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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

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

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

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

**SUBJECT: Annual Radiological Environmental Operating Report - 2020**

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 6.9.1.3 for the Shearon Harris Nuclear Power Plant Unit 1 (HNP), 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 5.6.2 for the H. B. Robinson Steam Electric Plant Unit 2 (RNP), is submitting the Annual Radiological Environmental Operating Reports (AREOR) for the period from January 1, 2020, through December 31, 2020. The AREORs are provided in Enclosures 1 through 6.

No regulatory commitments are contained in this submittal.

Please refer any questions concerning this letter and its enclosures to Mr. Art Zaremba,  
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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

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Enclosure 1  
RA-21-0050

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



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# **ANNUAL RADIOLOGICAL ENVIRONMENTAL OPERATING REPORT**

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

**2020**



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**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
CM	Community
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 <sup>3</sup>	picocurie per cubic meter
PMAC	Projected Maximum Annual Concentration
Q	Quarterly
REMP	Radiological Environmental Monitoring Program
SA	Semiannually
SB	Site Boundary
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

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# 1.0 EXECUTIVE SUMMARY

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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 2020.

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-three samples were analyzed comprising 1,353 test results to compile data for the 2020 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 2020 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 2020 indicates that radioactivity concentrations and all positively identified measurements attributable to BSEP operations in 2020 were within limits as specified in the BSEP ODCM, thus presenting no significant impact on the environment or public health and safety.

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## **2.0 INTRODUCTION**

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### **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.

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.

### **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

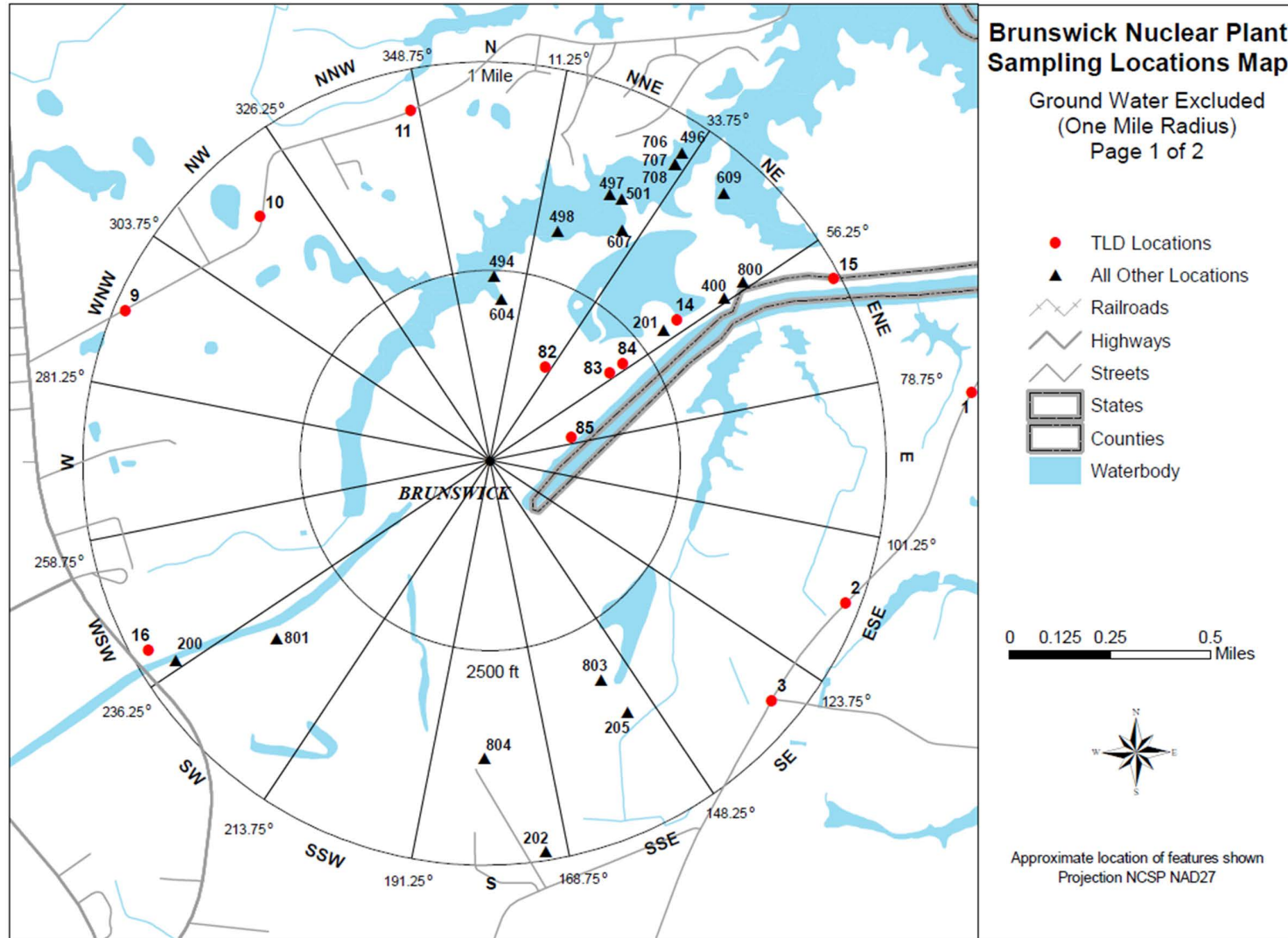


Figure 2.1-2

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

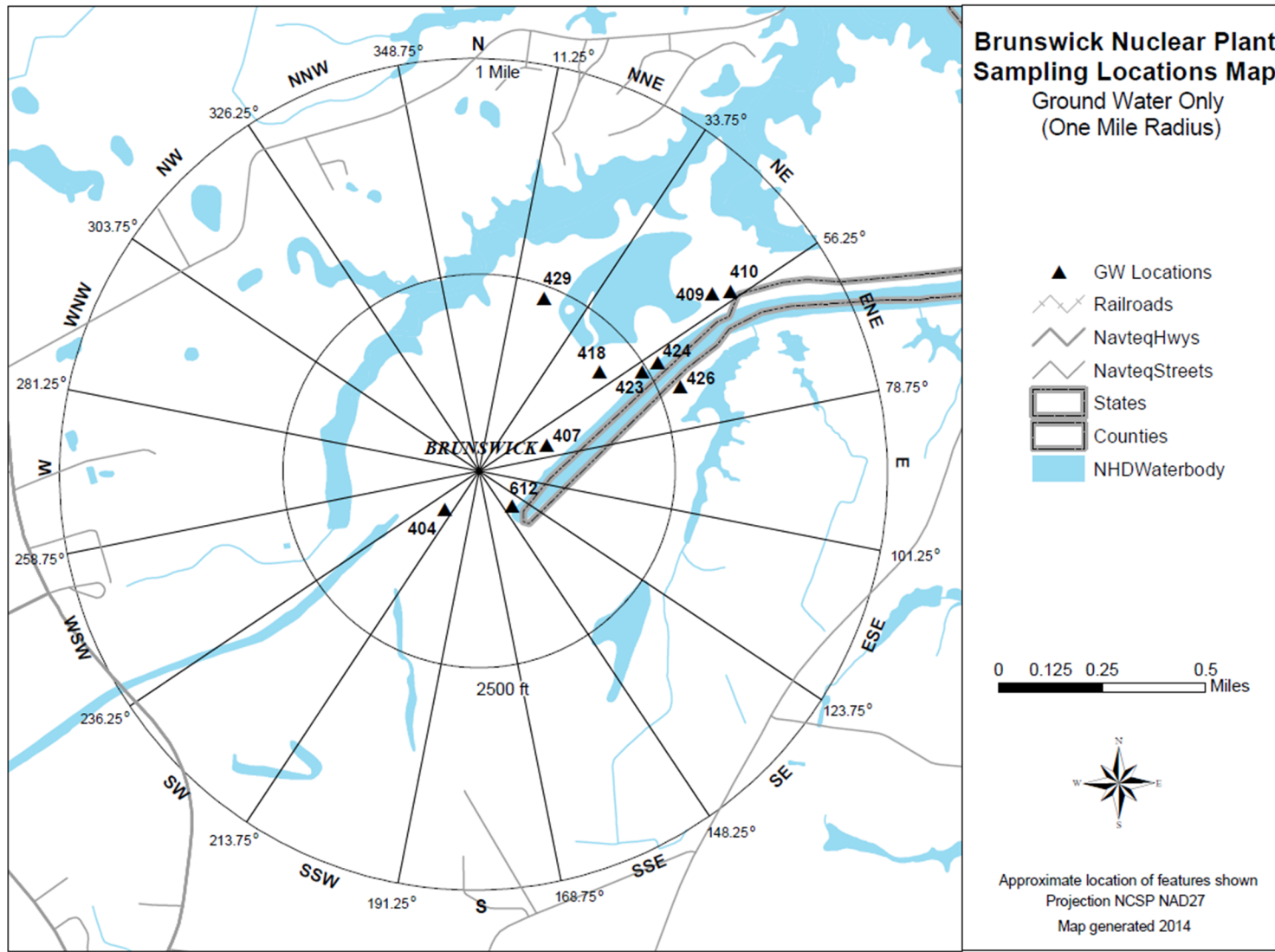
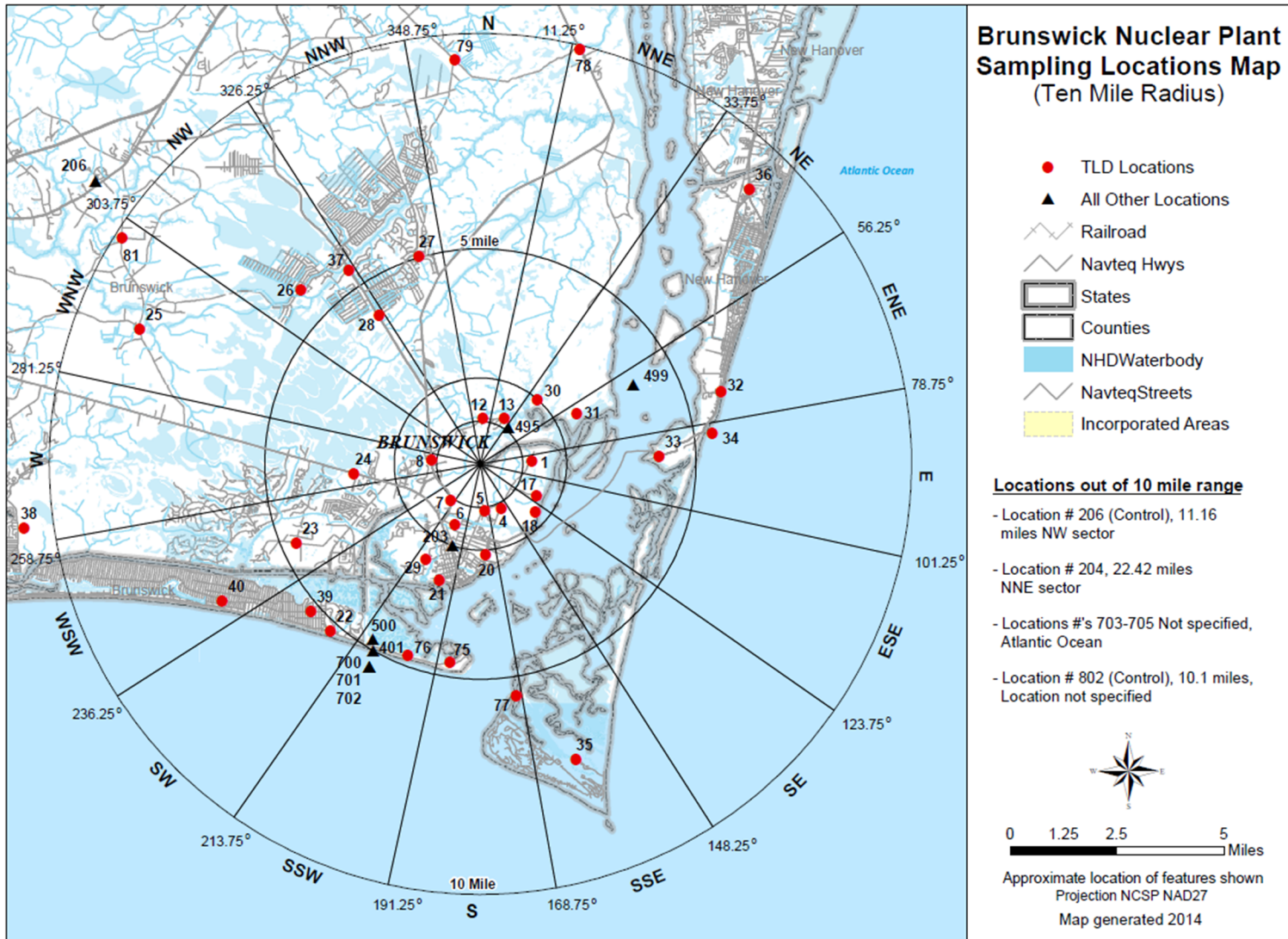


Figure 2.1-3

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			
A	Annually	SA	Semiannually
C	Control <sup>(d)</sup>	SB	Site Boundary
CM	Community	SDSP	Storm Drain Stabilization Pond
I	Indicator	W	Weekly
M	Monthly	WP	Waypoint
Q	Quarterly		

Site #	Type	Location Description <sup>(h)</sup>	Air Radioiodine & Air Particulate	Surface Water <sup>(g)</sup>	Shoreline Sediment	Fish <sup>(c)</sup>	Broadleaf Vegetation	Ground Water
200	I	1.0 miles WSW – Visitors Center	W/Q, SB					
201	I	0.5 miles NE – Bio Lab Rd. – Projected Maximum Annual Concentration (PMAC)	W/Q, SB					
202	I	1.0 mile S – Substation, Construction Rd.	W/Q, SB					
203	I	2.0 miles SSW – Southport Substation	W/Q, CM					
204 <sup>(f)</sup>	C	22.4 miles NNE – Sutton Plant (Historical Control)	W/Q					
205	I	0.6 miles SSE – Spoil Pond	W/Q, SB					
206 <sup>(f)</sup>	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 <sup>(b)(c)</sup>		
701	I	5.5 miles SSW – Atlantic Ocean @ discharge (Bottom Feeders)				SA <sup>(b)(c)</sup>		
702	I	5.5 miles SSW – Atlantic Ocean @ discharge (Shellfish/Invertebrates)				SA <sup>(b)(c)</sup>		
703	C	Atlantic Ocean; location not specified (Free Swimmer)				SA <sup>(b)(c)</sup>		
704	C	Atlantic Ocean; location not specified (Bottom Feeder)				SA <sup>(b)(c)</sup>		
705	C	Atlantic Ocean; location not specified (Shellfish/Invertebrates)				SA <sup>(b)(c)</sup>		

**TABLE 2.1-A (Continued)**

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

(a) When Available

(b) Edible Portions

(c) When in Season

(d) Control Station – These stations are presumed to be outside the influence of plant effluents.

(e) A sample of one free swimmer, one bottom feeder, and one shellfish (shrimp) will be collected if available. A control sample of each species collected will be obtained if available.

(f) The purpose of this sample is to obtain background information. If it is not practical to establish control locations in accordance with the distance and wind direction criteria, other sites that provide valid background data may be substituted.

(g) The “upstream” sample shall be taken at a distance beyond significant influence of the discharge. The “downstream” sample shall be taken in an area beyond but near the mixing zone. “Upstream” samples in an estuary must be taken far enough upstream to be beyond the plant influence. Salt-water shall be sampled only when the receiving water is utilized for recreational activities.

(h) 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**

**RADIOLOGICAL MONITORING PROGRAM SAMPLING LOCATIONS (TLD SITES) <sup>(b)</sup>**

**BRUNSWICK STEAM ELECTRIC PLANT (BSEP)**

Table 2.1-B Codes	
IR	Inner Ring
OR	Outer Ring
C	Control <sup>(a)</sup>
SI	Special Interest
ISFSI	Independent Spent Fuel Storage Installation

Site #	Measure Type	Location <sup>(c)</sup>	Distance (miles)	Sector	Site #	Measure Type	Location <sup>(c)</sup>	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					

(a) Control Station – These stations are presumed to be outside the influence of plant effluents.

(b) One or more instruments such as a pressurized ion chamber, for measuring and recording dose rate continuously may be used in place of, or in addition to, integrating dosimeters. Film badges shall not be used as dosimeters for measuring direct radiation. The frequency of analysis or readout for TLD systems will depend upon the characteristics of the specific system used and should be selected to obtain optimum dose information with minimal fading.

(c) 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 <sup>3</sup> )	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 <sup>(e)</sup>	Tritium	Gross Beta	TLD
Air Radioiodine	Weekly	X			
Air Particulate	Weekly			(c)	
	Quarterly	X			
Direct Radiation (TLD)	Quarterly				X
Surface Water	Monthly Composite (400 & 401) <sup>(d)(h)</sup>	X	X		
	Monthly Grab (494 - 499, 604, 607, & 609)	(f)	X		
Ground Water	Quarterly Grab	X	X		
	Semiannual Grab	X			
Shoreline Sediment	Semiannually (500)	X			
	Annually (501) <sup>(g)</sup>	(g)			
Fish and Shellfish/Invertebrates <sup>(a)</sup>	Semiannually (700 – 705)	X			
	Annually (706 – 708)	X			
Broadleaf Vegetation <sup>(i)</sup>	Monthly <sup>(b)</sup>	X			

(a) Edible portions

(b) When available

(c) Airborne particulate samples shall be analyzed for gross beta radioactivity 24 hours or more after sampling to allow for radon and thoron daughter decay. If gross beta activity in air particulate samples is greater than ten times the yearly mean of control samples, gamma isotopic shall be performed on the individual samples.

(d) Composite samples shall be collected by collecting an aliquot at intervals not exceeding 6 hours.

(e) Gamma isotopic analysis means the identification and quantification of gamma-emitting radionuclides that may be attributable to the effluents from the facility.

(f) The samples are to be analyzed for gamma isotopic analyses. If plant activity is detected from the gamma isotopic analysis, Sr-89, 90 and Fe-55 analysis are to be performed.

(g) If plant activity is detected, Sr-89, 90 and Fe-55 analysis are to be performed and frequency will be increased to Semi-Annual.

(h) A composite sample is one in which the quantity (aliquot) of liquid sampled is proportional to the quantity of flowing liquid and in which the method of sampling employed results in a specimen that is representative of the liquid flow. Composite samples shall be collected with equipment that is capable of collecting an aliquot at time intervals that are short (e.g., once per 6 hours) relative to compositing period (e.g., monthly) in order to assure obtaining a representative sample.

(i) When less than three (3) milking animal locations are available for testing within an 8-km distance, sampling of broadleaf vegetation shall be performed as indicated in [BSEP ODCM] Table 7.3.15-1, 4.c, in lieu of milk sampling.

**TABLE 2.2-C****DETECTION CAPABILITIES FOR THE *A PRIORI* LOWER LIMIT OF DETECTION<sup>(a)(b)(d)</sup>**

Analysis	Water (pCi/liter)	Airborne Particulates or Gases (pCi/m <sup>3</sup> )	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 <sup>(c)</sup>	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  $5 \times 10^{-7}$   $\mu$ Ci/ml for Principal Gamma Emitters and  $1 \times 10^{-9}$   $\mu$ Ci/ml for I-131.

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## 3.0 INTERPRETATION OF RESULTS

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Review of 2020 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 2020 information required by Technical Specification Administrative Control 5.6.2, BSEP ODCM 7.4.1 are located in Appendix B. Brunswick 2020 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 2020 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 2020 indicates that radioactivity concentrations were not higher than expected and all positively identified measurements attributable to BSEP operations in 2020 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 3.8 support the conclusion that there was no significant increase in radioactivity in the environment around Brunswick Steam Electric Plant due to station operations in 2020. Similarly, there was no significant increase in ambient background radiation levels in the surrounding areas. The 2020 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**

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 radioiodine was 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 2 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.

In 2020, 363 radioiodine and particulate samples were analyzed, 259 from five indicator locations and 104 from the two control locations. The air samplers operated for a total of 99.61% availability for the 2020 year.

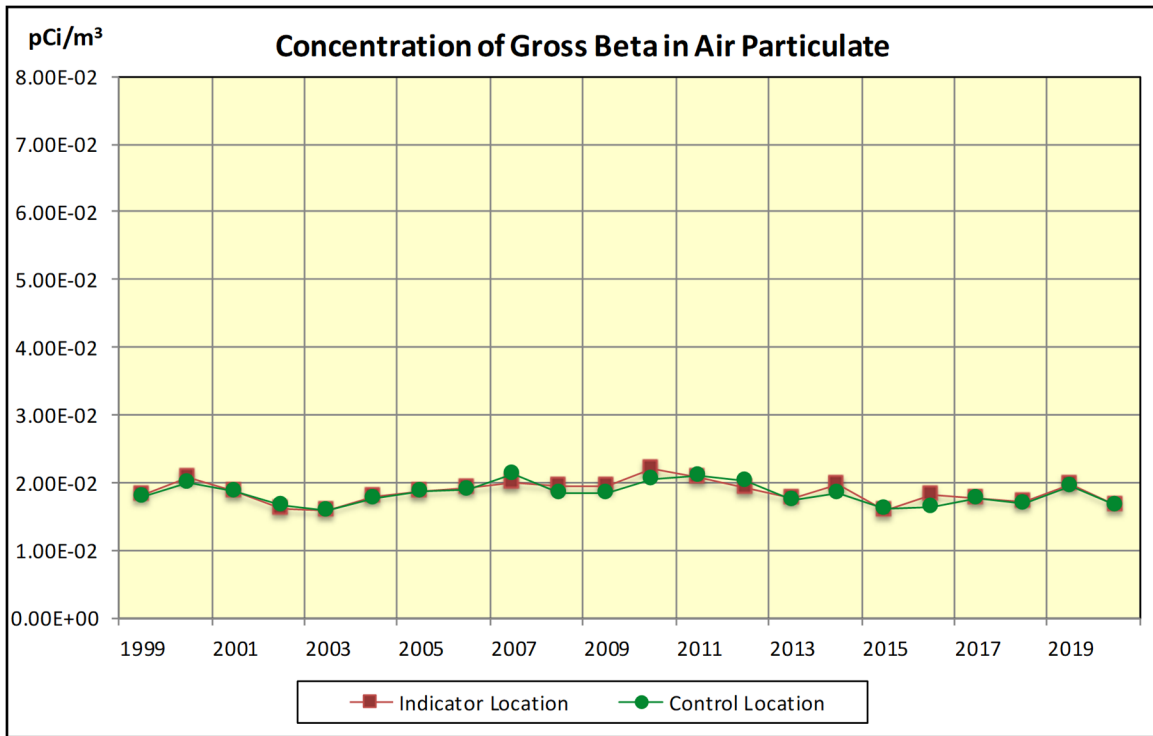
Gross beta analyses indicated  $1.64\text{E-}2$  pCi/m<sup>3</sup> at the location with the highest annual mean and  $1.65\text{E-}2$  pCi/m<sup>3</sup> at the two control locations. The preoperational (1973 – 1974) gross beta average concentration was  $8.2\text{E-}2$  pCi/m<sup>3</sup>. No gamma emitting radionuclides attributable to BNP plant operation were detected in any 2020 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 2020, 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 <sup>3</sup> )	Control Location (pCi/m <sup>3</sup> )
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
2020	1.64E-2	1.65E-2

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

Year	Indicator Location (pCi/m <sup>3</sup> )	Control Location (pCi/m <sup>3</sup> )
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 <sup>(1)</sup>	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 <sup>(2)</sup>	1.31E-1	1.00E-1
2012	0.00E+0	0.00E+0
2013	0.00E+0	0.00E+0
2014 <sup>(3)</sup>	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
2020	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

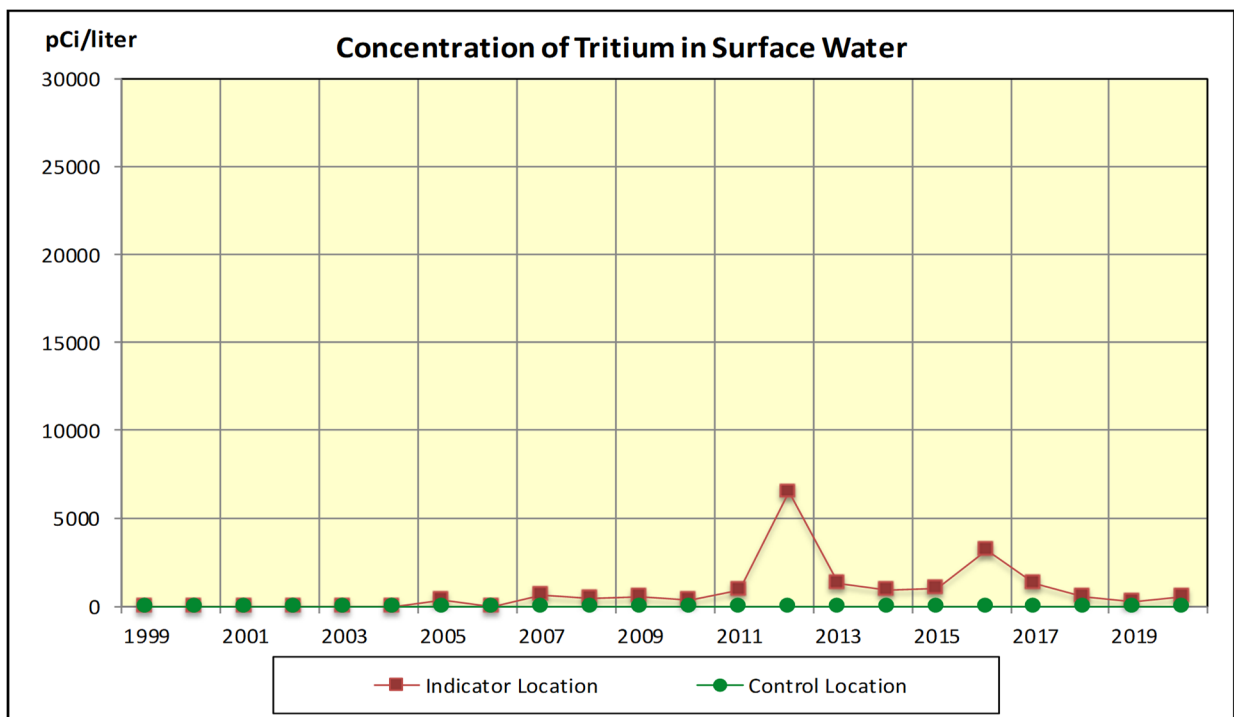
Surface water samples were taken monthly from the intake canal, the discharge canal, five Nancy’s Creek surface water locations, and four Nancy’s Creek Marsh Area surface water locations. Monthly composite samples were collected from locations 400 and 401 and monthly grab samples were collected from locations 494 – 499, 604, 607, and 609.

In 2020, 132 surface water samples were analyzed for gamma emitting radionuclides and tritium. No detectable gamma activity attributable to BSEP operation was found in surface water samples in 2020. K-40 and Be-7 observed in some surface water samples are naturally occurring radionuclides. Tritium was detected in 9 of the 132 surface water samples taken in 2020. Tritium was not detected in any of the control location samples in 2020.

The predominate indicator location indicating tritium in 2020 was at location 604, Nancy’s Creek Marsh Area (Waypoint-92). Nine 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 555 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**

<b>Year</b>	<b>Indicator Location (pCi/l)</b>	<b>Control Location (pCi/l)</b>
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
2020	5.55E+2	0.00E+0

0.00E+0 indicates no detectable measurements

### **3.3 GROUND WATER**

In 2020, there were 40 grab samples collected from ten ground water indicator locations and analyzed for gamma emitting radionuclides and/or tritium. The 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 2020. K-40 observed in some ground water samples is a naturally occurring radionuclide. Tritium was detected in one of the forty indicator ground water samples taken in 2020 with a mean tritium concentration of 224 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**

<b>Year</b>	<b>Indicator Location (pCi/l)</b>	<b>Control Location (pCi/l)</b>
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
2020	2.24E+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 2020. No indicator dairies were identified by the 2020 land use census.

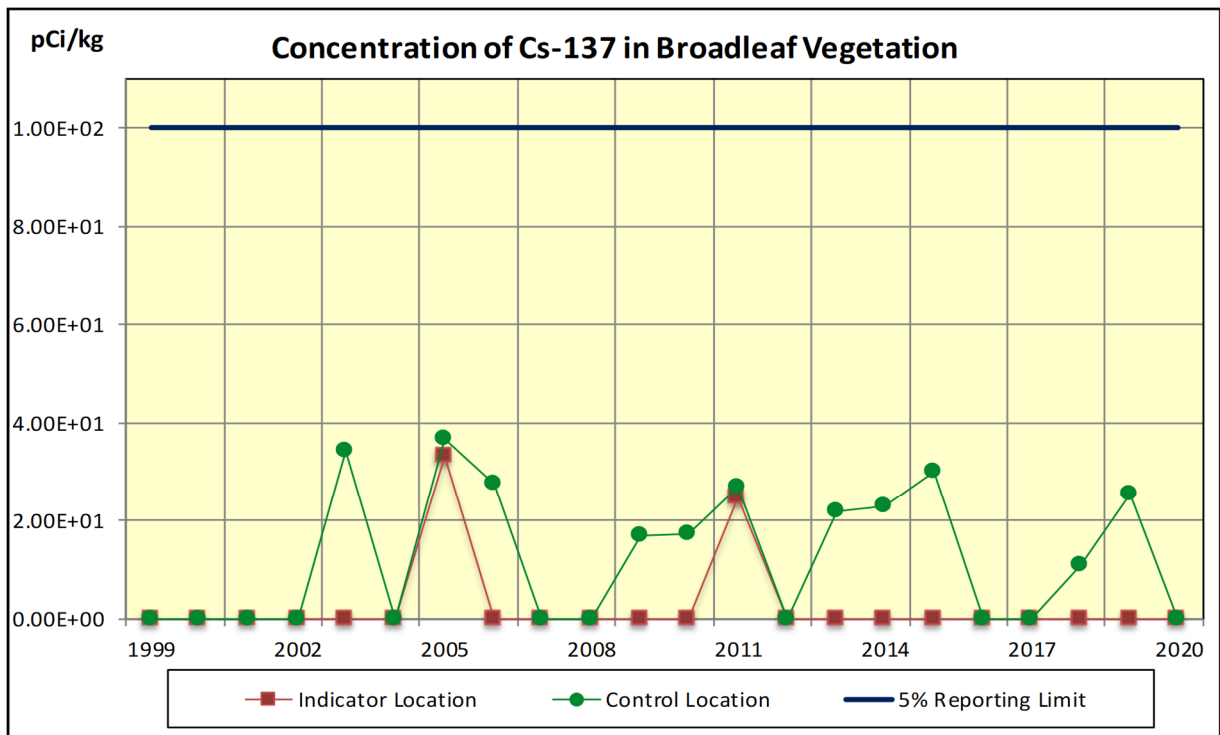
### 3.5 BROADLEAF VEGETATION

In 2020, sixty broadleaf vegetation samples were collected monthly (as available) and analyzed by gamma spectroscopy, 48 at the four indicator locations and twelve at the control location. No detectable gamma activity attributable to BSEP operation was found in broadleaf vegetation samples in 2020.

Gamma spectroscopy analysis did not detect Cs-137 in any of the indicator or control location samples, however 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 <sup>(1)</sup>	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 <sup>(2)</sup>	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
2020	0.00E+0	0.00E+0	0.00E+0	0.00E+0	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 2020, 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 on the edible portions of each sample indicated no gamma emitting radionuclides attributable to BSEP plant operations in any indicator or control location 2020 fish samples.

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

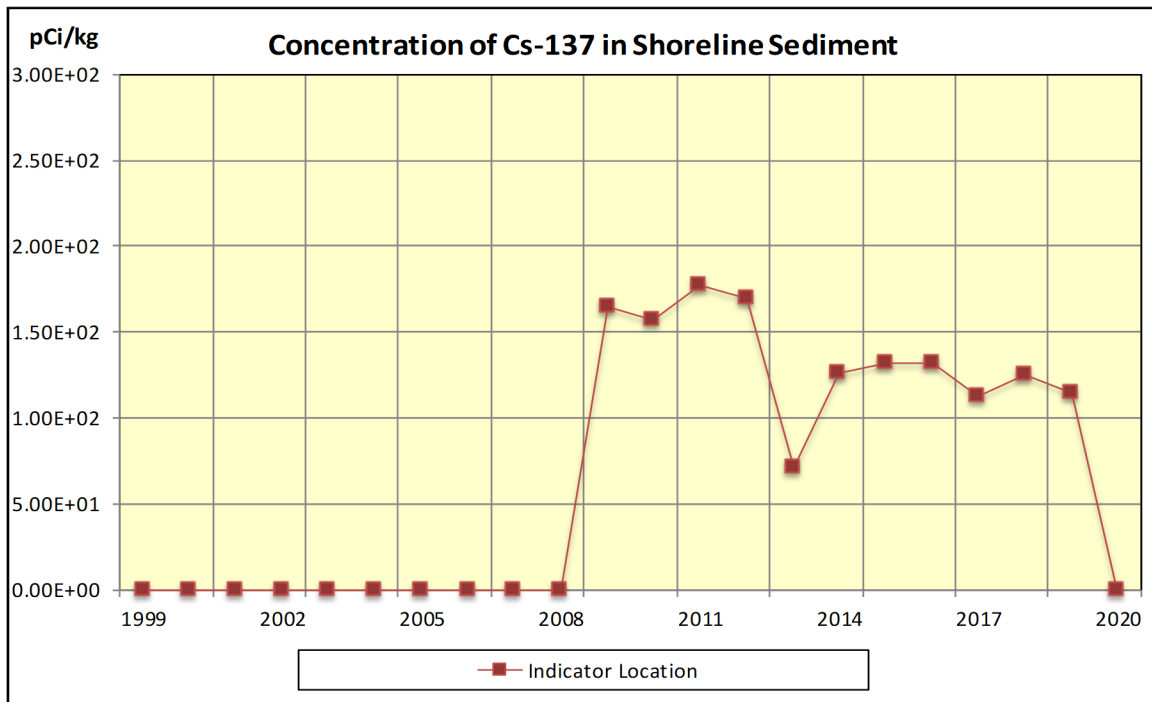
### 3.7 SHORELINE SEDIMENT

In 2020, four shoreline sediment samples were analyzed from two indicator locations. A gamma analysis was performed on each sample following the drying and removal of rocks and clams. There is no control shoreline sediment location. No detectable gamma activity attributable to BSEP operation was found in shoreline sediment samples in 2020.

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**

<b>YEAR</b>	<b>Cs-137 Indicator (pCi/kg)</b>
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 <sup>(1)</sup>	1.26E+2
2015	1.32E+2
2016	1.32E+2
2017	1.13E+2
2018	1.25E+2
2019	1.14E+2
2020	0.00E+0

0.00E+0 indicates no detectable measurements

There is no control location for Shoreline Sediment.

(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**

The BSEP site is located on land owned entirely by Duke Energy Progress, Inc. BSEP is licensed with an exclusion area boundary defined by UFSAR Section 2.1.2. No permanent public access is permitted within the exclusion area. For the purpose of effluent release calculations, the boundary for atmospheric releases is the site boundary and the boundary for liquid releases is the site boundary or prior to dilution by a natural body of water, whichever occurs first.

In 2020, there were 180 TLDs analyzed, 176 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. Environmental TLD (Alpha & Bravo) dual placement was implemented for BSEP ODCM TLD locations first quarter 2020.

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 2020 was essentially unchanged from 1989-2020, with an average exposure for all of 2020 indicator locations of 9.09 mR per std. quarter. The TLD location with the highest annual mean of 13.5 mR per std. quarter was location 39, located 5.3 miles SW of the plant. Control TLD location 81 had an annual mean of 10.0 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 2020 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 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.

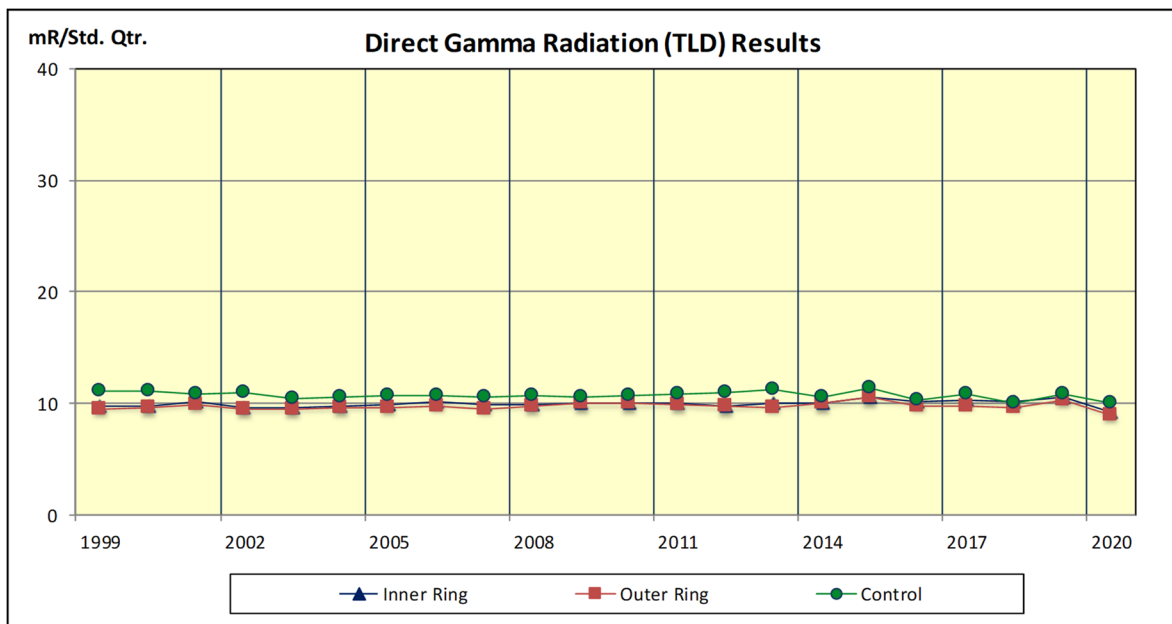
The fourth quarter 2020 TLD from location 17 (1.4 miles ESE) result of 17.2 mR/Std Qtr exceeded the location’s acceptance range. Investigation did not indicate any analytical abnormalities or any known TLD site changes and the result is considered valid.

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 3<sup>rd</sup> quarter of 2010. The ISFSI TLDs are not part of the plant’s environmental TLD monitoring program. Comparison of the 2020 ISFSI TLD data after loaded fuel with preoperational data (2008 – 3<sup>rd</sup> 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 2020 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**

<b>Year</b>	<b>Inner Ring Average (mR/Std. Qtr.)</b>	<b>Outer Ring Average (mR/Std. Qtr.)</b>	<b>Control Average (mR/Std. Qtr.)</b>
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 <sup>(1)</sup>	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
2020 <sup>(2)</sup>	9.18E+0	8.98E+0	1.00E+1

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

(2) Environmental TLD dual placement (Alpha & Bravo) implemented first quarter 2020.

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

<b>Year</b>	<b>Average TLD Exposure All Monitoring Locations (mR per week)*</b>
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 (1995-2020)**

<b>Year</b>	<b>Average TLD Exposure All Indicator Locations mR per quarter *</b>
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
2020	9.09E+1**

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

\*\* The equivalent 2020 weekly exposure is 7.0E-1 mR.

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

<b>Year</b>	<b>TLD # 82</b>	<b>TLD # 83</b>	<b>TLD # 84</b>	<b>TLD # 85</b>
Average Pre-Op (1Q2008 to 3Q2010)	3.01E+1	2.24E+1	1.67E+1	5.32E+1
Average after Fuel Loaded (4Q2010 to 4Q2020)	2.97E+1	2.38E+1	1.86E+1	3.56E+1



### **3.9 LAND USE CENSUS**

The 2020 BSEP Land Use Census (LUC) was conducted on 6/1/2020 and 6/2/2020 during the growing season as required by the BSEP ODCM to identify within 8 kilometers (5.0 miles) from the plant the nearest location from the site boundary in each of the sixteen meteorological sectors, the following: nearest residence, nearest garden greater than 50 square meters or 500 square feet, and the nearest milk-giving animal (cow, goat, etc.). Additionally, the LUC must also identify (for elevated releases) within the three-mile (4.8 kilometer) radius of the plant (garden census) for each of the 16 meteorological sectors the following: all milk animals and all gardens greater in size than 500 square feet (50 square meters).

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.

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.

During the 2020 census, no milk locations were identified. The nearest residence is located in the North sector at 0.74 miles. No environmental program changes were required as a result of the 2020 land use census.

The fleet Land Use Procedure AD-CP-ALL-0014 (Revision 4), Land Use Census Evaluation, was revised in 2020 to standardize the approach for the evaluation of Land Use Dose Calculations (NCR # 02343171).

**Table 3.9-A**

**Brunswick Steam Electric Plant  
Land Use Census Comparison (2019 – 2020)**

**Performed - June 1-2, 2020**

**Nearest Pathway (Miles)**

SECTOR	RESIDENT		GARDEN		MILK ANIMALS	
	2019	2020	2019	2020	2019	2020
N	0.74	0.74	1.10	None*	None	None
NNE	0.82	0.82	0.87	0.87	None	None
NE	None	None	None	None	None	None
ENE	None	None	None	None	None	None
E	None	None	None	None	None	None
ESE	1.37	1.37	None	1.37*	None	None
SE	None	None	None	None	None	None
SSE	2.13	2.13	None	None	None	None
S	1.12	1.12	1.87	2.28*	None	None
SSW	1.24	1.38*	1.71	1.62*	None	None
SW	1.09	1.09	1.09	1.09	None	None
WSW	1.24	1.24	1.30	3.31*	None	None
W	0.85	0.85	1.33	2.59*	None	None
WNW	0.93	0.93	0.98	0.98	None	None
NW	0.82	0.82	4.86	4.86	None	None
NNW	0.84	0.84	0.92	0.92	None	None

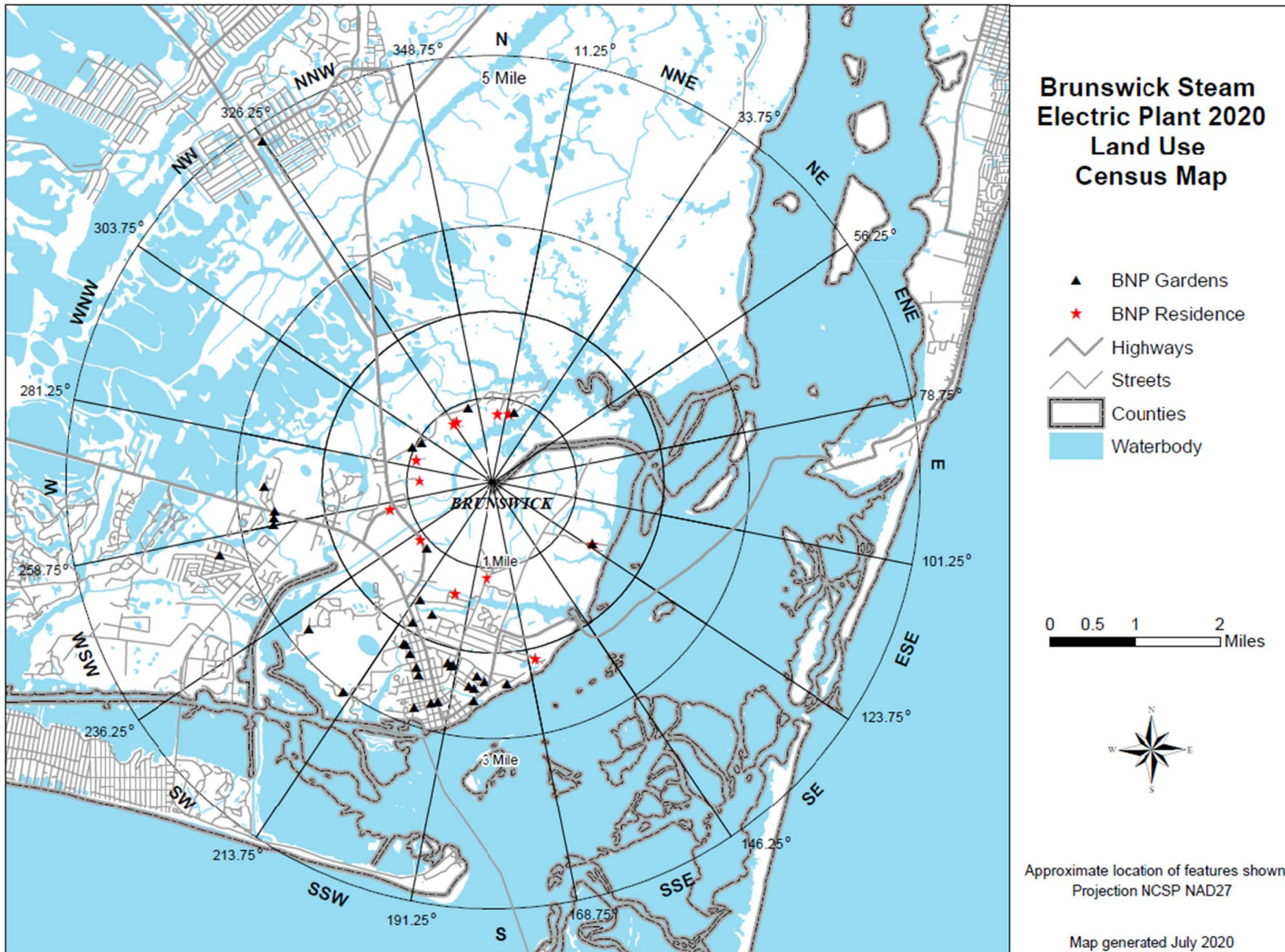
\* Represents a change from the previous year.  
Sector and distance determined by Global Positioning System.

**Table 3.9-B**  
**Brunswick Steam Electric Plant**  
**Garden Census – 2020**  
**Performed - June 1-2, 2020**

SECTOR	Bearing (degrees)	DISTANCE (miles)	SECTOR	Bearing (degrees)	DISTANCE (miles)
N	None	None	SSW	13	2.21
NNE	197	0.87*	SSW	26	2.23
NE	None	None	SSW	23	2.34
ENE	None	None	SSW	22	2.42
E	None	None	SSW	15	2.65
ESE	302	1.37*	SSW	16	2.69
SE	None	None	SSW	20	2.79
SSE	None	None	SW	52	1.09*
S	05	2.28*	SW	52	2.76
S	03	2.33	SW	36	3.01
S	356	2.37	WSW	75	3.31*
S	07	2.40	W	82	2.59*
S	06	2.43	W	81	2.60
S	06	2.57	W	81	2.61
SSW	32	1.62*	W	89	2.68
SSW	25	1.71	WNW	120	0.98*
SSW	30	1.89	WNW	114	1.04
SSW	29	2.16	NW	146	4.86*
SSW	15	2.18	NNW	162	0.92*

\* Indicates nearest garden in sector.  
Sector and distance determined by Global Positioning System

Figure 3.9



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# 4.0 QUALITY ASSURANCE

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## 4.1 SAMPLE COLLECTION

Environmental sample collection at BSEP was performed by BSEP Station Sciences in 2020 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 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 2020 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 2020. 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, mixed gamma in soil, 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 2020 is documented in Table 4.0-A.

Interlaboratory cross check samples from EZA were received and analyzed in two of the four quarters of 2020. Table 4.0-A lists the performance for specific samples. Fifty-one nuclide results were reported to EZA of which forty-nine (96 %) 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**

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 using the NIST-traceable Hopewell and submits them for analysis of the unknown estimated delivered exposure. A summary of the 2020 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 2020. A summary of the GEL quality assurance program results for the sample media types sent to GEL during 2020 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

#### 2020 Cross Check Results for EnRad Laboratories

Interlaboratory cross check samples from EZA were received and analyzed in two of the four quarters of 2020. 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. Fifty-one nuclide results were reported to EZA of which forty-nine (96 %) 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	E13185	Cs-137	2	pCi	225	238	0.95	Agreement
I-131 in Charcoal Cartridge	E13183	I-131	2	pCi	95.8	91.5	1.05	Agreement
Gamma in Soil	E13184	Ce-141	2	pCi/g	0.199	0.206	0.97	Agreement
		Co-58	2	pCi/g	0.168	0.178	0.94	Agreement
		Co-60	2	pCi/g	0.309	0.347	0.89	Agreement
		Cr-51	2	pCi/g	0.371	0.455	0.82	Agreement
		Cs-134	2	pCi/g	0.226	0.260	0.87	Agreement
		Cs-137	2	pCi/g	0.230	0.257	0.90	Agreement
		Fe-59	2	pCi/g	0.174	0.179	0.97	Agreement
		Mn-54	2	pCi/g	0.238	0.238	1.00	Agreement
		Zn-65	2	pCi/g	0.416	0.399	1.04	Agreement
Gamma in Simulated Vegetation	E13187	Ce-141	2	pCi/g	0.228	0.184	1.24	Agreement
		Co-58	2	pCi/g	0.172	0.159	1.08	Agreement
		Co-60	2	pCi/g	0.312	0.309	1.01	Agreement
		Cr-51	2	pCi/g	0.530	0.405	1.31	Non-Agreement <sup>(1)</sup>
		Cs-134	2	pCi/g	0.239	0.231	1.03	Agreement
		Cs-137	2	pCi/g	0.181	0.164	1.10	Agreement
		Fe-59	2	pCi/g	0.204	0.160	1.28	Non-Agreement <sup>(1)</sup>
		Mn-54	2	pCi/g	0.239	0.212	1.13	Agreement
		Zn-65	2	pCi/g	0.379	0.355	1.07	Agreement

(1) NCR # 02340178

## TABLE 4.0-A (Cont.)

Sample	Sample ID	Nuclide	Quarter	Units	EnRad Value	EZA Value	EnRad/EZA Ratio	Evaluation
Gamma in Simulated Vegetation	E13190	Ce-141	3	pCi/g	0.202	0.204	0.99	Agreement
		Co-58	3	pCi/g	0.213	0.244	0.87	Agreement
		Co-60	3	pCi/g	0.491	0.516	0.95	Agreement
		Cr-51	3	pCi/g	0.424	0.506	0.84	Agreement
		Cs-134	3	pCi/g	0.240	0.272	0.88	Agreement
		Cs-137	3	pCi/g	0.325	0.340	0.95	Agreement
		Fe-59	3	pCi/g	0.270	0.273	0.99	Agreement
		Mn-54	3	pCi/g	0.249	0.245	1.02	Agreement
		Zn-65	3	pCi/g	0.383	0.367	1.04	Agreement
Gamma in Composite Filter	E13188	Ce-141	3	pCi	109	107	1.02	Agreement
		Co-58	3	pCi	130	128	1.01	Agreement
		Co-60	3	pCi	278	271	1.03	Agreement
		Cr-51	3	pCi	247	266	0.93	Agreement
		Cs-134	3	pCi	136	143	0.95	Agreement
		Cs-137	3	pCi	187	179	1.05	Agreement
		Fe-59	3	pCi	152	143	1.06	Agreement
		Mn-54	3	pCi	136	129	1.06	Agreement
		Zn-65	3	pCi	215	193	1.12	Agreement
Gamma in Water	E13189	Ce-141	3	pCi/L	167	160	1.04	Agreement
		Co-58	3	pCi/L	202	191	1.06	Agreement
		Co-60	3	pCi/L	437	404	1.08	Agreement
		Cr-51	3	pCi/L	407	397	1.03	Agreement
		Cs-134	3	pCi/L	215	213	1.01	Agreement
		Cs-137	3	pCi/L	280	267	1.05	Agreement
		Fe-59	3	pCi/L	237	214	1.11	Agreement
		I-131	3	pCi/L	104	95.3	1.09	Agreement
		Mn-54	3	pCi/L	211	192	1.10	Agreement
Zn-65	3	pCi/L	322	288	1.12	Agreement		
Milk LLI-131	E13192	I-131	2	pCi/L	96.8	88.8	1.09	Agreement
Gross Beta in Water	E13191	Cs-137	2	pCi/L	244	240	1.02	Agreement
Tritium in Water	E13193	H-3	3	pCi/L	11900	12000	0.99	Agreement



# TABLE 4.0-B

## 2020 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 2020						2nd Quarter 2020						
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	
100007	59.67	60.97	-2.13	<+/-15%	Pass	102290	59.52	60.59	-1.77	<+/-15%	Pass	
100245	58.87	60.97	-3.44	<+/-15%	Pass	102359	59.12	60.59	-2.43	<+/-15%	Pass	
102059	60.34	60.97	-1.03	<+/-15%	Pass	103194	61.95	60.59	2.24	<+/-15%	Pass	
103098	64.18	60.97	5.26	<+/-15%	Pass	102029	60.76	60.59	0.28	<+/-15%	Pass	
103212	63.01	60.97	3.35	<+/-15%	Pass	102336	61.57	60.59	1.62	<+/-15%	Pass	
100074	60.02	60.97	-1.56	<+/-15%	Pass	103742	62.41	60.59	3.00	<+/-15%	Pass	
103148	62.83	60.97	3.05	<+/-15%	Pass	103721	63.00	60.59	3.98	<+/-15%	Pass	
102407	62.04	60.97	1.75	<+/-15%	Pass	102738	62.59	60.59	3.30	<+/-15%	Pass	
103615	62.69	60.97	2.82	<+/-15%	Pass	100007	58.49	60.59	-3.47	<+/-15%	Pass	
103087	64.32	60.97	5.49	<+/-15%	Pass	102931	61.99	60.59	2.31	<+/-15%	Pass	
Average Bias (B)			1.36				Average Bias (B)			0.91		
Standard Deviation (S)			3.18				Standard Deviation (S)			2.62		
Measure Performance  B +S			4.54	<15%	Pass	Measure Performance  B +S			3.52	<15%	Pass	
3rd Quarter 2020						4th Quarter 2020						
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	
103734	20.89	19.59	6.64	<+/-15%	Pass	103679	42.06	40.15	4.76	<+/-15%	Pass	
103438	21.02	19.59	7.30	<+/-15%	Pass	102783	38.82	40.15	-3.31	<+/-15%	Pass	
102970	18.88	19.59	-3.62	<+/-15%	Pass	103438	43.01	40.15	7.12	<+/-15%	Pass	
102770	20.78	19.59	6.07	<+/-15%	Pass	103734	42.84	40.15	6.70	<+/-15%	Pass	
103602	20.53	19.59	4.80	<+/-15%	Pass	100461	42.34	40.15	5.45	<+/-15%	Pass	
102741	21.03	19.59	7.35	<+/-15%	Pass	103029	42.84	40.15	6.70	<+/-15%	Pass	
102058	19.47	19.59	-0.61	<+/-15%	Pass	100180	38.59	40.15	-3.89	<+/-15%	Pass	
103029	21.06	19.59	7.50	<+/-15%	Pass	103557	43.52	40.15	8.39	<+/-15%	Pass	
103679	20.75	19.59	5.92	<+/-15%	Pass	103199	41.99	40.15	4.58	<+/-15%	Pass	
103557	21.00	19.59	7.20	<+/-15%	Pass	100154	39.71	40.15	-1.10	<+/-15%	Pass	
Average Bias (B)			4.85				Average Bias (B)			3.54		
Standard Deviation (S)			3.83				Standard Deviation (S)			4.55		
Measure Performance  B +S			8.69	<15%	Pass	Measure Performance  B +S			8.09	<15%	Pass	

# TABLE 4.0-C

## 2020 GEL Laboratories, LLC QA Results

Interlaboratory cross check samples from Eckert & Ziegler Analytics (EZA) were received and analyzed by GEL during 2020. 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
I-131 in Milk with EZA	E13173	I-131	2	pCi/L	83.1	81.5	1.02	Agreement
	E13177	I-131	3	pCi/L	94.9	95.0	1.00	Agreement
	E13181	I-131	4	pCi/L	94.4	91.9	1.08	Agreement

**APPENDIX A**

**ENVIRONMENTAL SAMPLING**  
**&**  
**ANALYSIS PROCEDURES**

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# APPENDIX A

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## 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 BNP Nuclear Station Sciences. Analyses were performed by EnRad Laboratories and Dosimetry and Records.

This appendix provides a description of the specific analyses performed on samples collected in the field. Changes to the sampling procedures and analyses procedures are also discussed in the section.

### I. CHANGE OF SAMPLING PROCEDURES

CY NISP-201 (Revision 0) Chemistry Quality Assurance Program Section 7C-Quality Controls for Sampling was implemented during 2020 for the sampling of Surface Water. Brunswick procedure 0E&RC-3101, Radiological Environmental Monitoring Program was updated to reflect these changes.

Environmental air sampling equipment was changed during 2020 to allow for the use of LV-1D air sampling equipment and pre-loaded air sampling heads as described in Brunswick procedure 0E&RC-3101, Radiological Environmental Monitoring Program.

Environmental TLD (Alpha & Bravo) dual placement was implemented for all BNP ODCM TLD locations effective first quarter 2020.

### 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**

There were no fundamental changes to analysis procedure methods, but procedures were revised to increase quality control measurements to comply with CY NISP-201 Chemistry Quality Assurance Program Section 7.

**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 2020

Medium or Pathway Sampled or Measured (Unit of Measurement)	Type and Total No. of Measurements Performed	Lower Limit of Detection (LLD) <sup>(1)</sup>	All Indicator Locations <sup>(2) (3)</sup> Mean Range	Location w/Highest Annual Mean		Control Locations Mean Range <sup>(2) (3)</sup>	No. of Non-Routine Report Meas.
				Name, Distance, and Direction	Mean Range <sup>(2) (3)</sup>		
Air Particulate (pCi/m <sup>3</sup> )	Gross Beta 363 <sup>(4)</sup>	See Table 2.2-C	1.60E-2 (259/259) 3.68E-3 – 3.43E-2	201 (0.50 mi NE)	1.64E-2 (51/51) 8.42E-3 – 3.36E-2	204 (22.4 mi NNE) 206 (11.3 mi NW) 1.65E-2 (104/104) 6.91E-3 – 3.21E-2	0
	Gamma 28 <sup>(4)</sup>	See Table 2.2-C	All less than LLD	----	----	All less than LLD	0
Air Radioiodine (pCi/m <sup>3</sup> )	Gamma 363 <sup>(4)</sup>	See Table 2.2-C	All less than LLD	----	----	All less than LLD	0
Broadleaf Vegetation (pCi/kg, wet)	Gamma 60	See Table 2.2-C	All less than LLD	----	----	All less than LLD	0
Fish and Invertebrates (pCi/l)	Gamma 15	See Table 2.2-C	All less than LLD	----	----	All less than LLD	0
Sediment - Shoreline (pCi/kg, dry)	Gamma 4	See Table 2.2-C	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 2020

Medium or Pathway Sampled or Measured (Unit of Measurement)	Type and Total No. of Measurements Performed	Lower Limit of Detection (LLD) <sup>(1)</sup>	All Indicator Locations <sup>(2) (3)</sup> Mean Range	Location w/Highest Annual Mean		Control Locations Mean Range <sup>(2) (3)</sup>	No. of Non-Routine Report Meas.
				Name, Distance, and Direction	Mean Range <sup>(2) (3)</sup>		
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	5.55E+02 (9/108) 2.27E+02 – 1.14E+03	604 Nancy's Creek Marsh Area Waypoint-92	5.55E+02 (9/12) 2.27E+02 – 1.14E+03	All less than LLD	0
Ground Water (pCi/l)	Gamma 20 <sup>(4)</sup>	See Table 2.2-C	All less than LLD	-----	-----	No Control	0
	Tritium 40	See Table 2.2-C	2.24E+02 (1/40) 2.24E+02 – 2.24E+02	418 Monitoring Well ESS-21B Near SDSP	2.24E+02 (1/4) 2.24E+02 – 2.24E+02	No Control	0
Direct Gamma Radiation (TLD) (mR per Std quarter) <sup>(5)</sup>	TLD Readout 180	-----	9.09E+00 (176/176) 4.98E+00 – 1.67E+01	39 (5.3 mi SW)	1.35E+01 (4/4) 1.26E+01 – 1.41E+01	81 (9.9 mi WNW) 1.00E+01 (4/4) 8.10E+00 – 1.21E+01	0
Direct Gamma Radiation (TLD) ISFSI (mR per Std quarter) <sup>(5)</sup>	TLD Readout 16	-----	2.32E+01 (16/16) 1.80E+01 – 3.14E+01	82 SW corner of ISFSI (0.17 mi NNE)	3.00E+01 (4/4) 2.73E+01 – 3.14E+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 99.61% availability in 2020. Air sampler downtime attributable to weather event Hurricane Isaias was 56.39 hours (24%).

Location	Scheduled Collection Dates	Code	Description & Action to Prevent Recurrence	Corrective Action
200	4/7 – 4/14/2020	OT	Air sampler malfunction resulting in decreased flow rate for unknown duration of time. Air sampler was replaced with a rebuilt pump to prevent recurrence.	NCR # 02325281
204	4/7 – 4/14/2020	OT	Air sampler malfunction resulting in decreased flow rate for unknown duration of time. Air sampler was replaced with a rebuilt pump to prevent recurrence.	NCR # 02325281
203	4/21 – 4/28/2020	PI	5.75 hours downtime due to GFCI breaker trip.	NCR # 02326916
200	7/28 – 8/4/2020	IW	Power interruption due to Hurricane Isaias resulted in 11.95 hours downtime.	NCR # 02342389
202	7/28 – 8/4/2020	IW	Power interruption due to Hurricane Isaias resulted in 8.3 hours downtime.	NCR # 02342389
203	7/28 – 8/4/2020	IW	Power interruption due to Hurricane Isaias resulted in 14.34 hours downtime.	NCR # 02342389
205	7/28 – 8/4/2020	IW	Power interruption due to Hurricane Isaias resulted in 12.82 hours downtime.	NCR # 02342389
206	7/28 – 8/4/2020	IW	Power interruption due to Hurricane Isaias resulted in 8.98 hours downtime.	NCR # 02342389
203	8/11 – 8/18/2020	PI	2.5 hours downtime due to power interruption, cause indeterminate.	NCR # 02344077
203	9/8 – 9/15/2020	PI	2.41 hours downtime due to power interruption, cause indeterminate.	NCR # 02348657
203	9/29 – 10/6/2020	PI	1.28 hours downtime due to power interruption, cause indeterminate.	NCR # 02351552
200	10/27 – 11/3/2020	PI	0.35 hours downtime due to power interruption, cause indeterminate.	NCR # 02356184

## 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 2020. There were no surface water sampling deviations or unavailable surface water samples during 2020.

## Ground Water

Location	Scheduled Collection Dates	Code	Description & Action to Prevent Recurrence	Corrective Action
ESS-1B ESS-13B ESS-17A ESS-17B ESS-21B ESS-24A ESS-24B ESS-25B ESS-27A MWPA-118B	December 2020	OT	December 2020 gamma analyses were missed due to a site procedure OE&RC-3250 and BNP ODCM Revision 38 discrepancy. The samples scheduled for collection during December 2020 were collected February 2021 and analyzed outside of the allowable monitoring frequency. Historical data has never shown any gamma emitters for these ground water monitoring locations and any observed tritium values were below the trigger threshold.	NCR # 02370499

## C.2 UNAVAILABLE ANALYSES

### Air Particulate and Air Radioiodine

Location	Scheduled Collection Dates	Code	Description & Action to Prevent Recurrence	Corrective Action
201	4/14 – 4/21/2020	OT	Air sampler malfunction caused 169.2 hours downtime resulting in an unavailable analysis. The air sampler was replaced with a rebuilt pump to prevent recurrence.	NCR # 02326459

# **APPENDIX D**

## **ANALYTICAL DEVIATIONS**

No Analytical Deviations were incurred for the  
2020 Radiological Environmental Monitoring Program

**APPENDIX E**

**RADIOLOGICAL  
ENVIRONMENTAL MONITORING  
PROGRAM RESULTS**

**2020**

This appendix includes sample analysis report summaries and supportive data generated from each sample medium for 2020.

# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
515205	12/31/2019 - 1/7/2020	Beta	1.66E-02	5.05E-03	6.96E-03
515449	1/7/2020 - 1/14/2020	Beta	1.06E-02	4.26E-03	6.30E-03
515839	1/14/2020 - 1/21/2020	Beta	2.11E-02	4.56E-03	5.55E-03
516100	1/21/2020 - 1/28/2020	Beta	1.79E-02	5.08E-03	6.72E-03
516453	1/28/2020 - 2/4/2020	Beta	1.54E-02	4.44E-03	6.09E-03
516839	2/4/2020 - 2/11/2020	Beta	1.84E-02	5.44E-03	7.51E-03
517362	2/11/2020 - 2/18/2020	Beta	1.59E-02	5.15E-03	7.18E-03
517632	2/18/2020 - 2/25/2020	Beta	1.42E-02	4.89E-03	6.90E-03
518652	2/25/2020 - 3/3/2020	Beta	1.25E-02	4.92E-03	7.22E-03
519271	3/3/2020 - 3/10/2020	Beta	1.30E-02	4.96E-03	7.23E-03
519649	3/10/2020 - 3/17/2020	Beta	1.33E-02	5.33E-03	7.91E-03
520226	3/17/2020 - 3/24/2020	Beta	1.46E-02	4.96E-03	7.02E-03
520458	3/24/2020 - 3/31/2020	Beta	1.32E-02	4.88E-03	7.04E-03
520233	12/31/2019 - 3/31/2020	Cs-134	<2.78E-03	0.00E+00	2.78E-03
		Cs-137	<1.60E-03	0.00E+00	1.60E-03
		Be-7	1.41E-01	4.55E-02	3.87E-02
		K-40	<1.91E-02	0.00E+00	1.91E-02
520759	3/31/2020 - 4/7/2020	Beta	1.00E-02	4.52E-03	6.71E-03
521558	4/7/2020 - 4/14/2020	Beta	2.03E-02	4.69E-03	6.87E-03
521993	4/14/2020 - 4/21/2020	Beta	2.03E-02	5.26E-03	6.88E-03
522292	4/21/2020 - 4/28/2020	Beta	1.59E-02	4.90E-03	6.72E-03
522547	4/28/2020 - 5/5/2020	Beta	1.21E-02	4.81E-03	7.07E-03
523054	5/5/2020 - 5/12/2020	Beta	1.80E-02	4.85E-03	6.41E-03
523427	5/12/2020 - 5/19/2020	Beta	8.58E-03	4.67E-03	7.24E-03
523821	5/19/2020 - 5/26/2020	Beta	1.14E-02	4.16E-03	6.09E-03



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
524392	5/26/2020 - 6/2/2020	Beta	1.07E-02	4.51E-03	6.68E-03
524714	6/2/2020 - 6/9/2020	Beta	1.77E-02	4.47E-03	5.96E-03
524946	6/9/2020 - 6/16/2020	Beta	1.34E-02	4.82E-03	6.92E-03
525294	6/16/2020 - 6/23/2020	Beta	1.26E-02	4.17E-03	5.98E-03
525543	6/23/2020 - 6/30/2020	Beta	1.47E-02	4.28E-03	5.95E-03
525301	3/31/2020 - 6/30/2020	Cs-134	<2.29E-03	0.00E+00	2.29E-03
		Cs-137	<3.34E-03	0.00E+00	3.34E-03
		Be-7	1.15E-01	4.68E-02	4.59E-02
		K-40	<6.69E-02	0.00E+00	6.69E-02
525892	6/30/2020 - 7/7/2020	Beta	1.81E-02	4.47E-03	5.97E-03
526227	7/7/2020 - 7/14/2020	Beta	1.24E-02	4.57E-03	6.60E-03
526506	7/14/2020 - 7/21/2020	Beta	2.60E-02	5.34E-03	6.57E-03
526833	7/21/2020 - 7/28/2020	Beta	9.84E-03	3.95E-03	5.70E-03
527310	7/28/2020 - 8/4/2020	Beta	2.33E-02	5.37E-03	6.64E-03
527604	8/4/2020 - 8/11/2020	Beta	3.68E-03	4.55E-03	7.64E-03
527895	8/11/2020 - 8/18/2020	Beta	1.22E-02	2.76E-03	3.48E-03
528652	8/18/2020 - 8/25/2020	Beta	1.48E-02	2.84E-03	3.40E-03
528868	8/25/2020 - 9/1/2020	Beta	1.55E-02	2.86E-03	3.34E-03
528979	9/1/2020 - 9/8/2020	Beta	2.57E-02	3.03E-03	2.99E-03
529975	9/8/2020 - 9/15/2020	Beta	8.98E-03	2.47E-03	3.31E-03
530270	9/15/2020 - 9/22/2020	Beta	1.50E-02	2.61E-03	3.12E-03
530550	9/22/2020 - 9/29/2020	Beta	1.51E-02	2.84E-03	3.31E-03
531048	6/30/2020 - 9/29/2020	Cs-134	<2.65E-03	0.00E+00	2.65E-03
		Cs-137	<1.07E-03	0.00E+00	1.07E-03
		Be-7	1.34E-01	3.74E-02	3.24E-02
		K-40	3.60E-02	2.12E-02	2.42E-02
531041	9/29/2020 - 10/6/2020	Beta	1.79E-02	2.90E-03	3.13E-03





# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
531659	10/6/2020 - 10/13/2020	Beta	2.46E-02	3.31E-03	3.42E-03
532055	10/13/2020 - 10/20/2020	Beta	1.78E-02	3.05E-03	3.51E-03
532487	10/20/2020 - 10/27/2020	Beta	9.58E-03	2.55E-03	3.41E-03
532795	10/27/2020 - 11/3/2020	Beta	1.32E-02	2.76E-03	3.41E-03
533322	11/3/2020 - 11/10/2020	Beta	1.72E-02	2.84E-03	3.09E-03
533776	11/10/2020 - 11/17/2020	Beta	1.43E-02	2.93E-03	3.65E-03
534084	11/17/2020 - 11/24/2020	Beta	1.27E-02	2.80E-03	3.63E-03
534542	11/24/2020 - 12/1/2020	Beta	2.64E-02	3.43E-03	3.31E-03
534722	12/1/2020 - 12/8/2020	Beta	2.06E-02	2.84E-03	3.04E-03
535316	12/8/2020 - 12/15/2020	Beta	3.42E-02	3.32E-03	2.84E-03
535866	12/15/2020 - 12/22/2020	Beta	1.45E-02	3.07E-03	3.95E-03
536159	12/22/2020 - 12/29/2020	Beta	1.82E-02	2.78E-03	3.16E-03
536717	9/29/2020 - 12/29/2020	Cs-134	<2.02E-03	0.00E+00	2.02E-03
		Cs-137	<1.03E-03	0.00E+00	1.03E-03
		Be-7	1.43E-01	3.63E-02	3.34E-02
		K-40	2.49E-02	1.64E-02	2.09E-02

Sample Point 201 [ INDICATOR - NE @ 0.5 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
515206	12/31/2019 - 1/7/2020	Beta	1.93E-02	5.25E-03	7.02E-03
515450	1/7/2020 - 1/14/2020	Beta	1.28E-02	4.41E-03	6.32E-03
515840	1/14/2020 - 1/21/2020	Beta	2.37E-02	4.70E-03	5.55E-03
516101	1/21/2020 - 1/28/2020	Beta	2.27E-02	5.38E-03	6.70E-03
516454	1/28/2020 - 2/4/2020	Beta	1.53E-02	4.44E-03	6.08E-03
516840	2/4/2020 - 2/11/2020	Beta	2.15E-02	5.62E-03	7.51E-03
517363	2/11/2020 - 2/18/2020	Beta	1.65E-02	5.18E-03	7.17E-03
517633	2/18/2020 - 2/25/2020	Beta	1.95E-02	5.23E-03	6.90E-03



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
518653	2/25/2020 - 3/3/2020	Beta	1.42E-02	5.02E-03	7.19E-03
519272	3/3/2020 - 3/10/2020	Beta	1.78E-02	5.26E-03	7.20E-03
519650	3/10/2020 - 3/17/2020	Beta	1.43E-02	5.38E-03	7.89E-03
520227	3/17/2020 - 3/24/2020	Beta	1.03E-02	4.67E-03	7.01E-03
520459	3/24/2020 - 3/31/2020	Beta	1.38E-02	4.91E-03	7.03E-03
520234	12/31/2019 - 3/31/2020	Cs-134	<2.96E-03	0.00E+00	2.96E-03
		Cs-137	<2.20E-03	0.00E+00	2.20E-03
		Be-7	1.27E-01	4.66E-02	4.72E-02
		K-40	3.85E-02	2.08E-02	7.46E-03
520760	3/31/2020 - 4/7/2020	Beta	1.43E-02	4.80E-03	6.69E-03
521559	4/7/2020 - 4/14/2020	Beta	2.25E-02	2.47E-03	3.03E-03
522293	4/21/2020 - 4/28/2020	Beta	2.09E-02	5.17E-03	6.66E-03
522548	4/28/2020 - 5/5/2020	Beta	1.42E-02	4.90E-03	7.00E-03
523055	5/5/2020 - 5/12/2020	Beta	1.41E-02	4.61E-03	6.39E-03
523428	5/12/2020 - 5/19/2020	Beta	9.34E-03	4.68E-03	7.19E-03
523822	5/19/2020 - 5/26/2020	Beta	1.20E-02	4.17E-03	6.05E-03
524393	5/26/2020 - 6/2/2020	Beta	1.27E-02	4.64E-03	6.69E-03
524715	6/2/2020 - 6/9/2020	Beta	1.96E-02	4.55E-03	5.92E-03
524947	6/9/2020 - 6/16/2020	Beta	1.45E-02	4.82E-03	6.81E-03
525295	6/16/2020 - 6/23/2020	Beta	8.42E-03	3.92E-03	5.97E-03
525544	6/23/2020 - 6/30/2020	Beta	1.38E-02	4.21E-03	5.92E-03
525302	3/31/2020 - 6/30/2020	Cs-134	<2.53E-03	0.00E+00	2.53E-03
		Cs-137	<3.05E-03	0.00E+00	3.05E-03
		Be-7	1.54E-01	4.37E-02	4.26E-02
		K-40	<6.22E-02	0.00E+00	6.22E-02
525893	6/30/2020 - 7/7/2020	Beta	1.65E-02	4.36E-03	5.93E-03
526228	7/7/2020 - 7/14/2020	Beta	1.21E-02	4.52E-03	6.55E-03



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
526507	7/14/2020 - 7/21/2020	Beta	2.88E-02	5.49E-03	6.56E-03
526834	7/21/2020 - 7/28/2020	Beta	9.35E-03	3.80E-03	5.48E-03
527311	7/28/2020 - 8/4/2020	Beta	1.70E-02	2.94E-03	3.23E-03
527605	8/4/2020 - 8/11/2020	Beta	1.58E-02	2.63E-03	3.05E-03
527896	8/11/2020 - 8/18/2020	Beta	1.25E-02	2.72E-03	3.37E-03
528653	8/18/2020 - 8/25/2020	Beta	1.55E-02	2.87E-03	3.39E-03
528869	8/25/2020 - 9/1/2020	Beta	1.67E-02	2.93E-03	3.34E-03
528980	9/1/2020 - 9/8/2020	Beta	2.67E-02	3.07E-03	3.00E-03
529976	9/8/2020 - 9/15/2020	Beta	1.01E-02	2.54E-03	3.31E-03
530271	9/15/2020 - 9/22/2020	Beta	1.51E-02	2.57E-03	3.05E-03
530551	9/22/2020 - 9/29/2020	Beta	1.51E-02	2.88E-03	3.38E-03
531049	6/30/2020 - 9/29/2020	Cs-134	<1.75E-03	0.00E+00	1.75E-03
		Cs-137	<1.44E-03	0.00E+00	1.44E-03
		Be-7	1.21E-01	3.42E-02	3.03E-02
		K-40	<2.64E-02	0.00E+00	2.64E-02
531042	9/29/2020 - 10/6/2020	Beta	1.61E-02	2.80E-03	3.12E-03
531660	10/6/2020 - 10/13/2020	Beta	2.39E-02	3.29E-03	3.43E-03
532056	10/13/2020 - 10/20/2020	Beta	1.71E-02	3.00E-03	3.49E-03
532488	10/20/2020 - 10/27/2020	Beta	8.99E-03	2.51E-03	3.41E-03
532796	10/27/2020 - 11/3/2020	Beta	1.53E-02	2.86E-03	3.39E-03
533323	11/3/2020 - 11/10/2020	Beta	1.51E-02	2.73E-03	3.09E-03
533777	11/10/2020 - 11/17/2020	Beta	1.25E-02	2.83E-03	3.65E-03
534085	11/17/2020 - 11/24/2020	Beta	1.20E-02	2.76E-03	3.62E-03
534543	11/24/2020 - 12/1/2020	Beta	2.13E-02	3.20E-03	3.32E-03
534723	12/1/2020 - 12/8/2020	Beta	1.92E-02	2.77E-03	3.04E-03



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
535317	12/8/2020 - 12/15/2020	Beta	3.36E-02	3.25E-03	2.77E-03
535867	12/15/2020 - 12/22/2020	Beta	1.50E-02	3.16E-03	4.05E-03
536160	12/22/2020 - 12/29/2020	Beta	1.90E-02	2.81E-03	3.16E-03
536718	9/29/2020 - 12/29/2020	Cs-134	<1.66E-03	0.00E+00	1.66E-03
		Cs-137	<1.06E-03	0.00E+00	1.06E-03
		Be-7	1.46E-01	3.72E-02	3.40E-02
		K-40	<2.72E-02	0.00E+00	2.72E-02

Sample Point 202 [ INDICATOR - S @ 1 miles ]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
515207	12/31/2019 - 1/7/2020	Beta	1.78E-02	5.29E-03	7.24E-03
515451	1/7/2020 - 1/14/2020	Beta	1.23E-02	4.51E-03	6.57E-03
515841	1/14/2020 - 1/21/2020	Beta	1.81E-02	4.49E-03	5.75E-03
516102	1/21/2020 - 1/28/2020	Beta	1.81E-02	5.22E-03	6.93E-03
516455	1/28/2020 - 2/4/2020	Beta	1.92E-02	4.81E-03	6.33E-03
516841	2/4/2020 - 2/11/2020	Beta	1.23E-02	5.22E-03	7.80E-03
517364	2/11/2020 - 2/18/2020	Beta	1.41E-02	5.20E-03	7.48E-03
517634	2/18/2020 - 2/25/2020	Beta	1.69E-02	5.24E-03	7.20E-03
518654	2/25/2020 - 3/3/2020	Beta	1.15E-02	5.03E-03	7.52E-03
519273	3/3/2020 - 3/10/2020	Beta	1.21E-02	5.09E-03	7.53E-03
519651	3/10/2020 - 3/17/2020	Beta	2.05E-02	5.96E-03	8.27E-03
520228	3/17/2020 - 3/24/2020	Beta	1.30E-02	5.02E-03	7.32E-03
520460	3/24/2020 - 3/31/2020	Beta	1.95E-02	5.44E-03	7.35E-03
520235	12/31/2019 - 3/31/2020	Cs-134	<1.52E-03	0.00E+00	1.52E-03
		Cs-137	<1.37E-03	0.00E+00	1.37E-03
		Be-7	1.68E-01	3.50E-02	3.53E-02
		K-40	5.86E-02	2.02E-02	2.43E-02
520761	3/31/2020 - 4/7/2020	Beta	1.58E-02	5.12E-03	7.07E-03
521560	4/7/2020 - 4/14/2020	Beta	2.51E-02	2.62E-03	3.18E-03



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
521995	4/14/2020 - 4/21/2020	Beta	2.26E-02	5.64E-03	7.29E-03
522294	4/21/2020 - 4/28/2020	Beta	1.83E-02	5.62E-03	7.70E-03
522549	4/28/2020 - 5/5/2020	Beta	1.28E-02	4.53E-03	6.50E-03
523056	5/5/2020 - 5/12/2020	Beta	1.83E-02	4.56E-03	5.86E-03
523429	5/12/2020 - 5/19/2020	Beta	8.39E-03	4.30E-03	6.61E-03
523823	5/19/2020 - 5/26/2020	Beta	1.11E-02	3.87E-03	5.63E-03
524394	5/26/2020 - 6/2/2020	Beta	1.36E-02	4.38E-03	6.15E-03
524716	6/2/2020 - 6/9/2020	Beta	1.60E-02	4.08E-03	5.47E-03
524948	6/9/2020 - 6/16/2020	Beta	1.26E-02	4.42E-03	6.33E-03
525296	6/16/2020 - 6/23/2020	Beta	1.06E-02	3.78E-03	5.50E-03
525545	6/23/2020 - 6/30/2020	Beta	1.58E-02	4.11E-03	5.53E-03
525303	3/31/2020 - 6/30/2020	Cs-134	<1.74E-03	0.00E+00	1.74E-03
		Cs-137	<1.79E-03	0.00E+00	1.79E-03
		Be-7	1.21E-01	3.92E-02	4.63E-02
		K-40	5.41E-02	2.02E-02	4.89E-03
525894	6/30/2020 - 7/7/2020	Beta	1.76E-02	4.21E-03	5.56E-03
526229	7/7/2020 - 7/14/2020	Beta	1.27E-02	4.27E-03	6.02E-03
526508	7/14/2020 - 7/21/2020	Beta	3.01E-02	5.25E-03	6.06E-03
526835	7/21/2020 - 7/28/2020	Beta	1.22E-02	3.84E-03	5.21E-03
527312	7/28/2020 - 8/4/2020	Beta	1.56E-02	4.50E-03	5.97E-03
527606	8/4/2020 - 8/11/2020	Beta	1.03E-02	3.78E-03	5.51E-03
527897	8/11/2020 - 8/18/2020	Beta	1.11E-02	4.25E-03	6.16E-03
528654	8/18/2020 - 8/25/2020	Beta	1.41E-02	2.78E-03	3.37E-03
528870	8/25/2020 - 9/1/2020	Beta	1.47E-02	2.83E-03	3.35E-03
528981	9/1/2020 - 9/8/2020	Beta	2.52E-02	3.01E-03	2.98E-03



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 202 [ INDICATOR - S @ 1 miles ]

Sample ID:	529977	Sample Dates:	9/8/2020 - 9/15/2020	Nuclide	Activity	2 Sigma Error	MDA
				Beta	1.14E-02	2.61E-03	3.31E-03
Sample ID:	530272	Sample Dates:	9/15/2020 - 9/22/2020	Nuclide	Activity	2 Sigma Error	MDA
				Beta	1.40E-02	2.56E-03	3.11E-03
Sample ID:	530552	Sample Dates:	9/22/2020 - 9/29/2020	Nuclide	Activity	2 Sigma Error	MDA
				Beta	1.61E-02	2.89E-03	3.31E-03
Sample ID:	531050	Sample Dates:	6/30/2020 - 9/29/2020	Nuclide	Activity	2 Sigma Error	MDA
				Cs-134	<2.73E-03	0.00E+00	2.73E-03
				Cs-137	<1.48E-03	0.00E+00	1.48E-03
				Be-7	1.36E-01	4.01E-02	3.73E-02
				K-40	<4.52E-02	0.00E+00	4.52E-02
Sample ID:	531043	Sample Dates:	9/29/2020 - 10/6/2020	Nuclide	Activity	2 Sigma Error	MDA
				Beta	1.91E-02	2.97E-03	3.14E-03
Sample ID:	531661	Sample Dates:	10/6/2020 - 10/13/2020	Nuclide	Activity	2 Sigma Error	MDA
				Beta	2.44E-02	3.30E-03	3.41E-03
Sample ID:	532057	Sample Dates:	10/13/2020 - 10/20/2020	Nuclide	Activity	2 Sigma Error	MDA
				Beta	1.42E-02	2.87E-03	3.51E-03
Sample ID:	532489	Sample Dates:	10/20/2020 - 10/27/2020	Nuclide	Activity	2 Sigma Error	MDA
				Beta	9.52E-03	2.54E-03	3.41E-03
Sample ID:	532797	Sample Dates:	10/27/2020 - 11/3/2020	Nuclide	Activity	2 Sigma Error	MDA
				Beta	1.56E-02	2.85E-03	3.37E-03
Sample ID:	533324	Sample Dates:	11/3/2020 - 11/10/2020	Nuclide	Activity	2 Sigma Error	MDA
				Beta	1.77E-02	2.88E-03	3.12E-03
Sample ID:	533778	Sample Dates:	11/10/2020 - 11/17/2020	Nuclide	Activity	2 Sigma Error	MDA
				Beta	1.37E-02	2.90E-03	3.64E-03
Sample ID:	534086	Sample Dates:	11/17/2020 - 11/24/2020	Nuclide	Activity	2 Sigma Error	MDA
				Beta	1.26E-02	2.90E-03	3.80E-03
Sample ID:	534544	Sample Dates:	11/24/2020 - 12/1/2020	Nuclide	Activity	2 Sigma Error	MDA
				Beta	2.34E-02	3.20E-03	3.16E-03
Sample ID:	534724	Sample Dates:	12/1/2020 - 12/8/2020	Nuclide	Activity	2 Sigma Error	MDA
				Beta	2.35E-02	2.96E-03	3.04E-03
Sample ID:	535318	Sample Dates:	12/8/2020 - 12/15/2020	Nuclide	Activity	2 Sigma Error	MDA
				Beta	3.43E-02	3.32E-03	2.84E-03
Sample ID:	535868	Sample Dates:	12/15/2020 - 12/22/2020	Nuclide	Activity	2 Sigma Error	MDA
				Beta	1.44E-02	3.06E-03	3.94E-03
Sample ID:	536161	Sample Dates:	12/22/2020 - 12/29/2020	Nuclide	Activity	2 Sigma Error	MDA
				Beta	1.59E-02	2.67E-03	3.17E-03
Sample ID:	536719	Sample Dates:	9/29/2020 - 12/29/2020	Nuclide	Activity	2 Sigma Error	MDA
				Cs-134	<2.22E-03	0.00E+00	2.22E-03
				Cs-137	<1.82E-03	0.00E+00	1.82E-03
				Be-7	1.48E-01	4.05E-02	4.17E-02
				K-40	<2.57E-02	0.00E+00	2.57E-02

Sample Point 203 [ INDICATOR - SSW @ 2 miles ]

Sample ID:	515208	Sample Dates:	12/31/2019 - 1/7/2020	Nuclide	Activity	2 Sigma Error	MDA
				Beta	1.25E-02	4.72E-03	6.81E-03
Sample ID:	515452	Sample Dates:	1/7/2020 - 1/14/2020	Nuclide	Activity	2 Sigma Error	MDA
				Beta	1.03E-02	4.05E-03	5.97E-03

# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
515842	1/14/2020 - 1/21/2020	Beta	1.67E-02	3.99E-03	5.04E-03
516103	1/21/2020 - 1/28/2020	Beta	1.65E-02	4.55E-03	5.96E-03
516456	1/28/2020 - 2/4/2020	Beta	1.54E-02	4.01E-03	5.34E-03
516842	2/4/2020 - 2/11/2020	Beta	1.31E-02	4.40E-03	6.25E-03
517365	2/11/2020 - 2/18/2020	Beta	1.64E-02	4.41E-03	5.84E-03
517635	2/18/2020 - 2/25/2020	Beta	1.87E-02	4.38E-03	5.54E-03
518655	2/25/2020 - 3/3/2020	Beta	1.09E-02	3.85E-03	5.51E-03
519274	3/3/2020 - 3/10/2020	Beta	1.10E-02	3.70E-03	5.23E-03
519652	3/10/2020 - 3/17/2020	Beta	1.32E-02	4.01E-03	5.60E-03
520229	3/17/2020 - 3/24/2020	Beta	1.24E-02	3.60E-03	4.89E-03
520461	3/24/2020 - 3/31/2020	Beta	1.57E-02	3.75E-03	4.82E-03
520236	12/31/2019 - 3/31/2020	Cs-134	<1.30E-03	0.00E+00	1.30E-03
		Cs-137	<1.23E-03	0.00E+00	1.23E-03
		Be-7	1.50E-01	3.78E-02	4.34E-02
		K-40	5.67E-02	1.78E-02	1.52E-02
520762	3/31/2020 - 4/7/2020	Beta	1.16E-02	4.58E-03	6.61E-03
521561	4/7/2020 - 4/14/2020	Beta	2.06E-02	2.34E-03	2.90E-03
521996	4/14/2020 - 4/21/2020	Beta	2.32E-02	5.20E-03	6.49E-03
522295	4/21/2020 - 4/28/2020	Beta	1.78E-02	6.01E-03	8.42E-03
522550	4/28/2020 - 5/5/2020	Beta	1.89E-02	5.17E-03	6.99E-03
523057	5/5/2020 - 5/12/2020	Beta	2.26E-02	5.10E-03	6.36E-03
523430	5/12/2020 - 5/19/2020	Beta	1.05E-02	4.75E-03	7.17E-03
523824	5/19/2020 - 5/26/2020	Beta	8.40E-03	3.95E-03	6.03E-03
524395	5/26/2020 - 6/2/2020	Beta	1.41E-02	4.68E-03	6.62E-03
524717	6/2/2020 - 6/9/2020	Beta	1.59E-02	4.32E-03	5.89E-03



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
524949	6/9/2020 - 6/16/2020	Beta	1.38E-02	4.77E-03	6.80E-03
525297	6/16/2020 - 6/23/2020	Beta	9.72E-03	3.99E-03	5.96E-03
525546	6/23/2020 - 6/30/2020	Beta	1.11E-02	4.06E-03	5.93E-03
525304	3/31/2020 - 6/30/2020	Cs-134	<2.39E-03	0.00E+00	2.39E-03
		Cs-137	<1.69E-03	0.00E+00	1.69E-03
		Be-7	1.24E-01	3.93E-02	4.95E-02
		K-40	5.60E-02	2.37E-02	2.79E-02
525895	6/30/2020 - 7/7/2020	Beta	1.59E-02	4.36E-03	5.99E-03
526230	7/7/2020 - 7/14/2020	Beta	9.94E-03	4.34E-03	6.47E-03
526509	7/14/2020 - 7/21/2020	Beta	2.27E-02	5.14E-03	6.53E-03
526836	7/21/2020 - 7/28/2020	Beta	1.05E-02	3.96E-03	5.63E-03
527313	7/28/2020 - 8/4/2020	Beta	1.77E-02	5.02E-03	6.64E-03
527607	8/4/2020 - 8/11/2020	Beta	1.10E-02	4.52E-03	6.74E-03
527898	8/11/2020 - 8/18/2020	Beta	1.16E-02	4.59E-03	6.69E-03
528655	8/18/2020 - 8/25/2020	Beta	1.42E-02	2.80E-03	3.38E-03
528871	8/25/2020 - 9/1/2020	Beta	1.62E-02	2.91E-03	3.35E-03
528982	9/1/2020 - 9/8/2020	Beta	2.65E-02	3.06E-03	2.98E-03
529978	9/8/2020 - 9/15/2020	Beta	1.06E-02	2.59E-03	3.35E-03
530273	9/15/2020 - 9/22/2020	Beta	1.58E-02	2.65E-03	3.12E-03
530553	9/22/2020 - 9/29/2020	Beta	1.57E-02	2.87E-03	3.31E-03
531051	6/30/2020 - 9/29/2020	Cs-134	<1.73E-03	0.00E+00	1.73E-03
		Cs-137	<1.84E-03	0.00E+00	1.84E-03
		Be-7	1.48E-01	4.39E-02	4.65E-02
		K-40	4.27E-02	2.27E-02	2.31E-02
531044	9/29/2020 - 10/6/2020	Beta	1.94E-02	3.00E-03	3.15E-03
531662	10/6/2020 - 10/13/2020	Beta	2.42E-02	3.30E-03	3.42E-03
532058	10/13/2020 - 10/20/2020	Beta	1.55E-02	2.93E-03	3.50E-03





# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
532490	10/20/2020 - 10/27/2020	Beta	1.05E-02	2.60E-03	3.40E-03
532798	10/27/2020 - 11/3/2020	Beta	1.25E-02	2.70E-03	3.38E-03
533325	11/3/2020 - 11/10/2020	Beta	1.63E-02	2.80E-03	3.11E-03
533779	11/10/2020 - 11/17/2020	Beta	1.48E-02	2.96E-03	3.65E-03
534087	11/17/2020 - 11/24/2020	Beta	1.25E-02	2.88E-03	3.81E-03
534545	11/24/2020 - 12/1/2020	Beta	2.37E-02	3.21E-03	3.15E-03
534725	12/1/2020 - 12/8/2020	Beta	2.10E-02	2.86E-03	3.04E-03
535319	12/8/2020 - 12/15/2020	Beta	3.13E-02	3.21E-03	2.84E-03
535869	12/15/2020 - 12/22/2020	Beta	1.46E-02	3.07E-03	3.94E-03
536162	12/22/2020 - 12/29/2020	Beta	1.82E-02	2.77E-03	3.16E-03
536720	9/29/2020 - 12/29/2020	Cs-134	<2.13E-03	0.00E+00	2.13E-03
		Cs-137	<1.19E-03	0.00E+00	1.19E-03
		Be-7	1.19E-01	3.43E-02	3.57E-02
		K-40	<3.93E-02	0.00E+00	3.93E-02

Sample Point 204 [ CONTROL - NNE @ 22.4 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
515209	12/31/2019 - 1/7/2020	Beta	1.92E-02	5.34E-03	7.18E-03
515453	1/7/2020 - 1/14/2020	Beta	1.03E-02	4.22E-03	6.27E-03
515843	1/14/2020 - 1/21/2020	Beta	2.08E-02	4.44E-03	5.39E-03
516104	1/21/2020 - 1/28/2020	Beta	2.30E-02	5.39E-03	6.70E-03
516457	1/28/2020 - 2/4/2020	Beta	1.57E-02	4.48E-03	6.13E-03
516843	2/4/2020 - 2/11/2020	Beta	1.49E-02	5.24E-03	7.53E-03
517366	2/11/2020 - 2/18/2020	Beta	1.55E-02	5.10E-03	7.15E-03
517636	2/18/2020 - 2/25/2020	Beta	2.08E-02	5.28E-03	6.82E-03
518656	2/25/2020 - 3/3/2020	Beta	1.82E-02	5.26E-03	7.20E-03
519275	3/3/2020 - 3/10/2020	Beta	1.46E-02	5.03E-03	7.15E-03



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
519653	3/10/2020 - 3/17/2020	Beta	1.54E-02	5.43E-03	7.84E-03
520230	3/17/2020 - 3/24/2020	Beta	1.33E-02	4.86E-03	6.99E-03
520462	3/24/2020 - 3/31/2020	Beta	1.57E-02	5.02E-03	6.99E-03
520237	12/31/2019 - 3/31/2020	Cs-134	<2.01E-03	0.00E+00	2.01E-03
		Cs-137	<1.43E-03	0.00E+00	1.43E-03
		Be-7	1.73E-01	3.83E-02	3.51E-02
		K-40	<1.42E-02	0.00E+00	1.42E-02
520763	3/31/2020 - 4/7/2020	Beta	1.30E-02	4.77E-03	6.78E-03
521562	4/7/2020 - 4/14/2020	Beta	2.71E-02	5.99E-03	9.09E-03
521997	4/14/2020 - 4/21/2020	Beta	2.40E-02	5.65E-03	7.17E-03
522296	4/21/2020 - 4/28/2020	Beta	1.36E-02	4.73E-03	6.68E-03
522551	4/28/2020 - 5/5/2020	Beta	1.73E-02	5.16E-03	7.15E-03
523058	5/5/2020 - 5/12/2020	Beta	2.08E-02	5.04E-03	6.43E-03
523431	5/12/2020 - 5/19/2020	Beta	9.85E-03	4.77E-03	7.29E-03
523825	5/19/2020 - 5/26/2020	Beta	9.87E-03	4.14E-03	6.21E-03
524396	5/26/2020 - 6/2/2020	Beta	6.91E-03	4.26E-03	6.71E-03
524718	6/2/2020 - 6/9/2020	Beta	1.96E-02	4.60E-03	6.01E-03
524950	6/9/2020 - 6/16/2020	Beta	1.47E-02	4.90E-03	6.93E-03
525298	6/16/2020 - 6/23/2020	Beta	1.15E-02	4.18E-03	6.08E-03
525547	6/23/2020 - 6/30/2020	Beta	1.67E-02	4.46E-03	6.06E-03
525305	3/31/2020 - 6/30/2020	Cs-134	<2.12E-03	0.00E+00	2.12E-03
		Cs-137	<2.12E-03	0.00E+00	2.12E-03
		Be-7	1.55E-01	4.19E-02	4.82E-02
		K-40	4.65E-02	2.16E-02	2.59E-02
525896	6/30/2020 - 7/7/2020	Beta	1.80E-02	4.47E-03	5.98E-03
526231	7/7/2020 - 7/14/2020	Beta	1.29E-02	4.65E-03	6.67E-03
526510	7/14/2020 - 7/21/2020	Beta	2.41E-02	5.31E-03	6.69E-03

# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
526837	7/21/2020 - 7/28/2020	Beta	1.39E-02	4.33E-03	5.85E-03
527314	7/28/2020 - 8/4/2020	Beta	1.46E-02	4.56E-03	6.20E-03
527608	8/4/2020 - 8/11/2020	Beta	9.95E-03	4.07E-03	6.04E-03
527899	8/11/2020 - 8/18/2020	Beta	1.40E-02	4.79E-03	6.77E-03
528656	8/18/2020 - 8/25/2020	Beta	1.73E-02	2.94E-03	3.36E-03
528872	8/25/2020 - 9/1/2020	Beta	1.73E-02	2.97E-03	3.35E-03
528983	9/1/2020 - 9/8/2020	Beta	2.03E-02	2.82E-03	3.01E-03
529979	9/8/2020 - 9/15/2020	Beta	7.23E-03	2.34E-03	3.28E-03
530274	9/15/2020 - 9/22/2020	Beta	1.47E-02	2.62E-03	3.15E-03
530554	9/22/2020 - 9/29/2020	Beta	1.70E-02	2.92E-03	3.29E-03
531052	6/30/2020 - 9/29/2020	Cs-134	<2.39E-03	0.00E+00	2.39E-03
		Cs-137	<2.12E-03	0.00E+00	2.12E-03
		Be-7	1.90E-01	4.43E-02	3.20E-02
		K-40	2.49E-02	1.68E-02	1.81E-02
531045	9/29/2020 - 10/6/2020	Beta	1.93E-02	2.96E-03	3.12E-03
531663	10/6/2020 - 10/13/2020	Beta	2.29E-02	3.23E-03	3.41E-03
532059	10/13/2020 - 10/20/2020	Beta	1.91E-02	3.11E-03	3.50E-03
532491	10/20/2020 - 10/27/2020	Beta	1.04E-02	2.60E-03	3.42E-03
532799	10/27/2020 - 11/3/2020	Beta	1.19E-02	2.67E-03	3.40E-03
533326	11/3/2020 - 11/10/2020	Beta	1.85E-02	2.91E-03	3.10E-03
533780	11/10/2020 - 11/17/2020	Beta	1.30E-02	2.85E-03	3.64E-03
534088	11/17/2020 - 11/24/2020	Beta	1.29E-02	2.88E-03	3.76E-03
534546	11/24/2020 - 12/1/2020	Beta	2.54E-02	3.31E-03	3.18E-03
534726	12/1/2020 - 12/8/2020	Beta	2.07E-02	2.84E-03	3.04E-03
535320	12/8/2020 - 12/15/2020	Beta	3.21E-02	3.23E-03	2.83E-03



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
535870	12/15/2020 - 12/22/2020	Beta	1.40E-02	3.04E-03	3.93E-03
536163	12/22/2020 - 12/29/2020	Beta	1.79E-02	2.77E-03	3.18E-03
536721	9/29/2020 - 12/29/2020	Cs-134	<1.46E-03	0.00E+00	1.46E-03
		Cs-137	<1.57E-03	0.00E+00	1.57E-03
		Be-7	1.53E-01	3.67E-02	3.04E-02
		K-40	2.16E-02	1.34E-02	1.36E-02

Sample Point 205 [ INDICATOR - SSE @ 0.6 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
515210	12/31/2019 - 1/7/2020	Beta	1.96E-02	5.24E-03	6.95E-03
515454	1/7/2020 - 1/14/2020	Beta	1.11E-02	4.28E-03	6.30E-03
515844	1/14/2020 - 1/21/2020	Beta	1.90E-02	4.43E-03	5.55E-03
516105	1/21/2020 - 1/28/2020	Beta	2.18E-02	5.31E-03	6.70E-03
516458	1/28/2020 - 2/4/2020	Beta	1.37E-02	4.34E-03	6.08E-03
516844	2/4/2020 - 2/11/2020	Beta	1.53E-02	5.22E-03	7.45E-03
517367	2/11/2020 - 2/18/2020	Beta	1.11E-02	4.82E-03	7.17E-03
517637	2/18/2020 - 2/25/2020	Beta	2.26E-02	5.41E-03	6.88E-03
518657	2/25/2020 - 3/3/2020	Beta	1.88E-02	5.32E-03	7.23E-03
519276	3/3/2020 - 3/10/2020	Beta	1.55E-02	5.12E-03	7.21E-03
519654	3/10/2020 - 3/17/2020	Beta	1.12E-02	5.17E-03	7.86E-03
520231	3/17/2020 - 3/24/2020	Beta	1.16E-02	4.77E-03	7.05E-03
520463	3/24/2020 - 3/31/2020	Beta	1.79E-02	5.16E-03	7.02E-03
520238	12/31/2019 - 3/31/2020	Cs-134	<1.66E-03	0.00E+00	1.66E-03
		Cs-137	<1.88E-03	0.00E+00	1.88E-03
		Be-7	1.28E-01	4.32E-02	4.96E-02
		K-40	<3.30E-02	0.00E+00	3.30E-02
520764	3/31/2020 - 4/7/2020	Beta	1.53E-02	4.87E-03	6.68E-03
521563	4/7/2020 - 4/14/2020	Beta	2.25E-02	2.48E-03	3.06E-03
521998	4/14/2020 - 4/21/2020	Beta	2.30E-02	5.46E-03	6.93E-03



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
522297	4/21/2020 - 4/28/2020	Beta	2.08E-02	6.04E-03	8.15E-03
522552	4/28/2020 - 5/5/2020	Beta	1.64E-02	5.06E-03	7.06E-03
523059	5/5/2020 - 5/12/2020	Beta	1.70E-02	4.79E-03	6.41E-03
523432	5/12/2020 - 5/19/2020	Beta	1.21E-02	4.85E-03	7.18E-03
523826	5/19/2020 - 5/26/2020	Beta	8.91E-03	4.03E-03	6.13E-03
524397	5/26/2020 - 6/2/2020	Beta	1.19E-02	4.58E-03	6.69E-03
524719	6/2/2020 - 6/9/2020	Beta	1.59E-02	4.36E-03	5.95E-03
524951	6/9/2020 - 6/16/2020	Beta	9.72E-03	4.57E-03	6.91E-03
525299	6/16/2020 - 6/23/2020	Beta	9.63E-03	4.01E-03	6.01E-03
525548	6/23/2020 - 6/30/2020	Beta	1.46E-02	4.32E-03	6.03E-03
525306	3/31/2020 - 6/30/2020	Cs-134	<2.66E-03	0.00E+00	2.66E-03
		Cs-137	<2.39E-03	0.00E+00	2.39E-03
		Be-7	1.62E-01	4.96E-02	4.88E-02
		K-40	<2.54E-02	0.00E+00	2.54E-02
525897	6/30/2020 - 7/7/2020	Beta	1.72E-02	4.49E-03	6.08E-03
526232	7/7/2020 - 7/14/2020	Beta	7.43E-03	4.24E-03	6.58E-03
526511	7/14/2020 - 7/21/2020	Beta	2.20E-02	5.14E-03	6.62E-03
526838	7/21/2020 - 7/28/2020	Beta	1.19E-02	4.11E-03	5.72E-03
527315	7/28/2020 - 8/4/2020	Beta	1.55E-02	4.92E-03	6.72E-03
527609	8/4/2020 - 8/11/2020	Beta	8.81E-03	4.47E-03	6.88E-03
527900	8/11/2020 - 8/18/2020	Beta	1.21E-02	4.69E-03	6.82E-03
528657	8/18/2020 - 8/25/2020	Beta	1.28E-02	2.70E-03	3.34E-03
528874	8/25/2020 - 9/1/2020	Beta	1.58E-02	2.88E-03	3.35E-03
528984	9/1/2020 - 9/8/2020	Beta	2.07E-02	2.82E-03	2.99E-03
529980	9/8/2020 - 9/15/2020	Beta	9.48E-03	2.49E-03	3.29E-03



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
530275	9/15/2020 - 9/22/2020	Beta	1.35E-02	2.53E-03	3.11E-03
530555	9/22/2020 - 9/29/2020	Beta	1.65E-02	2.92E-03	3.32E-03
531053	6/30/2020 - 9/29/2020	Cs-134	<1.71E-03	0.00E+00	1.71E-03
		Cs-137	<2.28E-03	0.00E+00	2.28E-03
		Be-7	1.17E-01	3.71E-02	3.69E-02
		K-40	3.84E-02	2.62E-02	3.58E-02
531046	9/29/2020 - 10/6/2020	Beta	1.91E-02	2.97E-03	3.15E-03
531664	10/6/2020 - 10/13/2020	Beta	1.89E-02	3.05E-03	3.42E-03
532060	10/13/2020 - 10/20/2020	Beta	1.49E-02	2.90E-03	3.51E-03
532492	10/20/2020 - 10/27/2020	Beta	7.45E-03	2.42E-03	3.40E-03
532800	10/27/2020 - 11/3/2020	Beta	1.56E-02	2.81E-03	3.30E-03
533327	11/3/2020 - 11/10/2020	Beta	1.51E-02	2.78E-03	3.18E-03
533781	11/10/2020 - 11/17/2020	Beta	1.24E-02	2.83E-03	3.64E-03
534089	11/17/2020 - 11/24/2020	Beta	1.28E-02	2.91E-03	3.82E-03
534547	11/24/2020 - 12/1/2020	Beta	2.46E-02	3.24E-03	3.14E-03
534727	12/1/2020 - 12/8/2020	Beta	1.87E-02	2.75E-03	3.05E-03
535321	12/8/2020 - 12/15/2020	Beta	2.97E-02	3.14E-03	2.83E-03
535871	12/15/2020 - 12/22/2020	Beta	1.51E-02	3.09E-03	3.94E-03
536164	12/22/2020 - 12/29/2020	Beta	1.94E-02	2.83E-03	3.17E-03
536722	9/29/2020 - 12/29/2020	Cs-134	<1.25E-03	0.00E+00	1.25E-03
		Cs-137	<1.19E-03	0.00E+00	1.19E-03
		Be-7	1.33E-01	3.54E-02	3.38E-02
		K-40	3.39E-02	1.71E-02	1.69E-02

Sample Point 206 [ CONTROL - NW @ 11.3 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
515211	12/31/2019 - 1/7/2020	Beta	1.72E-02	5.20E-03	7.13E-03
515455	1/7/2020 - 1/14/2020	Beta	1.18E-02	4.30E-03	6.24E-03
515845	1/14/2020 - 1/21/2020	Beta	2.27E-02	4.64E-03	5.54E-03



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
516106	1/21/2020 - 1/28/2020	Beta	2.00E-02	5.19E-03	6.64E-03
516459	1/28/2020 - 2/4/2020	Beta	1.70E-02	4.53E-03	6.07E-03
516845	2/4/2020 - 2/11/2020	Beta	3.03E-02	6.10E-03	7.45E-03
517368	2/11/2020 - 2/18/2020	Beta	1.58E-02	5.10E-03	7.12E-03
517638	2/18/2020 - 2/25/2020	Beta	2.21E-02	5.34E-03	6.82E-03
518658	2/25/2020 - 3/3/2020	Beta	1.25E-02	4.91E-03	7.19E-03
519277	3/3/2020 - 3/10/2020	Beta	1.32E-02	4.94E-03	7.14E-03
519655	3/10/2020 - 3/17/2020	Beta	1.44E-02	5.37E-03	7.83E-03
520232	3/17/2020 - 3/24/2020	Beta	1.65E-02	5.05E-03	6.96E-03
520464	3/24/2020 - 3/31/2020	Beta	1.45E-02	4.91E-03	6.95E-03
520239	12/31/2019 - 3/31/2020	Cs-134	<1.31E-03	0.00E+00	1.31E-03
		Cs-137	<1.00E-03	0.00E+00	1.00E-03
		Be-7	1.13E-01	3.31E-02	4.43E-02
		K-40	5.23E-02	1.68E-02	1.93E-02
520765	3/31/2020 - 4/7/2020	Beta	1.07E-02	4.61E-03	6.78E-03
521564	4/7/2020 - 4/14/2020	Beta	2.10E-02	2.38E-03	2.95E-03
521999	4/14/2020 - 4/21/2020	Beta	1.97E-02	5.29E-03	6.98E-03
522298	4/21/2020 - 4/28/2020	Beta	1.87E-02	5.18E-03	7.46E-03
522553	4/28/2020 - 5/5/2020	Beta	2.60E-02	5.67E-03	7.10E-03
523060	5/5/2020 - 5/12/2020	Beta	2.00E-02	4.97E-03	6.38E-03
523433	5/12/2020 - 5/19/2020	Beta	1.02E-02	4.78E-03	7.27E-03
523827	5/19/2020 - 5/26/2020	Beta	1.10E-02	4.20E-03	6.19E-03
524398	5/26/2020 - 6/2/2020	Beta	8.51E-03	4.38E-03	6.73E-03
524720	6/2/2020 - 6/9/2020	Beta	1.56E-02	4.39E-03	6.01E-03
524952	6/9/2020 - 6/16/2020	Beta	1.30E-02	4.81E-03	6.97E-03



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
525300	6/16/2020 - 6/23/2020	Beta	1.10E-02	4.15E-03	6.11E-03
525549	6/23/2020 - 6/30/2020	Beta	1.55E-02	4.41E-03	6.09E-03
525307	3/31/2020 - 6/30/2020	Cs-134	<2.42E-03	0.00E+00	2.42E-03
		Cs-137	<2.33E-03	0.00E+00	2.33E-03
		Be-7	1.56E-01	4.66E-02	4.58E-02
		K-40	<4.14E-02	0.00E+00	4.14E-02
525898	6/30/2020 - 7/7/2020	Beta	1.78E-02	4.51E-03	6.05E-03
526233	7/7/2020 - 7/14/2020	Beta	8.64E-03	4.43E-03	6.76E-03
526512	7/14/2020 - 7/21/2020	Beta	2.64E-02	5.50E-03	6.77E-03
526839	7/21/2020 - 7/28/2020	Beta	1.18E-02	4.23E-03	5.93E-03
527316	7/28/2020 - 8/4/2020	Beta	2.06E-02	5.20E-03	6.61E-03
527610	8/4/2020 - 8/11/2020	Beta	1.34E-02	4.56E-03	6.52E-03
527901	8/11/2020 - 8/18/2020	Beta	1.31E-02	4.79E-03	6.84E-03
528658	8/18/2020 - 8/25/2020	Beta	1.21E-02	2.67E-03	3.36E-03
528875	8/25/2020 - 9/1/2020	Beta	1.87E-02	3.05E-03	3.36E-03
528985	9/1/2020 - 9/8/2020	Beta	2.27E-02	2.93E-03	3.01E-03
529981	9/8/2020 - 9/15/2020	Beta	9.44E-03	2.49E-03	3.28E-03
530276	9/15/2020 - 9/22/2020	Beta	1.64E-02	2.69E-03	3.15E-03
530556	9/22/2020 - 9/29/2020	Beta	1.57E-02	2.86E-03	3.29E-03
531054	6/30/2020 - 9/29/2020	Cs-134	<2.05E-03	0.00E+00	2.05E-03
		Cs-137	<1.46E-03	0.00E+00	1.46E-03
		Be-7	1.56E-01	4.49E-02	4.54E-02
		K-40	<3.54E-02	0.00E+00	3.54E-02
531047	9/29/2020 - 10/6/2020	Beta	1.95E-02	2.98E-03	3.12E-03
531665	10/6/2020 - 10/13/2020	Beta	2.32E-02	3.24E-03	3.40E-03
532061	10/13/2020 - 10/20/2020	Beta	1.58E-02	2.95E-03	3.50E-03
532493	10/20/2020 - 10/27/2020	Beta	7.74E-03	2.45E-03	3.42E-03





# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
532801	10/27/2020 - 11/3/2020	Beta	1.30E-02	2.74E-03	3.40E-03
533328	11/3/2020 - 11/10/2020	Beta	2.09E-02	3.04E-03	3.11E-03
533782	11/10/2020 - 11/17/2020	Beta	1.31E-02	2.87E-03	3.64E-03
534090	11/17/2020 - 11/24/2020	Beta	1.11E-02	2.79E-03	3.76E-03
534548	11/24/2020 - 12/1/2020	Beta	2.21E-02	3.16E-03	3.19E-03
534728	12/1/2020 - 12/8/2020	Beta	1.90E-02	2.77E-03	3.04E-03
535322	12/8/2020 - 12/15/2020	Beta	3.02E-02	3.17E-03	2.83E-03
535872	12/15/2020 - 12/22/2020	Beta	1.28E-02	2.98E-03	3.93E-03
536165	12/22/2020 - 12/29/2020	Beta	1.95E-02	2.85E-03	3.18E-03
536723	9/29/2020 - 12/29/2020	Cs-134	<1.49E-03	0.00E+00	1.49E-03
		Cs-137	<3.08E-04	0.00E+00	3.08E-04
		Be-7	1.30E-01	3.71E-02	3.91E-02
		K-40	<3.22E-02	0.00E+00	3.22E-02

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
515212	12/31/2019 - 1/7/2020	I-131	<4.14E-02	0.00E+00	4.14E-02
		Cs-134	<4.10E-02	0.00E+00	4.10E-02
		Cs-137	<2.64E-02	0.00E+00	2.64E-02
		Be-7	<2.22E-01	0.00E+00	2.22E-01
		K-40	8.51E-01	3.59E-01	3.80E-01
515456	1/7/2020 - 1/14/2020	I-131	<3.08E-02	0.00E+00	3.08E-02
		Cs-134	<2.38E-02	0.00E+00	2.38E-02
		Cs-137	<2.34E-02	0.00E+00	2.34E-02
		Be-7	<1.92E-01	0.00E+00	1.92E-01
		K-40	1.41E+00	3.14E-01	1.95E-01
515846	1/14/2020 - 1/21/2020	I-131	<3.43E-02	0.00E+00	3.43E-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	<2.43E-01	0.00E+00	2.43E-01
		K-40	1.09E+00	4.16E-01	4.38E-01
516107	1/21/2020 - 1/28/2020	I-131	<4.44E-02	0.00E+00	4.44E-02
		Cs-134	<4.71E-02	0.00E+00	4.71E-02
		Cs-137	<3.64E-02	0.00E+00	3.64E-02
		Be-7	<2.47E-01	0.00E+00	2.47E-01
		K-40	1.23E+00	4.31E-01	4.19E-01
516460	1/28/2020 - 2/4/2020	I-131	<5.29E-02	0.00E+00	5.29E-02



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
516460	1/28/2020 - 2/4/2020	Cs-134	<3.62E-02	0.00E+00	3.62E-02
		Cs-137	<3.69E-02	0.00E+00	3.69E-02
		Be-7	<3.30E-01	0.00E+00	3.30E-01
		K-40	1.15E+00	5.00E-01	6.33E-01
516846	2/4/2020 - 2/11/2020	I-131	<2.94E-02	0.00E+00	2.94E-02
		Cs-134	<3.29E-02	0.00E+00	3.29E-02
		Cs-137	<2.53E-02	0.00E+00	2.53E-02
		Be-7	<2.09E-01	0.00E+00	2.09E-01
		K-40	4.80E-01	3.07E-01	4.06E-01
517369	2/11/2020 - 2/18/2020	I-131	<4.26E-02	0.00E+00	4.26E-02
		Cs-134	<3.78E-02	0.00E+00	3.78E-02
		Cs-137	<3.23E-02	0.00E+00	3.23E-02
		Be-7	<3.37E-01	0.00E+00	3.37E-01
		K-40	1.75E+00	5.24E-01	4.86E-01
517639	2/18/2020 - 2/25/2020	I-131	<5.52E-02	0.00E+00	5.52E-02
		Cs-134	<3.45E-02	0.00E+00	3.45E-02
		Cs-137	<3.42E-02	0.00E+00	3.42E-02
		Be-7	<2.01E-01	0.00E+00	2.01E-01
		K-40	8.81E-01	3.79E-01	4.36E-01
518659	2/25/2020 - 3/3/2020	I-131	<3.84E-02	0.00E+00	3.84E-02
		Cs-134	<4.04E-02	0.00E+00	4.04E-02
		Cs-137	<3.61E-02	0.00E+00	3.61E-02
		Be-7	<2.42E-01	0.00E+00	2.42E-01
		K-40	1.14E+00	4.35E-01	4.74E-01
519278	3/3/2020 - 3/10/2020	I-131	<4.34E-02	0.00E+00	4.34E-02
		Cs-134	<3.83E-02	0.00E+00	3.83E-02
		Cs-137	<3.28E-02	0.00E+00	3.28E-02
		Be-7	<3.05E-01	0.00E+00	3.05E-01
		K-40	1.81E+00	4.96E-01	3.24E-01
519656	3/10/2020 - 3/17/2020	I-131	<3.73E-02	0.00E+00	3.73E-02
		Cs-134	<2.47E-02	0.00E+00	2.47E-02
		Cs-137	<3.10E-02	0.00E+00	3.10E-02
		Be-7	<2.37E-01	0.00E+00	2.37E-01
		K-40	7.19E-01	3.56E-01	4.28E-01
520240	3/17/2020 - 3/24/2020	I-131	<5.09E-02	0.00E+00	5.09E-02
		Cs-134	<2.92E-02	0.00E+00	2.92E-02
		Cs-137	<3.67E-02	0.00E+00	3.67E-02
		Be-7	<3.33E-01	0.00E+00	3.33E-01
		K-40	1.27E+00	4.99E-01	5.95E-01
520465	3/24/2020 - 3/31/2020	I-131	<4.15E-02	0.00E+00	4.15E-02
		Cs-134	<4.87E-02	0.00E+00	4.87E-02
		Cs-137	<3.78E-02	0.00E+00	3.78E-02
		Be-7	<3.40E-01	0.00E+00	3.40E-01
		K-40	1.34E+00	3.98E-01	7.43E-02
520766	3/31/2020 - 4/7/2020	I-131	<5.52E-02	0.00E+00	5.52E-02
		Cs-134	<2.84E-02	0.00E+00	2.84E-02
		Cs-137	<2.13E-02	0.00E+00	2.13E-02
		Be-7	<2.40E-01	0.00E+00	2.40E-01



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
520766	3/31/2020 - 4/7/2020	K-40	1.07E+00	3.32E-01	3.70E-01
521565	4/7/2020 - 4/14/2020	I-131	<5.60E-02	0.00E+00	5.60E-02
		Cs-134	<3.62E-02	0.00E+00	3.62E-02
		Cs-137	<3.80E-02	0.00E+00	3.80E-02
		Be-7	<2.28E-01	0.00E+00	2.28E-01
		K-40	2.17E+00	5.19E-01	5.82E-01
522000	4/14/2020 - 4/21/2020	I-131	<4.56E-02	0.00E+00	4.56E-02
		Cs-134	<3.67E-02	0.00E+00	3.67E-02
		Cs-137	<2.78E-02	0.00E+00	2.78E-02
		Be-7	<1.88E-01	0.00E+00	1.88E-01
		K-40	6.41E-01	3.60E-01	4.75E-01
522299	4/21/2020 - 4/28/2020	I-131	<3.47E-02	0.00E+00	3.47E-02
		Cs-134	<3.33E-02	0.00E+00	3.33E-02
		Cs-137	<2.87E-02	0.00E+00	2.87E-02
		Be-7	<1.92E-01	0.00E+00	1.92E-01
		K-40	9.17E-01	3.84E-01	4.13E-01
522554	4/28/2020 - 5/5/2020	I-131	<4.16E-02	0.00E+00	4.16E-02
		Cs-134	<3.21E-02	0.00E+00	3.21E-02
		Cs-137	<2.35E-02	0.00E+00	2.35E-02
		Be-7	<1.90E-01	0.00E+00	1.90E-01
		K-40	8.75E-01	3.90E-01	4.71E-01
523061	5/5/2020 - 5/12/2020	I-131	<4.02E-02	0.00E+00	4.02E-02
		Cs-134	<3.79E-02	0.00E+00	3.79E-02
		Cs-137	<2.80E-02	0.00E+00	2.80E-02
		Be-7	<2.25E-01	0.00E+00	2.25E-01
		K-40	1.28E+00	4.08E-01	3.43E-01
523434	5/12/2020 - 5/19/2020	I-131	<3.33E-02	0.00E+00	3.33E-02
		Cs-134	<3.06E-02	0.00E+00	3.06E-02
		Cs-137	<2.50E-02	0.00E+00	2.50E-02
		Be-7	<1.84E-01	0.00E+00	1.84E-01
		K-40	7.48E-01	2.79E-01	6.75E-02
523828	5/19/2020 - 5/26/2020	I-131	<3.28E-02	0.00E+00	3.28E-02
		Cs-134	<3.03E-02	0.00E+00	3.03E-02
		Cs-137	<2.74E-02	0.00E+00	2.74E-02
		Be-7	<1.82E-01	0.00E+00	1.82E-01
		K-40	9.55E-01	3.63E-01	3.64E-01
524399	5/26/2020 - 6/2/2020	I-131	<2.80E-02	0.00E+00	2.80E-02
		Cs-134	<3.23E-02	0.00E+00	3.23E-02
		Cs-137	<1.55E-02	0.00E+00	1.55E-02
		Be-7	<1.97E-01	0.00E+00	1.97E-01
		K-40	6.76E-01	2.66E-01	6.79E-02
524721	6/2/2020 - 6/9/2020	I-131	<3.55E-02	0.00E+00	3.55E-02
		Cs-134	<3.04E-02	0.00E+00	3.04E-02
		Cs-137	<2.75E-02	0.00E+00	2.75E-02
		Be-7	<2.23E-01	0.00E+00	2.23E-01
		K-40	1.11E+00	4.01E-01	4.12E-01



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
524953	6/9/2020 - 6/16/2020	I-131	<3.08E-02	0.00E+00	3.08E-02
		Cs-134	<2.34E-02	0.00E+00	2.34E-02
		Cs-137	<2.37E-02	0.00E+00	2.37E-02
		Be-7	<1.98E-01	0.00E+00	1.98E-01
		K-40	3.61E-01	2.31E-01	2.78E-01
525308	6/16/2020 - 6/23/2020	I-131	<3.76E-02	0.00E+00	3.76E-02
		Cs-134	<3.44E-02	0.00E+00	3.44E-02
		Cs-137	<3.19E-02	0.00E+00	3.19E-02
		Be-7	<1.87E-01	0.00E+00	1.87E-01
		K-40	6.27E-01	3.00E-01	3.31E-01
525550	6/23/2020 - 6/30/2020	I-131	<3.32E-02	0.00E+00	3.32E-02
		Cs-134	<3.56E-02	0.00E+00	3.56E-02
		Cs-137	<3.68E-02	0.00E+00	3.68E-02
		Be-7	<2.06E-01	0.00E+00	2.06E-01
		K-40	7.54E-01	3.09E-01	2.89E-01
525899	6/30/2020 - 7/7/2020	I-131	<3.40E-02	0.00E+00	3.40E-02
		Cs-134	<3.54E-02	0.00E+00	3.54E-02
		Cs-137	<3.56E-02	0.00E+00	3.56E-02
		Be-7	<2.28E-01	0.00E+00	2.28E-01
		K-40	8.21E-01	3.84E-01	4.82E-01
526234	7/7/2020 - 7/14/2020	I-131	<4.20E-02	0.00E+00	4.20E-02
		Cs-134	<2.54E-02	0.00E+00	2.53E-02
		Cs-137	<3.36E-02	0.00E+00	3.36E-02
		Be-7	<2.06E-01	0.00E+00	2.06E-01
		K-40	<7.21E-01	0.00E+00	7.21E-01
526513	7/14/2020 - 7/21/2020	I-131	<3.49E-02	0.00E+00	3.49E-02
		Cs-134	<2.98E-02	0.00E+00	2.98E-02
		Cs-137	<3.06E-02	0.00E+00	3.06E-02
		Be-7	<2.07E-01	0.00E+00	2.07E-01
		K-40	7.98E-01	3.74E-01	4.64E-01
526840	7/21/2020 - 7/28/2020	I-131	<4.67E-02	0.00E+00	4.67E-02
		Cs-134	<3.26E-02	0.00E+00	3.26E-02
		Cs-137	<3.45E-02	0.00E+00	3.45E-02
		Be-7	<2.39E-01	0.00E+00	2.39E-01
		K-40	9.33E-01	3.55E-01	3.54E-01
527317	7/28/2020 - 8/4/2020	I-131	<5.09E-02	0.00E+00	5.09E-02
		Cs-134	<2.91E-02	0.00E+00	2.91E-02
		Cs-137	<2.81E-02	0.00E+00	2.81E-02
		Be-7	<2.10E-01	0.00E+00	2.10E-01
		K-40	6.47E-01	3.18E-01	3.56E-01
527611	8/4/2020 - 8/11/2020	I-131	<4.31E-02	0.00E+00	4.31E-02
		Cs-134	<3.93E-02	0.00E+00	3.93E-02
		Cs-137	<3.39E-02	0.00E+00	3.39E-02
		Be-7	<2.17E-01	0.00E+00	2.17E-01
		K-40	8.38E-01	4.09E-01	4.75E-01
527902	8/11/2020 - 8/18/2020	I-131	<2.08E-02	0.00E+00	2.08E-02
		Cs-134	<1.73E-02	0.00E+00	1.73E-02
		Cs-137	<1.67E-02	0.00E+00	1.67E-02



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
527902	8/11/2020 - 8/18/2020	Be-7	<7.62E-02	0.00E+00	7.62E-02
		K-40	7.14E-01	1.99E-01	3.45E-02
528659	8/18/2020 - 8/25/2020	I-131	<2.01E-02	0.00E+00	2.01E-02
		Cs-134	<1.62E-02	0.00E+00	1.62E-02
		Cs-137	<1.47E-02	0.00E+00	1.47E-02
		Be-7	<1.16E-01	0.00E+00	1.16E-01
		K-40	5.68E-01	1.87E-01	1.40E-01
528876	8/25/2020 - 9/1/2020	I-131	<1.25E-02	0.00E+00	1.25E-02
		Cs-134	<1.70E-02	0.00E+00	1.70E-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	<3.61E-01	0.00E+00	3.61E-01
528986	9/1/2020 - 9/8/2020	I-131	<2.81E-02	0.00E+00	2.81E-02
		Cs-134	<1.94E-02	0.00E+00	1.94E-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	6.35E-01	2.08E-01	1.93E-01
529982	9/8/2020 - 9/15/2020	I-131	<1.85E-02	0.00E+00	1.85E-02
		Cs-134	<2.19E-02	0.00E+00	2.19E-02
		Cs-137	<1.40E-02	0.00E+00	1.40E-02
		Be-7	<1.43E-01	0.00E+00	1.43E-01
		K-40	5.74E-01	2.19E-01	2.49E-01
530277	9/15/2020 - 9/22/2020	I-131	<1.87E-02	0.00E+00	1.87E-02
		Cs-134	<1.69E-02	0.00E+00	1.69E-02
		Cs-137	<1.75E-02	0.00E+00	1.75E-02
		Be-7	<1.00E-01	0.00E+00	1.00E-01
		K-40	<3.72E-01	0.00E+00	3.72E-01
530557	9/22/2020 - 9/29/2020	I-131	<1.56E-02	0.00E+00	1.56E-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	<1.08E-01	0.00E+00	1.08E-01
		K-40	3.95E-01	1.55E-01	1.31E-01
531055	9/29/2020 - 10/6/2020	I-131	<2.21E-02	0.00E+00	2.21E-02
		Cs-134	<1.54E-02	0.00E+00	1.54E-02
		Cs-137	<1.63E-02	0.00E+00	1.63E-02
		Be-7	<1.02E-01	0.00E+00	1.02E-01
		K-40	5.20E-01	2.02E-01	2.23E-01
531666	10/6/2020 - 10/13/2020	I-131	<1.97E-02	0.00E+00	1.97E-02
		Cs-134	<1.88E-02	0.00E+00	1.88E-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	6.20E-01	1.92E-01	1.34E-01
532062	10/13/2020 - 10/20/2020	I-131	<1.77E-02	0.00E+00	1.77E-02
		Cs-134	<1.63E-02	0.00E+00	1.63E-02
		Cs-137	<1.34E-02	0.00E+00	1.34E-02
		Be-7	<7.40E-02	0.00E+00	7.40E-02
		K-40	2.55E-01	1.44E-01	1.77E-01



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
532494	10/20/2020 - 10/27/2020	I-131	<2.75E-02	0.00E+00	2.75E-02
		Cs-134	<1.62E-02	0.00E+00	1.62E-02
		Cs-137	<1.25E-02	0.00E+00	1.25E-02
		Be-7	<1.07E-01	0.00E+00	1.07E-01
		K-40	5.82E-01	1.99E-01	1.86E-01
532802	10/27/2020 - 11/3/2020	I-131	<1.88E-02	0.00E+00	1.88E-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	<9.54E-02	0.00E+00	9.54E-02
		K-40	3.30E-01	1.45E-01	1.33E-01
533329	11/3/2020 - 11/10/2020	I-131	<2.02E-02	0.00E+00	2.02E-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	<8.38E-02	0.00E+00	8.38E-02
		K-40	3.36E-01	1.74E-01	2.14E-01
533783	11/10/2020 - 11/17/2020	I-131	<1.60E-02	0.00E+00	1.60E-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	<9.49E-02	0.00E+00	9.49E-02
		K-40	3.07E-01	1.52E-01	1.73E-01
534091	11/17/2020 - 11/24/2020	I-131	<2.41E-02	0.00E+00	2.41E-02
		Cs-134	<1.54E-02	0.00E+00	1.54E-02
		Cs-137	<1.49E-02	0.00E+00	1.49E-02
		Be-7	<1.22E-01	0.00E+00	1.22E-01
		K-40	3.66E-01	1.82E-01	2.35E-01
534549	11/24/2020 - 12/1/2020	I-131	<2.11E-02	0.00E+00	2.11E-02
		Cs-134	<1.96E-02	0.00E+00	1.96E-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	8.10E-01	2.28E-01	1.48E-01
534729	12/1/2020 - 12/8/2020	I-131	<1.35E-02	0.00E+00	1.35E-02
		Cs-134	<1.28E-02	0.00E+00	1.28E-02
		Cs-137	<9.05E-03	0.00E+00	9.05E-03
		Be-7	<8.57E-02	0.00E+00	8.57E-02
		K-40	3.24E-01	1.62E-01	1.93E-01
535323	12/8/2020 - 12/15/2020	I-131	<1.79E-02	0.00E+00	1.79E-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	<9.36E-02	0.00E+00	9.36E-02
		K-40	4.62E-01	1.80E-01	1.68E-01
535873	12/15/2020 - 12/22/2020	I-131	<3.61E-02	0.00E+00	3.61E-02
		Cs-134	<1.90E-02	0.00E+00	1.90E-02
		Cs-137	<1.56E-02	0.00E+00	1.56E-02
		Be-7	<1.36E-01	0.00E+00	1.36E-01
		K-40	4.15E-01	2.02E-01	2.59E-01
536166	12/22/2020 - 12/29/2020	I-131	<1.88E-02	0.00E+00	1.88E-02
		Cs-134	<1.16E-02	0.00E+00	1.16E-02
		Cs-137	<1.71E-02	0.00E+00	1.71E-02



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
536166	12/22/2020 - 12/29/2020	Be-7	<1.33E-01	0.00E+00	1.33E-01
		K-40	5.41E-01	1.93E-01	1.81E-01

Sample Point 201 [ INDICATOR - NE @ 0.5 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
515213	12/31/2019 - 1/7/2020	I-131	<3.03E-02	0.00E+00	3.03E-02
		Cs-134	<3.00E-02	0.00E+00	3.00E-02
		Cs-137	<2.26E-02	0.00E+00	2.26E-02
		Be-7	<2.02E-01	0.00E+00	2.02E-01
		K-40	1.32E+00	4.02E-01	2.66E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
515457	1/7/2020 - 1/14/2020	I-131	<3.59E-02	0.00E+00	3.59E-02
		Cs-134	<3.07E-02	0.00E+00	3.07E-02
		Cs-137	<2.13E-02	0.00E+00	2.13E-02
		Be-7	<2.06E-01	0.00E+00	2.06E-01
		K-40	7.23E-01	3.95E-01	5.27E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
515847	1/14/2020 - 1/21/2020	I-131	<3.46E-02	0.00E+00	3.46E-02
		Cs-134	<3.83E-02	0.00E+00	3.83E-02
		Cs-137	<2.31E-02	0.00E+00	2.31E-02
		Be-7	<1.68E-01	0.00E+00	1.68E-01
		K-40	6.35E-01	3.12E-01	3.48E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
516108	1/21/2020 - 1/28/2020	I-131	<4.25E-02	0.00E+00	4.25E-02
		Cs-134	<3.48E-02	0.00E+00	3.48E-02
		Cs-137	<3.13E-02	0.00E+00	3.13E-02
		Be-7	<2.11E-01	0.00E+00	2.11E-01
		K-40	9.95E-01	3.63E-01	2.97E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
516461	1/28/2020 - 2/4/2020	I-131	<3.83E-02	0.00E+00	3.83E-02
		Cs-134	<3.45E-02	0.00E+00	3.45E-02
		Cs-137	<3.11E-02	0.00E+00	3.11E-02
		Be-7	<2.51E-01	0.00E+00	2.51E-01
		K-40	1.41E+00	4.20E-01	2.69E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
516847	2/4/2020 - 2/11/2020	I-131	<3.22E-02	0.00E+00	3.22E-02
		Cs-134	<2.36E-02	0.00E+00	2.36E-02
		Cs-137	<3.79E-02	0.00E+00	3.79E-02
		Be-7	<1.89E-01	0.00E+00	1.89E-01
		K-40	<6.39E-01	0.00E+00	6.39E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
517370	2/11/2020 - 2/18/2020	I-131	<3.84E-02	0.00E+00	3.84E-02
		Cs-134	<3.89E-02	0.00E+00	3.89E-02
		Cs-137	<2.69E-02	0.00E+00	2.69E-02
		Be-7	<2.09E-01	0.00E+00	2.09E-01
		K-40	1.38E+00	4.57E-01	4.41E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
517640	2/18/2020 - 2/25/2020	I-131	<5.39E-02	0.00E+00	5.39E-02
		Cs-134	<2.95E-02	0.00E+00	2.95E-02
		Cs-137	<3.39E-02	0.00E+00	3.39E-02
		Be-7	<2.24E-01	0.00E+00	2.24E-01
		K-40	1.16E+00	4.00E-01	3.48E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
518660	2/25/2020 - 3/3/2020	I-131	<4.52E-02	0.00E+00	4.52E-02
		Cs-134	<4.30E-02	0.00E+00	4.30E-02
		Cs-137	<2.96E-02	0.00E+00	2.96E-02



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
518660	2/25/2020 - 3/3/2020	Be-7	<2.50E-01	0.00E+00	2.50E-01
		K-40	9.12E-01	3.47E-01	2.78E-01
519279	3/3/2020 - 3/10/2020	I-131	<3.28E-02	0.00E+00	3.28E-02
		Cs-134	<3.14E-02	0.00E+00	3.14E-02
		Cs-137	<3.61E-02	0.00E+00	3.61E-02
		Be-7	<2.81E-01	0.00E+00	2.81E-01
		K-40	<7.91E-01	0.00E+00	7.91E-01
519657	3/10/2020 - 3/17/2020	I-131	<4.06E-02	0.00E+00	4.06E-02
		Cs-134	<3.24E-02	0.00E+00	3.24E-02
		Cs-137	<2.94E-02	0.00E+00	2.94E-02
		Be-7	<1.68E-01	0.00E+00	1.68E-01
		K-40	<5.27E-01	0.00E+00	5.27E-01
520241	3/17/2020 - 3/24/2020	I-131	<4.48E-02	0.00E+00	4.48E-02
		Cs-134	<3.55E-02	0.00E+00	3.55E-02
		Cs-137	<2.93E-02	0.00E+00	2.93E-02
		Be-7	<1.28E-01	0.00E+00	1.28E-01
		K-40	1.03E+00	3.70E-01	3.14E-01
520466	3/24/2020 - 3/31/2020	I-131	<4.28E-02	0.00E+00	4.28E-02
		Cs-134	<3.88E-02	0.00E+00	3.88E-02
		Cs-137	<3.35E-02	0.00E+00	3.35E-02
		Be-7	<2.74E-01	0.00E+00	2.74E-01
		K-40	1.28E+00	4.72E-01	5.30E-01
520767	3/31/2020 - 4/7/2020	I-131	<5.29E-02	0.00E+00	5.29E-02
		Cs-134	<3.29E-02	0.00E+00	3.29E-02
		Cs-137	<2.46E-02	0.00E+00	2.46E-02
		Be-7	<2.04E-01	0.00E+00	2.04E-01
		K-40	1.05E+00	3.64E-01	4.27E-01
521566	4/7/2020 - 4/14/2020	I-131	<4.92E-02	0.00E+00	4.92E-02
		Cs-134	<2.97E-02	0.00E+00	2.97E-02
		Cs-137	<2.57E-02	0.00E+00	2.57E-02
		Be-7	<2.03E-01	0.00E+00	2.03E-01
		K-40	1.08E+00	3.45E-01	4.13E-01
522300	4/21/2020 - 4/28/2020	I-131	<2.91E-02	0.00E+00	2.91E-02
		Cs-134	<3.69E-02	0.00E+00	3.69E-02
		Cs-137	<3.51E-02	0.00E+00	3.51E-02
		Be-7	<2.36E-01	0.00E+00	2.36E-01
		K-40	1.80E+00	5.19E-01	4.96E-01
522555	4/28/2020 - 5/5/2020	I-131	<3.26E-02	0.00E+00	3.26E-02
		Cs-134	<3.44E-02	0.00E+00	3.44E-02
		Cs-137	<1.76E-02	0.00E+00	1.76E-02
		Be-7	<1.93E-01	0.00E+00	1.93E-01
		K-40	4.74E-01	3.62E-01	5.43E-01
523062	5/5/2020 - 5/12/2020	I-131	<3.57E-02	0.00E+00	3.57E-02
		Cs-134	<2.69E-02	0.00E+00	2.69E-02
		Cs-137	<3.50E-02	0.00E+00	3.50E-02
		Be-7	<2.20E-01	0.00E+00	2.20E-01
		K-40	1.09E+00	4.26E-01	4.90E-01





# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
523435	5/12/2020 - 5/19/2020	I-131	<3.58E-02	0.00E+00	3.58E-02
		Cs-134	<2.67E-02	0.00E+00	2.67E-02
		Cs-137	<2.60E-02	0.00E+00	2.60E-02
		Be-7	<2.06E-01	0.00E+00	2.06E-01
		K-40	<7.19E-01	0.00E+00	7.19E-01
523829	5/19/2020 - 5/26/2020	I-131	<3.71E-02	0.00E+00	3.71E-02
		Cs-134	<2.64E-02	0.00E+00	2.64E-02
		Cs-137	<2.82E-02	0.00E+00	2.82E-02
		Be-7	<2.10E-01	0.00E+00	2.10E-01
		K-40	9.26E-01	3.50E-01	3.42E-01
524400	5/26/2020 - 6/2/2020	I-131	<4.03E-02	0.00E+00	4.03E-02
		Cs-134	<2.31E-02	0.00E+00	2.31E-02
		Cs-137	<3.45E-02	0.00E+00	3.45E-02
		Be-7	<2.71E-01	0.00E+00	2.71E-01
		K-40	1.20E+00	4.25E-01	4.46E-01
524722	6/2/2020 - 6/9/2020	I-131	<2.97E-02	0.00E+00	2.97E-02
		Cs-134	<3.41E-02	0.00E+00	3.41E-02
		Cs-137	<2.29E-02	0.00E+00	2.29E-02
		Be-7	<2.20E-01	0.00E+00	2.20E-01
		K-40	7.82E-01	3.22E-01	3.23E-01
524954	6/9/2020 - 6/16/2020	I-131	<3.17E-02	0.00E+00	3.17E-02
		Cs-134	<2.85E-02	0.00E+00	2.85E-02
		Cs-137	<2.09E-02	0.00E+00	2.09E-02
		Be-7	<1.76E-01	0.00E+00	1.76E-01
		K-40	5.08E-01	2.59E-01	2.54E-01
525309	6/16/2020 - 6/23/2020	I-131	<2.29E-02	0.00E+00	2.29E-02
		Cs-134	<3.34E-02	0.00E+00	3.34E-02
		Cs-137	<2.48E-02	0.00E+00	2.48E-02
		Be-7	<2.03E-01	0.00E+00	2.03E-01
		K-40	<2.67E-01	0.00E+00	2.67E-01
525551	6/23/2020 - 6/30/2020	I-131	<4.35E-02	0.00E+00	4.35E-02
		Cs-134	<3.54E-02	0.00E+00	3.54E-02
		Cs-137	<3.26E-02	0.00E+00	3.26E-02
		Be-7	<1.88E-01	0.00E+00	1.88E-01
		K-40	1.02E+00	3.66E-01	3.43E-01
525900	6/30/2020 - 7/7/2020	I-131	<2.96E-02	0.00E+00	2.96E-02
		Cs-134	<2.65E-02	0.00E+00	2.65E-02
		Cs-137	<2.58E-02	0.00E+00	2.58E-02
		Be-7	<1.44E-01	0.00E+00	1.44E-01
		K-40	3.77E-01	2.17E-01	2.25E-01
526235	7/7/2020 - 7/14/2020	I-131	<3.28E-02	0.00E+00	3.28E-02
		Cs-134	<3.04E-02	0.00E+00	3.04E-02
		Cs-137	<2.62E-02	0.00E+00	2.62E-02
		Be-7	<2.09E-01	0.00E+00	2.09E-01
		K-40	6.02E-01	3.25E-01	4.11E-01
526514	7/14/2020 - 7/21/2020	I-131	<3.75E-02	0.00E+00	3.75E-02
		Cs-134	<2.64E-02	0.00E+00	2.64E-02
		Cs-137	<2.69E-02	0.00E+00	2.69E-02

# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
526514	7/14/2020 - 7/21/2020	Be-7	<1.76E-01	0.00E+00	1.76E-01
		K-40	7.93E-01	3.61E-01	4.30E-01
526841	7/21/2020 - 7/28/2020	I-131	<3.26E-02	0.00E+00	3.26E-02
		Cs-134	<3.13E-02	0.00E+00	3.13E-02
		Cs-137	<2.58E-02	0.00E+00	2.58E-02
		Be-7	<2.15E-01	0.00E+00	2.15E-01
		K-40	1.12E+00	4.00E-01	4.25E-01
527318	7/28/2020 - 8/4/2020	I-131	<2.70E-02	0.00E+00	2.70E-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	<1.17E-01	0.00E+00	1.17E-01
		K-40	4.64E-01	1.68E-01	1.27E-01
527612	8/4/2020 - 8/11/2020	I-131	<2.26E-02	0.00E+00	2.26E-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	<1.10E-01	0.00E+00	1.10E-01
		K-40	5.55E-01	1.73E-01	3.42E-02
527903	8/11/2020 - 8/18/2020	I-131	<2.00E-02	0.00E+00	2.00E-02
		Cs-134	<1.36E-02	0.00E+00	1.36E-02
		Cs-137	<1.61E-02	0.00E+00	1.61E-02
		Be-7	<7.29E-02	0.00E+00	7.29E-02
		K-40	4.21E-01	1.71E-01	1.75E-01
528660	8/18/2020 - 8/25/2020	I-131	<1.85E-02	0.00E+00	1.85E-02
		Cs-134	<1.61E-02	0.00E+00	1.61E-02
		Cs-137	<1.18E-02	0.00E+00	1.18E-02
		Be-7	2.44E-02	7.81E-02	1.38E-01
		K-40	4.54E-01	1.90E-01	2.16E-01
528877	8/25/2020 - 9/1/2020	I-131	<2.05E-02	0.00E+00	2.05E-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	<1.30E-01	0.00E+00	1.30E-01
		K-40	6.04E-01	2.18E-01	2.38E-01
528987	9/1/2020 - 9/8/2020	I-131	<2.35E-02	0.00E+00	2.35E-02
		Cs-134	<1.75E-02	0.00E+00	1.75E-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	4.25E-01	1.59E-01	1.26E-01
529983	9/8/2020 - 9/15/2020	I-131	<2.37E-02	0.00E+00	2.37E-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	<1.02E-01	0.00E+00	1.02E-01
		K-40	6.62E-01	2.11E-01	1.87E-01
530278	9/15/2020 - 9/22/2020	I-131	<1.96E-02	0.00E+00	1.96E-02
		Cs-134	<1.47E-02	0.00E+00	1.47E-02
		Cs-137	<9.65E-03	0.00E+00	9.65E-03
		Be-7	<8.95E-02	0.00E+00	8.95E-02
		K-40	4.25E-01	1.71E-01	1.78E-01



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
530558	9/22/2020 - 9/29/2020	I-131	<1.78E-02	0.00E+00	1.78E-02
		Cs-134	<1.73E-02	0.00E+00	1.73E-02
		Cs-137	<9.25E-03	0.00E+00	9.25E-03
		Be-7	<1.04E-01	0.00E+00	1.04E-01
		K-40	3.15E-01	1.40E-01	1.22E-01
531056	9/29/2020 - 10/6/2020	I-131	<2.08E-02	0.00E+00	2.08E-02
		Cs-134	<1.74E-02	0.00E+00	1.74E-02
		Cs-137	<1.56E-02	0.00E+00	1.56E-02
		Be-7	<8.87E-02	0.00E+00	8.87E-02
		K-40	6.30E-01	1.83E-01	3.35E-02
531667	10/6/2020 - 10/13/2020	I-131	<1.69E-02	0.00E+00	1.69E-02
		Cs-134	<1.45E-02	0.00E+00	1.45E-02
		Cs-137	<1.67E-02	0.00E+00	1.67E-02
		Be-7	<1.08E-01	0.00E+00	1.08E-01
		K-40	4.03E-01	1.87E-01	2.20E-01
532063	10/13/2020 - 10/20/2020	I-131	<2.00E-02	0.00E+00	2.00E-02
		Cs-134	<1.71E-02	0.00E+00	1.71E-02
		Cs-137	<1.33E-02	0.00E+00	1.33E-02
		Be-7	<1.19E-01	0.00E+00	1.19E-01
		K-40	6.38E-01	2.03E-01	1.48E-01
532495	10/20/2020 - 10/27/2020	I-131	<3.31E-02	0.00E+00	3.31E-02
		Cs-134	<1.95E-02	0.00E+00	1.95E-02
		Cs-137	<1.78E-02	0.00E+00	1.78E-02
		Be-7	<8.97E-02	0.00E+00	8.97E-02
		K-40	6.67E-01	2.11E-01	1.86E-01
532803	10/27/2020 - 11/3/2020	I-131	<2.07E-02	0.00E+00	2.07E-02
		Cs-134	<1.93E-02	0.00E+00	1.93E-02
		Cs-137	<1.40E-02	0.00E+00	1.40E-02
		Be-7	<1.16E-01	0.00E+00	1.16E-01
		K-40	4.49E-01	1.74E-01	1.55E-01
533330	11/3/2020 - 11/10/2020	I-131	<2.16E-02	0.00E+00	2.16E-02
		Cs-134	<1.35E-02	0.00E+00	1.35E-02
		Cs-137	<1.72E-02	0.00E+00	1.72E-02
		Be-7	<1.07E-01	0.00E+00	1.07E-01
		K-40	3.28E-01	1.78E-01	2.32E-01
533784	11/10/2020 - 11/17/2020	I-131	<1.74E-02	0.00E+00	1.74E-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	<1.13E-01	0.00E+00	1.13E-01
		K-40	4.71E-01	1.73E-01	1.34E-01
534092	11/17/2020 - 11/24/2020	I-131	<3.00E-02	0.00E+00	3.00E-02
		Cs-134	<1.48E-02	0.00E+00	1.48E-02
		Cs-137	<1.95E-02	0.00E+00	1.95E-02
		Be-7	<1.30E-01	0.00E+00	1.30E-01
		K-40	4.33E-01	1.98E-01	2.42E-01
534550	11/24/2020 - 12/1/2020	I-131	<2.11E-02	0.00E+00	2.11E-02
		Cs-134	<1.59E-02	0.00E+00	1.59E-02
		Cs-137	<1.04E-02	0.00E+00	1.04E-02



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
534550	11/24/2020 - 12/1/2020	Be-7	<1.25E-01	0.00E+00	1.25E-01
		K-40	4.75E-01	2.05E-01	2.43E-01
534730	12/1/2020 - 12/8/2020	I-131	<2.12E-02	0.00E+00	2.12E-02
		Cs-134	<1.93E-02	0.00E+00	1.93E-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	5.80E-01	2.10E-01	2.09E-01
535324	12/8/2020 - 12/15/2020	I-131	<1.56E-02	0.00E+00	1.56E-02
		Cs-134	<1.42E-02	0.00E+00	1.42E-02
		Cs-137	<1.15E-02	0.00E+00	1.15E-02
		Be-7	<9.12E-02	0.00E+00	9.12E-02
		K-40	<3.19E-01	0.00E+00	3.19E-01
535874	12/15/2020 - 12/22/2020	I-131	<2.86E-02	0.00E+00	2.86E-02
		Cs-134	<1.95E-02	0.00E+00	1.95E-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	4.83E-01	1.94E-01	2.10E-01
536167	12/22/2020 - 12/29/2020	I-131	<2.00E-02	0.00E+00	2.00E-02
		Cs-134	<2.16E-02	0.00E+00	2.16E-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	4.12E-01	1.85E-01	2.15E-01

## Sample Point 202 [ INDICATOR - S @ 1 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
515214	12/31/2019 - 1/7/2020	I-131	<4.34E-02	0.00E+00	4.34E-02
		Cs-134	<3.52E-02	0.00E+00	3.52E-02
		Cs-137	<4.10E-02	0.00E+00	4.10E-02
		Be-7	<1.99E-01	0.00E+00	1.99E-01
		K-40	1.26E+00	4.11E-01	3.13E-01
515458	1/7/2020 - 1/14/2020	I-131	<3.57E-02	0.00E+00	3.57E-02
		Cs-134	<2.83E-02	0.00E+00	2.83E-02
		Cs-137	<2.63E-02	0.00E+00	2.63E-02
		Be-7	<1.98E-01	0.00E+00	1.98E-01
		K-40	5.64E-01	3.53E-01	4.78E-01
515848	1/14/2020 - 1/21/2020	I-131	<3.24E-02	0.00E+00	3.24E-02
		Cs-134	<2.81E-02	0.00E+00	2.81E-02
		Cs-137	<1.99E-02	0.00E+00	1.99E-02
		Be-7	<1.88E-01	0.00E+00	1.88E-01
		K-40	<2.04E-01	0.00E+00	2.04E-01
516109	1/21/2020 - 1/28/2020	I-131	<3.21E-02	0.00E+00	3.21E-02
		Cs-134	<2.59E-02	0.00E+00	2.59E-02
		Cs-137	<3.63E-02	0.00E+00	3.63E-02
		Be-7	<1.91E-01	0.00E+00	1.91E-01
		K-40	6.73E-01	3.42E-01	4.01E-01
516462	1/28/2020 - 2/4/2020	I-131	<5.28E-02	0.00E+00	5.28E-02
		Cs-134	<2.85E-02	0.00E+00	2.85E-02
		Cs-137	<2.71E-02	0.00E+00	2.71E-02



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
516462	1/28/2020 - 2/4/2020	Be-7	<2.48E-01	0.00E+00	2.48E-01
		K-40	1.52E+00	3.68E-01	3.17E-01
516848	2/4/2020 - 2/11/2020	I-131	<5.46E-02	0.00E+00	5.46E-02
		Cs-134	<3.31E-02	0.00E+00	3.31E-02
		Cs-137	<2.62E-02	0.00E+00	2.62E-02
		Be-7	<2.46E-01	0.00E+00	2.46E-01
		K-40	1.62E+00	4.72E-01	5.28E-01
517371	2/11/2020 - 2/18/2020	I-131	<4.73E-02	0.00E+00	4.73E-02
		Cs-134	<3.01E-02	0.00E+00	3.01E-02
		Cs-137	<2.92E-02	0.00E+00	2.92E-02
		Be-7	<2.39E-01	0.00E+00	2.39E-01
		K-40	1.43E+00	4.74E-01	4.61E-01
517641	2/18/2020 - 2/25/2020	I-131	<5.55E-02	0.00E+00	5.55E-02
		Cs-134	<4.18E-02	0.00E+00	4.18E-02
		Cs-137	<3.03E-02	0.00E+00	3.03E-02
		Be-7	<2.37E-01	0.00E+00	2.37E-01
		K-40	5.84E-01	3.83E-01	5.36E-01
518661	2/25/2020 - 3/3/2020	I-131	<2.73E-02	0.00E+00	2.73E-02
		Cs-134	<4.17E-02	0.00E+00	4.17E-02
		Cs-137	<3.59E-02	0.00E+00	3.59E-02
		Be-7	<2.10E-01	0.00E+00	2.10E-01
		K-40	6.61E-01	3.52E-01	4.20E-01
519280	3/3/2020 - 3/10/2020	I-131	<3.76E-02	0.00E+00	3.76E-02
		Cs-134	<3.11E-02	0.00E+00	3.11E-02
		Cs-137	<2.69E-02	0.00E+00	2.69E-02
		Be-7	<2.03E-01	0.00E+00	2.03E-01
		K-40	1.04E+00	4.24E-01	4.63E-01
519658	3/10/2020 - 3/17/2020	I-131	<3.59E-02	0.00E+00	3.59E-02
		Cs-134	<3.45E-02	0.00E+00	3.45E-02
		Cs-137	<3.13E-02	0.00E+00	3.13E-02
		Be-7	<2.02E-01	0.00E+00	2.02E-01
		K-40	9.37E-01	3.55E-01	2.79E-01
520242	3/17/2020 - 3/24/2020	I-131	<5.15E-02	0.00E+00	5.15E-02
		Cs-134	<4.47E-02	0.00E+00	4.47E-02
		Cs-137	<4.04E-02	0.00E+00	4.04E-02
		Be-7	<2.90E-01	0.00E+00	2.90E-01
		K-40	1.44E+00	4.56E-01	3.63E-01
520467	3/24/2020 - 3/31/2020	I-131	<4.09E-02	0.00E+00	4.09E-02
		Cs-134	<3.19E-02	0.00E+00	3.19E-02
		Cs-137	<3.20E-02	0.00E+00	3.20E-02
		Be-7	<2.31E-01	0.00E+00	2.31E-01
		K-40	1.18E+00	3.80E-01	7.42E-02
520768	3/31/2020 - 4/7/2020	I-131	<5.51E-02	0.00E+00	5.51E-02
		Cs-134	<3.93E-02	0.00E+00	3.93E-02
		Cs-137	<3.85E-02	0.00E+00	3.85E-02
		Be-7	<2.18E-01	0.00E+00	2.18E-01
		K-40	9.66E-01	3.74E-01	3.87E-01



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
521567	4/7/2020 - 4/14/2020	I-131	<5.59E-02	0.00E+00	5.59E-02
		Cs-134	<2.79E-02	0.00E+00	2.79E-02
		Cs-137	<2.66E-02	0.00E+00	2.66E-02
		Be-7	<2.88E-01	0.00E+00	2.88E-01
		K-40	1.09E+00	3.81E-01	3.71E-01
522002	4/14/2020 - 4/21/2020	I-131	<5.16E-02	0.00E+00	5.16E-02
		Cs-134	<4.20E-02	0.00E+00	4.20E-02
		Cs-137	<3.83E-02	0.00E+00	3.83E-02
		Be-7	<3.15E-01	0.00E+00	3.15E-01
		K-40	1.57E+00	5.37E-01	5.80E-01
522301	4/21/2020 - 4/28/2020	I-131	<4.05E-02	0.00E+00	4.05E-02
		Cs-134	<3.40E-02	0.00E+00	3.40E-02
		Cs-137	<2.75E-02	0.00E+00	2.75E-02
		Be-7	<2.35E-01	0.00E+00	2.35E-01
		K-40	8.96E-01	4.26E-01	5.21E-01
522556	4/28/2020 - 5/5/2020	I-131	<3.27E-02	0.00E+00	3.27E-02
		Cs-134	<3.13E-02	0.00E+00	3.13E-02
		Cs-137	<2.48E-02	0.00E+00	2.48E-02
		Be-7	<1.41E-01	0.00E+00	1.41E-01
		K-40	7.11E-01	2.58E-01	6.02E-02
523063	5/5/2020 - 5/12/2020	I-131	<3.80E-02	0.00E+00	3.80E-02
		Cs-134	<2.52E-02	0.00E+00	2.52E-02
		Cs-137	<3.02E-02	0.00E+00	3.02E-02
		Be-7	<1.83E-01	0.00E+00	1.83E-01
		K-40	1.07E+00	3.70E-01	3.48E-01
523436	5/12/2020 - 5/19/2020	I-131	<3.28E-02	0.00E+00	3.28E-02
		Cs-134	<2.72E-02	0.00E+00	2.72E-02
		Cs-137	<2.08E-02	0.00E+00	2.08E-02
		Be-7	<1.71E-01	0.00E+00	1.71E-01
		K-40	1.22E+00	3.90E-01	3.64E-01
523830	5/19/2020 - 5/26/2020	I-131	<3.50E-02	0.00E+00	3.50E-02
		Cs-134	<2.42E-02	0.00E+00	2.42E-02
		Cs-137	<2.68E-02	0.00E+00	2.68E-02
		Be-7	<1.56E-01	0.00E+00	1.56E-01
		K-40	1.23E+00	3.81E-01	3.30E-01
524401	5/26/2020 - 6/2/2020	I-131	<3.79E-02	0.00E+00	3.79E-02
		Cs-134	<2.65E-02	0.00E+00	2.65E-02
		Cs-137	<2.86E-02	0.00E+00	2.86E-02
		Be-7	<1.85E-01	0.00E+00	1.85E-01
		K-40	9.75E-01	3.68E-01	3.93E-01
524723	6/2/2020 - 6/9/2020	I-131	<3.27E-02	0.00E+00	3.27E-02
		Cs-134	<2.85E-02	0.00E+00	2.85E-02
		Cs-137	<3.61E-02	0.00E+00	3.61E-02
		Be-7	<1.73E-01	0.00E+00	1.73E-01
		K-40	6.42E-01	3.41E-01	4.52E-01
524955	6/9/2020 - 6/16/2020	I-131	<4.16E-02	0.00E+00	4.16E-02
		Cs-134	<2.81E-02	0.00E+00	2.81E-02
		Cs-137	<2.41E-02	0.00E+00	2.41E-02



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
524955	6/9/2020 - 6/16/2020	Be-7	<2.12E-01	0.00E+00	2.12E-01
		K-40	6.51E-01	2.88E-01	2.99E-01
525310	6/16/2020 - 6/23/2020	I-131	<3.16E-02	0.00E+00	3.16E-02
		Cs-134	<2.62E-02	0.00E+00	2.62E-02
		Cs-137	<2.90E-02	0.00E+00	2.90E-02
		Be-7	<2.03E-01	0.00E+00	2.03E-01
		K-40	4.43E-01	3.13E-01	4.47E-01
525552	6/23/2020 - 6/30/2020	I-131	<3.11E-02	0.00E+00	3.11E-02
		Cs-134	<3.03E-02	0.00E+00	3.03E-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	8.65E-01	3.69E-01	4.43E-01
525901	6/30/2020 - 7/7/2020	I-131	<3.08E-02	0.00E+00	3.08E-02
		Cs-134	<2.92E-02	0.00E+00	2.92E-02
		Cs-137	<2.85E-02	0.00E+00	2.85E-02
		Be-7	<1.86E-01	0.00E+00	1.86E-01
		K-40	<6.81E-01	0.00E+00	6.81E-01
526236	7/7/2020 - 7/14/2020	I-131	<4.51E-02	0.00E+00	4.51E-02
		Cs-134	<2.62E-02	0.00E+00	2.62E-02
		Cs-137	<3.21E-02	0.00E+00	3.21E-02
		Be-7	<1.77E-01	0.00E+00	1.77E-01
		K-40	9.80E-01	3.50E-01	3.38E-01
526515	7/14/2020 - 7/21/2020	I-131	<3.07E-02	0.00E+00	3.07E-02
		Cs-134	<2.21E-02	0.00E+00	2.21E-02
		Cs-137	<2.73E-02	0.00E+00	2.73E-02
		Be-7	<1.84E-01	0.00E+00	1.84E-01
		K-40	9.06E-01	3.63E-01	4.20E-01
526842	7/21/2020 - 7/28/2020	I-131	<3.30E-02	0.00E+00	3.30E-02
		Cs-134	<3.07E-02	0.00E+00	3.07E-02
		Cs-137	<2.32E-02	0.00E+00	2.32E-02
		Be-7	<1.71E-01	0.00E+00	1.71E-01
		K-40	7.25E-01	2.93E-01	2.90E-01
527319	7/28/2020 - 8/4/2020	I-131	<5.39E-02	0.00E+00	5.39E-02
		Cs-134	<3.54E-02	0.00E+00	3.54E-02
		Cs-137	<2.94E-02	0.00E+00	2.94E-02
		Be-7	<2.16E-01	0.00E+00	2.16E-01
		K-40	8.93E-01	3.33E-01	3.12E-01
527613	8/4/2020 - 8/11/2020	I-131	<3.12E-02	0.00E+00	3.12E-02
		Cs-134	<3.21E-02	0.00E+00	3.21E-02
		Cs-137	<2.98E-02	0.00E+00	2.98E-02
		Be-7	<2.21E-01	0.00E+00	2.21E-01
		K-40	6.75E-01	3.25E-01	3.97E-01
527904	8/11/2020 - 8/18/2020	I-131	<3.08E-02	0.00E+00	3.08E-02
		Cs-134	<3.02E-02	0.00E+00	3.02E-02
		Cs-137	<3.01E-02	0.00E+00	3.01E-02
		Be-7	<1.90E-01	0.00E+00	1.90E-01
		K-40	8.21E-01	3.02E-01	2.55E-01



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
528661	8/18/2020 - 8/25/2020	I-131	<2.10E-02	0.00E+00	2.10E-02
		Cs-134	<1.89E-02	0.00E+00	1.89E-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	5.12E-01	2.05E-01	2.34E-01
528878	8/25/2020 - 9/1/2020	I-131	<1.94E-02	0.00E+00	1.94E-02
		Cs-134	<1.53E-02	0.00E+00	1.53E-02
		Cs-137	<1.57E-02	0.00E+00	1.57E-02
		Be-7	<1.03E-01	0.00E+00	1.03E-01
		K-40	5.12E-01	1.97E-01	2.10E-01
528988	9/1/2020 - 9/8/2020	I-131	<2.49E-02	0.00E+00	2.49E-02
		Cs-134	<1.35E-02	0.00E+00	1.35E-02
		Cs-137	<1.16E-02	0.00E+00	1.16E-02
		Be-7	<1.10E-01	0.00E+00	1.10E-01
		K-40	6.10E-01	1.89E-01	1.31E-01
529984	9/8/2020 - 9/15/2020	I-131	<1.98E-02	0.00E+00	1.98E-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	<1.14E-01	0.00E+00	1.14E-01
		K-40	4.37E-01	1.85E-01	2.10E-01
530279	9/15/2020 - 9/22/2020	I-131	<1.68E-02	0.00E+00	1.68E-02
		Cs-134	<1.66E-02	0.00E+00	1.66E-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	5.65E-01	2.01E-01	2.02E-01
530559	9/22/2020 - 9/29/2020	I-131	<2.09E-02	0.00E+00	2.09E-02
		Cs-134	<2.00E-02	0.00E+00	2.00E-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	4.65E-01	1.91E-01	2.03E-01
531057	9/29/2020 - 10/6/2020	I-131	<2.01E-02	0.00E+00	2.01E-02
		Cs-134	<1.54E-02	0.00E+00	1.54E-02
		Cs-137	<1.52E-02	0.00E+00	1.52E-02
		Be-7	<9.43E-02	0.00E+00	9.43E-02
		K-40	4.59E-01	1.80E-01	1.85E-01
531668	10/6/2020 - 10/13/2020	I-131	<1.55E-02	0.00E+00	1.55E-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	<7.36E-02	0.00E+00	7.36E-02
		K-40	3.64E-01	1.38E-01	3.41E-02
532064	10/13/2020 - 10/20/2020	I-131	<1.79E-02	0.00E+00	1.79E-02
		Cs-134	<1.63E-02	0.00E+00	1.63E-02
		Cs-137	<9.08E-03	0.00E+00	9.08E-03
		Be-7	<8.58E-02	0.00E+00	8.58E-02
		K-40	3.13E-01	1.35E-01	1.06E-01
532496	10/20/2020 - 10/27/2020	I-131	<3.22E-02	0.00E+00	3.22E-02
		Cs-134	<1.76E-02	0.00E+00	1.76E-02
		Cs-137	<1.46E-02	0.00E+00	1.46E-02



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
532496	10/20/2020 - 10/27/2020	Be-7	<1.16E-01	0.00E+00	1.16E-01
		K-40	4.45E-01	1.90E-01	2.19E-01
532804	10/27/2020 - 11/3/2020	I-131	<2.01E-02	0.00E+00	2.01E-02
		Cs-134	<1.59E-02	0.00E+00	1.59E-02
		Cs-137	<1.44E-02	0.00E+00	1.44E-02
		Be-7	<1.10E-01	0.00E+00	1.10E-01
		K-40	5.60E-01	1.82E-01	1.27E-01
533331	11/3/2020 - 11/10/2020	I-131	<1.69E-02	0.00E+00	1.69E-02
		Cs-134	<1.67E-02	0.00E+00	1.67E-02
		Cs-137	<1.38E-02	0.00E+00	1.38E-02
		Be-7	<8.86E-02	0.00E+00	8.86E-02
		K-40	5.13E-01	1.79E-01	1.50E-01
533785	11/10/2020 - 11/17/2020	I-131	<2.04E-02	0.00E+00	2.04E-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	<1.31E-01	0.00E+00	1.31E-01
		K-40	6.81E-01	2.27E-01	2.30E-01
534093	11/17/2020 - 11/24/2020	I-131	<3.05E-02	0.00E+00	3.05E-02
		Cs-134	<1.64E-02	0.00E+00	1.64E-02
		Cs-137	<1.41E-02	0.00E+00	1.41E-02
		Be-7	<9.19E-02	0.00E+00	9.19E-02
		K-40	1.96E-01	1.37E-01	1.88E-01
534551	11/24/2020 - 12/1/2020	I-131	<1.64E-02	0.00E+00	1.64E-02
		Cs-134	<1.69E-02	0.00E+00	1.69E-02
		Cs-137	<1.10E-02	0.00E+00	1.10E-02
		Be-7	<9.90E-02	0.00E+00	9.90E-02
		K-40	1.60E-01	1.40E-01	2.11E-01
534731	12/1/2020 - 12/8/2020	I-131	<2.25E-02	0.00E+00	2.25E-02
		Cs-134	<1.61E-02	0.00E+00	1.61E-02
		Cs-137	<1.80E-02	0.00E+00	1.80E-02
		Be-7	<1.10E-01	0.00E+00	1.10E-01
		K-40	5.29E-01	1.77E-01	1.19E-01
535325	12/8/2020 - 12/15/2020	I-131	<1.90E-02	0.00E+00	1.90E-02
		Cs-134	<1.43E-02	0.00E+00	1.43E-02
		Cs-137	<1.38E-02	0.00E+00	1.38E-02
		Be-7	<1.11E-01	0.00E+00	1.11E-01
		K-40	5.51E-01	1.90E-01	1.73E-01
535875	12/15/2020 - 12/22/2020	I-131	<3.51E-02	0.00E+00	3.51E-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	<1.25E-01	0.00E+00	1.25E-01
		K-40	5.79E-01	2.13E-01	2.32E-01
536168	12/22/2020 - 12/29/2020	I-131	<2.07E-02	0.00E+00	2.07E-02
		Cs-134	<1.76E-02	0.00E+00	1.76E-02
		Cs-137	<1.63E-02	0.00E+00	1.63E-02
		Be-7	<1.09E-01	0.00E+00	1.09E-01
		K-40	4.23E-01	1.61E-01	1.35E-01



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
515215	12/31/2019 - 1/7/2020	I-131	<4.07E-02	0.00E+00	4.07E-02
		Cs-134	<2.59E-02	0.00E+00	2.59E-02
		Cs-137	<2.98E-02	0.00E+00	2.98E-02
		Be-7	<1.63E-01	0.00E+00	1.63E-01
		K-40	7.78E-01	3.27E-01	3.25E-01
515459	1/7/2020 - 1/14/2020	I-131	<4.51E-02	0.00E+00	4.51E-02
		Cs-134	<4.06E-02	0.00E+00	4.06E-02
		Cs-137	<2.80E-02	0.00E+00	2.80E-02
		Be-7	<3.03E-01	0.00E+00	3.03E-01
		K-40	1.39E+00	4.41E-01	3.90E-01
515849	1/14/2020 - 1/21/2020	I-131	<3.79E-02	0.00E+00	3.79E-02
		Cs-134	<3.14E-02	0.00E+00	3.14E-02
		Cs-137	<2.24E-02	0.00E+00	2.24E-02
		Be-7	<1.82E-01	0.00E+00	1.82E-01
		K-40	<7.03E-01	0.00E+00	7.03E-01
516110	1/21/2020 - 1/28/2020	I-131	<2.86E-02	0.00E+00	2.86E-02
		Cs-134	<2.45E-02	0.00E+00	2.45E-02
		Cs-137	<2.12E-02	0.00E+00	2.12E-02
		Be-7	<1.54E-01	0.00E+00	1.54E-01
		K-40	8.17E-01	3.29E-01	3.25E-01
516463	1/28/2020 - 2/4/2020	I-131	<5.17E-02	0.00E+00	5.17E-02
		Cs-134	<3.04E-02	0.00E+00	3.04E-02
		Cs-137	<2.62E-02	0.00E+00	2.62E-02
		Be-7	<2.10E-01	0.00E+00	2.10E-01
		K-40	6.15E-01	3.08E-01	3.72E-01
516849	2/4/2020 - 2/11/2020	I-131	<4.24E-02	0.00E+00	4.24E-02
		Cs-134	<3.13E-02	0.00E+00	3.13E-02
		Cs-137	<2.89E-02	0.00E+00	2.89E-02
		Be-7	<1.92E-01	0.00E+00	1.92E-01
		K-40	1.09E+00	3.66E-01	3.46E-01
517372	2/11/2020 - 2/18/2020	I-131	<2.82E-02	0.00E+00	2.82E-02
		Cs-134	<2.00E-02	0.00E+00	2.00E-02
		Cs-137	<1.06E-02	0.00E+00	1.06E-02
		Be-7	<1.68E-01	0.00E+00	1.68E-01
		K-40	3.99E-01	2.58E-01	3.50E-01
517642	2/18/2020 - 2/25/2020	I-131	<5.14E-02	0.00E+00	5.14E-02
		Cs-134	<2.16E-02	0.00E+00	2.16E-02
		Cs-137	<1.86E-02	0.00E+00	1.86E-02
		Be-7	<2.28E-01	0.00E+00	2.28E-01
		K-40	6.75E-01	2.81E-01	2.51E-01
518662	2/25/2020 - 3/3/2020	I-131	<3.55E-02	0.00E+00	3.55E-02
		Cs-134	<2.78E-02	0.00E+00	2.78E-02
		Cs-137	<3.48E-02	0.00E+00	3.48E-02
		Be-7	<1.88E-01	0.00E+00	1.88E-01
		K-40	1.18E+00	3.29E-01	5.71E-02
519281	3/3/2020 - 3/10/2020	I-131	<2.55E-02	0.00E+00	2.55E-02
		Cs-134	<2.28E-02	0.00E+00	2.28E-02
		Cs-137	<2.38E-02	0.00E+00	2.38E-02



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
519281	3/3/2020 - 3/10/2020	Be-7	<1.61E-01	0.00E+00	1.61E-01
		K-40	5.93E-01	2.67E-01	2.99E-01
519659	3/10/2020 - 3/17/2020	I-131	<2.64E-02	0.00E+00	2.64E-02
		Cs-134	<2.82E-02	0.00E+00	2.82E-02
		Cs-137	<2.33E-02	0.00E+00	2.33E-02
		Be-7	<1.64E-01	0.00E+00	1.64E-01
		K-40	6.67E-01	2.57E-01	2.16E-01
520243	3/17/2020 - 3/24/2020	I-131	<2.48E-02	0.00E+00	2.48E-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	<1.84E-01	0.00E+00	1.84E-01
		K-40	7.69E-01	2.65E-01	2.13E-01
520468	3/24/2020 - 3/31/2020	I-131	<2.44E-02	0.00E+00	2.44E-02
		Cs-134	<2.83E-02	0.00E+00	2.83E-02
		Cs-137	<2.29E-02	0.00E+00	2.29E-02
		Be-7	<1.80E-01	0.00E+00	1.80E-01
		K-40	8.28E-01	2.81E-01	2.44E-01
520769	3/31/2020 - 4/7/2020	I-131	<5.51E-02	0.00E+00	5.51E-02
		Cs-134	<3.51E-02	0.00E+00	3.51E-02
		Cs-137	<3.03E-02	0.00E+00	3.03E-02
		Be-7	<2.62E-01	0.00E+00	2.62E-01
		K-40	8.78E-01	4.22E-01	5.41E-01
521568	4/7/2020 - 4/14/2020	I-131	<5.47E-02	0.00E+00	5.47E-02
		Cs-134	<2.28E-02	0.00E+00	2.28E-02
		Cs-137	<2.13E-02	0.00E+00	2.13E-02
		Be-7	<2.05E-01	0.00E+00	2.05E-01
		K-40	1.00E+00	2.94E-01	3.02E-01
522003	4/14/2020 - 4/21/2020	I-131	<4.38E-02	0.00E+00	4.38E-02
		Cs-134	<3.35E-02	0.00E+00	3.35E-02
		Cs-137	<3.30E-02	0.00E+00	3.30E-02
		Be-7	<2.53E-01	0.00E+00	2.53E-01
		K-40	1.28E+00	4.25E-01	4.00E-01
522302	4/21/2020 - 4/28/2020	I-131	<5.19E-02	0.00E+00	5.19E-02
		Cs-134	<2.94E-02	0.00E+00	2.94E-02
		Cs-137	<4.12E-02	0.00E+00	4.12E-02
		Be-7	<3.32E-01	0.00E+00	3.32E-01
		K-40	1.38E+00	5.60E-01	6.76E-01
522557	4/28/2020 - 5/5/2020	I-131	<3.61E-02	0.00E+00	3.61E-02
		Cs-134	<2.86E-02	0.00E+00	2.86E-02
		Cs-137	<2.61E-02	0.00E+00	2.61E-02
		Be-7	<1.35E-01	0.00E+00	1.35E-01
		K-40	1.01E+00	4.07E-01	4.67E-01
523064	5/5/2020 - 5/12/2020	I-131	<3.75E-02	0.00E+00	3.75E-02
		Cs-134	<2.53E-02	0.00E+00	2.53E-02
		Cs-137	<2.79E-02	0.00E+00	2.79E-02
		Be-7	<1.95E-01	0.00E+00	1.95E-01
		K-40	7.93E-01	2.87E-01	6.72E-02



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
523437	5/12/2020 - 5/19/2020	I-131	<4.03E-02	0.00E+00	4.03E-02
		Cs-134	<3.71E-02	0.00E+00	3.71E-02
		Cs-137	<3.11E-02	0.00E+00	3.11E-02
		Be-7	<1.86E-01	0.00E+00	1.86E-01
		K-40	1.20E+00	3.93E-01	3.34E-01
523831	5/19/2020 - 5/26/2020	I-131	<2.37E-02	0.00E+00	2.37E-02
		Cs-134	<2.81E-02	0.00E+00	2.81E-02
		Cs-137	<2.57E-02	0.00E+00	2.57E-02
		Be-7	<1.72E-01	0.00E+00	1.72E-01
		K-40	<6.57E-01	0.00E+00	6.57E-01
524402	5/26/2020 - 6/2/2020	I-131	<4.08E-02	0.00E+00	4.08E-02
		Cs-134	<3.28E-02	0.00E+00	3.28E-02
		Cs-137	<2.94E-02	0.00E+00	2.94E-02
		Be-7	<2.27E-01	0.00E+00	2.27E-01
		K-40	7.88E-01	3.61E-01	4.33E-01
524724	6/2/2020 - 6/9/2020	I-131	<4.64E-02	0.00E+00	4.64E-02
		Cs-134	<3.29E-02	0.00E+00	3.29E-02
		Cs-137	<2.14E-02	0.00E+00	2.14E-02
		Be-7	<2.10E-01	0.00E+00	2.10E-01
		K-40	9.32E-01	3.94E-01	4.63E-01
524956	6/9/2020 - 6/16/2020	I-131	<3.17E-02	0.00E+00	3.17E-02
		Cs-134	<3.45E-02	0.00E+00	3.45E-02
		Cs-137	<2.60E-02	0.00E+00	2.60E-02
		Be-7	<2.14E-01	0.00E+00	2.14E-01
		K-40	1.04E+00	3.46E-01	2.44E-01
525311	6/16/2020 - 6/23/2020	I-131	<3.31E-02	0.00E+00	3.31E-02
		Cs-134	<3.16E-02	0.00E+00	3.16E-02
		Cs-137	<2.30E-02	0.00E+00	2.30E-02
		Be-7	<2.06E-01	0.00E+00	2.06E-01
		K-40	1.15E+00	4.30E-01	4.82E-01
525553	6/23/2020 - 6/30/2020	I-131	<2.54E-02	0.00E+00	2.54E-02
		Cs-134	<3.19E-02	0.00E+00	3.19E-02
		Cs-137	<2.63E-02	0.00E+00	2.63E-02
		Be-7	<2.05E-01	0.00E+00	2.05E-01
		K-40	<7.06E-01	0.00E+00	7.06E-01
525902	6/30/2020 - 7/7/2020	I-131	<3.94E-02	0.00E+00	3.94E-02
		Cs-134	<3.15E-02	0.00E+00	3.15E-02
		Cs-137	<2.59E-02	0.00E+00	2.59E-02
		Be-7	<2.08E-01	0.00E+00	2.08E-01
		K-40	1.19E+00	3.52E-01	6.57E-02
526237	7/7/2020 - 7/14/2020	I-131	<4.12E-02	0.00E+00	4.12E-02
		Cs-134	<3.21E-02	0.00E+00	3.21E-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	5.38E-01	3.17E-01	4.23E-01
526516	7/14/2020 - 7/21/2020	I-131	<3.86E-02	0.00E+00	3.86E-02
		Cs-134	<2.45E-02	0.00E+00	2.45E-02
		Cs-137	<2.41E-02	0.00E+00	2.41E-02

# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
526516	7/14/2020 - 7/21/2020	Be-7	<1.62E-01	0.00E+00	1.62E-01
		K-40	6.12E-01	3.41E-01	4.52E-01
526843	7/21/2020 - 7/28/2020	I-131	<3.39E-02	0.00E+00	3.39E-02
		Cs-134	<3.13E-02	0.00E+00	3.13E-02
		Cs-137	<2.46E-02	0.00E+00	2.46E-02
		Be-7	<1.96E-01	0.00E+00	1.96E-01
		K-40	7.72E-01	3.13E-01	3.11E-01
527320	7/28/2020 - 8/4/2020	I-131	<5.59E-02	0.00E+00	5.59E-02
		Cs-134	<2.73E-02	0.00E+00	2.73E-02
		Cs-137	<2.72E-02	0.00E+00	2.72E-02
		Be-7	<2.08E-01	0.00E+00	2.08E-01
		K-40	<8.17E-01	0.00E+00	8.17E-01
527614	8/4/2020 - 8/11/2020	I-131	<3.49E-02	0.00E+00	3.49E-02
		Cs-134	<3.57E-02	0.00E+00	3.57E-02
		Cs-137	<3.72E-02	0.00E+00	3.72E-02
		Be-7	<2.17E-01	0.00E+00	2.17E-01
		K-40	1.15E+00	4.22E-01	4.18E-01
527905	8/11/2020 - 8/18/2020	I-131	<3.77E-02	0.00E+00	3.77E-02
		Cs-134	<2.94E-02	0.00E+00	2.94E-02
		Cs-137	<2.78E-02	0.00E+00	2.78E-02
		Be-7	<2.29E-01	0.00E+00	2.29E-01
		K-40	8.15E-01	4.69E-01	6.75E-01
528662	8/18/2020 - 8/25/2020	I-131	<2.28E-02	0.00E+00	2.28E-02
		Cs-134	<1.76E-02	0.00E+00	1.76E-02
		Cs-137	<1.26E-02	0.00E+00	1.26E-02
		Be-7	<1.02E-01	0.00E+00	1.02E-01
		K-40	5.89E-01	2.20E-01	2.47E-01
528879	8/25/2020 - 9/1/2020	I-131	<1.83E-02	0.00E+00	1.83E-02
		Cs-134	<1.15E-02	0.00E+00	1.15E-02
		Cs-137	<1.08E-02	0.00E+00	1.08E-02
		Be-7	<1.01E-01	0.00E+00	1.01E-01
		K-40	<3.66E-01	0.00E+00	3.66E-01
528989	9/1/2020 - 9/8/2020	I-131	<2.90E-02	0.00E+00	2.90E-02
		Cs-134	<1.73E-02	0.00E+00	1.73E-02
		Cs-137	<1.30E-02	0.00E+00	1.30E-02
		Be-7	<1.25E-01	0.00E+00	1.25E-01
		K-40	5.73E-01	1.93E-01	1.73E-01
529985	9/8/2020 - 9/15/2020	I-131	<1.95E-02	0.00E+00	1.95E-02
		Cs-134	<1.81E-02	0.00E+00	1.81E-02
		Cs-137	<1.21E-02	0.00E+00	1.21E-02
		Be-7	<8.21E-02	0.00E+00	8.21E-02
		K-40	2.56E-01	1.67E-01	2.33E-01
530280	9/15/2020 - 9/22/2020	I-131	<1.66E-02	0.00E+00	1.66E-02
		Cs-134	<1.52E-02	0.00E+00	1.52E-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	6.30E-01	1.83E-01	3.35E-02



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
530560	9/22/2020 - 9/29/2020	I-131	<1.83E-02	0.00E+00	1.83E-02
		Cs-134	<1.61E-02	0.00E+00	1.61E-02
		Cs-137	<1.17E-02	0.00E+00	1.17E-02
		Be-7	<1.21E-01	0.00E+00	1.21E-01
		K-40	4.57E-01	1.73E-01	1.60E-01
531058	9/29/2020 - 10/6/2020	I-131	<1.63E-02	0.00E+00	1.63E-02
		Cs-134	<1.79E-02	0.00E+00	1.79E-02
		Cs-137	<1.42E-02	0.00E+00	1.42E-02
		Be-7	<9.62E-02	0.00E+00	9.62E-02
		K-40	4.30E-01	1.59E-01	1.13E-01
531669	10/6/2020 - 10/13/2020	I-131	<1.77E-02	0.00E+00	1.77E-02
		Cs-134	<1.74E-02	0.00E+00	1.74E-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	5.27E-01	1.91E-01	1.87E-01
532065	10/13/2020 - 10/20/2020	I-131	<2.16E-02	0.00E+00	2.16E-02
		Cs-134	<1.95E-02	0.00E+00	1.95E-02
		Cs-137	<1.46E-02	0.00E+00	1.46E-02
		Be-7	<8.53E-02	0.00E+00	8.53E-02
		K-40	6.97E-01	2.02E-01	1.28E-01
532497	10/20/2020 - 10/27/2020	I-131	<2.86E-02	0.00E+00	2.86E-02
		Cs-134	<1.37E-02	0.00E+00	1.37E-02
		Cs-137	<1.32E-02	0.00E+00	1.32E-02
		Be-7	<9.80E-02	0.00E+00	9.80E-02
		K-40	7.52E-01	2.41E-01	2.50E-01
532805	10/27/2020 - 11/3/2020	I-131	<1.85E-02	0.00E+00	1.85E-02
		Cs-134	<1.91E-02	0.00E+00	1.91E-02
		Cs-137	<1.23E-02	0.00E+00	1.23E-02
		Be-7	<1.18E-01	0.00E+00	1.18E-01
		K-40	5.98E-01	2.14E-01	2.30E-01
533332	11/3/2020 - 11/10/2020	I-131	<2.53E-02	0.00E+00	2.53E-02
		Cs-134	<2.01E-02	0.00E+00	2.01E-02
		Cs-137	<1.39E-02	0.00E+00	1.39E-02
		Be-7	<9.87E-02	0.00E+00	9.87E-02
		K-40	3.56E-01	1.77E-01	2.21E-01
533786	11/10/2020 - 11/17/2020	I-131	<2.31E-02	0.00E+00	2.31E-02
		Cs-134	<1.53E-02	0.00E+00	1.53E-02
		Cs-137	<1.68E-02	0.00E+00	1.68E-02
		Be-7	<9.51E-02	0.00E+00	9.51E-02
		K-40	5.02E-01	1.95E-01	2.09E-01
534094	11/17/2020 - 11/24/2020	I-131	<3.14E-02	0.00E+00	3.14E-02
		Cs-134	<1.54E-02	0.00E+00	1.54E-02
		Cs-137	<1.51E-02	0.00E+00	1.51E-02
		Be-7	<1.13E-01	0.00E+00	1.13E-01
		K-40	6.38E-01	1.97E-01	1.46E-01
534552	11/24/2020 - 12/1/2020	I-131	<2.30E-02	0.00E+00	2.30E-02
		Cs-134	<2.04E-02	0.00E+00	2.04E-02
		Cs-137	<1.69E-02	0.00E+00	1.69E-02



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
534552	11/24/2020 - 12/1/2020	Be-7	<1.16E-01	0.00E+00	1.16E-01
		K-40	4.39E-01	2.00E-01	2.47E-01
534732	12/1/2020 - 12/8/2020	I-131	<1.91E-02	0.00E+00	1.91E-02
		Cs-134	<1.89E-02	0.00E+00	1.89E-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	4.72E-01	2.04E-01	2.46E-01
535326	12/8/2020 - 12/15/2020	I-131	<1.96E-02	0.00E+00	1.96E-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	<1.10E-01	0.00E+00	1.10E-01
		K-40	3.42E-01	1.56E-01	1.67E-01
535876	12/15/2020 - 12/22/2020	I-131	<3.53E-02	0.00E+00	3.53E-02
		Cs-134	<1.36E-02	0.00E+00	1.36E-02
		Cs-137	<1.32E-02	0.00E+00	1.32E-02
		Be-7	<1.18E-01	0.00E+00	1.18E-01
		K-40	<3.73E-01	0.00E+00	3.73E-01
536169	12/22/2020 - 12/29/2020	I-131	<1.72E-02	0.00E+00	1.72E-02
		Cs-134	<1.83E-02	0.00E+00	1.83E-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	<2.83E-01	0.00E+00	2.83E-01

## Sample Point 204 [ CONTROL - NNE @ 22.4 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
515216	12/31/2019 - 1/7/2020	I-131	<3.45E-02	0.00E+00	3.45E-02
		Cs-134	<3.99E-02	0.00E+00	3.99E-02
		Cs-137	<1.70E-02	0.00E+00	1.70E-02
		Be-7	<1.97E-01	0.00E+00	1.97E-01
		K-40	5.04E-01	3.05E-01	3.88E-01
515460	1/7/2020 - 1/14/2020	I-131	<3.77E-02	0.00E+00	3.77E-02
		Cs-134	<2.68E-02	0.00E+00	2.68E-02
		Cs-137	<3.56E-02	0.00E+00	3.56E-02
		Be-7	<2.16E-01	0.00E+00	2.16E-01
		K-40	1.22E+00	4.62E-01	5.22E-01
515850	1/14/2020 - 1/21/2020	I-131	<4.68E-02	0.00E+00	4.68E-02
		Cs-134	<3.64E-02	0.00E+00	3.64E-02
		Cs-137	<3.45E-02	0.00E+00	3.45E-02
		Be-7	<2.58E-01	0.00E+00	2.58E-01
		K-40	1.36E+00	4.46E-01	4.12E-01
516111	1/21/2020 - 1/28/2020	I-131	<3.89E-02	0.00E+00	3.89E-02
		Cs-134	<3.33E-02	0.00E+00	3.33E-02
		Cs-137	<3.03E-02	0.00E+00	3.03E-02
		Be-7	<2.06E-01	0.00E+00	2.06E-01
		K-40	6.14E-01	3.28E-01	3.84E-01
516464	1/28/2020 - 2/4/2020	I-131	<5.56E-02	0.00E+00	5.56E-02
		Cs-134	<3.91E-02	0.00E+00	3.91E-02
		Cs-137	<2.83E-02	0.00E+00	2.83E-02



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
516464	1/28/2020 - 2/4/2020	Be-7	<2.13E-01	0.00E+00	2.13E-01
		K-40	6.15E-01	2.94E-01	2.96E-01
516850	2/4/2020 - 2/11/2020	I-131	<5.58E-02	0.00E+00	5.58E-02
		Cs-134	<2.95E-02	0.00E+00	2.95E-02
		Cs-137	<3.17E-02	0.00E+00	3.17E-02
		Be-7	<2.70E-01	0.00E+00	2.70E-01
		K-40	1.03E+00	3.76E-01	4.49E-01
517373	2/11/2020 - 2/18/2020	I-131	<3.60E-02	0.00E+00	3.60E-02
		Cs-134	<3.29E-02	0.00E+00	3.29E-02
		Cs-137	<2.84E-02	0.00E+00	2.84E-02
		Be-7	<2.10E-01	0.00E+00	2.10E-01
		K-40	8.87E-01	3.17E-01	7.28E-02
517643	2/18/2020 - 2/25/2020	I-131	<5.09E-02	0.00E+00	5.09E-02
		Cs-134	<2.56E-02	0.00E+00	2.56E-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	1.08E+00	2.63E-01	1.37E-01
518663	2/25/2020 - 3/3/2020	I-131	<4.49E-02	0.00E+00	4.49E-02
		Cs-134	<3.90E-02	0.00E+00	3.90E-02
		Cs-137	<3.71E-02	0.00E+00	3.71E-02
		Be-7	<2.66E-01	0.00E+00	2.66E-01
		K-40	1.10E+00	3.92E-01	3.55E-01
519282	3/3/2020 - 3/10/2020	I-131	<3.86E-02	0.00E+00	3.86E-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	<2.07E-01	0.00E+00	2.07E-01
		K-40	1.24E+00	4.23E-01	3.95E-01
519660	3/10/2020 - 3/17/2020	I-131	<4.38E-02	0.00E+00	4.38E-02
		Cs-134	<3.99E-02	0.00E+00	3.99E-02
		Cs-137	<3.33E-02	0.00E+00	3.33E-02
		Be-7	<1.58E-01	0.00E+00	1.58E-01
		K-40	9.47E-01	3.25E-01	7.13E-02
520244	3/17/2020 - 3/24/2020	I-131	<3.68E-02	0.00E+00	3.68E-02
		Cs-134	<2.44E-02	0.00E+00	2.44E-02
		Cs-137	<2.78E-02	0.00E+00	2.78E-02
		Be-7	<1.89E-01	0.00E+00	1.89E-01
		K-40	7.33E-01	3.38E-01	3.78E-01
520469	3/24/2020 - 3/31/2020	I-131	<3.79E-02	0.00E+00	3.79E-02
		Cs-134	<3.05E-02	0.00E+00	3.05E-02
		Cs-137	<2.63E-02	0.00E+00	2.63E-02
		Be-7	<2.29E-01	0.00E+00	2.29E-01
		K-40	<5.99E-01	0.00E+00	5.99E-01
520770	3/31/2020 - 4/7/2020	I-131	<4.78E-02	0.00E+00	4.78E-02
		Cs-134	<3.43E-02	0.00E+00	3.43E-02
		Cs-137	<2.32E-02	0.00E+00	2.32E-02
		Be-7	<2.32E-01	0.00E+00	2.32E-01
		K-40	5.25E-01	2.38E-01	7.11E-02





# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
521569	4/7/2020 - 4/14/2020	I-131	<5.51E-02	0.00E+00	5.51E-02
		Cs-134	<2.82E-02	0.00E+00	2.82E-02
		Cs-137	<2.57E-02	0.00E+00	2.57E-02
		Be-7	<2.02E-01	0.00E+00	2.02E-01
		K-40	4.83E+00	5.59E-01	4.41E-01
522004	4/14/2020 - 4/21/2020	I-131	<4.46E-02	0.00E+00	4.46E-02
		Cs-134	<3.98E-02	0.00E+00	3.98E-02
		Cs-137	<3.31E-02	0.00E+00	3.31E-02
		Be-7	<2.34E-01	0.00E+00	2.34E-01
		K-40	1.00E+00	3.97E-01	4.14E-01
522303	4/21/2020 - 4/28/2020	I-131	<3.99E-02	0.00E+00	3.99E-02
		Cs-134	<3.81E-02	0.00E+00	3.81E-02
		Cs-137	<3.07E-02	0.00E+00	3.07E-02
		Be-7	<2.31E-01	0.00E+00	2.31E-01
		K-40	8.06E-01	3.47E-01	3.74E-01
522558	4/28/2020 - 5/5/2020	I-131	<3.65E-02	0.00E+00	3.65E-02
		Cs-134	<2.73E-02	0.00E+00	2.73E-02
		Cs-137	<2.65E-02	0.00E+00	2.65E-02
		Be-7	<1.60E-01	0.00E+00	1.60E-01
		K-40	5.20E-01	2.31E-01	6.72E-02
523065	5/5/2020 - 5/12/2020	I-131	<3.54E-02	0.00E+00	3.54E-02
		Cs-134	<2.14E-02	0.00E+00	2.14E-02
		Cs-137	<1.59E-02	0.00E+00	1.59E-02
		Be-7	<1.92E-01	0.00E+00	1.92E-01
		K-40	6.50E-01	3.15E-01	3.54E-01
523438	5/12/2020 - 5/19/2020	I-131	<3.60E-02	0.00E+00	3.60E-02
		Cs-134	<3.36E-02	0.00E+00	3.36E-02
		Cs-137	<2.19E-02	0.00E+00	2.19E-02
		Be-7	<1.77E-01	0.00E+00	1.77E-01
		K-40	<4.98E-01	0.00E+00	4.98E-01
523832	5/19/2020 - 5/26/2020	I-131	<3.28E-02	0.00E+00	3.28E-02
		Cs-134	<2.35E-02	0.00E+00	2.35E-02
		Cs-137	<3.40E-02	0.00E+00	3.40E-02
		Be-7	<1.80E-01	0.00E+00	1.80E-01
		K-40	2.59E-01	3.33E-01	5.47E-01
524403	5/26/2020 - 6/2/2020	I-131	<3.33E-02	0.00E+00	3.33E-02
		Cs-134	<3.13E-02	0.00E+00	3.13E-02
		Cs-137	<2.56E-02	0.00E+00	2.56E-02
		Be-7	<2.12E-01	0.00E+00	2.12E-01
		K-40	8.21E-01	3.55E-01	4.03E-01
524725	6/2/2020 - 6/9/2020	I-131	<3.07E-02	0.00E+00	3.07E-02
		Cs-134	<2.70E-02	0.00E+00	2.70E-02
		Cs-137	<2.48E-02	0.00E+00	2.48E-02
		Be-7	<2.25E-01	0.00E+00	2.25E-01
		K-40	<4.94E-01	0.00E+00	4.94E-01
524957	6/9/2020 - 6/16/2020	I-131	<4.65E-02	0.00E+00	4.65E-02
		Cs-134	<3.34E-02	0.00E+00	3.34E-02
		Cs-137	<2.88E-02	0.00E+00	2.88E-02



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
524957	6/9/2020 - 6/16/2020	Be-7	<1.95E-01	0.00E+00	1.95E-01
		K-40	9.36E-01	3.13E-01	6.68E-02
525312	6/16/2020 - 6/23/2020	I-131	<3.56E-02	0.00E+00	3.56E-02
		Cs-134	<2.88E-02	0.00E+00	2.88E-02
		Cs-137	<3.71E-02	0.00E+00	3.71E-02
		Be-7	<2.38E-01	0.00E+00	2.38E-01
		K-40	9.02E-01	3.80E-01	4.36E-01
525554	6/23/2020 - 6/30/2020	I-131	<3.29E-02	0.00E+00	3.29E-02
		Cs-134	<3.34E-02	0.00E+00	3.34E-02
		Cs-137	<3.34E-02	0.00E+00	3.34E-02
		Be-7	<1.96E-01	0.00E+00	1.96E-01
		K-40	6.25E-01	2.90E-01	2.97E-01
525903	6/30/2020 - 7/7/2020	I-131	<2.76E-02	0.00E+00	2.76E-02
		Cs-134	<2.68E-02	0.00E+00	2.68E-02
		Cs-137	<2.31E-02	0.00E+00	2.31E-02
		Be-7	<1.19E-01	0.00E+00	1.19E-01
		K-40	5.40E-01	2.34E-01	6.65E-02
526238	7/7/2020 - 7/14/2020	I-131	<4.05E-02	0.00E+00	4.05E-02
		Cs-134	<2.75E-02	0.00E+00	2.75E-02
		Cs-137	<2.81E-02	0.00E+00	2.81E-02
		Be-7	<1.74E-01	0.00E+00	1.74E-01
		K-40	<6.46E-01	0.00E+00	6.46E-01
526517	7/14/2020 - 7/21/2020	I-131	<3.62E-02	0.00E+00	3.62E-02
		Cs-134	<3.15E-02	0.00E+00	3.15E-02
		Cs-137	<2.72E-02	0.00E+00	2.72E-02
		Be-7	<1.75E-01	0.00E+00	1.75E-01
		K-40	8.83E-01	3.99E-01	4.98E-01
526844	7/21/2020 - 7/28/2020	I-131	<3.35E-02	0.00E+00	3.35E-02
		Cs-134	<2.48E-02	0.00E+00	2.48E-02
		Cs-137	<2.88E-02	0.00E+00	2.88E-02
		Be-7	<2.05E-01	0.00E+00	2.05E-01
		K-40	<6.23E-01	0.00E+00	6.23E-01
527321	7/28/2020 - 8/4/2020	I-131	<5.04E-02	0.00E+00	5.04E-02
		Cs-134	<3.02E-02	0.00E+00	3.02E-02
		Cs-137	<3.20E-02	0.00E+00	3.20E-02
		Be-7	<2.45E-01	0.00E+00	2.45E-01
		K-40	5.29E-01	3.07E-01	3.97E-01
527615	8/4/2020 - 8/11/2020	I-131	<3.54E-02	0.00E+00	3.54E-02
		Cs-134	<3.80E-02	0.00E+00	3.80E-02
		Cs-137	<2.83E-02	0.00E+00	2.83E-02
		Be-7	<2.34E-01	0.00E+00	2.34E-01
		K-40	9.55E-01	3.54E-01	3.32E-01
527906	8/11/2020 - 8/18/2020	I-131	<3.05E-02	0.00E+00	3.05E-02
		Cs-134	<2.88E-02	0.00E+00	2.88E-02
		Cs-137	<3.34E-02	0.00E+00	3.34E-02
		Be-7	<1.71E-01	0.00E+00	1.71E-01
		K-40	7.90E-01	3.24E-01	3.15E-01



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
528663	8/18/2020 - 8/25/2020	I-131	<2.13E-02	0.00E+00	2.13E-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	<1.19E-01	0.00E+00	1.19E-01
		K-40	3.84E-01	1.69E-01	1.88E-01
528880	8/25/2020 - 9/1/2020	I-131	<1.69E-02	0.00E+00	1.69E-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	5.78E-02	6.65E-02	1.07E-01
		K-40	5.86E-01	2.05E-01	1.88E-01
528990	9/1/2020 - 9/8/2020	I-131	<2.14E-02	0.00E+00	2.14E-02
		Cs-134	<1.35E-02	0.00E+00	1.35E-02
		Cs-137	<1.50E-02	0.00E+00	1.50E-02
		Be-7	<1.06E-01	0.00E+00	1.06E-01
		K-40	5.34E-01	1.93E-01	1.93E-01
529986	9/8/2020 - 9/15/2020	I-131	<2.24E-02	0.00E+00	2.24E-02
		Cs-134	<1.23E-02	0.00E+00	1.23E-02
		Cs-137	<1.83E-02	0.00E+00	1.83E-02
		Be-7	<1.04E-01	0.00E+00	1.04E-01
		K-40	5.54E-01	2.05E-01	2.05E-01
530281	9/15/2020 - 9/22/2020	I-131	<1.89E-02	0.00E+00	1.89E-02
		Cs-134	<1.59E-02	0.00E+00	1.59E-02
		Cs-137	<1.24E-02	0.00E+00	1.24E-02
		Be-7	<1.00E-01	0.00E+00	1.00E-01
		K-40	5.34E-01	1.75E-01	1.18E-01
530561	9/22/2020 - 9/29/2020	I-131	<1.89E-02	0.00E+00	1.89E-02
		Cs-134	<1.43E-02	0.00E+00	1.43E-02
		Cs-137	<1.79E-02	0.00E+00	1.79E-02
		Be-7	<9.94E-02	0.00E+00	9.94E-02
		K-40	4.92E-01	1.78E-01	1.63E-01
531059	9/29/2020 - 10/6/2020	I-131	<2.50E-02	0.00E+00	2.50E-02
		Cs-134	<1.80E-02	0.00E+00	1.80E-02
		Cs-137	<1.48E-02	0.00E+00	1.48E-02
		Be-7	<1.21E-01	0.00E+00	1.21E-01
		K-40	5.64E-01	1.90E-01	1.41E-01
531670	10/6/2020 - 10/13/2020	I-131	<1.91E-02	0.00E+00	1.91E-02
		Cs-134	<1.59E-02	0.00E+00	1.59E-02
		Cs-137	<1.16E-02	0.00E+00	1.16E-02
		Be-7	<1.03E-01	0.00E+00	1.03E-01
		K-40	7.47E-01	2.09E-01	1.30E-01
532066	10/13/2020 - 10/20/2020	I-131	<1.57E-02	0.00E+00	1.57E-02
		Cs-134	<1.28E-02	0.00E+00	1.28E-02
		Cs-137	<1.10E-02	0.00E+00	1.10E-02
		Be-7	<8.04E-02	0.00E+00	8.04E-02
		K-40	3.43E-01	1.45E-01	1.24E-01
532498	10/20/2020 - 10/27/2020	I-131	<2.81E-02	0.00E+00	2.81E-02
		Cs-134	<1.89E-02	0.00E+00	1.89E-02
		Cs-137	<1.68E-02	0.00E+00	1.68E-02



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
532498	10/20/2020 - 10/27/2020	Be-7	<1.05E-01	0.00E+00	1.05E-01
		K-40	4.40E-01	1.53E-01	3.41E-02
532806	10/27/2020 - 11/3/2020	I-131	<2.12E-02	0.00E+00	2.12E-02
		Cs-134	<1.94E-02	0.00E+00	1.94E-02
		Cs-137	<1.83E-02	0.00E+00	1.83E-02
		Be-7	<9.46E-02	0.00E+00	9.46E-02
		K-40	8.03E-01	2.36E-01	2.12E-01
533333	11/3/2020 - 11/10/2020	I-131	<2.05E-02	0.00E+00	2.05E-02
		Cs-134	<1.82E-02	0.00E+00	1.82E-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	5.58E-01	2.08E-01	2.21E-01
533787	11/10/2020 - 11/17/2020	I-131	<2.24E-02	0.00E+00	2.24E-02
		Cs-134	<1.03E-02	0.00E+00	1.03E-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	4.45E-01	1.82E-01	1.98E-01
534095	11/17/2020 - 11/24/2020	I-131	<3.00E-02	0.00E+00	3.00E-02
		Cs-134	<1.53E-02	0.00E+00	1.53E-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	4.65E-01	2.04E-01	2.49E-01
534553	11/24/2020 - 12/1/2020	I-131	<2.43E-02	0.00E+00	2.43E-02
		Cs-134	<1.62E-02	0.00E+00	1.62E-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	5.16E-01	1.98E-01	2.07E-01
534733	12/1/2020 - 12/8/2020	I-131	<1.74E-02	0.00E+00	1.74E-02
		Cs-134	<1.86E-02	0.00E+00	1.86E-02
		Cs-137	<1.31E-02	0.00E+00	1.31E-02
		Be-7	<1.09E-01	0.00E+00	1.09E-01
		K-40	5.04E-01	1.93E-01	2.06E-01
535327	12/8/2020 - 12/15/2020	I-131	<2.18E-02	0.00E+00	2.18E-02
		Cs-134	<1.79E-02	0.00E+00	1.79E-02
		Cs-137	<1.37E-02	0.00E+00	1.37E-02
		Be-7	<9.55E-02	0.00E+00	9.55E-02
		K-40	4.28E-01	1.91E-01	2.32E-01
535877	12/15/2020 - 12/22/2020	I-131	<3.04E-02	0.00E+00	3.04E-02
		Cs-134	<1.71E-02	0.00E+00	1.71E-02
		Cs-137	<1.33E-02	0.00E+00	1.33E-02
		Be-7	<1.08E-01	0.00E+00	1.08E-01
		K-40	3.03E-01	1.26E-01	3.42E-02
536170	12/22/2020 - 12/29/2020	I-131	<2.26E-02	0.00E+00	2.26E-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	<1.13E-01	0.00E+00	1.13E-01
		K-40	6.01E-01	1.93E-01	1.42E-01



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
515217	12/31/2019 - 1/7/2020	I-131	<4.44E-02	0.00E+00	4.44E-02
		Cs-134	<3.61E-02	0.00E+00	3.61E-02
		Cs-137	<2.44E-02	0.00E+00	2.44E-02
		Be-7	<1.89E-01	0.00E+00	1.89E-01
		K-40	5.32E-01	3.77E-01	5.45E-01
515461	1/7/2020 - 1/14/2020	I-131	<4.02E-02	0.00E+00	4.02E-02
		Cs-134	<3.87E-02	0.00E+00	3.87E-02
		Cs-137	<3.09E-02	0.00E+00	3.09E-02
		Be-7	<2.44E-01	0.00E+00	2.44E-01
		K-40	1.40E+00	4.26E-01	3.09E-01
515851	1/14/2020 - 1/21/2020	I-131	<5.50E-02	0.00E+00	5.50E-02
		Cs-134	<4.40E-02	0.00E+00	4.40E-02
		Cs-137	<3.96E-02	0.00E+00	3.96E-02
		Be-7	<2.71E-01	0.00E+00	2.71E-01
		K-40	1.83E+00	4.69E-01	7.39E-02
516112	1/21/2020 - 1/28/2020	I-131	<5.44E-02	0.00E+00	5.44E-02
		Cs-134	<3.95E-02	0.00E+00	3.95E-02
		Cs-137	<2.85E-02	0.00E+00	2.85E-02
		Be-7	<3.33E-01	0.00E+00	3.33E-01
		K-40	1.14E+00	4.56E-01	5.22E-01
516465	1/28/2020 - 2/4/2020	I-131	<5.41E-02	0.00E+00	5.41E-02
		Cs-134	<2.89E-02	0.00E+00	2.89E-02
		Cs-137	<2.84E-02	0.00E+00	2.84E-02
		Be-7	<2.02E-01	0.00E+00	2.02E-01
		K-40	5.55E-01	3.30E-01	4.21E-01
516851	2/4/2020 - 2/11/2020	I-131	<5.57E-02	0.00E+00	5.57E-02
		Cs-134	<3.36E-02	0.00E+00	3.36E-02
		Cs-137	<3.28E-02	0.00E+00	3.28E-02
		Be-7	<2.13E-01	0.00E+00	2.13E-01
		K-40	1.25E+00	4.36E-01	4.86E-01
517374	2/11/2020 - 2/18/2020	I-131	<2.76E-02	0.00E+00	2.76E-02
		Cs-134	<3.98E-02	0.00E+00	3.98E-02
		Cs-137	<3.00E-02	0.00E+00	3.00E-02
		Be-7	<1.65E-01	0.00E+00	1.65E-01
		K-40	8.78E-01	3.86E-01	4.24E-01
517644	2/18/2020 - 2/25/2020	I-131	<5.14E-02	0.00E+00	5.14E-02
		Cs-134	<2.24E-02	0.00E+00	2.24E-02
		Cs-137	<2.66E-02	0.00E+00	2.66E-02
		Be-7	<1.76E-01	0.00E+00	1.76E-01
		K-40	6.30E-01	2.99E-01	3.65E-01
518664	2/25/2020 - 3/3/2020	I-131	<3.46E-02	0.00E+00	3.46E-02
		Cs-134	<3.12E-02	0.00E+00	3.12E-02
		Cs-137	<3.32E-02	0.00E+00	3.32E-02
		Be-7	<2.04E-01	0.00E+00	2.04E-01
		K-40	1.15E+00	4.18E-01	3.80E-01
519283	3/3/2020 - 3/10/2020	I-131	<4.28E-02	0.00E+00	4.28E-02
		Cs-134	<3.65E-02	0.00E+00	3.65E-02
		Cs-137	<3.76E-02	0.00E+00	3.76E-02



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
519283	3/3/2020 - 3/10/2020	Be-7	<2.29E-01	0.00E+00	2.29E-01
		K-40	1.24E+00	3.78E-01	7.30E-02
519661	3/10/2020 - 3/17/2020	I-131	<4.03E-02	0.00E+00	4.03E-02
		Cs-134	<2.86E-02	0.00E+00	2.86E-02
		Cs-137	<2.47E-02	0.00E+00	2.47E-02
		Be-7	<1.88E-01	0.00E+00	1.88E-01
		K-40	1.39E+00	4.13E-01	2.67E-01
520245	3/17/2020 - 3/24/2020	I-131	<3.59E-02	0.00E+00	3.59E-02
		Cs-134	<2.93E-02	0.00E+00	2.93E-02
		Cs-137	<2.35E-02	0.00E+00	2.35E-02
		Be-7	<2.29E-01	0.00E+00	2.29E-01
		K-40	5.38E-01	2.44E-01	7.29E-02
520470	3/24/2020 - 3/31/2020	I-131	<3.71E-02	0.00E+00	3.71E-02
		Cs-134	<3.11E-02	0.00E+00	3.11E-02
		Cs-137	<2.84E-02	0.00E+00	2.84E-02
		Be-7	<1.90E-01	0.00E+00	1.90E-01
		K-40	6.79E-01	3.56E-01	4.46E-01
520771	3/31/2020 - 4/7/2020	I-131	<5.18E-02	0.00E+00	5.18E-02
		Cs-134	<1.94E-02	0.00E+00	1.94E-02
		Cs-137	<2.54E-02	0.00E+00	2.54E-02
		Be-7	<2.18E-01	0.00E+00	2.18E-01
		K-40	1.26E+00	3.30E-01	3.27E-01
521570	4/7/2020 - 4/14/2020	I-131	<5.27E-02	0.00E+00	5.27E-02
		Cs-134	<2.41E-02	0.00E+00	2.41E-02
		Cs-137	<2.31E-02	0.00E+00	2.31E-02
		Be-7	<2.00E-01	0.00E+00	2.00E-01
		K-40	1.51E+00	3.27E-01	2.12E-01
522005	4/14/2020 - 4/21/2020	I-131	<4.78E-02	0.00E+00	4.78E-02
		Cs-134	<4.49E-02	0.00E+00	4.49E-02
		Cs-137	<3.42E-02	0.00E+00	3.42E-02
		Be-7	<2.75E-01	0.00E+00	2.75E-01
		K-40	1.04E+00	3.91E-01	3.78E-01
522304	4/21/2020 - 4/28/2020	I-131	<3.79E-02	0.00E+00	3.79E-02
		Cs-134	<3.96E-02	0.00E+00	3.96E-02
		Cs-137	<2.90E-02	0.00E+00	2.90E-02
		Be-7	<1.94E-01	0.00E+00	1.94E-01
		K-40	6.69E-01	3.86E-01	5.02E-01
522559	4/28/2020 - 5/5/2020	I-131	<5.32E-02	0.00E+00	5.32E-02
		Cs-134	<4.10E-02	0.00E+00	4.10E-02
		Cs-137	<3.01E-02	0.00E+00	3.01E-02
		Be-7	<2.25E-01	0.00E+00	2.25E-01
		K-40	9.80E-01	3.52E-01	3.46E-01
523066	5/5/2020 - 5/12/2020	I-131	<3.74E-02	0.00E+00	3.74E-02
		Cs-134	<3.14E-02	0.00E+00	3.14E-02
		Cs-137	<2.86E-02	0.00E+00	2.86E-02
		Be-7	<1.80E-01	0.00E+00	1.80E-01
		K-40	<6.66E-01	0.00E+00	6.66E-01



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
523439	5/12/2020 - 5/19/2020	I-131	<3.17E-02	0.00E+00	3.17E-02
		Cs-134	<2.90E-02	0.00E+00	2.90E-02
		Cs-137	<1.55E-02	0.00E+00	1.55E-02
		Be-7	<1.77E-01	0.00E+00	1.77E-01
		K-40	3.41E-01	2.49E-01	3.40E-01
523833	5/19/2020 - 5/26/2020	I-131	<2.71E-02	0.00E+00	2.71E-02
		Cs-134	<2.45E-02	0.00E+00	2.45E-02
		Cs-137	<2.93E-02	0.00E+00	2.93E-02
		Be-7	<1.76E-01	0.00E+00	1.76E-01
		K-40	7.22E-01	3.56E-01	4.30E-01
524404	5/26/2020 - 6/2/2020	I-131	<4.85E-02	0.00E+00	4.85E-02
		Cs-134	<2.70E-02	0.00E+00	2.70E-02
		Cs-137	<3.44E-02	0.00E+00	3.44E-02
		Be-7	<2.06E-01	0.00E+00	2.06E-01
		K-40	1.23E+00	3.80E-01	2.52E-01
524726	6/2/2020 - 6/9/2020	I-131	<3.84E-02	0.00E+00	3.84E-02
		Cs-134	<2.90E-02	0.00E+00	2.90E-02
		Cs-137	<2.50E-02	0.00E+00	2.50E-02
		Be-7	<1.79E-01	0.00E+00	1.79E-01
		K-40	<1.84E-01	0.00E+00	1.84E-01
524958	6/9/2020 - 6/16/2020	I-131	<2.66E-02	0.00E+00	2.66E-02
		Cs-134	<4.11E-02	0.00E+00	4.11E-02
		Cs-137	<3.35E-02	0.00E+00	3.35E-02
		Be-7	<2.32E-01	0.00E+00	2.32E-01
		K-40	1.09E+00	3.56E-01	2.54E-01
525313	6/16/2020 - 6/23/2020	I-131	<3.74E-02	0.00E+00	3.74E-02
		Cs-134	<3.37E-02	0.00E+00	3.37E-02
		Cs-137	<3.68E-02	0.00E+00	3.68E-02
		Be-7	<1.71E-01	0.00E+00	1.71E-01
		K-40	8.77E-01	3.47E-01	3.57E-01
525555	6/23/2020 - 6/30/2020	I-131	<2.83E-02	0.00E+00	2.83E-02
		Cs-134	<3.06E-02	0.00E+00	3.06E-02
		Cs-137	<2.35E-02	0.00E+00	2.35E-02
		Be-7	<1.67E-01	0.00E+00	1.67E-01
		K-40	3.48E-01	2.65E-01	3.75E-01
525904	6/30/2020 - 7/7/2020	I-131	<4.43E-02	0.00E+00	4.43E-02
		Cs-134	<3.33E-02	0.00E+00	3.33E-02
		Cs-137	<3.11E-02	0.00E+00	3.11E-02
		Be-7	<2.91E-01	0.00E+00	2.91E-01
		K-40	1.06E+00	3.74E-01	3.47E-01
526239	7/7/2020 - 7/14/2020	I-131	<2.99E-02	0.00E+00	2.99E-02
		Cs-134	<2.33E-02	0.00E+00	2.33E-02
		Cs-137	<1.80E-02	0.00E+00	1.80E-02
		Be-7	<1.80E-01	0.00E+00	1.80E-01
		K-40	<1.85E-01	0.00E+00	1.85E-01
526518	7/14/2020 - 7/21/2020	I-131	<3.89E-02	0.00E+00	3.89E-02
		Cs-134	<3.15E-02	0.00E+00	3.15E-02
		Cs-137	<2.45E-02	0.00E+00	2.45E-02

# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
526518	7/14/2020 - 7/21/2020	Be-7	<1.76E-01	0.00E+00	1.76E-01
		K-40	9.07E-01	4.05E-01	5.05E-01
526845	7/21/2020 - 7/28/2020	I-131	<3.80E-02	0.00E+00	3.80E-02
		Cs-134	<2.67E-02	0.00E+00	2.67E-02
		Cs-137	<1.96E-02	0.00E+00	1.96E-02
		Be-7	<1.55E-01	0.00E+00	1.55E-01
		K-40	<1.80E-01	0.00E+00	1.80E-01
527322	7/28/2020 - 8/4/2020	I-131	<5.15E-02	0.00E+00	5.15E-02
		Cs-134	<2.94E-02	0.00E+00	2.94E-02
		Cs-137	<3.25E-02	0.00E+00	3.25E-02
		Be-7	<1.53E-01	0.00E+00	1.53E-01
		K-40	7.83E-01	3.97E-01	5.08E-01
527616	8/4/2020 - 8/11/2020	I-131	<4.08E-02	0.00E+00	4.08E-02
		Cs-134	<3.65E-02	0.00E+00	3.65E-02
		Cs-137	<3.44E-02	0.00E+00	3.44E-02
		Be-7	<2.32E-01	0.00E+00	2.32E-01
		K-40	1.07E+00	3.56E-01	7.61E-02
527907	8/11/2020 - 8/18/2020	I-131	<4.66E-02	0.00E+00	4.66E-02
		Cs-134	<2.89E-02	0.00E+00	2.89E-02
		Cs-137	<3.02E-02	0.00E+00	3.02E-02
		Be-7	<2.27E-01	0.00E+00	2.27E-01
		K-40	1.13E+00	4.28E-01	4.82E-01
528664	8/18/2020 - 8/25/2020	I-131	<1.77E-02	0.00E+00	1.77E-02
		Cs-134	<1.40E-02	0.00E+00	1.40E-02
		Cs-137	<1.62E-02	0.00E+00	1.62E-02
		Be-7	<9.42E-02	0.00E+00	9.42E-02
		K-40	2.71E-01	1.71E-01	2.39E-01
528881	8/25/2020 - 9/1/2020	I-131	<1.61E-02	0.00E+00	1.61E-02
		Cs-134	<1.27E-02	0.00E+00	1.27E-02
		Cs-137	<1.25E-02	0.00E+00	1.25E-02
		Be-7	<9.29E-02	0.00E+00	9.29E-02
		K-40	7.34E-01	2.00E-01	3.37E-02
528991	9/1/2020 - 9/8/2020	I-131	<2.86E-02	0.00E+00	2.86E-02
		Cs-134	<1.88E-02	0.00E+00	1.88E-02
		Cs-137	<1.21E-02	0.00E+00	1.21E-02
		Be-7	<1.11E-01	0.00E+00	1.11E-01
		K-40	4.25E-01	1.87E-01	2.22E-01
529987	9/8/2020 - 9/15/2020	I-131	<2.10E-02	0.00E+00	2.10E-02
		Cs-134	<1.62E-02	0.00E+00	1.62E-02
		Cs-137	<2.06E-02	0.00E+00	2.06E-02
		Be-7	<9.03E-02	0.00E+00	9.03E-02
		K-40	4.66E-01	1.86E-01	1.99E-01
530282	9/15/2020 - 9/22/2020	I-131	<2.04E-02	0.00E+00	2.04E-02
		Cs-134	<1.69E-02	0.00E+00	1.69E-02
		Cs-137	<1.52E-02	0.00E+00	1.52E-02
		Be-7	<1.06E-01	0.00E+00	1.06E-01
		K-40	<3.93E-01	0.00E+00	3.93E-01





# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
530562	9/22/2020 - 9/29/2020	I-131	<1.83E-02	0.00E+00	1.83E-02
		Cs-134	<1.61E-02	0.00E+00	1.61E-02
		Cs-137	<1.45E-02	0.00E+00	1.45E-02
		Be-7	<1.00E-01	0.00E+00	1.00E-01
		K-40	3.92E-01	1.65E-01	1.67E-01
531060	9/29/2020 - 10/6/2020	I-131	<1.84E-02	0.00E+00	1.84E-02
		Cs-134	<1.55E-02	0.00E+00	1.55E-02
		Cs-137	<1.54E-02	0.00E+00	1.54E-02
		Be-7	<1.35E-01	0.00E+00	1.35E-01
		K-40	4.49E-01	1.91E-01	2.19E-01
531671	10/6/2020 - 10/13/2020	I-131	<1.96E-02	0.00E+00	1.96E-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	<9.18E-02	0.00E+00	9.18E-02
		K-40	4.85E-01	2.18E-01	2.79E-01
532067	10/13/2020 - 10/20/2020	I-131	<2.29E-02	0.00E+00	2.29E-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	<9.00E-02	0.00E+00	9.00E-02
		K-40	5.62E-01	2.49E-01	3.21E-01
532499	10/20/2020 - 10/27/2020	I-131	<2.87E-02	0.00E+00	2.87E-02
		Cs-134	<1.45E-02	0.00E+00	1.45E-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	4.75E-01	1.85E-01	1.94E-01
532807	10/27/2020 - 11/3/2020	I-131	<1.34E-02	0.00E+00	1.34E-02
		Cs-134	<1.31E-02	0.00E+00	1.31E-02
		Cs-137	<1.28E-02	0.00E+00	1.28E-02
		Be-7	<1.16E-01	0.00E+00	1.16E-01
		K-40	5.40E-01	1.83E-01	1.59E-01
533334	11/3/2020 - 11/10/2020	I-131	<2.15E-02	0.00E+00	2.15E-02
		Cs-134	<1.91E-02	0.00E+00	1.91E-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	4.89E-01	2.33E-01	3.11E-01
533788	11/10/2020 - 11/17/2020	I-131	<1.93E-02	0.00E+00	1.93E-02
		Cs-134	<1.37E-02	0.00E+00	1.37E-02
		Cs-137	<1.19E-02	0.00E+00	1.19E-02
		Be-7	<9.02E-02	0.00E+00	9.02E-02
		K-40	2.74E-01	1.45E-01	1.70E-01
534096	11/17/2020 - 11/24/2020	I-131	<3.47E-02	0.00E+00	3.47E-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	<1.11E-01	0.00E+00	1.11E-01
		K-40	5.63E-01	1.85E-01	1.37E-01
534554	11/24/2020 - 12/1/2020	I-131	<2.25E-02	0.00E+00	2.25E-02
		Cs-134	<1.80E-02	0.00E+00	1.80E-02
		Cs-137	<1.78E-02	0.00E+00	1.78E-02



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
534554	11/24/2020 - 12/1/2020	Be-7	<1.23E-01	0.00E+00	1.23E-01
		K-40	5.11E-01	1.82E-01	1.57E-01
534734	12/1/2020 - 12/8/2020	I-131	<1.77E-02	0.00E+00	1.77E-02
		Cs-134	<1.36E-02	0.00E+00	1.36E-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	5.03E-01	2.06E-01	2.38E-01
535328	12/8/2020 - 12/15/2020	I-131	<1.64E-02	0.00E+00	1.64E-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	<1.05E-01	0.00E+00	1.05E-01
		K-40	4.50E-01	2.03E-01	2.53E-01
535878	12/15/2020 - 12/22/2020	I-131	<2.84E-02	0.00E+00	2.84E-02
		Cs-134	<1.65E-02	0.00E+00	1.65E-02
		Cs-137	<1.73E-02	0.00E+00	1.73E-02
		Be-7	<1.34E-01	0.00E+00	1.34E-01
		K-40	3.50E-01	1.79E-01	2.22E-01
536171	12/22/2020 - 12/29/2020	I-131	<2.17E-02	0.00E+00	2.17E-02
		Cs-134	<1.94E-02	0.00E+00	1.94E-02
		Cs-137	<1.44E-02	0.00E+00	1.44E-02
		Be-7	<1.17E-01	0.00E+00	1.17E-01
		K-40	4.26E-01	1.70E-01	1.62E-01

## Sample Point 206 [ CONTROL - NW @ 11.3 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
515218	12/31/2019 - 1/7/2020	I-131	<5.30E-02	0.00E+00	5.30E-02
		Cs-134	<2.54E-02	0.00E+00	2.54E-02
		Cs-137	<2.89E-02	0.00E+00	2.89E-02
		Be-7	<2.73E-01	0.00E+00	2.73E-01
		K-40	6.47E-01	3.34E-01	4.66E-01
515462	1/7/2020 - 1/14/2020	I-131	<2.80E-02	0.00E+00	2.80E-02
		Cs-134	<2.97E-02	0.00E+00	2.97E-02
		Cs-137	<2.56E-02	0.00E+00	2.56E-02
		Be-7	<1.71E-01	0.00E+00	1.71E-01
		K-40	5.86E-01	2.86E-01	3.01E-01
515852	1/14/2020 - 1/21/2020	I-131	<4.54E-02	0.00E+00	4.54E-02
		Cs-134	<4.25E-02	0.00E+00	4.25E-02
		Cs-137	<3.45E-02	0.00E+00	3.45E-02
		Be-7	<2.10E-01	0.00E+00	2.10E-01
		K-40	1.40E+00	4.19E-01	2.79E-01
516113	1/21/2020 - 1/28/2020	I-131	<3.54E-02	0.00E+00	3.54E-02
		Cs-134	<3.61E-02	0.00E+00	3.61E-02
		Cs-137	<4.12E-02	0.00E+00	4.12E-02
		Be-7	<2.37E-01	0.00E+00	2.37E-01
		K-40	1.18E+00	4.01E-01	3.39E-01
516466	1/28/2020 - 2/4/2020	I-131	<4.50E-02	0.00E+00	4.50E-02
		Cs-134	<2.86E-02	0.00E+00	2.86E-02
		Cs-137	<2.51E-02	0.00E+00	2.51E-02



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
516466	1/28/2020 - 2/4/2020	Be-7	<2.14E-01	0.00E+00	2.14E-01
		K-40	8.31E-01	2.77E-01	3.15E-01
516852	2/4/2020 - 2/11/2020	I-131	<5.46E-02	0.00E+00	5.46E-02
		Cs-134	<2.35E-02	0.00E+00	2.35E-02
		Cs-137	<2.88E-02	0.00E+00	2.88E-02
		Be-7	<2.29E-01	0.00E+00	2.29E-01
		K-40	1.14E+00	2.91E-01	1.94E-01
517375	2/11/2020 - 2/18/2020	I-131	<4.89E-02	0.00E+00	4.89E-02
		Cs-134	<3.27E-02	0.00E+00	3.27E-02
		Cs-137	<3.20E-02	0.00E+00	3.20E-02
		Be-7	<2.83E-01	0.00E+00	2.83E-01
		K-40	1.54E+00	4.43E-01	2.66E-01
517645	2/18/2020 - 2/25/2020	I-131	<5.04E-02	0.00E+00	5.04E-02
		Cs-134	<3.11E-02	0.00E+00	3.11E-02
		Cs-137	<2.24E-02	0.00E+00	2.24E-02
		Be-7	<1.68E-01	0.00E+00	1.68E-01
		K-40	1.43E+00	3.70E-01	2.98E-01
518665	2/25/2020 - 3/3/2020	I-131	<3.34E-02	0.00E+00	3.34E-02
		Cs-134	<2.24E-02	0.00E+00	2.24E-02
		Cs-137	<2.36E-02	0.00E+00	2.36E-02
		Be-7	<1.60E-01	0.00E+00	1.60E-01
		K-40	5.76E-01	3.34E-01	4.32E-01
519284	3/3/2020 - 3/10/2020	I-131	<3.57E-02	0.00E+00	3.57E-02
		Cs-134	<3.47E-02	0.00E+00	3.47E-02
		Cs-137	<3.24E-02	0.00E+00	3.24E-02
		Be-7	<2.60E-01	0.00E+00	2.60E-01
		K-40	1.20E+00	4.14E-01	3.77E-01
519662	3/10/2020 - 3/17/2020	I-131	<4.00E-02	0.00E+00	4.00E-02
		Cs-134	<3.06E-02	0.00E+00	3.06E-02
		Cs-137	<2.80E-02	0.00E+00	2.80E-02
		Be-7	<2.19E-01	0.00E+00	2.19E-01
		K-40	6.17E-01	3.43E-01	4.39E-01
520246	3/17/2020 - 3/24/2020	I-131	<5.42E-02	0.00E+00	5.42E-02
		Cs-134	<2.94E-02	0.00E+00	2.94E-02
		Cs-137	<2.32E-02	0.00E+00	2.32E-02
		Be-7	<2.50E-01	0.00E+00	2.50E-01
		K-40	1.35E+00	4.24E-01	4.97E-01
520471	3/24/2020 - 3/31/2020	I-131	<3.20E-02	0.00E+00	3.20E-02
		Cs-134	<3.25E-02	0.00E+00	3.25E-02
		Cs-137	<3.51E-02	0.00E+00	3.51E-02
		Be-7	<2.73E-01	0.00E+00	2.73E-01
		K-40	6.52E-01	3.62E-01	4.62E-01
520772	3/31/2020 - 4/7/2020	I-131	<5.14E-02	0.00E+00	5.14E-02
		Cs-134	<2.31E-02	0.00E+00	2.31E-02
		Cs-137	<2.65E-02	0.00E+00	2.65E-02
		Be-7	<1.66E-01	0.00E+00	1.66E-01
		K-40	8.20E-01	3.40E-01	4.07E-01



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
521571	4/7/2020 - 4/14/2020	I-131	<5.06E-02	0.00E+00	5.06E-02
		Cs-134	<2.14E-02	0.00E+00	2.14E-02
		Cs-137	<2.24E-02	0.00E+00	2.24E-02
		Be-7	<2.00E-01	0.00E+00	2.00E-01
		K-40	1.22E+00	2.95E-01	3.02E-01
522006	4/14/2020 - 4/21/2020	I-131	<4.46E-02	0.00E+00	4.46E-02
		Cs-134	<3.26E-02	0.00E+00	3.26E-02
		Cs-137	<2.32E-02	0.00E+00	2.32E-02
		Be-7	<2.61E-01	0.00E+00	2.61E-01
		K-40	8.01E-01	4.53E-01	6.33E-01
522305	4/21/2020 - 4/28/2020	I-131	<3.86E-02	0.00E+00	3.86E-02
		Cs-134	<3.50E-02	0.00E+00	3.50E-02
		Cs-137	<3.02E-02	0.00E+00	3.02E-02
		Be-7	<2.12E-01	0.00E+00	2.12E-01
		K-40	1.62E+00	4.46E-01	4.46E-01
522560	4/28/2020 - 5/5/2020	I-131	<5.38E-02	0.00E+00	5.38E-02
		Cs-134	<2.88E-02	0.00E+00	2.88E-02
		Cs-137	<1.84E-02	0.00E+00	1.84E-02
		Be-7	<1.91E-01	0.00E+00	1.91E-01
		K-40	1.41E+00	3.55E-01	2.15E-01
523067	5/5/2020 - 5/12/2020	I-131	<3.59E-02	0.00E+00	3.59E-02
		Cs-134	<3.63E-02	0.00E+00	3.63E-02
		Cs-137	<3.25E-02	0.00E+00	3.25E-02
		Be-7	<1.80E-01	0.00E+00	1.80E-01
		K-40	7.41E-01	3.39E-01	3.64E-01
523440	5/12/2020 - 5/19/2020	I-131	<3.18E-02	0.00E+00	3.18E-02
		Cs-134	<3.27E-02	0.00E+00	3.27E-02
		Cs-137	<3.57E-02	0.00E+00	3.57E-02
		Be-7	<1.68E-01	0.00E+00	1.68E-01
		K-40	7.49E-01	2.89E-01	7.25E-02
523834	5/19/2020 - 5/26/2020	I-131	<3.88E-02	0.00E+00	3.88E-02
		Cs-134	<3.50E-02	0.00E+00	3.50E-02
		Cs-137	<2.91E-02	0.00E+00	2.91E-02
		Be-7	<2.54E-01	0.00E+00	2.54E-01
		K-40	9.07E-01	2.46E-01	3.09E-01
524405	5/26/2020 - 6/2/2020	I-131	<3.55E-02	0.00E+00	3.55E-02
		Cs-134	<3.20E-02	0.00E+00	3.20E-02
		Cs-137	<2.63E-02	0.00E+00	2.63E-02
		Be-7	<1.78E-01	0.00E+00	1.78E-01
		K-40	5.43E-01	3.37E-01	4.65E-01
524727	6/2/2020 - 6/9/2020	I-131	<3.42E-02	0.00E+00	3.42E-02
		Cs-134	<3.73E-02	0.00E+00	3.73E-02
		Cs-137	<2.81E-02	0.00E+00	2.81E-02
		Be-7	<1.99E-01	0.00E+00	1.99E-01
		K-40	<4.84E-01	0.00E+00	4.84E-01
524959	6/9/2020 - 6/16/2020	I-131	<4.91E-02	0.00E+00	4.91E-02
		Cs-134	<3.80E-02	0.00E+00	3.80E-02
		Cs-137	<3.05E-02	0.00E+00	3.05E-02



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
524959	6/9/2020 - 6/16/2020	Be-7	<2.23E-01	0.00E+00	2.23E-01
		K-40	1.15E+00	3.72E-01	2.68E-01
525314	6/16/2020 - 6/23/2020	I-131	<3.33E-02	0.00E+00	3.33E-02
		Cs-134	<2.73E-02	0.00E+00	2.73E-02
		Cs-137	<2.66E-02	0.00E+00	2.66E-02
		Be-7	<2.24E-01	0.00E+00	2.24E-01
		K-40	7.30E-01	3.56E-01	4.37E-01
525556	6/23/2020 - 6/30/2020	I-131	<3.19E-02	0.00E+00	3.19E-02
		Cs-134	<3.43E-02	0.00E+00	3.43E-02
		Cs-137	<2.13E-02	0.00E+00	2.13E-02
		Be-7	<2.31E-01	0.00E+00	2.31E-01
		K-40	7.53E-01	3.14E-01	2.72E-01
525905	6/30/2020 - 7/7/2020	I-131	<3.32E-02	0.00E+00	3.32E-02
		Cs-134	<3.48E-02	0.00E+00	3.48E-02
		Cs-137	<1.78E-02	0.00E+00	1.78E-02
		Be-7	<1.58E-01	0.00E+00	1.58E-01
		K-40	<2.99E-01	0.00E+00	2.99E-01
526240	7/7/2020 - 7/14/2020	I-131	<4.14E-02	0.00E+00	4.14E-02
		Cs-134	<2.97E-02	0.00E+00	2.97E-02
		Cs-137	<3.16E-02	0.00E+00	3.16E-02
		Be-7	<2.14E-01	0.00E+00	2.14E-01
		K-40	<6.84E-01	0.00E+00	6.84E-01
526519	7/14/2020 - 7/21/2020	I-131	<3.52E-02	0.00E+00	3.52E-02
		Cs-134	<2.34E-02	0.00E+00	2.34E-02
		Cs-137	<2.67E-02	0.00E+00	2.67E-02
		Be-7	<1.99E-01	0.00E+00	1.99E-01
		K-40	<2.35E-01	0.00E+00	2.35E-01
526846	7/21/2020 - 7/28/2020	I-131	<3.68E-02	0.00E+00	3.68E-02
		Cs-134	<2.74E-02	0.00E+00	2.74E-02
		Cs-137	<2.67E-02	0.00E+00	2.67E-02
		Be-7	<2.43E-01	0.00E+00	2.43E-01
		K-40	9.24E-01	3.13E-01	6.77E-02
527323	7/28/2020 - 8/4/2020	I-131	<5.13E-02	0.00E+00	5.13E-02
		Cs-134	<3.56E-02	0.00E+00	3.56E-02
		Cs-137	<3.25E-02	0.00E+00	3.25E-02
		Be-7	<1.89E-01	0.00E+00	1.89E-01
		K-40	1.11E+00	3.73E-01	4.12E-01
527617	8/4/2020 - 8/11/2020	I-131	<3.43E-02	0.00E+00	3.43E-02
		Cs-134	<2.96E-02	0.00E+00	2.96E-02
		Cs-137	<2.86E-02	0.00E+00	2.86E-02
		Be-7	<2.44E-01	0.00E+00	2.44E-01
		K-40	<8.08E-01	0.00E+00	8.08E-01
527908	8/11/2020 - 8/18/2020	I-131	<3.05E-02	0.00E+00	3.05E-02
		Cs-134	<2.57E-02	0.00E+00	2.57E-02
		Cs-137	<2.69E-02	0.00E+00	2.69E-02
		Be-7	<1.83E-01	0.00E+00	1.83E-01
		K-40	7.68E-01	3.55E-01	4.15E-01



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
528665	8/18/2020 - 8/25/2020	I-131	<1.81E-02	0.00E+00	1.81E-02
		Cs-134	<1.45E-02	0.00E+00	1.45E-02
		Cs-137	<1.39E-02	0.00E+00	1.39E-02
		Be-7	<9.94E-02	0.00E+00	9.94E-02
		K-40	4.52E-01	2.06E-01	2.58E-01
528883	8/25/2020 - 9/1/2020	I-131	<1.70E-02	0.00E+00	1.70E-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	<1.12E-01	0.00E+00	1.12E-01
		K-40	4.20E-01	1.62E-01	1.45E-01
528992	9/1/2020 - 9/8/2020	I-131	<2.78E-02	0.00E+00	2.78E-02
		Cs-134	<1.53E-02	0.00E+00	1.53E-02
		Cs-137	<1.57E-02	0.00E+00	1.57E-02
		Be-7	<1.13E-01	0.00E+00	1.13E-01
		K-40	4.63E-01	1.79E-01	1.77E-01
529988	9/8/2020 - 9/15/2020	I-131	<2.26E-02	0.00E+00	2.26E-02
		Cs-134	<1.61E-02	0.00E+00	1.61E-02
		Cs-137	<1.17E-02	0.00E+00	1.17E-02
		Be-7	<1.13E-01	0.00E+00	1.13E-01
		K-40	4.07E-01	1.85E-01	2.21E-01
530283	9/15/2020 - 9/22/2020	I-131	<1.63E-02	0.00E+00	1.63E-02
		Cs-134	<1.55E-02	0.00E+00	1.55E-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	<3.10E-01	0.00E+00	3.10E-01
530563	9/22/2020 - 9/29/2020	I-131	<1.77E-02	0.00E+00	1.77E-02
		Cs-134	<1.85E-02	0.00E+00	1.85E-02
		Cs-137	<1.93E-02	0.00E+00	1.93E-02
		Be-7	<1.07E-01	0.00E+00	1.07E-01
		K-40	5.68E-01	1.97E-01	1.89E-01
531061	9/29/2020 - 10/6/2020	I-131	<2.12E-02	0.00E+00	2.12E-02
		Cs-134	<1.54E-02	0.00E+00	1.54E-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	6.84E-01	2.30E-01	2.41E-01
531672	10/6/2020 - 10/13/2020	I-131	<2.06E-02	0.00E+00	2.06E-02
		Cs-134	<1.87E-02	0.00E+00	1.87E-02
		Cs-137	<1.56E-02	0.00E+00	1.56E-02
		Be-7	<1.22E-01	0.00E+00	1.22E-01
		K-40	5.59E-01	2.09E-01	2.29E-01
532068	10/13/2020 - 10/20/2020	I-131	<1.93E-02	0.00E+00	1.93E-02
		Cs-134	<1.44E-02	0.00E+00	1.44E-02
		Cs-137	<1.45E-02	0.00E+00	1.45E-02
		Be-7	<9.93E-02	0.00E+00	9.93E-02
		K-40	4.00E-01	1.69E-01	1.77E-01
532500	10/20/2020 - 10/27/2020	I-131	<2.77E-02	0.00E+00	2.77E-02
		Cs-134	<1.84E-02	0.00E+00	1.84E-02
		Cs-137	<2.02E-02	0.00E+00	2.02E-02



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
532500	10/20/2020 - 10/27/2020	Be-7	<1.25E-01	0.00E+00	1.25E-01
		K-40	6.91E-01	2.10E-01	1.68E-01
532808	10/27/2020 - 11/3/2020	I-131	<1.63E-02	0.00E+00	1.63E-02
		Cs-134	<1.94E-02	0.00E+00	1.94E-02
		Cs-137	<8.99E-03	0.00E+00	8.99E-03
		Be-7	<1.21E-01	0.00E+00	1.21E-01
		K-40	5.82E-01	1.97E-01	1.79E-01
533335	11/3/2020 - 11/10/2020	I-131	<1.93E-02	0.00E+00	1.93E-02
		Cs-134	<2.05E-02	0.00E+00	2.05E-02
		Cs-137	<1.39E-02	0.00E+00	1.39E-02
		Be-7	<1.18E-01	0.00E+00	1.18E-01
		K-40	3.80E-01	1.63E-01	1.67E-01
533789	11/10/2020 - 11/17/2020	I-131	<1.76E-02	0.00E+00	1.76E-02
		Cs-134	<1.94E-02	0.00E+00	1.94E-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	3.53E-01	1.64E-01	1.76E-01
534097	11/17/2020 - 11/24/2020	I-131	<3.22E-02	0.00E+00	3.22E-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	<1.40E-01	0.00E+00	1.40E-01
		K-40	6.34E-01	2.43E-01	2.90E-01
534555	11/24/2020 - 12/1/2020	I-131	<3.21E-02	0.00E+00	3.21E-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	<1.50E-01	0.00E+00	1.50E-01
		K-40	5.70E-01	2.03E-01	2.00E-01
534735	12/1/2020 - 12/8/2020	I-131	<2.20E-02	0.00E+00	2.20E-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	<1.45E-01	0.00E+00	1.45E-01
		K-40	7.62E-01	2.18E-01	1.49E-01
535329	12/8/2020 - 12/15/2020	I-131	<2.11E-02	0.00E+00	2.11E-02
		Cs-134	<1.93E-02	0.00E+00	1.93E-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	3.80E-01	1.89E-01	2.40E-01
535879	12/15/2020 - 12/22/2020	I-131	<3.03E-02	0.00E+00	3.03E-02
		Cs-134	<1.76E-02	0.00E+00	1.76E-02
		Cs-137	<1.68E-02	0.00E+00	1.68E-02
		Be-7	<1.27E-01	0.00E+00	1.27E-01
		K-40	5.52E-01	1.78E-01	1.15E-01
536172	12/22/2020 - 12/29/2020	I-131	<2.18E-02	0.00E+00	2.18E-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	<1.20E-01	0.00E+00	1.20E-01
		K-40	4.63E-01	1.91E-01	2.12E-01



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 700 [ INDICATOR - SSW @ 5.5 miles ]

Sample ID:	525238	Sample Dates:	6/2/2020 - 6/2/2020	FREESWIM	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<5.34E+01	0.00E+00	5.34E+01
					Co-58	<7.58E+01	0.00E+00	7.58E+01
					Fe-59	<2.07E+02	0.00E+00	2.07E+02
					Co-60	<4.44E+01	0.00E+00	4.44E+01
					Zn-65	<1.43E+02	0.00E+00	1.43E+02
					Nb-95	<1.18E+02	0.00E+00	1.18E+02
					I-131	<4.32E+02	0.00E+00	4.32E+02
					Cs-134	<7.53E+01	0.00E+00	7.53E+01
					Cs-137	<5.75E+01	0.00E+00	5.75E+01
					Be-7	<4.91E+02	0.00E+00	4.91E+02
					K-40	3.68E+03	1.06E+03	1.08E+03
					Ag-110M	<5.27E+01	0.00E+00	5.27E+01
					Sb-122	<9.48E+04	0.00E+00	9.48E+04
					Sb-125	<1.38E+02	0.00E+00	1.38E+02

Sample ID:	536115	Sample Dates:	11/17/2020 - 11/17/2020	FREESWIM	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<4.77E+01	0.00E+00	4.77E+01
					Co-58	<5.01E+01	0.00E+00	5.01E+01
					Fe-59	<1.11E+02	0.00E+00	1.11E+02
					Co-60	<3.44E+01	0.00E+00	3.44E+01
					Zn-65	<6.38E+01	0.00E+00	6.38E+01
					Nb-95	<6.20E+01	0.00E+00	6.20E+01
					I-131	<2.26E+02	0.00E+00	2.26E+02
					Cs-134	<4.25E+01	0.00E+00	4.25E+01
					Cs-137	<3.88E+01	0.00E+00	3.88E+01
					Be-7	<3.77E+02	0.00E+00	3.77E+02
					K-40	3.45E+03	8.05E+02	5.19E+02
					Ag-110M	<2.25E+01	0.00E+00	2.25E+01
					Sb-122	<8.58E+03	0.00E+00	8.58E+03
					Sb-125	<9.86E+01	0.00E+00	9.86E+01

Sample Point 701 [ INDICATOR - SSW @ 5.5 miles ]

Sample ID:	525239	Sample Dates:	6/2/2020 - 6/2/2020	BOTMFEEDER	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<6.63E+01	0.00E+00	6.63E+01
					Co-58	<5.50E+01	0.00E+00	5.50E+01
					Fe-59	<1.76E+02	0.00E+00	1.76E+02
					Co-60	<9.42E+01	0.00E+00	9.42E+01
					Zn-65	<1.50E+02	0.00E+00	1.50E+02
					Nb-95	<1.13E+02	0.00E+00	1.13E+02
					I-131	<7.01E+02	0.00E+00	7.01E+02
					Cs-134	<6.82E+01	0.00E+00	6.82E+01
					Cs-137	<7.03E+01	0.00E+00	7.03E+01
					Be-7	<7.07E+02	0.00E+00	7.07E+02
					K-40	4.14E+03	1.02E+03	1.52E+02
					Ag-110M	<7.23E+01	0.00E+00	7.23E+01
					Sb-122	<1.24E+05	0.00E+00	1.24E+05
					Sb-125	<1.51E+02	0.00E+00	1.51E+02

Sample ID:	536116	Sample Dates:	11/17/2020 - 11/17/2020	BOTMFEEDER	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<4.67E+01	0.00E+00	4.67E+01
					Co-58	<6.61E+01	0.00E+00	6.61E+01
					Fe-59	<1.02E+02	0.00E+00	1.02E+02
					Co-60	<6.37E+01	0.00E+00	6.37E+01
					Zn-65	<1.18E+02	0.00E+00	1.18E+02
					Nb-95	<8.04E+01	0.00E+00	8.04E+01
					I-131	<2.40E+02	0.00E+00	2.40E+02
					Cs-134	<5.13E+01	0.00E+00	5.13E+01
					Cs-137	<5.04E+01	0.00E+00	5.04E+01
					Be-7	<4.09E+02	0.00E+00	4.09E+02
					K-40	3.79E+03	9.75E+02	9.36E+02
					Ag-110M	<4.91E+01	0.00E+00	4.91E+01
					Sb-122	<9.27E+03	0.00E+00	9.27E+03
					Sb-125	<8.87E+01	0.00E+00	8.87E+01





# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 702 [ INDICATOR - SSW @ 5.5 miles ]

Sample ID:	525240	Sample Dates:	6/2/2020 - 6/2/2020	INVERTEBRA	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<3.01E+01	0.00E+00	3.01E+01
					Co-58	<3.93E+01	0.00E+00	3.93E+01
					Fe-59	<8.98E+01	0.00E+00	8.98E+01
					Co-60	<5.22E+01	0.00E+00	5.22E+01
					Zn-65	<8.59E+01	0.00E+00	8.59E+01
					Nb-95	<4.37E+01	0.00E+00	4.37E+01
					I-131	<3.61E+02	0.00E+00	3.61E+02
					Cs-134	<4.81E+01	0.00E+00	4.81E+01
					Cs-137	<3.73E+01	0.00E+00	3.73E+01
					Be-7	<3.74E+02	0.00E+00	3.74E+02
					K-40	3.66E+03	7.54E+02	4.92E+02
					Ag-110M	<4.47E+01	0.00E+00	4.47E+01
					Sb-122	<6.49E+04	0.00E+00	6.49E+04
					Sb-125	<8.29E+01	0.00E+00	8.29E+01

Sample ID:	536117	Sample Dates:	11/17/2020 - 11/17/2020	INVERTEBRA	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<6.01E+01	0.00E+00	6.01E+01
					Co-58	<5.27E+01	0.00E+00	5.27E+01
					Fe-59	<1.12E+02	0.00E+00	1.12E+02
					Co-60	<2.76E+01	0.00E+00	2.76E+01
					Zn-65	<1.10E+02	0.00E+00	1.10E+02
					Nb-95	<7.50E+01	0.00E+00	7.50E+01
					I-131	<2.44E+02	0.00E+00	2.44E+02
					Cs-134	<4.53E+01	0.00E+00	4.53E+01
					Cs-137	<5.68E+01	0.00E+00	5.68E+01
					Be-7	<4.13E+02	0.00E+00	4.13E+02
					K-40	4.17E+03	9.47E+02	7.64E+02
					Ag-110M	<5.46E+01	0.00E+00	5.46E+01
					Sb-122	<1.32E+04	0.00E+00	1.32E+04
					Sb-125	<9.65E+01	0.00E+00	9.65E+01

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

Sample ID:	525241	Sample Dates:	6/2/2020 - 6/2/2020	FREESWIM	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<6.44E+01	0.00E+00	6.44E+01
					Co-58	<7.87E+01	0.00E+00	7.87E+01
					Fe-59	<2.06E+02	0.00E+00	2.06E+02
					Co-60	<7.10E+01	0.00E+00	7.10E+01
					Zn-65	<1.15E+02	0.00E+00	1.15E+02
					Nb-95	<1.08E+02	0.00E+00	1.08E+02
					I-131	<7.75E+02	0.00E+00	7.75E+02
					Cs-134	<8.47E+01	0.00E+00	8.47E+01
					Cs-137	<7.60E+01	0.00E+00	7.60E+01
					Be-7	<7.72E+02	0.00E+00	7.72E+02
					K-40	4.34E+03	1.18E+03	7.91E+02
					Ag-110M	<7.28E+01	0.00E+00	7.28E+01
					Sb-122	<1.31E+05	0.00E+00	1.31E+05
					Sb-125	<1.83E+02	0.00E+00	1.83E+02

Sample ID:	536118	Sample Dates:	11/17/2020 - 11/17/2020	FREESWIM	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<4.58E+01	0.00E+00	4.58E+01
					Co-58	<4.15E+01	0.00E+00	4.15E+01
					Fe-59	<1.04E+02	0.00E+00	1.04E+02
					Co-60	<6.25E+01	0.00E+00	6.25E+01
					Zn-65	<6.43E+01	0.00E+00	6.43E+01
					Nb-95	<6.22E+01	0.00E+00	6.22E+01
					I-131	<2.25E+02	0.00E+00	2.25E+02
					Cs-134	<5.03E+01	0.00E+00	5.03E+01
					Cs-137	<4.52E+01	0.00E+00	4.52E+01
					Be-7	<4.42E+02	0.00E+00	4.42E+02
					K-40	4.24E+03	9.25E+02	6.39E+02
					Ag-110M	<4.58E+01	0.00E+00	4.58E+01
					Sb-122	<1.26E+04	0.00E+00	1.26E+04
					Sb-125	<8.78E+01	0.00E+00	8.78E+01



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

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

Sample ID:	525242	Sample Dates:	6/2/2020 - 6/2/2020	BOTMFEEDER	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<5.86E+01	0.00E+00	5.86E+01
					Co-58	<7.16E+01	0.00E+00	7.16E+01
					Fe-59	<1.35E+02	0.00E+00	1.35E+02
					Co-60	<5.69E+01	0.00E+00	5.69E+01
					Zn-65	<1.17E+02	0.00E+00	1.17E+02
					Nb-95	<9.13E+01	0.00E+00	9.13E+01
					I-131	<5.76E+02	0.00E+00	5.76E+02
					Cs-134	<5.74E+01	0.00E+00	5.74E+01
					Cs-137	<5.92E+01	0.00E+00	5.92E+01
					Be-7	<6.70E+02	0.00E+00	6.70E+02
					K-40	4.78E+03	1.02E+03	1.27E+02
					Ag-110M	<5.67E+01	0.00E+00	5.67E+01
					Sb-122	<1.32E+05	0.00E+00	1.32E+05
					Sb-125	<1.61E+02	0.00E+00	1.61E+02

Sample ID:	536119	Sample Dates:	11/17/2020 - 11/17/2020	BOTMFEEDER	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<4.10E+01	0.00E+00	4.10E+01
					Co-58	<6.56E+01	0.00E+00	6.56E+01
					Fe-59	<9.56E+01	0.00E+00	9.56E+01
					Co-60	<5.25E+01	0.00E+00	5.25E+01
					Zn-65	<1.30E+02	0.00E+00	1.30E+02
					Nb-95	<6.55E+01	0.00E+00	6.55E+01
					I-131	<3.05E+02	0.00E+00	3.05E+02
					Cs-134	<5.43E+01	0.00E+00	5.43E+01
					Cs-137	<5.78E+01	0.00E+00	5.78E+01
					Be-7	<4.82E+02	0.00E+00	4.82E+02
					K-40	4.59E+03	9.33E+02	4.83E+02
					Ag-110M	<4.55E+01	0.00E+00	4.55E+01
					Sb-122	<1.53E+04	0.00E+00	1.53E+04
					Sb-125	<8.73E+01	0.00E+00	8.73E+01

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

Sample ID:	525243	Sample Dates:	6/2/2020 - 6/2/2020	INVERTEBRA	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<7.36E+01	0.00E+00	7.36E+01
					Co-58	<7.62E+01	0.00E+00	7.62E+01
					Fe-59	<1.69E+02	0.00E+00	1.69E+02
					Co-60	<4.33E+01	0.00E+00	4.33E+01
					Zn-65	<1.77E+02	0.00E+00	1.77E+02
					Nb-95	<8.28E+01	0.00E+00	8.28E+01
					I-131	<6.46E+02	0.00E+00	6.46E+02
					Cs-134	<8.00E+01	0.00E+00	8.00E+01
					Cs-137	<7.14E+01	0.00E+00	7.14E+01
					Be-7	<5.36E+02	0.00E+00	5.36E+02
					K-40	4.31E+03	1.06E+03	1.58E+02
					Ag-110M	<5.89E+01	0.00E+00	5.89E+01
					Sb-122	<1.07E+05	0.00E+00	1.07E+05
					Sb-125	<1.69E+02	0.00E+00	1.69E+02

Sample ID:	536120	Sample Dates:	11/17/2020 - 11/17/2020	INVERTEBRA	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<3.09E+01	0.00E+00	3.09E+01
					Co-58	<5.79E+01	0.00E+00	5.79E+01
					Fe-59	<1.00E+02	0.00E+00	1.00E+02
					Co-60	<3.63E+01	0.00E+00	3.63E+01
					Zn-65	<9.47E+01	0.00E+00	9.47E+01
					Nb-95	<6.88E+01	0.00E+00	6.88E+01
					I-131	<2.19E+02	0.00E+00	2.19E+02
					Cs-134	<4.72E+01	0.00E+00	4.72E+01
					Cs-137	<4.29E+01	0.00E+00	4.29E+01
					Be-7	<4.92E+02	0.00E+00	4.92E+02
					K-40	4.05E+03	8.89E+02	4.91E+02
					Ag-110M	<5.11E+01	0.00E+00	5.11E+01
					Sb-122	<1.17E+04	0.00E+00	1.17E+04
					Sb-125	<1.12E+02	0.00E+00	1.12E+02



**BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)**

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

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

Sample ID:	525244	Sample Dates:	5/13/2020 - 5/13/2020	FREESWIM	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<6.69E+01	0.00E+00	6.69E+01
					Co-58	<7.76E+01	0.00E+00	7.76E+01
					Fe-59	<2.03E+02	0.00E+00	2.03E+02
					Co-60	<6.28E+01	0.00E+00	6.28E+01
					Zn-65	<1.32E+02	0.00E+00	1.32E+02
					Nb-95	<1.27E+02	0.00E+00	1.27E+02
					I-131	<2.86E+03	0.00E+00	2.86E+03
					Cs-134	<6.85E+01	0.00E+00	6.85E+01
					Cs-137	<6.51E+01	0.00E+00	6.51E+01
					Be-7	<7.23E+02	0.00E+00	7.23E+02
					K-40	3.89E+03	9.57E+02	7.23E+02
					Ag-110M	<5.15E+01	0.00E+00	5.15E+01
					Sb-122	<1.67E+07	0.00E+00	1.67E+07
					Sb-125	<1.20E+02	0.00E+00	1.20E+02

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

Sample ID:	525245	Sample Dates:	5/13/2020 - 5/13/2020	BOTMFEEDER	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<3.74E+01	0.00E+00	3.74E+01
					Co-58	<6.33E+01	0.00E+00	6.33E+01
					Fe-59	<1.57E+02	0.00E+00	1.57E+02
					Co-60	<3.81E+01	0.00E+00	3.81E+01
					Zn-65	<9.66E+01	0.00E+00	9.66E+01
					Nb-95	<1.11E+02	0.00E+00	1.11E+02
					I-131	<3.81E+03	0.00E+00	3.81E+03
					Cs-134	<5.35E+01	0.00E+00	5.35E+01
					Cs-137	<4.09E+01	0.00E+00	4.09E+01
					Be-7	<4.99E+02	0.00E+00	4.99E+02
					K-40	4.46E+03	8.29E+02	6.69E+02
					Ag-110M	<3.77E+01	0.00E+00	3.77E+01
					Sb-122	<3.07E+07	0.00E+00	3.07E+07
					Sb-125	<1.04E+02	0.00E+00	1.04E+02

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

Sample ID:	525246	Sample Dates:	5/13/2020 - 5/14/2020	INVERTEBRA	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<4.19E+01	0.00E+00	4.19E+01
					Co-58	<6.86E+01	0.00E+00	6.86E+01
					Fe-59	<1.83E+02	0.00E+00	1.83E+02
					Co-60	<4.41E+01	0.00E+00	4.41E+01
					Zn-65	<1.22E+02	0.00E+00	1.22E+02
					Nb-95	<1.10E+02	0.00E+00	1.10E+02
					I-131	<2.73E+03	0.00E+00	2.73E+03
					Cs-134	<5.40E+01	0.00E+00	5.40E+01
					Cs-137	<4.31E+01	0.00E+00	4.31E+01
					Be-7	<6.28E+02	0.00E+00	6.28E+02
					K-40	3.76E+03	7.79E+02	7.08E+02
					Ag-110M	<3.63E+01	0.00E+00	3.63E+01
					Sb-122	<9.84E+06	0.00E+00	9.84E+06
					Sb-125	<1.06E+02	0.00E+00	1.06E+02

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

Sample Point 404 [ INDICATOR - SW @ 0.16 miles ]

Sample ID:	516786	Sample Dates:	3/8/2020 - 3/8/2020		Nuclide	Activity	2 Sigma Error	MDA
					H3GW	<-7.2E+01	0.00E+00	1.87E+02

Sample ID:	523030	Sample Dates:	6/10/2020 - 6/10/2020		Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<6.63E+00	0.00E+00	6.63E+00
					Co-58	<4.98E+00	0.00E+00	4.98E+00
					Fe-59	<1.09E+01	0.00E+00	1.09E+01
					Co-60	<6.43E+00	0.00E+00	6.43E+00
					Zn-65	<1.27E+01	0.00E+00	1.27E+01

# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 404 [ INDICATOR - SW @ 0.16 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
523030	6/10/2020 - 6/10/2020	Zr-95	<1.14E+01	0.00E+00	1.14E+01
		Nb-95	<5.59E+00	0.00E+00	5.59E+00
		I-131	<8.87E+00	0.00E+00	8.87E+00
		Cs-134	<6.60E+00	0.00E+00	6.60E+00
		Cs-137	<5.11E+00	0.00E+00	5.11E+00
		BaLa-140	<1.18E+01	0.00E+00	1.18E+01
		Total-Gam	0.00E+00		
		H3GW	<-5.2E+01	0.00E+00	1.88E+02
527585	9/10/2020 - 9/10/2020	H3GW	<-3.1E+01	0.00E+00	1.79E+02
533714	12/8/2020 - 12/8/2020	H3GW	<-9.9E+01	0.00E+00	2.00E+02
539424	2/15/2021 - 2/15/2021	Mn-54	<4.98E+00	0.00E+00	4.99E+00
		Co-58	<5.46E+00	0.00E+00	5.46E+00
		Fe-59	<1.08E+01	0.00E+00	1.08E+01
		Co-60	<5.55E+00	0.00E+00	5.55E+00
		Zn-65	<1.45E+01	0.00E+00	1.45E+01
		Zr-95	<1.06E+01	0.00E+00	1.06E+01
		Nb-95	<6.95E+00	0.00E+00	6.95E+00
		I-131	<6.69E+00	0.00E+00	6.69E+00
		Cs-134	<6.32E+00	0.00E+00	6.32E+00
		Cs-137	<7.02E+00	0.00E+00	7.02E+00
		BaLa-140	<7.12E+00	0.00E+00	7.12E+00
		Total-Gam	0.00E+00		

## Sample Point 407 [ INDICATOR - ENE @ 0.06 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
516787	3/10/2020 - 3/10/2020	H3GW	<1.28E+02	0.00E+00	1.85E+02
523031	6/11/2020 - 6/11/2020	Mn-54	<6.99E+00	0.00E+00	6.99E+00
		Co-58	<6.00E+00	0.00E+00	6.00E+00
		Fe-59	<1.29E+01	0.00E+00	1.29E+01
		Co-60	<5.04E+00	0.00E+00	5.04E+00
		Zn-65	<1.24E+01	0.00E+00	1.24E+01
		Zr-95	<9.76E+00	0.00E+00	9.76E+00
		Nb-95	<7.56E+00	0.00E+00	7.56E+00
		I-131	<1.14E+01	0.00E+00	1.14E+01
		Cs-134	<7.08E+00	0.00E+00	7.08E+00
		Cs-137	<6.63E+00	0.00E+00	6.63E+00
		BaLa-140	<9.51E+00	0.00E+00	9.51E+00
		Total-Gam	0.00E+00		
		H3GW	<8.06E+01	0.00E+00	1.89E+02
527586	9/11/2020 - 9/11/2020	H3GW	<1.01E+02	0.00E+00	1.84E+02
533715	12/8/2020 - 12/8/2020	H3GW	<3.36E+01	0.00E+00	1.98E+02
539425	2/15/2021 - 2/15/2021	Mn-54	<5.86E+00	0.00E+00	5.86E+00
		Co-58	<4.65E+00	0.00E+00	4.65E+00
		Fe-59	<1.29E+01	0.00E+00	1.29E+01
		Co-60	<5.82E+00	0.00E+00	5.82E+00
		Zn-65	<1.09E+01	0.00E+00	1.09E+01
		Zr-95	<1.03E+01	0.00E+00	1.03E+01
		Nb-95	<5.43E+00	0.00E+00	5.43E+00
		I-131	<6.77E+00	0.00E+00	6.77E+00
Cs-134	<5.93E+00	0.00E+00	5.93E+00		



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
539425	2/15/2021 - 2/15/2021	Cs-137	<5.73E+00	0.00E+00	5.73E+00
		BaLa-140	<7.66E+00	0.00E+00	7.66E+00
		Total-Gam	0.00E+00		

## Sample Point 409 [ INDICATOR - NE @ 0.65 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
516788	3/6/2020 - 3/6/2020	H3GW	<-1.1E+02	0.00E+00	1.85E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
523032	6/10/2020 - 6/10/2020	Mn-54	<4.50E+00	0.00E+00	4.50E+00
		Co-58	<6.27E+00	0.00E+00	6.27E+00
		Fe-59	<1.23E+01	0.00E+00	1.23E+01
		Co-60	<6.31E+00	0.00E+00	6.31E+00
		Zn-65	<9.59E+00	0.00E+00	9.59E+00
		Zr-95	<1.06E+01	0.00E+00	1.06E+01
		Nb-95	<5.99E+00	0.00E+00	5.99E+00
		I-131	<9.07E+00	0.00E+00	9.07E+00
		Cs-134	<7.16E+00	0.00E+00	7.16E+00
		Cs-137	<4.90E+00	0.00E+00	4.90E+00
		BaLa-140	<1.07E+01	0.00E+00	1.07E+01
		Total-Gam	0.00E+00		
		H3GW	<2.60E+01	0.00E+00	1.88E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
527587	9/8/2020 - 9/8/2020	H3GW	<-1.4E+01	0.00E+00	1.78E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
533716	12/7/2020 - 12/7/2020	H3GW	<-1.9E+01	0.00E+00	1.98E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
539426	2/11/2021 - 2/11/2021	Mn-54	<4.80E+00	0.00E+00	4.80E+00
		Co-58	<5.22E+00	0.00E+00	5.22E+00
		Fe-59	<1.15E+01	0.00E+00	1.15E+01
		Co-60	<5.12E+00	0.00E+00	5.12E+00
		Zn-65	<1.26E+01	0.00E+00	1.26E+01
		Zr-95	<9.13E+00	0.00E+00	9.13E+00
		Nb-95	<6.24E+00	0.00E+00	6.24E+00
		I-131	<9.01E+00	0.00E+00	9.01E+00
		Cs-134	<6.13E+00	0.00E+00	6.13E+00
		Cs-137	<3.16E+00	0.00E+00	3.16E+00
		BaLa-140	<6.87E+00	0.00E+00	6.87E+00
		Total-Gam	0.00E+00		

## Sample Point 410 [ INDICATOR - NE @ 0.65 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
516789	3/8/2020 - 3/8/2020	H3GW	<-8.1E+01	0.00E+00	1.85E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
523033	6/10/2020 - 6/10/2020	Mn-54	<6.44E+00	0.00E+00	6.44E+00
		Co-58	<6.73E+00	0.00E+00	6.73E+00
		Fe-59	<8.59E+00	0.00E+00	8.59E+00
		Co-60	<4.97E+00	0.00E+00	4.97E+00
		Zn-65	<9.67E+00	0.00E+00	9.67E+00
		Zr-95	<8.07E+00	0.00E+00	8.07E+00
		Nb-95	<5.53E+00	0.00E+00	5.53E+00
		I-131	<9.92E+00	0.00E+00	9.92E+00
		Cs-134	<5.96E+00	0.00E+00	5.96E+00
		Cs-137	<4.02E+00	0.00E+00	4.02E+00
		BaLa-140	<7.05E+00	0.00E+00	7.05E+00
		Total-Gam	0.00E+00		
		H3GW	<-2.1E+01	0.00E+00	1.88E+02



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 410 [ INDICATOR - NE @ 0.65 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
527588	9/8/2020 - 9/8/2020	H3GW	<0.00E+00	0.00E+00	1.80E+02
533717	12/7/2020 - 12/7/2020	H3GW	<4.11E+01	0.00E+00	2.00E+02
539428	2/11/2021 - 2/11/2021	Mn-54	<6.59E+00	0.00E+00	6.59E+00
		Co-58	<5.98E+00	0.00E+00	5.98E+00
		Fe-59	<1.07E+01	0.00E+00	1.07E+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	<1.08E+01	0.00E+00	1.08E+01
		Nb-95	<7.19E+00	0.00E+00	7.19E+00
		I-131	<1.15E+01	0.00E+00	1.15E+01
		Cs-134	<4.66E+00	0.00E+00	4.66E+00
		Cs-137	<7.10E+00	0.00E+00	7.10E+00
		BaLa-140	<7.19E+00	0.00E+00	7.19E+00
		Total-Gam	0.00E+00		

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

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
516796	3/7/2020 - 3/7/2020	H3GW	<6.09E+01	0.00E+00	1.87E+02
523041	6/10/2020 - 6/10/2020	Mn-54	<6.54E+00	0.00E+00	6.54E+00
		Co-58	<7.32E+00	0.00E+00	7.32E+00
		Fe-59	<1.70E+01	0.00E+00	1.70E+01
		Co-60	<6.29E+00	0.00E+00	6.29E+00
		Zn-65	<1.36E+01	0.00E+00	1.36E+01
		Zr-95	<1.06E+01	0.00E+00	1.06E+01
		Nb-95	<6.46E+00	0.00E+00	6.46E+00
		I-131	<1.19E+01	0.00E+00	1.19E+01
		Cs-134	<6.91E+00	0.00E+00	6.91E+00
		Cs-137	<5.80E+00	0.00E+00	5.80E+00
		BaLa-140	<9.99E+00	0.00E+00	9.99E+00
		Total-Gam	0.00E+00		
		H3GW	<1.75E+02	0.00E+00	1.88E+02
527595	9/8/2020 - 9/8/2020	H3GW	2.24E+02	1.13E+02	1.82E+02
533725	12/8/2020 - 12/8/2020	H3GW	<1.13E+02	0.00E+00	1.99E+02
539429	2/15/2021 - 2/15/2021	Mn-54	<5.63E+00	0.00E+00	5.63E+00
		Co-58	<5.66E+00	0.00E+00	5.66E+00
		Fe-59	<1.18E+01	0.00E+00	1.18E+01
		Co-60	<5.97E+00	0.00E+00	5.97E+00
		Zn-65	<1.45E+01	0.00E+00	1.45E+01
		Zr-95	<1.15E+01	0.00E+00	1.15E+01
		Nb-95	<6.30E+00	0.00E+00	6.30E+00
		I-131	<7.85E+00	0.00E+00	7.85E+00
		Cs-134	<7.16E+00	0.00E+00	7.16E+00
		Cs-137	<6.39E+00	0.00E+00	6.39E+00
		BaLa-140	<8.36E+00	0.00E+00	8.36E+00
		Total-Gam	0.00E+00		

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

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
516798	3/8/2020 - 3/8/2020	H3GW	<9.72E+01	0.00E+00	1.83E+02



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

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

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
523044	6/10/2020 - 6/10/2020	Mn-54	<7.12E+00	0.00E+00	7.12E+00
		Co-58	<6.55E+00	0.00E+00	6.55E+00
		Fe-59	<1.04E+01	0.00E+00	1.04E+01
		Co-60	<7.43E+00	0.00E+00	7.43E+00
		Zn-65	<2.30E+01	0.00E+00	2.30E+01
		Zr-95	<8.78E+00	0.00E+00	8.78E+00
		Nb-95	<6.57E+00	0.00E+00	6.57E+00
		I-131	<8.95E+00	0.00E+00	8.95E+00
		Cs-134	<4.77E+00	0.00E+00	4.77E+00
		Cs-137	<5.53E+00	0.00E+00	5.53E+00
		BaLa-140	<1.10E+01	0.00E+00	1.10E+01
		Total-Gam	0.00E+00		
		H3GW	<-7.6E+01	0.00E+00	1.88E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
527597	9/10/2020 - 9/10/2020	H3GW	<7.44E+01	0.00E+00	1.81E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
533730	12/7/2020 - 12/7/2020	H3GW	<-3.9E+01	0.00E+00	2.01E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
539430	2/11/2021 - 2/11/2021	Mn-54	<5.33E+00	0.00E+00	5.33E+00
		Co-58	<5.93E+00	0.00E+00	5.93E+00
		Fe-59	<1.37E+01	0.00E+00	1.37E+01
		Co-60	<6.21E+00	0.00E+00	6.21E+00
		Zn-65	<1.04E+01	0.00E+00	1.04E+01
		Zr-95	<1.07E+01	0.00E+00	1.07E+01
		Nb-95	<4.68E+00	0.00E+00	4.68E+00
		I-131	<1.14E+01	0.00E+00	1.14E+01
		Cs-134	<6.18E+00	0.00E+00	6.18E+00
		Cs-137	<6.07E+00	0.00E+00	6.07E+00
		BaLa-140	<9.44E+00	0.00E+00	9.44E+00
		Total-Gam	0.00E+00		

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

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
516799	3/8/2020 - 3/8/2020	H3GW	<2.37E+00	0.00E+00	1.83E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
523045	6/10/2020 - 6/10/2020	Mn-54	<4.70E+00	0.00E+00	4.70E+00
		Co-58	<5.48E+00	0.00E+00	5.48E+00
		Fe-59	<1.19E+01	0.00E+00	1.19E+01
		Co-60	<5.71E+00	0.00E+00	5.71E+00
		Zn-65	<1.08E+01	0.00E+00	1.08E+01
		Zr-95	<1.18E+01	0.00E+00	1.18E+01
		Nb-95	<6.36E+00	0.00E+00	6.36E+00
		I-131	<9.93E+00	0.00E+00	9.93E+00
		Cs-134	<7.08E+00	0.00E+00	7.08E+00
		Cs-137	<5.99E+00	0.00E+00	5.99E+00
		BaLa-140	<6.45E+00	0.00E+00	6.45E+00
		Total-Gam	0.00E+00		
		H3GW	<-1.2E+01	0.00E+00	1.88E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
527598	9/10/2020 - 9/10/2020	H3GW	<-2.4E+00	0.00E+00	1.81E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
533731	12/7/2020 - 12/7/2020	H3GW	<-4.8E+01	0.00E+00	1.99E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
539431	2/11/2021 - 2/11/2021	Mn-54	<5.48E+00	0.00E+00	5.48E+00
		Co-58	<6.30E+00	0.00E+00	6.30E+00
		Fe-59	<1.26E+01	0.00E+00	1.26E+01
		Co-60	<6.01E+00	0.00E+00	6.01E+00



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
539431	2/11/2021 - 2/11/2021	Zn-65	<1.32E+01	0.00E+00	1.32E+01
		Zr-95	<9.13E+00	0.00E+00	9.13E+00
		Nb-95	<4.82E+00	0.00E+00	4.82E+00
		I-131	<8.68E+00	0.00E+00	8.68E+00
		Cs-134	<6.13E+00	0.00E+00	6.13E+00
		Cs-137	<5.12E+00	0.00E+00	5.12E+00
		BaLa-140	<8.91E+00	0.00E+00	8.91E+00
		Total-Gam	0.00E+00		

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

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
516801	3/9/2020 - 3/9/2020	H3GW	<1.42E+02	0.00E+00	1.85E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
523047	6/10/2020 - 6/10/2020	Mn-54	<5.90E+00	0.00E+00	5.90E+00
		Co-58	<5.32E+00	0.00E+00	5.32E+00
		Fe-59	<1.29E+01	0.00E+00	1.29E+01
		Co-60	<6.22E+00	0.00E+00	6.22E+00
		Zn-65	<1.48E+01	0.00E+00	1.48E+01
		Zr-95	<1.07E+01	0.00E+00	1.07E+01
		Nb-95	<4.99E+00	0.00E+00	4.99E+00
		I-131	<1.11E+01	0.00E+00	1.11E+01
		Cs-134	<7.35E+00	0.00E+00	7.35E+00
		Cs-137	<5.14E+00	0.00E+00	5.14E+00
		BaLa-140	<8.98E+00	0.00E+00	8.98E+00
		Total-Gam	0.00E+00		
		H3GW	<2.83E+01	0.00E+00	1.88E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
527600	9/11/2020 - 9/11/2020	H3GW	<8.23E+01	0.00E+00	1.84E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
533733	12/8/2020 - 12/8/2020	H3GW	<4.9E+01	0.00E+00	2.01E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
539432	2/15/2021 - 2/15/2021	Mn-54	<5.29E+00	0.00E+00	5.29E+00
		Co-58	<5.51E+00	0.00E+00	5.51E+00
		Fe-59	<1.11E+01	0.00E+00	1.11E+01
		Co-60	<7.49E+00	0.00E+00	7.49E+00
		Zn-65	<1.27E+01	0.00E+00	1.27E+01
		Zr-95	<1.16E+01	0.00E+00	1.16E+01
		Nb-95	<7.97E+00	0.00E+00	7.97E+00
		I-131	<6.87E+00	0.00E+00	6.87E+00
		Cs-134	<6.15E+00	0.00E+00	6.15E+00
		Cs-137	<6.32E+00	0.00E+00	6.32E+00
		BaLa-140	<8.43E+00	0.00E+00	8.43E+00
		Total-Gam	0.00E+00		

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

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
516803	3/7/2020 - 3/7/2020	H3GW	<1.7E+01	0.00E+00	1.84E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
523048	6/10/2020 - 6/10/2020	Mn-54	<6.90E+00	0.00E+00	6.90E+00
		Co-58	<6.35E+00	0.00E+00	6.35E+00
		Fe-59	<1.19E+01	0.00E+00	1.19E+01
		Co-60	<6.22E+00	0.00E+00	6.22E+00
		Zn-65	<1.39E+01	0.00E+00	1.39E+01
		Zr-95	<9.32E+00	0.00E+00	9.32E+00
		Nb-95	<6.35E+00	0.00E+00	6.35E+00
		I-131	<9.85E+00	0.00E+00	9.85E+00
		Cs-134	<7.17E+00	0.00E+00	7.17E+00





# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
523048	6/10/2020 - 6/10/2020	Cs-137	<7.62E+00	0.00E+00	7.62E+00
		BaLa-140	<1.07E+01	0.00E+00	1.07E+01
		Total-Gam	0.00E+00		
		H3GW	<-1.1E+02	0.00E+00	1.88E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
527601	9/8/2020 - 9/8/2020	H3GW	<2.87E+01	0.00E+00	1.80E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
533734	12/7/2020 - 12/7/2020	H3GW	<1.38E+02	0.00E+00	2.00E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
539433	2/15/2021 - 2/15/2021	Mn-54	<5.64E+00	0.00E+00	5.64E+00
		Co-58	<5.47E+00	0.00E+00	5.47E+00
		Fe-59	<1.08E+01	0.00E+00	1.08E+01
		Co-60	<6.76E+00	0.00E+00	6.76E+00
		Zn-65	<1.25E+01	0.00E+00	1.25E+01
		Zr-95	<9.52E+00	0.00E+00	9.52E+00
		Nb-95	<6.32E+00	0.00E+00	6.32E+00
		I-131	<6.17E+00	0.00E+00	6.17E+00
		Cs-134	<7.37E+00	0.00E+00	7.37E+00
		Cs-137	<4.41E+00	0.00E+00	4.41E+00
		BaLa-140	<7.18E+00	0.00E+00	7.18E+00
		Total-Gam	0.00E+00		

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

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
516804	3/10/2020 - 3/10/2020	H3GW	<1.12E+02	0.00E+00	1.84E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
523050	6/11/2020 - 6/11/2020	Mn-54	<7.14E+00	0.00E+00	7.14E+00
		Co-58	<5.58E+00	0.00E+00	5.58E+00
		Fe-59	<9.34E+00	0.00E+00	9.34E+00
		Co-60	<6.99E+00	0.00E+00	6.99E+00
		Zn-65	<1.67E+01	0.00E+00	1.67E+01
		Zr-95	<9.75E+00	0.00E+00	9.75E+00
		Nb-95	<5.92E+00	0.00E+00	5.92E+00
		I-131	<9.27E+00	0.00E+00	9.27E+00
		Cs-134	<6.47E+00	0.00E+00	6.47E+00
		Cs-137	<6.63E+00	0.00E+00	6.63E+00
		BaLa-140	<5.33E+00	0.00E+00	5.33E+00
		Total-Gam	0.00E+00		
		H3GW	<9.92E+01	0.00E+00	1.88E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
527602	9/10/2020 - 9/10/2020	H3GW	<1.24E+02	0.00E+00	1.80E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
533736	12/8/2020 - 12/8/2020	H3GW	<-5.3E+01	0.00E+00	1.99E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
539434	2/15/2021 - 2/15/2021	Mn-54	<6.75E+00	0.00E+00	6.75E+00
		Co-58	<5.96E+00	0.00E+00	5.96E+00
		Fe-59	<1.01E+01	0.00E+00	1.01E+01
		Co-60	<6.24E+00	0.00E+00	6.24E+00
		Zn-65	<1.56E+01	0.00E+00	1.56E+01
		Zr-95	<1.19E+01	0.00E+00	1.19E+01
		Nb-95	<7.02E+00	0.00E+00	7.02E+00
		I-131	<8.97E+00	0.00E+00	8.97E+00
		Cs-134	<5.75E+00	0.00E+00	5.75E+00
		Cs-137	<7.72E+00	0.00E+00	7.72E+00
		BaLa-140	<5.50E+00	0.00E+00	5.50E+00
		Total-Gam	0.00E+00		



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

Media Type: SEDIMENT\_SHORE Concentration (Activity): pCi/kg dry

Sample Point 500 [ INDICATOR - SSW @ 5 miles ]

Sample ID:	523924	Sample Dates:	5/12/2020 - 5/12/2020	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<3.72E+01	0.00E+00	3.72E+01
				Co-58	<3.90E+01	0.00E+00	3.90E+01
				Fe-59	<9.89E+01	0.00E+00	9.89E+01
				Co-60	<3.12E+01	0.00E+00	3.12E+01
				Zn-65	<9.42E+01	0.00E+00	9.42E+01
				Zr-95	<9.67E+01	0.00E+00	9.67E+01
				Nb-95	<5.70E+01	0.00E+00	5.70E+01
				I-131	<1.72E+02	0.00E+00	1.72E+02
				Cs-134	<4.45E+01	0.00E+00	4.45E+01
				Cs-137	<4.11E+01	0.00E+00	4.11E+01
				Be-7	<2.72E+02	0.00E+00	2.72E+02
				K-40	1.44E+03	5.41E+02	4.32E+02
				Co-57	<3.19E+01	0.00E+00	3.19E+01
				Mo-99	<7.49E+04	0.00E+00	7.49E+04
				Ag-110M	<3.60E+01	0.00E+00	3.60E+01
				Sb-122	<1.25E+04	0.00E+00	1.25E+04
				Sb-125	<8.16E+01	0.00E+00	8.16E+01

Sample ID:	534661	Sample Dates:	11/12/2020 - 11/12/2020	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<4.82E+01	0.00E+00	4.82E+01
				Co-58	<3.94E+01	0.00E+00	3.94E+01
				Fe-59	<1.03E+02	0.00E+00	1.03E+02
				Co-60	<4.38E+01	0.00E+00	4.38E+01
				Zn-65	<6.27E+01	0.00E+00	6.27E+01
				Zr-95	<1.02E+02	0.00E+00	1.02E+02
				Nb-95	<2.87E+01	0.00E+00	2.87E+01
				I-131	<8.09E+01	0.00E+00	8.09E+01
				Cs-134	<5.37E+01	0.00E+00	5.37E+01
				Cs-137	<3.55E+01	0.00E+00	3.55E+01
				Be-7	<3.18E+02	0.00E+00	3.18E+02
				K-40	7.97E+02	3.92E+02	1.27E+02
				Co-57	<2.98E+01	0.00E+00	2.98E+01
				Mo-99	<4.84E+03	0.00E+00	4.84E+03
				Ag-110M	<4.52E+01	0.00E+00	4.52E+01
				Sb-122	<9.28E+02	0.00E+00	9.28E+02
				Sb-125	<9.03E+01	0.00E+00	9.03E+01

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

Sample ID:	523925	Sample Dates:	5/12/2020 - 5/12/2020	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<1.50E+02	0.00E+00	1.50E+02
				Co-58	<1.03E+02	0.00E+00	1.03E+02
				Fe-59	<2.61E+02	0.00E+00	2.61E+02
				Co-60	<1.20E+02	0.00E+00	1.20E+02
				Zn-65	<2.22E+02	0.00E+00	2.22E+02
				Zr-95	<2.12E+02	0.00E+00	2.12E+02
				Nb-95	<1.60E+02	0.00E+00	1.60E+02
				I-131	<8.14E+02	0.00E+00	8.14E+02
				Cs-134	<9.63E+01	0.00E+00	9.63E+01
				Cs-137	<1.17E+02	0.00E+00	1.17E+02
				Be-7	<1.41E+03	0.00E+00	1.41E+03
				K-40	2.06E+03	1.33E+03	1.71E+03
				Co-57	<1.02E+02	0.00E+00	1.02E+02
				Mo-99	<2.97E+05	0.00E+00	2.97E+05
				Ag-110M	<1.33E+02	0.00E+00	1.33E+02
				Sb-122	<5.39E+04	0.00E+00	5.39E+04
				Sb-125	<2.86E+02	0.00E+00	2.86E+02

Sample ID:	534662	Sample Dates:	11/12/2020 - 11/12/2020	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<8.34E+01	0.00E+00	8.34E+01
				Co-58	<7.68E+01	0.00E+00	7.68E+01
				Fe-59	<1.45E+02	0.00E+00	1.45E+02
				Co-60	<1.80E+01	0.00E+00	1.80E+01
				Zn-65	<8.82E+01	0.00E+00	8.82E+01



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

Media Type: SEDIMENT\_SHORE Concentration (Activity): pCi/kg dry

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

Sample ID: 534662 Sample Dates: 11/12/2020 - 11/12/2020

Nuclide	Activity	2 Sigma Error	MDA
Zr-95	<1.08E+02	0.00E+00	1.08E+02
Nb-95	<8.19E+01	0.00E+00	8.19E+01
I-131	<1.36E+02	0.00E+00	1.36E+02
Cs-134	<6.98E+01	0.00E+00	6.98E+01
Cs-137	<9.57E+01	0.00E+00	9.57E+01
Be-7	<5.16E+02	0.00E+00	5.16E+02
K-40	5.16E+03	1.29E+03	7.60E+02
Co-57	<5.48E+01	0.00E+00	5.48E+01
Mo-99	<6.00E+03	0.00E+00	6.00E+03
Ag-110M	<5.95E+01	0.00E+00	5.95E+01
Sb-122	<1.07E+03	0.00E+00	1.07E+03
Sb-125	<1.18E+02	0.00E+00	1.18E+02

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

Sample Point 400 [ CONTROL - NE @ 0.6 miles ]

Sample ID: 516472 Sample Dates: 1/2/2020 - 2/3/2020

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<1.63E+00	0.00E+00	1.63E+00
Co-58	<1.96E+00	0.00E+00	1.96E+00
Fe-59	<4.37E+00	0.00E+00	4.37E+00
Co-60	<1.92E+00	0.00E+00	1.92E+00
Zn-65	<3.66E+00	0.00E+00	3.66E+00
Zr-95	<3.88E+00	0.00E+00	3.88E+00
Nb-95	<2.51E+00	0.00E+00	2.51E+00
I-131	<9.80E+00	0.00E+00	9.80E+00
Cs-134	<1.84E+00	0.00E+00	1.84E+00
Cs-137	<1.67E+00	0.00E+00	1.67E+00
BaLa-140	<5.51E+00	0.00E+00	5.51E+00
H3SW	<-2.4E+01	0.00E+00	1.97E+02

Sample ID: 518671 Sample Dates: 2/3/2020 - 3/1/2020

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<1.32E+00	0.00E+00	1.32E+00
Co-58	<1.94E+00	0.00E+00	1.94E+00
Fe-59	<3.69E+00	0.00E+00	3.69E+00
Co-60	<1.45E+00	0.00E+00	1.45E+00
Zn-65	<3.03E+00	0.00E+00	3.03E+00
Zr-95	<3.39E+00	0.00E+00	3.39E+00
Nb-95	<2.12E+00	0.00E+00	2.12E+00
I-131	<1.06E+01	0.00E+00	1.06E+01
Cs-134	<1.81E+00	0.00E+00	1.81E+00
Cs-137	<1.67E+00	0.00E+00	1.67E+00
BaLa-140	<5.51E+00	0.00E+00	5.51E+00
H3SW	<2.47E+01	0.00E+00	1.79E+02

Sample ID: 520477 Sample Dates: 3/1/2020 - 4/2/2020

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<1.51E+00	0.00E+00	1.51E+00
Co-58	<1.87E+00	0.00E+00	1.87E+00
Fe-59	<4.37E+00	0.00E+00	4.37E+00
Co-60	<1.92E+00	0.00E+00	1.92E+00
Zn-65	<4.11E+00	0.00E+00	4.11E+00
Zr-95	<3.57E+00	0.00E+00	3.57E+00
Nb-95	<2.41E+00	0.00E+00	2.41E+00
I-131	<1.11E+01	0.00E+00	1.11E+01
Cs-134	<1.87E+00	0.00E+00	1.87E+00
Cs-137	<1.68E+00	0.00E+00	1.68E+00
BaLa-140	<4.43E+00	0.00E+00	4.43E+00
H3SW	<-1.8E+01	0.00E+00	1.88E+02

Sample ID: 522311 Sample Dates: 4/2/2020 - 5/1/2020

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<1.94E+00	0.00E+00	1.94E+00
Co-58	<2.04E+00	0.00E+00	2.04E+00
Fe-59	<4.21E+00	0.00E+00	4.21E+00
Co-60	<2.16E+00	0.00E+00	2.16E+00
Zn-65	<4.02E+00	0.00E+00	4.02E+00

# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
522311	4/2/2020 - 5/1/2020	Zr-95	<3.40E+00	0.00E+00	3.40E+00
		Nb-95	<2.60E+00	0.00E+00	2.60E+00
		I-131	<1.07E+01	0.00E+00	1.07E+01
		Cs-134	<1.92E+00	0.00E+00	1.92E+00
		Cs-137	<1.88E+00	0.00E+00	1.88E+00
		BaLa-140	<5.41E+00	0.00E+00	5.41E+00
		H3SW	<-6.8E+01	0.00E+00	1.91E+02
523840	5/1/2020 - 6/1/2020	Mn-54	<1.57E+00	0.00E+00	1.57E+00
		Co-58	<2.07E+00	0.00E+00	2.07E+00
		Fe-59	<4.13E+00	0.00E+00	4.13E+00
		Co-60	<1.70E+00	0.00E+00	1.70E+00
		Zn-65	<3.63E+00	0.00E+00	3.63E+00
		Zr-95	<3.50E+00	0.00E+00	3.50E+00
		Nb-95	<2.41E+00	0.00E+00	2.41E+00
		I-131	<1.17E+01	0.00E+00	1.17E+01
		Cs-134	<1.88E+00	0.00E+00	1.88E+00
		Cs-137	<1.79E+00	0.00E+00	1.79E+00
		BaLa-140	<6.01E+00	0.00E+00	6.01E+00
		H3SW	<-1.1E+02	0.00E+00	2.02E+02
		525320	6/1/2020 - 7/1/2020	Mn-54	<1.59E+00
Co-58	<2.30E+00			0.00E+00	2.30E+00
Fe-59	<3.93E+00			0.00E+00	3.93E+00
Co-60	<1.75E+00			0.00E+00	1.75E+00
Zn-65	<3.32E+00			0.00E+00	3.32E+00
Zr-95	<3.49E+00			0.00E+00	3.49E+00
Nb-95	<2.58E+00			0.00E+00	2.58E+00
I-131	<1.06E+01			0.00E+00	1.06E+01
Cs-134	<2.18E+00			0.00E+00	2.18E+00
Cs-137	<2.08E+00			0.00E+00	2.08E+00
BaLa-140	<4.39E+00			0.00E+00	4.39E+00
H3SW	<-2.8E+01			0.00E+00	1.84E+02
526525	7/1/2020 - 8/4/2020			Mn-54	<1.46E+00
		Co-58	<1.65E+00	0.00E+00	1.65E+00
		Fe-59	<3.90E+00	0.00E+00	3.90E+00
		Co-60	<1.58E+00	0.00E+00	1.58E+00
		Zn-65	<3.00E+00	0.00E+00	3.00E+00
		Zr-95	<2.64E+00	0.00E+00	2.64E+00
		Nb-95	<2.31E+00	0.00E+00	2.31E+00
		I-131	<1.03E+01	0.00E+00	1.03E+01
		Cs-134	<1.58E+00	0.00E+00	1.58E+00
		Cs-137	<1.63E+00	0.00E+00	1.63E+00
		BaLa-140	<5.13E+00	0.00E+00	5.13E+00
		H3SW	<-2.2E+01	0.00E+00	1.93E+02
		527914	8/4/2020 - 9/1/2020	Mn-54	<1.41E+00
Co-58	<1.67E+00			0.00E+00	1.67E+00
Fe-59	<3.40E+00			0.00E+00	3.40E+00
Co-60	<1.07E+00			0.00E+00	1.07E+00
Zn-65	<2.92E+00			0.00E+00	2.92E+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	<7.69E+00			0.00E+00	7.69E+00
Cs-134	<1.45E+00			0.00E+00	1.45E+00
Cs-137	<1.54E+00			0.00E+00	1.54E+00
BaLa-140	<3.52E+00			0.00E+00	3.52E+00
H3SW	<-2.3E+00			0.00E+00	1.81E+02



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 400 [ CONTROL - NE @ 0.6 miles ]

Sample ID:	530289	Sample Dates:	9/1/2020 - 10/1/2020	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<2.06E+00	0.00E+00	2.06E+00
				Co-58	<2.08E+00	0.00E+00	2.08E+00
				Fe-59	<4.08E+00	0.00E+00	4.08E+00
				Co-60	<1.94E+00	0.00E+00	1.94E+00
				Zn-65	<3.96E+00	0.00E+00	3.96E+00
				Zr-95	<3.72E+00	0.00E+00	3.72E+00
				Nb-95	<2.84E+00	0.00E+00	2.84E+00
				I-131	<1.18E+01	0.00E+00	1.18E+01
				Cs-134	<1.88E+00	0.00E+00	1.88E+00
				Cs-137	<1.91E+00	0.00E+00	1.91E+00
				BaLa-140	<5.92E+00	0.00E+00	5.92E+00
				H3SW	<-5.7E+01	0.00E+00	1.82E+02

Sample ID:	532074	Sample Dates:	10/1/2020 - 11/1/2020	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<1.60E+00	0.00E+00	1.60E+00
				Co-58	<1.66E+00	0.00E+00	1.66E+00
				Fe-59	<3.82E+00	0.00E+00	3.82E+00
				Co-60	<1.35E+00	0.00E+00	1.35E+00
				Zn-65	<3.16E+00	0.00E+00	3.16E+00
				Zr-95	<3.56E+00	0.00E+00	3.56E+00
				Nb-95	<2.51E+00	0.00E+00	2.51E+00
				I-131	<1.13E+01	0.00E+00	1.13E+01
				Cs-134	<1.59E+00	0.00E+00	1.59E+00
				Cs-137	<1.57E+00	0.00E+00	1.57E+00
				BaLa-140	<4.48E+00	0.00E+00	4.48E+00
				H3SW	<9.75E+01	0.00E+00	1.78E+02

Sample ID:	533795	Sample Dates:	11/1/2020 - 12/1/2020	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<2.75E+00	0.00E+00	2.75E+00
				Co-58	<3.09E+00	0.00E+00	3.09E+00
				Fe-59	<6.01E+00	0.00E+00	6.01E+00
				Co-60	<2.97E+00	0.00E+00	2.97E+00
				Zn-65	<5.50E+00	0.00E+00	5.50E+00
				Zr-95	<6.34E+00	0.00E+00	6.34E+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	<2.84E+00	0.00E+00	2.84E+00
				Cs-137	<2.48E+00	0.00E+00	2.48E+00
				BaLa-140	<7.36E+00	0.00E+00	7.36E+00
				H3SW	<1.21E+01	0.00E+00	2.04E+02

Sample ID:	537282	Sample Dates:	12/1/2020 - 1/5/2021	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<1.31E+00	0.00E+00	1.31E+00
				Co-58	<1.64E+00	0.00E+00	1.64E+00
				Fe-59	<4.03E+00	0.00E+00	4.03E+00
				Co-60	<1.53E+00	0.00E+00	1.53E+00
				Zn-65	<3.20E+00	0.00E+00	3.20E+00
				Zr-95	<3.12E+00	0.00E+00	3.12E+00
				Nb-95	<2.10E+00	0.00E+00	2.10E+00
				I-131	<1.06E+01	0.00E+00	1.06E+01
				Cs-134	<1.65E+00	0.00E+00	1.65E+00
				Cs-137	<1.51E+00	0.00E+00	1.51E+00
				BaLa-140	<4.48E+00	0.00E+00	4.48E+00
				H3SW	<6.64E+01	0.00E+00	1.93E+02

Sample Point 401 [ INDICATOR - SSW @ 4.9 miles ]

Sample ID:	516473	Sample Dates:	1/2/2020 - 2/3/2020	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<1.81E+00	0.00E+00	1.81E+00
				Co-58	<2.15E+00	0.00E+00	2.15E+00
				Fe-59	<4.07E+00	0.00E+00	4.07E+00
				Co-60	<2.08E+00	0.00E+00	2.08E+00
				Zn-65	<3.83E+00	0.00E+00	3.83E+00
				Zr-95	<3.33E+00	0.00E+00	3.33E+00



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
516473	1/2/2020 - 2/3/2020	Nb-95	<2.39E+00	0.00E+00	2.39E+00
		I-131	<1.20E+01	0.00E+00	1.20E+01
		Cs-134	<2.08E+00	0.00E+00	2.08E+00
		Cs-137	<1.49E+00	0.00E+00	1.49E+00
		BaLa-140	<3.79E+00	0.00E+00	3.79E+00
		H3SW	<3.31E+01	0.00E+00	1.97E+02
518672	2/3/2020 - 3/2/2020	Mn-54	<2.94E+00	0.00E+00	2.94E+00
		Co-58	<2.98E+00	0.00E+00	2.98E+00
		Fe-59	<5.15E+00	0.00E+00	5.15E+00
		Co-60	<2.16E+00	0.00E+00	2.16E+00
		Zn-65	<5.32E+00	0.00E+00	5.32E+00
		Zr-95	<5.90E+00	0.00E+00	5.90E+00
		Nb-95	<3.67E+00	0.00E+00	3.67E+00
		I-131	<1.09E+01	0.00E+00	1.09E+01
		Cs-134	<2.55E+00	0.00E+00	2.55E+00
		Cs-137	<2.64E+00	0.00E+00	2.64E+00
		BaLa-140	<5.62E+00	0.00E+00	5.62E+00
		H3SW	<1.27E+02	0.00E+00	1.81E+02
		520478	3/2/2020 - 4/2/2020	Mn-54	<1.72E+00
Co-58	<2.05E+00			0.00E+00	2.05E+00
Fe-59	<4.42E+00			0.00E+00	4.42E+00
Co-60	<2.19E+00			0.00E+00	2.19E+00
Zn-65	<3.72E+00			0.00E+00	3.72E+00
Zr-95	<4.39E+00			0.00E+00	4.39E+00
Nb-95	<2.90E+00			0.00E+00	2.90E+00
I-131	<8.36E+00			0.00E+00	8.36E+00
Cs-134	<2.50E+00			0.00E+00	2.50E+00
Cs-137	<2.07E+00			0.00E+00	2.07E+00
BaLa-140	<6.14E+00			0.00E+00	6.14E+00
H3SW	<3.40E+01			0.00E+00	1.87E+02
522312	4/2/2020 - 5/4/2020			Mn-54	<2.79E+00
		Co-58	<3.60E+00	0.00E+00	3.60E+00
		Fe-59	<5.74E+00	0.00E+00	5.74E+00
		Co-60	<2.94E+00	0.00E+00	2.94E+00
		Zn-65	<5.78E+00	0.00E+00	5.78E+00
		Zr-95	<5.66E+00	0.00E+00	5.66E+00
		Nb-95	<4.71E+00	0.00E+00	4.71E+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	<2.59E+00	0.00E+00	2.59E+00
		BaLa-140	<6.95E+00	0.00E+00	6.95E+00
		H3SW	<7.30E+00	0.00E+00	1.92E+02
		523841	5/4/2020 - 6/1/2020	Mn-54	<1.72E+00
Co-58	<2.14E+00			0.00E+00	2.14E+00
Fe-59	<4.45E+00			0.00E+00	4.45E+00
Co-60	<1.70E+00			0.00E+00	1.70E+00
Zn-65	<3.62E+00			0.00E+00	3.62E+00
Zr-95	<3.79E+00			0.00E+00	3.79E+00
Nb-95	<2.39E+00			0.00E+00	2.39E+00
I-131	<9.92E+00			0.00E+00	9.92E+00
Cs-134	<1.95E+00			0.00E+00	1.95E+00
Cs-137	<1.63E+00			0.00E+00	1.63E+00
BaLa-140	<4.86E+00			0.00E+00	4.86E+00
H3SW	<-2.6E+01			0.00E+00	2.02E+02
525321	6/1/2020 - 7/1/2020			Mn-54	<1.79E+00



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 401 [ INDICATOR - SSW @ 4.9 miles ]

Sample ID: 525321 Sample Dates: 6/1/2020 - 7/1/2020

Nuclide	Activity	2 Sigma Error	MDA
Co-58	<2.00E+00	0.00E+00	2.00E+00
Fe-59	<4.53E+00	0.00E+00	4.53E+00
Co-60	<1.98E+00	0.00E+00	1.98E+00
Zn-65	<4.12E+00	0.00E+00	4.12E+00
Zr-95	<3.76E+00	0.00E+00	3.76E+00
Nb-95	<2.83E+00	0.00E+00	2.83E+00
I-131	<1.13E+01	0.00E+00	1.13E+01
Cs-134	<2.16E+00	0.00E+00	2.16E+00
Cs-137	<2.22E+00	0.00E+00	2.22E+00
BaLa-140	<4.59E+00	0.00E+00	4.59E+00
H3SW	<2.95E+01	0.00E+00	1.82E+02

Sample ID: 526526 Sample Dates: 7/1/2020 - 8/4/2020

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<1.23E+00	0.00E+00	1.23E+00
Co-58	<1.49E+00	0.00E+00	1.49E+00
Fe-59	<3.59E+00	0.00E+00	3.59E+00
Co-60	<1.16E+00	0.00E+00	1.16E+00
Zn-65	<3.07E+00	0.00E+00	3.07E+00
Zr-95	<2.48E+00	0.00E+00	2.48E+00
Nb-95	<1.97E+00	0.00E+00	1.97E+00
I-131	<8.83E+00	0.00E+00	8.83E+00
Cs-134	<1.42E+00	0.00E+00	1.42E+00
Cs-137	<1.19E+00	0.00E+00	1.19E+00
BaLa-140	<4.30E+00	0.00E+00	4.30E+00
H3SW	<-2.6E+01	0.00E+00	1.92E+02

Sample ID: 527915 Sample Dates: 8/4/2020 - 9/1/2020

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<1.57E+00	0.00E+00	1.57E+00
Co-58	<2.01E+00	0.00E+00	2.01E+00
Fe-59	<4.12E+00	0.00E+00	4.12E+00
Co-60	<1.56E+00	0.00E+00	1.56E+00
Zn-65	<3.61E+00	0.00E+00	3.61E+00
Zr-95	<3.96E+00	0.00E+00	3.96E+00
Nb-95	<2.41E+00	0.00E+00	2.41E+00
I-131	<9.71E+00	0.00E+00	9.71E+00
Cs-134	<1.95E+00	0.00E+00	1.95E+00
Cs-137	<1.86E+00	0.00E+00	1.86E+00
BaLa-140	<4.64E+00	0.00E+00	4.64E+00
H3SW	<5.23E+01	0.00E+00	1.81E+02

Sample ID: 530290 Sample Dates: 9/1/2020 - 10/1/2020

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<1.87E+00	0.00E+00	1.87E+00
Co-58	<2.34E+00	0.00E+00	2.34E+00
Fe-59	<4.36E+00	0.00E+00	4.36E+00
Co-60	<1.63E+00	0.00E+00	1.63E+00
Zn-65	<3.54E+00	0.00E+00	3.54E+00
Zr-95	<4.22E+00	0.00E+00	4.22E+00
Nb-95	<3.00E+00	0.00E+00	3.00E+00
I-131	<1.19E+01	0.00E+00	1.19E+01
Cs-134	<2.06E+00	0.00E+00	2.06E+00
Cs-137	<2.12E+00	0.00E+00	2.12E+00
BaLa-140	<5.97E+00	0.00E+00	5.97E+00
H3SW	<-5.5E+01	0.00E+00	1.82E+02

Sample ID: 532075 Sample Dates: 10/1/2020 - 11/1/2020

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<1.62E+00	0.00E+00	1.62E+00
Co-58	<1.96E+00	0.00E+00	1.96E+00
Fe-59	<4.57E+00	0.00E+00	4.57E+00
Co-60	<1.55E+00	0.00E+00	1.55E+00
Zn-65	<3.27E+00	0.00E+00	3.27E+00
Zr-95	<3.93E+00	0.00E+00	3.93E+00
Nb-95	<2.47E+00	0.00E+00	2.47E+00
I-131	<1.13E+01	0.00E+00	1.13E+01
Cs-134	<1.75E+00	0.00E+00	1.75E+00
Cs-137	<1.78E+00	0.00E+00	1.78E+00



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
532075	10/1/2020 - 11/1/2020	BaLa-140	<5.92E+00	0.00E+00	5.92E+00
		H3SW	<3.10E+01	0.00E+00	1.79E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
533796	11/1/2020 - 12/1/2020	Mn-54	<2.50E+00	0.00E+00	2.50E+00
		Co-58	<2.35E+00	0.00E+00	2.35E+00
		Fe-59	<5.26E+00	0.00E+00	5.26E+00
		Co-60	<2.07E+00	0.00E+00	2.07E+00
		Zn-65	<4.89E+00	0.00E+00	4.89E+00
		Zr-95	<3.76E+00	0.00E+00	3.76E+00
		Nb-95	<2.50E+00	0.00E+00	2.50E+00
		I-131	<1.03E+01	0.00E+00	1.03E+01
		Cs-134	<2.08E+00	0.00E+00	2.08E+00
		Cs-137	<2.17E+00	0.00E+00	2.17E+00
		BaLa-140	<5.23E+00	0.00E+00	5.23E+00
H3SW	<9.66E+00	0.00E+00	2.03E+02		

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
537283	12/1/2020 - 1/5/2021	Mn-54	<1.53E+00	0.00E+00	1.53E+00
		Co-58	<1.84E+00	0.00E+00	1.84E+00
		Fe-59	<4.47E+00	0.00E+00	4.47E+00
		Co-60	<1.44E+00	0.00E+00	1.44E+00
		Zn-65	<3.04E+00	0.00E+00	3.05E+00
		Zr-95	<3.50E+00	0.00E+00	3.50E+00
		Nb-95	<2.20E+00	0.00E+00	2.20E+00
		I-131	<1.13E+01	0.00E+00	1.13E+01
		Cs-134	<1.63E+00	0.00E+00	1.63E+00
		Cs-137	<1.53E+00	0.00E+00	1.53E+00
		BaLa-140	<5.82E+00	0.00E+00	5.82E+00
		H3SW	<6.74E+01	0.00E+00	1.89E+02

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

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514103	1/15/2020 - 1/15/2020	Mn-54	<5.09E+00	0.00E+00	5.09E+00
		Co-58	<5.23E+00	0.00E+00	5.23E+00
		Fe-59	<1.04E+01	0.00E+00	1.04E+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	<1.12E+01	0.00E+00	1.12E+01
		Nb-95	<6.81E+00	0.00E+00	6.81E+00
		I-131	<7.12E+00	0.00E+00	7.12E+00
		Cs-134	<6.78E+00	0.00E+00	6.78E+00
		Cs-137	<5.14E+00	0.00E+00	5.14E+00
		BaLa-140	<6.27E+00	0.00E+00	6.27E+00
		Total-Gam	0.00E+00		
H3SW	<5.78E+01	0.00E+00	1.85E+02		

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
517223	2/24/2020 - 2/24/2020	Mn-54	<3.64E+00	0.00E+00	3.64E+00
		Co-58	<3.78E+00	0.00E+00	3.78E+00
		Fe-59	<6.98E+00	0.00E+00	6.98E+00
		Co-60	<2.48E+00	0.00E+00	2.48E+00
		Zn-65	<7.52E+00	0.00E+00	7.52E+00
		Zr-95	<4.59E+00	0.00E+00	4.59E+00
		Nb-95	<3.41E+00	0.00E+00	3.41E+00
		I-131	<4.07E+00	0.00E+00	4.07E+00
		Cs-134	<3.84E+00	0.00E+00	3.84E+00
		Cs-137	<3.83E+00	0.00E+00	3.83E+00
		BaLa-140	<2.60E+00	0.00E+00	2.60E+00
		Total-Gam	0.00E+00		
		H3SW	<2.37E+01	0.00E+00	1.87E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
515555	3/25/2020 - 3/25/2020	Mn-54	<5.96E+00	0.00E+00	5.96E+00





# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

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

Sample ID: 515555 Sample Dates: 3/25/2020 - 3/25/2020

Nuclide	Activity	2 Sigma Error	MDA
Co-58	<4.56E+00	0.00E+00	4.56E+00
Fe-59	<1.29E+01	0.00E+00	1.29E+01
Co-60	<5.86E+00	0.00E+00	5.86E+00
Zn-65	<1.44E+01	0.00E+00	1.44E+01
Zr-95	<1.14E+01	0.00E+00	1.14E+01
Nb-95	<5.89E+00	0.00E+00	5.89E+00
I-131	<7.06E+00	0.00E+00	7.06E+00
Cs-134	<6.44E+00	0.00E+00	6.44E+00
Cs-137	<3.38E+00	0.00E+00	3.38E+00
BaLa-140	<8.39E+00	0.00E+00	8.39E+00
Total-Gam	0.00E+00		
H3SW	<7.77E+01	0.00E+00	1.84E+02

Sample ID: 519637 Sample Dates: 4/21/2020 - 4/21/2020

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<6.09E+00	0.00E+00	6.09E+00
Co-58	<5.52E+00	0.00E+00	5.52E+00
Fe-59	<1.37E+01	0.00E+00	1.37E+01
Co-60	<5.90E+00	0.00E+00	5.90E+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	<6.25E+00	0.00E+00	6.25E+00
I-131	<5.50E+00	0.00E+00	5.50E+00
Cs-134	<6.44E+00	0.00E+00	6.44E+00
Cs-137	<6.47E+00	0.00E+00	6.47E+00
BaLa-140	<5.16E+00	0.00E+00	5.16E+00
Total-Gam	0.00E+00		
H3SW	<-4.4E+01	0.00E+00	1.97E+02

Sample ID: 521522 Sample Dates: 5/20/2020 - 5/20/2020

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<6.08E+00	0.00E+00	6.08E+00
Co-58	<5.85E+00	0.00E+00	5.85E+00
Fe-59	<1.01E+01	0.00E+00	1.01E+01
Co-60	<8.05E+00	0.00E+00	8.05E+00
Zn-65	<1.14E+01	0.00E+00	1.14E+01
Zr-95	<1.12E+01	0.00E+00	1.12E+01
Nb-95	<5.93E+00	0.00E+00	5.93E+00
I-131	<9.63E+00	0.00E+00	9.63E+00
Cs-134	<8.62E+00	0.00E+00	8.62E+00
Cs-137	<6.25E+00	0.00E+00	6.25E+00
BaLa-140	<9.95E+00	0.00E+00	9.95E+00
Total-Gam	0.00E+00		
H3SW	<5.31E+01	0.00E+00	1.76E+02

Sample ID: 523407 Sample Dates: 6/24/2020 - 6/24/2020

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<5.17E+00	0.00E+00	5.17E+00
Co-58	<4.57E+00	0.00E+00	4.57E+00
Fe-59	<1.02E+01	0.00E+00	1.02E+01
Co-60	<7.31E+00	0.00E+00	7.31E+00
Zn-65	<1.07E+01	0.00E+00	1.07E+01
Zr-95	<1.18E+01	0.00E+00	1.18E+01
Nb-95	<6.50E+00	0.00E+00	6.50E+00
I-131	<9.53E+00	0.00E+00	9.53E+00
Cs-134	<6.07E+00	0.00E+00	6.07E+00
Cs-137	<5.61E+00	0.00E+00	5.61E+00
BaLa-140	<8.30E+00	0.00E+00	8.30E+00
Total-Gam	0.00E+00		
H3SW	<6.19E+01	0.00E+00	1.83E+02

Sample ID: 524934 Sample Dates: 7/22/2020 - 7/22/2020

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<7.09E+00	0.00E+00	7.09E+00
Co-58	<6.74E+00	0.00E+00	6.74E+00
Fe-59	<1.06E+01	0.00E+00	1.06E+01
Co-60	<6.78E+00	0.00E+00	6.78E+00
Zn-65	<1.14E+01	0.00E+00	1.14E+01
Zr-95	<1.08E+01	0.00E+00	1.08E+01



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
524934	7/22/2020 - 7/22/2020	Nb-95	<6.92E+00	0.00E+00	6.92E+00
		I-131	<9.95E+00	0.00E+00	9.95E+00
		Cs-134	<7.95E+00	0.00E+00	7.95E+00
		Cs-137	<5.11E+00	0.00E+00	5.11E+00
		BaLa-140	<8.73E+00	0.00E+00	8.73E+00
		Total-Gam	0.00E+00		
		H3SW	<-7.1E+00	0.00E+00	1.88E+02
526326	8/26/2020 - 8/26/2020	Mn-54	<5.01E+00	0.00E+00	5.01E+00
		Co-58	<6.02E+00	0.00E+00	6.02E+00
		Fe-59	<1.12E+01	0.00E+00	1.12E+01
		Co-60	<7.68E+00	0.00E+00	7.68E+00
		Zn-65	<1.06E+01	0.00E+00	1.06E+01
		Zr-95	<1.18E+01	0.00E+00	1.18E+01
		Nb-95	<6.47E+00	0.00E+00	6.47E+00
		I-131	<8.75E+00	0.00E+00	8.75E+00
		Cs-134	<6.34E+00	0.00E+00	6.34E+00
		Cs-137	<5.70E+00	0.00E+00	5.70E+00
		BaLa-140	<7.42E+00	0.00E+00	7.42E+00
		Total-Gam	0.00E+00		
		H3SW	<8.12E+01	0.00E+00	1.93E+02
		527883	9/23/2020 - 9/23/2020	Mn-54	<6.43E+00
Co-58	<5.39E+00			0.00E+00	5.39E+00
Fe-59	<1.34E+01			0.00E+00	1.34E+01
Co-60	<5.59E+00			0.00E+00	5.59E+00
Zn-65	<1.20E+01			0.00E+00	1.20E+01
Zr-95	<1.15E+01			0.00E+00	1.15E+01
Nb-95	<6.48E+00			0.00E+00	6.48E+00
I-131	<6.86E+00			0.00E+00	6.86E+00
Cs-134	<5.88E+00			0.00E+00	5.88E+00
Cs-137	<4.14E+00			0.00E+00	4.14E+00
BaLa-140	<9.77E+00			0.00E+00	9.77E+00
Total-Gam	0.00E+00				
H3SW	<2.64E+01			0.00E+00	1.94E+02
530214	10/21/2020 - 10/21/2020			Mn-54	<5.75E+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	<4.15E+00	0.00E+00	4.15E+00
		Zn-65	<1.49E+01	0.00E+00	1.49E+01
		Zr-95	<1.10E+01	0.00E+00	1.10E+01
		Nb-95	<5.41E+00	0.00E+00	5.41E+00
		I-131	<7.92E+00	0.00E+00	7.92E+00
		Cs-134	<7.77E+00	0.00E+00	7.77E+00
		Cs-137	<6.21E+00	0.00E+00	6.21E+00
		BaLa-140	<9.86E+00	0.00E+00	9.86E+00
		Total-Gam	0.00E+00		
		H3SW	<-6.8E+01	0.00E+00	1.84E+02
		532312	11/25/2020 - 11/25/2020	Mn-54	<6.67E+00
Co-58	<6.36E+00			0.00E+00	6.36E+00
Fe-59	<1.00E+01			0.00E+00	1.00E+01
Co-60	<8.17E+00			0.00E+00	8.17E+00
Zn-65	<7.21E+00			0.00E+00	7.21E+00
Zr-95	<1.17E+01			0.00E+00	1.17E+01
Nb-95	<7.98E+00			0.00E+00	7.98E+00
I-131	<1.11E+01			0.00E+00	1.11E+01
Cs-134	<6.88E+00			0.00E+00	6.88E+00
Cs-137	<5.43E+00			0.00E+00	5.43E+00
BaLa-140	<7.70E+00			0.00E+00	7.70E+00



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
532312	11/25/2020 - 11/25/2020	Total-Gam	0.00E+00		
		H3SW	<4.70E+00	0.00E+00	1.87E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
534037	12/22/2020 - 12/22/2020	Mn-54	<5.60E+00	0.00E+00	5.60E+00
		Co-58	<6.39E+00	0.00E+00	6.39E+00
		Fe-59	<1.19E+01	0.00E+00	1.19E+01
		Co-60	<6.99E+00	0.00E+00	6.99E+00
		Zn-65	<1.24E+01	0.00E+00	1.24E+01
		Zr-95	<1.21E+01	0.00E+00	1.21E+01
		Nb-95	<7.25E+00	0.00E+00	7.25E+00
		I-131	<8.85E+00	0.00E+00	8.85E+00
		Cs-134	<7.08E+00	0.00E+00	7.08E+00
		Cs-137	<6.63E+00	0.00E+00	6.63E+00
		BaLa-140	<1.16E+01	0.00E+00	1.16E+01
		Total-Gam	0.00E+00		
		H3SW	<7.14E+00	0.00E+00	1.92E+02

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

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514104	1/15/2020 - 1/15/2020	Mn-54	<6.08E+00	0.00E+00	6.08E+00
		Co-58	<5.84E+00	0.00E+00	5.84E+00
		Fe-59	<1.13E+01	0.00E+00	1.13E+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	<9.43E+00	0.00E+00	9.43E+00
		Nb-95	<7.04E+00	0.00E+00	7.04E+00
		I-131	<8.16E+00	0.00E+00	8.16E+00
		Cs-134	<5.89E+00	0.00E+00	5.89E+00
		Cs-137	<6.89E+00	0.00E+00	6.89E+00
		BaLa-140	<9.15E+00	0.00E+00	9.15E+00
		Total-Gam	0.00E+00		
		H3SW	<6.48E+01	0.00E+00	1.84E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
517224	2/24/2020 - 2/24/2020	Mn-54	<6.90E+00	0.00E+00	6.90E+00
		Co-58	<7.55E+00	0.00E+00	7.55E+00
		Fe-59	<1.27E+01	0.00E+00	1.27E+01
		Co-60	<7.53E+00	0.00E+00	7.53E+00
		Zn-65	<1.46E+01	0.00E+00	1.46E+01
		Zr-95	<1.20E+01	0.00E+00	1.20E+01
		Nb-95	<8.16E+00	0.00E+00	8.16E+00
		I-131	<7.26E+00	0.00E+00	7.26E+00
		Cs-134	<6.92E+00	0.00E+00	6.92E+00
		Cs-137	<6.62E+00	0.00E+00	6.62E+00
		BaLa-140	<8.48E+00	0.00E+00	8.48E+00
		Total-Gam	0.00E+00		
		H3SW	<-3.1E+01	0.00E+00	1.87E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
515556	3/25/2020 - 3/25/2020	Mn-54	<4.51E+00	0.00E+00	4.51E+00
		Co-58	<7.53E+00	0.00E+00	7.53E+00
		Fe-59	<1.27E+01	0.00E+00	1.27E+01
		Co-60	<4.56E+00	0.00E+00	4.56E+00
		Zn-65	<9.85E+00	0.00E+00	9.85E+00
		Zr-95	<1.04E+01	0.00E+00	1.04E+01
		Nb-95	<5.36E+00	0.00E+00	5.36E+00
		I-131	<7.25E+00	0.00E+00	7.25E+00
		Cs-134	<6.56E+00	0.00E+00	6.56E+00
		Cs-137	<6.39E+00	0.00E+00	6.39E+00
		BaLa-140	<8.68E+00	0.00E+00	8.68E+00
		Total-Gam	0.00E+00		
		H3SW	<7.49E+01	0.00E+00	1.83E+02



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

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

Sample ID: 519638 Sample Dates: 4/21/2020 - 4/21/2020

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<4.74E+00	0.00E+00	4.74E+00
Co-58	<5.40E+00	0.00E+00	5.40E+00
Fe-59	<1.11E+01	0.00E+00	1.11E+01
Co-60	<5.55E+00	0.00E+00	5.55E+00
Zn-65	<1.05E+01	0.00E+00	1.05E+01
Zr-95	<8.62E+00	0.00E+00	8.62E+00
Nb-95	<6.34E+00	0.00E+00	6.34E+00
I-131	<5.80E+00	0.00E+00	5.80E+00
Cs-134	<5.85E+00	0.00E+00	5.85E+00
Cs-137	<6.39E+00	0.00E+00	6.39E+00
BaLa-140	<5.21E+00	0.00E+00	5.21E+00
Total-Gam	0.00E+00		
H3SW	<-1.3E+02	0.00E+00	1.91E+02

Sample ID: 521523 Sample Dates: 5/20/2020 - 5/20/2020

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<5.58E+00	0.00E+00	5.58E+00
Co-58	<6.68E+00	0.00E+00	6.68E+00
Fe-59	<1.22E+01	0.00E+00	1.22E+01
Co-60	<5.50E+00	0.00E+00	5.50E+00
Zn-65	<1.45E+01	0.00E+00	1.45E+01
Zr-95	<1.00E+01	0.00E+00	1.00E+01
Nb-95	<8.71E+00	0.00E+00	8.71E+00
I-131	<9.45E+00	0.00E+00	9.45E+00
Cs-134	<7.45E+00	0.00E+00	7.45E+00
Cs-137	<6.31E+00	0.00E+00	6.31E+00
BaLa-140	<1.15E+01	0.00E+00	1.15E+01
Total-Gam	0.00E+00		
H3SW	<1.53E+02	0.00E+00	1.76E+02

Sample ID: 523408 Sample Dates: 6/24/2020 - 6/24/2020

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<3.85E+00	0.00E+00	3.85E+00
Co-58	<3.45E+00	0.00E+00	3.45E+00
Fe-59	<6.35E+00	0.00E+00	6.35E+00
Co-60	<4.00E+00	0.00E+00	4.00E+00
Zn-65	<1.78E+01	0.00E+00	1.78E+01
Zr-95	<6.45E+00	0.00E+00	6.45E+00
Nb-95	<5.15E+00	0.00E+00	5.15E+00
I-131	<5.70E+00	0.00E+00	5.70E+00
Cs-134	<3.89E+00	0.00E+00	3.89E+00
Cs-137	<4.18E+00	0.00E+00	4.18E+00
BaLa-140	<5.04E+00	0.00E+00	5.04E+00
Total-Gam	0.00E+00		
H3SW	<5.27E+01	0.00E+00	1.83E+02

Sample ID: 524935 Sample Dates: 7/22/2020 - 7/22/2020

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<4.70E+00	0.00E+00	4.70E+00
Co-58	<5.48E+00	0.00E+00	5.48E+00
Fe-59	<1.25E+01	0.00E+00	1.25E+01
Co-60	<5.91E+00	0.00E+00	5.91E+00
Zn-65	<1.24E+01	0.00E+00	1.24E+01
Zr-95	<1.15E+01	0.00E+00	1.15E+01
Nb-95	<7.57E+00	0.00E+00	7.57E+00
I-131	<8.75E+00	0.00E+00	8.75E+00
Cs-134	<6.24E+00	0.00E+00	6.24E+00
Cs-137	<5.80E+00	0.00E+00	5.80E+00
BaLa-140	<7.01E+00	0.00E+00	7.01E+00
Total-Gam	0.00E+00		
H3SW	<-1.4E+01	0.00E+00	1.88E+02

Sample ID: 526327 Sample Dates: 8/26/2020 - 8/26/2020

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<7.99E+00	0.00E+00	7.99E+00
Co-58	<5.63E+00	0.00E+00	5.63E+00
Fe-59	<1.24E+01	0.00E+00	1.24E+01
Co-60	<7.13E+00	0.00E+00	7.13E+00
Zn-65	<1.43E+01	0.00E+00	1.43E+01



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
526327	8/26/2020 - 8/26/2020	Zr-95	<1.05E+01	0.00E+00	1.05E+01
		Nb-95	<7.53E+00	0.00E+00	7.53E+00
		I-131	<9.19E+00	0.00E+00	9.19E+00
		Cs-134	<8.29E+00	0.00E+00	8.29E+00
		Cs-137	<5.52E+00	0.00E+00	5.52E+00
		BaLa-140	<8.38E+00	0.00E+00	8.38E+00
		Total-Gam	0.00E+00		
		H3SW	<-6.0E+01	0.00E+00	1.93E+02
527884	9/23/2020 - 9/23/2020	Mn-54	<6.08E+00	0.00E+00	6.08E+00
		Co-58	<5.17E+00	0.00E+00	5.17E+00
		Fe-59	<1.24E+01	0.00E+00	1.24E+01
		Co-60	<5.61E+00	0.00E+00	5.61E+00
		Zn-65	<1.32E+01	0.00E+00	1.32E+01
		Zr-95	<1.05E+01	0.00E+00	1.05E+01
		Nb-95	<6.10E+00	0.00E+00	6.10E+00
		I-131	<8.42E+00	0.00E+00	8.42E+00
		Cs-134	<7.40E+00	0.00E+00	7.40E+00
		Cs-137	<6.74E+00	0.00E+00	6.74E+00
		BaLa-140	<8.35E+00	0.00E+00	8.35E+00
		Total-Gam	0.00E+00		
		H3SW	<-2.0E+01	0.00E+00	1.79E+02
530215	10/21/2020 - 10/21/2020	Mn-54	<4.64E+00	0.00E+00	4.64E+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	<4.45E+00	0.00E+00	4.45E+00
		Zn-65	<1.60E+01	0.00E+00	1.60E+01
		Zr-95	<9.07E+00	0.00E+00	9.07E+00
		Nb-95	<6.02E+00	0.00E+00	6.02E+00
		I-131	<7.80E+00	0.00E+00	7.80E+00
		Cs-134	<7.17E+00	0.00E+00	7.17E+00
		Cs-137	<5.55E+00	0.00E+00	5.55E+00
		BaLa-140	<7.75E+00	0.00E+00	7.75E+00
		Total-Gam	0.00E+00		
		H3SW	<-3.2E+01	0.00E+00	1.85E+02
532313	11/25/2020 - 11/25/2020	Mn-54	<5.68E+00	0.00E+00	5.68E+00
		Co-58	<7.00E+00	0.00E+00	7.00E+00
		Fe-59	<1.08E+01	0.00E+00	1.08E+01
		Co-60	<7.38E+00	0.00E+00	7.38E+00
		Zn-65	<1.47E+01	0.00E+00	1.47E+01
		Zr-95	<1.13E+01	0.00E+00	1.13E+01
		Nb-95	<7.13E+00	0.00E+00	7.13E+00
		I-131	<7.99E+00	0.00E+00	7.99E+00
		Cs-134	<6.35E+00	0.00E+00	6.35E+00
		Cs-137	<6.56E+00	0.00E+00	6.56E+00
		BaLa-140	<8.69E+00	0.00E+00	8.69E+00
		Total-Gam	0.00E+00		
		H3SW	<-3.1E+01	0.00E+00	1.87E+02
534038	12/22/2020 - 12/22/2020	Mn-54	<6.43E+00	0.00E+00	6.43E+00
		Co-58	<5.52E+00	0.00E+00	5.52E+00
		Fe-59	<1.17E+01	0.00E+00	1.17E+01
		Co-60	<4.97E+00	0.00E+00	4.97E+00
		Zn-65	<1.10E+01	0.00E+00	1.10E+01
		Zr-95	<1.07E+01	0.00E+00	1.07E+01
		Nb-95	<6.07E+00	0.00E+00	6.07E+00
		I-131	<9.76E+00	0.00E+00	9.76E+00
		Cs-134	<5.21E+00	0.00E+00	5.21E+00
		Cs-137	<5.73E+00	0.00E+00	5.73E+00



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

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

Sample ID: 534038 Sample Dates: 12/22/2020 - 12/22/2020

Nuclide	Activity	2 Sigma Error	MDA
BaLa-140	<1.95E+00	0.00E+00	1.95E+00
Total-Gam	0.00E+00		
H3SW	<-1.7E+01	0.00E+00	1.94E+02

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

Sample ID: 514105 Sample Dates: 1/15/2020 - 1/15/2020

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<4.88E+00	0.00E+00	4.88E+00
Co-58	<5.66E+00	0.00E+00	5.66E+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	<1.10E+01	0.00E+00	1.10E+01
Zr-95	<8.75E+00	0.00E+00	8.75E+00
Nb-95	<5.73E+00	0.00E+00	5.73E+00
I-131	<6.76E+00	0.00E+00	6.76E+00
Cs-134	<5.46E+00	0.00E+00	5.46E+00
Cs-137	<4.52E+00	0.00E+00	4.52E+00
BaLa-140	<6.27E+00	0.00E+00	6.27E+00
Total-Gam	0.00E+00		
H3SW	<0.00E+00	0.00E+00	1.84E+02

Sample ID: 517225 Sample Dates: 2/24/2020 - 2/24/2020

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<7.07E+00	0.00E+00	7.07E+00
Co-58	<7.87E+00	0.00E+00	7.87E+00
Fe-59	<1.28E+01	0.00E+00	1.28E+01
Co-60	<6.29E+00	0.00E+00	6.29E+00
Zn-65	<1.48E+01	0.00E+00	1.48E+01
Zr-95	<1.10E+01	0.00E+00	1.10E+01
Nb-95	<5.97E+00	0.00E+00	5.97E+00
I-131	<7.47E+00	0.00E+00	7.47E+00
Cs-134	<7.12E+00	0.00E+00	7.12E+00
Cs-137	<8.02E+00	0.00E+00	8.02E+00
BaLa-140	<8.95E+00	0.00E+00	8.95E+00
Total-Gam	0.00E+00		
H3SW	<4.48E+01	0.00E+00	1.86E+02

Sample ID: 515557 Sample Dates: 3/25/2020 - 3/25/2020

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<5.72E+00	0.00E+00	5.72E+00
Co-58	<5.39E+00	0.00E+00	5.39E+00
Fe-59	<1.04E+01	0.00E+00	1.04E+01
Co-60	<5.73E+00	0.00E+00	5.73E+00
Zn-65	<1.11E+01	0.00E+00	1.11E+01
Zr-95	<1.24E+01	0.00E+00	1.24E+01
Nb-95	<5.72E+00	0.00E+00	5.72E+00
I-131	<7.61E+00	0.00E+00	7.61E+00
Cs-134	<5.56E+00	0.00E+00	5.56E+00
Cs-137	<6.09E+00	0.00E+00	6.09E+00
BaLa-140	<6.78E+00	0.00E+00	6.78E+00
Total-Gam	0.00E+00		
H3SW	<7.04E+01	0.00E+00	1.84E+02

Sample ID: 519639 Sample Dates: 4/21/2020 - 4/21/2020

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<4.61E+00	0.00E+00	4.61E+00
Co-58	<6.01E+00	0.00E+00	6.01E+00
Fe-59	<1.13E+01	0.00E+00	1.13E+01
Co-60	<6.55E+00	0.00E+00	6.55E+00
Zn-65	<1.21E+01	0.00E+00	1.21E+01
Zr-95	<8.00E+00	0.00E+00	8.00E+00
Nb-95	<5.12E+00	0.00E+00	5.12E+00
I-131	<5.71E+00	0.00E+00	5.71E+00
Cs-134	<6.15E+00	0.00E+00	6.15E+00
Cs-137	<5.16E+00	0.00E+00	5.16E+00
BaLa-140	<5.90E+00	0.00E+00	5.90E+00
Total-Gam	0.00E+00		



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
519639	4/21/2020 - 4/21/2020	H3SW	<-9.7E+01	0.00E+00	1.95E+02
521524	5/20/2020 - 5/20/2020	Mn-54	<5.88E+00	0.00E+00	5.88E+00
		Co-58	<5.45E+00	0.00E+00	5.45E+00
		Fe-59	<1.44E+01	0.00E+00	1.44E+01
		Co-60	<4.97E+00	0.00E+00	4.97E+00
		Zn-65	<1.22E+01	0.00E+00	1.22E+01
		Zr-95	<1.09E+01	0.00E+00	1.09E+01
		Nb-95	<7.16E+00	0.00E+00	7.16E+00
		I-131	<9.07E+00	0.00E+00	9.07E+00
		Cs-134	<6.78E+00	0.00E+00	6.78E+00
		Cs-137	<6.20E+00	0.00E+00	6.20E+00
		BaLa-140	<7.34E+00	0.00E+00	7.34E+00
		Total-Gam	0.00E+00		
		H3SW	<1.47E+02	0.00E+00	1.74E+02
523409	6/24/2020 - 6/24/2020	Mn-54	<5.29E+00	0.00E+00	5.29E+00
		Co-58	<5.93E+00	0.00E+00	5.93E+00
		Fe-59	<1.31E+01	0.00E+00	1.31E+01
		Co-60	<7.09E+00	0.00E+00	7.09E+00
		Zn-65	<7.37E+00	0.00E+00	7.37E+00
		Zr-95	<1.11E+01	0.00E+00	1.11E+01
		Nb-95	<5.77E+00	0.00E+00	5.77E+00
		I-131	<8.47E+00	0.00E+00	8.47E+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	<1.04E+01	0.00E+00	1.04E+01
		Total-Gam	0.00E+00		
		H3SW	<-1.8E+01	0.00E+00	1.82E+02
524936	7/22/2020 - 7/22/2020	Mn-54	<5.87E+00	0.00E+00	5.87E+00
		Co-58	<5.40E+00	0.00E+00	5.40E+00
		Fe-59	<1.24E+01	0.00E+00	1.24E+01
		Co-60	<6.90E+00	0.00E+00	6.90E+00
		Zn-65	<1.16E+01	0.00E+00	1.16E+01
		Zr-95	<1.07E+01	0.00E+00	1.07E+01
		Nb-95	<6.69E+00	0.00E+00	6.69E+00
		I-131	<8.77E+00	0.00E+00	8.77E+00
		Cs-134	<6.57E+00	0.00E+00	6.57E+00
		Cs-137	<6.51E+00	0.00E+00	6.51E+00
		BaLa-140	<9.67E+00	0.00E+00	9.67E+00
		Total-Gam	0.00E+00		
		H3SW	<-6.8E+01	0.00E+00	1.88E+02
526328	8/26/2020 - 8/26/2020	Mn-54	<6.26E+00	0.00E+00	6.26E+00
		Co-58	<5.12E+00	0.00E+00	5.12E+00
		Fe-59	<1.18E+01	0.00E+00	1.18E+01
		Co-60	<5.30E+00	0.00E+00	5.30E+00
		Zn-65	<1.40E+01	0.00E+00	1.40E+01
		Zr-95	<1.18E+01	0.00E+00	1.18E+01
		Nb-95	<7.28E+00	0.00E+00	7.28E+00
		I-131	<9.60E+00	0.00E+00	9.60E+00
		Cs-134	<6.24E+00	0.00E+00	6.24E+00
		Cs-137	<6.82E+00	0.00E+00	6.82E+00
		BaLa-140	<7.91E+00	0.00E+00	7.91E+00
		Total-Gam	0.00E+00		
		H3SW	<-5.0E+01	0.00E+00	1.94E+02
527885	9/23/2020 - 9/23/2020	Mn-54	<6.18E+00	0.00E+00	6.18E+00
		Co-58	<5.91E+00	0.00E+00	5.91E+00



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
527885	9/23/2020 - 9/23/2020	Fe-59	<1.30E+01	0.00E+00	1.30E+01
		Co-60	<6.30E+00	0.00E+00	6.30E+00
		Zn-65	<1.49E+01	0.00E+00	1.49E+01
		Zr-95	<1.07E+01	0.00E+00	1.07E+01
		Nb-95	<4.64E+00	0.00E+00	4.64E+00
		I-131	<1.11E+01	0.00E+00	1.11E+01
		Cs-134	<6.44E+00	0.00E+00	6.44E+00
		Cs-137	<6.58E+00	0.00E+00	6.58E+00
		BaLa-140	<1.02E+01	0.00E+00	1.02E+01
		Total-Gam	0.00E+00		
		H3SW	<-3.6E+01	0.00E+00	1.79E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
530216	10/21/2020 - 10/21/2020	Mn-54	<6.41E+00	0.00E+00	6.41E+00
		Co-58	<6.17E+00	0.00E+00	6.17E+00
		Fe-59	<1.17E+01	0.00E+00	1.17E+01
		Co-60	<3.93E+00	0.00E+00	3.93E+00
		Zn-65	<1.51E+01	0.00E+00	1.51E+01
		Zr-95	<1.17E+01	0.00E+00	1.17E+01
		Nb-95	<5.99E+00	0.00E+00	5.99E+00
		I-131	<7.79E+00	0.00E+00	7.79E+00
		Cs-134	<6.11E+00	0.00E+00	6.11E+00
		Cs-137	<7.72E+00	0.00E+00	7.72E+00
		BaLa-140	<7.92E+00	0.00E+00	7.92E+00
		Total-Gam	0.00E+00		
		H3SW	<-2.0E+01	0.00E+00	1.84E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
532314	11/25/2020 - 11/25/2020	Mn-54	<4.92E+00	0.00E+00	4.92E+00
		Co-58	<4.58E+00	0.00E+00	4.58E+00
		Fe-59	<1.37E+01	0.00E+00	1.37E+01
		Co-60	<5.88E+00	0.00E+00	5.88E+00
		Zn-65	<1.44E+01	0.00E+00	1.44E+01
		Zr-95	<8.01E+00	0.00E+00	8.01E+00
		Nb-95	<4.68E+00	0.00E+00	4.68E+00
		I-131	<7.87E+00	0.00E+00	7.87E+00
		Cs-134	<7.23E+00	0.00E+00	7.23E+00
		Cs-137	<5.00E+00	0.00E+00	5.00E+00
		BaLa-140	<1.19E+01	0.00E+00	1.19E+01
		Total-Gam	0.00E+00		
		H3SW	<3.29E+01	0.00E+00	1.87E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
534039	12/22/2020 - 12/22/2020	Mn-54	<5.89E+00	0.00E+00	5.89E+00
		Co-58	<4.71E+00	0.00E+00	4.71E+00
		Fe-59	<1.02E+01	0.00E+00	1.02E+01
		Co-60	<6.77E+00	0.00E+00	6.77E+00
		Zn-65	<9.93E+00	0.00E+00	9.93E+00
		Zr-95	<1.20E+01	0.00E+00	1.20E+01
		Nb-95	<6.65E+00	0.00E+00	6.65E+00
		I-131	<8.07E+00	0.00E+00	8.07E+00
		Cs-134	<6.36E+00	0.00E+00	6.36E+00
		Cs-137	<4.90E+00	0.00E+00	4.90E+00
		BaLa-140	<2.01E+00	0.00E+00	2.01E+00
		Total-Gam	0.00E+00		
		H3SW	<-5.3E+01	0.00E+00	1.94E+02

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

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514106	1/15/2020 - 1/15/2020	Mn-54	<5.41E+00	0.00E+00	5.41E+00
		Co-58	<5.56E+00	0.00E+00	5.56E+00
		Fe-59	<9.25E+00	0.00E+00	9.25E+00
		Co-60	<6.40E+00	0.00E+00	6.40E+00





# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
514106	1/15/2020 - 1/15/2020	Zn-65	<1.35E+01	0.00E+00	1.35E+01
		Zr-95	<1.19E+01	0.00E+00	1.19E+01
		Nb-95	<6.65E+00	0.00E+00	6.65E+00
		I-131	<7.65E+00	0.00E+00	7.65E+00
		Cs-134	<7.02E+00	0.00E+00	7.02E+00
		Cs-137	<5.82E+00	0.00E+00	5.82E+00
		BaLa-140	<9.98E+00	0.00E+00	9.98E+00
		Total-Gam	0.00E+00		
		H3SW	<3.82E+01	0.00E+00	1.83E+02
		517226	2/24/2020 - 2/24/2020	Mn-54	<7.02E+00
Co-58	<4.73E+00			0.00E+00	4.73E+00
Fe-59	<1.12E+01			0.00E+00	1.12E+01
Co-60	<5.97E+00			0.00E+00	5.97E+00
Zn-65	<1.24E+01			0.00E+00	1.24E+01
Zr-95	<9.76E+00			0.00E+00	9.76E+00
Nb-95	<6.68E+00			0.00E+00	6.68E+00
I-131	<6.21E+00			0.00E+00	6.21E+00
Cs-134	<6.09E+00			0.00E+00	6.09E+00
Cs-137	<5.69E+00			0.00E+00	5.69E+00
BaLa-140	<5.25E+00			0.00E+00	5.25E+00
Total-Gam	0.00E+00				
H3SW	<4.71E+00			0.00E+00	1.86E+02
515558	3/25/2020 - 3/25/2020			Mn-54	<5.38E+00
		Co-58	<6.34E+00	0.00E+00	6.34E+00
		Fe-59	<1.08E+01	0.00E+00	1.08E+01
		Co-60	<5.23E+00	0.00E+00	5.23E+00
		Zn-65	<1.22E+01	0.00E+00	1.22E+01
		Zr-95	<1.23E+01	0.00E+00	1.23E+01
		Nb-95	<4.75E+00	0.00E+00	4.75E+00
		I-131	<6.47E+00	0.00E+00	6.47E+00
		Cs-134	<5.77E+00	0.00E+00	5.77E+00
		Cs-137	<5.66E+00	0.00E+00	5.66E+00
		BaLa-140	<8.14E+00	0.00E+00	8.14E+00
		Total-Gam	0.00E+00		
		H3SW	<7.98E+01	0.00E+00	1.83E+02
		519640	4/21/2020 - 4/21/2020	Mn-54	<4.98E+00
Co-58	<4.73E+00			0.00E+00	4.73E+00
Fe-59	<8.79E+00			0.00E+00	8.79E+00
Co-60	<6.39E+00			0.00E+00	6.39E+00
Zn-65	<1.46E+01			0.00E+00	1.46E+01
Zr-95	<9.04E+00			0.00E+00	9.04E+00
Nb-95	<4.36E+00			0.00E+00	4.36E+00
I-131	<6.32E+00			0.00E+00	6.32E+00
Cs-134	<5.86E+00			0.00E+00	5.86E+00
Cs-137	<4.14E+00			0.00E+00	4.14E+00
BaLa-140	<6.08E+00			0.00E+00	6.08E+00
Total-Gam	0.00E+00				
H3SW	<-8.2E+01			0.00E+00	1.95E+02
521525	5/20/2020 - 5/20/2020			Mn-54	<6.06E+00
		Co-58	<5.62E+00	0.00E+00	5.62E+00
		Fe-59	<1.00E+01	0.00E+00	1.00E+01
		Co-60	<7.06E+00	0.00E+00	7.06E+00
		Zn-65	<1.13E+01	0.00E+00	1.13E+01
		Zr-95	<1.18E+01	0.00E+00	1.18E+01
		Nb-95	<7.04E+00	0.00E+00	7.04E+00
		I-131	<8.96E+00	0.00E+00	8.96E+00
		Cs-134	<7.56E+00	0.00E+00	7.56E+00



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
521525	5/20/2020 - 5/20/2020	Cs-137	<7.16E+00	0.00E+00	7.16E+00
		BaLa-140	<8.38E+00	0.00E+00	8.38E+00
		Total-Gam	0.00E+00		
		H3SW	<8.31E+01	0.00E+00	1.76E+02
523410	6/24/2020 - 6/24/2020	Mn-54	<6.87E+00	0.00E+00	6.87E+00
		Co-58	<5.57E+00	0.00E+00	5.57E+00
		Fe-59	<1.16E+01	0.00E+00	1.16E+01
		Co-60	<5.34E+00	0.00E+00	5.34E+00
		Zn-65	<1.44E+01	0.00E+00	1.44E+01
		Zr-95	<9.73E+00	0.00E+00	9.73E+00
		Nb-95	<8.15E+00	0.00E+00	8.15E+00
		I-131	<1.05E+01	0.00E+00	1.05E+01
		Cs-134	<7.24E+00	0.00E+00	7.24E+00
		Cs-137	<6.00E+00	0.00E+00	6.00E+00
		BaLa-140	<1.13E+01	0.00E+00	1.13E+01
		Total-Gam	0.00E+00		
		H3SW	<5.70E+01	0.00E+00	1.82E+02
524937	7/22/2020 - 7/22/2020	Mn-54	<7.52E+00	0.00E+00	7.52E+00
		Co-58	<7.52E+00	0.00E+00	7.52E+00
		Fe-59	<9.18E+00	0.00E+00	9.18E+00
		Co-60	<3.93E+00	0.00E+00	3.93E+00
		Zn-65	<1.25E+01	0.00E+00	1.25E+01
		Zr-95	<8.02E+00	0.00E+00	8.02E+00
		Nb-95	<6.89E+00	0.00E+00	6.89E+00
		I-131	<6.88E+00	0.00E+00	6.88E+00
		Cs-134	<7.18E+00	0.00E+00	7.18E+00
		Cs-137	<6.87E+00	0.00E+00	6.87E+00
		BaLa-140	<7.09E+00	0.00E+00	7.09E+00
		Total-Gam	0.00E+00		
		H3SW	<2.36E+01	0.00E+00	1.88E+02
526329	8/26/2020 - 8/26/2020	Mn-54	<5.07E+00	0.00E+00	5.07E+00
		Co-58	<6.70E+00	0.00E+00	6.70E+00
		Fe-59	<1.03E+01	0.00E+00	1.03E+01
		Co-60	<6.87E+00	0.00E+00	6.87E+00
		Zn-65	<1.32E+01	0.00E+00	1.32E+01
		Zr-95	<1.20E+01	0.00E+00	1.20E+01
		Nb-95	<6.77E+00	0.00E+00	6.77E+00
		I-131	<8.03E+00	0.00E+00	8.03E+00
		Cs-134	<8.14E+00	0.00E+00	8.14E+00
		Cs-137	<6.92E+00	0.00E+00	6.92E+00
		BaLa-140	<8.06E+00	0.00E+00	8.06E+00
		Total-Gam	0.00E+00		
		H3SW	<1.25E+02	0.00E+00	1.94E+02
527886	9/23/2020 - 9/23/2020	Mn-54	<6.32E+00	0.00E+00	6.32E+00
		Co-58	<5.52E+00	0.00E+00	5.52E+00
		Fe-59	<1.22E+01	0.00E+00	1.22E+01
		Co-60	<7.60E+00	0.00E+00	7.60E+00
		Zn-65	<1.35E+01	0.00E+00	1.35E+01
		Zr-95	<9.63E+00	0.00E+00	9.63E+00
		Nb-95	<7.07E+00	0.00E+00	7.07E+00
		I-131	<9.77E+00	0.00E+00	9.77E+00
		Cs-134	<5.53E+00	0.00E+00	5.53E+00
		Cs-137	<6.78E+00	0.00E+00	6.78E+00
		BaLa-140	<8.92E+00	0.00E+00	8.92E+00
		Total-Gam	0.00E+00		
		H3SW	<2.73E+01	0.00E+00	1.80E+02



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

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

Sample ID: 530217 Sample Dates: 10/21/2020 - 10/21/2020

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<5.20E+00	0.00E+00	5.20E+00
Co-58	<6.88E+00	0.00E+00	6.88E+00
Fe-59	<1.28E+01	0.00E+00	1.28E+01
Co-60	<5.64E+00	0.00E+00	5.64E+00
Zn-65	<1.14E+01	0.00E+00	1.14E+01
Zr-95	<1.12E+01	0.00E+00	1.12E+01
Nb-95	<9.46E+00	0.00E+00	9.46E+00
I-131	<8.30E+00	0.00E+00	8.30E+00
Cs-134	<6.61E+00	0.00E+00	6.61E+00
Cs-137	<5.73E+00	0.00E+00	5.73E+00
BaLa-140	<6.66E+00	0.00E+00	6.66E+00
Total-Gam	0.00E+00		
H3SW	<-4.3E+01	0.00E+00	1.85E+02

Sample ID: 532315 Sample Dates: 11/25/2020 - 11/25/2020

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<5.98E+00	0.00E+00	5.98E+00
Co-58	<5.78E+00	0.00E+00	5.78E+00
Fe-59	<1.13E+01	0.00E+00	1.13E+01
Co-60	<5.50E+00	0.00E+00	5.50E+00
Zn-65	<1.40E+01	0.00E+00	1.40E+01
Zr-95	<1.18E+01	0.00E+00	1.18E+01
Nb-95	<4.98E+00	0.00E+00	4.98E+00
I-131	<9.15E+00	0.00E+00	9.15E+00
Cs-134	<7.98E+00	0.00E+00	7.98E+00
Cs-137	<5.43E+00	0.00E+00	5.43E+00
BaLa-140	<8.63E+00	0.00E+00	8.63E+00
Total-Gam	0.00E+00		
H3SW	<-1.9E+01	0.00E+00	1.87E+02

Sample ID: 534040 Sample Dates: 12/22/2020 - 12/22/2020

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<3.82E+00	0.00E+00	3.82E+00
Co-58	<6.21E+00	0.00E+00	6.21E+00
Fe-59	<1.21E+01	0.00E+00	1.21E+01
Co-60	<6.71E+00	0.00E+00	6.71E+00
Zn-65	<1.33E+01	0.00E+00	1.33E+01
Zr-95	<1.00E+01	0.00E+00	1.00E+01
Nb-95	<5.62E+00	0.00E+00	5.62E+00
I-131	<9.18E+00	0.00E+00	9.18E+00
Cs-134	<5.93E+00	0.00E+00	5.93E+00
Cs-137	<6.01E+00	0.00E+00	6.01E+00
BaLa-140	<1.02E+01	0.00E+00	1.02E+01
Total-Gam	0.00E+00		
H3SW	<3.11E+01	0.00E+00	1.93E+02

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

Sample ID: 514107 Sample Dates: 1/15/2020 - 1/15/2020

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<6.42E+00	0.00E+00	6.42E+00
Co-58	<5.16E+00	0.00E+00	5.16E+00
Fe-59	<1.18E+01	0.00E+00	1.18E+01
Co-60	<7.97E+00	0.00E+00	7.97E+00
Zn-65	<1.19E+01	0.00E+00	1.19E+01
Zr-95	<9.41E+00	0.00E+00	9.41E+00
Nb-95	<6.10E+00	0.00E+00	6.10E+00
I-131	<8.45E+00	0.00E+00	8.45E+00
Cs-134	<6.34E+00	0.00E+00	6.34E+00
Cs-137	<4.87E+00	0.00E+00	4.87E+00
BaLa-140	<6.45E+00	0.00E+00	6.45E+00
Total-Gam	0.00E+00		
H3SW	<9.47E+01	0.00E+00	1.81E+02

Sample ID: 517227 Sample Dates: 2/24/2020 - 2/24/2020

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<5.27E+00	0.00E+00	5.27E+00
Co-58	<4.84E+00	0.00E+00	4.84E+00

# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
517227	2/24/2020 - 2/24/2020	Fe-59	<9.20E+00	0.00E+00	9.20E+00
		Co-60	<5.82E+00	0.00E+00	5.82E+00
		Zn-65	<9.51E+00	0.00E+00	9.51E+00
		Zr-95	<8.41E+00	0.00E+00	8.41E+00
		Nb-95	<4.48E+00	0.00E+00	4.48E+00
		I-131	<5.87E+00	0.00E+00	5.87E+00
		Cs-134	<5.93E+00	0.00E+00	5.93E+00
		Cs-137	<4.01E+00	0.00E+00	4.01E+00
		BaLa-140	<5.94E+00	0.00E+00	5.94E+00
		Total-Gam	0.00E+00		
		H3SW	<6.60E+01	0.00E+00	1.86E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
515559	3/25/2020 - 3/25/2020	Mn-54	<4.24E+00	0.00E+00	4.24E+00
		Co-58	<4.73E+00	0.00E+00	4.73E+00
		Fe-59	<9.65E+00	0.00E+00	9.65E+00
		Co-60	<3.50E+00	0.00E+00	3.50E+00
		Zn-65	<2.08E+01	0.00E+00	2.08E+01
		Zr-95	<8.58E+00	0.00E+00	8.58E+00
		Nb-95	<5.45E+00	0.00E+00	5.45E+00
		I-131	<6.03E+00	0.00E+00	6.03E+00
		Cs-134	<5.33E+00	0.00E+00	5.33E+00
		Cs-137	<4.24E+00	0.00E+00	4.24E+00
		BaLa-140	<7.85E+00	0.00E+00	7.85E+00
		Total-Gam	0.00E+00		
H3SW	<3.64E+01	0.00E+00	1.84E+02		

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
519641	4/21/2020 - 4/21/2020	Mn-54	<4.99E+00	0.00E+00	4.99E+00
		Co-58	<4.72E+00	0.00E+00	4.72E+00
		Fe-59	<8.47E+00	0.00E+00	8.47E+00
		Co-60	<5.36E+00	0.00E+00	5.36E+00
		Zn-65	<9.43E+00	0.00E+00	9.43E+00
		Zr-95	<9.51E+00	0.00E+00	9.51E+00
		Nb-95	<4.59E+00	0.00E+00	4.59E+00
		I-131	<5.28E+00	0.00E+00	5.28E+00
		Cs-134	<6.17E+00	0.00E+00	6.17E+00
		Cs-137	<6.76E+00	0.00E+00	6.76E+00
		BaLa-140	<7.11E+00	0.00E+00	7.11E+00
		Total-Gam	0.00E+00		
H3SW	<-4.4E+01	0.00E+00	1.95E+02		

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
521526	5/20/2020 - 5/20/2020	Mn-54	<5.32E+00	0.00E+00	5.32E+00
		Co-58	<5.02E+00	0.00E+00	5.02E+00
		Fe-59	<9.78E+00	0.00E+00	9.78E+00
		Co-60	<5.42E+00	0.00E+00	5.42E+00
		Zn-65	<1.16E+01	0.00E+00	1.16E+01
		Zr-95	<8.35E+00	0.00E+00	8.35E+00
		Nb-95	<5.54E+00	0.00E+00	5.54E+00
		I-131	<7.06E+00	0.00E+00	7.06E+00
		Cs-134	<4.63E+00	0.00E+00	4.63E+00
		Cs-137	<6.23E+00	0.00E+00	6.23E+00
		BaLa-140	<1.08E+01	0.00E+00	1.08E+01
		Total-Gam	0.00E+00		
H3SW	<7.13E+01	0.00E+00	1.75E+02		

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
523411	6/24/2020 - 6/24/2020	Mn-54	<4.13E+00	0.00E+00	4.13E+00
		Co-58	<3.75E+00	0.00E+00	3.75E+00
		Fe-59	<7.47E+00	0.00E+00	7.47E+00
		Co-60	<4.56E+00	0.00E+00	4.56E+00
		Zn-65	<7.40E+00	0.00E+00	7.40E+00
		Zr-95	<7.32E+00	0.00E+00	7.32E+00
Nb-95	<5.09E+00	0.00E+00	5.09E+00		



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
523411	6/24/2020 - 6/24/2020	I-131	<6.18E+00	0.00E+00	6.18E+00
		Cs-134	<4.39E+00	0.00E+00	4.39E+00
		Cs-137	<3.21E+00	0.00E+00	3.21E+00
		BaLa-140	<5.06E+00	0.00E+00	5.06E+00
		Total-Gam	0.00E+00		
		H3SW	<1.14E+01	0.00E+00	1.82E+02
524938	7/22/2020 - 7/22/2020	Mn-54	<4.57E+00	0.00E+00	4.57E+00
		Co-58	<4.34E+00	0.00E+00	4.34E+00
		Fe-59	<9.41E+00	0.00E+00	9.41E+00
		Co-60	<3.88E+00	0.00E+00	3.88E+00
		Zn-65	<2.17E+01	0.00E+00	2.17E+01
		Zr-95	<5.77E+00	0.00E+00	5.77E+00
		Nb-95	<5.17E+00	0.00E+00	5.17E+00
		I-131	<6.27E+00	0.00E+00	6.27E+00
		Cs-134	<5.35E+00	0.00E+00	5.35E+00
		Cs-137	<4.15E+00	0.00E+00	4.15E+00
		BaLa-140	<6.05E+00	0.00E+00	6.05E+00
		Total-Gam	0.00E+00		
		H3SW	<1.18E+01	0.00E+00	1.88E+02
526330	8/26/2020 - 8/26/2020	Mn-54	<6.59E+00	0.00E+00	6.59E+00
		Co-58	<5.82E+00	0.00E+00	5.82E+00
		Fe-59	<1.13E+01	0.00E+00	1.13E+01
		Co-60	<4.56E+00	0.00E+00	4.56E+00
		Zn-65	<1.19E+01	0.00E+00	1.19E+01
		Zr-95	<9.39E+00	0.00E+00	9.39E+00
		Nb-95	<8.54E+00	0.00E+00	8.54E+00
		I-131	<8.67E+00	0.00E+00	8.67E+00
		Cs-134	<7.18E+00	0.00E+00	7.18E+00
		Cs-137	<7.45E+00	0.00E+00	7.45E+00
		BaLa-140	<5.08E+00	0.00E+00	5.08E+00
		Total-Gam	0.00E+00		
		H3SW	<4.73E+01	0.00E+00	1.81E+02
527887	9/23/2020 - 9/23/2020	Mn-54	<6.06E+00	0.00E+00	6.06E+00
		Co-58	<5.62E+00	0.00E+00	5.62E+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	<1.42E+01	0.00E+00	1.42E+01
		Zr-95	<1.05E+01	0.00E+00	1.05E+01
		Nb-95	<6.10E+00	0.00E+00	6.10E+00
		I-131	<8.32E+00	0.00E+00	8.32E+00
		Cs-134	<5.63E+00	0.00E+00	5.63E+00
		Cs-137	<6.75E+00	0.00E+00	6.75E+00
		BaLa-140	<1.10E+01	0.00E+00	1.10E+01
		Total-Gam	0.00E+00		
		H3SW	<2.93E+01	0.00E+00	1.79E+02
530218	10/21/2020 - 10/21/2020	Mn-54	<5.88E+00	0.00E+00	5.88E+00
		Co-58	<4.21E+00	0.00E+00	4.21E+00
		Fe-59	<1.42E+01	0.00E+00	1.42E+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	<9.45E+00	0.00E+00	9.45E+00
		Nb-95	<5.64E+00	0.00E+00	5.64E+00
		I-131	<8.74E+00	0.00E+00	8.74E+00
		Cs-134	<6.79E+00	0.00E+00	6.79E+00
		Cs-137	<3.73E+00	0.00E+00	3.73E+00
		BaLa-140	<9.73E+00	0.00E+00	9.73E+00
		Total-Gam	0.00E+00		



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
530218	10/21/2020 - 10/21/2020	H3SW	<-8.6E+01	0.00E+00	1.84E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
532316	11/25/2020 - 11/25/2020	Mn-54	<4.79E+00	0.00E+00	4.79E+00
		Co-58	<6.46E+00	0.00E+00	6.46E+00
		Fe-59	<1.40E+01	0.00E+00	1.40E+01
		Co-60	<4.56E+00	0.00E+00	4.56E+00
		Zn-65	<1.20E+01	0.00E+00	1.20E+01
		Zr-95	<1.16E+01	0.00E+00	1.16E+01
		Nb-95	<5.30E+00	0.00E+00	5.30E+00
		I-131	<7.64E+00	0.00E+00	7.64E+00
		Cs-134	<6.35E+00	0.00E+00	6.35E+00
		Cs-137	<5.69E+00	0.00E+00	5.69E+00
		BaLa-140	<8.72E+00	0.00E+00	8.72E+00
		Total-Gam	0.00E+00		
		H3SW	<3.07E+01	0.00E+00	1.87E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
534041	12/22/2020 - 12/22/2020	Mn-54	<5.39E+00	0.00E+00	5.39E+00
		Co-58	<6.75E+00	0.00E+00	6.75E+00
		Fe-59	<1.52E+01	0.00E+00	1.52E+01
		Co-60	<6.30E+00	0.00E+00	6.30E+00
		Zn-65	<1.40E+01	0.00E+00	1.40E+01
		Zr-95	<9.39E+00	0.00E+00	9.39E+00
		Nb-95	<6.35E+00	0.00E+00	6.35E+00
		I-131	<1.07E+01	0.00E+00	1.07E+01
		Cs-134	<6.25E+00	0.00E+00	6.25E+00
		Cs-137	<7.36E+00	0.00E+00	7.36E+00
		BaLa-140	<8.80E+00	0.00E+00	8.80E+00
		Total-Gam	0.00E+00		
		H3SW	<-6.0E+01	0.00E+00	1.94E+02

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

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514108	1/15/2020 - 1/15/2020	Mn-54	<6.06E+00	0.00E+00	6.06E+00
		Co-58	<5.85E+00	0.00E+00	5.85E+00
		Fe-59	<9.08E+00	0.00E+00	9.08E+00
		Co-60	<5.84E+00	0.00E+00	5.84E+00
		Zn-65	<8.82E+00	0.00E+00	8.82E+00
		Zr-95	<1.02E+01	0.00E+00	1.02E+01
		Nb-95	<6.11E+00	0.00E+00	6.11E+00
		I-131	<7.16E+00	0.00E+00	7.16E+00
		Cs-134	<6.97E+00	0.00E+00	6.97E+00
		Cs-137	<5.52E+00	0.00E+00	5.52E+00
		BaLa-140	<1.08E+01	0.00E+00	1.08E+01
		Total-Gam	0.00E+00		
		H3SW	<-1.7E+01	0.00E+00	1.84E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
517228	2/24/2020 - 2/24/2020	Mn-54	<5.85E+00	0.00E+00	5.85E+00
		Co-58	<5.84E+00	0.00E+00	5.84E+00
		Fe-59	<9.21E+00	0.00E+00	9.21E+00
		Co-60	<3.83E+00	0.00E+00	3.83E+00
		Zn-65	<1.02E+01	0.00E+00	1.02E+01
		Zr-95	<9.50E+00	0.00E+00	9.50E+00
		Nb-95	<5.13E+00	0.00E+00	5.13E+00
		I-131	<5.43E+00	0.00E+00	5.43E+00
		Cs-134	<6.15E+00	0.00E+00	6.15E+00
		Cs-137	<4.27E+00	0.00E+00	4.27E+00
		BaLa-140	<6.64E+00	0.00E+00	6.64E+00
		Total-Gam	0.00E+00		
		H3SW	<7.16E+01	0.00E+00	1.89E+02



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

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

Sample ID: 515560 Sample Dates: 3/25/2020 - 3/25/2020

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<6.23E+00	0.00E+00	6.23E+00
Co-58	<6.00E+00	0.00E+00	6.00E+00
Fe-59	<1.37E+01	0.00E+00	1.37E+01
Co-60	<6.89E+00	0.00E+00	6.89E+00
Zn-65	<1.16E+01	0.00E+00	1.16E+01
Zr-95	<7.81E+00	0.00E+00	7.81E+00
Nb-95	<6.02E+00	0.00E+00	6.02E+00
I-131	<7.51E+00	0.00E+00	7.51E+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	<8.45E+00	0.00E+00	8.45E+00
Total-Gam	0.00E+00		
H3SW	<1.93E+01	0.00E+00	1.83E+02

Sample ID: 519642 Sample Dates: 4/21/2020 - 4/21/2020

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<5.73E+00	0.00E+00	5.73E+00
Co-58	<4.41E+00	0.00E+00	4.41E+00
Fe-59	<1.10E+01	0.00E+00	1.10E+01
Co-60	<7.29E+00	0.00E+00	7.29E+00
Zn-65	<1.17E+01	0.00E+00	1.17E+01
Zr-95	<7.66E+00	0.00E+00	7.66E+00
Nb-95	<5.75E+00	0.00E+00	5.75E+00
I-131	<6.32E+00	0.00E+00	6.32E+00
Cs-134	<6.85E+00	0.00E+00	6.85E+00
Cs-137	<5.62E+00	0.00E+00	5.62E+00
BaLa-140	<7.30E+00	0.00E+00	7.30E+00
Total-Gam	0.00E+00		
H3SW	<-7.5E+01	0.00E+00	1.95E+02

Sample ID: 521527 Sample Dates: 5/20/2020 - 5/20/2020

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<4.25E+00	0.00E+00	4.25E+00
Co-58	<5.17E+00	0.00E+00	5.17E+00
Fe-59	<1.07E+01	0.00E+00	1.07E+01
Co-60	<6.01E+00	0.00E+00	6.01E+00
Zn-65	<1.70E+01	0.00E+00	1.70E+01
Zr-95	<9.44E+00	0.00E+00	9.44E+00
Nb-95	<6.12E+00	0.00E+00	6.12E+00
I-131	<7.39E+00	0.00E+00	7.39E+00
Cs-134	<5.88E+00	0.00E+00	5.88E+00
Cs-137	<3.85E+00	0.00E+00	3.85E+00
BaLa-140	<9.20E+00	0.00E+00	9.20E+00
Total-Gam	0.00E+00		
H3SW	<7.59E+01	0.00E+00	1.75E+02

Sample ID: 523412 Sample Dates: 6/24/2020 - 6/24/2020

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<6.30E+00	0.00E+00	6.30E+00
Co-58	<5.75E+00	0.00E+00	5.75E+00
Fe-59	<1.25E+01	0.00E+00	1.25E+01
Co-60	<6.97E+00	0.00E+00	6.97E+00
Zn-65	<1.19E+01	0.00E+00	1.19E+01
Zr-95	<1.18E+01	0.00E+00	1.18E+01
Nb-95	<7.22E+00	0.00E+00	7.22E+00
I-131	<8.86E+00	0.00E+00	8.86E+00
Cs-134	<7.48E+00	0.00E+00	7.48E+00
Cs-137	<7.18E+00	0.00E+00	7.18E+00
BaLa-140	<9.17E+00	0.00E+00	9.17E+00
Total-Gam	0.00E+00		
H3SW	<1.14E+01	0.00E+00	1.81E+02

Sample ID: 524939 Sample Dates: 7/22/2020 - 7/22/2020

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<6.48E+00	0.00E+00	6.48E+00
Co-58	<6.61E+00	0.00E+00	6.61E+00
Fe-59	<1.10E+01	0.00E+00	1.10E+01
Co-60	<5.91E+00	0.00E+00	5.91E+00
Zn-65	<1.34E+01	0.00E+00	1.34E+01



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
524939	7/22/2020 - 7/22/2020	Zr-95	<1.18E+01	0.00E+00	1.18E+01
		Nb-95	<8.01E+00	0.00E+00	8.01E+00
		I-131	<9.28E+00	0.00E+00	9.28E+00
		Cs-134	<5.77E+00	0.00E+00	5.77E+00
		Cs-137	<8.49E+00	0.00E+00	8.49E+00
		BaLa-140	<7.85E+00	0.00E+00	7.85E+00
		Total-Gam	0.00E+00		
		H3SW	<-2.9E+01	0.00E+00	1.83E+02
526331	8/26/2020 - 8/26/2020	Mn-54	<6.07E+00	0.00E+00	6.07E+00
		Co-58	<5.46E+00	0.00E+00	5.46E+00
		Fe-59	<1.30E+01	0.00E+00	1.30E+01
		Co-60	<6.89E+00	0.00E+00	6.89E+00
		Zn-65	<1.16E+01	0.00E+00	1.16E+01
		Zr-95	<9.88E+00	0.00E+00	9.88E+00
		Nb-95	<6.12E+00	0.00E+00	6.12E+00
		I-131	<9.94E+00	0.00E+00	9.94E+00
		Cs-134	<6.39E+00	0.00E+00	6.39E+00
		Cs-137	<5.73E+00	0.00E+00	5.73E+00
		BaLa-140	<8.10E+00	0.00E+00	8.10E+00
		Total-Gam	0.00E+00		
		H3SW	<-2.7E+01	0.00E+00	1.82E+02
527888	9/23/2020 - 9/23/2020	Mn-54	<7.30E+00	0.00E+00	7.30E+00
		Co-58	<6.56E+00	0.00E+00	6.56E+00
		Fe-59	<1.19E+01	0.00E+00	1.19E+01
		Co-60	<7.78E+00	0.00E+00	7.78E+00
		Zn-65	<1.19E+01	0.00E+00	1.19E+01
		Zr-95	<9.91E+00	0.00E+00	9.91E+00
		Nb-95	<6.42E+00	0.00E+00	6.42E+00
		I-131	<8.77E+00	0.00E+00	8.77E+00
		Cs-134	<6.44E+00	0.00E+00	6.44E+00
		Cs-137	<6.76E+00	0.00E+00	6.76E+00
		BaLa-140	<6.75E+00	0.00E+00	6.75E+00
		Total-Gam	0.00E+00		
		H3SW	<2.64E+01	0.00E+00	1.94E+02
530219	10/21/2020 - 10/21/2020	Mn-54	<5.66E+00	0.00E+00	5.66E+00
		Co-58	<6.36E+00	0.00E+00	6.36E+00
		Fe-59	<1.22E+01	0.00E+00	1.22E+01
		Co-60	<5.97E+00	0.00E+00	5.97E+00
		Zn-65	<1.19E+01	0.00E+00	1.19E+01
		Zr-95	<8.91E+00	0.00E+00	8.91E+00
		Nb-95	<4.88E+00	0.00E+00	4.88E+00
		I-131	<8.63E+00	0.00E+00	8.63E+00
		Cs-134	<6.11E+00	0.00E+00	6.11E+00
		Cs-137	<7.02E+00	0.00E+00	7.02E+00
		BaLa-140	<8.68E+00	0.00E+00	8.68E+00
		Total-Gam	0.00E+00		
		H3SW	<-5.9E+01	0.00E+00	1.84E+02
532317	11/25/2020 - 11/25/2020	Mn-54	<5.03E+00	0.00E+00	5.03E+00
		Co-58	<5.44E+00	0.00E+00	5.44E+00
		Fe-59	<9.47E+00	0.00E+00	9.47E+00
		Co-60	<5.59E+00	0.00E+00	5.59E+00
		Zn-65	<1.14E+01	0.00E+00	1.14E+01
		Zr-95	<9.91E+00	0.00E+00	9.91E+00
		Nb-95	<6.80E+00	0.00E+00	6.80E+00
		I-131	<8.49E+00	0.00E+00	8.49E+00
		Cs-134	<5.07E+00	0.00E+00	5.07E+00
		Cs-137	<5.33E+00	0.00E+00	5.33E+00





# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

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

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Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
532317	11/25/2020 - 11/25/2020	BaLa-140	<8.78E+00	0.00E+00	8.78E+00
		Total-Gam	0.00E+00		
		H3SW	<-3.2E+01	0.00E+00	1.90E+02

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Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
534042	12/22/2020 - 12/22/2020	Mn-54	<5.72E+00	0.00E+00	5.72E+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	<4.45E+00	0.00E+00	4.45E+00
		Zn-65	<9.65E+00	0.00E+00	9.65E+00
		Zr-95	<1.00E+01	0.00E+00	1.00E+01
		Nb-95	<6.65E+00	0.00E+00	6.65E+00
		I-131	<9.19E+00	0.00E+00	9.19E+00
		Cs-134	<6.18E+00	0.00E+00	6.18E+00
		Cs-137	<4.75E+00	0.00E+00	4.75E+00
		BaLa-140	<8.69E+00	0.00E+00	8.69E+00
		Total-Gam	0.00E+00		
		H3SW	<8.02E+01	0.00E+00	1.76E+02

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

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Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514109	1/15/2020 - 1/15/2020	Mn-54	<5.69E+00	0.00E+00	5.69E+00
		Co-58	<5.63E+00	0.00E+00	5.63E+00
		Fe-59	<1.14E+01	0.00E+00	1.14E+01
		Co-60	<7.13E+00	0.00E+00	7.13E+00
		Zn-65	<1.14E+01	0.00E+00	1.14E+01
		Zr-95	<9.44E+00	0.00E+00	9.44E+00
		Nb-95	<5.92E+00	0.00E+00	5.92E+00
		I-131	<8.25E+00	0.00E+00	8.25E+00
		Cs-134	<7.59E+00	0.00E+00	7.59E+00
		Cs-137	<6.58E+00	0.00E+00	6.58E+00
		BaLa-140	<6.52E+00	0.00E+00	6.52E+00
		Total-Gam	0.00E+00		
		H3SW	2.67E+02	1.15E+02	1.83E+02

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Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
517229	2/24/2020 - 2/24/2020	Mn-54	<5.63E+00	0.00E+00	5.63E+00
		Co-58	<6.19E+00	0.00E+00	6.19E+00
		Fe-59	<8.08E+00	0.00E+00	8.08E+00
		Co-60	<4.58E+00	0.00E+00	4.58E+00
		Zn-65	<1.55E+01	0.00E+00	1.55E+01
		Zr-95	<1.01E+01	0.00E+00	1.01E+01
		Nb-95	<6.04E+00	0.00E+00	6.04E+00
		I-131	<5.71E+00	0.00E+00	5.71E+00
		Cs-134	<5.61E+00	0.00E+00	5.61E+00
		Cs-137	<5.53E+00	0.00E+00	5.53E+00
		BaLa-140	<5.29E+00	0.00E+00	5.29E+00
		Total-Gam	0.00E+00		
		H3SW	8.67E+02	1.39E+02	1.93E+02

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Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
515561	3/25/2020 - 3/25/2020	Mn-54	<5.66E+00	0.00E+00	5.66E+00
		Co-58	<5.97E+00	0.00E+00	5.97E+00
		Fe-59	<1.36E+01	0.00E+00	1.36E+01
		Co-60	<8.78E+00	0.00E+00	8.78E+00
		Zn-65	<1.36E+01	0.00E+00	1.36E+01
		Zr-95	<1.14E+01	0.00E+00	1.14E+01
		Nb-95	<6.18E+00	0.00E+00	6.18E+00
		I-131	<7.65E+00	0.00E+00	7.65E+00
		Cs-134	<7.18E+00	0.00E+00	7.18E+00
		Cs-137	<6.87E+00	0.00E+00	6.87E+00
		BaLa-140	<7.10E+00	0.00E+00	7.10E+00
		Total-Gam	0.00E+00		

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# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
515561	3/25/2020 - 3/25/2020	H3SW	2.27E+02	1.14E+02	1.83E+02
519643	4/21/2020 - 4/21/2020	Mn-54	<6.19E+00	0.00E+00	6.19E+00
		Co-58	<6.52E+00	0.00E+00	6.52E+00
		Fe-59	<1.17E+01	0.00E+00	1.17E+01
		Co-60	<7.05E+00	0.00E+00	7.05E+00
		Zn-65	<8.95E+00	0.00E+00	8.95E+00
		Zr-95	<6.79E+00	0.00E+00	6.79E+00
		Nb-95	<6.97E+00	0.00E+00	6.97E+00
		I-131	<6.17E+00	0.00E+00	6.17E+00
		Cs-134	<5.33E+00	0.00E+00	5.33E+00
		Cs-137	<7.02E+00	0.00E+00	7.02E+00
		BaLa-140	<4.15E+00	0.00E+00	4.15E+00
		Total-Gam	0.00E+00		
		H3SW	2.98E+02	1.22E+02	1.94E+02
521528	5/20/2020 - 5/20/2020	Mn-54	<5.76E+00	0.00E+00	5.76E+00
		Co-58	<4.90E+00	0.00E+00	4.90E+00
		Fe-59	<1.13E+01	0.00E+00	1.13E+01
		Co-60	<5.37E+00	0.00E+00	5.37E+00
		Zn-65	<1.38E+01	0.00E+00	1.38E+01
		Zr-95	<1.25E+01	0.00E+00	1.25E+01
		Nb-95	<6.00E+00	0.00E+00	6.00E+00
		I-131	<9.58E+00	0.00E+00	9.58E+00
		Cs-134	<4.66E+00	0.00E+00	4.66E+00
		Cs-137	<5.38E+00	0.00E+00	5.38E+00
		BaLa-140	<5.42E+00	0.00E+00	5.42E+00
		Total-Gam	0.00E+00		
		H3SW	1.11E+03	1.36E+02	1.77E+02
523413	6/24/2020 - 6/24/2020	Mn-54	<5.78E+00	0.00E+00	5.78E+00
		Co-58	<5.54E+00	0.00E+00	5.54E+00
		Fe-59	<1.17E+01	0.00E+00	1.17E+01
		Co-60	<6.65E+00	0.00E+00	6.65E+00
		Zn-65	<1.12E+01	0.00E+00	1.12E+01
		Zr-95	<1.07E+01	0.00E+00	1.07E+01
		Nb-95	<6.78E+00	0.00E+00	6.78E+00
		I-131	<8.98E+00	0.00E+00	8.98E+00
		Cs-134	<7.08E+00	0.00E+00	7.08E+00
		Cs-137	<6.78E+00	0.00E+00	6.78E+00
		BaLa-140	<7.48E+00	0.00E+00	7.48E+00
		Total-Gam	0.00E+00		
		H3SW	<5.73E+01	0.00E+00	1.83E+02
524940	7/22/2020 - 7/22/2020	Mn-54	<5.87E+00	0.00E+00	5.87E+00
		Co-58	<6.17E+00	0.00E+00	6.17E+00
		Fe-59	<1.19E+01	0.00E+00	1.19E+01
		Co-60	<5.43E+00	0.00E+00	5.43E+00
		Zn-65	<9.60E+00	0.00E+00	9.60E+00
		Zr-95	<1.14E+01	0.00E+00	1.14E+01
		Nb-95	<7.61E+00	0.00E+00	7.61E+00
		I-131	<8.71E+00	0.00E+00	8.71E+00
		Cs-134	<6.57E+00	0.00E+00	6.57E+00
		Cs-137	<6.81E+00	0.00E+00	6.81E+00
		BaLa-140	<1.08E+01	0.00E+00	1.08E+01
		Total-Gam	0.00E+00		
		H3SW	2.61E+02	1.16E+02	1.85E+02
526332	8/26/2020 - 8/26/2020	Mn-54	<5.76E+00	0.00E+00	5.76E+00
		Co-58	<6.76E+00	0.00E+00	6.76E+00



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
526332	8/26/2020 - 8/26/2020	Fe-59	<8.99E+00	0.00E+00	8.99E+00
		Co-60	<5.86E+00	0.00E+00	5.86E+00
		Zn-65	<1.19E+01	0.00E+00	1.19E+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	<1.02E+01	0.00E+00	1.02E+01
		Cs-134	<6.19E+00	0.00E+00	6.19E+00
		Cs-137	<7.26E+00	0.00E+00	7.26E+00
		BaLa-140	<8.76E+00	0.00E+00	8.76E+00
		Total-Gam	0.00E+00		
		H3SW	<1.15E+02	0.00E+00	1.81E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
527889	9/23/2020 - 9/23/2020	Mn-54	<7.41E+00	0.00E+00	7.41E+00
		Co-58	<6.43E+00	0.00E+00	6.43E+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	<1.32E+01	0.00E+00	1.32E+01
		Zr-95	<1.02E+01	0.00E+00	1.02E+01
		Nb-95	<7.69E+00	0.00E+00	7.69E+00
		I-131	<9.48E+00	0.00E+00	9.48E+00
		Cs-134	<6.37E+00	0.00E+00	6.37E+00
		Cs-137	<6.08E+00	0.00E+00	6.08E+00
		BaLa-140	<1.11E+01	0.00E+00	1.11E+01
		Total-Gam	0.00E+00		
		H3SW	<5.97E+01	0.00E+00	1.94E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
530220	10/21/2020 - 10/21/2020	Mn-54	<6.57E+00	0.00E+00	6.57E+00
		Co-58	<5.63E+00	0.00E+00	5.63E+00
		Fe-59	<1.53E+01	0.00E+00	1.53E+01
		Co-60	<4.81E+00	0.00E+00	4.81E+00
		Zn-65	<1.44E+01	0.00E+00	1.44E+01
		Zr-95	<9.40E+00	0.00E+00	9.40E+00
		Nb-95	<7.10E+00	0.00E+00	7.10E+00
		I-131	<8.77E+00	0.00E+00	8.77E+00
		Cs-134	<6.18E+00	0.00E+00	6.18E+00
		Cs-137	<7.57E+00	0.00E+00	7.57E+00
		BaLa-140	<9.82E+00	0.00E+00	9.82E+00
		Total-Gam	0.00E+00		
		H3SW	4.35E+02	1.20E+02	1.83E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
532318	11/25/2020 - 11/25/2020	Mn-54	<6.78E+00	0.00E+00	6.78E+00
		Co-58	<5.73E+00	0.00E+00	5.73E+00
		Fe-59	<9.95E+00	0.00E+00	9.95E+00
		Co-60	<4.15E+00	0.00E+00	4.15E+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	<6.32E+00	0.00E+00	6.32E+00
		I-131	<1.02E+01	0.00E+00	1.02E+01
		Cs-134	<7.37E+00	0.00E+00	7.37E+00
		Cs-137	<7.26E+00	0.00E+00	7.26E+00
		BaLa-140	<7.11E+00	0.00E+00	7.11E+00
		Total-Gam	0.00E+00		
		H3SW	3.86E+02	1.21E+02	1.88E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
534043	12/22/2020 - 12/22/2020	Mn-54	<4.26E+00	0.00E+00	4.26E+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	<1.32E+01	0.00E+00	1.32E+01
		Zr-95	<1.03E+01	0.00E+00	1.03E+01
		Nb-95	<6.85E+00	0.00E+00	6.85E+00



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

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

Sample ID: 534043 Sample Dates: 12/22/2020 - 12/22/2020

Nuclide	Activity	2 Sigma Error	MDA
I-131	<1.02E+01	0.00E+00	1.02E+01
Cs-134	<6.36E+00	0.00E+00	6.36E+00
Cs-137	<5.12E+00	0.00E+00	5.12E+00
BaLa-140	<1.05E+01	0.00E+00	1.05E+01
Total-Gam	0.00E+00		
H3SW	1.14E+03	1.38E+02	1.76E+02

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

Sample ID: 514110 Sample Dates: 1/15/2020 - 1/15/2020

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<5.97E+00	0.00E+00	5.97E+00
Co-58	<5.91E+00	0.00E+00	5.91E+00
Fe-59	<1.12E+01	0.00E+00	1.12E+01
Co-60	<8.41E+00	0.00E+00	8.41E+00
Zn-65	<1.12E+01	0.00E+00	1.12E+01
Zr-95	<9.91E+00	0.00E+00	9.91E+00
Nb-95	<7.03E+00	0.00E+00	7.03E+00
I-131	<7.92E+00	0.00E+00	7.92E+00
Cs-134	<6.19E+00	0.00E+00	6.19E+00
Cs-137	<6.40E+00	0.00E+00	6.40E+00
BaLa-140	<6.76E+00	0.00E+00	6.76E+00
Total-Gam	0.00E+00		
H3SW	<9.35E+01	0.00E+00	1.84E+02

Sample ID: 517230 Sample Dates: 2/24/2020 - 2/24/2020

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<6.10E+00	0.00E+00	6.10E+00
Co-58	<6.09E+00	0.00E+00	6.09E+00
Fe-59	<1.29E+01	0.00E+00	1.29E+01
Co-60	<7.59E+00	0.00E+00	7.59E+00
Zn-65	<1.43E+01	0.00E+00	1.43E+01
Zr-95	<1.06E+01	0.00E+00	1.06E+01
Nb-95	<6.11E+00	0.00E+00	6.11E+00
I-131	<6.30E+00	0.00E+00	6.30E+00
Cs-134	<6.23E+00	0.00E+00	6.23E+00
Cs-137	<8.25E+00	0.00E+00	8.25E+00
BaLa-140	<7.36E+00	0.00E+00	7.36E+00
Total-Gam	0.00E+00		
H3SW	<-1.2E+01	0.00E+00	1.93E+02

Sample ID: 515562 Sample Dates: 3/25/2020 - 3/25/2020

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<5.95E+00	0.00E+00	5.95E+00
Co-58	<7.41E+00	0.00E+00	7.41E+00
Fe-59	<1.10E+01	0.00E+00	1.10E+01
Co-60	<5.91E+00	0.00E+00	5.91E+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	<6.45E+00	0.00E+00	6.45E+00
I-131	<8.90E+00	0.00E+00	8.90E+00
Cs-134	<7.07E+00	0.00E+00	7.07E+00
Cs-137	<6.31E+00	0.00E+00	6.31E+00
BaLa-140	<7.84E+00	0.00E+00	7.84E+00
Total-Gam	0.00E+00		
H3SW	<1.15E+02	0.00E+00	1.82E+02

Sample ID: 519644 Sample Dates: 4/21/2020 - 4/21/2020

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<5.06E+00	0.00E+00	5.06E+00
Co-58	<4.83E+00	0.00E+00	4.83E+00
Fe-59	<1.23E+01	0.00E+00	1.23E+01
Co-60	<6.55E+00	0.00E+00	6.55E+00
Zn-65	<1.02E+01	0.00E+00	1.02E+01
Zr-95	<7.11E+00	0.00E+00	7.11E+00
Nb-95	<5.68E+00	0.00E+00	5.68E+00
I-131	<5.96E+00	0.00E+00	5.96E+00
Cs-134	<4.91E+00	0.00E+00	4.91E+00



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
519644	4/21/2020 - 4/21/2020	Cs-137	<4.96E+00	0.00E+00	4.96E+00
		BaLa-140	<8.27E+00	0.00E+00	8.27E+00
		Total-Gam	0.00E+00		
		H3SW	<0.00E+00	0.00E+00	1.94E+02
521529	5/20/2020 - 5/20/2020	Mn-54	<5.48E+00	0.00E+00	5.48E+00
		Co-58	<6.98E+00	0.00E+00	6.98E+00
		Fe-59	<1.20E+01	0.00E+00	1.20E+01
		Co-60	<7.13E+00	0.00E+00	7.13E+00
		Zn-65	<1.07E+01	0.00E+00	1.07E+01
		Zr-95	<1.13E+01	0.00E+00	1.13E+01
		Nb-95	<6.90E+00	0.00E+00	6.90E+00
		I-131	<7.84E+00	0.00E+00	7.84E+00
		Cs-134	<7.77E+00	0.00E+00	7.77E+00
		Cs-137	<7.34E+00	0.00E+00	7.34E+00
		BaLa-140	<1.06E+01	0.00E+00	1.06E+01
		Total-Gam	0.00E+00		
		H3SW	<1.11E+02	0.00E+00	1.76E+02
523414	6/24/2020 - 6/24/2020	Mn-54	<6.64E+00	0.00E+00	6.64E+00
		Co-58	<5.39E+00	0.00E+00	5.39E+00
		Fe-59	<1.09E+01	0.00E+00	1.09E+01
		Co-60	<6.14E+00	0.00E+00	6.14E+00
		Zn-65	<9.51E+00	0.00E+00	9.51E+00
		Zr-95	<1.19E+01	0.00E+00	1.19E+01
		Nb-95	<7.24E+00	0.00E+00	7.24E+00
		I-131	<9.09E+00	0.00E+00	9.09E+00
		Cs-134	<6.69E+00	0.00E+00	6.69E+00
		Cs-137	<5.45E+00	0.00E+00	5.45E+00
		BaLa-140	<7.31E+00	0.00E+00	7.31E+00
		Total-Gam	0.00E+00		
		H3SW	<4.56E+00	0.00E+00	1.82E+02
524941	7/22/2020 - 7/22/2020	Mn-54	<4.56E+00	0.00E+00	4.56E+00
		Co-58	<4.83E+00	0.00E+00	4.83E+00
		Fe-59	<8.81E+00	0.00E+00	8.81E+00
		Co-60	<4.26E+00	0.00E+00	4.26E+00
		Zn-65	<9.97E+00	0.00E+00	9.97E+00
		Zr-95	<1.14E+01	0.00E+00	1.14E+01
		Nb-95	<6.69E+00	0.00E+00	6.69E+00
		I-131	<6.89E+00	0.00E+00	6.89E+00
		Cs-134	<5.11E+00	0.00E+00	5.11E+00
		Cs-137	<6.23E+00	0.00E+00	6.23E+00
		BaLa-140	<8.31E+00	0.00E+00	8.31E+00
		Total-Gam	0.00E+00		
		H3SW	<6.50E+01	0.00E+00	1.84E+02
526333	8/26/2020 - 8/26/2020	Mn-54	<5.76E+00	0.00E+00	5.76E+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	<6.43E+00	0.00E+00	6.43E+00
		Zn-65	<9.23E+00	0.00E+00	9.23E+00
		Zr-95	<1.06E+01	0.00E+00	1.06E+01
		Nb-95	<7.30E+00	0.00E+00	7.30E+00
		I-131	<1.20E+01	0.00E+00	1.20E+01
		Cs-134	<7.54E+00	0.00E+00	7.54E+00
		Cs-137	<5.23E+00	0.00E+00	5.23E+00
		BaLa-140	<1.05E+01	0.00E+00	1.05E+01
		Total-Gam	0.00E+00		
		H3SW	<2.72E+01	0.00E+00	1.81E+02



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

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

Sample ID:	527890	Sample Dates:	9/23/2020 - 9/23/2020	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<6.49E+00	0.00E+00	6.49E+00
				Co-58	<6.84E+00	0.00E+00	6.84E+00
				Fe-59	<1.17E+01	0.00E+00	1.17E+01
				Co-60	<6.30E+00	0.00E+00	6.30E+00
				Zn-65	<1.35E+01	0.00E+00	1.35E+01
				Zr-95	<9.26E+00	0.00E+00	9.26E+00
				Nb-95	<6.38E+00	0.00E+00	6.38E+00
				I-131	<1.04E+01	0.00E+00	1.04E+01
				Cs-134	<7.45E+00	0.00E+00	7.45E+00
				Cs-137	<6.47E+00	0.00E+00	6.47E+00
				BaLa-140	<1.03E+01	0.00E+00	1.03E+01
				Total-Gam	0.00E+00		
				H3SW	<5.68E+01	0.00E+00	1.80E+02

Sample ID:	530221	Sample Dates:	10/21/2020 - 10/21/2020	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<6.92E+00	0.00E+00	6.92E+00
				Co-58	<5.12E+00	0.00E+00	5.12E+00
				Fe-59	<1.41E+01	0.00E+00	1.41E+01
				Co-60	<6.01E+00	0.00E+00	6.01E+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	<7.56E+00	0.00E+00	7.56E+00
				I-131	<7.60E+00	0.00E+00	7.60E+00
				Cs-134	<6.57E+00	0.00E+00	6.57E+00
				Cs-137	<4.66E+00	0.00E+00	4.66E+00
				BaLa-140	<6.17E+00	0.00E+00	6.17E+00
				Total-Gam	0.00E+00		
				H3SW	<-7.9E+01	0.00E+00	1.83E+02

Sample ID:	532319	Sample Dates:	11/25/2020 - 11/25/2020	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<4.95E+00	0.00E+00	4.95E+00
				Co-58	<7.07E+00	0.00E+00	7.07E+00
				Fe-59	<1.39E+01	0.00E+00	1.39E+01
				Co-60	<5.91E+00	0.00E+00	5.91E+00
				Zn-65	<9.77E+00	0.00E+00	9.77E+00
				Zr-95	<9.36E+00	0.00E+00	9.36E+00
				Nb-95	<6.87E+00	0.00E+00	6.87E+00
				I-131	<9.20E+00	0.00E+00	9.20E+00
				Cs-134	<7.64E+00	0.00E+00	7.64E+00
				Cs-137	<7.36E+00	0.00E+00	7.36E+00
				BaLa-140	<7.76E+00	0.00E+00	7.76E+00
				Total-Gam	0.00E+00		
				H3SW	<9.89E+01	0.00E+00	1.90E+02

Sample ID:	534044	Sample Dates:	12/22/2020 - 12/22/2020	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<7.65E+00	0.00E+00	7.65E+00
				Co-58	<6.64E+00	0.00E+00	6.64E+00
				Fe-59	<1.38E+01	0.00E+00	1.38E+01
				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	<6.37E+00	0.00E+00	6.37E+00
				I-131	<1.18E+01	0.00E+00	1.18E+01
				Cs-134	<6.93E+00	0.00E+00	6.93E+00
				Cs-137	<6.40E+00	0.00E+00	6.40E+00
				BaLa-140	<1.10E+01	0.00E+00	1.10E+01
				Total-Gam	0.00E+00		
				H3SW	<3.77E+01	0.00E+00	1.76E+02

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

Sample ID:	514111	Sample Dates:	1/15/2020 - 1/15/2020	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<5.77E+00	0.00E+00	5.77E+00
				Co-58	<4.96E+00	0.00E+00	4.96E+00



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
514111	1/15/2020 - 1/15/2020	Fe-59	<1.03E+01	0.00E+00	1.03E+01
		Co-60	<4.45E+00	0.00E+00	4.45E+00
		Zn-65	<2.20E+01	0.00E+00	2.20E+01
		Zr-95	<8.67E+00	0.00E+00	8.67E+00
		Nb-95	<6.60E+00	0.00E+00	6.60E+00
		I-131	<8.32E+00	0.00E+00	8.32E+00
		Cs-134	<6.04E+00	0.00E+00	6.04E+00
		Cs-137	<5.38E+00	0.00E+00	5.38E+00
		BaLa-140	<9.23E+00	0.00E+00	9.23E+00
		Total-Gam	0.00E+00		
		H3SW	<-6.5E+01	0.00E+00	1.83E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
517231	2/24/2020 - 2/24/2020	Mn-54	<5.62E+00	0.00E+00	5.62E+00
		Co-58	<4.73E+00	0.00E+00	4.73E+00
		Fe-59	<9.46E+00	0.00E+00	9.46E+00
		Co-60	<5.97E+00	0.00E+00	5.97E+00
		Zn-65	<1.35E+01	0.00E+00	1.35E+01
		Zr-95	<9.03E+00	0.00E+00	9.03E+00
		Nb-95	<5.67E+00	0.00E+00	5.67E+00
		I-131	<7.04E+00	0.00E+00	7.04E+00
		Cs-134	<6.09E+00	0.00E+00	6.09E+00
		Cs-137	<7.85E+00	0.00E+00	7.85E+00
		BaLa-140	<6.81E+00	0.00E+00	6.81E+00
		Total-Gam	0.00E+00		
H3SW	<1.42E+02	0.00E+00	1.94E+02		

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
515563	3/25/2020 - 3/25/2020	Mn-54	<5.09E+00	0.00E+00	5.09E+00
		Co-58	<3.91E+00	0.00E+00	3.91E+00
		Fe-59	<1.14E+01	0.00E+00	1.14E+01
		Co-60	<5.83E+00	0.00E+00	5.83E+00
		Zn-65	<1.22E+01	0.00E+00	1.22E+01
		Zr-95	<9.45E+00	0.00E+00	9.45E+00
		Nb-95	<5.43E+00	0.00E+00	5.43E+00
		I-131	<7.70E+00	0.00E+00	7.70E+00
		Cs-134	<6.79E+00	0.00E+00	6.79E+00
		Cs-137	<6.07E+00	0.00E+00	6.07E+00
		BaLa-140	<6.97E+00	0.00E+00	6.97E+00
		Total-Gam	0.00E+00		
H3SW	<9.27E+01	0.00E+00	1.85E+02		

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
519645	4/21/2020 - 4/21/2020	Mn-54	<6.37E+00	0.00E+00	6.37E+00
		Co-58	<5.62E+00	0.00E+00	5.62E+00
		Fe-59	<8.07E+00	0.00E+00	8.07E+00
		Co-60	<4.58E+00	0.00E+00	4.58E+00
		Zn-65	<1.41E+01	0.00E+00	1.41E+01
		Zr-95	<9.78E+00	0.00E+00	9.78E+00
		Nb-95	<5.47E+00	0.00E+00	5.47E+00
		I-131	<4.84E+00	0.00E+00	4.84E+00
		Cs-134	<5.05E+00	0.00E+00	5.05E+00
		Cs-137	<4.90E+00	0.00E+00	4.90E+00
		BaLa-140	<7.99E+00	0.00E+00	7.99E+00
		Total-Gam	0.00E+00		
H3SW	<0.00E+00	0.00E+00	1.93E+02		

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
521530	5/20/2020 - 5/20/2020	Mn-54	<4.94E+00	0.00E+00	4.94E+00
		Co-58	<3.29E+00	0.00E+00	3.29E+00
		Fe-59	<1.17E+01	0.00E+00	1.17E+01
		Co-60	<6.99E+00	0.00E+00	6.99E+00
		Zn-65	<1.05E+01	0.00E+00	1.05E+01
		Zr-95	<8.46E+00	0.00E+00	8.46E+00
Nb-95	<6.41E+00	0.00E+00	6.41E+00		



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
521530	5/20/2020 - 5/20/2020	I-131	<8.47E+00	0.00E+00	8.47E+00
		Cs-134	<7.27E+00	0.00E+00	7.27E+00
		Cs-137	<6.31E+00	0.00E+00	6.31E+00
		BaLa-140	<8.32E+00	0.00E+00	8.32E+00
		Total-Gam	0.00E+00		
		H3SW	<6.95E+01	0.00E+00	1.77E+02
523415	6/24/2020 - 6/24/2020	Mn-54	<5.50E+00	0.00E+00	5.50E+00
		Co-58	<6.41E+00	0.00E+00	6.41E+00
		Fe-59	<1.21E+01	0.00E+00	1.21E+01
		Co-60	<6.90E+00	0.00E+00	6.90E+00
		Zn-65	<1.28E+01	0.00E+00	1.28E+01
		Zr-95	<1.02E+01	0.00E+00	1.02E+01
		Nb-95	<8.19E+00	0.00E+00	8.19E+00
		I-131	<8.69E+00	0.00E+00	8.69E+00
		Cs-134	<7.16E+00	0.00E+00	7.16E+00
		Cs-137	<6.20E+00	0.00E+00	6.20E+00
		BaLa-140	<7.36E+00	0.00E+00	7.36E+00
		Total-Gam	0.00E+00		
		H3SW	<2.51E+01	0.00E+00	1.82E+02
		524942	7/22/2020 - 7/22/2020	Mn-54	<6.95E+00
Co-58	<5.14E+00			0.00E+00	5.14E+00
Fe-59	<9.53E+00			0.00E+00	9.53E+00
Co-60	<5.77E+00			0.00E+00	5.77E+00
Zn-65	<2.38E+01			0.00E+00	2.38E+01
Zr-95	<1.07E+01			0.00E+00	1.07E+01
Nb-95	<6.97E+00			0.00E+00	6.97E+00
I-131	<7.91E+00			0.00E+00	7.91E+00
Cs-134	<5.88E+00			0.00E+00	5.88E+00
Cs-137	<5.31E+00			0.00E+00	5.31E+00
BaLa-140	<8.40E+00			0.00E+00	8.40E+00
Total-Gam	0.00E+00				
H3SW	<7.47E+01			0.00E+00	1.84E+02
526334	8/26/2020 - 8/26/2020			Mn-54	<6.49E+00
		Co-58	<6.13E+00	0.00E+00	6.13E+00
		Fe-59	<1.32E+01	0.00E+00	1.32E+01
		Co-60	<4.51E+00	0.00E+00	4.51E+00
		Zn-65	<1.35E+01	0.00E+00	1.35E+01
		Zr-95	<9.65E+00	0.00E+00	9.65E+00
		Nb-95	<6.92E+00	0.00E+00	6.92E+00
		I-131	<7.85E+00	0.00E+00	7.85E+00
		Cs-134	<7.08E+00	0.00E+00	7.08E+00
		Cs-137	<6.93E+00	0.00E+00	6.93E+00
		BaLa-140	<9.66E+00	0.00E+00	9.66E+00
		Total-Gam	0.00E+00		
		H3SW	<2.27E+01	0.00E+00	1.82E+02
		527891	9/23/2020 - 9/23/2020	Mn-54	<6.62E+00
Co-58	<4.66E+00			0.00E+00	4.66E+00
Fe-59	<1.44E+01			0.00E+00	1.44E+01
Co-60	<6.03E+00			0.00E+00	6.03E+00
Zn-65	<1.32E+01			0.00E+00	1.32E+01
Zr-95	<1.15E+01			0.00E+00	1.15E+01
Nb-95	<6.32E+00			0.00E+00	6.32E+00
I-131	<8.82E+00			0.00E+00	8.82E+00
Cs-134	<7.40E+00			0.00E+00	7.40E+00
Cs-137	<5.11E+00			0.00E+00	5.11E+00
BaLa-140	<9.18E+00			0.00E+00	9.18E+00
Total-Gam	0.00E+00				





**BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
527891	9/23/2020 - 9/23/2020	H3SW	<1.44E+01	0.00E+00	1.94E+02
530222	10/21/2020 - 10/21/2020	Mn-54	<6.42E+00	0.00E+00	6.42E+00
		Co-58	<5.79E+00	0.00E+00	5.79E+00
		Fe-59	<1.17E+01	0.00E+00	1.17E+01
		Co-60	<7.10E+00	0.00E+00	7.10E+00
		Zn-65	<1.20E+01	0.00E+00	1.20E+01
		Zr-95	<1.23E+01	0.00E+00	1.23E+01
		Nb-95	<6.58E+00	0.00E+00	6.58E+00
		I-131	<6.64E+00	0.00E+00	6.64E+00
		Cs-134	<7.75E+00	0.00E+00	7.75E+00
		Cs-137	<3.85E+00	0.00E+00	3.85E+00
		BaLa-140	<7.17E+00	0.00E+00	7.17E+00
		Total-Gam	0.00E+00		
		H3SW	<-7.3E+01	0.00E+00	1.85E+02
532320	11/25/2020 - 11/25/2020	Mn-54	<5.47E+00	0.00E+00	5.47E+00
		Co-58	<6.28E+00	0.00E+00	6.28E+00
		Fe-59	<1.14E+01	0.00E+00	1.14E+01
		Co-60	<6.72E+00	0.00E+00	6.72E+00
		Zn-65	<1.13E+01	0.00E+00	1.13E+01
		Zr-95	<8.65E+00	0.00E+00	8.65E+00
		Nb-95	<6.21E+00	0.00E+00	6.21E+00
		I-131	<8.27E+00	0.00E+00	8.27E+00
		Cs-134	<6.35E+00	0.00E+00	6.35E+00
		Cs-137	<6.05E+00	0.00E+00	6.05E+00
		BaLa-140	<8.76E+00	0.00E+00	8.76E+00
		Total-Gam	0.00E+00		
		H3SW	<1.83E+01	0.00E+00	1.88E+02
534045	12/22/2020 - 12/22/2020	Mn-54	<6.51E+00	0.00E+00	6.51E+00
		Co-58	<4.90E+00	0.00E+00	4.90E+00
		Fe-59	<1.25E+01	0.00E+00	1.25E+01
		Co-60	<6.30E+00	0.00E+00	6.30E+00
		Zn-65	<9.78E+00	0.00E+00	9.78E+00
		Zr-95	<1.05E+01	0.00E+00	1.05E+01
		Nb-95	<6.56E+00	0.00E+00	6.56E+00
		I-131	<8.61E+00	0.00E+00	8.61E+00
		Cs-134	<4.36E+00	0.00E+00	4.36E+00
		Cs-137	<6.63E+00	0.00E+00	6.63E+00
		BaLa-140	<1.04E+01	0.00E+00	1.04E+01
		Total-Gam	0.00E+00		
		H3SW	<3.07E+01	0.00E+00	1.76E+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
518353	1/6/2020 - 4/9/2020	mR/Std Qtr	10.50
524090	4/9/2020 - 7/13/2020	mR/Std Qtr	9.69
529232	7/13/2020 - 10/14/2020	mR/Std Qtr	8.78
535397	10/14/2020 - 1/8/2021	mR/Std Qtr	5.41



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 2 [ INDICATOR - ESE @ 0.9 miles ]

TLD RING TLD\_INNER

Sample ID:	518363	Sample Dates:	1/6/2020 - 4/9/2020	Nuclide	Activity
				mR/Std Qtr	9.90
Sample ID:	524100	Sample Dates:	4/9/2020 - 7/13/2020	Nuclide	Activity
				mR/Std Qtr	9.38
Sample ID:	529242	Sample Dates:	7/13/2020 - 10/14/2020	Nuclide	Activity
				mR/Std Qtr	8.14
Sample ID:	535407	Sample Dates:	10/14/2020 - 1/8/2021	Nuclide	Activity
				mR/Std Qtr	7.70

Sample Point 3 [ INDICATOR - SE @ 0.9 miles ]

TLD RING TLD\_INNER

Sample ID:	518374	Sample Dates:	1/6/2020 - 4/9/2020	Nuclide	Activity
				mR/Std Qtr	10.46
Sample ID:	524111	Sample Dates:	4/9/2020 - 7/3/2020	Nuclide	Activity
				mR/Std Qtr	9.41
Sample ID:	529253	Sample Dates:	7/3/2020 - 10/7/2020	Nuclide	Activity
				mR/Std Qtr	9.18
Sample ID:	535418	Sample Dates:	10/7/2020 - 1/6/2021	Nuclide	Activity
				mR/Std Qtr	8.27

Sample Point 4 [ INDICATOR - SSE @ 1.1 miles ]

TLD RING TLD\_INNER

Sample ID:	518385	Sample Dates:	1/6/2020 - 4/9/2020	Nuclide	Activity
				mR/Std Qtr	10.52
Sample ID:	524122	Sample Dates:	4/9/2020 - 7/3/2020	Nuclide	Activity
				mR/Std Qtr	8.82
Sample ID:	529264	Sample Dates:	7/3/2020 - 10/7/2020	Nuclide	Activity
				mR/Std Qtr	9.04
Sample ID:	535429	Sample Dates:	10/7/2020 - 1/6/2021	Nuclide	Activity
				mR/Std Qtr	7.68

Sample Point 5 [ INDICATOR - S @ 1.1 miles ]

TLD RING TLD\_INNER

Sample ID:	518387	Sample Dates:	1/6/2020 - 4/9/2020	Nuclide	Activity
				mR/Std Qtr	9.72
Sample ID:	524124	Sample Dates:	4/9/2020 - 7/3/2020	Nuclide	Activity
				mR/Std Qtr	9.03
Sample ID:	529266	Sample Dates:	7/3/2020 - 10/7/2020	Nuclide	Activity
				mR/Std Qtr	7.86
Sample ID:	535431	Sample Dates:	10/7/2020 - 1/6/2021	Nuclide	Activity
				mR/Std Qtr	6.76

Sample Point 6 [ INDICATOR - SSW @ 1.6 miles ]

TLD RING TLD\_INNER

Sample ID:	518388	Sample Dates:	1/6/2020 - 4/9/2020	Nuclide	Activity
				mR/Std Qtr	9.99
Sample ID:	524125	Sample Dates:	4/9/2020 - 7/3/2020	Nuclide	Activity
				mR/Std Qtr	8.42
Sample ID:	529267	Sample Dates:	7/3/2020 - 10/7/2020	Nuclide	Activity
				mR/Std Qtr	8.92

# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 6 [ INDICATOR - SSW @ 1.6 miles ]

TLD RING TLD\_INNER

Sample ID:	535432	Sample Dates:	10/7/2020 - 1/6/2021	Nuclide	Activity
				mR/Std Qtr	7.51

Sample Point 7 [ INDICATOR - SW @ 1.1 miles ]

TLD RING TLD\_INNER

Sample ID:	518389	Sample Dates:	1/6/2020 - 4/9/2020	Nuclide	Activity
				mR/Std Qtr	9.37

Sample ID:	524126	Sample Dates:	4/9/2020 - 7/3/2020	Nuclide	Activity
				mR/Std Qtr	8.62

Sample ID:	529268	Sample Dates:	7/3/2020 - 10/7/2020	Nuclide	Activity
				mR/Std Qtr	9.45

Sample ID:	535433	Sample Dates:	10/7/2020 - 1/6/2021	Nuclide	Activity
				mR/Std Qtr	7.77

Sample Point 8 [ INDICATOR - W @ 1.2 miles ]

TLD RING TLD\_INNER

Sample ID:	518395	Sample Dates:	1/6/2020 - 4/8/2020	Nuclide	Activity
				mR/Std Qtr	8.58

Sample ID:	524132	Sample Dates:	4/8/2020 - 7/6/2020	Nuclide	Activity
				mR/Std Qtr	9.15

Sample ID:	529274	Sample Dates:	7/6/2020 - 10/6/2020	Nuclide	Activity
				mR/Std Qtr	7.32

Sample ID:	535439	Sample Dates:	10/6/2020 - 1/6/2021	Nuclide	Activity
				mR/Std Qtr	7.56

Sample Point 9 [ INDICATOR - WNW @ 1 miles ]

TLD RING TLD\_INNER

Sample ID:	518401	Sample Dates:	1/6/2020 - 4/8/2020	Nuclide	Activity
				mR/Std Qtr	9.91

Sample ID:	524138	Sample Dates:	4/8/2020 - 7/6/2020	Nuclide	Activity
				mR/Std Qtr	10.07

Sample ID:	529280	Sample Dates:	7/6/2020 - 10/6/2020	Nuclide	Activity
				mR/Std Qtr	8.37

Sample ID:	535445	Sample Dates:	10/6/2020 - 1/6/2021	Nuclide	Activity
				mR/Std Qtr	8.25

Sample Point 10 [ INDICATOR - NW @ 0.8 miles ]

TLD RING TLD\_INNER

Sample ID:	518354	Sample Dates:	1/6/2020 - 4/8/2020	Nuclide	Activity
				mR/Std Qtr	8.28

Sample ID:	524091	Sample Dates:	4/8/2020 - 7/6/2020	Nuclide	Activity
				mR/Std Qtr	8.62

Sample ID:	529233	Sample Dates:	7/6/2020 - 10/7/2020	Nuclide	Activity
				mR/Std Qtr	6.60

Sample ID:	535398	Sample Dates:	10/7/2020 - 1/6/2021	Nuclide	Activity
				mR/Std Qtr	6.31

Sample Point 11 [ INDICATOR - NNW @ 0.9 miles ]

TLD RING TLD\_INNER

Sample ID:	518355	Sample Dates:	1/6/2020 - 4/8/2020	Nuclide	Activity
				mR/Std Qtr	10.55

# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 11 [ INDICATOR - NNW @ 0.9 miles ]

TLD RING TLD\_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
524092	4/8/2020 - 7/6/2020	mR/Std Qtr	8.88
529234	7/6/2020 - 10/7/2020	mR/Std Qtr	8.47
535399	10/7/2020 - 1/6/2021	mR/Std Qtr	6.47

Sample Point 12 [ INDICATOR - N @ 1.1 miles ]

TLD RING TLD\_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
518356	1/6/2020 - 4/8/2020	mR/Std Qtr	9.76
524093	4/8/2020 - 7/6/2020	mR/Std Qtr	10.09
529235	7/6/2020 - 10/7/2020	mR/Std Qtr	8.82
535400	10/7/2020 - 1/6/2021	mR/Std Qtr	7.46

Sample Point 13 [ INDICATOR - NNE @ 1.2 miles ]

TLD RING TLD\_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
518357	1/6/2020 - 4/8/2020	mR/Std Qtr	10.29
524094	4/8/2020 - 7/6/2020	mR/Std Qtr	8.31
529236	7/6/2020 - 10/7/2020	mR/Std Qtr	7.61
535401	10/7/2020 - 1/6/2021	mR/Std Qtr	7.23

Sample Point 14 [ INDICATOR - NE @ 0.5 miles ]

TLD RING TLD\_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
518358	1/3/2020 - 4/8/2020	mR/Std Qtr	11.99
524095	4/8/2020 - 7/3/2020	mR/Std Qtr	10.14
529237	7/3/2020 - 10/6/2020	mR/Std Qtr	8.53
535402	10/6/2020 - 1/5/2021	mR/Std Qtr	8.02

Sample Point 15 [ INDICATOR - ENE @ 0.9 miles ]

TLD RING TLD\_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
518359	1/3/2020 - 4/8/2020	mR/Std Qtr	11.54
524096	4/8/2020 - 7/3/2020	mR/Std Qtr	10.87
529238	7/3/2020 - 10/6/2020	mR/Std Qtr	8.00
535403	10/6/2020 - 1/5/2021	mR/Std Qtr	9.87

# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 16 [ INDICATOR - WSW @ 1 miles ]

TLD RING TLD\_INNER

Sample ID:	518360	Sample Dates:	1/6/2020 - 4/8/2020	Nuclide	Activity
				mR/Std Qtr	10.45
Sample ID:	524097	Sample Dates:	4/8/2020 - 7/6/2020	Nuclide	Activity
				mR/Std Qtr	9.23
Sample ID:	529239	Sample Dates:	7/6/2020 - 10/6/2020	Nuclide	Activity
				mR/Std Qtr	9.02
Sample ID:	535404	Sample Dates:	10/6/2020 - 1/6/2021	Nuclide	Activity
				mR/Std Qtr	7.05

Sample Point 17 [ INDICATOR - ESE @ 1.4 miles ]

TLD RING TLD\_INNER

Sample ID:	518361	Sample Dates:	1/6/2020 - 4/10/2020	Nuclide	Activity
				mR/Std Qtr	12.32
Sample ID:	524098	Sample Dates:	4/10/2020 - 7/3/2020	Nuclide	Activity
				mR/Std Qtr	10.30
Sample ID:	529240	Sample Dates:	7/3/2020 - 10/7/2020	Nuclide	Activity
				mR/Std Qtr	9.91
Sample ID:	535405	Sample Dates:	10/7/2020 - 1/6/2021	Nuclide	Activity
				mR/Std Qtr	16.74

Sample Point 18 [ INDICATOR - SE @ 1.7 miles ]

TLD RING TLD\_INNER

Sample ID:	518362	Sample Dates:	1/6/2020 - 4/10/2020	Nuclide	Activity
				mR/Std Qtr	10.50
Sample ID:	524099	Sample Dates:	4/10/2020 - 7/3/2020	Nuclide	Activity
				mR/Std Qtr	9.44
Sample ID:	529241	Sample Dates:	7/3/2020 - 10/7/2020	Nuclide	Activity
				mR/Std Qtr	8.82
Sample ID:	535406	Sample Dates:	10/7/2020 - 1/6/2021	Nuclide	Activity
				mR/Std Qtr	6.84

Sample Point 20 [ INDICATOR - S @ 2.1 miles ]

TLD RING TLD\_INNER

Sample ID:	518364	Sample Dates:	1/6/2020 - 4/10/2020	Nuclide	Activity
				mR/Std Qtr	9.98
Sample ID:	524101	Sample Dates:	4/10/2020 - 7/3/2020	Nuclide	Activity
				mR/Std Qtr	8.85
Sample ID:	529243	Sample Dates:	7/3/2020 - 10/12/2020	Nuclide	Activity
				mR/Std Qtr	8.91
Sample ID:	535408	Sample Dates:	10/12/2020 - 1/6/2021	Nuclide	Activity
				mR/Std Qtr	7.50

Sample Point 21 [ INDICATOR - SSW @ 2.9 miles ]

TLD RING TLD\_INNER

Sample ID:	518365	Sample Dates:	1/6/2020 - 4/10/2020	Nuclide	Activity
				mR/Std Qtr	12.40
Sample ID:	524102	Sample Dates:	4/10/2020 - 7/3/2020	Nuclide	Activity
				mR/Std Qtr	12.32
Sample ID:	529244	Sample Dates:	7/3/2020 - 10/12/2020	Nuclide	Activity
				mR/Std Qtr	11.77

# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 21 [ INDICATOR - SSW @ 2.9 miles ]

TLD RING TLD\_INNER

Sample ID:	535409	Sample Dates:	10/12/2020 - 1/6/2021	Nuclide	Activity
				mR/Std Qtr	9.55

Sample Point 22 [ INDICATOR - SW @ 5.3 miles ]

TLD RING TLD\_OUTER

Sample ID:	518366	Sample Dates:	1/8/2020 - 4/9/2020	Nuclide	Activity
				mR/Std Qtr	10.23

Sample ID:	524103	Sample Dates:	4/9/2020 - 7/10/2020	Nuclide	Activity
				mR/Std Qtr	11.19

Sample ID:	529245	Sample Dates:	7/10/2020 - 10/13/2020	Nuclide	Activity
				mR/Std Qtr	9.15

Sample ID:	535410	Sample Dates:	10/13/2020 - 1/7/2021	Nuclide	Activity
				mR/Std Qtr	8.99

Sample Point 23 [ INDICATOR - WSW @ 4.6 miles ]

TLD RING TLD\_OUTER

Sample ID:	518367	Sample Dates:	1/8/2020 - 4/9/2020	Nuclide	Activity
				mR/Std Qtr	7.42

Sample ID:	524104	Sample Dates:	4/9/2020 - 7/10/2020	Nuclide	Activity
				mR/Std Qtr	6.07

Sample ID:	529246	Sample Dates:	7/10/2020 - 10/13/2020	Nuclide	Activity
				mR/Std Qtr	6.18

Sample ID:	535411	Sample Dates:	10/13/2020 - 1/7/2021	Nuclide	Activity
				mR/Std Qtr	5.27

Sample Point 24 [ INDICATOR - W @ 3 miles ]

TLD RING TLD\_INNER

Sample ID:	518368	Sample Dates:	1/3/2020 - 4/10/2020	Nuclide	Activity
				mR/Std Qtr	12.04

Sample ID:	524105	Sample Dates:	4/10/2020 - 7/8/2020	Nuclide	Activity
				mR/Std Qtr	13.05

Sample ID:	529247	Sample Dates:	7/8/2020 - 10/13/2020	Nuclide	Activity
				mR/Std Qtr	11.25

Sample ID:	535412	Sample Dates:	10/13/2020 - 1/7/2021	Nuclide	Activity
				mR/Std Qtr	11.2

Sample Point 25 [ INDICATOR - WNW @ 8.6 miles ]

TLD RING TLD\_OUTER

Sample ID:	518369	Sample Dates:	1/3/2020 - 4/10/2020	Nuclide	Activity
				mR/Std Qtr	10.19

Sample ID:	524106	Sample Dates:	4/10/2020 - 7/8/2020	Nuclide	Activity
				mR/Std Qtr	8.76

Sample ID:	529248	Sample Dates:	7/8/2020 - 10/13/2020	Nuclide	Activity
				mR/Std Qtr	8.33

Sample ID:	535413	Sample Dates:	10/13/2020 - 1/7/2021	Nuclide	Activity
				mR/Std Qtr	7.71

Sample Point 26 [ INDICATOR - NW @ 5.9 miles ]

TLD RING TLD\_OUTER

Sample ID:	518370	Sample Dates:	1/6/2020 - 4/7/2020	Nuclide	Activity
				mR/Std Qtr	12.49

# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 26 [ INDICATOR - NW @ 5.9 miles ]

TLD RING TLD\_OUTER

Sample ID:	524107	Sample Dates:	4/7/2020 - 7/7/2020	Nuclide	Activity
				mR/Std Qtr	9.72

Sample ID:	529249	Sample Dates:	7/7/2020 - 10/12/2020	Nuclide	Activity
				mR/Std Qtr	11.50

Sample ID:	535414	Sample Dates:	10/12/2020 - 1/7/2021	Nuclide	Activity
				mR/Std Qtr	9.84

Sample Point 27 [ INDICATOR - NNW @ 5.1 miles ]

TLD RING TLD\_OUTER

Sample ID:	518371	Sample Dates:	1/6/2020 - 4/8/2020	Nuclide	Activity
				mR/Std Qtr	9.71

Sample ID:	524108	Sample Dates:	4/8/2020 - 7/7/2020	Nuclide	Activity
				mR/Std Qtr	7.98

Sample ID:	529250	Sample Dates:	7/7/2020 - 10/12/2020	Nuclide	Activity
				mR/Std Qtr	7.50

Sample ID:	535415	Sample Dates:	10/12/2020 - 1/7/2021	Nuclide	Activity
				mR/Std Qtr	6.44

Sample Point 28 [ INDICATOR - NW @ 4.2 miles ]

TLD RING TLD\_OUTER

Sample ID:	518372	Sample Dates:	1/6/2020 - 4/8/2020	Nuclide	Activity
				mR/Std Qtr	9.84

Sample ID:	524109	Sample Dates:	4/8/2020 - 7/7/2020	Nuclide	Activity
				mR/Std Qtr	8.79

Sample ID:	529251	Sample Dates:	7/7/2020 - 10/12/2020	Nuclide	Activity
				mR/Std Qtr	8.60

Sample ID:	535416	Sample Dates:	10/12/2020 - 1/7/2021	Nuclide	Activity
				mR/Std Qtr	6.91

Sample Point 29 [ INDICATOR - SSW @ 2.6 miles ]

TLD RING TLD\_INNER

Sample ID:	518373	Sample Dates:	1/6/2020 - 4/10/2020	Nuclide	Activity
				mR/Std Qtr	8.48

Sample ID:	524110	Sample Dates:	4/10/2020 - 7/3/2020	Nuclide	Activity
				mR/Std Qtr	8.39

Sample ID:	529252	Sample Dates:	7/3/2020 - 10/12/2020	Nuclide	Activity
				mR/Std Qtr	7.52

Sample ID:	535417	Sample Dates:	10/12/2020 - 1/6/2021	Nuclide	Activity
				mR/Std Qtr	6.31

Sample Point 30 [ INDICATOR - NE @ 2 miles ]

TLD RING TLD\_INNER

Sample ID:	518375	Sample Dates:	1/3/2020 - 4/20/2020	Nuclide	Activity
				mR/Std Qtr	10.03

Sample ID:	524112	Sample Dates:	4/20/2020 - 7/9/2020	Nuclide	Activity
				mR/Std Qtr	8.60

Sample ID:	529254	Sample Dates:	7/9/2020 - 10/14/2020	Nuclide	Activity
				mR/Std Qtr	8.22

# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 31 [ INDICATOR - ENE @ 2.5 miles ]

TLD RING TLD\_INNER

Sample ID:	518376	Sample Dates:	1/3/2020 - 4/20/2020	Nuclide	Activity
				mR/Std Qtr	11.27

Sample ID:	524113	Sample Dates:	4/20/2020 - 7/9/2020	Nuclide	Activity
				mR/Std Qtr	9.68

Sample ID:	529255	Sample Dates:	7/9/2020 - 10/14/2020	Nuclide	Activity
				mR/Std Qtr	10.70

Sample Point 32 [ INDICATOR - ENE @ 5.8 miles ]

TLD RING TLD\_OUTER

Sample ID:	518377	Sample Dates:	1/2/2020 - 4/8/2020	Nuclide	Activity
				mR/Std Qtr	11.16

Sample ID:	524114	Sample Dates:	4/8/2020 - 7/8/2020	Nuclide	Activity
				mR/Std Qtr	11.44

Sample ID:	529256	Sample Dates:	7/8/2020 - 10/6/2020	Nuclide	Activity
				mR/Std Qtr	9.58

Sample ID:	535421	Sample Dates:	10/6/2020 - 1/5/2021	Nuclide	Activity
				mR/Std Qtr	8.52

Sample Point 33 [ INDICATOR - E @ 4.1 miles ]

TLD RING TLD\_OUTER

Sample ID:	518378	Sample Dates:	1/2/2020 - 4/8/2020	Nuclide	Activity
				mR/Std Qtr	9.05

Sample ID:	524115	Sample Dates:	4/8/2020 - 7/8/2020	Nuclide	Activity
				mR/Std Qtr	7.98

Sample ID:	529257	Sample Dates:	7/8/2020 - 10/6/2020	Nuclide	Activity
				mR/Std Qtr	6.75

Sample ID:	535422	Sample Dates:	10/6/2020 - 1/5/2021	Nuclide	Activity
				mR/Std Qtr	6.92

Sample Point 34 [ INDICATOR - E @ 5.4 miles ]

TLD RING TLD\_OUTER

Sample ID:	518379	Sample Dates:	1/2/2020 - 4/8/2020	Nuclide	Activity
				mR/Std Qtr	9.93

Sample ID:	524116	Sample Dates:	4/8/2020 - 7/8/2020	Nuclide	Activity
				mR/Std Qtr	8.78

Sample ID:	529258	Sample Dates:	7/8/2020 - 10/6/2020	Nuclide	Activity
				mR/Std Qtr	7.45

Sample ID:	535423	Sample Dates:	10/6/2020 - 1/5/2021	Nuclide	Activity
				mR/Std Qtr	7.09

Sample Point 35 [ INDICATOR - SSE @ 7.3 miles ]

TLD RING TLD\_OUTER

Sample ID:	518380	Sample Dates:	1/8/2020 - 4/7/2020	Nuclide	Activity
				mR/Std Qtr	8.37

Sample ID:	524117	Sample Dates:	4/7/2020 - 7/9/2020	Nuclide	Activity
				mR/Std Qtr	8.74

Sample ID:	529259	Sample Dates:	7/9/2020 - 10/7/2020	Nuclide	Activity
				mR/Std Qtr	6.51

Sample ID:	535424	Sample Dates:	10/7/2020 - 1/6/2021	Nuclide	Activity
				mR/Std Qtr	6.56



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 36 [ INDICATOR - NE @ 8.9 miles ]

TLD RING TLD\_OUTER

Sample ID:	518381	Sample Dates:	1/2/2020 - 4/8/2020	Nuclide	Activity
				mR/Std Qtr	10.23
Sample ID:	524118	Sample Dates:	4/8/2020 - 7/8/2020	Nuclide	Activity
				mR/Std Qtr	9.54
Sample ID:	529260	Sample Dates:	7/8/2020 - 10/6/2020	Nuclide	Activity
				mR/Std Qtr	8.32
Sample ID:	535425	Sample Dates:	10/6/2020 - 1/5/2021	Nuclide	Activity
				mR/Std Qtr	8.78

Sample Point 37 [ INDICATOR - NW @ 5.5 miles ]

TLD RING TLD\_OUTER

Sample ID:	518382	Sample Dates:	1/6/2020 - 4/8/2020	Nuclide	Activity
				mR/Std Qtr	8.46
Sample ID:	524119	Sample Dates:	4/8/2020 - 7/7/2020	Nuclide	Activity
				mR/Std Qtr	8.23
Sample ID:	529261	Sample Dates:	7/7/2020 - 10/12/2020	Nuclide	Activity
				mR/Std Qtr	7.13
Sample ID:	535426	Sample Dates:	10/12/2020 - 1/7/2021	Nuclide	Activity
				mR/Std Qtr	6.24

Sample Point 38 [ INDICATOR - W @ 11 miles ]

TLD RING TLD\_OUTER

Sample ID:	518383	Sample Dates:	1/3/2020 - 4/10/2020	Nuclide	Activity
				mR/Std Qtr	9.15
Sample ID:	524120	Sample Dates:	4/10/2020 - 7/8/2020	Nuclide	Activity
				mR/Std Qtr	8.82
Sample ID:	529262	Sample Dates:	7/8/2020 - 10/13/2020	Nuclide	Activity
				mR/Std Qtr	8.17
Sample ID:	535427	Sample Dates:	10/13/2020 - 1/7/2021	Nuclide	Activity
				mR/Std Qtr	6.77

Sample Point 39 [ INDICATOR - SW @ 5.3 miles ]

TLD RING TLD\_OUTER

Sample ID:	518384	Sample Dates:	1/8/2020 - 4/9/2020	Nuclide	Activity
				mR/Std Qtr	13.92
Sample ID:	524121	Sample Dates:	4/9/2020 - 7/10/2020	Nuclide	Activity
				mR/Std Qtr	13.54
Sample ID:	529263	Sample Dates:	7/10/2020 - 10/13/2020	Nuclide	Activity
				mR/Std Qtr	14.08
Sample ID:	535428	Sample Dates:	10/13/2020 - 1/7/2021	Nuclide	Activity
				mR/Std Qtr	12.57

Sample Point 40 [ INDICATOR - WSW @ 6.9 miles ]

TLD RING TLD\_OUTER

Sample ID:	518386	Sample Dates:	1/8/2020 - 4/9/2020	Nuclide	Activity
				mR/Std Qtr	13.42
Sample ID:	524123	Sample Dates:	4/9/2020 - 7/10/2020	Nuclide	Activity
				mR/Std Qtr	12.19
Sample ID:	529265	Sample Dates:	7/10/2020 - 10/13/2020	Nuclide	Activity
				mR/Std Qtr	12.20

# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 40 [ INDICATOR - WSW @ 6.9 miles ]

TLD RING TLD\_OUTER

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Sample ID:	535430	Sample Dates:	10/13/2020 - 1/7/2021	Nuclide	Activity
				mR/Std Qtr	10.47

Sample Point 75 [ INDICATOR - S @ 4.7 miles ]

TLD RING TLD\_OUTER

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Sample ID:	518390	Sample Dates:	1/8/2020 - 4/9/2020	Nuclide	Activity
				mR/Std Qtr	11.36

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Sample ID:	524127	Sample Dates:	4/9/2020 - 7/10/2020	Nuclide	Activity
				mR/Std Qtr	9.21

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Sample ID:	529269	Sample Dates:	7/10/2020 - 10/14/2020	Nuclide	Activity
				mR/Std Qtr	9.62

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Sample ID:	535434	Sample Dates:	10/14/2020 - 1/7/2021	Nuclide	Activity
				mR/Std Qtr	8.35

Sample Point 76 [ INDICATOR - SSW @ 4.8 miles ]

TLD RING TLD\_OUTER

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Sample ID:	518391	Sample Dates:	1/8/2020 - 4/9/2020	Nuclide	Activity
				mR/Std Qtr	12.10

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Sample ID:	524128	Sample Dates:	4/9/2020 - 7/10/2020	Nuclide	Activity
				mR/Std Qtr	10.67

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Sample ID:	529270	Sample Dates:	7/10/2020 - 10/14/2020	Nuclide	Activity
				mR/Std Qtr	11.47

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Sample ID:	535435	Sample Dates:	10/14/2020 - 1/7/2021	Nuclide	Activity
				mR/Std Qtr	7.62

Sample Point 77 [ INDICATOR - S @ 5.4 miles ]

TLD RING TLD\_OUTER

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Sample ID:	518392	Sample Dates:	1/8/2020 - 4/7/2020	Nuclide	Activity
				mR/Std Qtr	8.66

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Sample ID:	524129	Sample Dates:	4/7/2020 - 7/9/2020	Nuclide	Activity
				mR/Std Qtr	6.65

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Sample ID:	529271	Sample Dates:	7/9/2020 - 10/7/2020	Nuclide	Activity
				mR/Std Qtr	7.48

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Sample ID:	535436	Sample Dates:	10/7/2020 - 1/6/2021	Nuclide	Activity
				mR/Std Qtr	6.10

Sample Point 78 [ INDICATOR - NNE @ 9.9 miles ]

TLD RING TLD\_OUTER

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Sample ID:	518393	Sample Dates:	1/6/2020 - 4/8/2020	Nuclide	Activity
				mR/Std Qtr	8.50

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Sample ID:	524130	Sample Dates:	4/8/2020 - 7/7/2020	Nuclide	Activity
				mR/Std Qtr	7.74

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Sample ID:	529272	Sample Dates:	7/7/2020 - 10/12/2020	Nuclide	Activity
				mR/Std Qtr	7.28

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Sample ID:	535437	Sample Dates:	10/12/2020 - 1/7/2021	Nuclide	Activity
				mR/Std Qtr	5.15

Sample Point 79 [ INDICATOR - N @ 9.5 miles ]

TLD RING TLD\_OUTER

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Sample ID:	518394	Sample Dates:	1/6/2020 - 4/8/2020	Nuclide	Activity
				mR/Std Qtr	10.19

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# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 79 [ INDICATOR - N @ 9.5 miles ]

TLD RING TLD\_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
524131	4/8/2020 - 7/7/2020	mR/Std Qtr	8.81
529273	7/7/2020 - 10/12/2020	mR/Std Qtr	8.64
535438	10/12/2020 - 1/7/2021	mR/Std Qtr	6.55

## Sample Point 81 [ CONTROL - WNW @ 9.9 miles ]

TLD RING TLD\_CTRL

Sample ID:	Sample Dates:	Nuclide	Activity
518396	1/3/2020 - 4/10/2020	mR/Std Qtr	12.06
524133	4/10/2020 - 7/8/2020	mR/Std Qtr	10.72
529275	7/8/2020 - 10/13/2020	mR/Std Qtr	9.30
535440	10/13/2020 - 1/7/2021	mR/Std Qtr	8.08

## Sample Point 82 [ INDICATOR - NNE @ 0.17 miles ]

TLD RING TLD\_ISFSI

Sample ID:	Sample Dates:	Nuclide	Activity
518397	1/3/2020 - 4/8/2020	mR/Std Qtr	30.83
524134	4/8/2020 - 7/3/2020	mR/Std Qtr	31.36
529276	7/3/2020 - 10/6/2020	mR/Std Qtr	27.28
535441	10/6/2020 - 1/5/2021	mR/Std Qtr	29.70

## Sample Point 83 [ INDICATOR - NE @ 0.27 miles ]

TLD RING TLD\_ISFSI

Sample ID:	Sample Dates:	Nuclide	Activity
518398	1/3/2020 - 4/8/2020	mR/Std Qtr	23.42
524135	4/8/2020 - 7/3/2020	mR/Std Qtr	22.92
529277	7/3/2020 - 10/6/2020	mR/Std Qtr	20.96
535442	10/6/2020 - 1/5/2021	mR/Std Qtr	22.48

## Sample Point 84 [ INDICATOR - NE @ 0.27 miles ]

TLD RING TLD\_ISFSI

Sample ID:	Sample Dates:	Nuclide	Activity
518399	1/3/2020 - 4/8/2020	mR/Std Qtr	19.98
524136	4/8/2020 - 7/3/2020	mR/Std Qtr	19.71
529278	7/3/2020 - 10/6/2020	mR/Std Qtr	18.58
535443	10/6/2020 - 1/5/2021	mR/Std Qtr	18.00

# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 85 [ INDICATOR - ENE @ 0.09 miles ]

TLD RING TLD\_ISFSI

Sample ID:	Sample Dates:	Nuclide	Activity
518400	1/3/2020 - 4/8/2020	mR/Std Qtr	20.96
524137	4/8/2020 - 7/3/2020	mR/Std Qtr	22.48
529279	7/3/2020 - 10/6/2020	mR/Std Qtr	21.07
535444	10/6/2020 - 1/5/2021	mR/Std Qtr	22.24

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
515219	1/2/2020 - 1/2/2020	WAXMYRTLE	Mn-54	<1.91E+01	0.00E+00	1.91E+01
			Co-58	<2.47E+01	0.00E+00	2.47E+01
			Fe-59	<3.95E+01	0.00E+00	3.95E+01
			Co-60	<2.85E+01	0.00E+00	2.85E+01
			Zn-65	<5.23E+01	0.00E+00	5.23E+01
			Zr-95	<4.41E+01	0.00E+00	4.41E+01
			Nb-95	<2.22E+01	0.00E+00	2.22E+01
			I-131	<3.73E+01	0.00E+00	3.73E+01
			Cs-134	<2.46E+01	0.00E+00	2.46E+01
			Cs-137	<2.25E+01	0.00E+00	2.25E+01
			BaLa-140	<2.44E+01	0.00E+00	2.44E+01
			Be-7	2.58E+03	4.10E+02	3.59E+02
			K-40	1.60E+03	4.23E+02	4.52E+02
516467	2/3/2020 - 2/3/2020	WAXMYRTLE	Mn-54	<1.59E+01	0.00E+00	1.59E+01
			Co-58	<2.14E+01	0.00E+00	2.14E+01
			Fe-59	<3.40E+01	0.00E+00	3.40E+01
			Co-60	<1.52E+01	0.00E+00	1.52E+01
			Zn-65	<4.21E+01	0.00E+00	4.21E+01
			Zr-95	<3.10E+01	0.00E+00	3.10E+01
			Nb-95	<1.88E+01	0.00E+00	1.88E+01
			I-131	<2.59E+01	0.00E+00	2.59E+01
			Cs-134	<2.09E+01	0.00E+00	2.09E+01
			Cs-137	<2.03E+01	0.00E+00	2.03E+01
			BaLa-140	<2.95E+01	0.00E+00	2.95E+01
			Be-7	2.36E+03	3.56E+02	2.89E+02
			K-40	1.44E+03	3.28E+02	2.77E+02
518666	3/1/2020 - 3/1/2020	WAXMYRTLE	Mn-54	<2.19E+01	0.00E+00	2.19E+01
			Co-58	<2.34E+01	0.00E+00	2.34E+01
			Fe-59	<4.70E+01	0.00E+00	4.70E+01
			Co-60	<3.04E+01	0.00E+00	3.04E+01
			Zn-65	<5.05E+01	0.00E+00	5.05E+01
			Zr-95	<4.19E+01	0.00E+00	4.19E+01
			Nb-95	<2.53E+01	0.00E+00	2.53E+01
			I-131	<3.81E+01	0.00E+00	3.81E+01
			Cs-134	<2.50E+01	0.00E+00	2.50E+01
			Cs-137	<2.37E+01	0.00E+00	2.37E+01
			BaLa-140	<2.02E+01	0.00E+00	2.02E+01
			Be-7	3.22E+03	4.53E+02	3.15E+02
			K-40	2.17E+03	4.58E+02	4.03E+02
520472	4/2/2020 - 4/2/2020	WAXMYRTLE	Mn-54	<1.72E+01	0.00E+00	1.72E+01
			Co-58	<1.41E+01	0.00E+00	1.41E+01
			Fe-59	<3.91E+01	0.00E+00	3.91E+01
			Co-60	<1.65E+01	0.00E+00	1.65E+01



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
520472	4/2/2020 - 4/2/2020	WAXMYRTLE	Zn-65	<3.72E+01	0.00E+00	3.72E+01
			Zr-95	<2.80E+01	0.00E+00	2.80E+01
			Nb-95	<1.57E+01	0.00E+00	1.57E+01
			I-131	<2.08E+01	0.00E+00	2.08E+01
			Cs-134	<1.45E+01	0.00E+00	1.45E+01
			Cs-137	<1.78E+01	0.00E+00	1.78E+01
			BaLa-140	<2.04E+01	0.00E+00	2.04E+01
			Be-7	1.57E+03	2.41E+02	1.85E+02
			K-40	2.91E+03	4.36E+02	2.57E+02
			522306	5/1/2020 - 5/1/2020	WAXMYRTLE	Mn-54
Co-58	<1.98E+01	0.00E+00				1.98E+01
Fe-59	<3.42E+01	0.00E+00				3.42E+01
Co-60	<1.63E+01	0.00E+00				1.63E+01
Zn-65	<3.74E+01	0.00E+00				3.74E+01
Zr-95	<3.22E+01	0.00E+00				3.22E+01
Nb-95	<1.90E+01	0.00E+00				1.90E+01
I-131	<2.52E+01	0.00E+00				2.52E+01
Cs-134	<1.86E+01	0.00E+00				1.86E+01
Cs-137	<1.45E+01	0.00E+00				1.45E+01
BaLa-140	<2.37E+01	0.00E+00				2.37E+01
Be-7	7.22E+02	1.76E+02				2.07E+02
K-40	3.46E+03	4.82E+02				1.97E+02
523835	6/1/2020 - 6/1/2020	WAXMYRTLE				Mn-54
			Co-58	<1.95E+01	0.00E+00	1.95E+01
			Fe-59	<4.41E+01	0.00E+00	4.41E+01
			Co-60	<1.96E+01	0.00E+00	1.96E+01
			Zn-65	<3.68E+01	0.00E+00	3.68E+01
			Zr-95	<3.50E+01	0.00E+00	3.50E+01
			Nb-95	<2.39E+01	0.00E+00	2.39E+01
			I-131	<3.55E+01	0.00E+00	3.55E+01
			Cs-134	<2.53E+01	0.00E+00	2.53E+01
			Cs-137	<2.18E+01	0.00E+00	2.18E+01
			BaLa-140	<1.77E+01	0.00E+00	1.77E+01
			Be-7	1.33E+03	2.64E+02	2.60E+02
			K-40	3.15E+03	5.21E+02	3.37E+02
			525315	7/1/2020 - 7/1/2020	WAXMYRTLE	Mn-54
Co-58	<1.72E+01	0.00E+00				1.72E+01
Fe-59	<2.07E+01	0.00E+00				2.07E+01
Co-60	<2.17E+01	0.00E+00				2.17E+01
Zn-65	<4.79E+01	0.00E+00				4.79E+01
Zr-95	<2.71E+01	0.00E+00				2.71E+01
Nb-95	<2.08E+01	0.00E+00				2.08E+01
I-131	<2.75E+01	0.00E+00				2.75E+01
Cs-134	<2.19E+01	0.00E+00				2.19E+01
Cs-137	<2.13E+01	0.00E+00				2.13E+01
BaLa-140	<3.37E+01	0.00E+00				3.37E+01
Be-7	3.01E+03	3.89E+02				2.24E+02
K-40	2.81E+03	4.48E+02				2.66E+02
526520	8/3/2020 - 8/3/2020	WAXMYRTLE				Mn-54
			Co-58	<2.70E+01	0.00E+00	2.70E+01
			Fe-59	<6.36E+01	0.00E+00	6.36E+01
			Co-60	<3.14E+01	0.00E+00	3.14E+01
			Zn-65	<6.56E+01	0.00E+00	6.56E+01
			Zr-95	<5.93E+01	0.00E+00	5.93E+01
			Nb-95	<2.93E+01	0.00E+00	2.93E+01
			I-131	<4.23E+01	0.00E+00	4.23E+01
			Cs-134	<3.31E+01	0.00E+00	3.31E+01



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
526520	8/3/2020 - 8/3/2020	WAXMYRTLE	Cs-137	<2.54E+01	0.00E+00	2.54E+01
			BaLa-140	<2.35E+01	0.00E+00	2.35E+01
			Be-7	2.20E+03	3.77E+02	3.14E+02
			K-40	3.55E+03	5.90E+02	2.91E+02
527909	9/1/2020 - 9/1/2020	WAXMYRTLE	Mn-54	<1.66E+01	0.00E+00	1.66E+01
			Co-58	<1.60E+01	0.00E+00	1.60E+01
			Fe-59	<3.90E+01	0.00E+00	3.90E+01
			Co-60	<2.33E+01	0.00E+00	2.33E+01
			Zn-65	<3.00E+01	0.00E+00	3.00E+01
			Zr-95	<3.10E+01	0.00E+00	3.10E+01
			Nb-95	<1.92E+01	0.00E+00	1.92E+01
			I-131	<3.22E+01	0.00E+00	3.22E+01
			Cs-134	<1.71E+01	0.00E+00	1.71E+01
			Cs-137	<1.87E+01	0.00E+00	1.87E+01
			BaLa-140	<3.13E+01	0.00E+00	3.13E+01
			Be-7	1.47E+03	2.53E+02	2.37E+02
			K-40	3.07E+03	4.58E+02	2.26E+02
			530284	10/1/2020 - 10/1/2020	WAXMYRTLE	Mn-54
Co-58	<1.46E+01	0.00E+00				1.46E+01
Fe-59	<3.85E+01	0.00E+00				3.85E+01
Co-60	<1.52E+01	0.00E+00				1.52E+01
Zn-65	<4.20E+01	0.00E+00				4.20E+01
Zr-95	<2.91E+01	0.00E+00				2.91E+01
Nb-95	<1.78E+01	0.00E+00				1.78E+01
I-131	<2.73E+01	0.00E+00				2.73E+01
Cs-134	<1.75E+01	0.00E+00				1.75E+01
Cs-137	<1.43E+01	0.00E+00				1.43E+01
BaLa-140	<2.34E+01	0.00E+00				2.34E+01
Be-7	2.23E+03	3.02E+02				2.06E+02
K-40	2.64E+03	4.06E+02				1.98E+02
532069	11/3/2020 - 11/3/2020	WAXMYRTLE				Mn-54
			Co-58	<1.90E+01	0.00E+00	1.90E+01
			Fe-59	<4.36E+01	0.00E+00	4.36E+01
			Co-60	<1.68E+01	0.00E+00	1.68E+01
			Zn-65	<3.98E+01	0.00E+00	3.98E+01
			Zr-95	<3.38E+01	0.00E+00	3.38E+01
			Nb-95	<2.07E+01	0.00E+00	2.07E+01
			I-131	<2.79E+01	0.00E+00	2.79E+01
			Cs-134	<2.13E+01	0.00E+00	2.13E+01
			Cs-137	<1.83E+01	0.00E+00	1.83E+01
			BaLa-140	<3.27E+01	0.00E+00	3.27E+01
			Be-7	1.21E+03	2.22E+02	1.98E+02
			K-40	3.27E+03	4.81E+02	2.44E+02
			533790	12/1/2020 - 12/1/2020	WAXMYRTLE	Mn-54
Co-58	<1.69E+01	0.00E+00				1.69E+01
Fe-59	<2.23E+01	0.00E+00				2.23E+01
Co-60	<1.78E+01	0.00E+00				1.78E+01
Zn-65	<3.60E+01	0.00E+00				3.60E+01
Zr-95	<2.46E+01	0.00E+00				2.46E+01
Nb-95	<2.17E+01	0.00E+00				2.17E+01
I-131	<1.65E+01	0.00E+00				1.65E+01
Cs-134	<2.21E+01	0.00E+00				2.21E+01
Cs-137	<1.32E+01	0.00E+00				1.32E+01
BaLa-140	<1.16E+01	0.00E+00				1.16E+01
Be-7	2.50E+03	3.32E+02				1.86E+02
K-40	1.92E+03	3.43E+02				1.22E+02



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
515220	1/2/2020 - 1/2/2020	WAXMYRTLE	Mn-54	<2.64E+01	0.00E+00	2.64E+01
			Co-58	<2.47E+01	0.00E+00	2.47E+01
			Fe-59	<5.77E+01	0.00E+00	5.77E+01
			Co-60	<2.20E+01	0.00E+00	2.20E+01
			Zn-65	<6.09E+01	0.00E+00	6.09E+01
			Zr-95	<4.99E+01	0.00E+00	4.99E+01
			Nb-95	<3.05E+01	0.00E+00	3.05E+01
			I-131	<3.63E+01	0.00E+00	3.63E+01
			Cs-134	<3.56E+01	0.00E+00	3.56E+01
			Cs-137	<2.94E+01	0.00E+00	2.94E+01
			BaLa-140	<4.02E+01	0.00E+00	4.02E+01
			Be-7	2.26E+03	3.81E+02	3.07E+02
			K-40	2.55E+03	5.05E+02	3.18E+02
			516468	2/3/2020 - 2/3/2020	WAXMYRTLE	Mn-54
Co-58	<1.78E+01	0.00E+00				1.78E+01
Fe-59	<3.84E+01	0.00E+00				3.84E+01
Co-60	<2.00E+01	0.00E+00				2.00E+01
Zn-65	<3.70E+01	0.00E+00				3.70E+01
Zr-95	<2.42E+01	0.00E+00				2.42E+01
Nb-95	<1.43E+01	0.00E+00				1.43E+01
I-131	<2.56E+01	0.00E+00				2.56E+01
Cs-134	<1.79E+01	0.00E+00				1.79E+01
Cs-137	<1.39E+01	0.00E+00				1.39E+01
BaLa-140	<2.98E+01	0.00E+00				2.98E+01
Be-7	2.10E+03	3.04E+02				2.11E+02
K-40	1.97E+03	3.57E+02				1.99E+02
518667	3/2/2020 - 3/2/2020	WAXMYRTLE				Mn-54
			Co-58	<1.88E+01	0.00E+00	1.88E+01
			Fe-59	<4.42E+01	0.00E+00	4.42E+01
			Co-60	<1.82E+01	0.00E+00	1.82E+01
			Zn-65	<5.24E+01	0.00E+00	5.24E+01
			Zr-95	<2.90E+01	0.00E+00	2.90E+01
			Nb-95	<1.77E+01	0.00E+00	1.77E+01
			I-131	<2.84E+01	0.00E+00	2.84E+01
			Cs-134	<2.10E+01	0.00E+00	2.10E+01
			Cs-137	<2.02E+01	0.00E+00	2.02E+01
			BaLa-140	<3.84E+01	0.00E+00	3.84E+01
			Be-7	3.56E+03	4.49E+02	2.10E+02
			K-40	1.89E+03	3.81E+02	2.40E+02
			520473	4/2/2020 - 4/2/2020	WAXMYRTLE	Mn-54
Co-58	<1.47E+01	0.00E+00				1.47E+01
Fe-59	<2.48E+01	0.00E+00				2.48E+01
Co-60	<1.46E+01	0.00E+00				1.46E+01
Zn-65	<2.75E+01	0.00E+00				2.75E+01
Zr-95	<1.92E+01	0.00E+00				1.92E+01
Nb-95	<1.14E+01	0.00E+00				1.14E+01
I-131	<1.74E+01	0.00E+00				1.74E+01
Cs-134	<1.32E+01	0.00E+00				1.32E+01
Cs-137	<1.26E+01	0.00E+00				1.26E+01
BaLa-140	<1.52E+01	0.00E+00				1.52E+01
Be-7	1.62E+03	2.26E+02				1.54E+02
K-40	3.42E+03	4.51E+02				2.14E+02
522307	5/4/2020 - 5/4/2020	WAXMYRTLE				Mn-54
			Co-58	<1.61E+01	0.00E+00	1.61E+01
			Fe-59	<3.68E+01	0.00E+00	3.68E+01
			Co-60	<1.89E+01	0.00E+00	1.89E+01
			Zn-65	<3.95E+01	0.00E+00	3.95E+01



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
522307	5/4/2020 - 5/4/2020	WAXMYRTLE	Zr-95	<3.20E+01	0.00E+00	3.20E+01
			Nb-95	<1.71E+01	0.00E+00	1.71E+01
			I-131	<2.97E+01	0.00E+00	2.97E+01
			Cs-134	<2.02E+01	0.00E+00	2.02E+01
			Cs-137	<1.51E+01	0.00E+00	1.51E+01
			BaLa-140	<1.70E+01	0.00E+00	1.70E+01
			Be-7	5.04E+02	1.54E+02	1.98E+02
			K-40	3.37E+03	5.42E+02	5.09E+02
523836	6/1/2020 - 6/1/2020	WAXMYRTLE	Mn-54	<1.77E+01	0.00E+00	1.77E+01
			Co-58	<1.81E+01	0.00E+00	1.81E+01
			Fe-59	<3.69E+01	0.00E+00	3.69E+01
			Co-60	<2.03E+01	0.00E+00	2.03E+01
			Zn-65	<4.15E+01	0.00E+00	4.15E+01
			Zr-95	<3.73E+01	0.00E+00	3.73E+01
			Nb-95	<2.17E+01	0.00E+00	2.17E+01
			I-131	<3.09E+01	0.00E+00	3.09E+01
			Cs-134	<2.14E+01	0.00E+00	2.14E+01
			Cs-137	<2.11E+01	0.00E+00	2.11E+01
			BaLa-140	<2.90E+01	0.00E+00	2.90E+01
			Be-7	9.36E+02	2.17E+02	2.73E+02
			K-40	3.53E+03	4.92E+02	3.33E+02
			525316	7/1/2020 - 7/1/2020	WAXMYRTLE	Mn-54
Co-58	<1.33E+01	0.00E+00				1.33E+01
Fe-59	<3.02E+01	0.00E+00				3.02E+01
Co-60	<1.84E+01	0.00E+00				1.84E+01
Zn-65	<3.37E+01	0.00E+00				3.37E+01
Zr-95	<2.65E+01	0.00E+00				2.65E+01
Nb-95	<1.82E+01	0.00E+00				1.82E+01
I-131	<2.58E+01	0.00E+00				2.58E+01
Cs-134	<1.58E+01	0.00E+00				1.58E+01
Cs-137	<1.69E+01	0.00E+00				1.69E+01
BaLa-140	<2.23E+01	0.00E+00				2.23E+01
Be-7	3.60E+03	4.29E+02				2.13E+02
K-40	2.99E+03	4.38E+02				2.18E+02
526521	8/3/2020 - 8/3/2020	WAXMYRTLE				Mn-54
			Co-58	<2.44E+01	0.00E+00	2.44E+01
			Fe-59	<3.71E+01	0.00E+00	3.71E+01
			Co-60	<2.16E+01	0.00E+00	2.16E+01
			Zn-65	<5.12E+01	0.00E+00	5.12E+01
			Zr-95	<3.91E+01	0.00E+00	3.91E+01
			Nb-95	<2.70E+01	0.00E+00	2.70E+01
			I-131	<3.72E+01	0.00E+00	3.72E+01
			Cs-134	<2.24E+01	0.00E+00	2.24E+01
			Cs-137	<2.56E+01	0.00E+00	2.56E+01
			BaLa-140	<3.03E+01	0.00E+00	3.03E+01
			Be-7	1.94E+03	3.25E+02	2.56E+02
			K-40	3.13E+03	5.27E+02	2.88E+02
			527910	9/1/2020 - 9/1/2020	WAXMYRTLE	Mn-54
Co-58	<1.11E+01	0.00E+00				1.11E+01
Fe-59	<2.49E+01	0.00E+00				2.49E+01
Co-60	<1.04E+01	0.00E+00				1.04E+01
Zn-65	<2.37E+01	0.00E+00				2.37E+01
Zr-95	<1.84E+01	0.00E+00				1.84E+01
Nb-95	<1.39E+01	0.00E+00				1.39E+01
I-131	<2.63E+01	0.00E+00				2.63E+01
Cs-134	<1.29E+01	0.00E+00				1.29E+01
Cs-137	<9.41E+00	0.00E+00				9.41E+00





# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 801 [ INDICATOR - SW @ 0.8 miles ]

Sample ID:	527910	Sample Dates:	9/1/2020 - 9/1/2020	WAXMYRTLE	Nuclide	Activity	2 Sigma Error	MDA
					BaLa-140	<2.03E+01	0.00E+00	2.03E+01
					Be-7	1.51E+03	1.92E+02	1.35E+02
					K-40	2.50E+03	3.12E+02	1.58E+02

Sample ID:	530285	Sample Dates:	10/1/2020 - 10/1/2020	WAXMYRTLE	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<1.61E+01	0.00E+00	1.61E+01
					Co-58	<1.23E+01	0.00E+00	1.23E+01
					Fe-59	<3.15E+01	0.00E+00	3.15E+01
					Co-60	<1.44E+01	0.00E+00	1.44E+01
					Zn-65	<3.97E+01	0.00E+00	3.97E+01
					Zr-95	<2.90E+01	0.00E+00	2.90E+01
					Nb-95	<2.10E+01	0.00E+00	2.10E+01
					I-131	<2.61E+01	0.00E+00	2.61E+01
					Cs-134	<2.11E+01	0.00E+00	2.11E+01
					Cs-137	<2.15E+01	0.00E+00	2.15E+01
					BaLa-140	<2.84E+01	0.00E+00	2.84E+01
					Be-7	2.40E+03	3.25E+02	2.01E+02
					K-40	3.24E+03	4.61E+02	2.16E+02

Sample ID:	532070	Sample Dates:	11/3/2020 - 11/3/2020	WAXMYRTLE	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<1.89E+01	0.00E+00	1.89E+01
					Co-58	<1.56E+01	0.00E+00	1.56E+01
					Fe-59	<3.09E+01	0.00E+00	3.09E+01
					Co-60	<2.03E+01	0.00E+00	2.03E+01
					Zn-65	<3.83E+01	0.00E+00	3.83E+01
					Zr-95	<3.48E+01	0.00E+00	3.48E+01
					Nb-95	<2.14E+01	0.00E+00	2.14E+01
					I-131	<2.88E+01	0.00E+00	2.88E+01
					Cs-134	<1.73E+01	0.00E+00	1.73E+01
					Cs-137	<1.71E+01	0.00E+00	1.71E+01
					BaLa-140	<2.60E+01	0.00E+00	2.60E+01
					Be-7	1.48E+03	2.46E+02	2.08E+02
					K-40	2.25E+03	3.82E+02	2.58E+02

Sample ID:	533791	Sample Dates:	12/1/2020 - 12/1/2020	WAXMYRTLE	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<1.72E+01	0.00E+00	1.72E+01
					Co-58	<1.30E+01	0.00E+00	1.30E+01
					Fe-59	<2.84E+01	0.00E+00	2.84E+01
					Co-60	<1.25E+01	0.00E+00	1.25E+01
					Zn-65	<4.08E+01	0.00E+00	4.08E+01
					Zr-95	<2.78E+01	0.00E+00	2.78E+01
					Nb-95	<1.59E+01	0.00E+00	1.59E+01
					I-131	<1.86E+01	0.00E+00	1.86E+01
					Cs-134	<1.71E+01	0.00E+00	1.71E+01
					Cs-137	<1.56E+01	0.00E+00	1.56E+01
					BaLa-140	<1.67E+01	0.00E+00	1.67E+01
					Be-7	2.62E+03	3.37E+02	2.05E+02
					K-40	2.16E+03	3.85E+02	2.94E+02

Sample Point 802 [ CONTROL - -- @ 10.1 miles ]

Sample ID:	515221	Sample Dates:	1/2/2020 - 1/2/2020	WAXMYRTLE	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<3.74E+01	0.00E+00	3.74E+01
					Co-58	<2.57E+01	0.00E+00	2.57E+01
					Fe-59	<6.02E+01	0.00E+00	6.02E+01
					Co-60	<2.77E+01	0.00E+00	2.77E+01
					Zn-65	<6.36E+01	0.00E+00	6.36E+01
					Zr-95	<4.32E+01	0.00E+00	4.32E+01
					Nb-95	<3.20E+01	0.00E+00	3.20E+01
					I-131	<3.59E+01	0.00E+00	3.59E+01
					Cs-134	<3.16E+01	0.00E+00	3.16E+01
					Cs-137	<2.40E+01	0.00E+00	2.40E+01
					BaLa-140	<3.82E+01	0.00E+00	3.82E+01
					Be-7	3.15E+03	4.50E+02	3.09E+02



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
515221	1/2/2020 - 1/2/2020		K-40	1.93E+03	4.43E+02	3.62E+02
516469	2/3/2020 - 2/3/2020		Mn-54	<1.40E+01	0.00E+00	1.40E+01
			Co-58	<1.24E+01	0.00E+00	1.24E+01
			Fe-59	<2.79E+01	0.00E+00	2.79E+01
			Co-60	<1.30E+01	0.00E+00	1.30E+01
			Zn-65	<2.83E+01	0.00E+00	2.83E+01
			Zr-95	<2.48E+01	0.00E+00	2.48E+01
			Nb-95	<1.47E+01	0.00E+00	1.47E+01
			I-131	<2.21E+01	0.00E+00	2.21E+01
			Cs-134	<1.56E+01	0.00E+00	1.56E+01
			Cs-137	<1.44E+01	0.00E+00	1.44E+01
			BaLa-140	<1.93E+01	0.00E+00	1.93E+01
			Be-7	3.07E+03	3.51E+02	1.97E+02
			K-40	1.52E+03	2.52E+02	1.85E+02
518668	3/2/2020 - 3/2/2020		Mn-54	<2.59E+01	0.00E+00	2.59E+01
			Co-58	<2.30E+01	0.00E+00	2.30E+01
			Fe-59	<4.90E+01	0.00E+00	4.90E+01
			Co-60	<2.32E+01	0.00E+00	2.32E+01
			Zn-65	<5.82E+01	0.00E+00	5.82E+01
			Zr-95	<3.23E+01	0.00E+00	3.23E+01
			Nb-95	<2.60E+01	0.00E+00	2.60E+01
			I-131	<3.38E+01	0.00E+00	3.38E+01
			Cs-134	<2.76E+01	0.00E+00	2.76E+01
			Cs-137	<2.02E+01	0.00E+00	2.02E+01
			BaLa-140	<2.85E+01	0.00E+00	2.85E+01
			Be-7	5.21E+03	6.13E+02	2.41E+02
			K-40	1.68E+03	3.66E+02	2.19E+02
520474	4/2/2020 - 4/2/2020		Mn-54	<1.24E+01	0.00E+00	1.24E+01
			Co-58	<1.27E+01	0.00E+00	1.27E+01
			Fe-59	<3.04E+01	0.00E+00	3.04E+01
			Co-60	<1.53E+01	0.00E+00	1.53E+01
			Zn-65	<3.25E+01	0.00E+00	3.25E+01
			Zr-95	<2.42E+01	0.00E+00	2.42E+01
			Nb-95	<1.67E+01	0.00E+00	1.67E+01
			I-131	<1.83E+01	0.00E+00	1.83E+01
			Cs-134	<1.48E+01	0.00E+00	1.48E+01
			Cs-137	<1.03E+01	0.00E+00	1.03E+01
			BaLa-140	<2.04E+01	0.00E+00	2.04E+01
			Be-7	5.59E+03	5.87E+02	1.84E+02
			K-40	1.73E+03	3.06E+02	1.94E+02
522308	5/4/2020 - 5/4/2020		Mn-54	<1.32E+01	0.00E+00	1.32E+01
			Co-58	<8.11E+00	0.00E+00	8.11E+00
			Fe-59	<2.21E+01	0.00E+00	2.21E+01
			Co-60	<1.62E+01	0.00E+00	1.62E+01
			Zn-65	<3.17E+01	0.00E+00	3.17E+01
			Zr-95	<2.13E+01	0.00E+00	2.13E+01
			Nb-95	<1.35E+01	0.00E+00	1.35E+01
			I-131	<1.20E+01	0.00E+00	1.20E+01
			Cs-134	<1.34E+01	0.00E+00	1.34E+01
			Cs-137	<1.72E+01	0.00E+00	1.72E+01
			BaLa-140	<1.12E+01	0.00E+00	1.12E+01
			Be-7	8.10E+02	1.64E+02	1.86E+02
			K-40	3.02E+03	3.90E+02	1.33E+02
523837	6/2/2020 - 6/2/2020		Mn-54	<2.87E+01	0.00E+00	2.87E+01
			Co-58	<2.50E+01	0.00E+00	2.50E+01



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
523837	6/2/2020 - 6/2/2020	WAXMYRTLE	Fe-59	<5.82E+01	0.00E+00	5.82E+01
			Co-60	<3.25E+01	0.00E+00	3.25E+01
			Zn-65	<6.55E+01	0.00E+00	6.55E+01
			Zr-95	<5.00E+01	0.00E+00	5.00E+01
			Nb-95	<3.04E+01	0.00E+00	3.04E+01
			I-131	<4.04E+01	0.00E+00	4.04E+01
			Cs-134	<3.81E+01	0.00E+00	3.81E+01
			Cs-137	<2.82E+01	0.00E+00	2.82E+01
			BaLa-140	<4.16E+01	0.00E+00	4.16E+01
			Be-7	1.46E+03	3.44E+02	4.01E+02
			K-40	3.78E+03	6.33E+02	3.73E+02
525317	7/1/2020 - 7/1/2020	WAXMYRTLE	Mn-54	<1.67E+01	0.00E+00	1.67E+01
			Co-58	<1.62E+01	0.00E+00	1.62E+01
			Fe-59	<3.23E+01	0.00E+00	3.23E+01
			Co-60	<1.74E+01	0.00E+00	1.74E+01
			Zn-65	<2.66E+01	0.00E+00	2.66E+01
			Zr-95	<3.03E+01	0.00E+00	3.03E+01
			Nb-95	<1.75E+01	0.00E+00	1.75E+01
			I-131	<2.51E+01	0.00E+00	2.51E+01
			Cs-134	<2.01E+01	0.00E+00	2.01E+01
			Cs-137	<1.79E+01	0.00E+00	1.79E+01
			BaLa-140	<2.21E+01	0.00E+00	2.21E+01
Be-7	2.70E+03	3.49E+02	2.39E+02			
K-40	2.33E+03	3.84E+02	2.45E+02			
526522	8/3/2020 - 8/3/2020	WAXMYRTLE	Mn-54	<2.55E+01	0.00E+00	2.55E+01
			Co-58	<2.01E+01	0.00E+00	2.01E+01
			Fe-59	<4.10E+01	0.00E+00	4.10E+01
			Co-60	<2.09E+01	0.00E+00	2.09E+01
			Zn-65	<3.98E+01	0.00E+00	3.98E+01
			Zr-95	<3.20E+01	0.00E+00	3.20E+01
			Nb-95	<2.67E+01	0.00E+00	2.67E+01
			I-131	<3.65E+01	0.00E+00	3.65E+01
			Cs-134	<2.56E+01	0.00E+00	2.56E+01
			Cs-137	<2.49E+01	0.00E+00	2.49E+01
			BaLa-140	<2.72E+01	0.00E+00	2.72E+01
Be-7	2.42E+03	3.78E+02	2.96E+02			
K-40	1.63E+03	3.77E+02	2.80E+02			
527911	9/1/2020 - 9/1/2020	WAXMYRTLE	Mn-54	<1.81E+01	0.00E+00	1.81E+01
			Co-58	<1.68E+01	0.00E+00	1.68E+01
			Fe-59	<3.90E+01	0.00E+00	3.90E+01
			Co-60	<1.77E+01	0.00E+00	1.77E+01
			Zn-65	<4.05E+01	0.00E+00	4.05E+01
			Zr-95	<3.48E+01	0.00E+00	3.48E+01
			Nb-95	<2.18E+01	0.00E+00	2.18E+01
			I-131	<4.11E+01	0.00E+00	4.11E+01
			Cs-134	<2.11E+01	0.00E+00	2.11E+01
			Cs-137	<1.81E+01	0.00E+00	1.81E+01
			BaLa-140	<2.42E+01	0.00E+00	2.42E+01
Be-7	1.38E+03	2.35E+02	2.09E+02			
K-40	2.60E+03	4.12E+02	3.03E+02			
530286	10/1/2020 - 10/1/2020	WAXMYRTLE	Mn-54	<1.78E+01	0.00E+00	1.78E+01
			Co-58	<1.21E+01	0.00E+00	1.21E+01
			Fe-59	<3.45E+01	0.00E+00	3.45E+01
			Co-60	<1.48E+01	0.00E+00	1.48E+01
			Zn-65	<3.44E+01	0.00E+00	3.44E+01
			Zr-95	<2.19E+01	0.00E+00	2.19E+01
Nb-95	<1.38E+01	0.00E+00	1.38E+01			



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
530286	10/1/2020 - 10/1/2020		I-131	<3.30E+01	0.00E+00	3.30E+01
			Cs-134	<1.08E+01	0.00E+00	1.08E+01
			Cs-137	<1.74E+01	0.00E+00	1.74E+01
			BaLa-140	<2.79E+01	0.00E+00	2.79E+01
			Be-7	2.80E+03	3.53E+02	2.11E+02
			K-40	2.07E+03	3.45E+02	2.07E+02

Sample ID:	Sample Dates:	WAXMYRTLE	Nuclide	Activity	2 Sigma Error	MDA
532071	11/3/2020 - 11/3/2020		Mn-54	<1.70E+01	0.00E+00	1.70E+01
			Co-58	<1.50E+01	0.00E+00	1.50E+01
			Fe-59	<2.55E+01	0.00E+00	2.55E+01
			Co-60	<1.50E+01	0.00E+00	1.50E+01
			Zn-65	<4.44E+01	0.00E+00	4.44E+01
			Zr-95	<2.71E+01	0.00E+00	2.71E+01
			Nb-95	<2.11E+01	0.00E+00	2.11E+01
			I-131	<2.89E+01	0.00E+00	2.89E+01
			Cs-134	<2.00E+01	0.00E+00	2.00E+01
			Cs-137	<1.63E+01	0.00E+00	1.63E+01
			BaLa-140	<1.87E+01	0.00E+00	1.87E+01
			Be-7	3.94E+03	4.76E+02	2.49E+02
			K-40	1.74E+03	3.23E+02	1.48E+02

Sample ID:	Sample Dates:	WAXMYRTLE	Nuclide	Activity	2 Sigma Error	MDA
533792	12/1/2020 - 12/1/2020		Mn-54	<1.29E+01	0.00E+00	1.29E+01
			Co-58	<1.81E+01	0.00E+00	1.81E+01
			Fe-59	<1.94E+01	0.00E+00	1.94E+01
			Co-60	<1.55E+01	0.00E+00	1.55E+01
			Zn-65	<3.00E+01	0.00E+00	3.00E+01
			Zr-95	<2.69E+01	0.00E+00	2.69E+01
			Nb-95	<1.62E+01	0.00E+00	1.62E+01
			I-131	<1.73E+01	0.00E+00	1.73E+01
			Cs-134	<2.07E+01	0.00E+00	2.07E+01
			Cs-137	<1.79E+01	0.00E+00	1.79E+01
			BaLa-140	<1.66E+01	0.00E+00	1.66E+01
			Be-7	3.45E+03	4.09E+02	1.97E+02
			K-40	1.65E+03	3.33E+02	2.88E+02

## Sample Point 803 [ INDICATOR - SSE @ 0.6 miles ]

Sample ID:	Sample Dates:	WAXMYRTLE	Nuclide	Activity	2 Sigma Error	MDA
515222	1/2/2020 - 1/2/2020		Mn-54	<2.27E+01	0.00E+00	2.27E+01
			Co-58	<2.02E+01	0.00E+00	2.02E+01
			Fe-59	<3.56E+01	0.00E+00	3.56E+01
			Co-60	<2.58E+01	0.00E+00	2.58E+01
			Zn-65	<5.40E+01	0.00E+00	5.40E+01
			Zr-95	<3.20E+01	0.00E+00	3.20E+01
			Nb-95	<2.76E+01	0.00E+00	2.76E+01
			I-131	<2.93E+01	0.00E+00	2.93E+01
			Cs-134	<2.10E+01	0.00E+00	2.10E+01
			Cs-137	<2.37E+01	0.00E+00	2.37E+01
			BaLa-140	<3.24E+01	0.00E+00	3.24E+01
			Be-7	3.98E+03	5.06E+02	2.65E+02
			K-40	2.06E+03	4.37E+02	3.31E+02

Sample ID:	Sample Dates:	WAXMYRTLE	Nuclide	Activity	2 Sigma Error	MDA
516470	2/3/2020 - 2/3/2020		Mn-54	<1.45E+01	0.00E+00	1.45E+01
			Co-58	<1.25E+01	0.00E+00	1.25E+01
			Fe-59	<3.09E+01	0.00E+00	3.09E+01
			Co-60	<1.73E+01	0.00E+00	1.73E+01
			Zn-65	<2.91E+01	0.00E+00	2.91E+01
			Zr-95	<2.38E+01	0.00E+00	2.38E+01
			Nb-95	<1.78E+01	0.00E+00	1.78E+01
			I-131	<2.57E+01	0.00E+00	2.57E+01
			Cs-134	<1.34E+01	0.00E+00	1.34E+01



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
516470	2/3/2020 - 2/3/2020		Cs-137	<1.55E+01	0.00E+00	1.55E+01
			BaLa-140	<2.50E+01	0.00E+00	2.50E+01
			Be-7	2.53E+03	3.37E+02	2.09E+02
			K-40	2.51E+03	3.98E+02	2.23E+02
518669	3/2/2020 - 3/2/2020		Mn-54	<1.96E+01	0.00E+00	1.96E+01
			Co-58	<2.20E+01	0.00E+00	2.20E+01
			Fe-59	<4.34E+01	0.00E+00	4.34E+01
			Co-60	<1.75E+01	0.00E+00	1.75E+01
			Zn-65	<3.76E+01	0.00E+00	3.76E+01
			Zr-95	<5.18E+01	0.00E+00	5.18E+01
			Nb-95	<2.07E+01	0.00E+00	2.07E+01
			I-131	<3.34E+01	0.00E+00	3.34E+01
			Cs-134	<2.68E+01	0.00E+00	2.68E+01
			Cs-137	<2.11E+01	0.00E+00	2.11E+01
			BaLa-140	<3.99E+01	0.00E+00	3.99E+01
			Be-7	4.53E+03	5.78E+02	3.34E+02
			K-40	2.69E+03	4.89E+02	2.59E+02
520475	4/2/2020 - 4/2/2020		Mn-54	<1.86E+01	0.00E+00	1.86E+01
			Co-58	<2.19E+01	0.00E+00	2.19E+01
			Fe-59	<2.73E+01	0.00E+00	2.73E+01
			Co-60	<2.38E+01	0.00E+00	2.38E+01
			Zn-65	<4.02E+01	0.00E+00	4.02E+01
			Zr-95	<3.08E+01	0.00E+00	3.08E+01
			Nb-95	<2.21E+01	0.00E+00	2.21E+01
			I-131	<2.56E+01	0.00E+00	2.56E+01
			Cs-134	<1.93E+01	0.00E+00	1.93E+01
			Cs-137	<2.42E+01	0.00E+00	2.42E+01
			BaLa-140	<2.06E+01	0.00E+00	2.06E+01
			Be-7	1.69E+03	2.89E+02	2.40E+02
			K-40	3.49E+03	5.18E+02	3.71E+01
522309	5/4/2020 - 5/4/2020		Mn-54	<1.39E+01	0.00E+00	1.39E+01
			Co-58	<1.29E+01	0.00E+00	1.29E+01
			Fe-59	<2.68E+01	0.00E+00	2.68E+01
			Co-60	<1.11E+01	0.00E+00	1.11E+01
			Zn-65	<3.65E+01	0.00E+00	3.65E+01
			Zr-95	<2.13E+01	0.00E+00	2.13E+01
			Nb-95	<1.37E+01	0.00E+00	1.37E+01
			I-131	<1.34E+01	0.00E+00	1.34E+01
			Cs-134	<1.34E+01	0.00E+00	1.34E+01
			Cs-137	<1.44E+01	0.00E+00	1.44E+01
			BaLa-140	<1.46E+01	0.00E+00	1.46E+01
			Be-7	5.80E+02	1.33E+02	1.48E+02
			K-40	3.03E+03	4.06E+02	1.84E+02
523838	6/2/2020 - 6/2/2020		Mn-54	<2.09E+01	0.00E+00	2.09E+01
			Co-58	<2.47E+01	0.00E+00	2.47E+01
			Fe-59	<4.50E+01	0.00E+00	4.50E+01
			Co-60	<2.70E+01	0.00E+00	2.70E+01
			Zn-65	<5.65E+01	0.00E+00	5.65E+01
			Zr-95	<3.48E+01	0.00E+00	3.48E+01
			Nb-95	<2.38E+01	0.00E+00	2.38E+01
			I-131	<2.95E+01	0.00E+00	2.95E+01
			Cs-134	<2.55E+01	0.00E+00	2.55E+01
			Cs-137	<1.87E+01	0.00E+00	1.87E+01
			BaLa-140	<1.90E+01	0.00E+00	1.90E+01
			Be-7	8.36E+02	2.26E+02	2.65E+02
			K-40	3.06E+03	5.40E+02	3.63E+02



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
525318	7/1/2020 - 7/1/2020		Mn-54	<1.35E+01	0.00E+00	1.35E+01
			Co-58	<1.58E+01	0.00E+00	1.58E+01
			Fe-59	<3.30E+01	0.00E+00	3.30E+01
			Co-60	<1.30E+01	0.00E+00	1.30E+01
			Zn-65	<3.42E+01	0.00E+00	3.42E+01
			Zr-95	<2.95E+01	0.00E+00	2.95E+01
			Nb-95	<1.89E+01	0.00E+00	1.89E+01
			I-131	<2.92E+01	0.00E+00	2.92E+01
			Cs-134	<1.69E+01	0.00E+00	1.69E+01
			Cs-137	<1.62E+01	0.00E+00	1.62E+01
			BaLa-140	<2.54E+01	0.00E+00	2.54E+01
			Be-7	3.46E+03	4.29E+02	2.54E+02
			K-40	2.50E+03	3.98E+02	2.58E+02
			526523	8/3/2020 - 8/3/2020		Mn-54
Co-58	<2.22E+01	0.00E+00				2.22E+01
Fe-59	<5.48E+01	0.00E+00				5.48E+01
Co-60	<3.43E+01	0.00E+00				3.43E+01
Zn-65	<5.43E+01	0.00E+00				5.43E+01
Zr-95	<4.33E+01	0.00E+00				4.33E+01
Nb-95	<2.88E+01	0.00E+00				2.88E+01
I-131	<4.65E+01	0.00E+00				4.65E+01
Cs-134	<2.83E+01	0.00E+00				2.83E+01
Cs-137	<1.76E+01	0.00E+00				1.76E+01
BaLa-140	<3.48E+01	0.00E+00				3.48E+01
Be-7	1.67E+03	3.26E+02				3.10E+02
K-40	2.42E+03	4.90E+02				3.28E+02
527912	9/1/2020 - 9/1/2020					Mn-54
			Co-58	<1.30E+01	0.00E+00	1.30E+01
			Fe-59	<3.17E+01	0.00E+00	3.17E+01
			Co-60	<1.92E+01	0.00E+00	1.92E+01
			Zn-65	<3.43E+01	0.00E+00	3.43E+01
			Zr-95	<2.71E+01	0.00E+00	2.71E+01
			Nb-95	<2.10E+01	0.00E+00	2.10E+01
			I-131	<4.61E+01	0.00E+00	4.61E+01
			Cs-134	<1.63E+01	0.00E+00	1.63E+01
			Cs-137	<1.27E+01	0.00E+00	1.27E+01
			BaLa-140	<2.86E+01	0.00E+00	2.86E+01
			Be-7	2.44E+03	3.31E+02	2.26E+02
			K-40	2.81E+03	4.25E+02	2.39E+02
			530287	10/2/2020 - 10/2/2020		Mn-54
Co-58	<1.26E+01	0.00E+00				1.26E+01
Fe-59	<2.59E+01	0.00E+00				2.59E+01
Co-60	<1.37E+01	0.00E+00				1.37E+01
Zn-65	<3.38E+01	0.00E+00				3.38E+01
Zr-95	<2.46E+01	0.00E+00				2.46E+01
Nb-95	<2.01E+01	0.00E+00				2.01E+01
I-131	<3.18E+01	0.00E+00				3.18E+01
Cs-134	<1.66E+01	0.00E+00				1.66E+01
Cs-137	<1.31E+01	0.00E+00				1.31E+01
BaLa-140	<2.98E+01	0.00E+00				2.98E+01
Be-7	2.33E+03	3.09E+02				1.73E+02
K-40	1.76E+03	3.13E+02				1.84E+02
532072	11/3/2020 - 11/3/2020					Mn-54
			Co-58	<1.63E+01	0.00E+00	1.63E+01
			Fe-59	<3.72E+01	0.00E+00	3.72E+01
			Co-60	<1.74E+01	0.00E+00	1.74E+01
			Zn-65	<4.23E+01	0.00E+00	4.23E+01



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 803 [ INDICATOR - SSE @ 0.6 miles ]

Sample ID:	532072	Sample Dates:	11/3/2020 - 11/3/2020	WAXMYRTLE	Nuclide	Activity	2 Sigma Error	MDA
					Zr-95	<3.15E+01	0.00E+00	3.15E+01
					Nb-95	<1.85E+01	0.00E+00	1.85E+01
					I-131	<2.91E+01	0.00E+00	2.91E+01
					Cs-134	<1.59E+01	0.00E+00	1.59E+01
					Cs-137	<1.27E+01	0.00E+00	1.27E+01
					BaLa-140	<2.30E+01	0.00E+00	2.30E+01
					Be-7	2.19E+03	3.06E+02	2.03E+02
					K-40	3.18E+03	4.78E+02	2.63E+02

Sample ID:	533793	Sample Dates:	12/1/2020 - 12/1/2020	WAXMYRTLE	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<1.45E+01	0.00E+00	1.45E+01
					Co-58	<1.55E+01	0.00E+00	1.55E+01
					Fe-59	<2.67E+01	0.00E+00	2.67E+01
					Co-60	<1.88E+01	0.00E+00	1.88E+01
					Zn-65	<3.58E+01	0.00E+00	3.58E+01
					Zr-95	<2.80E+01	0.00E+00	2.80E+01
					Nb-95	<1.45E+01	0.00E+00	1.45E+01
					I-131	<1.74E+01	0.00E+00	1.74E+01
					Cs-134	<1.74E+01	0.00E+00	1.74E+01
					Cs-137	<1.54E+01	0.00E+00	1.54E+01
					BaLa-140	<2.29E+01	0.00E+00	2.29E+01
					Be-7	3.03E+03	3.75E+02	2.16E+02
					K-40	2.20E+03	3.64E+02	2.55E+02

## Sample Point 804 [ INDICATOR - S @ 0.7 miles ]

Sample ID:	515223	Sample Dates:	1/2/2020 - 1/2/2020	WAXMYRTLE	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<2.58E+01	0.00E+00	2.58E+01
					Co-58	<2.65E+01	0.00E+00	2.65E+01
					Fe-59	<5.27E+01	0.00E+00	5.27E+01
					Co-60	<2.62E+01	0.00E+00	2.62E+01
					Zn-65	<5.36E+01	0.00E+00	5.36E+01
					Zr-95	<4.97E+01	0.00E+00	4.97E+01
					Nb-95	<1.99E+01	0.00E+00	1.99E+01
					I-131	<3.36E+01	0.00E+00	3.36E+01
					Cs-134	<2.35E+01	0.00E+00	2.35E+01
					Cs-137	<2.02E+01	0.00E+00	2.02E+01
					BaLa-140	<3.11E+01	0.00E+00	3.11E+01
					Be-7	3.69E+03	4.92E+02	2.68E+02
					K-40	2.77E+03	5.06E+02	2.12E+02

Sample ID:	516471	Sample Dates:	2/3/2020 - 2/3/2020	WAXMYRTLE	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<1.69E+01	0.00E+00	1.69E+01
					Co-58	<2.01E+01	0.00E+00	2.01E+01
					Fe-59	<3.32E+01	0.00E+00	3.32E+01
					Co-60	<1.57E+01	0.00E+00	1.57E+01
					Zn-65	<3.83E+01	0.00E+00	3.83E+01
					Zr-95	<3.57E+01	0.00E+00	3.57E+01
					Nb-95	<1.86E+01	0.00E+00	1.86E+01
					I-131	<3.04E+01	0.00E+00	3.04E+01
					Cs-134	<1.85E+01	0.00E+00	1.85E+01
					Cs-137	<1.57E+01	0.00E+00	1.57E+01
					BaLa-140	<2.47E+01	0.00E+00	2.47E+01
					Be-7	2.86E+03	3.70E+02	2.39E+02
					K-40	1.92E+03	3.93E+02	3.77E+02

Sample ID:	518670	Sample Dates:	3/2/2020 - 3/2/2020	WAXMYRTLE	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<3.53E+01	0.00E+00	3.53E+01
					Co-58	<2.83E+01	0.00E+00	2.83E+01
					Fe-59	<5.05E+01	0.00E+00	5.05E+01
					Co-60	<3.49E+01	0.00E+00	3.49E+01
					Zn-65	<6.57E+01	0.00E+00	6.57E+01
					Zr-95	<4.93E+01	0.00E+00	4.93E+01
					Nb-95	<3.30E+01	0.00E+00	3.30E+01



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
518670	3/2/2020 - 3/2/2020		I-131	<4.57E+01	0.00E+00	4.57E+01
			Cs-134	<2.72E+01	0.00E+00	2.72E+01
			Cs-137	<2.94E+01	0.00E+00	2.94E+01
			BaLa-140	<4.39E+01	0.00E+00	4.39E+01
			Be-7	5.21E+03	6.63E+02	3.64E+02
			K-40	3.14E+03	5.75E+02	3.92E+02
520476	4/2/2020 - 4/2/2020		Mn-54	<1.37E+01	0.00E+00	1.37E+01
			Co-58	<1.40E+01	0.00E+00	1.40E+01
			Fe-59	<2.98E+01	0.00E+00	2.98E+01
			Co-60	<1.51E+01	0.00E+00	1.51E+01
			Zn-65	<3.10E+01	0.00E+00	3.10E+01
			Zr-95	<2.23E+01	0.00E+00	2.23E+01
			Nb-95	<1.28E+01	0.00E+00	1.28E+01
			I-131	<1.62E+01	0.00E+00	1.62E+01
			Cs-134	<1.71E+01	0.00E+00	1.71E+01
			Cs-137	<1.13E+01	0.00E+00	1.13E+01
			BaLa-140	<1.32E+01	0.00E+00	1.32E+01
			Be-7	4.88E+03	7.10E+02	1.22E+02
			K-40	2.59E+03	3.80E+02	1.43E+02
			522310	5/4/2020 - 5/4/2020		Mn-54
Co-58	<1.51E+01	0.00E+00				1.51E+01
Fe-59	<2.62E+01	0.00E+00				2.62E+01
Co-60	<1.65E+01	0.00E+00				1.65E+01
Zn-65	<2.08E+01	0.00E+00				2.08E+01
Zr-95	<2.19E+01	0.00E+00				2.19E+01
Nb-95	<1.31E+01	0.00E+00				1.31E+01
I-131	<1.49E+01	0.00E+00				1.49E+01
Cs-134	<1.45E+01	0.00E+00				1.45E+01
Cs-137	<1.39E+01	0.00E+00				1.39E+01
BaLa-140	<1.92E+01	0.00E+00				1.92E+01
Be-7	8.53E+02	1.64E+02				1.55E+02
K-40	3.15E+03	4.36E+02				1.70E+02
523839	6/2/2020 - 6/2/2020					Mn-54
			Co-58	<2.29E+01	0.00E+00	2.29E+01
			Fe-59	<4.51E+01	0.00E+00	4.51E+01
			Co-60	<2.82E+01	0.00E+00	2.82E+01
			Zn-65	<4.11E+01	0.00E+00	4.11E+01
			Zr-95	<4.21E+01	0.00E+00	4.21E+01
			Nb-95	<2.80E+01	0.00E+00	2.80E+01
			I-131	<3.16E+01	0.00E+00	3.16E+01
			Cs-134	<3.07E+01	0.00E+00	3.07E+01
			Cs-137	<2.43E+01	0.00E+00	2.43E+01
			BaLa-140	<3.09E+01	0.00E+00	3.09E+01
			Be-7	1.69E+03	3.09E+02	2.89E+02
			K-40	3.74E+03	6.13E+02	4.25E+02
			525319	7/1/2020 - 7/1/2020		Mn-54
Co-58	<1.58E+01	0.00E+00				1.58E+01
Fe-59	<2.82E+01	0.00E+00				2.82E+01
Co-60	<1.19E+01	0.00E+00				1.19E+01
Zn-65	<2.55E+01	0.00E+00				2.55E+01
Zr-95	<2.20E+01	0.00E+00				2.20E+01
Nb-95	<1.49E+01	0.00E+00				1.49E+01
I-131	<2.24E+01	0.00E+00				2.24E+01
Cs-134	<1.51E+01	0.00E+00				1.51E+01
Cs-137	<1.47E+01	0.00E+00				1.47E+01
BaLa-140	<1.75E+01	0.00E+00				1.75E+01
Be-7	4.53E+03	4.78E+02				1.85E+02





# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (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
525319	7/1/2020 - 7/1/2020		K-40	2.05E+03	3.27E+02	2.22E+02
526524	8/3/2020 - 8/3/2020		Mn-54	<2.23E+01	0.00E+00	2.23E+01
			Co-58	<2.24E+01	0.00E+00	2.24E+01
			Fe-59	<4.25E+01	0.00E+00	4.25E+01
			Co-60	<1.73E+01	0.00E+00	1.73E+01
			Zn-65	<5.55E+01	0.00E+00	5.55E+01
			Zr-95	<4.06E+01	0.00E+00	4.06E+01
			Nb-95	<2.72E+01	0.00E+00	2.72E+01
			I-131	<4.13E+01	0.00E+00	4.13E+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	<3.19E+01	0.00E+00	3.19E+01
			Be-7	1.51E+03	2.74E+02	2.58E+02
			K-40	2.81E+03	4.76E+02	3.54E+02
527913	9/1/2020 - 9/1/2020		Mn-54	<1.54E+01	0.00E+00	1.54E+01
			Co-58	<1.43E+01	0.00E+00	1.43E+01
			Fe-59	<3.00E+01	0.00E+00	3.00E+01
			Co-60	<1.50E+01	0.00E+00	1.50E+01
			Zn-65	<3.63E+01	0.00E+00	3.63E+01
			Zr-95	<2.97E+01	0.00E+00	2.97E+01
			Nb-95	<1.74E+01	0.00E+00	1.74E+01
			I-131	<3.71E+01	0.00E+00	3.71E+01
			Cs-134	<1.42E+01	0.00E+00	1.42E+01
			Cs-137	<1.43E+01	0.00E+00	1.43E+01
			BaLa-140	<2.94E+01	0.00E+00	2.94E+01
			Be-7	2.32E+03	2.98E+02	1.78E+02
			K-40	2.04E+03	3.21E+02	1.41E+02
530288	10/1/2020 - 10/1/2020		Mn-54	<1.30E+01	0.00E+00	1.30E+01
			Co-58	<1.65E+01	0.00E+00	1.65E+01
			Fe-59	<3.32E+01	0.00E+00	3.32E+01
			Co-60	<1.39E+01	0.00E+00	1.39E+01
			Zn-65	<3.51E+01	0.00E+00	3.51E+01
			Zr-95	<2.34E+01	0.00E+00	2.34E+01
			Nb-95	<1.82E+01	0.00E+00	1.82E+01
			I-131	<3.04E+01	0.00E+00	3.04E+01
			Cs-134	<1.53E+01	0.00E+00	1.53E+01
			Cs-137	<1.63E+01	0.00E+00	1.63E+01
			BaLa-140	<1.83E+01	0.00E+00	1.83E+01
			Be-7	4.35E+03	4.89E+02	1.97E+02
			K-40	2.12E+03	3.55E+02	2.48E+02
532073	11/3/2020 - 11/3/2020		Mn-54	<1.40E+01	0.00E+00	1.40E+01
			Co-58	<1.37E+01	0.00E+00	1.37E+01
			Fe-59	<3.41E+01	0.00E+00	3.41E+01
			Co-60	<1.95E+01	0.00E+00	1.95E+01
			Zn-65	<3.34E+01	0.00E+00	3.34E+01
			Zr-95	<1.94E+01	0.00E+00	1.94E+01
			Nb-95	<1.61E+01	0.00E+00	1.61E+01
			I-131	<1.81E+01	0.00E+00	1.81E+01
			Cs-134	<1.69E+01	0.00E+00	1.69E+01
			Cs-137	<1.35E+01	0.00E+00	1.35E+01
			BaLa-140	<1.58E+01	0.00E+00	1.58E+01
			Be-7	1.14E+03	1.99E+02	1.68E+02
			K-40	2.04E+03	3.43E+02	2.04E+02
533794	12/1/2020 - 12/1/2020		Mn-54	<1.54E+01	0.00E+00	1.54E+01
			Co-58	<1.36E+01	0.00E+00	1.36E+01



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 804 [ INDICATOR - S @ 0.7 miles ]

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Sample ID:	533794	Sample Dates:	12/1/2020 - 12/1/2020	WAXMYRTLE	Nuclide	Activity	2 Sigma Error	MDA
					Fe-59	<3.00E+01	0.00E+00	3.00E+01
					Co-60	<1.48E+01	0.00E+00	1.48E+01
					Zn-65	<4.01E+01	0.00E+00	4.01E+01
					Zr-95	<2.67E+01	0.00E+00	2.67E+01
					Nb-95	<1.62E+01	0.00E+00	1.62E+01
					I-131	<1.72E+01	0.00E+00	1.72E+01
					Cs-134	<1.82E+01	0.00E+00	1.82E+01
					Cs-137	<2.14E+01	0.00E+00	2.14E+01
					BaLa-140	<1.86E+01	0.00E+00	1.86E+01
					Be-7	2.91E+03	3.62E+02	1.90E+02
					K-40	1.99E+03	3.45E+02	1.92E+02

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**APPENDIX F**

**ERRATA TO  
PREVIOUS REPORTS**

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# APPENDIX F

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## ERRATA TO THE 2020 AREOR

### **Brunswick AREOR: 2018**

#### BNP Appendix A:

BNP Appendix A, Section IV. A.6 incorrectly stated that during 2018 an annual sample was taken from location 501 (Nancy's Creek, Adjacent to WP-55, Near Storm Drain Stabilization Pond) when two location 501 samples were actually collected. Location 501 was sampled 8MAY2018 and 7NOV2018. There were no location 501 monitoring results omitted from the 2018 AREOR as a result of this error (NCR # 02325175).

#### BNP Appendix C:

Surface water sampler percent availability was omitted from Appendix C of the 2018 BNP AREOR. There was no surface water downtime or unavailability for the Brunswick 2018 REMP. Information below should have been included in the 2018 BNP AREOR Appendix C. (NCR # 02325175).

#### **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 2018. There were no surface water sampling deviations or unavailable surface water samples during 2018.

#### BNP Appendix D:

The "Deviation and Unavailable Reason Codes" table in Appendix D should have indicated reason code "AD" as "Analytical Deviation" for TLD location 76 (NCR # 02325175).

Enclosure 2  
RA-21-0050

**ENCLOSURE 2: [CNS Annual Radiological Environmental Operating Report](#)**



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# **ANNUAL RADIOLOGICAL ENVIRONMENTAL OPERATING REPORT**

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**DUKE ENERGY CORPORATION  
CATAWBA NUCLEAR STATION  
Units 1 and 2**

**2020**



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**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
CM	Community
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 <sup>3</sup>	picocurie per cubic meter
Q	Quarterly
REMP	Radiological Environmental Monitoring Program
SA	Semiannually
SB	Site Boundary
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

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# 1.0 EXECUTIVE SUMMARY

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This Annual Radiological Environmental Operating Report describes the Catawba Nuclear Station Radiological Environmental Monitoring Program (REMP), and the program results for the calendar year 2020.

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 eleven samples were analyzed comprising 1,063 test results in order to compile data for the 2020 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 2020 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, thus presenting no significant impact on the environment or public health and safety.

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## **2.0 INTRODUCTION**

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### **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.

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.

### **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

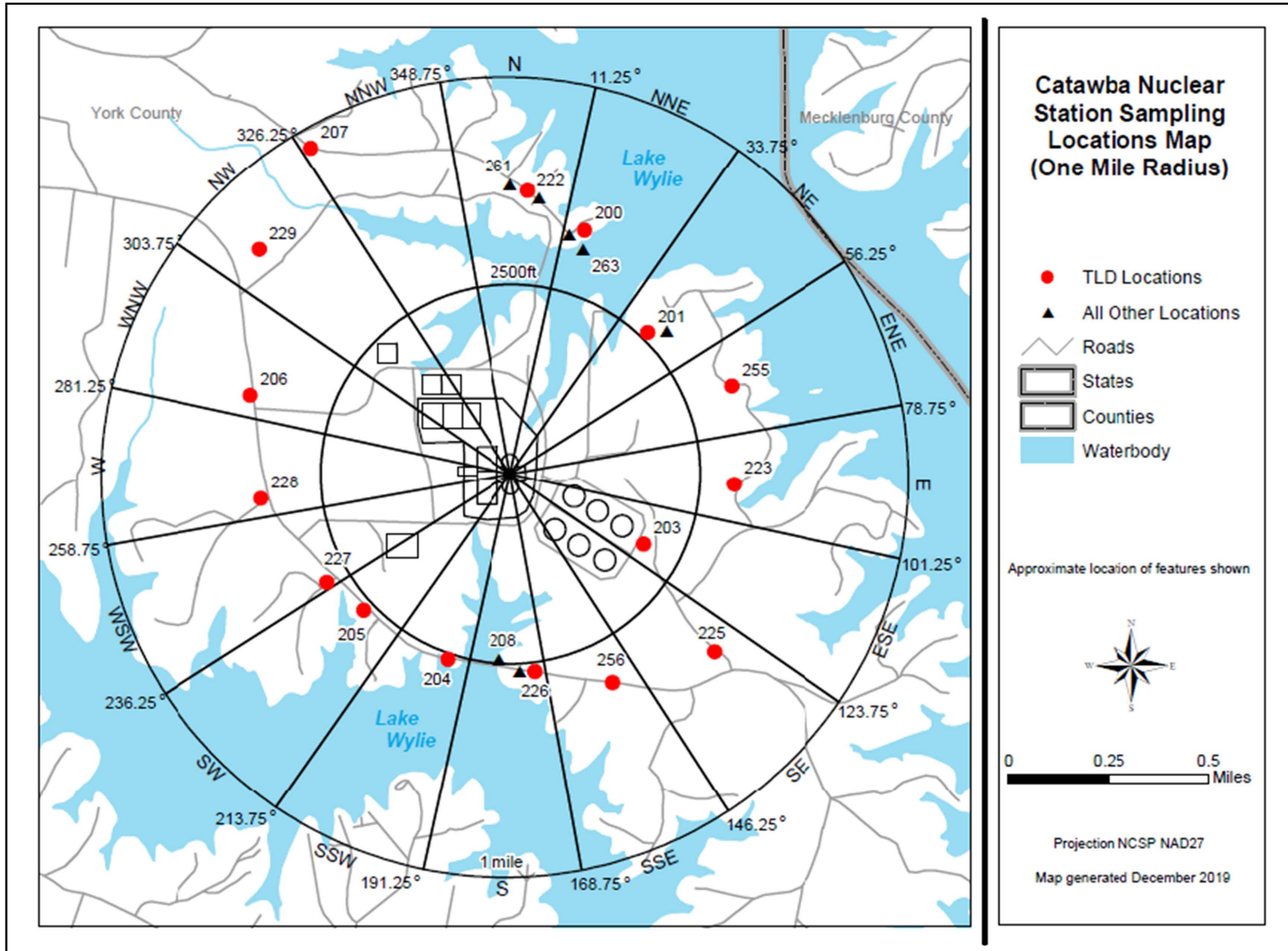
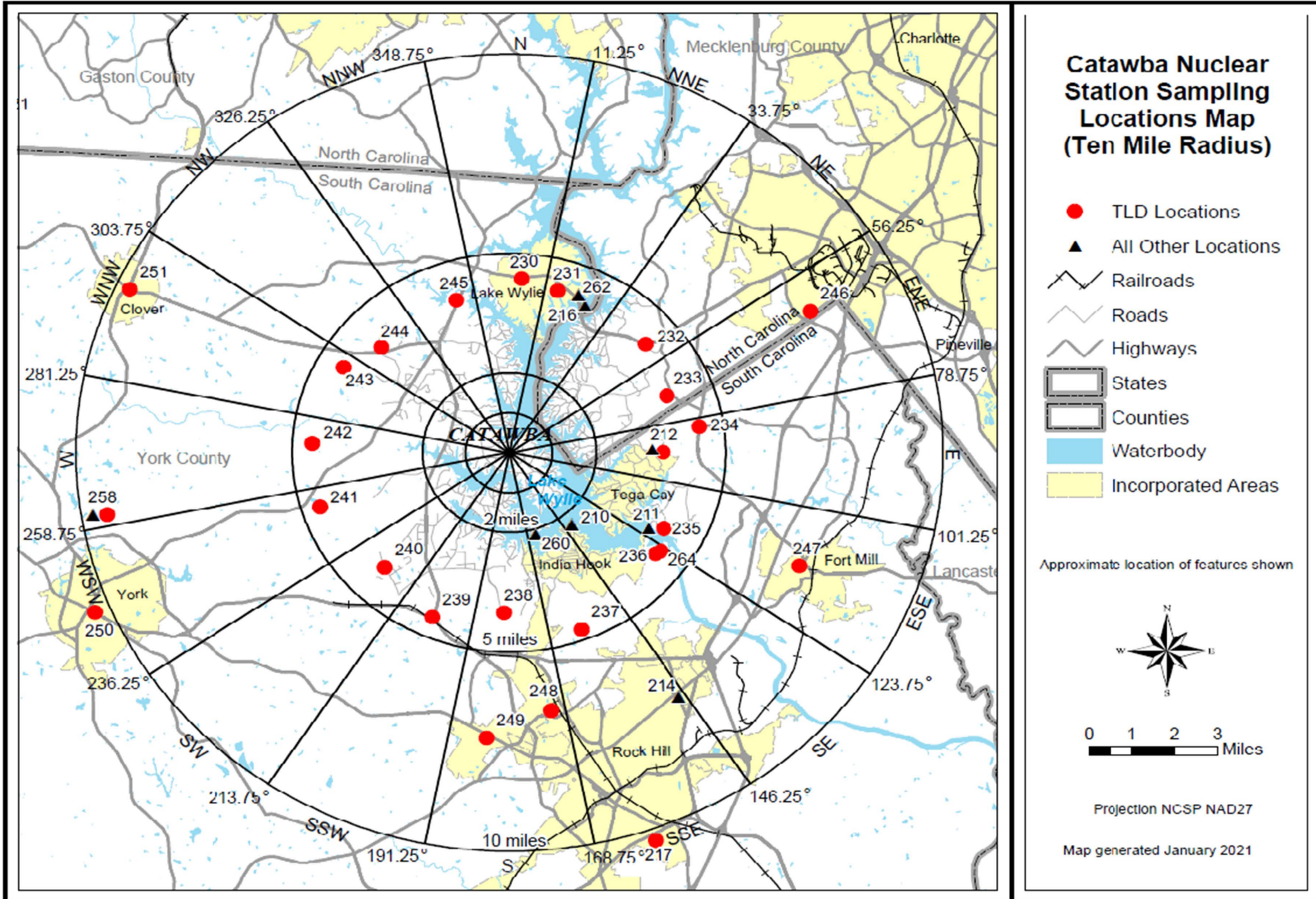


Figure 2.1-2





**TABLE 2.1-A**

**CATAWBA RADIOLOGICAL MONITORING PROGRAM  
SAMPLING LOCATIONS**

Table 2.1-A Codes			
BW	BiWeekly	Q	Quarterly
C	Control	SA	Semiannually
CM	Community	SB	Site Boundary
I	Indicator	SM	Semimonthly
M	Monthly	W	Weekly

Site #	Measure Type	Location Description*	Air Rad. & Part.	Surface Water	Drinking Water	Shoreline Sediment	Food Products (a)	Fish	Milk	Broad Leaf Veg. (b)	Ground Water **
200	I	Site Boundary (0.63 mi NNE)	W, SB							M	
201	I	Site Boundary (0.53 mi NE)	W, CM							M	
208(c)	I	Discharge Canal – Site Boundary (0.45 mi S)	W, SB	M		SA		SA			
210	I	Ebenezer Access (2.31 mi SE)				SA					
211	I	Wylie Dam (4.06 mi ESE)		M							
212(d)	I	Tega Cay (3.32 mi E)	W								
214	I	Rock Hill Water Supply (7.30 mi SSE)			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, SB								
262	C	Lake Wylie Marina- Hwy 49 (4.19 mi NNE)				SA					
263	C	Liberty Hill Road (0.59 mi NNE)		M							

(a) During Harvest Season

(b) When Available

(c) Location Description Change, CNS ODCM Rev. 064 eff. 30DEC2020 (NCR # 02347403, DRR # 02350659)

(d) Location Terminated on 29DEC2020, CNS ODCM Rev. 064 eff. 30DEC2020 (NCR # 02347403, DRR # 02350659)

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

\*\* Currently no off-site ground water monitoring locations available that are used for drinking or irrigation purposes where hydraulic gradient or recharge properties are suitable for contamination.

**TABLE 2.1-B**

**CATAWBA RADIOLOGICAL MONITORING PROGRAM  
SAMPLING LOCATIONS (TLD SITES)**

Table 2.1-B Codes			
C	Control	OR	Outer Ring
IR	Inner Ring	SI	Special Interest

Site #	Measure Type	Location*(d)	Distance (miles)	Sector	Site #	Measure Type	Location*(d)	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(e)	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(a)	SI	TEGA CAY	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	KINGSBURY 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
264(b)	OR	INDIA HOOK ROAD	4.32	SE	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.

(a) Location Description change, CNS ODCM Rev. 064 eff. 30DEC2020 (NCR # 02347403, DRR # 02350659)

(b) Location Added 12MAR2020, CNS ODCM Rev. 064 eff. 30DEC2020 (DRR # 023155656)

(c) Location Terminated 12MAR2020, CNS ODCM Rev. 064 eff. 30DEC2020 (DRR # 023155656)

(d) One or more instruments, such as a pressurized ion chamber, for measuring and recording dose rate continuously may be used in place of, or in addition to, integrating dosimeters. For the purposes of this table, a thermoluminescent dosimeter (TLD) is considered to be one phosphor; two or more phosphors in a packet are considered as two or more dosimeters. Film badges shall not be used as dosimeters for measuring direct radiation. (The 40 stations is not an absolute number. The number of direct radiation monitoring stations may be reduced according to geographical limitations; e.g., at an ocean site, some sectors will be over water so that the number of dosimeters may be reduced accordingly. The frequency of analysis or readout for TLD systems will depend upon the characteristics of the specific system used and should be selected to obtain optimum dose information within minimal fading.)

**TABLE 2.2-A**

**REPORTING LEVELS FOR RADIOACTIVITY  
CONCENTRATIONS IN ENVIRONMENTAL SAMPLES**

Analysis	Water (pCi/liter)	Air Particulates or Gases (pCi/m <sup>3</sup> )	Fish (pCi/kg-wet)	Milk (pCi/liter)	Food Products (pCi/kg-wet)
H-3	20,000 <sup>(a),(b)</sup>	---	---	---	---
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 <sup>(d)</sup>	Tritium	Low Level I-131	Gross Beta	TLD
Air Radioiodine	Weekly	X	---	---	---	---
Air Particulate	Weekly		---	---	(c)	---
	Quarterly Composite	X	---	---	---	---
Direct Radiation	Quarterly	---	---	---	---	X
Surface Water	Monthly Composite <sup>(e)(f)</sup>	X	---	---	---	---
	Quarterly Composite	---	X	---	---	---
Drinking Water	Monthly Composite <sup>(e)</sup>	X	---	(a)	X	---
	Quarterly Composite	---	X	---	---	---
Ground Water	Quarterly	X	X	---	---	---
Shoreline Sediment	Semiannually	X	---	---	---	---
Milk	Semiannually	X	---	X	---	---
Fish	Semiannually	X	---	---	---	---
Broadleaf Vegetation	Monthly <sup>(b)</sup>	X	---	---	---	---
Food Products	Monthly <sup>(g)</sup>	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
- (c) Airborne particulate sample filters shall be analyzed for gross beta radioactivity 24 hours or more after sampling to allow for radon and thoron daughter decay. If gross beta activity in air particulate samples is greater than 10 times the yearly mean of control samples, gamma isotopic analysis shall be performed on the individual samples.
- (d) Gamma isotopic analysis means the identification and quantification of gamma emitting radionuclides that may be attributable to the effluents from the facility.
- (e) A composite sample is one in which the rate at which the liquid sampled is uniform and in which the method of sampling employed results in a specimen that is representative of the time-averages concentration at the location being sampled. In this program composite sample aliquots shall be collected at time intervals that are very short (e.g. hourly) relative to the composite period (e.g. monthly) in order to assure obtaining a representative sample.
- (f) The “upstream sample” shall be taken at a distance beyond significant influence of the discharge. The “downstream” sample shall be taken in an area beyond but near the mixing zone. “Upstream” samples in an estuary must be taken far enough upstream to be beyond the plant influence. Salt water shall be sampled only when the receiving water is utilized for recreational activities.
- (g) If harvest occurs more than once a year, sampling shall be performed during each discrete harvest. If harvest occurs continuously, sampling shall be monthly. Attention shall be paid to including samples of tuberous and root food products.

**TABLE 2.2-C**

**MAXIMUM VALUES FOR THE *A PRIORI* LOWER LIMIT OF DETECTION<sup>(c) (d)</sup>**

Analysis	Water (pCi/liter)	Air Particulates or Gases (pCi/m <sup>3</sup> )	Fish (pCi/kg-wet)	Milk (pCi/liter)	Food Products (pCi/kg-wet)	Sediment (pCi/kg-dry)
Gross Beta	4	0.01	---	---	---	---
H-3	2000 <sup>(a)</sup>	---	---	---	---	---
Mn-54	15	---	130	---	---	---
Fe-59	30	---	260	---	---	---
Co-58, 60	15	---	130	---	---	---
Zn-65	30	---	260	---	---	---
Zr-Nb-95	15	---	---	---	---	---
I-131	1 <sup>(b)</sup>	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.

(c) Lower Limit of Detection is defined in Section 2.3.2

(d) This list does not mean that only these nuclides are to be considered. Other peaks that are identifiable, together with those of the above nuclides, shall also be analyzed and reported in the Annual Radiological Environmental Operating Report pursuant to Technical Specification 5.6.2.

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## 3.0 INTERPRETATION OF RESULTS

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Review of all 2020 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 2020 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 2020. Summary tables containing 2020 information required by Technical Specification Administrative Control 5.6.2 are located in Appendix B. REMP results for 2020 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 2020 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 2020 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 2020 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 2020. Similarly, there was no significant increase in ambient background radiation levels in the surrounding areas. The 2020 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**

Airborne particulate and radioiodine samples at each of six locations were composited 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.

In 2020, 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 2020. 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 2020. Table 3.1-A shows the highest indicator annual mean and control location annual mean for gross beta in air particulate.

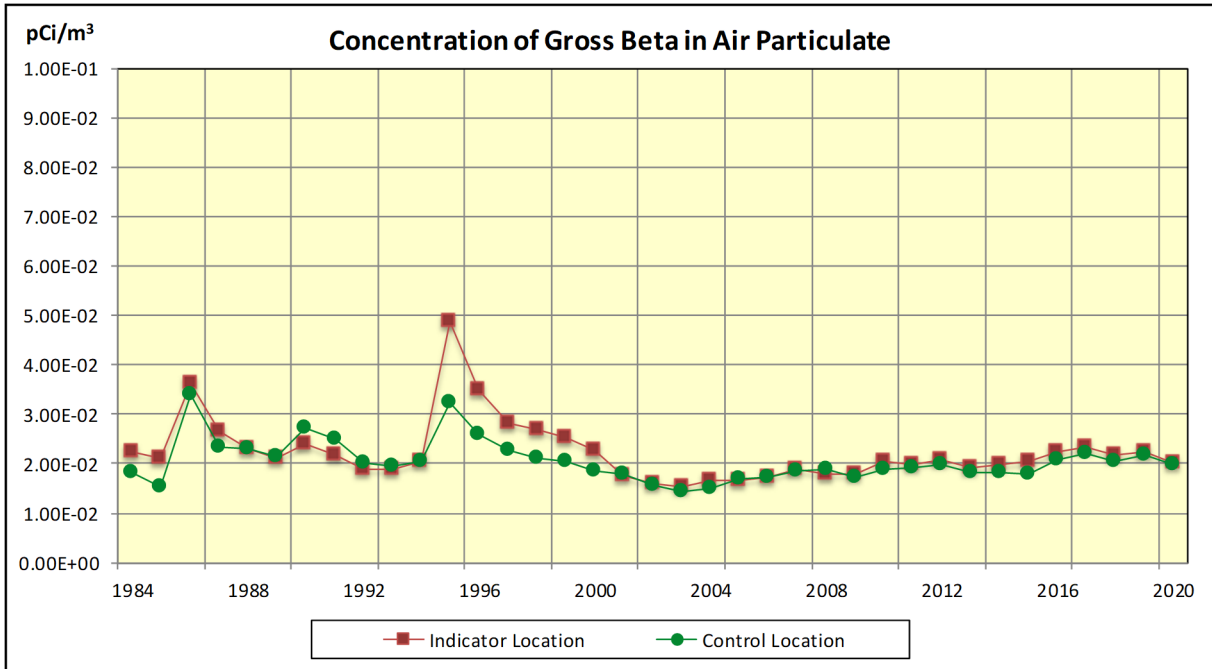
There was no detectable I-131 in air radioiodine samples analyzed in 2020. Table 3.1-B shows the highest indicator annual mean and control location annual mean for I-131 since 1984 (preoperational period). The table shows similar concentrations for both the indicator and control locations and the activities 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.

In 2020, Nuclear Oversight (NOS) determined (NCR #2347403) that air sampling location 212 (Tega Cay, 3.32 mi E) did not currently meet the definition of a community air sampling location per CNS SLC 16.11-13. The geography and population demographics have changed considerably since Location 212 was initially deemed the community air sampler. To meet the CNS SLC 16.11-13 requirements, Location 201 (Site Boundary, 0.53 mi NE) was removed as a site boundary location (as it had the 4<sup>th</sup> highest average D/Q) and is now the new community air sampler as it is within a community on the edge of the station. Location 208 (Discharge Canal – Site Boundary, 0.45 mi S), the location with the third highest average D/Q was formally made a site boundary location as it had not been previously designated as so. Location 212 (Tega Cay, 3.32 mi E) was a surplus location and was removed from the CNS REMP. All changes to the CNS REMP as a result of the NOS community air sampling finding were effective with the 30DEC2020 Rev. 64 of the CNS ODCM.



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**

<b>Year</b>	<b>Indicator Location (pCi/m<sup>3</sup>)</b>	<b>Control Location (pCi/m<sup>3</sup>)</b>
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
2020	2.01E-2	1.97E-2

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

<b>Year</b>	<b>Indicator Location (pCi/m<sup>3</sup>)</b>	<b>Control Location (pCi/m<sup>3</sup>)</b>
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 <sup>(1)</sup>	5.53E-2	5.65E-2
2012	0.00E0	0.00E0
2013	0.00E0	0.00E0
2014 <sup>(2)</sup>	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
2020	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. Monthly composite drinking water samples were collected at each of two locations; one indicator location, along with one control location.

No gamma emitting radionuclides attributable to plant operations were identified in 2020 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 4.16 pCi/l in 2020 and the control location concentration was 4.41 pCi/l. The gross beta mean indicator activity and mean control activity increased in 2019 due to an analytical method change affecting analytical sensitivities in 2019 (NCR # 02303030).

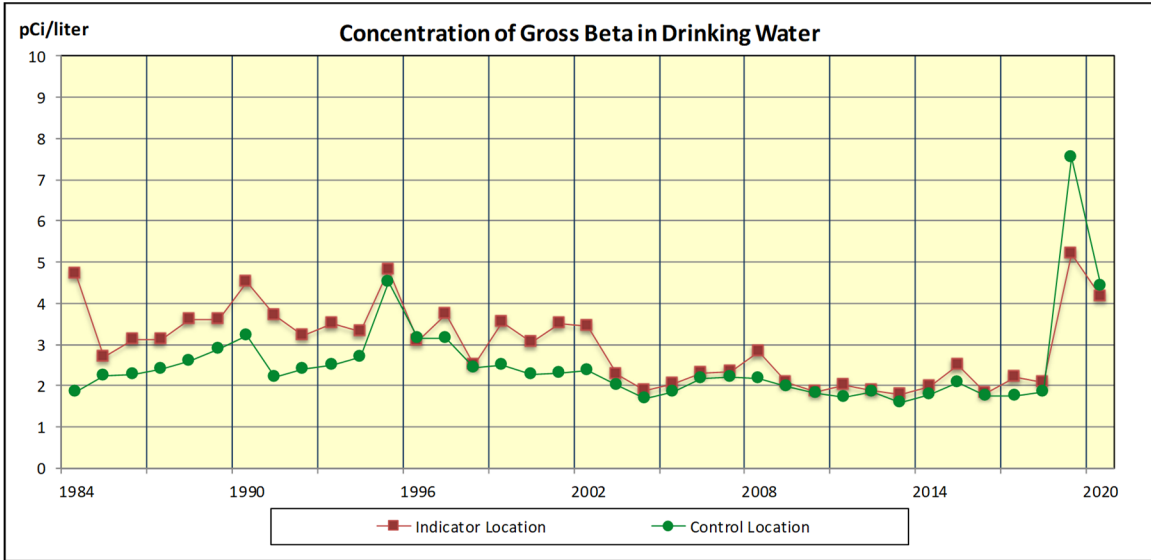
Tritium was detected in all four indicator samples as well as all four control samples during 2020. The mean indicator tritium concentration for 2020 was 452 pCi/l, 2.26% of reporting level. The mean control tritium concentration for 2020 was 287 pCi/l, 1.44% of reporting level. Figure 3.2-2 and Table 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 2020; therefore low-level iodine analysis is not required.

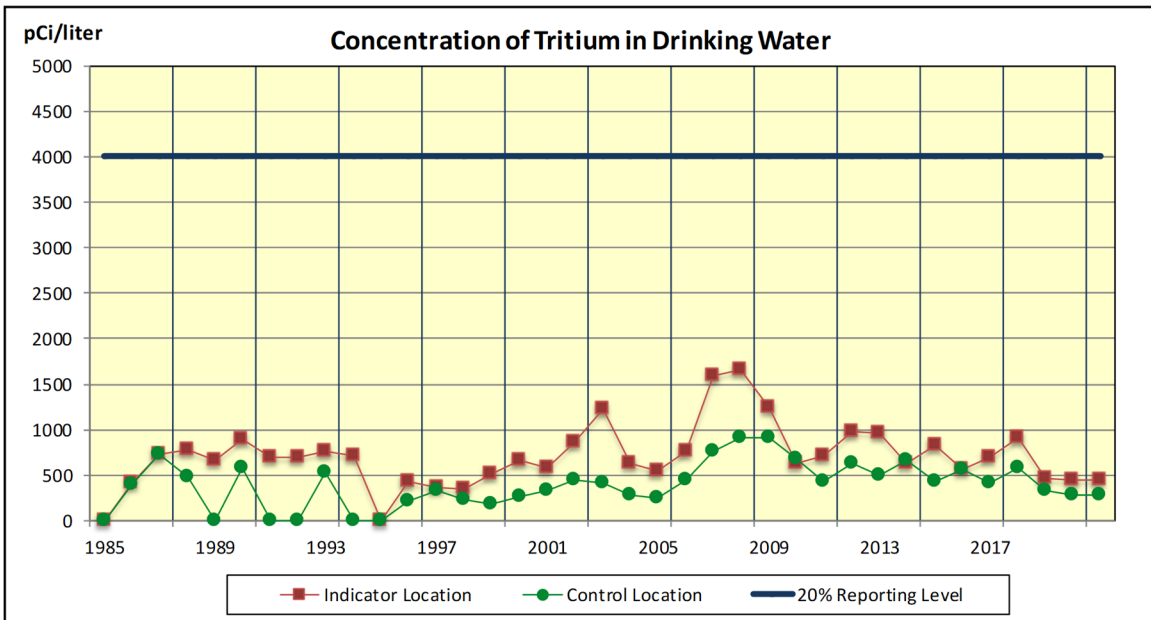
K-40 is a naturally occurring radionuclide observed in drinking water samples in 2020.

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 <sup>(1)</sup>	5.20	7.54	4.55E2	2.85E2
2020	4.16	4.41	4.52E2	2.87E2

0.00E0 indicates no 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 composite samples were analyzed for gamma emitting radionuclides. The samples were additionally 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 all 8 indicator samples with an average concentration of 5,478 pCi/l. Indicator location 208 (Discharge Canal) showed a range of activities from 7,470 to 13,400 pCi/l which had the highest mean concentration of 10,548 pCi/l. Tritium was detected in two of the four control samples during 2020 with an average concentration of 237 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).

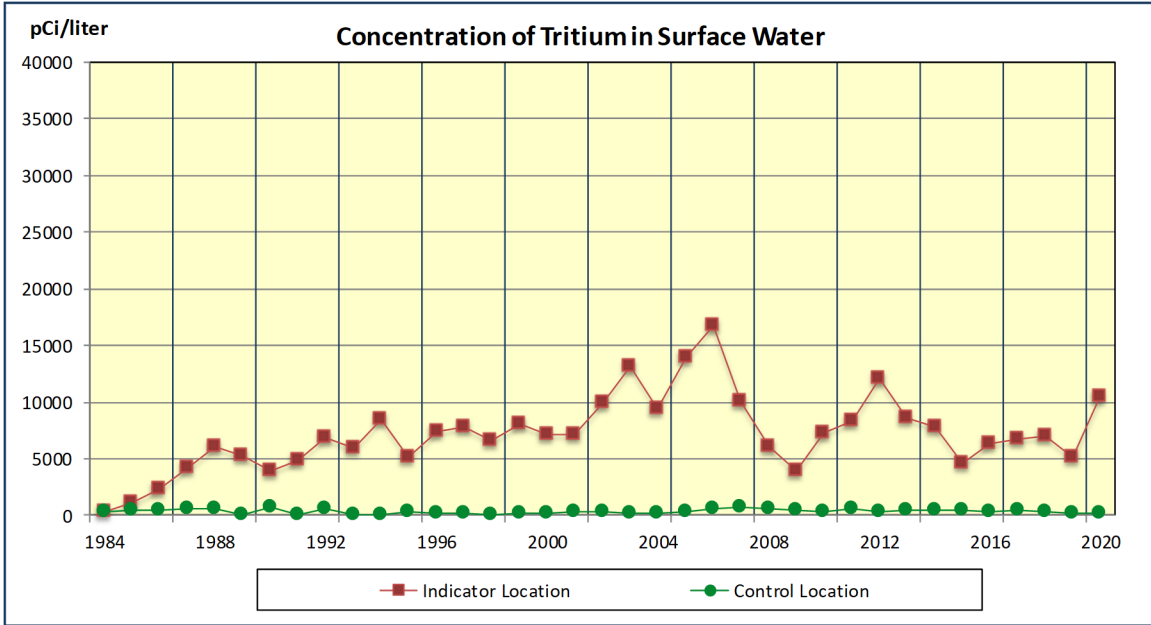
No gamma emitting radionuclides attributable to plant operations were identified in 2020 surface water samples. Table 3.3 summarizes the indicator annual means of radionuclides detected since 1984. Visual inspection of the tabular data did not reveal any increasing trends.

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 2020.

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	Cs-137	H-3 Indicator	H-3 Control
1984	4.59E-1	5.71E-1	9.08E-1	3.35E2	3.18E2
1985	3.46E0	4.83E-2	8.19E-1	1.19E3	5.05E2
1986	3.10E-1	-4.12E-2	4.85E-1	2.34E3	5.05E2
1987 <sup>(1)</sup>	0.00E0	3.10E0	9.90E0	4.17E3	6.20E2
1988	9.20E0	0.00E0	0.00E0	6.03E3	6.07E2
1989	0.00E0	0.00E0	0.00E0	5.27E3	0.00E0
1990	6.50E0	0.00E0	0.00E0	3.98E3	7.73E2
1991	0.00E0	0.00E0	0.00E0	4.87E3	0.00E0
1992	0.00E0	0.00E0	0.00E0	6.91E3	6.64E2
1993	4.70E0	1.80E0	0.00E0	5.98E3	0.00E0
1994	0.00E0	0.00E0	0.00E0	8.42E3	0.00E0
1995	0.00E0	0.00E0	0.00E0	5.13E3	2.89E2
1996	0.00E0	0.00E0	0.00E0	7.36E3	2.61E2
1997	0.00E0	0.00E0	0.00E0	7.77E3	2.20E2
1998	0.00E0	0.00E0	0.00E0	6.61E3	0.00E0
1999	0.00E0	0.00E0	0.00E0	8.13E3	2.41E2
2000	0.00E0	0.00E0	0.00E0	7.19E3	2.56E2
2001	0.00E0	0.00E0	0.00E0	7.13E3	3.28E2
2002	0.00E0	0.00E0	0.00E0	1.00E4	3.80E2
2003	0.00E0	0.00E0	0.00E0	1.31E4	2.37E2
2004	0.00E0	0.00E0	0.00E0	9.43E3	2.60E2
2005	0.00E0	0.00E0	0.00E0	1.40E4	3.78E2
2006	0.00E0	0.00E0	0.00E0	1.67E4	5.83E2
2007	0.00E0	0.00E0	0.00E0	1.01E4	7.82E2
2008	6.80E0	1.16E1	0.00E0	6.02E3	6.31E2
2009	9.40E0	1.06E1	0.00E0	3.93E3	5.29E2
2010	0.00E0	0.00E0	0.00E0	7.26E3	2.94E2
2011	8.75E0	1.96E1	0.00E0	8.29E3	5.41E2
2012	0.00E0	0.00E0	0.00E0	1.21E4	3.71E2
2013	0.00E0	0.00E0	0.00E0	8.62E3	4.02E2
2014 <sup>(2) (3)</sup>	7.23E0	4.69E0	0.00E0	7.79E3	4.18E2
2015 <sup>(4)</sup>	1.15E1	1.07E0	0.00E0	4.61E3	4.14E2
2016	0.00E0	0.00E0	0.00E0	6.34E3	2.81E2
2017	0.00E0	0.00E0	0.00E0	6.80E3	5.24E2
2018	0.00E0	0.00E0	0.00E0	7.07E3	2.79E2
2019	0.00E0	0.00E0	0.00E0	5.10E3	2.21E2
2020	0.00E0	0.00E0	0.00E0	1.05E4	2.37E2

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 3<sup>rd</sup> 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 biweekly grab samples of milk were analyzed by gamma spectroscopy and low-level Iodine-131 during 2020. There was one control location sampled. No indicator dairies were identified by the 2020 land use census.

There were no gamma emitting radionuclides attributable to plant operations identified in milk samples in 2020. 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 2020.

**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 <sup>(1)</sup>	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 <sup>(2)</sup>	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
2020	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

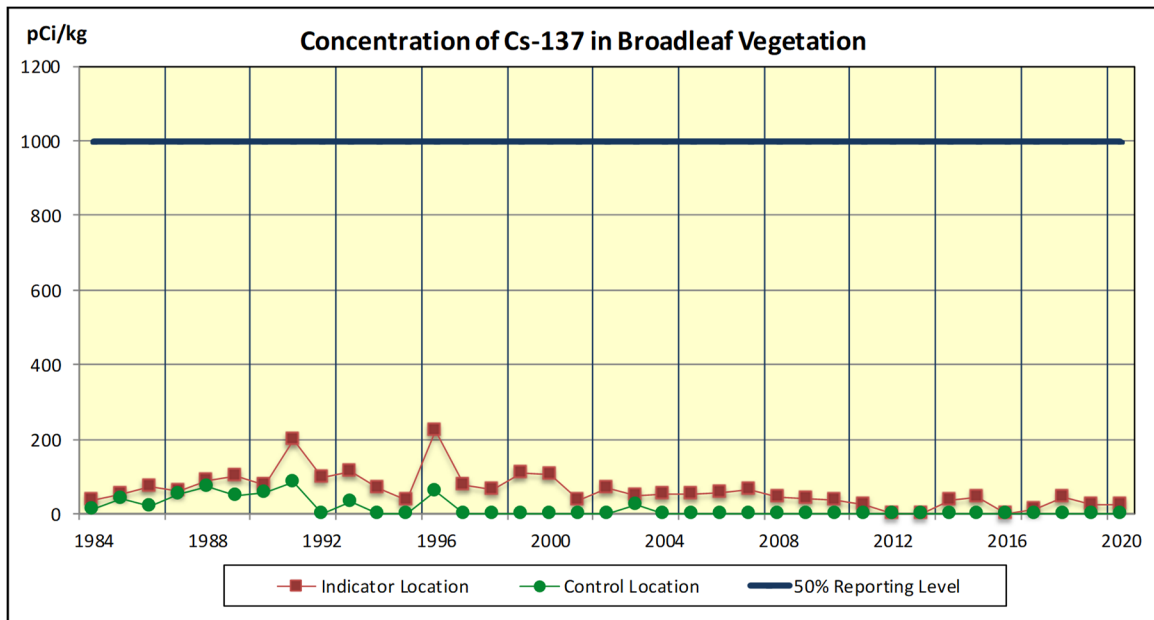
Gamma spectroscopy was performed on 60 broadleaf vegetation samples collected monthly from five locations during 2020. Four indicator locations and one control location were sampled. Cs-137 was reported in one indicator location, Location 201, in five of twelve samples collected with a mean concentration of 24.6 pCi/kg (1.23% of reporting level). Cs-137 was not detected in any of the control samples in 2020.

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 2020 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 2020.

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 <sup>(1)</sup>	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 <sup>(2)</sup>	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
2020	2.46E1	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 2020 growing season eleven samples were collected (monthly when available) and analyzed for gamma radionuclides.

There were no gamma emitting radionuclides attributable to plant operations identified in food product samples in 2020. There is no control location for this media type.

K-40 and Be-7 are naturally occurring radionuclides that were observed in food product samples in 2020.

### 3.7 FISH

Gamma spectroscopy was performed on the edible portions of the twelve fish samples collected semiannually during 2020. One downstream indicator location and one control location were sampled.

No fish indicator or control samples were positive for gamma emitting radionuclides, attributable to plant operations during 2020.

Co-58, Co-60, and Cs-137 are normally the predominant radionuclides identified in fish samples.

Figures 3.7-1 and 3.7-2 are graphs displaying annual mean concentrations for 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 1984 have been included in the table. Overall, radionuclides have not shown a significant trend or accumulation.

K-40 and Be-7 are naturally occurring radionuclides that were observed in some fish samples collected during 2020.

Figure 3.7-1

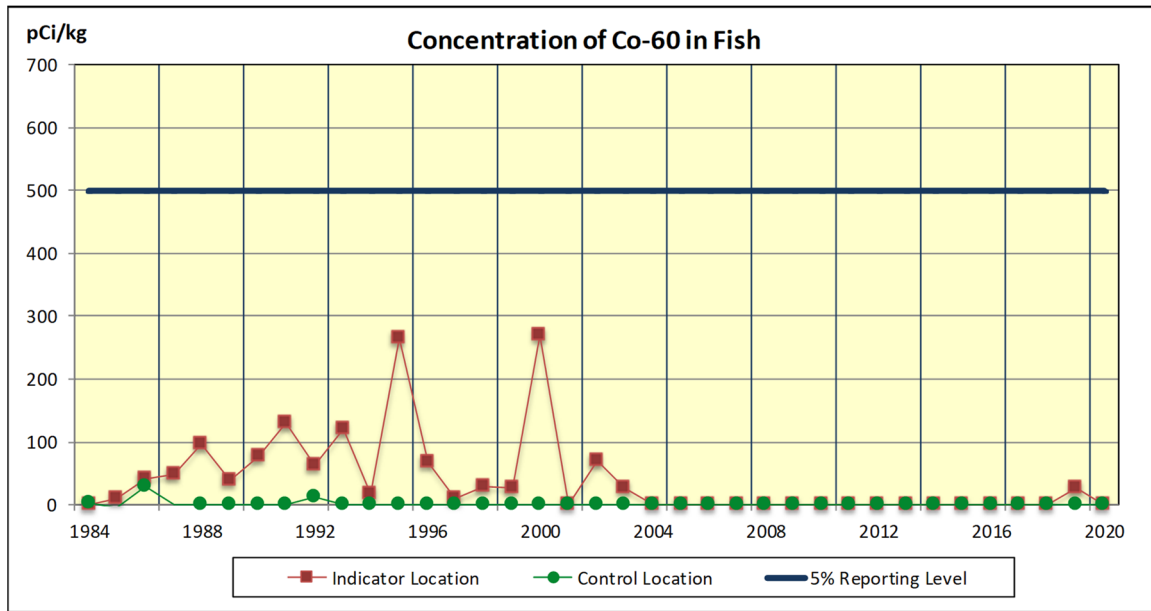
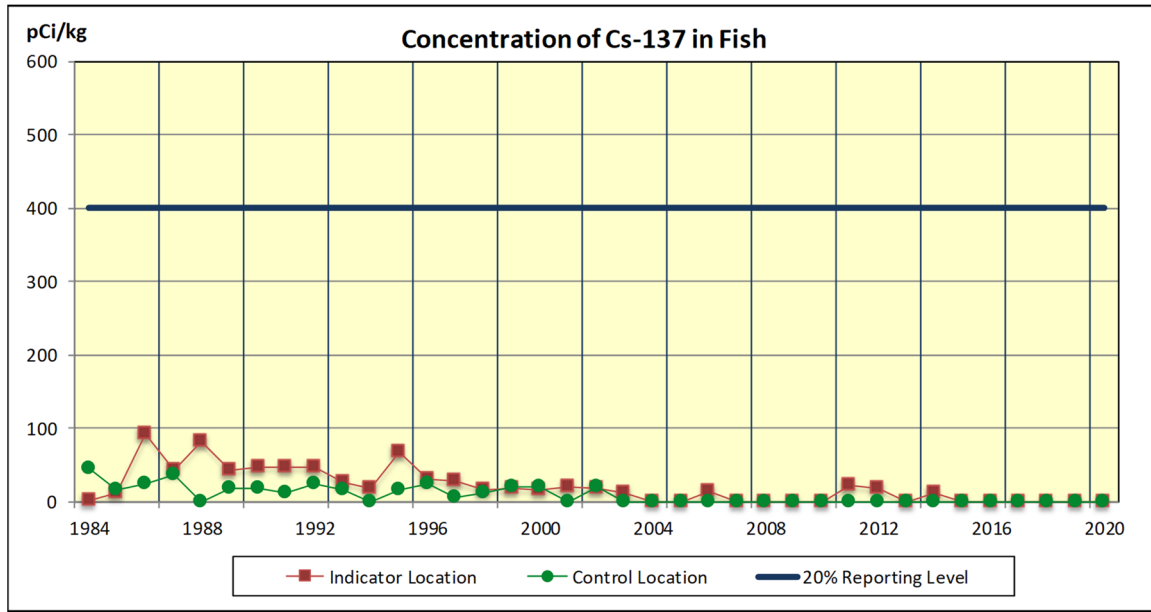


Figure 3.7-2





**Table 3.7 Mean Concentrations of Radionuclides in Fish (pCi/kg)**

Year	Co-58	Co-60	Cs-134	Cs-137
1984	3.00E0	6.11E-1	-5.32E0	1.83E0
1985	3.40E1	9.11E0	3.22E0	1.28E1
1986	1.86E2	4.01E1	3.51E1	9.29E1
1987 <sup>(1)</sup>	7.57E1	4.81E1	3.83E0	4.27E1
1988	1.40E2	9.70E1	1.67E1	8.24E1
1989	1.33E2	3.83E1	1.47E1	4.37E1
1990	1.75E2	7.77E1	1.32E1	4.66E1
1991	1.46E2	1.29E2	1.03E1	4.60E1
1992	9.02E1	6.20E1	1.27E1	4.61E1
1993	3.58E2	1.21E2	2.73E0	2.56E1
1994	4.75E1	1.81E1	0.00E0	1.75E1
1995	8.90E2	2.66E2	0.00E0	6.77E1
1996	5.95E1	6.68E1	0.00E0	3.02E1
1997	4.93E1	9.88E0	0.00E0	2.74E1
1998	6.44E1	2.86E1	0.00E0	1.58E1
1999	3.12E1	2.71E1	0.00E0	1.87E1
2000	2.13E2	2.69E2	0.00E0	1.52E1
2001	4.66E1	0.00E0	0.00E0	2.08E1
2002	5.23E1	7.00E1	0.00E0	1.73E1
2003	1.43E2	2.61E1	0.00E0	1.19E1
2004	1.81E1	0.00E0	0.00E0	0.00E0
2005	0.00E0	0.00E0	0.00E0	0.00E0
2006	0.00E0	0.00E0	0.00E0	1.44E1
2007	0.00E0	0.00E0	0.00E0	0.00E0
2008	0.00E0	0.00E0	0.00E0	0.00E0
2009	0.00E0	0.00E0	0.00E0	0.00E0
2010	0.00E0	0.00E0	0.00E0	0.00E0
2011	0.00E0	0.00E0	0.00E0	2.16E1
2012	0.00E0	0.00E0	0.00E0	1.84E1
2013	0.00E0	0.00E0	0.00E0	0.00E0
2014 <sup>(2)</sup>	0.00E0	0.00E0	0.00E0	1.10E1
2015	0.00E0	0.00E0	0.00E0	0.00E0
2016	0.00E0	0.00E0	0.00E0	0.00E0
2017	0.00E0	0.00E0	0.00E0	0.00E0
2018	0.00E0	0.00E0	0.00E0	0.00E0
2019	0.00E0	2.72E1	0.00E0	0.00E0
2020	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 2020, a total of six shoreline sediment samples were collected semiannually and analyzed, four from two indicator locations and two from the control location.

The sample is dried, then sifted to remove any rocks and clams prior to analysis. Gamma analysis of the six samples detected only natural activity in the samples collected in 2020.

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.

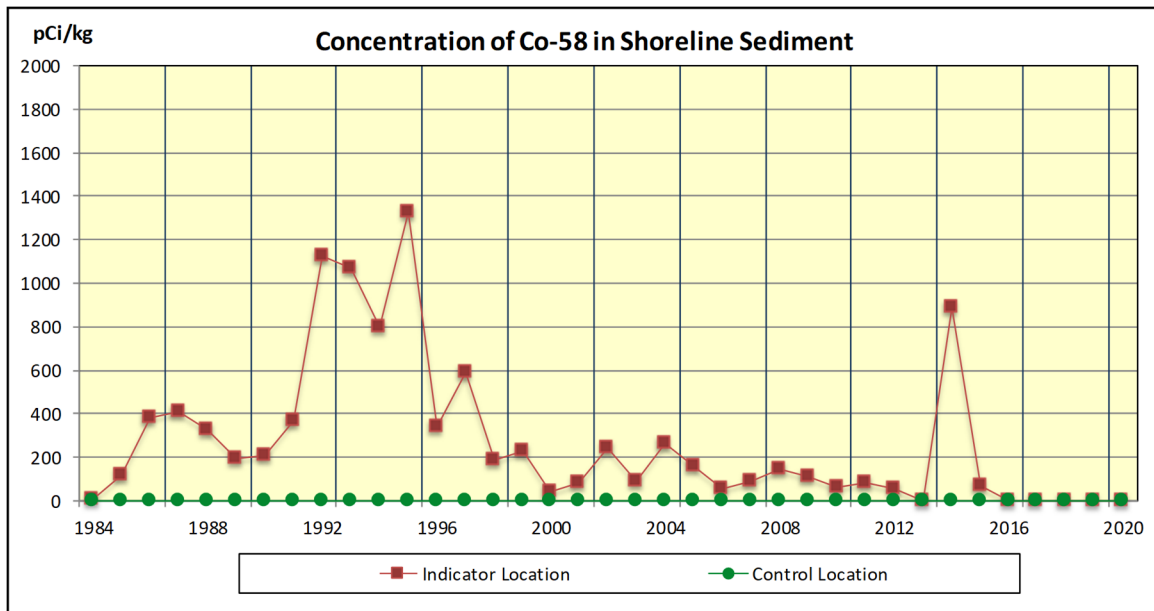
Co-58, Co-60, and Cs-137 are normally the predominant radionuclides identified in shoreline sediment samples. There were no gamma emitting radionuclides attributable to plant operations identified in samples from the indicator locations or the control location in 2020.

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.

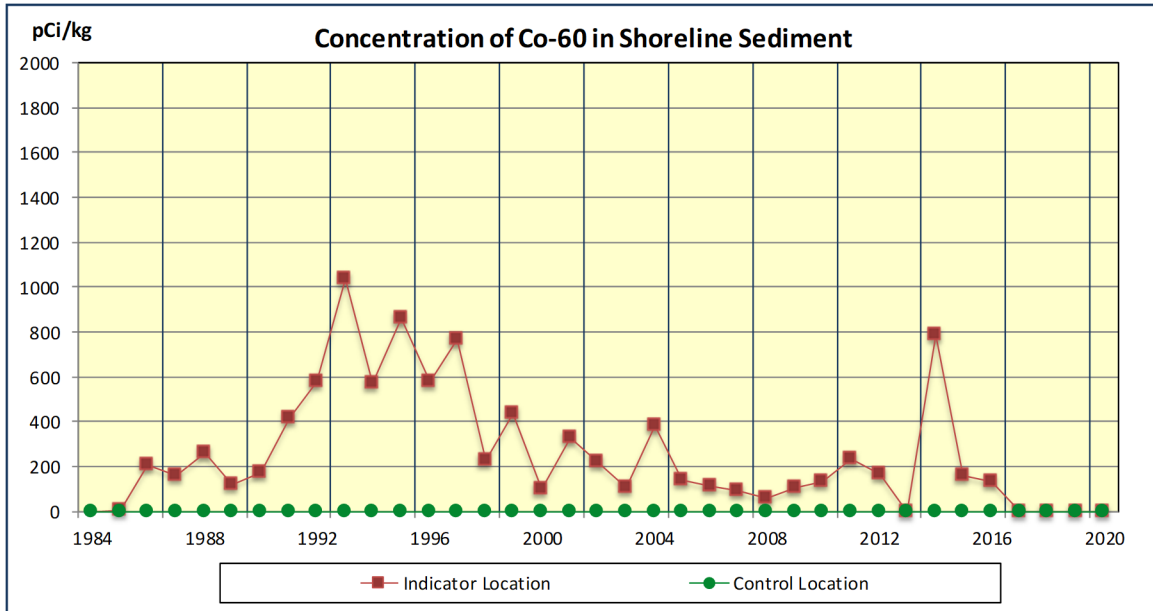
Naturally occurring K-40 was observed in some shoreline sediment samples collected during 2020.

**Figure 3.8-1**



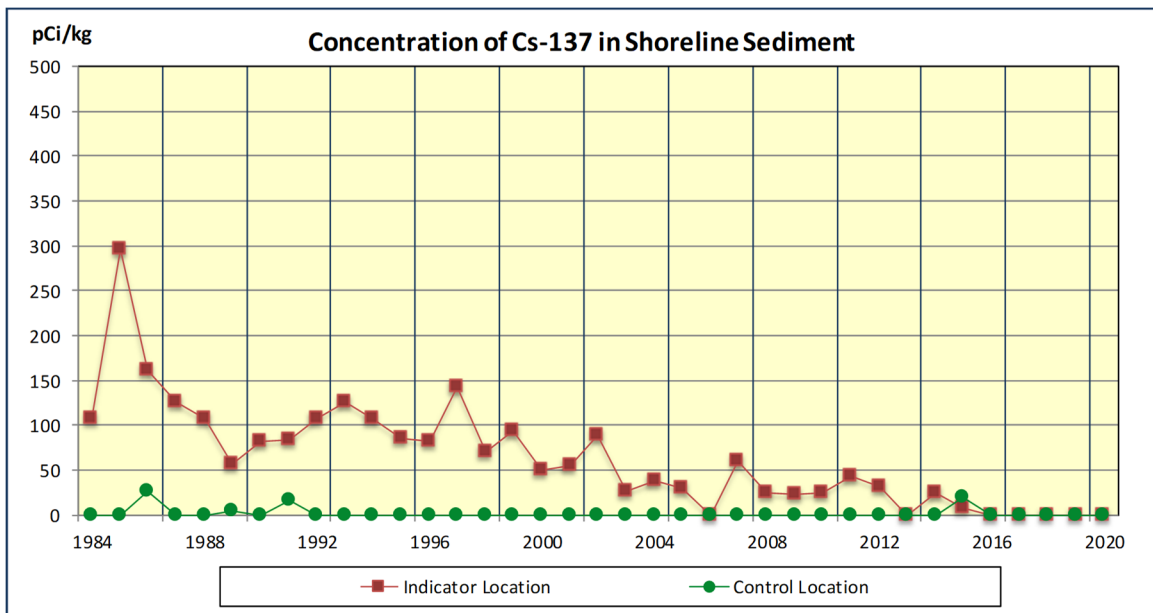
*There is no reporting level for Co-58 in Shoreline Sediment*

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	Cs-134	Cs-137	Co-57
1984	1.03E0	4.40E0	-2.34E0	3.19E1	1.07E2	0.00E0
1985	-3.12E0	1.16E2	5.18E0	2.11E2	2.97E2	0.00E0
1986	1.09E2	3.79E2	2.05E2	6.50E1	1.61E2	0.00E0
1987 <sup>(1)</sup>	8.83E1	4.08E2	1.61E2	6.08E1	1.26E2	0.00E0
1988	1.07E2	3.29E2	2.63E2	2.59E1	1.07E2	7.65E-1
1989	4.58E1	1.94E2	1.21E2	1.65E1	5.77E1	0.00E0
1990	5.39E1	2.08E2	1.77E2	1.66E1	8.18E1	0.00E0
1991	8.50E1	3.70E2	4.19E2	1.82E1	8.33E1	1.20E0
1992	1.17E2	1.13E3	5.80E2	1.69E1	1.07E2	3.00E0
1993	1.33E2	1.07E3	1.04E3	2.80E1	1.26E2	2.47E1
1994	4.93E1	7.98E2	5.73E2	5.67E0	1.07E2	4.38E0
1995	1.02E2	1.33E3	8.65E2	0.00E0	8.50E1	3.69E1
1996	8.73E1	3.39E2	5.81E2	0.00E0	8.30E1	0.00E0
1997	6.96E1	5.90E2	7.64E2	0.00E0	1.43E2	0.00E0
1998	3.07E1	1.88E2	2.30E2	0.00E0	7.11E1	0.00E0
1999	7.28E1	2.29E2	4.39E2	0.00E0	9.42E1	0.00E0
2000	0.00E0	3.90E1	1.03E2	0.00E0	4.96E1	0.00E0
2001	3.86E1	8.27E1	3.29E2	0.00E0	5.58E1	0.00E0
2002	3.51E1	2.41E2	2.22E2	0.00E0	8.83E1	0.00E0
2003	2.17E1	8.75E1	1.08E2	0.00E0	2.69E1	0.00E0
2004	6.60E1	2.67E2	3.83E2	0.00E0	3.79E1	0.00E0
2005	0.00E0	1.61E2	1.41E2	0.00E0	3.04E1	0.00E0
2006	0.00E0	5.40E1	1.11E2	0.00E0	0.00E0	0.00E0
2007	0.00E0	8.77E1	9.46E1	0.00E0	6.13E1	0.00E0
2008	0.00E0	1.48E2	6.24E1	0.00E0	2.57E1	0.00E0
2009	0.00E0	1.10E2	1.04E2	0.00E0	2.27E1	0.00E0
2010	0.00E0	6.56E1	1.37E2	0.00E0	2.56E1	0.00E0
2011	0.00E0	8.36E1	2.36E2	3.62E1	4.33E1	1.05E1
2012	0.00E0	5.59E1	1.70E2	0.00E0	3.15E1	0.00E0
2013	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0
2014 <sup>(2) (3)</sup>	6.84E1	8.87E2	7.90E2	0.00E0	2.46E1	0.00E0
2015	0.00E0	6.73E1	1.61E2	0.00E0	8.75E0	0.00E0
2016	0.00E0	0.00E0	1.31E2	0.00E0	0.00E0	0.00E0
2017	0.00E0	0.00E0	1.31E2	0.00E0	0.00E0	0.00E0
2018	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
2020	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 3<sup>rd</sup> 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. Catawba has forty-one Thermoluminescent dosimeter (TLD) locations which are collected quarterly. Sixteen TLDs, one in each meteorological sector in the general area of the site boundary are designated as "inner ring" and are within a 1 mile radius from station center and all are used as indicators. Sixteen TLD locations, one in each meteorological sector in the 6 to 8 kilometer range, are designated as "outer ring," they 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," they are placed in population centers, residential areas, or schools. 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 2020, 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 102.6 mrem at indicator location 264, India Hook Road, 4.32 mi SE. 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 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 2020 ODCM TLD

location exceeded the quarterly investigation level therefore no additional evaluation was performed. Quarterly TLD results are in Appendix E.

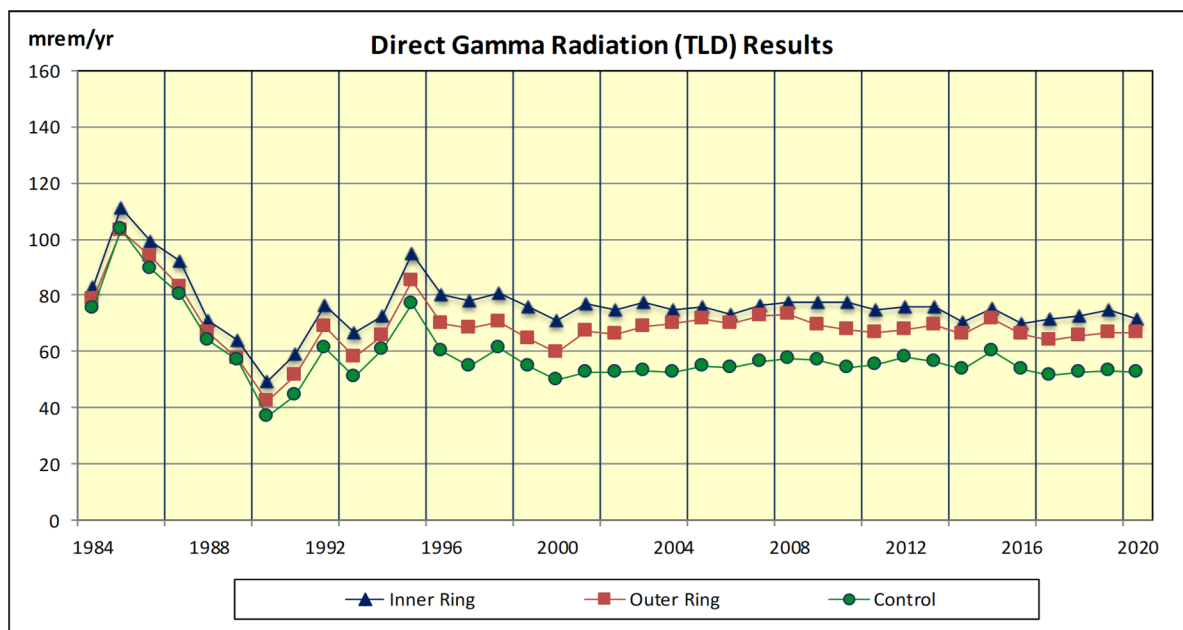
A TLD intercomparison program is conducted as part of the quality assurance program. Results of this program are included in section 4.7.

### 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<sup>(1)</sup>**

<b>Year</b>	<b>Inner Ring Average (mrem/yr)</b>	<b>Outer Ring Average (mrem/yr)</b>	<b>Control Average (mrem/yr)</b>
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	7.47E1	6.70E1	5.34E1
2020	7.16E1	6.65E1	5.27E1

\* Preoperational Data

(1) 2014 AREOR, tabular results converted from mR/yr to mrem/yr (n \* 0.95)

### **3.10 LAND USE CENSUS**

The 2020 Annual Land Use Census was conducted June 23 - 25, 2020 as required by SLC 16.11-14. The 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, which includes: the nearest residence, the nearest garden greater than 50 square meters (500 square feet), the nearest milk-giving animal (cow, goat, etc.).

Table 3.10 summarizes the comparison between the 2019 and 2020 census results. A map indicating identified locations is shown in Figure 3.10.

During the 2020 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 2020 land use census.

The Fleet Land Use Procedure AD-CP-ALL-0014 (Revision 4), Land Use Census Evaluation, was revised in 2020 to standardize the approach for the evaluation of Land Use Dose Calculations (NCR # 02343171).



**Table 3.10 Catawba 2020 Land Use Census Results**

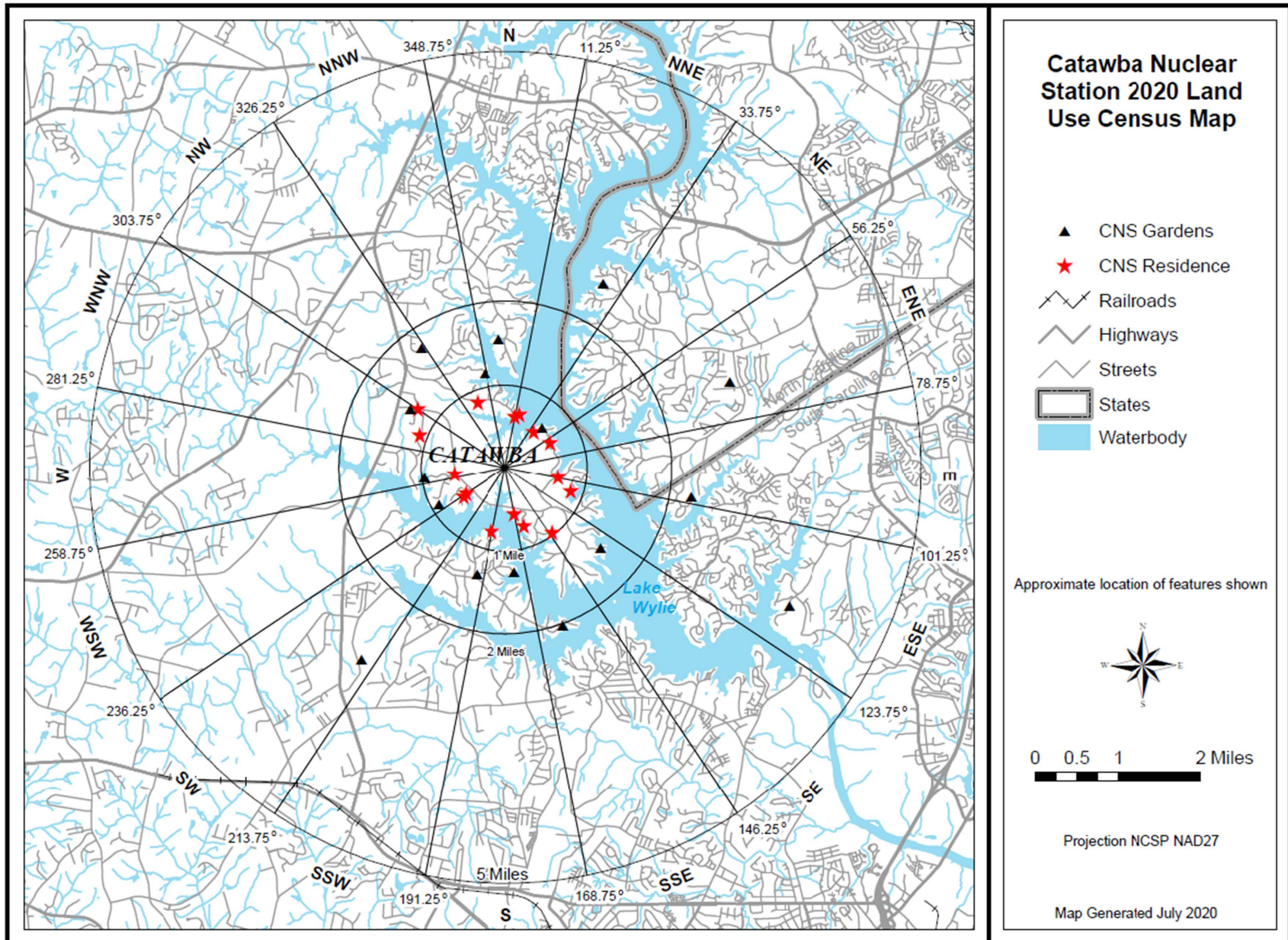
**Performed 6/23/2020 - 6/25/2020  
Nearest Pathways (Miles)**

SECTOR	RESIDENCE		GARDEN		MILK ANIMAL	
	2019	2020	2019	2020	2019	2020
North	0.63	0.63	1.55	1.55	---	---
North-Northeast	0.66	0.66	2.75	2.51*	---	---
Northeast	0.56	0.56	0.67	0.67	---	---
East-Northeast	0.61	0.61	1.44	2.89*	---	---
East	0.65	0.65	2.26	2.26	---	---
East-Southeast	0.84	0.84	3.80	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	1.26*	---	---
South-Southwest	0.78	0.78	1.08	1.33*	---	---
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	1.35	1.35	---	---
Northwest	1.27	1.27	1.54	1.76*	---	---
North-Northwest	0.86	0.86	2.13	1.17*	---	---

**NOTE: Sector and distances were determined by Global Positioning System**

**\* Represents a change from the previous year  
--- Indicates no occurrence within 5 mile radius**

Figure 3.10



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# 4.0 QUALITY ASSURANCE

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## 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; beta analysis in drinking water samples, and Low-Level Iodine-131 analysis in milk samples.

## **4.5 DUKE ENERGY INTERLABORATORY COMPARISON PROGRAM**

In 2020 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 2020. 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, mixed gamma in soil, 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 2020 is documented in Table 4.0-A.

Interlaboratory cross check samples from EZA were received and analyzed in two of the four quarters of 2020. Table 4.0-A lists the performance for specific samples. Fifty-one nuclide results were reported to EZA of which forty-nine (96 %) 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**

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 using the NIST-traceable Hopewell and submits them for analysis of the unknown estimated delivered exposure. A summary of the 2020 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 2020. A summary of the GEL quality assurance program results for the sample media types sent to GEL during 2020 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

#### 2020 Cross Check Results for EnRad Laboratories

Interlaboratory cross check samples from EZA were received and analyzed in two of the four quarters of 2020. 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. Fifty-one nuclide results were reported to EZA of which forty-nine (96 %) 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	E13185	Cs-137	2	pCi	225	238	0.95	Agreement
I-131 in Charcoal Cartridge	E13183	I-131	2	pCi	95.8	91.5	1.05	Agreement
Gamma in Soil	E13184	Ce-141	2	pCi/g	0.199	0.206	0.97	Agreement
		Co-58	2	pCi/g	0.168	0.178	0.94	Agreement
		Co-60	2	pCi/g	0.309	0.347	0.89	Agreement
		Cr-51	2	pCi/g	0.371	0.455	0.82	Agreement
		Cs-134	2	pCi/g	0.226	0.260	0.87	Agreement
		Cs-137	2	pCi/g	0.230	0.257	0.90	Agreement
		Fe-59	2	pCi/g	0.174	0.179	0.97	Agreement
		Mn-54	2	pCi/g	0.238	0.238	1.00	Agreement
		Zn-65	2	pCi/g	0.416	0.399	1.04	Agreement
Gamma in Simulated Vegetation	E13187	Ce-141	2	pCi/g	0.228	0.184	1.24	Agreement
		Co-58	2	pCi/g	0.172	0.159	1.08	Agreement
		Co-60	2	pCi/g	0.312	0.309	1.01	Agreement
		Cr-51	2	pCi/g	0.530	0.405	1.31	Non-Agreement <sup>(1)</sup>
		Cs-134	2	pCi/g	0.239	0.231	1.03	Agreement
		Cs-137	2	pCi/g	0.181	0.164	1.10	Agreement
		Fe-59	2	pCi/g	0.204	0.160	1.28	Non-Agreement <sup>(1)</sup>
		Mn-54	2	pCi/g	0.239	0.212	1.13	Agreement
		Zn-65	2	pCi/g	0.379	0.355	1.07	Agreement

(1) NCR # 02340178

## TABLE 4.0-A (Cont.)

Sample	Sample ID	Nuclide	Quarter	Units	EnRad Value	EZA Value	EnRad/EZA Ratio	Evaluation
Gamma in Simulated Vegetation	E13190	Ce-141	3	pCi/g	0.202	0.204	0.99	Agreement
		Co-58	3	pCi/g	0.213	0.244	0.87	Agreement
		Co-60	3	pCi/g	0.491	0.516	0.95	Agreement
		Cr-51	3	pCi/g	0.424	0.506	0.84	Agreement
		Cs-134	3	pCi/g	0.240	0.272	0.88	Agreement
		Cs-137	3	pCi/g	0.325	0.340	0.95	Agreement
		Fe-59	3	pCi/g	0.270	0.273	0.99	Agreement
		Mn-54	3	pCi/g	0.249	0.245	1.02	Agreement
		Zn-65	3	pCi/g	0.383	0.367	1.04	Agreement
Gamma in Composite Filter	E13188	Ce-141	3	pCi	109	107	1.02	Agreement
		Co-58	3	pCi	130	128	1.01	Agreement
		Co-60	3	pCi	278	271	1.03	Agreement
		Cr-51	3	pCi	247	266	0.93	Agreement
		Cs-134	3	pCi	136	143	0.95	Agreement
		Cs-137	3	pCi	187	179	1.05	Agreement
		Fe-59	3	pCi	152	143	1.06	Agreement
		Mn-54	3	pCi	136	129	1.06	Agreement
		Zn-65	3	pCi	215	193	1.12	Agreement
Gamma in Water	E13189	Ce-141	3	pCi/L	167	160	1.04	Agreement
		Co-58	3	pCi/L	202	191	1.06	Agreement
		Co-60	3	pCi/L	437	404	1.08	Agreement
		Cr-51	3	pCi/L	407	397	1.03	Agreement
		Cs-134	3	pCi/L	215	213	1.01	Agreement
		Cs-137	3	pCi/L	280	267	1.05	Agreement
		Fe-59	3	pCi/L	237	214	1.11	Agreement
		I-131	3	pCi/L	104	95.3	1.09	Agreement
		Mn-54	3	pCi/L	211	192	1.10	Agreement
Zn-65	3	pCi/L	322	288	1.12	Agreement		
Milk LLI-131	E13192	I-131	2	pCi/L	96.8	88.8	1.09	Agreement
Gross Beta in Water	E13191	Cs-137	2	pCi/L	244	240	1.02	Agreement
Tritium in Water	E13193	H-3	3	pCi/L	11900	12000	0.99	Agreement

# TABLE 4.0-B

## 2020 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 2020						2nd Quarter 2020							
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		
100007	59.67	60.97	-2.13	<+/-15%	Pass	102290	59.52	60.59	-1.77	<+/-15%	Pass		
100245	58.87	60.97	-3.44	<+/-15%	Pass	102359	59.12	60.59	-2.43	<+/-15%	Pass		
102059	60.34	60.97	-1.03	<+/-15%	Pass	103194	61.95	60.59	2.24	<+/-15%	Pass		
103098	64.18	60.97	5.26	<+/-15%	Pass	102029	60.76	60.59	0.28	<+/-15%	Pass		
103212	63.01	60.97	3.35	<+/-15%	Pass	102336	61.57	60.59	1.62	<+/-15%	Pass		
100074	60.02	60.97	-1.56	<+/-15%	Pass	103742	62.41	60.59	3.00	<+/-15%	Pass		
103148	62.83	60.97	3.05	<+/-15%	Pass	103721	63.00	60.59	3.98	<+/-15%	Pass		
102407	62.04	60.97	1.75	<+/-15%	Pass	102738	62.59	60.59	3.30	<+/-15%	Pass		
103615	62.69	60.97	2.82	<+/-15%	Pass	100007	58.49	60.59	-3.47	<+/-15%	Pass		
103087	64.32	60.97	5.49	<+/-15%	Pass	102931	61.99	60.59	2.31	<+/-15%	Pass		
Average Bias (B)			1.36				Average Bias (B)			0.91			
Standard Deviation (S)			3.18				Standard Deviation (S)			2.62			
Measure Performance  B +S			4.54	<15%	Pass	Measure Performance  B +S			3.52	<15%	Pass		
3rd Quarter 2020						4th Quarter 2020							
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		
103734	20.89	19.59	6.64	<+/-15%	Pass	103679	42.06	40.15	4.76	<+/-15%	Pass		
103438	21.02	19.59	7.30	<+/-15%	Pass	102783	38.82	40.15	-3.31	<+/-15%	Pass		
102970	18.88	19.59	-3.62	<+/-15%	Pass	103438	43.01	40.15	7.12	<+/-15%	Pass		
102770	20.78	19.59	6.07	<+/-15%	Pass	103734	42.84	40.15	6.70	<+/-15%	Pass		
103602	20.53	19.59	4.80	<+/-15%	Pass	100461	42.34	40.15	5.45	<+/-15%	Pass		
102741	21.03	19.59	7.35	<+/-15%	Pass	103029	42.84	40.15	6.70	<+/-15%	Pass		
102058	19.47	19.59	-0.61	<+/-15%	Pass	100180	38.59	40.15	-3.89	<+/-15%	Pass		
103029	21.06	19.59	7.50	<+/-15%	Pass	103557	43.52	40.15	8.39	<+/-15%	Pass		
103679	20.75	19.59	5.92	<+/-15%	Pass	103199	41.99	40.15	4.58	<+/-15%	Pass		
103557	21.00	19.59	7.20	<+/-15%	Pass	100154	39.71	40.15	-1.10	<+/-15%	Pass		
Average Bias (B)			4.85				Average Bias (B)			3.54			
Standard Deviation (S)			3.83				Standard Deviation (S)			4.55			
Measure Performance  B +S			8.69	<15%	Pass	Measure Performance  B +S			8.09	<15%	Pass		

# TABLE 4.0-C

## 2020 GEL Laboratories, LLC QA Results

Interlaboratory cross check samples from Eckert & Ziegler Analytics (EZA) were received and analyzed by GEL during 2020. 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
I-131 in Milk with EZA	E13173	I-131	2	pCi/L	83.1	81.5	1.02	Agreement
	E13177	I-131	3	pCi/L	94.9	95.0	1.00	Agreement
	E13181	I-131	4	pCi/L	94.4	91.9	1.08	Agreement



**APPENDIX A**

**ENVIRONMENTAL SAMPLING  
&  
ANALYSIS PROCEDURES**

**2020**

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# APPENDIX A

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## 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 provides a description of the specific analyses performed on samples collected in the field. Changes to the sampling procedures and analyses procedures are also discussed in the section.

### I. CHANGE OF SAMPLING PROCEDURES

CY NISP-201 Chemistry Quality Assurance Program, Revision 0, Section 7C-Quality Controls for Sampling was implemented during 2020 for the sampling of Drinking Water and Surface Water.

Sampling procedure 721, Airborne Radioiodine Particulate Sampling at Catawba Nuclear Station was revised to remove Air Sampling Location 212 (Tega Cay (3.32 mi E)) from the REMP on 29DEC2020. The location was removed as it was no longer deemed an acceptable community air sampling location (NCR # 02347403). Further discussion can be found in Section 3.1. The changes to the REMP were effective in ODCM revision 064, effective 30DEC2020.

Sampling procedure 727, Direct Radiation Measurements (TLDs) at Catawba Nuclear Station was revised to terminate the use of TLD Location 236 (SC Wildlife Federation Office (4.25 mi SE)) on 12MAR2020 and location 264 (India Hook Road (4.32 mi SE)) was added to the CNS REMP on 12MAR2020 (DRR #02315656). The (SC Wildlife Federation Office) was abandoned. It was unknown what would become of the property or buildings, so TLD 236 was removed from the CNS REMP and Location 264, which is on Duke Energy owned property, was added to the CNS REMP. The changes to the REMP were effective in ODCM revision 064, effective 30DEC2020.

## **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 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**

There were no fundamental changes to analysis procedure methods, but procedures were revised to increase quality control measurements to comply with CY NISP-201 Chemistry Quality Assurance Program, Revision 0, Section 7.

**APPENDIX B**

**RADIOLOGICAL  
ENVIRONMENTAL MONITORING  
PROGRAM**

**SUMMARY OF RESULTS**

**2020**

**CATAWBA NUCLEAR STATION  
RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM DATA SUMMARY**

Catawba Nuclear Station  
York County, South Carolina

Docket Numbers 50-413, 414  
Calendar Year 2020

Medium or Pathway Sampled or Measured (Unit of Measurement)	Type and Total No. of Measurements Performed	Lower Limit of Detection (LLD) <sup>(1)</sup>	All Indicator Locations <sup>(2) (3)</sup> Mean Range	Location w/Highest Annual Mean		Control Locations Mean Range <sup>(2) (3)</sup>	No. of Non-Routine Report Meas.
				Name, Distance, and Direction	Mean Range <sup>(2) (3)</sup>		
Air Particulate (pCi/m <sup>3</sup> )	Gross Beta 312 <sup>(4)</sup>	See Table 2.2-C	1.98E-02 (260/260) 3.12E-03 – 3.94E-02	201 (0.53 mi NE)	2.01E-02 (52/52) 3.12E-03 – 3.92E-02	258 (9.84 mi W) 1.97E-02 (52/52) 8.93E-03 – 3.52E-02	0
	Gamma 24 <sup>(4)</sup>	See Table 2.2-C	All less than LLD	-----	-----	All less than LLD	0
Air Radioiodine (pCi/m <sup>3</sup> )	Gamma 312 <sup>(4)</sup>	See Table 2.2-C	All less than LLD	-----	-----	All less than LLD	0
Drinking Water (pCi/l)	Gross Beta 26 <sup>(4)</sup>	4	4.16E+00 (7/13) 3.41E+00 – 5.29E+00	214 (7.30 mi SSE)	4.16E+00 (7/13) 3.41E+00 – 5.29E+00	218 (13.5 mi NNE) 4.41E+00 (4/13) 3.44E+00 – 4.91E+00	0
	Gamma 26 <sup>(4)</sup>	See Table 2.2-C	All less than LLD	-----	-----	All less than LLD	0
	Tritium 8 <sup>(4) (5)</sup>	2000	4.52E+02 (4/4) 3.77E+02 – 5.40E+02	214 (7.30 mi SSE)	4.52E+02 (4/4) 3.77E+02 – 5.40E+02	218 (13.5 mi NNE) 2.87E+02 (4/4) 2.21E+02 – 3.89E+02	0
Surface Water (pCi/l)	Gamma 39 <sup>(4)</sup>	See Table 2.2-C	All less than LLD	-----	-----	All less than LLD	0
	Tritium 12 <sup>(4)</sup>	2000	5.48E+03 (8/8) 3.39E+02 – 1.34E+04	208 (0.45 mi S)	1.05E+04 (4/4) 7.47E+03 – 1.34E+04	263 (0.59 mi NNE) 2.37E+02 (2/4) 2.15E+02 – 2.58E+02	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

**CATAWBA NUCLEAR STATION  
RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM DATA SUMMARY**

Catawba Nuclear Station  
York County, South Carolina

Docket Numbers 50-413, 414  
Calendar Year 2020

Medium or Pathway Sampled or Measured (Unit of Measurement)	Type and Total No. of Measurements Performed	Lower Limit of Detection (LLD) <sup>(1)</sup>	All Indicator Locations <sup>(2) (3)</sup> Mean Range	Location w/Highest Annual Mean		Control Locations Mean Range <sup>(2) (3)</sup>	No. of Non-Routine Report Meas.
				Name, Distance, and Direction	Mean Range <sup>(2) (3)</sup>		
Broadleaf Vegetation (pCi/kg, wet)	Gamma 60 Cs-137	See Table 2.2-C	2.46E+01 (5/48) 1.52E+01 – 3.59E+01	201 (0.53 mi NE)	2.46E+01 (5/12) 1.52E+01 – 3.59E+01	All less than LLD	0
Food Products (pCi/kg, wet)	Gamma 11 <sup>(4)</sup>	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
TLD (mR per quarter) <sup>(6)</sup>	TLD Readout 163 <sup>(4)</sup>	-----	1.78E+01 (151/151) 9.94E+00 – 2.86E+01	264 (4.32 mi SE)	2.70E+01 (3/3) 2.48E+01 – 2.86E+01	217 (10.3 mi SSE) 247 (7.33 mi ESE) 251 (9.72 mi WNW) 1.39E+01 (12/12) 9.56E+00 – 1.97E+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 ( $n * 0.95$  ergs/g-Roentgen)<sup>1</sup>.

<sup>1</sup> Cember, H. (2009). Introduction to Health Physics, 4<sup>th</sup> Edition. United States: McGraw-Hill Companies, Inc.

**APPENDIX C**

**SAMPLING DEVIATIONS  
&  
UNAVAILABLE ANALYSES**

**2020**



# 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 99.38% availability in 2020.

Location	Scheduled Collection Dates	Code	Description & Action to Prevent Recurrence	Corrective Action
200	3/3 – 3/10/2020	PO	1.58 hours downtime due to power outage from a squirrel invading a transformer.	NCR # 02320144
200	3/10 – 3/17/2020	PO	0.37 hours downtime due to power outage from a squirrel invading a transformer.	NCR # 02321072
261	4/28 – 5/5/2020	PI	9.93 hours downtime due to power interruption, severe weather.	NCR # 02328889
201	5/19 – 5/26/2020	PO	93.07 hours downtime due to power outage, tripped breaker.	NCR # 02332158
261	5/19 – 5/26/2020	PO	110.69 hours downtime due to power outage, tripped breaker.	NCR # 02332159
261	5/26 – 6/2/2020	PO	116.45 hours downtime due to power outage, tripped breaker.	NCR # 02333118

## 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 99.94% availability in 2020.

Location	Scheduled Collection Dates	Code	Description & Action to Prevent Recurrence	Corrective Action
218 DW	2/25 – 3/24/2020	CN	22.75 hours downtime. Water line was damaged due to construction in the area. Water was shut off and then restored after repair.	NCR # 02322191
263 SW	7/14 – 8/11/2020	OT	Indeterminate downtime. ISCO pump malfunction, pump was continuously sampling. Grab samples taken. ISCO replaced to prevent recurrence.	NCR # 02343430
218 DW	8/11 – 9/9/2020	CN	2.0 hours downtime. Water flow was disrupted to the sampler by water treatment personnel for approximately 2 hours for construction purposes.	NCR # 02348025
263 SW	9/9 – 10/6/2020	OT	Indeterminate downtime. ISCO pump malfunction, pump was continuously sampling. Grab samples taken. ISCO replaced to prevent recurrence.	NCR # 02352084

## C.2 UNAVAILABLE ANALYSES

### Food Products / Crops

Location	Scheduled Collection Dates	Code	Description & Action to Prevent Recurrence	Corrective Action
260	4/7/2020	SU	Sample seasonally unavailable at time of collection.	NCR # 02324156

### TLDs

Location	Scheduled Collection Dates	Code	Description & Action to Prevent Recurrence	Corrective Action
234	9/21 – 12/16/2020	VN	Alpha and Bravo TLDs missing at the time of collection, due to human intervention.	NCR # 02362301

**APPENDIX D**

**ANALYTICAL DEVIATIONS**

**2020**

No Analytical deviations were incurred for the  
2020 Radiological Environmental Monitoring Program

**APPENDIX E**

**RADIOLOGICAL  
ENVIRONMENTAL MONITORING  
PROGRAM RESULTS**

**2020**

This appendix includes sample analysis report summaries and supportive data generated from each sample medium for 2020.

# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (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
514430	12/31/2019 - 1/7/2020	Beta	1.45E-02	2.44E-03	2.72E-03
514897	1/7/2020 - 1/14/2020	Beta	9.45E-03	2.59E-03	3.51E-03
515226	1/14/2020 - 1/21/2020	Beta	2.16E-02	3.15E-03	3.26E-03
515463	1/21/2020 - 1/28/2020	Beta	1.89E-02	2.70E-03	2.87E-03
515853	1/28/2020 - 2/4/2020	Beta	1.50E-02	2.72E-03	3.01E-03
516114	2/4/2020 - 2/11/2020	Beta	1.46E-02	2.39E-03	2.57E-03
516474	2/11/2020 - 2/18/2020	Beta	1.45E-02	2.50E-03	2.90E-03
516853	2/18/2020 - 2/25/2020	Beta	1.84E-02	2.65E-03	2.83E-03
517376	2/25/2020 - 3/3/2020	Beta	1.61E-02	2.52E-03	2.74E-03
517646	3/3/2020 - 3/10/2020	Beta	1.55E-02	2.94E-03	3.50E-03
518673	3/10/2020 - 3/17/2020	Beta	1.80E-02	2.76E-03	3.15E-03
519285	3/17/2020 - 3/24/2020	Beta	1.36E-02	2.70E-03	3.17E-03
519663	3/24/2020 - 3/31/2020	Beta	1.59E-02	2.86E-03	3.25E-03
520253	12/31/2019 - 3/31/2020	Cs-134	<1.46E-03	0.00E+00	1.46E-03
		Cs-137	<1.03E-03	0.00E+00	1.03E-03
		Be-7	1.32E-01	3.60E-02	3.46E-02
		K-40	<2.52E-02	0.00E+00	2.52E-02
520247	3/31/2020 - 4/7/2020	Beta	1.95E-02	3.06E-03	3.32E-03
520479	4/7/2020 - 4/14/2020	Beta	2.13E-02	2.99E-03	2.89E-03
520773	4/14/2020 - 4/21/2020	Beta	2.05E-02	2.72E-03	2.72E-03
521572	4/21/2020 - 4/28/2020	Beta	1.41E-02	2.50E-03	2.93E-03
522007	4/28/2020 - 5/5/2020	Beta	1.72E-02	2.89E-03	3.17E-03
522313	5/5/2020 - 5/12/2020	Beta	1.62E-02	2.83E-03	3.14E-03
522561	5/12/2020 - 5/19/2020	Beta	2.04E-02	2.64E-03	2.50E-03
523068	5/19/2020 - 5/26/2020	Beta	1.14E-02	2.33E-03	2.90E-03
523441	5/26/2020 - 6/2/2020	Beta	1.10E-02	2.58E-03	3.25E-03

# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (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
523842	6/2/2020 - 6/8/2020	Beta	2.51E-02	3.46E-03	3.28E-03
524406	6/8/2020 - 6/16/2020	Beta	1.56E-02	2.53E-03	2.74E-03
524728	6/16/2020 - 6/23/2020	Beta	1.31E-02	2.83E-03	3.63E-03
524960	6/23/2020 - 6/30/2020	Beta	1.80E-02	3.00E-03	3.39E-03
525328	3/31/2020 - 6/30/2020	Cs-134	<3.75E-04	0.00E+00	3.75E-04
		Cs-137	<8.38E-04	0.00E+00	8.38E-04
		Be-7	1.41E-01	3.64E-02	3.27E-02
		K-40	<1.84E-02	0.00E+00	1.84E-02
525322	6/30/2020 - 7/7/2020	Beta	2.42E-02	3.25E-03	3.17E-03
525557	7/7/2020 - 7/14/2020	Beta	1.85E-02	2.75E-03	3.05E-03
525906	7/14/2020 - 7/21/2020	Beta	3.45E-02	3.29E-03	2.63E-03
526241	7/21/2020 - 7/28/2020	Beta	1.41E-02	2.47E-03	2.85E-03
526527	7/28/2020 - 8/4/2020	Beta	1.64E-02	2.97E-03	3.55E-03
526847	8/4/2020 - 8/11/2020	Beta	2.66E-02	3.37E-03	3.21E-03
527324	8/11/2020 - 8/18/2020	Beta	2.07E-02	2.72E-03	2.66E-03
527618	8/18/2020 - 8/25/2020	Beta	2.26E-02	2.89E-03	2.95E-03
527916	8/25/2020 - 9/1/2020	Beta	1.79E-02	2.57E-03	2.64E-03
528666	9/1/2020 - 9/9/2020	Beta	2.47E-02	3.06E-03	2.99E-03
528993	9/9/2020 - 9/15/2020	Beta	1.20E-02	3.10E-03	4.10E-03
529989	9/15/2020 - 9/21/2020	Beta	2.05E-02	3.43E-03	3.75E-03
530291	9/21/2020 - 9/29/2020	Beta	2.13E-02	2.73E-03	2.52E-03
531068	6/30/2020 - 9/29/2020	Cs-134	<1.61E-03	0.00E+00	1.61E-03
		Cs-137	<2.21E-03	0.00E+00	2.21E-03
		Be-7	1.05E-01	3.07E-02	3.12E-02
		K-40	<2.79E-02	0.00E+00	2.79E-02
530564	9/29/2020 - 10/6/2020	Beta	1.91E-02	2.84E-03	2.82E-03
531062	10/6/2020 - 10/13/2020	Beta	3.02E-02	3.57E-03	3.33E-03
531673	10/13/2020 - 10/20/2020	Beta	2.47E-02	3.28E-03	3.21E-03

# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (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
532076	10/20/2020 - 10/27/2020	Beta	1.43E-02	2.42E-03	2.71E-03
532501	10/27/2020 - 11/3/2020	Beta	1.91E-02	2.64E-03	2.69E-03
532809	11/3/2020 - 11/10/2020	Beta	2.18E-02	3.15E-03	3.20E-03
533336	11/10/2020 - 11/17/2020	Beta	1.89E-02	2.86E-03	2.88E-03
533797	11/17/2020 - 11/24/2020	Beta	1.77E-02	2.96E-03	3.35E-03
534098	11/24/2020 - 12/1/2020	Beta	2.70E-02	3.31E-03	3.07E-03
534556	12/1/2020 - 12/8/2020	Beta	2.73E-02	3.46E-03	3.39E-03
535330	12/8/2020 - 12/14/2020	Beta	3.79E-02	4.08E-03	3.56E-03
535887	12/14/2020 - 12/21/2020	Beta	2.15E-02	3.01E-03	2.94E-03
536173	12/21/2020 - 12/29/2020	Beta	2.10E-02	2.94E-03	3.06E-03
536736	9/29/2020 - 12/29/2020	Cs-134	<1.77E-03	0.00E+00	1.77E-03
		Cs-137	<1.58E-03	0.00E+00	1.58E-03
		Be-7	1.27E-01	3.72E-02	3.90E-02
		K-40	<2.57E-02	0.00E+00	2.57E-02

Sample Point 201 [ INDICATOR - NE @ 0.53 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514431	12/31/2019 - 1/7/2020	Beta	1.74E-02	2.58E-03	2.72E-03
514898	1/7/2020 - 1/14/2020	Beta	1.03E-02	2.64E-03	3.51E-03
515227	1/14/2020 - 1/21/2020	Beta	2.21E-02	3.17E-03	3.26E-03
515464	1/21/2020 - 1/28/2020	Beta	1.87E-02	2.70E-03	2.89E-03
515854	1/28/2020 - 2/4/2020	Beta	1.85E-02	2.90E-03	3.00E-03
516115	2/4/2020 - 2/11/2020	Beta	1.69E-02	2.50E-03	2.57E-03
516475	2/11/2020 - 2/18/2020	Beta	1.52E-02	2.54E-03	2.89E-03
516854	2/18/2020 - 2/25/2020	Beta	2.01E-02	2.73E-03	2.84E-03
517377	2/25/2020 - 3/3/2020	Beta	1.58E-02	2.51E-03	2.73E-03
517647	3/3/2020 - 3/10/2020	Beta	1.66E-02	2.98E-03	3.47E-03
518674	3/10/2020 - 3/17/2020	Beta	1.86E-02	2.79E-03	3.14E-03

# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (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
519286	3/17/2020 - 3/24/2020	Beta	1.77E-02	2.93E-03	3.18E-03
519664	3/24/2020 - 3/31/2020	Beta	1.68E-02	2.90E-03	3.24E-03
520254	12/31/2019 - 3/31/2020	Cs-134	<1.02E-03	0.00E+00	1.02E-03
		Cs-137	<1.49E-03	0.00E+00	1.49E-03
		Be-7	1.50E-01	3.56E-02	2.32E-02
		K-40	<1.59E-02	0.00E+00	1.59E-02
520248	3/31/2020 - 4/7/2020	Beta	2.14E-02	3.16E-03	3.32E-03
520480	4/7/2020 - 4/14/2020	Beta	2.30E-02	3.07E-03	2.89E-03
520774	4/14/2020 - 4/21/2020	Beta	2.61E-02	2.97E-03	2.73E-03
521573	4/21/2020 - 4/28/2020	Beta	1.36E-02	2.47E-03	2.92E-03
522008	4/28/2020 - 5/5/2020	Beta	1.76E-02	2.92E-03	3.18E-03
522314	5/5/2020 - 5/12/2020	Beta	2.05E-02	3.05E-03	3.14E-03
522562	5/12/2020 - 5/19/2020	Beta	2.15E-02	2.69E-03	2.51E-03
523069	5/19/2020 - 5/22/2020	Beta	3.12E-03	1.78E-03	2.88E-03
523442	5/26/2020 - 6/2/2020	Beta	1.41E-02	2.75E-03	3.26E-03
523843	6/2/2020 - 6/8/2020	Beta	2.54E-02	3.47E-03	3.27E-03
524407	6/8/2020 - 6/16/2020	Beta	1.49E-02	2.49E-03	2.75E-03
524729	6/16/2020 - 6/23/2020	Beta	1.58E-02	2.99E-03	3.66E-03
524961	6/23/2020 - 6/30/2020	Beta	2.07E-02	3.11E-03	3.37E-03
525329	3/31/2020 - 6/30/2020	Cs-134	<1.43E-03	0.00E+00	1.43E-03
		Cs-137	<1.36E-03	0.00E+00	1.36E-03
		Be-7	1.44E-01	3.75E-02	3.15E-02
		K-40	<2.86E-02	0.00E+00	2.86E-02
525323	6/30/2020 - 7/7/2020	Beta	2.59E-02	3.13E-03	2.88E-03
525558	7/7/2020 - 7/14/2020	Beta	1.82E-02	2.74E-03	3.06E-03
525907	7/14/2020 - 7/21/2020	Beta	3.63E-02	3.35E-03	2.63E-03
526242	7/21/2020 - 7/28/2020	Beta	1.29E-02	2.40E-03	2.84E-03
526528	7/28/2020 - 8/4/2020	Beta	1.59E-02	2.95E-03	3.56E-03



# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (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
526848	8/4/2020 - 8/11/2020	Beta	2.40E-02	3.25E-03	3.22E-03
527325	8/11/2020 - 8/18/2020	Beta	2.43E-02	2.88E-03	2.66E-03
527619	8/18/2020 - 8/25/2020	Beta	2.16E-02	2.85E-03	2.95E-03
527917	8/25/2020 - 9/1/2020	Beta	2.01E-02	2.68E-03	2.65E-03
528667	9/1/2020 - 9/9/2020	Beta	2.70E-02	3.16E-03	2.99E-03
528994	9/9/2020 - 9/15/2020	Beta	1.23E-02	3.11E-03	4.09E-03
529990	9/15/2020 - 9/21/2020	Beta	1.98E-02	3.38E-03	3.71E-03
530292	9/21/2020 - 9/29/2020	Beta	2.36E-02	2.85E-03	2.54E-03
531069	6/30/2020 - 9/29/2020	Cs-134	<3.60E-04	0.00E+00	3.60E-04
		Cs-137	<1.65E-03	0.00E+00	1.65E-03
		Be-7	1.65E-01	3.79E-02	3.32E-02
		K-40	<2.78E-02	0.00E+00	2.78E-02
530565	9/29/2020 - 10/6/2020	Beta	2.20E-02	3.00E-03	2.83E-03
531063	10/6/2020 - 10/13/2020	Beta	3.01E-02	3.56E-03	3.32E-03
531674	10/13/2020 - 10/20/2020	Beta	2.28E-02	3.19E-03	3.21E-03
532077	10/20/2020 - 10/27/2020	Beta	1.64E-02	2.52E-03	2.70E-03
532502	10/27/2020 - 11/3/2020	Beta	1.76E-02	2.59E-03	2.71E-03
532810	11/3/2020 - 11/10/2020	Beta	2.29E-02	3.20E-03	3.19E-03
533337	11/10/2020 - 11/17/2020	Beta	1.76E-02	2.80E-03	2.88E-03
533798	11/17/2020 - 11/24/2020	Beta	1.84E-02	3.00E-03	3.35E-03
534099	11/24/2020 - 12/1/2020	Beta	2.60E-02	3.26E-03	3.08E-03
534557	12/1/2020 - 12/8/2020	Beta	2.61E-02	3.41E-03	3.37E-03
535331	12/8/2020 - 12/14/2020	Beta	3.92E-02	4.15E-03	3.56E-03
535888	12/14/2020 - 12/21/2020	Beta	2.11E-02	2.98E-03	2.93E-03
536174	12/21/2020 - 12/29/2020	Beta	2.22E-02	3.00E-03	3.07E-03
536737	9/29/2020 - 12/29/2020	Cs-134	<1.61E-03	0.00E+00	1.61E-03
		Cs-137	<1.55E-03	0.00E+00	1.55E-03

# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (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
536737	9/29/2020 - 12/29/2020	Be-7	1.45E-01	3.62E-02	3.25E-02
		K-40	<3.93E-02	0.00E+00	3.93E-02

Sample Point 208 [ INDICATOR - S @ 0.45 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514432	12/31/2019 - 1/7/2020	Beta	1.49E-02	2.46E-03	2.72E-03
514899	1/7/2020 - 1/14/2020	Beta	1.22E-02	2.74E-03	3.51E-03
515228	1/14/2020 - 1/21/2020	Beta	2.28E-02	3.20E-03	3.26E-03
515465	1/21/2020 - 1/28/2020	Beta	1.92E-02	2.72E-03	2.89E-03
515855	1/28/2020 - 2/4/2020	Beta	2.21E-02	3.08E-03	3.00E-03
516116	2/4/2020 - 2/11/2020	Beta	1.65E-02	2.48E-03	2.58E-03
516476	2/11/2020 - 2/18/2020	Beta	1.56E-02	2.56E-03	2.89E-03
516855	2/18/2020 - 2/25/2020	Beta	2.12E-02	2.78E-03	2.84E-03
517378	2/25/2020 - 3/3/2020	Beta	1.59E-02	2.51E-03	2.73E-03
517648	3/3/2020 - 3/10/2020	Beta	1.70E-02	2.99E-03	3.47E-03
518675	3/10/2020 - 3/17/2020	Beta	2.01E-02	2.85E-03	3.14E-03
519287	3/17/2020 - 3/24/2020	Beta	1.66E-02	2.87E-03	3.18E-03
519665	3/24/2020 - 3/31/2020	Beta	1.69E-02	2.91E-03	3.24E-03
520255	12/31/2019 - 3/31/2020	Cs-134	<2.09E-03	0.00E+00	2.09E-03
		Cs-137	<1.12E-03	0.00E+00	1.12E-03
		Be-7	1.19E-01	3.41E-02	3.03E-02
		K-40	<1.96E-02	0.00E+00	1.96E-02
520249	3/31/2020 - 4/7/2020	Beta	2.08E-02	3.13E-03	3.32E-03
520481	4/7/2020 - 4/14/2020	Beta	2.19E-02	3.02E-03	2.89E-03
520775	4/14/2020 - 4/21/2020	Beta	2.44E-02	2.90E-03	2.73E-03
521574	4/21/2020 - 4/28/2020	Beta	1.34E-02	2.45E-03	2.92E-03
522009	4/28/2020 - 5/5/2020	Beta	1.88E-02	2.98E-03	3.18E-03
522315	5/5/2020 - 5/12/2020	Beta	1.81E-02	2.93E-03	3.14E-03
522563	5/12/2020 - 5/19/2020	Beta	1.76E-02	2.51E-03	2.51E-03

# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (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
523070	5/19/2020 - 5/26/2020	Beta	8.53E-03	2.17E-03	2.90E-03
523443	5/26/2020 - 6/2/2020	Beta	1.47E-02	2.79E-03	3.26E-03
523844	6/2/2020 - 6/8/2020	Beta	2.25E-02	3.33E-03	3.27E-03
524408	6/8/2020 - 6/16/2020	Beta	1.63E-02	2.57E-03	2.75E-03
524730	6/16/2020 - 6/23/2020	Beta	1.51E-02	2.94E-03	3.63E-03
524962	6/23/2020 - 6/30/2020	Beta	1.49E-02	2.84E-03	3.39E-03
525330	3/31/2020 - 6/30/2020	Cs-134	<1.64E-03	0.00E+00	1.64E-03
		Cs-137	<1.58E-03	0.00E+00	1.58E-03
		Be-7	1.50E-01	3.48E-02	2.35E-02
		K-40	<3.92E-02	0.00E+00	3.92E-02
525324	6/30/2020 - 7/7/2020	Beta	2.34E-02	3.20E-03	3.17E-03
525559	7/7/2020 - 7/14/2020	Beta	1.86E-02	2.76E-03	3.06E-03
525908	7/14/2020 - 7/21/2020	Beta	3.26E-02	3.21E-03	2.63E-03
526243	7/21/2020 - 7/28/2020	Beta	1.21E-02	2.36E-03	2.84E-03
526529	7/28/2020 - 8/4/2020	Beta	1.66E-02	2.98E-03	3.55E-03
526849	8/4/2020 - 8/11/2020	Beta	2.33E-02	3.22E-03	3.22E-03
527326	8/11/2020 - 8/18/2020	Beta	2.16E-02	2.76E-03	2.66E-03
527620	8/18/2020 - 8/25/2020	Beta	1.88E-02	2.73E-03	2.95E-03
527918	8/25/2020 - 9/1/2020	Beta	1.93E-02	2.64E-03	2.65E-03
528668	9/1/2020 - 9/9/2020	Beta	2.51E-02	3.08E-03	2.99E-03
528995	9/9/2020 - 9/15/2020	Beta	1.15E-02	3.05E-03	4.09E-03
529991	9/15/2020 - 9/21/2020	Beta	2.30E-02	3.55E-03	3.73E-03
530293	9/21/2020 - 9/29/2020	Beta	2.15E-02	2.75E-03	2.53E-03
531070	6/30/2020 - 9/29/2020	Cs-134	<1.66E-03	0.00E+00	1.66E-03
		Cs-137	<1.71E-03	0.00E+00	1.71E-03
		Be-7	1.71E-01	3.63E-02	2.14E-02
		K-40	<2.85E-02	0.00E+00	2.85E-02
530566	9/29/2020 - 10/6/2020	Beta	2.33E-02	3.06E-03	2.83E-03

# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (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
531064	10/6/2020 - 10/13/2020	Beta	2.87E-02	3.51E-03	3.32E-03
531675	10/13/2020 - 10/20/2020	Beta	2.28E-02	3.19E-03	3.21E-03
532078	10/20/2020 - 10/27/2020	Beta	1.60E-02	2.50E-03	2.70E-03
532503	10/27/2020 - 11/3/2020	Beta	1.95E-02	2.68E-03	2.71E-03
532811	11/3/2020 - 11/10/2020	Beta	2.20E-02	3.16E-03	3.19E-03
533338	11/10/2020 - 11/17/2020	Beta	1.94E-02	2.89E-03	2.88E-03
533799	11/17/2020 - 11/24/2020	Beta	1.85E-02	3.00E-03	3.35E-03
534100	11/24/2020 - 12/1/2020	Beta	2.60E-02	3.26E-03	3.08E-03
534558	12/1/2020 - 12/8/2020	Beta	2.42E-02	3.32E-03	3.38E-03
535332	12/8/2020 - 12/14/2020	Beta	3.68E-02	4.04E-03	3.56E-03
535889	12/14/2020 - 12/21/2020	Beta	2.20E-02	3.02E-03	2.94E-03
536175	12/21/2020 - 12/29/2020	Beta	2.13E-02	2.96E-03	3.07E-03
536738	9/29/2020 - 12/29/2020	Cs-134	<1.26E-03	0.00E+00	1.26E-03
		Cs-137	<1.56E-03	0.00E+00	1.56E-03
		Be-7	1.67E-01	3.69E-02	2.45E-02
		K-40	<3.05E-02	0.00E+00	3.05E-02

Sample Point 212 [ INDICATOR - E @ 3.32 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514433	12/31/2019 - 1/7/2020	Beta	1.83E-02	2.62E-03	2.72E-03
514900	1/7/2020 - 1/14/2020	Beta	1.38E-02	2.83E-03	3.52E-03
515229	1/14/2020 - 1/21/2020	Beta	1.87E-02	3.00E-03	3.26E-03
515466	1/21/2020 - 1/28/2020	Beta	1.73E-02	2.62E-03	2.87E-03
515856	1/28/2020 - 2/4/2020	Beta	2.08E-02	3.03E-03	3.01E-03
516117	2/4/2020 - 2/11/2020	Beta	1.78E-02	2.54E-03	2.57E-03
516477	2/11/2020 - 2/18/2020	Beta	1.56E-02	2.56E-03	2.90E-03
516856	2/18/2020 - 2/25/2020	Beta	2.00E-02	2.72E-03	2.82E-03
517379	2/25/2020 - 3/3/2020	Beta	1.73E-02	2.58E-03	2.74E-03

# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (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
517649	3/3/2020 - 3/10/2020	Beta	1.68E-02	2.98E-03	3.47E-03
518676	3/10/2020 - 3/17/2020	Beta	1.93E-02	2.82E-03	3.15E-03
519288	3/17/2020 - 3/24/2020	Beta	1.51E-02	2.78E-03	3.16E-03
519666	3/24/2020 - 3/31/2020	Beta	1.69E-02	2.91E-03	3.26E-03
520256	12/31/2019 - 3/31/2020	Cs-134	<1.00E-03	0.00E+00	1.00E-03
		Cs-137	<1.57E-03	0.00E+00	1.57E-03
		Be-7	1.66E-01	4.30E-02	4.38E-02
		K-40	<3.28E-02	0.00E+00	3.28E-02
520250	3/31/2020 - 4/7/2020	Beta	2.29E-02	3.22E-03	3.31E-03
520482	4/7/2020 - 4/14/2020	Beta	2.24E-02	3.05E-03	2.90E-03
520776	4/14/2020 - 4/21/2020	Beta	2.33E-02	2.84E-03	2.72E-03
521575	4/21/2020 - 4/28/2020	Beta	1.46E-02	2.53E-03	2.93E-03
522010	4/28/2020 - 5/5/2020	Beta	1.79E-02	2.93E-03	3.17E-03
522316	5/5/2020 - 5/12/2020	Beta	1.96E-02	3.01E-03	3.14E-03
522564	5/12/2020 - 5/19/2020	Beta	1.98E-02	2.61E-03	2.50E-03
523071	5/19/2020 - 5/26/2020	Beta	1.01E-02	2.26E-03	2.91E-03
523444	5/26/2020 - 6/2/2020	Beta	1.16E-02	2.61E-03	3.25E-03
523845	6/2/2020 - 6/8/2020	Beta	2.49E-02	3.44E-03	3.28E-03
524409	6/8/2020 - 6/16/2020	Beta	1.42E-02	2.45E-03	2.73E-03
524731	6/16/2020 - 6/23/2020	Beta	1.65E-02	3.01E-03	3.64E-03
524963	6/23/2020 - 6/30/2020	Beta	1.40E-02	2.80E-03	3.40E-03
525331	3/31/2020 - 6/30/2020	Cs-134	<1.25E-03	0.00E+00	1.25E-03
		Cs-137	<1.65E-03	0.00E+00	1.65E-03
		Be-7	1.35E-01	3.64E-02	3.64E-02
		K-40	1.91E-02	1.58E-02	2.24E-02
525325	6/30/2020 - 7/7/2020	Beta	2.19E-02	3.13E-03	3.17E-03
525560	7/7/2020 - 7/14/2020	Beta	1.62E-02	2.63E-03	3.04E-03
525909	7/14/2020 - 7/21/2020	Beta	2.77E-02	3.02E-03	2.64E-03

# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (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
526244	7/21/2020 - 7/28/2020	Beta	1.44E-02	2.48E-03	2.85E-03
526530	7/28/2020 - 8/4/2020	Beta	1.78E-02	3.04E-03	3.55E-03
526850	8/4/2020 - 8/11/2020	Beta	2.64E-02	3.34E-03	3.19E-03
527327	8/11/2020 - 8/18/2020	Beta	2.14E-02	2.76E-03	2.68E-03
527621	8/18/2020 - 8/25/2020	Beta	2.14E-02	2.85E-03	2.96E-03
527919	8/25/2020 - 9/1/2020	Beta	2.07E-02	2.70E-03	2.64E-03
528669	9/1/2020 - 9/9/2020	Beta	2.59E-02	3.10E-03	2.97E-03
528996	9/9/2020 - 9/15/2020	Beta	1.27E-02	3.16E-03	4.13E-03
529992	9/15/2020 - 9/21/2020	Beta	1.88E-02	3.31E-03	3.70E-03
530294	9/21/2020 - 9/29/2020	Beta	2.40E-02	2.88E-03	2.54E-03
531071	6/30/2020 - 9/29/2020	Cs-134	<1.36E-03	0.00E+00	1.36E-03
		Cs-137	<1.30E-03	0.00E+00	1.30E-03
		Be-7	1.69E-01	3.98E-02	3.44E-02
		K-40	<3.78E-02	0.00E+00	3.78E-02
530567	9/29/2020 - 10/6/2020	Beta	2.30E-02	3.02E-03	2.80E-03
531065	10/6/2020 - 10/13/2020	Beta	3.33E-02	3.71E-03	3.34E-03
531676	10/13/2020 - 10/20/2020	Beta	2.67E-02	3.38E-03	3.22E-03
532079	10/20/2020 - 10/27/2020	Beta	1.67E-02	2.55E-03	2.73E-03
532504	10/27/2020 - 11/3/2020	Beta	1.95E-02	2.64E-03	2.66E-03
532812	11/3/2020 - 11/10/2020	Beta	2.31E-02	3.22E-03	3.21E-03
533339	11/10/2020 - 11/17/2020	Beta	2.01E-02	2.92E-03	2.87E-03
533800	11/17/2020 - 11/24/2020	Beta	2.02E-02	3.09E-03	3.36E-03
534101	11/24/2020 - 12/1/2020	Beta	2.67E-02	3.28E-03	3.06E-03
534559	12/1/2020 - 12/8/2020	Beta	2.43E-02	3.34E-03	3.40E-03
535333	12/8/2020 - 12/14/2020	Beta	3.94E-02	4.15E-03	3.56E-03
535890	12/14/2020 - 12/21/2020	Beta	2.16E-02	3.01E-03	2.94E-03

# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (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
536176	12/21/2020 - 12/29/2020	Beta	1.91E-02	2.85E-03	3.06E-03
536739	9/29/2020 - 12/29/2020	Cs-134	<1.61E-03	0.00E+00	1.61E-03
		Cs-137	<1.32E-03	0.00E+00	1.32E-03
		Be-7	1.51E-01	3.69E-02	3.24E-02
		K-40	<3.37E-02	0.00E+00	3.37E-02
<b>Sample Point 258 [ CONTROL - W @ 9.84 miles ]</b>					
514434	12/31/2019 - 1/7/2020	Beta	1.56E-02	2.49E-03	2.73E-03
514901	1/7/2020 - 1/14/2020	Beta	1.02E-02	2.62E-03	3.51E-03
515230	1/14/2020 - 1/21/2020	Beta	2.03E-02	3.09E-03	3.26E-03
515467	1/21/2020 - 1/28/2020	Beta	1.89E-02	2.71E-03	2.89E-03
515857	1/28/2020 - 2/4/2020	Beta	1.94E-02	2.95E-03	3.00E-03
516118	2/4/2020 - 2/11/2020	Beta	1.71E-02	2.51E-03	2.58E-03
516478	2/11/2020 - 2/18/2020	Beta	1.78E-02	2.66E-03	2.88E-03
516857	2/18/2020 - 2/25/2020	Beta	1.94E-02	2.71E-03	2.84E-03
517380	2/25/2020 - 3/3/2020	Beta	1.60E-02	2.52E-03	2.73E-03
517650	3/3/2020 - 3/10/2020	Beta	1.65E-02	2.97E-03	3.46E-03
518677	3/10/2020 - 3/17/2020	Beta	2.19E-02	2.93E-03	3.14E-03
519289	3/17/2020 - 3/24/2020	Beta	1.54E-02	2.80E-03	3.18E-03
519667	3/24/2020 - 3/31/2020	Beta	1.73E-02	2.93E-03	3.24E-03
520257	12/31/2019 - 3/31/2020	Cs-134	<1.63E-03	0.00E+00	1.63E-03
		Cs-137	<1.19E-03	0.00E+00	1.19E-03
		Be-7	1.39E-01	3.86E-02	3.93E-02
		K-40	<2.80E-02	0.00E+00	2.80E-02
520251	3/31/2020 - 4/7/2020	Beta	1.94E-02	3.07E-03	3.35E-03
520483	4/7/2020 - 4/14/2020	Beta	2.30E-02	3.06E-03	2.87E-03
520777	4/14/2020 - 4/21/2020	Beta	2.24E-02	2.81E-03	2.73E-03
521576	4/21/2020 - 4/28/2020	Beta	1.42E-02	2.50E-03	2.92E-03
522011	4/28/2020 - 5/5/2020	Beta	1.69E-02	2.89E-03	3.19E-03

# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (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
522317	5/5/2020 - 5/12/2020	Beta	1.84E-02	2.95E-03	3.13E-03
522565	5/12/2020 - 5/19/2020	Beta	1.69E-02	2.48E-03	2.51E-03
523072	5/19/2020 - 5/26/2020	Beta	8.93E-03	2.20E-03	2.90E-03
523445	5/26/2020 - 6/2/2020	Beta	1.40E-02	2.76E-03	3.27E-03
523846	6/2/2020 - 6/8/2020	Beta	2.45E-02	3.42E-03	3.26E-03
524410	6/8/2020 - 6/16/2020	Beta	1.55E-02	2.52E-03	2.74E-03
524732	6/16/2020 - 6/23/2020	Beta	1.57E-02	2.99E-03	3.66E-03
524964	6/23/2020 - 6/30/2020	Beta	1.48E-02	2.82E-03	3.37E-03
525332	3/31/2020 - 6/30/2020	Cs-134	<1.75E-03	0.00E+00	1.75E-03
		Cs-137	<1.97E-03	0.00E+00	1.97E-03
		Be-7	1.53E-01	3.45E-02	2.11E-02
		K-40	<3.23E-02	0.00E+00	3.23E-02
525326	6/30/2020 - 7/7/2020	Beta	2.38E-02	3.23E-03	3.17E-03
525561	7/7/2020 - 7/14/2020	Beta	1.75E-02	2.71E-03	3.05E-03
525910	7/14/2020 - 7/21/2020	Beta	3.52E-02	3.31E-03	2.63E-03
526245	7/21/2020 - 7/28/2020	Beta	1.68E-02	2.59E-03	2.84E-03
526531	7/28/2020 - 8/4/2020	Beta	1.66E-02	2.99E-03	3.56E-03
526851	8/4/2020 - 8/11/2020	Beta	2.74E-02	3.40E-03	3.21E-03
527328	8/11/2020 - 8/18/2020	Beta	2.34E-02	2.84E-03	2.66E-03
527622	8/18/2020 - 8/25/2020	Beta	1.96E-02	2.76E-03	2.95E-03
527920	8/25/2020 - 9/1/2020	Beta	2.13E-02	2.71E-03	2.60E-03
528670	9/1/2020 - 9/9/2020	Beta	2.70E-02	3.19E-03	3.04E-03
528997	9/9/2020 - 9/15/2020	Beta	1.32E-02	3.15E-03	4.08E-03
529993	9/15/2020 - 9/21/2020	Beta	1.96E-02	3.28E-03	3.60E-03
530295	9/21/2020 - 9/29/2020	Beta	2.21E-02	2.83E-03	2.60E-03
531072	6/30/2020 - 9/29/2020	Cs-134	<1.92E-03	0.00E+00	1.92E-03
		Cs-137	<1.45E-03	0.00E+00	1.45E-03



# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (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
531072	6/30/2020 - 9/29/2020	Be-7	1.44E-01	3.39E-02	2.15E-02
		K-40	2.62E-02	1.59E-02	1.76E-02
530568	9/29/2020 - 10/6/2020	Beta	2.38E-02	3.08E-03	2.84E-03
531066	10/6/2020 - 10/13/2020	Beta	2.90E-02	3.52E-03	3.32E-03
531677	10/13/2020 - 10/20/2020	Beta	2.63E-02	3.35E-03	3.20E-03
532080	10/20/2020 - 10/27/2020	Beta	1.43E-02	2.39E-03	2.68E-03
532505	10/27/2020 - 11/3/2020	Beta	1.98E-02	2.70E-03	2.74E-03
532813	11/3/2020 - 11/10/2020	Beta	2.28E-02	3.19E-03	3.18E-03
533340	11/10/2020 - 11/17/2020	Beta	1.76E-02	2.79E-03	2.88E-03
533801	11/17/2020 - 11/24/2020	Beta	1.73E-02	2.95E-03	3.35E-03
534102	11/24/2020 - 12/1/2020	Beta	2.38E-02	3.17E-03	3.10E-03
534560	12/1/2020 - 12/8/2020	Beta	2.12E-02	3.16E-03	3.36E-03
535334	12/8/2020 - 12/14/2020	Beta	3.49E-02	3.96E-03	3.56E-03
535891	12/14/2020 - 12/21/2020	Beta	2.14E-02	3.00E-03	2.93E-03
536177	12/21/2020 - 12/29/2020	Beta	2.26E-02	3.02E-03	3.07E-03
536740	9/29/2020 - 12/29/2020	Cs-134	<1.02E-03	0.00E+00	1.02E-03
		Cs-137	<1.06E-03	0.00E+00	1.06E-03
		Be-7	1.70E-01	4.12E-02	3.88E-02
		K-40	<2.05E-02	0.00E+00	2.05E-02

Sample Point 261 [ INDICATOR - N @ 0.72 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514435	12/31/2019 - 1/7/2020	Beta	1.89E-02	2.65E-03	2.72E-03
514902	1/7/2020 - 1/14/2020	Beta	1.33E-02	2.80E-03	3.51E-03
515231	1/14/2020 - 1/21/2020	Beta	2.13E-02	3.14E-03	3.26E-03
515468	1/21/2020 - 1/28/2020	Beta	1.97E-02	2.74E-03	2.87E-03
515858	1/28/2020 - 2/4/2020	Beta	1.95E-02	2.96E-03	3.01E-03
516119	2/4/2020 - 2/11/2020	Beta	1.45E-02	2.37E-03	2.57E-03
516479	2/11/2020 - 2/18/2020	Beta	1.57E-02	2.57E-03	2.90E-03

# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (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
516858	2/18/2020 - 2/25/2020	Beta	1.84E-02	2.65E-03	2.83E-03
517381	2/25/2020 - 3/3/2020	Beta	1.51E-02	2.47E-03	2.74E-03
517651	3/3/2020 - 3/10/2020	Beta	1.64E-02	2.96E-03	3.47E-03
518678	3/10/2020 - 3/17/2020	Beta	1.70E-02	2.71E-03	3.14E-03
519290	3/17/2020 - 3/24/2020	Beta	1.88E-02	2.99E-03	3.17E-03
519668	3/24/2020 - 3/31/2020	Beta	1.66E-02	2.90E-03	3.25E-03
520258	12/31/2019 - 3/31/2020	Cs-134	<1.83E-03	0.00E+00	1.83E-03
		Cs-137	<8.39E-04	0.00E+00	8.39E-04
		Be-7	1.44E-01	3.54E-02	2.40E-02
		K-40	<4.63E-03	0.00E+00	4.63E-03
520252	3/31/2020 - 4/7/2020	Beta	1.92E-02	3.04E-03	3.31E-03
520484	4/7/2020 - 4/14/2020	Beta	2.35E-02	3.10E-03	2.90E-03
520778	4/14/2020 - 4/21/2020	Beta	2.46E-02	2.91E-03	2.72E-03
521577	4/21/2020 - 4/28/2020	Beta	1.22E-02	2.39E-03	2.93E-03
522012	4/28/2020 - 5/5/2020	Beta	1.72E-02	3.02E-03	3.39E-03
522318	5/5/2020 - 5/12/2020	Beta	1.70E-02	2.86E-03	3.12E-03
522566	5/12/2020 - 5/19/2020	Beta	1.84E-02	2.55E-03	2.50E-03
523073	5/19/2020 - 5/21/2020	Beta	3.73E-03	2.29E-03	3.72E-03
523446	5/26/2020 - 5/28/2020	Beta	7.69E-03	5.18E-03	8.37E-03
523847	6/2/2020 - 6/8/2020	Beta	2.58E-02	3.49E-03	3.27E-03
524411	6/8/2020 - 6/16/2020	Beta	1.42E-02	2.45E-03	2.74E-03
524733	6/16/2020 - 6/23/2020	Beta	1.48E-02	2.92E-03	3.64E-03
524965	6/23/2020 - 6/30/2020	Beta	1.60E-02	2.90E-03	3.39E-03
525333	3/31/2020 - 6/30/2020	Cs-134	<1.99E-03	0.00E+00	1.99E-03
		Cs-137	<2.17E-03	0.00E+00	2.17E-03
		Be-7	1.52E-01	3.88E-02	3.33E-02
		K-40	3.32E-02	1.96E-02	2.37E-02
525327	6/30/2020 - 7/7/2020	Beta	2.40E-02	3.24E-03	3.17E-03

# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (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
525562	7/7/2020 - 7/14/2020	Beta	1.74E-02	2.70E-03	3.05E-03
525911	7/14/2020 - 7/21/2020	Beta	3.52E-02	3.32E-03	2.64E-03
526246	7/21/2020 - 7/28/2020	Beta	1.49E-02	2.50E-03	2.84E-03
526532	7/28/2020 - 8/4/2020	Beta	1.50E-02	2.90E-03	3.55E-03
526852	8/4/2020 - 8/11/2020	Beta	2.74E-02	3.41E-03	3.22E-03
527329	8/11/2020 - 8/18/2020	Beta	2.37E-02	2.85E-03	2.66E-03
527623	8/18/2020 - 8/25/2020	Beta	1.87E-02	2.73E-03	2.95E-03
527921	8/25/2020 - 9/1/2020	Beta	2.28E-02	2.80E-03	2.65E-03
528671	9/1/2020 - 9/9/2020	Beta	2.64E-02	3.13E-03	2.98E-03
528998	9/9/2020 - 9/15/2020	Beta	1.46E-02	3.24E-03	4.10E-03
529994	9/15/2020 - 9/21/2020	Beta	1.92E-02	3.34E-03	3.72E-03
530296	9/21/2020 - 9/29/2020	Beta	2.02E-02	2.69E-03	2.54E-03
531073	6/30/2020 - 9/29/2020	Cs-134	<1.08E-03	0.00E+00	1.08E-03
		Cs-137	<1.59E-03	0.00E+00	1.59E-03
		Be-7	1.73E-01	3.89E-02	2.94E-02
		K-40	1.93E-02	1.38E-02	1.64E-02
530569	9/29/2020 - 10/6/2020	Beta	2.05E-02	2.92E-03	2.82E-03
531067	10/6/2020 - 10/13/2020	Beta	2.88E-02	3.52E-03	3.33E-03
531678	10/13/2020 - 10/20/2020	Beta	2.82E-02	3.45E-03	3.21E-03
532081	10/20/2020 - 10/27/2020	Beta	1.55E-02	2.47E-03	2.70E-03
532506	10/27/2020 - 11/3/2020	Beta	1.68E-02	2.54E-03	2.70E-03
532814	11/3/2020 - 11/10/2020	Beta	2.08E-02	3.10E-03	3.20E-03
533341	11/10/2020 - 11/17/2020	Beta	1.74E-02	2.78E-03	2.88E-03
533802	11/17/2020 - 11/24/2020	Beta	2.01E-02	3.08E-03	3.35E-03
534103	11/24/2020 - 12/1/2020	Beta	2.44E-02	3.19E-03	3.10E-03
534561	12/1/2020 - 12/8/2020	Beta	2.27E-02	3.24E-03	3.36E-03

# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (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
535335	12/8/2020 - 12/14/2020	Beta	3.68E-02	4.04E-03	3.56E-03
535892	12/14/2020 - 12/21/2020	Beta	2.33E-02	3.09E-03	2.94E-03
536178	12/21/2020 - 12/29/2020	Beta	2.64E-02	3.19E-03	3.07E-03
536741	9/29/2020 - 12/29/2020	Cs-134	<2.08E-03	0.00E+00	2.08E-03
		Cs-137	<8.89E-04	0.00E+00	8.89E-04
		Be-7	1.41E-01	3.58E-02	2.91E-02
		K-40	2.00E-02	1.22E-02	4.92E-03

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
514442	12/31/2019 - 1/7/2020	I-131	<1.76E-02	0.00E+00	1.76E-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	<1.04E-01	0.00E+00	1.04E-01
		K-40	4.53E-01	1.75E-01	1.69E-01
514903	1/7/2020 - 1/14/2020	I-131	<2.32E-02	0.00E+00	2.32E-02
		Cs-134	<1.83E-02	0.00E+00	1.83E-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	5.80E-01	1.79E-01	3.49E-02
515232	1/14/2020 - 1/21/2020	I-131	<1.59E-02	0.00E+00	1.59E-02
		Cs-134	<1.60E-02	0.00E+00	1.60E-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	5.12E-01	1.80E-01	1.53E-01
515469	1/21/2020 - 1/28/2020	I-131	<1.33E-02	0.00E+00	1.33E-02
		Cs-134	<1.68E-02	0.00E+00	1.68E-02
		Cs-137	<1.18E-02	0.00E+00	1.18E-02
		Be-7	<7.86E-02	0.00E+00	7.86E-02
		K-40	<1.51E-01	0.00E+00	1.51E-01
515859	1/28/2020 - 2/4/2020	I-131	<1.71E-02	0.00E+00	1.71E-02
		Cs-134	<1.95E-02	0.00E+00	1.95E-02
		Cs-137	<1.39E-02	0.00E+00	1.39E-02
		Be-7	<1.36E-01	0.00E+00	1.36E-01
		K-40	7.04E-01	2.11E-01	1.54E-01
516120	2/4/2020 - 2/11/2020	I-131	<1.35E-02	0.00E+00	1.35E-02
		Cs-134	<1.16E-02	0.00E+00	1.16E-02
		Cs-137	<1.45E-02	0.00E+00	1.45E-02
		Be-7	<9.17E-02	0.00E+00	9.17E-02
		K-40	2.50E-01	1.33E-01	1.49E-01
516480	2/11/2020 - 2/18/2020	I-131	<1.46E-02	0.00E+00	1.46E-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	<9.74E-02	0.00E+00	9.74E-02
		K-40	2.53E-01	1.55E-01	2.06E-01
516859	2/18/2020 - 2/25/2020	I-131	<1.65E-02	0.00E+00	1.65E-02

# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (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
516859	2/18/2020 - 2/25/2020	Cs-134	<1.85E-02	0.00E+00	1.85E-02
		Cs-137	<1.55E-02	0.00E+00	1.55E-02
		Be-7	<1.22E-01	0.00E+00	1.22E-01
		K-40	3.17E-01	1.56E-01	1.80E-01
517382	2/25/2020 - 3/3/2020	I-131	<1.47E-02	0.00E+00	1.47E-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	<9.67E-02	0.00E+00	9.67E-02
		K-40	3.99E-01	1.70E-01	1.80E-01
517652	3/3/2020 - 3/10/2020	I-131	<1.71E-02	0.00E+00	1.71E-02
		Cs-134	<1.77E-02	0.00E+00	1.77E-02
		Cs-137	<1.02E-02	0.00E+00	1.02E-02
		Be-7	<1.19E-01	0.00E+00	1.19E-01
		K-40	4.73E-01	1.74E-01	1.51E-01
518679	3/10/2020 - 3/17/2020	I-131	<2.02E-02	0.00E+00	2.02E-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	<1.34E-01	0.00E+00	1.34E-01
		K-40	5.11E-01	1.94E-01	1.97E-01
519291	3/17/2020 - 3/24/2020	I-131	<1.81E-02	0.00E+00	1.81E-02
		Cs-134	<2.23E-02	0.00E+00	2.23E-02
		Cs-137	<1.38E-02	0.00E+00	1.38E-02
		Be-7	<1.33E-01	0.00E+00	1.33E-01
		K-40	5.22E-01	1.94E-01	1.92E-01
519669	3/24/2020 - 3/31/2020	I-131	<1.71E-02	0.00E+00	1.71E-02
		Cs-134	<1.83E-02	0.00E+00	1.83E-02
		Cs-137	<1.83E-02	0.00E+00	1.83E-02
		Be-7	<1.53E-01	0.00E+00	1.53E-01
		K-40	4.00E-01	1.47E-01	3.50E-02
520259	3/31/2020 - 4/7/2020	I-131	<1.96E-02	0.00E+00	1.96E-02
		Cs-134	<1.26E-02	0.00E+00	1.26E-02
		Cs-137	<1.39E-02	0.00E+00	1.39E-02
		Be-7	<1.08E-01	0.00E+00	1.08E-01
		K-40	<4.29E-01	0.00E+00	4.29E-01
520485	4/7/2020 - 4/14/2020	I-131	<2.03E-02	0.00E+00	2.03E-02
		Cs-134	<1.38E-02	0.00E+00	1.38E-02
		Cs-137	<1.68E-02	0.00E+00	1.68E-02
		Be-7	<1.43E-01	0.00E+00	1.43E-01
		K-40	4.44E-01	1.77E-01	1.73E-01
520779	4/14/2020 - 4/21/2020	I-131	<2.14E-02	0.00E+00	2.14E-02
		Cs-134	<2.00E-02	0.00E+00	2.00E-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	5.14E-01	1.87E-01	1.73E-01
521578	4/21/2020 - 4/28/2020	I-131	<1.82E-02	0.00E+00	1.82E-02
		Cs-134	<1.70E-02	0.00E+00	1.70E-02
		Cs-137	<1.63E-02	0.00E+00	1.63E-02
		Be-7	<1.51E-01	0.00E+00	1.51E-01
		K-40	5.20E-01	1.79E-01	1.33E-01

# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (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
522013	4/28/2020 - 5/5/2020	I-131	<1.65E-02	0.00E+00	1.65E-02
		Cs-134	<1.51E-02	0.00E+00	1.51E-02
		Cs-137	<9.88E-03	0.00E+00	9.88E-03
		Be-7	<1.06E-01	0.00E+00	1.06E-01
		K-40	3.46E-01	1.54E-01	1.63E-01
522319	5/5/2020 - 5/12/2020	I-131	<1.58E-02	0.00E+00	1.58E-02
		Cs-134	<1.46E-02	0.00E+00	1.46E-02
		Cs-137	<1.26E-02	0.00E+00	1.26E-02
		Be-7	<9.55E-02	0.00E+00	9.55E-02
		K-40	5.01E-01	1.63E-01	3.40E-02
522567	5/12/2020 - 5/19/2020	I-131	<1.36E-02	0.00E+00	1.36E-02
		Cs-134	<1.16E-02	0.00E+00	1.16E-02
		Cs-137	<1.68E-02	0.00E+00	1.68E-02
		Be-7	<8.29E-02	0.00E+00	8.29E-02
		K-40	<1.51E-01	0.00E+00	1.51E-01
523074	5/19/2020 - 5/26/2020	I-131	<1.76E-02	0.00E+00	1.76E-02
		Cs-134	<1.42E-02	0.00E+00	1.42E-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	3.30E-01	1.54E-01	1.71E-01
523447	5/26/2020 - 6/2/2020	I-131	<1.69E-02	0.00E+00	1.69E-02
		Cs-134	<1.75E-02	0.00E+00	1.75E-02
		Cs-137	<1.58E-02	0.00E+00	1.58E-02
		Be-7	<9.97E-02	0.00E+00	9.97E-02
		K-40	<2.58E-01	0.00E+00	2.58E-01
523848	6/2/2020 - 6/8/2020	I-131	<1.88E-02	0.00E+00	1.88E-02
		Cs-134	<1.68E-02	0.00E+00	1.68E-02
		Cs-137	<1.79E-02	0.00E+00	1.79E-02
		Be-7	<1.22E-01	0.00E+00	1.22E-01
		K-40	<3.72E-01	0.00E+00	3.72E-01
524412	6/8/2020 - 6/16/2020	I-131	<1.50E-02	0.00E+00	1.50E-02
		Cs-134	<1.54E-02	0.00E+00	1.54E-02
		Cs-137	<1.16E-02	0.00E+00	1.16E-02
		Be-7	<1.10E-01	0.00E+00	1.10E-01
		K-40	6.34E-01	1.94E-01	1.72E-01
524734	6/16/2020 - 6/23/2020	I-131	<1.76E-02	0.00E+00	1.76E-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	<9.67E-02	0.00E+00	9.67E-02
		K-40	6.07E-01	2.07E-01	2.03E-01
524966	6/23/2020 - 6/30/2020	I-131	<1.72E-02	0.00E+00	1.72E-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	<1.19E-01	0.00E+00	1.19E-01
		K-40	3.29E-01	1.76E-01	2.29E-01
525334	6/30/2020 - 7/7/2020	I-131	<2.00E-02	0.00E+00	2.00E-02
		Cs-134	<1.82E-02	0.00E+00	1.82E-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	5.71E-01	1.99E-01	1.92E-01

# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (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
525563	7/7/2020 - 7/14/2020	I-131	<2.13E-02	0.00E+00	2.13E-02
		Cs-134	<1.69E-02	0.00E+00	1.69E-02
		Cs-137	<1.58E-02	0.00E+00	1.58E-02
		Be-7	<1.09E-01	0.00E+00	1.09E-01
		K-40	3.78E-01	1.96E-01	2.60E-01
525912	7/14/2020 - 7/21/2020	I-131	<1.66E-02	0.00E+00	1.66E-02
		Cs-134	<1.27E-02	0.00E+00	1.27E-02
		Cs-137	<1.58E-02	0.00E+00	1.58E-02
		Be-7	<9.43E-02	0.00E+00	9.43E-02
		K-40	<3.09E-01	0.00E+00	3.09E-01
526247	7/21/2020 - 7/28/2020	I-131	<1.55E-02	0.00E+00	1.55E-02
		Cs-134	<1.61E-02	0.00E+00	1.61E-02
		Cs-137	<1.18E-02	0.00E+00	1.18E-02
		Be-7	<1.38E-01	0.00E+00	1.38E-01
		K-40	5.35E-01	1.69E-01	3.37E-02
526533	7/28/2020 - 8/4/2020	I-131	<1.81E-02	0.00E+00	1.81E-02
		Cs-134	<1.52E-02	0.00E+00	1.52E-02
		Cs-137	<1.71E-02	0.00E+00	1.71E-02
		Be-7	<9.40E-02	0.00E+00	9.40E-02
		K-40	<3.66E-01	0.00E+00	3.66E-01
526853	8/4/2020 - 8/11/2020	I-131	<1.59E-02	0.00E+00	1.59E-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	<8.94E-02	0.00E+00	8.94E-02
		K-40	2.48E-01	1.65E-01	2.33E-01
527330	8/11/2020 - 8/18/2020	I-131	<1.61E-02	0.00E+00	1.61E-02
		Cs-134	<1.67E-02	0.00E+00	1.67E-02
		Cs-137	<1.72E-02	0.00E+00	1.72E-02
		Be-7	<9.90E-02	0.00E+00	9.90E-02
		K-40	4.58E-01	1.97E-01	2.33E-01
527624	8/18/2020 - 8/25/2020	I-131	<1.84E-02	0.00E+00	1.84E-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	<9.52E-02	0.00E+00	9.52E-02
		K-40	3.66E-01	1.83E-01	2.32E-01
527922	8/25/2020 - 9/1/2020	I-131	<2.02E-02	0.00E+00	2.02E-02
		Cs-134	<1.99E-02	0.00E+00	1.99E-02
		Cs-137	<1.45E-02	0.00E+00	1.45E-02
		Be-7	<9.60E-02	0.00E+00	9.60E-02
		K-40	5.15E-01	1.79E-01	1.49E-01
528672	9/1/2020 - 9/9/2020	I-131	<1.45E-02	0.00E+00	1.45E-02
		Cs-134	<1.41E-02	0.00E+00	1.41E-02
		Cs-137	<1.41E-02	0.00E+00	1.41E-02
		Be-7	<6.60E-02	0.00E+00	6.60E-02
		K-40	3.58E-01	1.61E-01	1.95E-01
528999	9/9/2020 - 9/15/2020	I-131	<2.02E-02	0.00E+00	2.02E-02
		Cs-134	<1.90E-02	0.00E+00	1.90E-02
		Cs-137	<2.10E-02	0.00E+00	2.10E-02
		Be-7	<1.38E-01	0.00E+00	1.38E-01
		K-40	5.41E-01	2.33E-01	2.76E-01

# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (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
529995	9/15/2020 - 9/21/2020	I-131	<2.11E-02	0.00E+00	2.11E-02
		Cs-134	<1.24E-02	0.00E+00	1.24E-02
		Cs-137	<9.23E-03	0.00E+00	9.23E-03
		Be-7	<1.05E-01	0.00E+00	1.05E-01
		K-40	<2.91E-01	0.00E+00	2.91E-01
530297	9/21/2020 - 9/29/2020	I-131	<1.33E-02	0.00E+00	1.33E-02
		Cs-134	<9.12E-03	0.00E+00	9.12E-03
		Cs-137	<1.16E-02	0.00E+00	1.16E-02
		Be-7	<9.16E-02	0.00E+00	9.16E-02
		K-40	<2.90E-01	0.00E+00	2.90E-01
530570	9/29/2020 - 10/6/2020	I-131	<1.75E-02	0.00E+00	1.75E-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	<1.26E-01	0.00E+00	1.26E-01
		K-40	<3.41E-01	0.00E+00	3.41E-01
531074	10/6/2020 - 10/13/2020	I-131	<1.90E-02	0.00E+00	1.90E-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	<1.11E-01	0.00E+00	1.11E-01
		K-40	4.53E-01	2.03E-01	2.44E-01
531679	10/13/2020 - 10/20/2020	I-131	<1.44E-02	0.00E+00	1.44E-02
		Cs-134	<1.45E-02	0.00E+00	1.45E-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	4.41E-01	1.89E-01	2.09E-01
532082	10/20/2020 - 10/27/2020	I-131	<1.94E-02	0.00E+00	1.94E-02
		Cs-134	<1.67E-02	0.00E+00	1.67E-02
		Cs-137	<1.25E-02	0.00E+00	1.25E-02
		Be-7	<9.98E-02	0.00E+00	9.98E-02
		K-40	5.30E-01	2.32E-01	2.98E-01
532507	10/27/2020 - 11/3/2020	I-131	<1.67E-02	0.00E+00	1.67E-02
		Cs-134	<1.59E-02	0.00E+00	1.59E-02
		Cs-137	<1.67E-02	0.00E+00	1.67E-02
		Be-7	<9.71E-02	0.00E+00	9.71E-02
		K-40	3.63E-01	1.49E-01	1.27E-01
532815	11/3/2020 - 11/10/2020	I-131	<1.84E-02	0.00E+00	1.84E-02
		Cs-134	<1.27E-02	0.00E+00	1.27E-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	6.31E-01	2.08E-01	1.84E-01
533342	11/10/2020 - 11/17/2020	I-131	<1.98E-02	0.00E+00	1.98E-02
		Cs-134	<1.68E-02	0.00E+00	1.68E-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	6.26E-01	1.86E-01	3.46E-02
533803	11/17/2020 - 11/24/2020	I-131	<1.96E-02	0.00E+00	1.96E-02
		Cs-134	<1.52E-02	0.00E+00	1.52E-02
		Cs-137	<1.49E-02	0.00E+00	1.49E-02
		Be-7	<1.07E-01	0.00E+00	1.07E-01
		K-40	4.92E-01	1.98E-01	2.21E-01



# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (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
534104	11/24/2020 - 12/1/2020	I-131	<2.05E-02	0.00E+00	2.05E-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	<1.27E-01	0.00E+00	1.27E-01
		K-40	5.09E-01	1.98E-01	2.14E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
534562	12/1/2020 - 12/8/2020	I-131	<1.50E-02	0.00E+00	1.50E-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	<1.35E-01	0.00E+00	1.35E-01
		K-40	3.60E-01	1.62E-01	1.76E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
535336	12/8/2020 - 12/14/2020	I-131	<2.02E-02	0.00E+00	2.02E-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	<1.10E-01	0.00E+00	1.10E-01
		K-40	4.38E-01	1.61E-01	3.83E-02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
535893	12/14/2020 - 12/21/2020	I-131	<1.77E-02	0.00E+00	1.77E-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	<9.89E-02	0.00E+00	9.89E-02
		K-40	3.96E-01	2.02E-01	2.68E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
536179	12/21/2020 - 12/29/2020	I-131	<2.57E-02	0.00E+00	2.57E-02
		Cs-134	<1.22E-02	0.00E+00	1.22E-02
		Cs-137	<9.76E-03	0.00E+00	9.76E-03
		Be-7	<9.41E-02	0.00E+00	9.41E-02
		K-40	<2.38E-01	0.00E+00	2.38E-01

## Sample Point 201 [ INDICATOR - NE @ 0.53 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514443	12/31/2019 - 1/7/2020	I-131	<1.44E-02	0.00E+00	1.44E-02
		Cs-134	<1.32E-02	0.00E+00	1.32E-02
		Cs-137	<1.63E-02	0.00E+00	1.63E-02
		Be-7	<9.74E-02	0.00E+00	9.74E-02
		K-40	2.78E-01	1.67E-01	2.28E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514904	1/7/2020 - 1/14/2020	I-131	<1.61E-02	0.00E+00	1.61E-02
		Cs-134	<1.27E-02	0.00E+00	1.27E-02
		Cs-137	<1.74E-02	0.00E+00	1.74E-02
		Be-7	<9.74E-02	0.00E+00	9.74E-02
		K-40	5.72E-01	1.98E-01	1.88E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
515233	1/14/2020 - 1/21/2020	I-131	<1.35E-02	0.00E+00	1.35E-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	2.73E-02	5.25E-02	9.13E-02
		K-40	3.09E-01	1.51E-01	1.72E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
515470	1/21/2020 - 1/28/2020	I-131	<1.27E-02	0.00E+00	1.27E-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	<9.32E-02	0.00E+00	9.32E-02
		K-40	3.46E-01	1.66E-01	1.88E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
515860	1/28/2020 - 2/4/2020	I-131	<1.58E-02	0.00E+00	1.58E-02
		Cs-134	<1.60E-02	0.00E+00	1.60E-02
		Cs-137	<1.32E-02	0.00E+00	1.32E-02

# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (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
515860	1/28/2020 - 2/4/2020	Be-7	<7.28E-02	0.00E+00	7.28E-02
		K-40	4.09E-01	1.65E-01	1.58E-01
516121	2/4/2020 - 2/11/2020	I-131	<1.42E-02	0.00E+00	1.42E-02
		Cs-134	<1.92E-02	0.00E+00	1.92E-02
		Cs-137	<1.39E-02	0.00E+00	1.39E-02
		Be-7	<8.68E-02	0.00E+00	8.68E-02
		K-40	<3.68E-01	0.00E+00	3.68E-01
516481	2/11/2020 - 2/18/2020	I-131	<2.35E-02	0.00E+00	2.35E-02
		Cs-134	<1.56E-02	0.00E+00	1.56E-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	6.31E-01	2.21E-01	2.28E-01
516860	2/18/2020 - 2/25/2020	I-131	<1.92E-02	0.00E+00	1.92E-02
		Cs-134	<1.62E-02	0.00E+00	1.62E-02
		Cs-137	<1.24E-02	0.00E+00	1.24E-02
		Be-7	<9.29E-02	0.00E+00	9.29E-02
		K-40	<2.90E-01	0.00E+00	2.90E-01
517383	2/25/2020 - 3/3/2020	I-131	<1.54E-02	0.00E+00	1.54E-02
		Cs-134	<1.74E-02	0.00E+00	1.74E-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	5.55E-01	1.71E-01	3.34E-02
517653	3/3/2020 - 3/10/2020	I-131	<1.78E-02	0.00E+00	1.78E-02
		Cs-134	<1.80E-02	0.00E+00	1.80E-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	4.61E-01	1.67E-01	1.36E-01
518680	3/10/2020 - 3/17/2020	I-131	<1.73E-02	0.00E+00	1.73E-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	<6.63E-02	0.00E+00	6.63E-02
		K-40	1.79E-01	1.37E-01	1.96E-01
519292	3/17/2020 - 3/24/2020	I-131	<2.14E-02	0.00E+00	2.14E-02
		Cs-134	<1.77E-02	0.00E+00	1.77E-02
		Cs-137	<1.39E-02	0.00E+00	1.39E-02
		Be-7	<1.36E-01	0.00E+00	1.36E-01
		K-40	4.35E-01	1.69E-01	1.50E-01
519670	3/24/2020 - 3/31/2020	I-131	<1.56E-02	0.00E+00	1.56E-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	<1.00E-01	0.00E+00	1.00E-01
		K-40	4.43E-01	1.78E-01	1.86E-01
520260	3/31/2020 - 4/7/2020	I-131	<1.88E-02	0.00E+00	1.88E-02
		Cs-134	<1.82E-02	0.00E+00	1.82E-02
		Cs-137	<1.67E-02	0.00E+00	1.67E-02
		Be-7	<1.42E-01	0.00E+00	1.42E-01
		K-40	7.08E-01	2.07E-01	1.30E-01
520486	4/7/2020 - 4/14/2020	I-131	<2.09E-02	0.00E+00	2.09E-02

# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (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
520486	4/7/2020 - 4/14/2020	Cs-134	<1.76E-02	0.00E+00	1.76E-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	<3.41E-01	0.00E+00	3.41E-01
520780	4/14/2020 - 4/21/2020	I-131	<2.10E-02	0.00E+00	2.10E-02
		Cs-134	<1.76E-02	0.00E+00	1.76E-02
		Cs-137	<1.67E-02	0.00E+00	1.67E-02
		Be-7	<1.34E-01	0.00E+00	1.34E-01
		K-40	4.49E-01	2.00E-01	2.42E-01
521579	4/21/2020 - 4/28/2020	I-131	<1.77E-02	0.00E+00	1.77E-02
		Cs-134	<1.45E-02	0.00E+00	1.45E-02
		Cs-137	<1.51E-02	0.00E+00	1.51E-02
		Be-7	<1.13E-01	0.00E+00	1.13E-01
		K-40	4.04E-01	1.55E-01	1.23E-01
522014	4/28/2020 - 5/5/2020	I-131	<1.76E-02	0.00E+00	1.76E-02
		Cs-134	<1.35E-02	0.00E+00	1.35E-02
		Cs-137	<1.32E-02	0.00E+00	1.32E-02
		Be-7	<7.27E-02	0.00E+00	7.27E-02
		K-40	3.43E-01	1.95E-01	2.68E-01
522320	5/5/2020 - 5/12/2020	I-131	<1.63E-02	0.00E+00	1.63E-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	<7.16E-02	0.00E+00	7.16E-02
		K-40	3.84E-01	1.83E-01	2.26E-01
522568	5/12/2020 - 5/19/2020	I-131	<1.62E-02	0.00E+00	1.62E-02
		Cs-134	<2.05E-02	0.00E+00	2.05E-02
		Cs-137	<1.81E-02	0.00E+00	1.81E-02
		Be-7	<1.17E-01	0.00E+00	1.17E-01
		K-40	6.43E-01	1.97E-01	1.40E-01
523075	5/19/2020 - 5/22/2020	I-131	<4.09E-02	0.00E+00	4.09E-02
		Cs-134	<3.04E-02	0.00E+00	3.04E-02
		Cs-137	<2.62E-02	0.00E+00	2.62E-02
		Be-7	<2.47E-01	0.00E+00	2.47E-01
		K-40	9.47E-01	3.63E-01	3.45E-01
523448	5/26/2020 - 6/2/2020	I-131	<1.24E-02	0.00E+00	1.24E-02
		Cs-134	<1.76E-02	0.00E+00	1.76E-02
		Cs-137	<1.28E-02	0.00E+00	1.28E-02
		Be-7	<9.63E-02	0.00E+00	9.63E-02
		K-40	<3.30E-01	0.00E+00	3.30E-01
523849	6/2/2020 - 6/8/2020	I-131	<1.81E-02	0.00E+00	1.81E-02
		Cs-134	<1.77E-02	0.00E+00	1.77E-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	6.66E-01	2.33E-01	2.29E-01
524413	6/8/2020 - 6/16/2020	I-131	<1.72E-02	0.00E+00	1.72E-02
		Cs-134	<1.60E-02	0.00E+00	1.60E-02
		Cs-137	<1.34E-02	0.00E+00	1.34E-02
		Be-7	<1.06E-01	0.00E+00	1.06E-01
		K-40	3.86E-01	1.49E-01	1.42E-01

# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (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
524735	6/16/2020 - 6/23/2020	I-131	<1.70E-02	0.00E+00	1.70E-02
		Cs-134	<1.37E-02	0.00E+00	1.37E-02
		Cs-137	<1.01E-02	0.00E+00	1.01E-02
		Be-7	<8.92E-02	0.00E+00	8.92E-02
		K-40	4.33E-01	1.72E-01	1.69E-01
524967	6/23/2020 - 6/30/2020	I-131	<1.87E-02	0.00E+00	1.87E-02
		Cs-134	<1.87E-02	0.00E+00	1.87E-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	4.25E-01	1.69E-01	1.65E-01
525335	6/30/2020 - 7/7/2020	I-131	<1.88E-02	0.00E+00	1.88E-02
		Cs-134	<1.59E-02	0.00E+00	1.59E-02
		Cs-137	<1.20E-02	0.00E+00	1.20E-02
		Be-7	<1.17E-01	0.00E+00	1.17E-01
		K-40	3.24E-01	1.61E-01	2.01E-01
525564	7/7/2020 - 7/14/2020	I-131	<1.69E-02	0.00E+00	1.69E-02
		Cs-134	<1.54E-02	0.00E+00	1.54E-02
		Cs-137	<1.52E-02	0.00E+00	1.52E-02
		Be-7	<9.79E-02	0.00E+00	9.79E-02
		K-40	4.56E-01	1.74E-01	1.64E-01
525913	7/14/2020 - 7/21/2020	I-131	<1.37E-02	0.00E+00	1.37E-02
		Cs-134	<1.77E-02	0.00E+00	1.77E-02
		Cs-137	<9.09E-03	0.00E+00	9.09E-03
		Be-7	<7.97E-02	0.00E+00	7.97E-02
		K-40	<1.18E-01	0.00E+00	1.18E-01
526248	7/21/2020 - 7/28/2020	I-131	<1.68E-02	0.00E+00	1.68E-02
		Cs-134	<1.53E-02	0.00E+00	1.53E-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	3.61E-01	1.63E-01	1.80E-01
526534	7/28/2020 - 8/4/2020	I-131	<1.90E-02	0.00E+00	1.90E-02
		Cs-134	<1.67E-02	0.00E+00	1.67E-02
		Cs-137	<1.45E-02	0.00E+00	1.45E-02
		Be-7	<1.23E-01	0.00E+00	1.23E-01
		K-40	<4.40E-01	0.00E+00	4.40E-01
526854	8/4/2020 - 8/11/2020	I-131	<1.70E-02	0.00E+00	1.70E-02
		Cs-134	<1.52E-02	0.00E+00	1.52E-02
		Cs-137	<1.24E-02	0.00E+00	1.24E-02
		Be-7	<1.08E-01	0.00E+00	1.08E-01
		K-40	4.38E-01	1.76E-01	1.83E-01
527331	8/11/2020 - 8/18/2020	I-131	<1.61E-02	0.00E+00	1.61E-02
		Cs-134	<1.57E-02	0.00E+00	1.57E-02
		Cs-137	<1.63E-02	0.00E+00	1.63E-02
		Be-7	<7.51E-02	0.00E+00	7.51E-02
		K-40	5.55E-01	2.03E-01	2.14E-01
527625	8/18/2020 - 8/25/2020	I-131	<1.34E-02	0.00E+00	1.34E-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	<1.25E-01	0.00E+00	1.25E-01
		K-40	4.19E-01	1.96E-01	2.45E-01

# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (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
527923	8/25/2020 - 9/1/2020	I-131	<1.82E-02	0.00E+00	1.82E-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	<9.10E-02	0.00E+00	9.10E-02
		K-40	4.08E-01	1.87E-01	2.27E-01
528673	9/1/2020 - 9/9/2020	I-131	<1.62E-02	0.00E+00	1.62E-02
		Cs-134	<1.52E-02	0.00E+00	1.52E-02
		Cs-137	<1.08E-02	0.00E+00	1.08E-02
		Be-7	<8.36E-02	0.00E+00	8.36E-02
		K-40	4.93E-01	1.78E-01	1.86E-01
529000	9/9/2020 - 9/15/2020	I-131	<1.86E-02	0.00E+00	1.86E-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	<1.06E-01	0.00E+00	1.06E-01
		K-40	7.73E-01	2.36E-01	1.79E-01
529996	9/15/2020 - 9/21/2020	I-131	<2.14E-02	0.00E+00	2.14E-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	<8.99E-02	0.00E+00	8.99E-02
		K-40	1.59E-01	1.77E-01	2.82E-01
530298	9/21/2020 - 9/29/2020	I-131	<1.36E-02	0.00E+00	1.36E-02
		Cs-134	<1.27E-02	0.00E+00	1.27E-02
		Cs-137	<1.46E-02	0.00E+00	1.46E-02
		Be-7	<9.67E-02	0.00E+00	9.67E-02
		K-40	2.90E-01	1.48E-01	1.76E-01
530571	9/29/2020 - 10/6/2020	I-131	<1.90E-02	0.00E+00	1.90E-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	<1.30E-01	0.00E+00	1.30E-01
		K-40	5.63E-01	2.06E-01	2.06E-01
531075	10/6/2020 - 10/13/2020	I-131	<1.52E-02	0.00E+00	1.52E-02
		Cs-134	<1.17E-02	0.00E+00	1.17E-02
		Cs-137	<1.40E-02	0.00E+00	1.40E-02
		Be-7	<9.80E-02	0.00E+00	9.80E-02
		K-40	4.30E-01	1.64E-01	1.37E-01
531680	10/13/2020 - 10/20/2020	I-131	<1.71E-02	0.00E+00	1.71E-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	<1.29E-01	0.00E+00	1.29E-01
		K-40	3.88E-01	1.80E-01	2.15E-01
532083	10/20/2020 - 10/27/2020	I-131	<1.57E-02	0.00E+00	1.57E-02
		Cs-134	<1.51E-02	0.00E+00	1.51E-02
		Cs-137	<1.38E-02	0.00E+00	1.38E-02
		Be-7	<1.04E-01	0.00E+00	1.04E-01
		K-40	3.50E-01	1.46E-01	1.26E-01
532508	10/27/2020 - 11/3/2020	I-131	<1.77E-02	0.00E+00	1.77E-02
		Cs-134	<1.52E-02	0.00E+00	1.52E-02
		Cs-137	<1.51E-02	0.00E+00	1.51E-02
		Be-7	<9.63E-02	0.00E+00	9.63E-02
		K-40	5.17E-01	1.86E-01	1.75E-01

# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (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
532816	11/3/2020 - 11/10/2020	I-131	<1.67E-02	0.00E+00	1.67E-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	<8.43E-02	0.00E+00	8.43E-02
		K-40	6.33E-01	1.97E-01	1.48E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
533343	11/10/2020 - 11/17/2020	I-131	<1.88E-02	0.00E+00	1.88E-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	<1.15E-01	0.00E+00	1.15E-01
		K-40	5.23E-01	1.90E-01	1.85E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
533804	11/17/2020 - 11/24/2020	I-131	<1.56E-02	0.00E+00	1.56E-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	<1.02E-01	0.00E+00	1.02E-01
		K-40	6.24E-01	1.92E-01	1.38E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
534105	11/24/2020 - 12/1/2020	I-131	<2.15E-02	0.00E+00	2.15E-02
		Cs-134	<1.60E-02	0.00E+00	1.60E-02
		Cs-137	<1.64E-02	0.00E+00	1.64E-02
		Be-7	<1.02E-01	0.00E+00	1.02E-01
		K-40	5.57E-01	1.74E-01	3.43E-02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
534563	12/1/2020 - 12/8/2020	I-131	<1.51E-02	0.00E+00	1.51E-02
		Cs-134	<1.64E-02	0.00E+00	1.64E-02
		Cs-137	<1.62E-02	0.00E+00	1.62E-02
		Be-7	<1.38E-01	0.00E+00	1.38E-01
		K-40	<3.67E-01	0.00E+00	3.67E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
535337	12/8/2020 - 12/14/2020	I-131	<1.93E-02	0.00E+00	1.93E-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	<1.58E-01	0.00E+00	1.58E-01
		K-40	7.25E-01	2.39E-01	2.28E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
535894	12/14/2020 - 12/21/2020	I-131	<1.60E-02	0.00E+00	1.60E-02
		Cs-134	<1.60E-02	0.00E+00	1.60E-02
		Cs-137	<1.72E-02	0.00E+00	1.72E-02
		Be-7	<9.72E-02	0.00E+00	9.72E-02
		K-40	3.14E-01	1.56E-01	1.81E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
536180	12/21/2020 - 12/29/2020	I-131	<3.12E-02	0.00E+00	3.12E-02
		Cs-134	<1.21E-02	0.00E+00	1.21E-02
		Cs-137	<9.66E-03	0.00E+00	9.66E-03
		Be-7	<9.30E-02	0.00E+00	9.30E-02
		K-40	3.64E-01	1.38E-01	1.07E-01

Sample Point 208 [ INDICATOR - S @ 0.45 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514444	12/31/2019 - 1/7/2020	I-131	<1.58E-02	0.00E+00	1.58E-02
		Cs-134	<1.60E-02	0.00E+00	1.60E-02
		Cs-137	<1.78E-02	0.00E+00	1.78E-02
		Be-7	<9.78E-02	0.00E+00	9.78E-02
		K-40	3.34E-01	1.52E-01	1.58E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514905	1/7/2020 - 1/14/2020	I-131	<1.03E-02	0.00E+00	1.03E-02
		Cs-134	<1.69E-02	0.00E+00	1.69E-02
		Cs-137	<1.45E-02	0.00E+00	1.45E-02

# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (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
514905	1/7/2020 - 1/14/2020	Be-7	<1.00E-01	0.00E+00	1.00E-01
		K-40	4.82E-01	1.75E-01	1.53E-01
515234	1/14/2020 - 1/21/2020	I-131	<2.07E-02	0.00E+00	2.07E-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	<1.33E-01	0.00E+00	1.33E-01
		K-40	3.64E-01	2.06E-01	2.83E-01
515471	1/21/2020 - 1/28/2020	I-131	<1.64E-02	0.00E+00	1.64E-02
		Cs-134	<2.05E-02	0.00E+00	2.05E-02
		Cs-137	<1.67E-02	0.00E+00	1.67E-02
		Be-7	<1.04E-01	0.00E+00	1.04E-01
		K-40	4.45E-01	1.97E-01	2.38E-01
515861	1/28/2020 - 2/4/2020	I-131	<1.53E-02	0.00E+00	1.53E-02
		Cs-134	<1.43E-02	0.00E+00	1.43E-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	2.86E-01	1.59E-01	2.05E-01
516122	2/4/2020 - 2/11/2020	I-131	<2.01E-02	0.00E+00	2.01E-02
		Cs-134	<1.60E-02	0.00E+00	1.60E-02
		Cs-137	<1.71E-02	0.00E+00	1.71E-02
		Be-7	<1.58E-01	0.00E+00	1.58E-01
		K-40	5.21E-01	1.81E-01	1.44E-01
516482	2/11/2020 - 2/18/2020	I-131	<1.89E-02	0.00E+00	1.89E-02
		Cs-134	<1.63E-02	0.00E+00	1.63E-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	4.05E-01	2.18E-01	3.00E-01
516861	2/18/2020 - 2/25/2020	I-131	<1.97E-02	0.00E+00	1.97E-02
		Cs-134	<2.00E-02	0.00E+00	2.00E-02
		Cs-137	<1.61E-02	0.00E+00	1.61E-02
		Be-7	<1.56E-01	0.00E+00	1.56E-01
		K-40	4.97E-01	1.64E-01	3.45E-02
517384	2/25/2020 - 3/3/2020	I-131	<1.90E-02	0.00E+00	1.90E-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	<1.33E-01	0.00E+00	1.33E-01
		K-40	4.00E-01	1.59E-01	1.36E-01
517654	3/3/2020 - 3/10/2020	I-131	<1.44E-02	0.00E+00	1.44E-02
		Cs-134	<1.45E-02	0.00E+00	1.45E-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	<3.43E-01	0.00E+00	3.43E-01
518681	3/10/2020 - 3/17/2020	I-131	<1.63E-02	0.00E+00	1.63E-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	<8.42E-02	0.00E+00	8.42E-02
		K-40	<1.17E-01	0.00E+00	1.17E-01
519293	3/17/2020 - 3/24/2020	I-131	<1.78E-02	0.00E+00	1.78E-02

# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (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
519293	3/17/2020 - 3/24/2020	Cs-134	<1.45E-02	0.00E+00	1.45E-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	4.48E-01	1.53E-01	3.37E-02
519671	3/24/2020 - 3/31/2020	I-131	<1.75E-02	0.00E+00	1.75E-02
		Cs-134	<1.81E-02	0.00E+00	1.81E-02
		Cs-137	<1.51E-02	0.00E+00	1.51E-02
		Be-7	<9.69E-02	0.00E+00	9.69E-02
		K-40	3.90E-01	1.78E-01	2.08E-01
520261	3/31/2020 - 4/7/2020	I-131	<1.85E-02	0.00E+00	1.85E-02
		Cs-134	<1.53E-02	0.00E+00	1.53E-02
		Cs-137	<1.25E-02	0.00E+00	1.25E-02
		Be-7	<9.71E-02	0.00E+00	9.71E-02
		K-40	3.70E-01	1.76E-01	2.12E-01
520487	4/7/2020 - 4/14/2020	I-131	<2.28E-02	0.00E+00	2.28E-02
		Cs-134	<1.63E-02	0.00E+00	1.63E-02
		Cs-137	<1.57E-02	0.00E+00	1.57E-02
		Be-7	<1.32E-01	0.00E+00	1.32E-01
		K-40	4.06E-01	1.70E-01	1.73E-01
520781	4/14/2020 - 4/21/2020	I-131	<1.99E-02	0.00E+00	1.99E-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	<1.57E-01	0.00E+00	1.57E-01
		K-40	4.49E-01	1.56E-01	3.47E-02
521580	4/21/2020 - 4/28/2020	I-131	<1.57E-02	0.00E+00	1.57E-02
		Cs-134	<1.15E-02	0.00E+00	1.15E-02
		Cs-137	<1.38E-02	0.00E+00	1.38E-02
		Be-7	<9.07E-02	0.00E+00	9.07E-02
		K-40	4.95E-01	2.26E-01	2.95E-01
522015	4/28/2020 - 5/5/2020	I-131	<1.24E-02	0.00E+00	1.24E-02
		Cs-134	<8.85E-03	0.00E+00	8.85E-03
		Cs-137	<1.16E-02	0.00E+00	1.16E-02
		Be-7	<9.08E-02	0.00E+00	9.08E-02
		K-40	1.54E-01	1.37E-01	2.07E-01
522321	5/5/2020 - 5/12/2020	I-131	<1.67E-02	0.00E+00	1.67E-02
		Cs-134	<1.13E-02	0.00E+00	1.13E-02
		Cs-137	<1.22E-02	0.00E+00	1.22E-02
		Be-7	<9.69E-02	0.00E+00	9.69E-02
		K-40	<3.43E-01	0.00E+00	3.43E-01
522569	5/12/2020 - 5/19/2020	I-131	<1.47E-02	0.00E+00	1.47E-02
		Cs-134	<1.43E-02	0.00E+00	1.43E-02
		Cs-137	<1.54E-02	0.00E+00	1.54E-02
		Be-7	<9.51E-02	0.00E+00	9.51E-02
		K-40	6.65E-01	1.95E-01	1.20E-01
523076	5/19/2020 - 5/26/2020	I-131	<1.64E-02	0.00E+00	1.64E-02
		Cs-134	<1.52E-02	0.00E+00	1.52E-02
		Cs-137	<1.03E-02	0.00E+00	1.03E-02
		Be-7	<7.37E-02	0.00E+00	7.37E-02
		K-40	4.24E-01	1.67E-01	1.66E-01



# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (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
523449	5/26/2020 - 6/2/2020	I-131	<2.05E-02	0.00E+00	2.05E-02
		Cs-134	<1.58E-02	0.00E+00	1.58E-02
		Cs-137	<1.98E-02	0.00E+00	1.98E-02
		Be-7	<9.59E-02	0.00E+00	9.59E-02
		K-40	4.93E-01	1.82E-01	1.65E-01
523850	6/2/2020 - 6/8/2020	I-131	<2.09E-02	0.00E+00	2.09E-02
		Cs-134	<2.11E-02	0.00E+00	2.11E-02
		Cs-137	<1.82E-02	0.00E+00	1.82E-02
		Be-7	<1.41E-01	0.00E+00	1.41E-01
		K-40	5.15E-01	2.12E-01	2.31E-01
524414	6/8/2020 - 6/16/2020	I-131	<1.29E-02	0.00E+00	1.29E-02
		Cs-134	<1.19E-02	0.00E+00	1.19E-02
		Cs-137	<1.47E-02	0.00E+00	1.47E-02
		Be-7	<8.26E-02	0.00E+00	8.26E-02
		K-40	4.06E-01	1.62E-01	1.70E-01
524736	6/16/2020 - 6/23/2020	I-131	<1.28E-02	0.00E+00	1.28E-02
		Cs-134	<1.78E-02	0.00E+00	1.78E-02
		Cs-137	<1.32E-02	0.00E+00	1.32E-02
		Be-7	<1.22E-01	0.00E+00	1.22E-01
		K-40	3.36E-01	1.47E-01	1.29E-01
524968	6/23/2020 - 6/30/2020	I-131	<1.54E-02	0.00E+00	1.54E-02
		Cs-134	<7.17E-03	0.00E+00	7.17E-03
		Cs-137	<1.19E-02	0.00E+00	1.19E-02
		Be-7	<9.81E-02	0.00E+00	9.81E-02
		K-40	<1.36E-01	0.00E+00	1.36E-01
525336	6/30/2020 - 7/7/2020	I-131	<1.84E-02	0.00E+00	1.84E-02
		Cs-134	<1.51E-02	0.00E+00	1.51E-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	3.65E-01	1.68E-01	1.93E-01
525565	7/7/2020 - 7/14/2020	I-131	<1.64E-02	0.00E+00	1.64E-02
		Cs-134	<1.46E-02	0.00E+00	1.46E-02
		Cs-137	<1.19E-02	0.00E+00	1.19E-02
		Be-7	<1.10E-01	0.00E+00	1.10E-01
		K-40	4.71E-01	1.75E-01	1.57E-01
525914	7/14/2020 - 7/21/2020	I-131	<1.49E-02	0.00E+00	1.49E-02
		Cs-134	<1.89E-02	0.00E+00	1.89E-02
		Cs-137	<1.33E-02	0.00E+00	1.33E-02
		Be-7	<1.13E-01	0.00E+00	1.13E-01
		K-40	4.28E-01	1.59E-01	1.22E-01
526249	7/21/2020 - 7/28/2020	I-131	<1.52E-02	0.00E+00	1.52E-02
		Cs-134	<1.43E-02	0.00E+00	1.43E-02
		Cs-137	<1.60E-02	0.00E+00	1.60E-02
		Be-7	<9.83E-02	0.00E+00	9.83E-02
		K-40	4.03E-01	1.58E-01	1.39E-01
526535	7/28/2020 - 8/4/2020	I-131	<1.97E-02	0.00E+00	1.97E-02
		Cs-134	<1.59E-02	0.00E+00	1.59E-02
		Cs-137	<1.66E-02	0.00E+00	1.66E-02
		Be-7	<7.41E-02	0.00E+00	7.41E-02
		K-40	4.34E-01	1.63E-01	1.36E-01

# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (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
526855	8/4/2020 - 8/11/2020	I-131	<1.72E-02	0.00E+00	1.72E-02
		Cs-134	<1.88E-02	0.00E+00	1.88E-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	3.76E-01	1.74E-01	2.03E-01
527332	8/11/2020 - 8/18/2020	I-131	<1.98E-02	0.00E+00	1.98E-02
		Cs-134	<1.53E-02	0.00E+00	1.53E-02
		Cs-137	<1.63E-02	0.00E+00	1.63E-02
		Be-7	<1.01E-01	0.00E+00	1.01E-01
		K-40	<2.89E-01	0.00E+00	2.89E-01
527626	8/18/2020 - 8/25/2020	I-131	<1.20E-02	0.00E+00	1.20E-02
		Cs-134	<1.64E-02	0.00E+00	1.64E-02
		Cs-137	<1.41E-02	0.00E+00	1.41E-02
		Be-7	<1.10E-01	0.00E+00	1.10E-01
		K-40	4.73E-01	1.97E-01	2.29E-01
527924	8/25/2020 - 9/1/2020	I-131	<1.49E-02	0.00E+00	1.49E-02
		Cs-134	<1.73E-02	0.00E+00	1.73E-02
		Cs-137	<1.66E-02	0.00E+00	1.66E-02
		Be-7	<1.25E-01	0.00E+00	1.25E-01
		K-40	6.09E-01	2.08E-01	2.05E-01
528674	9/1/2020 - 9/9/2020	I-131	<1.53E-02	0.00E+00	1.53E-02
		Cs-134	<1.38E-02	0.00E+00	1.38E-02
		Cs-137	<1.34E-02	0.00E+00	1.34E-02
		Be-7	<7.98E-02	0.00E+00	7.98E-02
		K-40	4.75E-01	1.67E-01	1.59E-01
529001	9/9/2020 - 9/15/2020	I-131	<1.82E-02	0.00E+00	1.82E-02
		Cs-134	<1.69E-02	0.00E+00	1.69E-02
		Cs-137	<1.76E-02	0.00E+00	1.76E-02
		Be-7	<8.99E-02	0.00E+00	8.99E-02
		K-40	6.24E-01	2.59E-01	3.17E-01
529997	9/15/2020 - 9/21/2020	I-131	<2.00E-02	0.00E+00	2.00E-02
		Cs-134	<1.19E-02	0.00E+00	1.19E-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	4.84E-01	1.84E-01	1.52E-01
530299	9/21/2020 - 9/29/2020	I-131	<1.35E-02	0.00E+00	1.35E-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	<9.35E-02	0.00E+00	9.35E-02
		K-40	3.06E-01	1.29E-01	1.17E-01
530572	9/29/2020 - 10/6/2020	I-131	<1.86E-02	0.00E+00	1.86E-02
		Cs-134	<1.27E-02	0.00E+00	1.27E-02
		Cs-137	<1.25E-02	0.00E+00	1.25E-02
		Be-7	<8.46E-02	0.00E+00	8.46E-02
		K-40	2.92E-01	1.50E-01	1.77E-01
531076	10/6/2020 - 10/13/2020	I-131	<1.54E-02	0.00E+00	1.54E-02
		Cs-134	<1.60E-02	0.00E+00	1.60E-02
		Cs-137	<1.39E-02	0.00E+00	1.39E-02
		Be-7	<1.15E-01	0.00E+00	1.15E-01
		K-40	4.03E-01	2.07E-01	2.77E-01

# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (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
531681	10/13/2020 - 10/20/2020	I-131	<1.86E-02	0.00E+00	1.86E-02
		Cs-134	<1.94E-02	0.00E+00	1.94E-02
		Cs-137	<1.16E-02	0.00E+00	1.16E-02
		Be-7	<1.34E-01	0.00E+00	1.34E-01
		K-40	5.52E-01	1.87E-01	1.35E-01
532084	10/20/2020 - 10/27/2020	I-131	<1.52E-02	0.00E+00	1.52E-02
		Cs-134	<1.50E-02	0.00E+00	1.50E-02
		Cs-137	<1.70E-02	0.00E+00	1.70E-02
		Be-7	<9.43E-02	0.00E+00	9.43E-02
		K-40	4.38E-01	1.77E-01	1.89E-01
532509	10/27/2020 - 11/3/2020	I-131	<1.46E-02	0.00E+00	1.46E-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	<1.16E-01	0.00E+00	1.16E-01
		K-40	2.06E-01	1.48E-01	2.10E-01
532817	11/3/2020 - 11/10/2020	I-131	<2.13E-02	0.00E+00	2.13E-02
		Cs-134	<1.95E-02	0.00E+00	1.95E-02
		Cs-137	<1.99E-02	0.00E+00	1.99E-02
		Be-7	<1.30E-01	0.00E+00	1.30E-01
		K-40	5.74E-01	2.30E-01	2.76E-01
533344	11/10/2020 - 11/17/2020	I-131	<1.79E-02	0.00E+00	1.79E-02
		Cs-134	<1.75E-02	0.00E+00	1.75E-02
		Cs-137	<1.87E-02	0.00E+00	1.87E-02
		Be-7	<1.01E-01	0.00E+00	1.01E-01
		K-40	3.80E-01	1.52E-01	1.24E-01
533805	11/17/2020 - 11/24/2020	I-131	<1.48E-02	0.00E+00	1.48E-02
		Cs-134	<1.60E-02	0.00E+00	1.60E-02
		Cs-137	<1.51E-02	0.00E+00	1.51E-02
		Be-7	<8.80E-02	0.00E+00	8.80E-02
		K-40	3.59E-01	1.84E-01	2.36E-01
534106	11/24/2020 - 12/1/2020	I-131	<2.04E-02	0.00E+00	2.04E-02
		Cs-134	<1.44E-02	0.00E+00	1.44E-02
		Cs-137	<1.69E-02	0.00E+00	1.69E-02
		Be-7	<1.50E-01	0.00E+00	1.50E-01
		K-40	7.10E-01	2.06E-01	1.32E-01
534564	12/1/2020 - 12/8/2020	I-131	<1.59E-02	0.00E+00	1.59E-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	<7.90E-02	0.00E+00	7.90E-02
		K-40	4.18E-01	1.78E-01	1.94E-01
535338	12/8/2020 - 12/14/2020	I-131	<1.59E-02	0.00E+00	1.59E-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	<1.05E-01	0.00E+00	1.05E-01
		K-40	4.27E-01	1.60E-01	3.86E-02
535895	12/14/2020 - 12/21/2020	I-131	<1.78E-02	0.00E+00	1.78E-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	<9.56E-02	0.00E+00	9.56E-02
		K-40	4.48E-01	2.26E-01	3.08E-01

# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (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
536181	12/21/2020 - 12/29/2020	I-131	<3.21E-02	0.00E+00	3.21E-02
		Cs-134	<1.83E-02	0.00E+00	1.83E-02
		Cs-137	<1.11E-02	0.00E+00	1.11E-02
		Be-7	<1.13E-01	0.00E+00	1.13E-01
		K-40	<2.89E-01	0.00E+00	2.89E-01

Sample Point 212 [ INDICATOR - E @ 3.32 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514445	12/31/2019 - 1/7/2020	I-131	<1.31E-02	0.00E+00	1.31E-02
		Cs-134	<1.03E-02	0.00E+00	1.03E-02
		Cs-137	<1.44E-02	0.00E+00	1.44E-02
		Be-7	<8.76E-02	0.00E+00	8.76E-02
		K-40	2.95E-01	1.23E-01	3.33E-02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514906	1/7/2020 - 1/14/2020	I-131	<1.44E-02	0.00E+00	1.44E-02
		Cs-134	<1.64E-02	0.00E+00	1.64E-02
		Cs-137	<1.29E-02	0.00E+00	1.29E-02
		Be-7	<8.09E-02	0.00E+00	8.09E-02
		K-40	<2.52E-01	0.00E+00	2.52E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
515235	1/14/2020 - 1/21/2020	I-131	<1.47E-02	0.00E+00	1.47E-02
		Cs-134	<1.75E-02	0.00E+00	1.75E-02
		Cs-137	<1.26E-02	0.00E+00	1.26E-02
		Be-7	<1.11E-01	0.00E+00	1.11E-01
		K-40	6.47E-01	2.36E-01	2.73E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
515472	1/21/2020 - 1/28/2020	I-131	<1.43E-02	0.00E+00	1.43E-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	<1.03E-01	0.00E+00	1.03E-01
		K-40	<2.38E-01	0.00E+00	2.38E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
515862	1/28/2020 - 2/4/2020	I-131	<1.69E-02	0.00E+00	1.69E-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	<7.85E-02	0.00E+00	7.85E-02
		K-40	2.44E-01	1.30E-01	1.39E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
516123	2/4/2020 - 2/11/2020	I-131	<1.54E-02	0.00E+00	1.54E-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	<9.94E-02	0.00E+00	9.94E-02
		K-40	2.59E-01	1.79E-01	2.60E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
516483	2/11/2020 - 2/18/2020	I-131	<1.34E-02	0.00E+00	1.34E-02
		Cs-134	<1.76E-02	0.00E+00	1.76E-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	4.52E-01	1.74E-01	1.66E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
516862	2/18/2020 - 2/25/2020	I-131	<1.96E-02	0.00E+00	1.96E-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	<1.43E-01	0.00E+00	1.43E-01
		K-40	4.38E-01	2.21E-01	2.96E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
517385	2/25/2020 - 3/3/2020	I-131	<1.54E-02	0.00E+00	1.54E-02
		Cs-134	<1.80E-02	0.00E+00	1.80E-02
		Cs-137	<1.90E-02	0.00E+00	1.90E-02

# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (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
517385	2/25/2020 - 3/3/2020	Be-7	<1.02E-01	0.00E+00	1.02E-01
		K-40	<3.72E-01	0.00E+00	3.72E-01
517655	3/3/2020 - 3/10/2020	I-131	<1.34E-02	0.00E+00	1.34E-02
		Cs-134	<1.15E-02	0.00E+00	1.15E-02
		Cs-137	<1.25E-02	0.00E+00	1.25E-02
		Be-7	<9.14E-02	0.00E+00	9.14E-02
		K-40	2.51E-01	1.24E-01	1.19E-01
518682	3/10/2020 - 3/17/2020	I-131	<1.47E-02	0.00E+00	1.47E-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	<1.07E-01	0.00E+00	1.07E-01
		K-40	<3.00E-01	0.00E+00	3.00E-01
519294	3/17/2020 - 3/24/2020	I-131	<2.08E-02	0.00E+00	2.08E-02
		Cs-134	<1.45E-02	0.00E+00	1.45E-02
		Cs-137	<1.38E-02	0.00E+00	1.38E-02
		Be-7	<1.58E-01	0.00E+00	1.58E-01
		K-40	6.36E-01	2.12E-01	1.98E-01
519672	3/24/2020 - 3/31/2020	I-131	<1.44E-02	0.00E+00	1.44E-02
		Cs-134	<8.94E-03	0.00E+00	8.94E-03
		Cs-137	<6.13E-03	0.00E+00	6.13E-03
		Be-7	<1.07E-01	0.00E+00	1.07E-01
		K-40	3.46E-01	1.80E-01	2.33E-01
520262	3/31/2020 - 4/7/2020	I-131	<1.77E-02	0.00E+00	1.77E-02
		Cs-134	<1.59E-02	0.00E+00	1.59E-02
		Cs-137	<1.24E-02	0.00E+00	1.24E-02
		Be-7	<9.97E-02	0.00E+00	9.97E-02
		K-40	<2.46E-01	0.00E+00	2.46E-01
520488	4/7/2020 - 4/14/2020	I-131	<1.94E-02	0.00E+00	1.94E-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	<9.80E-02	0.00E+00	9.80E-02
		K-40	4.01E-01	2.16E-01	2.97E-01
520782	4/14/2020 - 4/21/2020	I-131	<1.73E-02	0.00E+00	1.73E-02
		Cs-134	<1.68E-02	0.00E+00	1.68E-02
		Cs-137	<1.61E-02	0.00E+00	1.61E-02
		Be-7	<1.28E-01	0.00E+00	1.28E-01
		K-40	5.80E-01	1.93E-01	1.58E-01
521581	4/21/2020 - 4/28/2020	I-131	<1.71E-02	0.00E+00	1.71E-02
		Cs-134	<1.61E-02	0.00E+00	1.61E-02
		Cs-137	<1.40E-02	0.00E+00	1.40E-02
		Be-7	<7.34E-02	0.00E+00	7.34E-02
		K-40	3.52E-01	1.54E-01	1.54E-01
522016	4/28/2020 - 5/5/2020	I-131	<2.01E-02	0.00E+00	2.01E-02
		Cs-134	<1.43E-02	0.00E+00	1.43E-02
		Cs-137	<8.85E-03	0.00E+00	8.85E-03
		Be-7	<9.95E-02	0.00E+00	9.95E-02
		K-40	2.75E-01	1.27E-01	1.10E-01
522322	5/5/2020 - 5/12/2020	I-131	<1.68E-02	0.00E+00	1.68E-02

# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (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
522322	5/5/2020 - 5/12/2020	Cs-134	<1.36E-02	0.00E+00	1.36E-02
		Cs-137	<1.69E-02	0.00E+00	1.69E-02
		Be-7	<8.88E-02	0.00E+00	8.88E-02
		K-40	2.23E-01	1.49E-01	2.05E-01
522570	5/12/2020 - 5/19/2020	I-131	<1.70E-02	0.00E+00	1.70E-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	<8.86E-02	0.00E+00	8.86E-02
		K-40	6.92E-01	2.11E-01	1.79E-01
523077	5/19/2020 - 5/26/2020	I-131	<1.99E-02	0.00E+00	1.99E-02
		Cs-134	<1.13E-02	0.00E+00	1.13E-02
		Cs-137	<1.64E-02	0.00E+00	1.64E-02
		Be-7	<8.71E-02	0.00E+00	8.71E-02
		K-40	3.11E-01	1.35E-01	1.14E-01
523450	5/26/2020 - 6/2/2020	I-131	<1.97E-02	0.00E+00	1.97E-02
		Cs-134	<1.98E-02	0.00E+00	1.98E-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	2.19E-01	1.65E-01	2.38E-01
523851	6/2/2020 - 6/8/2020	I-131	<1.26E-02	0.00E+00	1.26E-02
		Cs-134	<2.30E-02	0.00E+00	2.30E-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	<3.71E-01	0.00E+00	3.71E-01
524415	6/8/2020 - 6/16/2020	I-131	<1.34E-02	0.00E+00	1.34E-02
		Cs-134	<1.46E-02	0.00E+00	1.46E-02
		Cs-137	<1.15E-02	0.00E+00	1.15E-02
		Be-7	<7.69E-02	0.00E+00	7.69E-02
		K-40	3.41E-01	1.37E-01	1.24E-01
524737	6/16/2020 - 6/23/2020	I-131	<1.75E-02	0.00E+00	1.75E-02
		Cs-134	<1.99E-02	0.00E+00	1.99E-02
		Cs-137	<1.17E-02	0.00E+00	1.17E-02
		Be-7	<1.26E-01	0.00E+00	1.26E-01
		K-40	6.42E-01	1.97E-01	1.43E-01
524969	6/23/2020 - 6/30/2020	I-131	<1.43E-02	0.00E+00	1.43E-02
		Cs-134	<1.45E-02	0.00E+00	1.45E-02
		Cs-137	<1.33E-02	0.00E+00	1.33E-02
		Be-7	<9.39E-02	0.00E+00	9.39E-02
		K-40	<3.01E-01	0.00E+00	3.01E-01
525337	6/30/2020 - 7/7/2020	I-131	<1.03E-02	0.00E+00	1.03E-02
		Cs-134	<8.62E-03	0.00E+00	8.62E-03
		Cs-137	<1.09E-02	0.00E+00	1.09E-02
		Be-7	<8.00E-02	0.00E+00	8.00E-02
		K-40	4.11E-01	1.34E-01	1.53E-01
525566	7/7/2020 - 7/14/2020	I-131	<1.82E-02	0.00E+00	1.82E-02
		Cs-134	<2.22E-02	0.00E+00	2.22E-02
		Cs-137	<1.87E-02	0.00E+00	1.87E-02
		Be-7	<1.28E-01	0.00E+00	1.28E-01
		K-40	3.10E-01	1.88E-01	2.63E-01

# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (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
525915	7/14/2020 - 7/21/2020	I-131	<1.85E-02	0.00E+00	1.85E-02
		Cs-134	<1.63E-02	0.00E+00	1.63E-02
		Cs-137	<1.01E-02	0.00E+00	1.01E-02
		Be-7	<1.09E-01	0.00E+00	1.09E-01
		K-40	5.76E-01	1.89E-01	1.49E-01
526250	7/21/2020 - 7/28/2020	I-131	<1.52E-02	0.00E+00	1.52E-02
		Cs-134	<1.89E-02	0.00E+00	1.89E-02
		Cs-137	<1.41E-02	0.00E+00	1.41E-02
		Be-7	<1.10E-01	0.00E+00	1.10E-01
		K-40	3.86E-01	1.58E-01	1.51E-01
526536	7/28/2020 - 8/4/2020	I-131	<2.07E-02	0.00E+00	2.07E-02
		Cs-134	<1.65E-02	0.00E+00	1.65E-02
		Cs-137	<1.69E-02	0.00E+00	1.69E-02
		Be-7	<9.59E-02	0.00E+00	9.59E-02
		K-40	4.68E-01	1.92E-01	2.18E-01
526856	8/4/2020 - 8/11/2020	I-131	<1.56E-02	0.00E+00	1.56E-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	<7.29E-02	0.00E+00	7.29E-02
		K-40	<1.16E-01	0.00E+00	1.16E-01
527333	8/11/2020 - 8/18/2020	I-131	<1.74E-02	0.00E+00	1.74E-02
		Cs-134	<1.76E-02	0.00E+00	1.76E-02
		Cs-137	<1.10E-02	0.00E+00	1.10E-02
		Be-7	<1.36E-01	0.00E+00	1.36E-01
		K-40	3.62E-01	1.75E-01	2.14E-01
527627	8/18/2020 - 8/25/2020	I-131	<1.75E-02	0.00E+00	1.75E-02
		Cs-134	<1.45E-02	0.00E+00	1.45E-02
		Cs-137	<1.46E-02	0.00E+00	1.46E-02
		Be-7	<8.39E-02	0.00E+00	8.39E-02
		K-40	5.06E-01	1.74E-01	1.27E-01
527925	8/25/2020 - 9/1/2020	I-131	<1.65E-02	0.00E+00	1.65E-02
		Cs-134	<1.76E-02	0.00E+00	1.76E-02
		Cs-137	<1.67E-02	0.00E+00	1.67E-02
		Be-7	<1.06E-01	0.00E+00	1.06E-01
		K-40	5.42E-01	1.78E-01	1.29E-01
528675	9/1/2020 - 9/9/2020	I-131	<1.73E-02	0.00E+00	1.73E-02
		Cs-134	<1.31E-02	0.00E+00	1.31E-02
		Cs-137	<1.19E-02	0.00E+00	1.19E-02
		Be-7	<8.48E-02	0.00E+00	8.48E-02
		K-40	3.41E-01	1.58E-01	1.91E-01
529002	9/9/2020 - 9/15/2020	I-131	<1.53E-02	0.00E+00	1.53E-02
		Cs-134	<1.77E-02	0.00E+00	1.77E-02
		Cs-137	<1.81E-02	0.00E+00	1.81E-02
		Be-7	<1.18E-01	0.00E+00	1.18E-01
		K-40	6.03E-01	1.93E-01	3.89E-02
529998	9/15/2020 - 9/21/2020	I-131	<2.11E-02	0.00E+00	2.11E-02
		Cs-134	<2.12E-02	0.00E+00	2.12E-02
		Cs-137	<2.08E-02	0.00E+00	2.08E-02
		Be-7	<1.08E-01	0.00E+00	1.08E-01
		K-40	5.62E-01	2.29E-01	2.60E-01

# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (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
530300	9/21/2020 - 9/29/2020	I-131	<1.24E-02	0.00E+00	1.24E-02
		Cs-134	<1.54E-02	0.00E+00	1.54E-02
		Cs-137	<1.48E-02	0.00E+00	1.48E-02
		Be-7	<1.10E-01	0.00E+00	1.09E-01
		K-40	3.46E-01	1.51E-01	1.67E-01
530573	9/29/2020 - 10/6/2020	I-131	<1.92E-02	0.00E+00	1.92E-02
		Cs-134	<1.76E-02	0.00E+00	1.76E-02
		Cs-137	<1.58E-02	0.00E+00	1.58E-02
		Be-7	<9.77E-02	0.00E+00	9.77E-02
		K-40	4.56E-01	2.07E-01	2.55E-01
531077	10/6/2020 - 10/13/2020	I-131	<1.93E-02	0.00E+00	1.93E-02
		Cs-134	<1.61E-02	0.00E+00	1.61E-02
		Cs-137	<1.45E-02	0.00E+00	1.45E-02
		Be-7	<1.11E-01	0.00E+00	1.11E-01
		K-40	5.29E-01	1.82E-01	1.52E-01
531682	10/13/2020 - 10/20/2020	I-131	<1.66E-02	0.00E+00	1.66E-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	<1.14E-01	0.00E+00	1.14E-01
		K-40	<3.88E-01	0.00E+00	3.88E-01
532085	10/20/2020 - 10/27/2020	I-131	<1.70E-02	0.00E+00	1.70E-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	<9.23E-02	0.00E+00	9.23E-02
		K-40	5.16E-01	2.02E-01	2.26E-01
532510	10/27/2020 - 11/3/2020	I-131	<1.76E-02	0.00E+00	1.76E-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	<1.20E-01	0.00E+00	1.20E-01
		K-40	4.51E-01	1.82E-01	1.85E-01
532818	11/3/2020 - 11/10/2020	I-131	<2.01E-02	0.00E+00	2.01E-02
		Cs-134	<1.97E-02	0.00E+00	1.97E-02
		Cs-137	<1.85E-02	0.00E+00	1.85E-02
		Be-7	<7.89E-02	0.00E+00	7.89E-02
		K-40	6.12E-01	1.98E-01	1.61E-01
533345	11/10/2020 - 11/17/2020	I-131	<1.61E-02	0.00E+00	1.61E-02
		Cs-134	<1.44E-02	0.00E+00	1.44E-02
		Cs-137	<1.67E-02	0.00E+00	1.67E-02
		Be-7	<9.91E-02	0.00E+00	9.91E-02
		K-40	5.24E-01	1.82E-01	1.55E-01
533806	11/17/2020 - 11/24/2020	I-131	<1.25E-02	0.00E+00	1.25E-02
		Cs-134	<1.17E-02	0.00E+00	1.17E-02
		Cs-137	<1.52E-02	0.00E+00	1.52E-02
		Be-7	<7.82E-02	0.00E+00	7.82E-02
		K-40	3.60E-01	1.58E-01	1.63E-01
534107	11/24/2020 - 12/1/2020	I-131	<2.29E-02	0.00E+00	2.29E-02
		Cs-134	<1.58E-02	0.00E+00	1.58E-02
		Cs-137	<1.58E-02	0.00E+00	1.58E-02
		Be-7	<1.27E-01	0.00E+00	1.27E-01
		K-40	5.72E-01	1.91E-01	1.59E-01



# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (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
534565	12/1/2020 - 12/8/2020	I-131	<1.25E-02	0.00E+00	1.25E-02
		Cs-134	<1.54E-02	0.00E+00	1.54E-02
		Cs-137	<1.18E-02	0.00E+00	1.18E-02
		Be-7	<1.30E-01	0.00E+00	1.30E-01
		K-40	5.68E-01	1.88E-01	1.51E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
535339	12/8/2020 - 12/14/2020	I-131	<1.66E-02	0.00E+00	1.66E-02
		Cs-134	<1.80E-02	0.00E+00	1.80E-02
		Cs-137	<1.69E-02	0.00E+00	1.69E-02
		Be-7	<1.24E-01	0.00E+00	1.24E-01
		K-40	5.42E-01	2.14E-01	2.32E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
535896	12/14/2020 - 12/21/2020	I-131	<2.16E-02	0.00E+00	2.16E-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	1.43E-01	9.87E-02	1.48E-01
		K-40	5.08E-01	1.66E-01	3.44E-02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
536182	12/21/2020 - 12/29/2020	I-131	<2.42E-02	0.00E+00	2.42E-02
		Cs-134	<1.76E-02	0.00E+00	1.76E-02
		Cs-137	<1.32E-02	0.00E+00	1.32E-02
		Be-7	<1.09E-01	0.00E+00	1.09E-01
		K-40	3.82E-01	1.84E-01	2.40E-01

## Sample Point 258 [ CONTROL - W @ 9.84 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514446	12/31/2019 - 1/7/2020	I-131	<1.63E-02	0.00E+00	1.63E-02
		Cs-134	<1.46E-02	0.00E+00	1.46E-02
		Cs-137	<1.19E-02	0.00E+00	1.19E-02
		Be-7	<9.37E-02	0.00E+00	9.37E-02
		K-40	2.59E-01	1.26E-01	1.15E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514907	1/7/2020 - 1/14/2020	I-131	<1.54E-02	0.00E+00	1.54E-02
		Cs-134	<1.60E-02	0.00E+00	1.60E-02
		Cs-137	<1.78E-02	0.00E+00	1.78E-02
		Be-7	<9.80E-02	0.00E+00	9.80E-02
		K-40	3.47E-01	1.64E-01	1.87E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
515236	1/14/2020 - 1/21/2020	I-131	<1.45E-02	0.00E+00	1.45E-02
		Cs-134	<1.26E-02	0.00E+00	1.26E-02
		Cs-137	<1.51E-02	0.00E+00	1.51E-02
		Be-7	<1.03E-01	0.00E+00	1.03E-01
		K-40	4.09E-01	2.19E-01	3.02E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
515473	1/21/2020 - 1/28/2020	I-131	<1.96E-02	0.00E+00	1.96E-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	<9.78E-02	0.00E+00	9.78E-02
		K-40	4.53E-01	1.55E-01	3.41E-02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
515863	1/28/2020 - 2/4/2020	I-131	<1.44E-02	0.00E+00	1.44E-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	<1.02E-01	0.00E+00	1.02E-01
		K-40	<3.34E-01	0.00E+00	3.34E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
516124	2/4/2020 - 2/11/2020	I-131	<1.39E-02	0.00E+00	1.39E-02
		Cs-134	<1.58E-02	0.00E+00	1.58E-02
		Cs-137	<1.16E-02	0.00E+00	1.16E-02

# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (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
516124	2/4/2020 - 2/11/2020	Be-7	<7.67E-02	0.00E+00	7.67E-02
		K-40	1.25E-01	1.34E-01	2.11E-01
516484	2/11/2020 - 2/18/2020	I-131	<1.61E-02	0.00E+00	1.61E-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	<9.45E-02	0.00E+00	9.45E-02
		K-40	<9.36E-02	0.00E+00	9.36E-02
516863	2/18/2020 - 2/25/2020	I-131	<2.44E-02	0.00E+00	2.44E-02
		Cs-134	<1.36E-02	0.00E+00	1.36E-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	5.45E-01	2.15E-01	2.46E-01
517386	2/25/2020 - 3/3/2020	I-131	<1.71E-02	0.00E+00	1.71E-02
		Cs-134	<1.17E-02	0.00E+00	1.17E-02
		Cs-137	<1.11E-02	0.00E+00	1.11E-02
		Be-7	<8.86E-02	0.00E+00	8.86E-02
		K-40	<9.33E-02	0.00E+00	9.33E-02
517656	3/3/2020 - 3/10/2020	I-131	<1.38E-02	0.00E+00	1.38E-02
		Cs-134	<1.54E-02	0.00E+00	1.54E-02
		Cs-137	<1.19E-02	0.00E+00	1.19E-02
		Be-7	<1.01E-01	0.00E+00	1.01E-01
		K-40	9.67E-02	1.13E-01	1.81E-01
518683	3/10/2020 - 3/17/2020	I-131	<1.46E-02	0.00E+00	1.46E-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	<1.05E-01	0.00E+00	1.05E-01
		K-40	4.68E-01	2.09E-01	2.62E-01
519295	3/17/2020 - 3/24/2020	I-131	<2.30E-02	0.00E+00	2.30E-02
		Cs-134	<1.67E-02	0.00E+00	1.67E-02
		Cs-137	<1.17E-02	0.00E+00	1.17E-02
		Be-7	<1.12E-01	0.00E+00	1.12E-01
		K-40	4.03E-01	1.73E-01	1.89E-01
519673	3/24/2020 - 3/31/2020	I-131	<2.06E-02	0.00E+00	2.06E-02
		Cs-134	<1.83E-02	0.00E+00	1.83E-02
		Cs-137	<1.73E-02	0.00E+00	1.73E-02
		Be-7	<1.32E-01	0.00E+00	1.32E-01
		K-40	5.62E-01	2.10E-01	2.23E-01
520263	3/31/2020 - 4/7/2020	I-131	<1.70E-02	0.00E+00	1.70E-02
		Cs-134	<1.38E-02	0.00E+00	1.38E-02
		Cs-137	<1.41E-02	0.00E+00	1.41E-02
		Be-7	<1.02E-01	0.00E+00	1.02E-01
		K-40	1.72E-01	1.06E-01	1.15E-01
520489	4/7/2020 - 4/14/2020	I-131	<2.39E-02	0.00E+00	2.39E-02
		Cs-134	<1.69E-02	0.00E+00	1.69E-02
		Cs-137	<1.72E-02	0.00E+00	1.72E-02
		Be-7	<1.32E-01	0.00E+00	1.32E-01
		K-40	3.72E-01	1.67E-01	1.81E-01
520783	4/14/2020 - 4/21/2020	I-131	<2.28E-02	0.00E+00	2.28E-02

# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (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
520783	4/14/2020 - 4/21/2020	Cs-134	<1.95E-02	0.00E+00	1.95E-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	3.81E-01	1.73E-01	1.96E-01
521582	4/21/2020 - 4/28/2020	I-131	<1.35E-02	0.00E+00	1.35E-02
		Cs-134	<1.15E-02	0.00E+00	1.15E-02
		Cs-137	<8.93E-03	0.00E+00	8.93E-03
		Be-7	<9.93E-02	0.00E+00	9.93E-02
		K-40	<3.14E-01	0.00E+00	3.14E-01
522017	4/28/2020 - 5/5/2020	I-131	<1.54E-02	0.00E+00	1.54E-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	<9.36E-02	0.00E+00	9.36E-02
		K-40	<1.17E-01	0.00E+00	1.17E-01
522323	5/5/2020 - 5/12/2020	I-131	<1.46E-02	0.00E+00	1.46E-02
		Cs-134	<1.59E-02	0.00E+00	1.59E-02
		Cs-137	<1.24E-02	0.00E+00	1.24E-02
		Be-7	<1.13E-01	0.00E+00	1.13E-01
		K-40	<2.95E-01	0.00E+00	2.95E-01
522571	5/12/2020 - 5/19/2020	I-131	<1.63E-02	0.00E+00	1.63E-02
		Cs-134	<1.60E-02	0.00E+00	1.60E-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	6.35E-01	1.85E-01	3.38E-02
523078	5/19/2020 - 5/26/2020	I-131	<1.35E-02	0.00E+00	1.35E-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	<8.97E-02	0.00E+00	8.97E-02
		K-40	<2.62E-01	0.00E+00	2.62E-01
523451	5/26/2020 - 6/2/2020	I-131	<1.76E-02	0.00E+00	1.76E-02
		Cs-134	<1.20E-02	0.00E+00	1.20E-02
		Cs-137	<1.49E-02	0.00E+00	1.49E-02
		Be-7	<9.92E-02	0.00E+00	9.92E-02
		K-40	4.12E-01	1.62E-01	1.37E-01
523852	6/2/2020 - 6/8/2020	I-131	<2.05E-02	0.00E+00	2.05E-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	<1.13E-01	0.00E+00	1.13E-01
		K-40	<3.37E-01	0.00E+00	3.37E-01
524416	6/8/2020 - 6/16/2020	I-131	<1.39E-02	0.00E+00	1.39E-02
		Cs-134	<1.03E-02	0.00E+00	1.03E-02
		Cs-137	<8.86E-03	0.00E+00	8.86E-03
		Be-7	<7.44E-02	0.00E+00	7.44E-02
		K-40	2.51E-01	1.57E-01	2.19E-01
524738	6/16/2020 - 6/23/2020	I-131	<1.58E-02	0.00E+00	1.58E-02
		Cs-134	<1.25E-02	0.00E+00	1.25E-02
		Cs-137	<1.24E-02	0.00E+00	1.24E-02
		Be-7	<1.21E-01	0.00E+00	1.21E-01
		K-40	5.78E-01	1.94E-01	1.74E-01

# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (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
524970	6/23/2020 - 6/30/2020	I-131	<1.55E-02	0.00E+00	1.55E-02
		Cs-134	<1.88E-02	0.00E+00	1.88E-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	3.88E-01	1.64E-01	1.70E-01
525338	6/30/2020 - 7/7/2020	I-131	<1.74E-02	0.00E+00	1.74E-02
		Cs-134	<1.52E-02	0.00E+00	1.52E-02
		Cs-137	<1.32E-02	0.00E+00	1.32E-02
		Be-7	<9.77E-02	0.00E+00	9.77E-02
		K-40	<3.31E-01	0.00E+00	3.31E-01
525567	7/7/2020 - 7/14/2020	I-131	<1.54E-02	0.00E+00	1.54E-02
		Cs-134	<1.23E-02	0.00E+00	1.23E-02
		Cs-137	<1.41E-02	0.00E+00	1.41E-02
		Be-7	<9.81E-02	0.00E+00	9.81E-02
		K-40	4.27E-01	1.58E-01	1.25E-01
525916	7/14/2020 - 7/21/2020	I-131	<1.34E-02	0.00E+00	1.34E-02
		Cs-134	<1.26E-02	0.00E+00	1.26E-02
		Cs-137	<1.44E-02	0.00E+00	1.44E-02
		Be-7	<9.63E-02	0.00E+00	9.63E-02
		K-40	2.67E-01	1.76E-01	2.50E-01
526251	7/21/2020 - 7/28/2020	I-131	<1.38E-02	0.00E+00	1.38E-02
		Cs-134	<1.60E-02	0.00E+00	1.60E-02
		Cs-137	<1.82E-02	0.00E+00	1.82E-02
		Be-7	<8.34E-02	0.00E+00	8.34E-02
		K-40	2.74E-01	1.44E-01	1.69E-01
526537	7/28/2020 - 8/4/2020	I-131	<1.68E-02	0.00E+00	1.68E-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	<8.13E-02	0.00E+00	8.13E-02
		K-40	5.17E-01	1.90E-01	1.91E-01
526857	8/4/2020 - 8/11/2020	I-131	<1.74E-02	0.00E+00	1.74E-02
		Cs-134	<1.59E-02	0.00E+00	1.59E-02
		Cs-137	<1.66E-02	0.00E+00	1.66E-02
		Be-7	<1.10E-01	0.00E+00	1.10E-01
		K-40	4.91E-01	1.71E-01	1.33E-01
527334	8/11/2020 - 8/18/2020	I-131	<1.61E-02	0.00E+00	1.61E-02
		Cs-134	<1.46E-02	0.00E+00	1.46E-02
		Cs-137	<1.01E-02	0.00E+00	1.01E-02
		Be-7	<9.70E-02	0.00E+00	9.70E-02
		K-40	<1.36E-01	0.00E+00	1.36E-01
527628	8/18/2020 - 8/25/2020	I-131	<1.90E-02	0.00E+00	1.90E-02
		Cs-134	<1.35E-02	0.00E+00	1.35E-02
		Cs-137	<9.98E-03	0.00E+00	9.98E-03
		Be-7	<1.20E-01	0.00E+00	1.20E-01
		K-40	4.38E-01	1.87E-01	2.16E-01
527926	8/25/2020 - 9/1/2020	I-131	<1.65E-02	0.00E+00	1.65E-02
		Cs-134	<1.24E-02	0.00E+00	1.24E-02
		Cs-137	<1.15E-02	0.00E+00	1.15E-02
		Be-7	<9.11E-02	0.00E+00	9.11E-02
		K-40	4.82E-01	1.68E-01	1.25E-01

# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (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
528676	9/1/2020 - 9/9/2020	I-131	<1.61E-02	0.00E+00	1.61E-02
		Cs-134	<1.34E-02	0.00E+00	1.34E-02
		Cs-137	<1.32E-02	0.00E+00	1.32E-02
		Be-7	<9.85E-02	0.00E+00	9.85E-02
		K-40	4.19E-01	1.55E-01	1.44E-01
529003	9/9/2020 - 9/15/2020	I-131	<1.56E-02	0.00E+00	1.56E-02
		Cs-134	<1.59E-02	0.00E+00	1.59E-02
		Cs-137	<2.14E-02	0.00E+00	2.14E-02
		Be-7	<1.08E-01	0.00E+00	1.08E-01
		K-40	5.84E-01	2.10E-01	1.84E-01
529999	9/15/2020 - 9/21/2020	I-131	<1.83E-02	0.00E+00	1.83E-02
		Cs-134	<1.74E-02	0.00E+00	1.74E-02
		Cs-137	<1.50E-02	0.00E+00	1.50E-02
		Be-7	<1.17E-01	0.00E+00	1.17E-01
		K-40	7.73E-01	2.31E-01	1.68E-01
530301	9/21/2020 - 9/29/2020	I-131	<1.87E-02	0.00E+00	1.87E-02
		Cs-134	<1.78E-02	0.00E+00	1.78E-02
		Cs-137	<1.11E-02	0.00E+00	1.11E-02
		Be-7	<1.07E-01	0.00E+00	1.07E-01
		K-40	4.02E-01	1.71E-01	1.99E-01
530574	9/29/2020 - 10/6/2020	I-131	<1.42E-02	0.00E+00	1.42E-02
		Cs-134	<1.37E-02	0.00E+00	1.37E-02
		Cs-137	<1.46E-02	0.00E+00	1.46E-02
		Be-7	<9.33E-02	0.00E+00	9.33E-02
		K-40	3.62E-01	1.53E-01	1.44E-01
531078	10/6/2020 - 10/13/2020	I-131	<2.01E-02	0.00E+00	2.01E-02
		Cs-134	<1.37E-02	0.00E+00	1.37E-02
		Cs-137	<1.32E-02	0.00E+00	1.32E-02
		Be-7	<9.62E-02	0.00E+00	9.62E-02
		K-40	6.07E-01	1.97E-01	1.63E-01
531683	10/13/2020 - 10/20/2020	I-131	<1.69E-02	0.00E+00	1.69E-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	<1.09E-01	0.00E+00	1.09E-01
		K-40	3.94E-01	1.77E-01	2.06E-01
532086	10/20/2020 - 10/27/2020	I-131	<1.51E-02	0.00E+00	1.51E-02
		Cs-134	<1.91E-02	0.00E+00	1.91E-02
		Cs-137	<1.23E-02	0.00E+00	1.23E-02
		Be-7	<1.20E-01	0.00E+00	1.20E-01
		K-40	5.85E-01	2.23E-01	2.59E-01
532511	10/27/2020 - 11/3/2020	I-131	<1.91E-02	0.00E+00	1.91E-02
		Cs-134	<1.38E-02	0.00E+00	1.38E-02
		Cs-137	<1.47E-02	0.00E+00	1.47E-02
		Be-7	<9.42E-02	0.00E+00	9.42E-02
		K-40	7.13E-01	2.27E-01	2.18E-01
532819	11/3/2020 - 11/10/2020	I-131	<2.18E-02	0.00E+00	2.18E-02
		Cs-134	<1.94E-02	0.00E+00	1.94E-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	8.45E-01	2.19E-01	3.47E-02

# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (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
533346	11/10/2020 - 11/17/2020	I-131	<1.07E-02	0.00E+00	1.07E-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	<7.85E-02	0.00E+00	7.85E-02
		K-40	<3.67E-01	0.00E+00	3.67E-01
533807	11/17/2020 - 11/24/2020	I-131	<1.31E-02	0.00E+00	1.31E-02
		Cs-134	<1.34E-02	0.00E+00	1.34E-02
		Cs-137	<1.16E-02	0.00E+00	1.16E-02
		Be-7	<8.73E-02	0.00E+00	8.73E-02
		K-40	4.76E-01	2.02E-01	2.32E-01
534108	11/24/2020 - 12/1/2020	I-131	<2.46E-02	0.00E+00	2.46E-02
		Cs-134	<1.60E-02	0.00E+00	1.60E-02
		Cs-137	<1.43E-02	0.00E+00	1.43E-02
		Be-7	<1.19E-01	0.00E+00	1.19E-01
		K-40	5.33E-01	2.21E-01	2.66E-01
534566	12/1/2020 - 12/8/2020	I-131	<1.62E-02	0.00E+00	1.62E-02
		Cs-134	<1.45E-02	0.00E+00	1.45E-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	3.94E-01	2.31E-01	3.31E-01
535340	12/8/2020 - 12/14/2020	I-131	<1.68E-02	0.00E+00	1.68E-02
		Cs-134	<1.80E-02	0.00E+00	1.80E-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	4.51E-01	1.71E-01	1.27E-01
535897	12/14/2020 - 12/21/2020	I-131	<1.74E-02	0.00E+00	1.74E-02
		Cs-134	<1.62E-02	0.00E+00	1.62E-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	2.51E-01	1.14E-01	3.40E-02
536183	12/21/2020 - 12/29/2020	I-131	<2.34E-02	0.00E+00	2.34E-02
		Cs-134	<1.89E-02	0.00E+00	1.89E-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	3.90E-01	1.86E-01	2.41E-01
<b>Sample Point 261 [ INDICATOR - N @ 0.72 miles ]</b>					
514447	12/31/2019 - 1/7/2020	I-131	<1.84E-02	0.00E+00	1.84E-02
		Cs-134	<1.35E-02	0.00E+00	1.35E-02
		Cs-137	<1.25E-02	0.00E+00	1.25E-02
		Be-7	<1.07E-01	0.00E+00	1.07E-01
		K-40	<3.28E-01	0.00E+00	3.28E-01
514908	1/7/2020 - 1/14/2020	I-131	<1.47E-02	0.00E+00	1.47E-02
		Cs-134	<1.15E-02	0.00E+00	1.15E-02
		Cs-137	<1.36E-02	0.00E+00	1.36E-02
		Be-7	2.53E-02	7.69E-02	1.31E-01
		K-40	4.56E-01	1.32E-01	1.26E-01
515237	1/14/2020 - 1/21/2020	I-131	<1.26E-02	0.00E+00	1.26E-02
		Cs-134	<1.41E-02	0.00E+00	1.41E-02
		Cs-137	<1.14E-02	0.00E+00	1.14E-02

# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (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
515237	1/14/2020 - 1/21/2020	Be-7	<8.87E-02	0.00E+00	8.87E-02
		K-40	<1.92E-01	0.00E+00	1.92E-01
515474	1/21/2020 - 1/28/2020	I-131	<1.54E-02	0.00E+00	1.54E-02
		Cs-134	<1.44E-02	0.00E+00	1.44E-02
		Cs-137	<8.16E-03	0.00E+00	8.16E-03
		Be-7	<1.06E-01	0.00E+00	1.06E-01
		K-40	3.88E-01	1.74E-01	1.89E-01
515864	1/28/2020 - 2/4/2020	I-131	<1.69E-02	0.00E+00	1.69E-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	<9.91E-02	0.00E+00	9.91E-02
		K-40	4.84E-01	1.96E-01	2.21E-01
516125	2/4/2020 - 2/11/2020	I-131	<1.25E-02	0.00E+00	1.25E-02
		Cs-134	<8.95E-03	0.00E+00	8.95E-03
		Cs-137	<1.00E-02	0.00E+00	1.00E-02
		Be-7	<1.04E-01	0.00E+00	1.04E-01
		K-40	3.17E-01	1.39E-01	1.21E-01
516485	2/11/2020 - 2/18/2020	I-131	<1.53E-02	0.00E+00	1.53E-02
		Cs-134	<1.27E-02	0.00E+00	1.27E-02
		Cs-137	<9.03E-03	0.00E+00	9.03E-03
		Be-7	<1.23E-01	0.00E+00	1.23E-01
		K-40	<2.93E-01	0.00E+00	2.93E-01
516864	2/18/2020 - 2/25/2020	I-131	<1.73E-02	0.00E+00	1.73E-02
		Cs-134	<1.80E-02	0.00E+00	1.80E-02
		Cs-137	<1.61E-02	0.00E+00	1.61E-02
		Be-7	<1.19E-01	0.00E+00	1.19E-01
		K-40	4.29E-01	1.87E-01	2.21E-01
517387	2/25/2020 - 3/3/2020	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	<1.11E-01	0.00E+00	1.11E-01
		K-40	<2.77E-01	0.00E+00	2.77E-01
517657	3/3/2020 - 3/10/2020	I-131	<1.33E-02	0.00E+00	1.33E-02
		Cs-134	<1.63E-02	0.00E+00	1.63E-02
		Cs-137	<7.83E-03	0.00E+00	7.83E-03
		Be-7	<1.01E-01	0.00E+00	1.01E-01
		K-40	3.07E-01	1.74E-01	2.30E-01
518684	3/10/2020 - 3/17/2020	I-131	<1.60E-02	0.00E+00	1.60E-02
		Cs-134	<1.35E-02	0.00E+00	1.35E-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	2.19E-01	1.32E-01	1.66E-01
519296	3/17/2020 - 3/24/2020	I-131	<1.88E-02	0.00E+00	1.88E-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	<1.24E-01	0.00E+00	1.24E-01
		K-40	3.92E-01	1.71E-01	1.89E-01
519674	3/24/2020 - 3/31/2020	I-131	<1.93E-02	0.00E+00	1.93E-02

# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (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
519674	3/24/2020 - 3/31/2020	Cs-134	<1.54E-02	0.00E+00	1.54E-02
		Cs-137	<1.40E-02	0.00E+00	1.40E-02
		Be-7	<8.41E-02	0.00E+00	8.41E-02
		K-40	5.11E-01	1.65E-01	3.38E-02
520264	3/31/2020 - 4/7/2020	I-131	<1.83E-02	0.00E+00	1.83E-02
		Cs-134	<1.42E-02	0.00E+00	1.42E-02
		Cs-137	<1.50E-02	0.00E+00	1.50E-02
		Be-7	<9.75E-02	0.00E+00	9.75E-02
		K-40	2.91E-01	1.61E-01	2.07E-01
520490	4/7/2020 - 4/14/2020	I-131	<1.69E-02	0.00E+00	1.69E-02
		Cs-134	<1.05E-02	0.00E+00	1.05E-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	<4.07E-01	0.00E+00	4.07E-01
520784	4/14/2020 - 4/21/2020	I-131	<2.47E-02	0.00E+00	2.47E-02
		Cs-134	<1.61E-02	0.00E+00	1.61E-02
		Cs-137	<1.61E-02	0.00E+00	1.61E-02
		Be-7	<1.33E-01	0.00E+00	1.33E-01
		K-40	4.77E-01	2.09E-01	2.56E-01
521583	4/21/2020 - 4/28/2020	I-131	<1.07E-02	0.00E+00	1.07E-02
		Cs-134	<1.05E-02	0.00E+00	1.05E-02
		Cs-137	<1.34E-02	0.00E+00	1.34E-02
		Be-7	<7.88E-02	0.00E+00	7.88E-02
		K-40	<1.18E-01	0.00E+00	1.18E-01
522018	4/28/2020 - 5/5/2020	I-131	<1.64E-02	0.00E+00	1.64E-02
		Cs-134	<1.54E-02	0.00E+00	1.54E-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	2.44E-01	1.35E-01	1.42E-01
522324	5/5/2020 - 5/12/2020	I-131	<1.58E-02	0.00E+00	1.58E-02
		Cs-134	<1.28E-02	0.00E+00	1.28E-02
		Cs-137	<1.33E-02	0.00E+00	1.33E-02
		Be-7	<1.08E-01	0.00E+00	1.08E-01
		K-40	2.93E-01	1.62E-01	2.05E-01
522572	5/12/2020 - 5/19/2020	I-131	<1.52E-02	0.00E+00	1.52E-02
		Cs-134	<1.02E-02	0.00E+00	1.02E-02
		Cs-137	<1.16E-02	0.00E+00	1.16E-02
		Be-7	<1.03E-01	0.00E+00	1.03E-01
		K-40	3.90E-01	1.41E-01	3.30E-02
523079	5/19/2020 - 5/21/2020	I-131	<5.60E-02	0.00E+00	5.60E-02
		Cs-134	<3.79E-02	0.00E+00	3.79E-02
		Cs-137	<2.62E-02	0.00E+00	2.62E-02
		Be-7	<1.80E-01	0.00E+00	1.80E-01
		K-40	9.79E-01	3.66E-01	8.85E-02
523452	5/26/2020 - 5/28/2020	I-131	<5.54E-02	0.00E+00	5.54E-02
		Cs-134	<4.81E-02	0.00E+00	4.81E-02
		Cs-137	<3.78E-02	0.00E+00	3.78E-02
		Be-7	<2.85E-01	0.00E+00	2.85E-01
		K-40	1.47E+00	5.06E-01	5.68E-01



# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (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
523853	6/2/2020 - 6/8/2020	I-131	<1.58E-02	0.00E+00	1.58E-02
		Cs-134	<1.53E-02	0.00E+00	1.53E-02
		Cs-137	<1.83E-02	0.00E+00	1.83E-02
		Be-7	<1.39E-01	0.00E+00	1.39E-01
		K-40	6.68E-01	2.16E-01	1.67E-01
524417	6/8/2020 - 6/16/2020	I-131	<1.33E-02	0.00E+00	1.33E-02
		Cs-134	<1.63E-02	0.00E+00	1.63E-02
		Cs-137	<1.23E-02	0.00E+00	1.23E-02
		Be-7	<9.40E-02	0.00E+00	9.40E-02
		K-40	3.20E-01	1.34E-01	1.11E-01
524739	6/16/2020 - 6/23/2020	I-131	<1.57E-02	0.00E+00	1.57E-02
		Cs-134	<1.48E-02	0.00E+00	1.48E-02
		Cs-137	<1.40E-02	0.00E+00	1.40E-02
		Be-7	<1.01E-01	0.00E+00	1.01E-01
		K-40	5.17E-01	2.01E-01	2.27E-01
524971	6/23/2020 - 6/30/2020	I-131	<1.94E-02	0.00E+00	1.94E-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	<1.00E-01	0.00E+00	1.00E-01
		K-40	4.44E-01	1.52E-01	3.34E-02
525339	6/30/2020 - 7/7/2020	I-131	<1.13E-02	0.00E+00	1.13E-02
		Cs-134	<1.37E-02	0.00E+00	1.37E-02
		Cs-137	<1.10E-02	0.00E+00	1.10E-02
		Be-7	<8.90E-02	0.00E+00	8.90E-02
		K-40	<1.66E-01	0.00E+00	1.66E-01
525568	7/7/2020 - 7/14/2020	I-131	<1.57E-02	0.00E+00	1.57E-02
		Cs-134	<1.27E-02	0.00E+00	1.27E-02
		Cs-137	<1.33E-02	0.00E+00	1.33E-02
		Be-7	<9.84E-02	0.00E+00	9.84E-02
		K-40	3.63E-01	1.65E-01	1.83E-01
525917	7/14/2020 - 7/21/2020	I-131	<1.85E-02	0.00E+00	1.85E-02
		Cs-134	<1.50E-02	0.00E+00	1.50E-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	4.11E-01	1.71E-01	1.82E-01
526252	7/21/2020 - 7/28/2020	I-131	<1.31E-02	0.00E+00	1.31E-02
		Cs-134	<1.27E-02	0.00E+00	1.27E-02
		Cs-137	<1.10E-02	0.00E+00	1.10E-02
		Be-7	<9.24E-02	0.00E+00	9.24E-02
		K-40	2.09E-01	1.33E-01	1.71E-01
526538	7/28/2020 - 8/4/2020	I-131	<2.29E-02	0.00E+00	2.29E-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	<7.91E-02	0.00E+00	7.91E-02
		K-40	5.67E-01	1.73E-01	3.34E-02
526858	8/4/2020 - 8/11/2020	I-131	<1.75E-02	0.00E+00	1.75E-02
		Cs-134	<1.74E-02	0.00E+00	1.74E-02
		Cs-137	<1.32E-02	0.00E+00	1.32E-02
		Be-7	<8.44E-02	0.00E+00	8.44E-02
		K-40	3.39E-01	1.58E-01	1.76E-01

# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (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
527335	8/11/2020 - 8/18/2020	I-131	<1.73E-02	0.00E+00	1.73E-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	<1.05E-01	0.00E+00	1.05E-01
		K-40	<3.00E-01	0.00E+00	3.00E-01
527629	8/18/2020 - 8/25/2020	I-131	<1.47E-02	0.00E+00	1.47E-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	<1.01E-01	0.00E+00	1.01E-01
		K-40	4.59E-01	1.69E-01	1.41E-01
527927	8/25/2020 - 9/1/2020	I-131	<1.63E-02	0.00E+00	1.63E-02
		Cs-134	<1.52E-02	0.00E+00	1.52E-02
		Cs-137	<1.44E-02	0.00E+00	1.44E-02
		Be-7	<1.23E-01	0.00E+00	1.23E-01
		K-40	4.97E-01	2.08E-01	2.50E-01
528677	9/1/2020 - 9/9/2020	I-131	<1.73E-02	0.00E+00	1.73E-02
		Cs-134	<1.25E-02	0.00E+00	1.25E-02
		Cs-137	<1.21E-02	0.00E+00	1.21E-02
		Be-7	<8.53E-02	0.00E+00	8.53E-02
		K-40	4.84E-01	1.63E-01	1.20E-01
529004	9/9/2020 - 9/15/2020	I-131	<1.94E-02	0.00E+00	1.94E-02
		Cs-134	<2.36E-02	0.00E+00	2.36E-02
		Cs-137	<1.56E-02	0.00E+00	1.56E-02
		Be-7	<1.17E-01	0.00E+00	1.17E-01
		K-40	5.85E-01	1.91E-01	3.97E-02
530000	9/15/2020 - 9/21/2020	I-131	<2.09E-02	0.00E+00	2.09E-02
		Cs-134	<2.05E-02	0.00E+00	2.05E-02
		Cs-137	<1.71E-02	0.00E+00	1.71E-02
		Be-7	<1.31E-01	0.00E+00	1.31E-01
		K-40	6.31E-01	2.50E-01	2.91E-01
530302	9/21/2020 - 9/29/2020	I-131	<1.22E-02	0.00E+00	1.22E-02
		Cs-134	<1.11E-02	0.00E+00	1.11E-02
		Cs-137	<9.55E-03	0.00E+00	9.55E-03
		Be-7	<9.04E-02	0.00E+00	9.04E-02
		K-40	3.63E-01	1.57E-01	1.78E-01
530575	9/29/2020 - 10/6/2020	I-131	<1.84E-02	0.00E+00	1.84E-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	<1.13E-01	0.00E+00	1.13E-01
		K-40	4.99E-01	1.69E-01	1.15E-01
531079	10/6/2020 - 10/13/2020	I-131	<2.04E-02	0.00E+00	2.04E-02
		Cs-134	<2.01E-02	0.00E+00	2.01E-02
		Cs-137	<1.98E-02	0.00E+00	1.98E-02
		Be-7	<1.20E-01	0.00E+00	1.20E-01
		K-40	5.35E-01	2.01E-01	2.15E-01
531684	10/13/2020 - 10/20/2020	I-131	<1.51E-02	0.00E+00	1.51E-02
		Cs-134	<1.89E-02	0.00E+00	1.89E-02
		Cs-137	<1.26E-02	0.00E+00	1.26E-02
		Be-7	<1.12E-01	0.00E+00	1.12E-01
		K-40	6.10E-01	2.12E-01	2.15E-01

# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (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
532087	10/20/2020 - 10/27/2020	I-131	<1.75E-02	0.00E+00	1.75E-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	<1.00E-01	0.00E+00	1.00E-01
		K-40	4.30E-01	1.76E-01	1.86E-01
532512	10/27/2020 - 11/3/2020	I-131	<1.73E-02	0.00E+00	1.73E-02
		Cs-134	<1.44E-02	0.00E+00	1.44E-02
		Cs-137	<1.56E-02	0.00E+00	1.56E-02
		Be-7	<1.18E-01	0.00E+00	1.18E-01
		K-40	6.01E-01	1.78E-01	3.33E-02
532820	11/3/2020 - 11/10/2020	I-131	<1.87E-02	0.00E+00	1.87E-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	<1.05E-01	0.00E+00	1.05E-01
		K-40	5.91E-01	2.12E-01	2.17E-01
533347	11/10/2020 - 11/17/2020	I-131	<1.44E-02	0.00E+00	1.44E-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	<1.06E-01	0.00E+00	1.06E-01
		K-40	5.42E-01	1.92E-01	1.65E-01
533808	11/17/2020 - 11/24/2020	I-131	<1.64E-02	0.00E+00	1.64E-02
		Cs-134	<1.61E-02	0.00E+00	1.61E-02
		Cs-137	<1.62E-02	0.00E+00	1.62E-02
		Be-7	<9.18E-02	0.00E+00	9.18E-02
		K-40	5.33E-01	1.89E-01	1.76E-01
534109	11/24/2020 - 12/1/2020	I-131	<2.27E-02	0.00E+00	2.27E-02
		Cs-134	<2.05E-02	0.00E+00	2.05E-02
		Cs-137	<1.73E-02	0.00E+00	1.73E-02
		Be-7	<8.97E-02	0.00E+00	8.97E-02
		K-40	6.68E-01	1.89E-01	3.35E-02
534567	12/1/2020 - 12/8/2020	I-131	<2.12E-02	0.00E+00	2.12E-02
		Cs-134	<2.22E-02	0.00E+00	2.22E-02
		Cs-137	<1.61E-02	0.00E+00	1.61E-02
		Be-7	<1.44E-01	0.00E+00	1.44E-01
		K-40	8.39E-01	2.30E-01	1.56E-01
535341	12/8/2020 - 12/14/2020	I-131	<2.22E-02	0.00E+00	2.22E-02
		Cs-134	<1.73E-02	0.00E+00	1.73E-02
		Cs-137	<1.50E-02	0.00E+00	1.50E-02
		Be-7	<1.26E-01	0.00E+00	1.26E-01
		K-40	4.65E-01	2.03E-01	2.32E-01
535898	12/14/2020 - 12/21/2020	I-131	<2.11E-02	0.00E+00	2.11E-02
		Cs-134	<1.78E-02	0.00E+00	1.78E-02
		Cs-137	<1.83E-02	0.00E+00	1.83E-02
		Be-7	<1.28E-01	0.00E+00	1.28E-01
		K-40	3.81E-01	1.92E-01	2.43E-01
536184	12/21/2020 - 12/29/2020	I-131	<2.82E-02	0.00E+00	2.82E-02
		Cs-134	<1.29E-02	0.00E+00	1.29E-02
		Cs-137	<1.42E-02	0.00E+00	1.42E-02
		Be-7	<1.19E-01	0.00E+00	1.19E-01
		K-40	4.32E-01	1.72E-01	1.86E-01

# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (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
514118	1/7/2020 - 1/7/2020		I-131	<1.68E+01	0.00E+00	1.68E+01
			Cs-134	<1.21E+01	0.00E+00	1.21E+01
			Cs-137	<1.00E+01	0.00E+00	1.00E+01
			Be-7	4.00E+02	9.57E+01	1.06E+02
			K-40	3.39E+03	4.02E+02	1.29E+02
515475	2/4/2020 - 2/4/2020		I-131	<1.08E+01	0.00E+00	1.08E+01
			Cs-134	<1.44E+01	0.00E+00	1.44E+01
			Cs-137	<1.24E+01	0.00E+00	1.24E+01
			Be-7	2.71E+02	8.87E+01	1.16E+02
			K-40	4.08E+03	4.69E+02	1.31E+02
517171	3/3/2020 - 3/3/2020		I-131	<8.56E+00	0.00E+00	8.56E+00
			Cs-134	<7.01E+00	0.00E+00	7.01E+00
			Cs-137	<9.94E+00	0.00E+00	9.94E+00
			Be-7	1.18E+02	5.84E+01	8.39E+01
			K-40	4.23E+03	4.54E+02	9.27E+01
521507	5/5/2020 - 5/5/2020		I-131	<7.74E+00	0.00E+00	7.74E+00
			Cs-134	<7.91E+00	0.00E+00	7.91E+00
			Cs-137	<7.75E+00	0.00E+00	7.75E+00
			Be-7	9.66E+01	6.89E+01	1.07E+02
			K-40	2.05E+03	2.72E+02	9.55E+01
522988	6/2/2020 - 6/2/2020		I-131	<9.56E+00	0.00E+00	9.56E+00
			Cs-134	<8.59E+00	0.00E+00	8.59E+00
			Cs-137	<6.85E+00	0.00E+00	6.85E+00
			Be-7	<6.99E+01	0.00E+00	6.99E+01
			K-40	2.47E+03	3.05E+02	1.02E+02
524649	7/7/2020 - 7/7/2020		I-131	<7.08E+00	0.00E+00	7.08E+00
			Cs-134	<9.21E+00	0.00E+00	9.21E+00
			Cs-137	<6.41E+00	0.00E+00	6.41E+00
			Be-7	<5.04E+01	0.00E+00	5.04E+01
			K-40	1.72E+03	2.33E+02	1.15E+02
527336	8/4/2020 - 8/4/2020		I-131	<6.34E+00	0.00E+00	6.34E+00
			Cs-134	<8.47E+00	0.00E+00	8.47E+00
			Cs-137	<6.61E+00	0.00E+00	6.61E+00
			Be-7	<4.71E+01	0.00E+00	4.71E+01
			K-40	1.98E+03	2.66E+02	1.60E+02
525890	9/1/2020 - 9/1/2020		I-131	<9.38E+00	0.00E+00	9.38E+00
			Cs-134	<1.17E+01	0.00E+00	1.17E+01
			Cs-137	<8.16E+00	0.00E+00	8.16E+00
			Be-7	<7.36E+01	0.00E+00	7.36E+01
			K-40	2.59E+03	3.15E+02	9.95E+01
531240	10/6/2020 - 10/6/2020		I-131	<7.34E+00	0.00E+00	7.34E+00
			Cs-134	<8.81E+00	0.00E+00	8.81E+00
			Cs-137	<6.24E+00	0.00E+00	6.24E+00
			Be-7	<5.68E+01	0.00E+00	5.68E+01
			K-40	2.44E+03	2.94E+02	1.08E+02
533079	11/3/2020 - 11/3/2020		I-131	<9.49E+00	0.00E+00	9.49E+00
			Cs-134	<9.62E+00	0.00E+00	9.62E+00
			Cs-137	<9.26E+00	0.00E+00	9.26E+00
			Be-7	2.26E+02	7.32E+01	9.40E+01
			K-40	3.75E+03	4.31E+02	1.39E+02

# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

Media Type: CROPS Concentration (Activity): pCi/kg

Sample Point 260 [ INDICATOR - SSE @ 2 miles ]

Sample ID:	535288	Sample Dates:	12/1/2020 - 12/1/2020	MIXEDCROPS	Nuclide	Activity	2 Sigma Error	MDA
					I-131	<9.89E+00	0.00E+00	9.89E+00
					Cs-134	<1.23E+01	0.00E+00	1.23E+01
					Cs-137	<1.05E+01	0.00E+00	1.05E+01
					Be-7	3.12E+02	8.73E+01	1.07E+02
					K-40	3.65E+03	4.21E+02	1.60E+02

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

Sample Point 214 [ INDICATOR - SSE @ 7.3 miles ]

Sample ID:	515713	Sample Dates:	12/31/2019 - 1/28/2020		Nuclide	Activity	2 Sigma Error	MDA
					Beta	<3.31E+00	0.00E+00	3.31E+00
					Mn-54	<3.55E+00	0.00E+00	3.55E+00
					Co-58	<4.64E+00	0.00E+00	4.64E+00
					Fe-59	<6.11E+00	0.00E+00	6.11E+00
					Co-60	<5.33E+00	0.00E+00	5.33E+00
					Zn-65	<8.72E+00	0.00E+00	8.72E+00
					Zr-95	<8.95E+00	0.00E+00	8.95E+00
					Nb-95	<5.63E+00	0.00E+00	5.63E+00
					I-131	<1.19E+01	0.00E+00	1.19E+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	<9.66E+00	0.00E+00	9.66E+00
					Be-7	<4.36E+01	0.00E+00	4.36E+01
					K-40	8.52E+01	4.77E+01	6.37E+01

Sample ID:	517232	Sample Dates:	1/28/2020 - 2/25/2020		Nuclide	Activity	2 Sigma Error	MDA
					Beta	<3.22E+00	0.00E+00	3.22E+00
					Mn-54	<3.97E+00	0.00E+00	3.97E+00
					Co-58	<4.18E+00	0.00E+00	4.18E+00
					Fe-59	<7.16E+00	0.00E+00	7.16E+00
					Co-60	<3.61E+00	0.00E+00	3.61E+00
					Zn-65	<6.27E+00	0.00E+00	6.27E+00
					Zr-95	<6.74E+00	0.00E+00	6.74E+00
					Nb-95	<3.78E+00	0.00E+00	3.78E+00
					I-131	<1.16E+01	0.00E+00	1.16E+01
					Cs-134	<3.02E+00	0.00E+00	3.02E+00
					Cs-137	<2.79E+00	0.00E+00	2.79E+00
					BaLa-140	<6.21E+00	0.00E+00	6.21E+00
					Be-7	<2.77E+01	0.00E+00	2.77E+01
					K-40	<3.58E+01	0.00E+00	3.58E+01

Sample ID:	519402	Sample Dates:	2/25/2020 - 3/24/2020		Nuclide	Activity	2 Sigma Error	MDA
					Beta	4.36E+00	4.43E+00	3.24E+00
					Mn-54	<4.17E+00	0.00E+00	4.17E+00
					Co-58	<5.09E+00	0.00E+00	5.09E+00
					Fe-59	<1.05E+01	0.00E+00	1.05E+01
					Co-60	<2.59E+00	0.00E+00	2.59E+00
					Zn-65	<7.79E+00	0.00E+00	7.79E+00
					Zr-95	<5.58E+00	0.00E+00	5.58E+00
					Nb-95	<5.21E+00	0.00E+00	5.21E+00
					I-131	<1.19E+01	0.00E+00	1.19E+01
					Cs-134	<3.14E+00	0.00E+00	3.14E+00
					Cs-137	<3.34E+00	0.00E+00	3.34E+00
					BaLa-140	<7.22E+00	0.00E+00	7.22E+00
					Be-7	<3.26E+01	0.00E+00	3.26E+01
					K-40	<8.03E+01	0.00E+00	8.03E+01

Sample ID:	516432	Sample Dates:	12/31/2019 - 4/21/2020		Nuclide	Activity	2 Sigma Error	MDA
					H3DW	5.40E+02	1.21E+02	1.78E+02

Sample ID:	521268	Sample Dates:	3/24/2020 - 4/21/2020		Nuclide	Activity	2 Sigma Error	MDA
					Beta	5.29E+00	4.61E+00	3.36E+00
					Mn-54	<3.43E+00	0.00E+00	3.43E+00
					Co-58	<3.13E+00	0.00E+00	3.13E+00
					Fe-59	<6.96E+00	0.00E+00	6.96E+00
					Co-60	<3.51E+00	0.00E+00	3.51E+00
					Zn-65	<5.17E+00	0.00E+00	5.17E+00

# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (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
521268	3/24/2020 - 4/21/2020	Zr-95	<6.05E+00	0.00E+00	6.05E+00
		Nb-95	<3.93E+00	0.00E+00	3.93E+00
		I-131	<1.17E+01	0.00E+00	1.17E+01
		Cs-134	<3.57E+00	0.00E+00	3.57E+00
		Cs-137	<3.34E+00	0.00E+00	3.34E+00
		BaLa-140	<6.81E+00	0.00E+00	6.81E+00
		Be-7	<2.91E+01	0.00E+00	2.91E+01
		K-40	7.43E+01	3.43E+01	3.74E+01
		522836	4/21/2020 - 5/19/2020	Beta	3.89E+00
Mn-54	<3.05E+00			0.00E+00	3.05E+00
Co-58	<3.48E+00			0.00E+00	3.48E+00
Fe-59	<7.68E+00			0.00E+00	7.68E+00
Co-60	<2.53E+00			0.00E+00	2.53E+00
Zn-65	<6.41E+00			0.00E+00	6.41E+00
Zr-95	<7.04E+00			0.00E+00	7.04E+00
Nb-95	<3.75E+00			0.00E+00	3.75E+00
I-131	<1.18E+01			0.00E+00	1.18E+01
Cs-134	<3.81E+00			0.00E+00	3.81E+00
Cs-137	<3.33E+00			0.00E+00	3.33E+00
BaLa-140	<7.23E+00			0.00E+00	7.23E+00
Be-7	<2.57E+01			0.00E+00	2.57E+01
K-40	7.93E+01			3.17E+01	3.45E+01
524501	5/19/2020 - 6/16/2020			Beta	<3.24E+00
		Mn-54	<2.44E+00	0.00E+00	2.44E+00
		Co-58	<3.97E+00	0.00E+00	3.97E+00
		Fe-59	<7.07E+00	0.00E+00	7.07E+00
		Co-60	<3.95E+00	0.00E+00	3.95E+00
		Zn-65	<6.67E+00	0.00E+00	6.67E+00
		Zr-95	<6.66E+00	0.00E+00	6.66E+00
		Nb-95	<4.64E+00	0.00E+00	4.64E+00
		I-131	<1.14E+01	0.00E+00	1.14E+01
		Cs-134	<4.00E+00	0.00E+00	4.00E+00
		Cs-137	<2.05E+00	0.00E+00	2.05E+00
		BaLa-140	<8.54E+00	0.00E+00	8.54E+00
		Be-7	<2.48E+01	0.00E+00	2.48E+01
		K-40	<3.91E+01	0.00E+00	3.91E+01
		522524	4/21/2020 - 7/14/2020	Nuclide	Activity
H3DW	3.77E+02			1.21E+02	1.87E+02
525818	6/16/2020 - 7/14/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	<3.23E+00	0.00E+00	3.23E+00
		Mn-54	<3.39E+00	0.00E+00	3.39E+00
		Co-58	<3.92E+00	0.00E+00	3.92E+00
		Fe-59	<6.42E+00	0.00E+00	6.42E+00
		Co-60	<2.78E+00	0.00E+00	2.78E+00
		Zn-65	<6.57E+00	0.00E+00	6.57E+00
		Zr-95	<6.80E+00	0.00E+00	6.80E+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	<3.68E+00	0.00E+00	3.68E+00
		Cs-137	<4.17E+00	0.00E+00	4.17E+00
		BaLa-140	<5.65E+00	0.00E+00	5.65E+00
		Be-7	<2.71E+01	0.00E+00	2.71E+01
		K-40	8.80E+01	3.81E+01	4.94E+01
527086	7/14/2020 - 8/11/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	3.77E+00	4.40E+00	3.23E+00
		Mn-54	<2.45E+00	0.00E+00	2.45E+00
		Co-58	<3.27E+00	0.00E+00	3.27E+00
		Fe-59	<5.22E+00	0.00E+00	5.22E+00
		Co-60	<2.94E+00	0.00E+00	2.94E+00
		Zn-65	<6.96E+00	0.00E+00	6.96E+00

# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (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
527086	7/14/2020 - 8/11/2020	Zr-95	<6.04E+00	0.00E+00	6.04E+00
		Nb-95	<3.94E+00	0.00E+00	3.94E+00
		I-131	<1.05E+01	0.00E+00	1.05E+01
		Cs-134	<2.90E+00	0.00E+00	2.90E+00
		Cs-137	<3.44E+00	0.00E+00	3.44E+00
		BaLa-140	<6.27E+00	0.00E+00	6.27E+00
		Be-7	<2.78E+01	0.00E+00	2.78E+01
		K-40	9.00E+01	3.34E+01	4.00E+01
		528908	8/11/2020 - 9/9/2020	Beta	3.86E+00
Mn-54	<3.23E+00			0.00E+00	3.23E+00
Co-58	<4.32E+00			0.00E+00	4.32E+00
Fe-59	<8.10E+00			0.00E+00	8.10E+00
Co-60	<3.40E+00			0.00E+00	3.40E+00
Zn-65	<7.58E+00			0.00E+00	7.58E+00
Zr-95	<6.34E+00			0.00E+00	6.34E+00
Nb-95	<5.39E+00			0.00E+00	5.39E+00
I-131	<1.19E+01			0.00E+00	1.19E+01
Cs-134	<4.58E+00			0.00E+00	4.58E+00
Cs-137	<3.66E+00			0.00E+00	3.66E+00
BaLa-140	<6.54E+00			0.00E+00	6.54E+00
Be-7	<3.53E+01			0.00E+00	3.53E+01
K-40	5.21E+01			3.86E+01	5.74E+01
527289	7/14/2020 - 10/6/2020			H3DW	4.38E+02
530683	9/9/2020 - 10/6/2020	Beta	3.41E+00	4.40E+00	3.23E+00
		Mn-54	<3.95E+00	0.00E+00	3.95E+00
		Co-58	<3.66E+00	0.00E+00	3.66E+00
		Fe-59	<9.30E+00	0.00E+00	9.30E+00
		Co-60	<2.80E+00	0.00E+00	2.80E+00
		Zn-65	<7.67E+00	0.00E+00	7.67E+00
		Zr-95	<5.89E+00	0.00E+00	5.89E+00
		Nb-95	<4.39E+00	0.00E+00	4.39E+00
		I-131	<1.01E+01	0.00E+00	1.01E+01
		Cs-134	<4.11E+00	0.00E+00	4.11E+00
		Cs-137	<3.24E+00	0.00E+00	3.24E+00
		BaLa-140	<8.19E+00	0.00E+00	8.19E+00
		Be-7	<3.01E+01	0.00E+00	3.01E+01
		K-40	8.07E+01	3.91E+01	5.24E+01
		532592	10/6/2020 - 11/3/2020	Beta	4.51E+00
Mn-54	<4.02E+00			0.00E+00	4.02E+00
Co-58	<4.25E+00			0.00E+00	4.25E+00
Fe-59	<7.20E+00			0.00E+00	7.20E+00
Co-60	<3.67E+00			0.00E+00	3.67E+00
Zn-65	<6.08E+00			0.00E+00	6.08E+00
Zr-95	<7.17E+00			0.00E+00	7.17E+00
Nb-95	<3.72E+00			0.00E+00	3.72E+00
I-131	<1.15E+01			0.00E+00	1.15E+01
Cs-134	<4.99E+00			0.00E+00	4.99E+00
Cs-137	<4.51E+00			0.00E+00	4.51E+00
BaLa-140	<8.72E+00			0.00E+00	8.72E+00
Be-7	<3.22E+01			0.00E+00	3.22E+01
K-40	1.30E+02			4.61E+01	4.29E+01
534188	11/3/2020 - 12/1/2020			Beta	<3.24E+00
		Mn-54	<2.85E+00	0.00E+00	2.85E+00
		Co-58	<3.75E+00	0.00E+00	3.75E+00
		Fe-59	<7.41E+00	0.00E+00	7.41E+00
		Co-60	<2.66E+00	0.00E+00	2.66E+00
		Zn-65	<8.17E+00	0.00E+00	8.17E+00

# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (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
534188	11/3/2020 - 12/1/2020	Zr-95	<6.21E+00	0.00E+00	6.21E+00
		Nb-95	<4.35E+00	0.00E+00	4.35E+00
		I-131	<1.10E+01	0.00E+00	1.10E+01
		Cs-134	<4.50E+00	0.00E+00	4.50E+00
		Cs-137	<3.31E+00	0.00E+00	3.31E+00
		BaLa-140	<7.48E+00	0.00E+00	7.48E+00
		Be-7	<2.76E+01	0.00E+00	2.76E+01
		K-40	9.00E+01	3.37E+01	3.85E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
533284	10/6/2020 - 12/29/2020	H3DW	4.53E+02	1.27E+02	1.94E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
536302	12/1/2020 - 12/29/2020	Beta	<3.21E+00	0.00E+00	3.21E+00
		Mn-54	<2.44E+00	0.00E+00	2.44E+00
		Co-58	<3.16E+00	0.00E+00	3.16E+00
		Fe-59	<7.46E+00	0.00E+00	7.46E+00
		Co-60	<2.35E+00	0.00E+00	2.35E+00
		Zn-65	<7.01E+00	0.00E+00	7.01E+00
		Zr-95	<6.12E+00	0.00E+00	6.12E+00
		Nb-95	<3.96E+00	0.00E+00	3.96E+00
		I-131	<1.13E+01	0.00E+00	1.13E+01
		Cs-134	<3.06E+00	0.00E+00	3.06E+00
		Cs-137	<3.63E+00	0.00E+00	3.63E+00
		BaLa-140	<4.85E+00	0.00E+00	4.85E+00
		Be-7	<2.36E+01	0.00E+00	2.36E+01
		K-40	8.75E+01	3.49E+01	4.17E+01

Sample Point 218 [ CONTROL - NNE @ 13.5 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
515714	12/31/2019 - 1/28/2020	Beta	<3.31E+00	0.00E+00	3.31E+00
		Mn-54	<3.63E+00	0.00E+00	3.63E+00
		Co-58	<3.16E+00	0.00E+00	3.16E+00
		Fe-59	<5.63E+00	0.00E+00	5.63E+00
		Co-60	<3.35E+00	0.00E+00	3.35E+00
		Zn-65	<6.46E+00	0.00E+00	6.46E+00
		Zr-95	<6.00E+00	0.00E+00	6.00E+00
		Nb-95	<3.92E+00	0.00E+00	3.92E+00
		I-131	<1.19E+01	0.00E+00	1.19E+01
		Cs-134	<3.67E+00	0.00E+00	3.67E+00
		Cs-137	<2.86E+00	0.00E+00	2.86E+00
		BaLa-140	<6.76E+00	0.00E+00	6.76E+00
		Be-7	<2.92E+01	0.00E+00	2.92E+01
		K-40	<6.62E+01	0.00E+00	6.62E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
517233	1/28/2020 - 2/25/2020	Beta	<3.22E+00	0.00E+00	3.22E+00
		Mn-54	<2.04E+00	0.00E+00	2.04E+00
		Co-58	<2.58E+00	0.00E+00	2.58E+00
		Fe-59	<4.55E+00	0.00E+00	4.55E+00
		Co-60	<1.58E+00	0.00E+00	1.58E+00
		Zn-65	<4.73E+00	0.00E+00	4.73E+00
		Zr-95	<4.03E+00	0.00E+00	4.03E+00
		Nb-95	<2.70E+00	0.00E+00	2.70E+00
		I-131	<1.00E+01	0.00E+00	1.00E+01
		Cs-134	<2.56E+00	0.00E+00	2.56E+00
		Cs-137	<2.69E+00	0.00E+00	2.69E+00
		BaLa-140	<5.57E+00	0.00E+00	5.57E+00
		Be-7	<2.11E+01	0.00E+00	2.11E+01
		K-40	2.61E+01	1.99E+01	2.98E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
519403	2/25/2020 - 3/24/2020	Beta	3.44E+00	4.41E+00	3.24E+00
		Mn-54	<3.89E+00	0.00E+00	3.89E+00
		Co-58	<3.79E+00	0.00E+00	3.79E+00
		Fe-59	<7.43E+00	0.00E+00	7.43E+00



# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (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
519403	2/25/2020 - 3/24/2020	Co-60	<3.74E+00	0.00E+00	3.74E+00
		Zn-65	<7.29E+00	0.00E+00	7.29E+00
		Zr-95	<6.18E+00	0.00E+00	6.18E+00
		Nb-95	<3.32E+00	0.00E+00	3.32E+00
		I-131	<1.19E+01	0.00E+00	1.19E+01
		Cs-134	<3.47E+00	0.00E+00	3.47E+00
		Cs-137	<2.89E+00	0.00E+00	2.89E+00
		BaLa-140	<7.53E+00	0.00E+00	7.53E+00
		Be-7	<2.97E+01	0.00E+00	2.97E+01
		K-40	<2.65E+01	0.00E+00	2.65E+01
516433	12/31/2019 - 4/21/2020	H3DW	2.21E+02	1.10E+02	1.76E+02
521269	3/24/2020 - 4/21/2020	Beta	4.91E+00	4.60E+00	3.36E+00
		Mn-54	<3.66E+00	0.00E+00	3.66E+00
		Co-58	<3.58E+00	0.00E+00	3.58E+00
		Fe-59	<5.62E+00	0.00E+00	5.62E+00
		Co-60	<2.97E+00	0.00E+00	2.97E+00
		Zn-65	<5.73E+00	0.00E+00	5.73E+00
		Zr-95	<4.80E+00	0.00E+00	4.80E+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	<3.57E+00	0.00E+00	3.57E+00
		Cs-137	<3.43E+00	0.00E+00	3.43E+00
		BaLa-140	<6.60E+00	0.00E+00	6.60E+00
		Be-7	<2.98E+01	0.00E+00	2.98E+01
		K-40	1.02E+02	3.33E+01	3.46E+01
522837	4/21/2020 - 5/19/2020	Beta	<3.24E+00	0.00E+00	3.24E+00
		Mn-54	<3.27E+00	0.00E+00	3.27E+00
		Co-58	<3.20E+00	0.00E+00	3.20E+00
		Fe-59	<7.12E+00	0.00E+00	7.12E+00
		Co-60	<3.75E+00	0.00E+00	3.75E+00
		Zn-65	<5.28E+00	0.00E+00	5.28E+00
		Zr-95	<6.54E+00	0.00E+00	6.54E+00
		Nb-95	<4.19E+00	0.00E+00	4.19E+00
		I-131	<1.20E+01	0.00E+00	1.20E+01
		Cs-134	<3.31E+00	0.00E+00	3.31E+00
		Cs-137	<3.10E+00	0.00E+00	3.10E+00
		BaLa-140	<9.17E+00	0.00E+00	9.17E+00
		Be-7	<2.67E+01	0.00E+00	2.67E+01
		K-40	8.31E+01	2.72E+01	2.18E+01
524502	5/19/2020 - 6/16/2020	Beta	<3.24E+00	0.00E+00	3.24E+00
		Mn-54	<2.70E+00	0.00E+00	2.70E+00
		Co-58	<2.66E+00	0.00E+00	2.66E+00
		Fe-59	<4.75E+00	0.00E+00	4.75E+00
		Co-60	<2.54E+00	0.00E+00	2.54E+00
		Zn-65	<5.38E+00	0.00E+00	5.38E+00
		Zr-95	<5.35E+00	0.00E+00	5.35E+00
		Nb-95	<3.06E+00	0.00E+00	3.06E+00
		I-131	<8.76E+00	0.00E+00	8.76E+00
		Cs-134	<2.07E+00	0.00E+00	2.07E+00
		Cs-137	<2.68E+00	0.00E+00	2.68E+00
		BaLa-140	<5.41E+00	0.00E+00	5.41E+00
		Be-7	<2.18E+01	0.00E+00	2.18E+01
		K-40	1.11E+02	3.13E+01	3.66E+01
522525	4/21/2020 - 7/14/2020	H3DW	2.86E+02	1.18E+02	1.87E+02
525819	6/16/2020 - 7/14/2020	Beta	<3.23E+00	0.00E+00	3.23E+00

# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (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
525819	6/16/2020 - 7/14/2020	Mn-54	<4.39E+00	0.00E+00	4.39E+00
		Co-58	<4.16E+00	0.00E+00	4.16E+00
		Fe-59	<7.71E+00	0.00E+00	7.71E+00
		Co-60	<2.20E+00	0.00E+00	2.20E+00
		Zn-65	<1.21E+01	0.00E+00	1.21E+01
		Zr-95	<8.33E+00	0.00E+00	8.33E+00
		Nb-95	<4.86E+00	0.00E+00	4.86E+00
		I-131	<1.17E+01	0.00E+00	1.17E+01
		Cs-134	<3.28E+00	0.00E+00	3.28E+00
		Cs-137	<3.29E+00	0.00E+00	3.29E+00
		BaLa-140	<1.06E+01	0.00E+00	1.06E+01
		Be-7	<2.48E+01	0.00E+00	2.48E+01
		K-40	2.59E+01	2.79E+01	4.37E+01
527087	7/14/2020 - 8/11/2020	Beta	<3.23E+00	0.00E+00	3.23E+00
		Mn-54	<5.01E+00	0.00E+00	5.01E+00
		Co-58	<3.31E+00	0.00E+00	3.31E+00
		Fe-59	<9.18E+00	0.00E+00	9.18E+00
		Co-60	<4.68E+00	0.00E+00	4.68E+00
		Zn-65	<8.63E+00	0.00E+00	8.63E+00
		Zr-95	<7.33E+00	0.00E+00	7.33E+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	<3.90E+00	0.00E+00	3.90E+00
		Cs-137	<4.56E+00	0.00E+00	4.56E+00
		BaLa-140	<9.54E+00	0.00E+00	9.54E+00
		Be-7	<3.89E+01	0.00E+00	3.89E+01
K-40	1.06E+02	4.93E+01	6.02E+01		
528909	8/11/2020 - 9/9/2020	Beta	4.81E+00	4.40E+00	3.21E+00
		Mn-54	<3.28E+00	0.00E+00	3.28E+00
		Co-58	<3.76E+00	0.00E+00	3.76E+00
		Fe-59	<6.88E+00	0.00E+00	6.88E+00
		Co-60	<2.50E+00	0.00E+00	2.50E+00
		Zn-65	<7.76E+00	0.00E+00	7.76E+00
		Zr-95	<6.22E+00	0.00E+00	6.22E+00
		Nb-95	<4.87E+00	0.00E+00	4.87E+00
		I-131	<1.19E+01	0.00E+00	1.19E+01
		Cs-134	<3.76E+00	0.00E+00	3.76E+00
		Cs-137	<4.06E+00	0.00E+00	4.06E+00
		BaLa-140	<7.70E+00	0.00E+00	7.70E+00
		Be-7	<2.38E+01	0.00E+00	2.38E+01
K-40	7.20E+01	3.68E+01	4.85E+01		
527290	7/14/2020 - 10/6/2020	Nuclide	Activity	2 Sigma Error	MDA
		H3DW	3.89E+02	1.18E+02	1.82E+02
530684	9/9/2020 - 10/6/2020	Beta	<3.23E+00	0.00E+00	3.23E+00
		Mn-54	<4.19E+00	0.00E+00	4.19E+00
		Co-58	<5.21E+00	0.00E+00	5.21E+00
		Fe-59	<6.05E+00	0.00E+00	6.05E+00
		Co-60	<3.12E+00	0.00E+00	3.12E+00
		Zn-65	<8.71E+00	0.00E+00	8.71E+00
		Zr-95	<7.78E+00	0.00E+00	7.78E+00
		Nb-95	<5.57E+00	0.00E+00	5.57E+00
		I-131	<1.17E+01	0.00E+00	1.17E+01
		Cs-134	<3.94E+00	0.00E+00	3.94E+00
		Cs-137	<3.88E+00	0.00E+00	3.88E+00
		BaLa-140	<8.08E+00	0.00E+00	8.08E+00
		Be-7	<3.88E+01	0.00E+00	3.88E+01
K-40	8.87E+01	4.44E+01	5.40E+01		
532593	10/6/2020 - 11/3/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	4.47E+00	4.43E+00	3.24E+00

# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 218 [ CONTROL - NNE @ 13.5 miles ]

Sample ID:	532593	Sample Dates:	10/6/2020 - 11/3/2020	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<2.73E+00	0.00E+00	2.73E+00
				Co-58	<3.16E+00	0.00E+00	3.16E+00
				Fe-59	<7.46E+00	0.00E+00	7.46E+00
				Co-60	<2.46E+00	0.00E+00	2.46E+00
				Zn-65	<8.46E+00	0.00E+00	8.46E+00
				Zr-95	<5.85E+00	0.00E+00	5.85E+00
				Nb-95	<4.75E+00	0.00E+00	4.75E+00
				I-131	<1.06E+01	0.00E+00	1.06E+01
				Cs-134	<3.02E+00	0.00E+00	3.02E+00
				Cs-137	<3.45E+00	0.00E+00	3.45E+00
				BaLa-140	<8.67E+00	0.00E+00	8.67E+00
				Be-7	<2.51E+01	0.00E+00	2.51E+01
				K-40	4.01E+01	3.20E+01	4.82E+01

Sample ID:	534189	Sample Dates:	11/3/2020 - 12/1/2020	Nuclide	Activity	2 Sigma Error	MDA
				Beta	<3.24E+00	0.00E+00	3.24E+00
				Mn-54	<1.93E+00	0.00E+00	1.93E+00
				Co-58	<2.60E+00	0.00E+00	2.60E+00
				Fe-59	<6.77E+00	0.00E+00	6.77E+00
				Co-60	<2.59E+00	0.00E+00	2.59E+00
				Zn-65	<5.39E+00	0.00E+00	5.39E+00
				Zr-95	<5.96E+00	0.00E+00	5.96E+00
				Nb-95	<3.51E+00	0.00E+00	3.51E+00
				I-131	<1.20E+01	0.00E+00	1.20E+01
				Cs-134	<2.66E+00	0.00E+00	2.66E+00
				Cs-137	<3.48E+00	0.00E+00	3.48E+00
				BaLa-140	<7.04E+00	0.00E+00	7.04E+00
				Be-7	<2.75E+01	0.00E+00	2.75E+01
				K-40	6.03E+01	2.92E+01	3.94E+01

Sample ID:	533285	Sample Dates:	10/6/2020 - 12/29/2020	Nuclide	Activity	2 Sigma Error	MDA
				H3DW	2.52E+02	1.21E+02	1.94E+02

Sample ID:	536303	Sample Dates:	12/1/2020 - 12/29/2020	Nuclide	Activity	2 Sigma Error	MDA
				Beta	<3.21E+00	0.00E+00	3.21E+00
				Mn-54	<2.86E+00	0.00E+00	2.86E+00
				Co-58	<2.47E+00	0.00E+00	2.47E+00
				Fe-59	<6.60E+00	0.00E+00	6.60E+00
				Co-60	<2.13E+00	0.00E+00	2.13E+00
				Zn-65	<5.72E+00	0.00E+00	5.72E+00
				Zr-95	<5.46E+00	0.00E+00	5.46E+00
				Nb-95	<3.34E+00	0.00E+00	3.34E+00
				I-131	<1.18E+01	0.00E+00	1.18E+01
				Cs-134	<3.72E+00	0.00E+00	3.72E+00
				Cs-137	<2.85E+00	0.00E+00	2.85E+00
				BaLa-140	<7.63E+00	0.00E+00	7.63E+00
				Be-7	<2.92E+01	0.00E+00	2.92E+01
				K-40	9.36E+01	3.96E+01	5.29E+01

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

Sample Point 208 [ INDICATOR - S @ 0.45 miles ]

Sample ID:	520658	Sample Dates:	4/1/2020 - 4/1/2020	PREDATOR	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<8.36E+01	0.00E+00	8.36E+01
					Co-58	<8.63E+01	0.00E+00	8.63E+01
					Fe-59	<1.50E+02	0.00E+00	1.50E+02
					Co-60	<5.01E+01	0.00E+00	5.01E+01
					Zn-65	<1.99E+02	0.00E+00	1.99E+02
					Nb-95	<8.94E+01	0.00E+00	8.94E+01
					I-131	<7.78E+01	0.00E+00	7.78E+01
					Cs-134	<9.01E+01	0.00E+00	9.01E+01
					Cs-137	<1.04E+02	0.00E+00	1.04E+02
					Be-7	<6.22E+02	0.00E+00	6.22E+02
					K-40	6.22E+03	1.56E+03	1.35E+03
					Ag-110M	<6.31E+01	0.00E+00	6.31E+01
					Sb-122	<1.25E+02	0.00E+00	1.25E+02

# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 208 [ INDICATOR - S @ 0.45 miles ]

Sample ID:	Sample Dates:	PREDATOR	Nuclide	Activity	2 Sigma Error	MDA
520658	4/1/2020 - 4/1/2020	PREDATOR	Sb-125	<2.01E+02	0.00E+00	2.01E+02
520659	4/1/2020 - 4/1/2020	FORAGER	Mn-54	<5.62E+01	0.00E+00	5.62E+01
			Co-58	<4.60E+01	0.00E+00	4.60E+01
			Fe-59	<1.24E+02	0.00E+00	1.24E+02
			Co-60	<5.40E+01	0.00E+00	5.40E+01
			Zn-65	<1.32E+02	0.00E+00	1.32E+02
			Nb-95	<6.81E+01	0.00E+00	6.81E+01
			I-131	<6.41E+01	0.00E+00	6.41E+01
			Cs-134	<5.63E+01	0.00E+00	5.63E+01
			Cs-137	<6.57E+01	0.00E+00	6.57E+01
			Be-7	<3.80E+02	0.00E+00	3.80E+02
			K-40	3.16E+03	1.01E+03	1.07E+03
			Ag-110M	<4.37E+01	0.00E+00	4.37E+01
			Sb-122	<8.15E+01	0.00E+00	8.15E+01
			Sb-125	<1.28E+02	0.00E+00	1.28E+02
520660	4/1/2020 - 4/1/2020	BOTMFEEDER	Mn-54	<6.56E+01	0.00E+00	6.56E+01
			Co-58	<7.14E+01	0.00E+00	7.14E+01
			Fe-59	<8.47E+01	0.00E+00	8.47E+01
			Co-60	<6.29E+01	0.00E+00	6.29E+01
			Zn-65	<1.35E+02	0.00E+00	1.35E+02
			Nb-95	<5.94E+01	0.00E+00	5.94E+01
			I-131	<5.78E+01	0.00E+00	5.78E+01
			Cs-134	<8.11E+01	0.00E+00	8.11E+01
			Cs-137	<7.10E+01	0.00E+00	7.10E+01
			Be-7	<4.65E+02	0.00E+00	4.65E+02
			K-40	3.54E+03	1.02E+03	7.33E+02
			Ag-110M	<4.75E+01	0.00E+00	4.75E+01
			Sb-122	<9.08E+01	0.00E+00	9.08E+01
			Sb-125	<1.56E+02	0.00E+00	1.56E+02
531562	10/21/2020 - 10/21/2020	FORAGER	Mn-54	<4.60E+01	0.00E+00	4.60E+01
			Co-58	<4.61E+01	0.00E+00	4.61E+01
			Fe-59	<7.99E+01	0.00E+00	7.99E+01
			Co-60	<4.22E+01	0.00E+00	4.22E+01
			Zn-65	<8.98E+01	0.00E+00	8.98E+01
			Nb-95	<5.72E+01	0.00E+00	5.72E+01
			I-131	<1.24E+02	0.00E+00	1.24E+02
			Cs-134	<3.38E+01	0.00E+00	3.38E+01
			Cs-137	<5.32E+01	0.00E+00	5.32E+01
			Be-7	<3.53E+02	0.00E+00	3.53E+02
			K-40	3.92E+03	8.88E+02	7.10E+02
			Ag-110M	<4.36E+01	0.00E+00	4.36E+01
			Sb-122	<1.99E+03	0.00E+00	1.99E+03
			Sb-125	<1.01E+02	0.00E+00	1.01E+02
531563	10/21/2020 - 10/21/2020	PREDATOR	Mn-54	<4.25E+01	0.00E+00	4.25E+01
			Co-58	<3.91E+01	0.00E+00	3.91E+01
			Fe-59	<5.49E+01	0.00E+00	5.49E+01
			Co-60	<4.40E+01	0.00E+00	4.40E+01
			Zn-65	<6.79E+01	0.00E+00	6.79E+01
			Nb-95	<3.81E+01	0.00E+00	3.81E+01
			I-131	<1.04E+02	0.00E+00	1.04E+02
			Cs-134	<3.53E+01	0.00E+00	3.53E+01
			Cs-137	<4.07E+01	0.00E+00	4.07E+01
			Be-7	<2.91E+02	0.00E+00	2.91E+02
			K-40	3.45E+03	7.11E+02	8.41E+01
			Ag-110M	<3.32E+01	0.00E+00	3.32E+01
			Sb-122	<1.19E+03	0.00E+00	1.19E+03
			Sb-125	<1.01E+02	0.00E+00	1.01E+02

# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 208 [ INDICATOR - S @ 0.45 miles ]

Sample ID:	531564	Sample Dates:	10/21/2020 - 10/21/2020	BOTMFEEDER	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<2.72E+01	0.00E+00	2.72E+01
					Co-58	<3.92E+01	0.00E+00	3.92E+01
					Fe-59	<4.35E+01	0.00E+00	4.35E+01
					Co-60	<2.88E+01	0.00E+00	2.88E+01
					Zn-65	<7.97E+01	0.00E+00	7.97E+01
					Nb-95	<5.11E+01	0.00E+00	5.11E+01
					I-131	<7.23E+01	0.00E+00	7.23E+01
					Cs-134	<3.54E+01	0.00E+00	3.54E+01
					Cs-137	<3.06E+01	0.00E+00	3.06E+01
					Be-7	8.91E+01	1.66E+02	2.86E+02
					K-40	3.11E+03	7.01E+02	4.38E+02
					Ag-110M	<3.17E+01	0.00E+00	3.17E+01
					Sb-122	<1.37E+03	0.00E+00	1.37E+03
					Sb-125	<6.40E+01	0.00E+00	6.40E+01

Sample Point 216 [ CONTROL - NNE @ 4.19 miles ]

Sample ID:	520661	Sample Dates:	4/1/2020 - 4/1/2020	BOTMFEEDER	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<7.07E+01	0.00E+00	7.07E+01
					Co-58	<6.23E+01	0.00E+00	6.23E+01
					Fe-59	<1.28E+02	0.00E+00	1.28E+02
					Co-60	<6.73E+01	0.00E+00	6.73E+01
					Zn-65	<1.19E+02	0.00E+00	1.19E+02
					Nb-95	<6.76E+01	0.00E+00	6.76E+01
					I-131	<5.11E+01	0.00E+00	5.11E+01
					Cs-134	<1.36E+01	0.00E+00	1.36E+01
					Cs-137	<6.18E+01	0.00E+00	6.18E+01
					Be-7	<4.94E+02	0.00E+00	4.94E+02
					K-40	4.68E+03	1.26E+03	1.03E+03
					Ag-110M	<6.18E+01	0.00E+00	6.18E+01
					Sb-122	<1.11E+02	0.00E+00	1.11E+02
					Sb-125	<1.94E+02	0.00E+00	1.94E+02

Sample ID:	520662	Sample Dates:	4/1/2020 - 4/1/2020	PREDATOR	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<5.56E+01	0.00E+00	5.56E+01
					Co-58	<6.80E+01	0.00E+00	6.80E+01
					Fe-59	<8.08E+01	0.00E+00	8.08E+01
					Co-60	<7.30E+01	0.00E+00	7.30E+01
					Zn-65	<1.28E+02	0.00E+00	1.28E+02
					Nb-95	<4.94E+01	0.00E+00	4.94E+01
					I-131	<5.25E+01	0.00E+00	5.25E+01
					Cs-134	<4.12E+01	0.00E+00	4.12E+01
					Cs-137	<4.18E+01	0.00E+00	4.18E+01
					Be-7	<4.59E+02	0.00E+00	4.59E+02
					K-40	4.30E+03	1.13E+03	8.81E+02
					Ag-110M	<6.01E+01	0.00E+00	6.01E+01
					Sb-122	<1.13E+02	0.00E+00	1.13E+02
					Sb-125	<1.15E+02	0.00E+00	1.15E+02

Sample ID:	520663	Sample Dates:	4/1/2020 - 4/1/2020	FORAGER	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<6.14E+01	0.00E+00	6.14E+01
					Co-58	<9.47E+01	0.00E+00	9.47E+01
					Fe-59	<1.22E+02	0.00E+00	1.22E+02
					Co-60	<8.65E+01	0.00E+00	8.65E+01
					Zn-65	<1.63E+02	0.00E+00	1.63E+02
					Nb-95	<9.49E+01	0.00E+00	9.49E+01
					I-131	<9.95E+01	0.00E+00	9.95E+01
					Cs-134	<6.40E+01	0.00E+00	6.40E+01
					Cs-137	<7.42E+01	0.00E+00	7.42E+01
					Be-7	<6.57E+02	0.00E+00	6.57E+02
					K-40	5.33E+03	1.33E+03	1.03E+03
					Ag-110M	<7.45E+01	0.00E+00	7.45E+01
					Sb-122	<3.90E+02	0.00E+00	3.90E+02
					Sb-125	<1.81E+02	0.00E+00	1.81E+02

Sample ID:	531565	Sample Dates:	10/21/2020 - 10/21/2020	PREDATOR	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<4.55E+01	0.00E+00	4.55E+01

# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 216 [ CONTROL - NNE @ 4.19 miles ]

Sample ID:	531565	Sample Dates:	10/21/2020 - 10/21/2020	PREDATOR	Nuclide	Activity	2 Sigma Error	MDA
					Co-58	<4.05E+01	0.00E+00	4.05E+01
					Fe-59	<8.02E+01	0.00E+00	8.02E+01
					Co-60	<3.47E+01	0.00E+00	3.47E+01
					Zn-65	<7.03E+01	0.00E+00	7.03E+01
					Nb-95	<5.27E+01	0.00E+00	5.27E+01
					I-131	<1.05E+02	0.00E+00	1.05E+02
					Cs-134	<4.11E+01	0.00E+00	4.11E+01
					Cs-137	<4.06E+01	0.00E+00	4.06E+01
					Be-7	<3.25E+02	0.00E+00	3.25E+02
					K-40	3.52E+03	8.14E+02	6.79E+02
					Ag-110M	<4.02E+01	0.00E+00	4.02E+01
					Sb-122	<1.79E+03	0.00E+00	1.79E+03
					Sb-125	<8.60E+01	0.00E+00	8.60E+01

Sample ID:	531566	Sample Dates:	10/21/2020 - 10/21/2020	FORAGER	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<3.60E+01	0.00E+00	3.60E+01
					Co-58	<3.66E+01	0.00E+00	3.66E+01
					Fe-59	<7.18E+01	0.00E+00	7.18E+01
					Co-60	<9.47E+00	0.00E+00	9.47E+00
					Zn-65	<9.57E+01	0.00E+00	9.57E+01
					Nb-95	<5.55E+01	0.00E+00	5.55E+01
					I-131	<1.16E+02	0.00E+00	1.16E+02
					Cs-134	<3.99E+01	0.00E+00	3.99E+01
					Cs-137	<2.94E+01	0.00E+00	2.94E+01
					Be-7	<3.64E+02	0.00E+00	3.64E+02
					K-40	2.55E+03	6.69E+02	4.68E+02
					Ag-110M	<2.09E+01	0.00E+00	2.09E+01
					Sb-122	<1.57E+03	0.00E+00	1.57E+03
					Sb-125	<7.68E+01	0.00E+00	7.68E+01

Sample ID:	531567	Sample Dates:	10/21/2020 - 10/21/2020	BOTMFEEDER	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<3.44E+01	0.00E+00	3.44E+01
					Co-58	<3.20E+01	0.00E+00	3.20E+01
					Fe-59	<1.11E+02	0.00E+00	1.11E+02
					Co-60	<4.04E+01	0.00E+00	4.04E+01
					Zn-65	<8.01E+01	0.00E+00	8.01E+01
					Nb-95	<6.40E+01	0.00E+00	6.40E+01
					I-131	<1.13E+02	0.00E+00	1.13E+02
					Cs-134	<5.09E+01	0.00E+00	5.09E+01
					Cs-137	<4.24E+01	0.00E+00	4.24E+01
					Be-7	<4.04E+02	0.00E+00	4.04E+02
					K-40	4.05E+03	8.23E+02	3.71E+02
					Ag-110M	<3.23E+01	0.00E+00	3.23E+01
					Sb-122	<1.50E+03	0.00E+00	1.50E+03
					Sb-125	<9.94E+01	0.00E+00	9.94E+01

Media Type: MILK Concentration (Activity): pCi/l

Sample Point 221 [ CONTROL - NW @ 14.5 miles ]

Sample ID:	515238	Sample Dates:	1/7/2020 - 1/7/2020		Nuclide	Activity	2 Sigma Error	MDA
					LLI-131	<5.94E-01	0.00E+00	5.94E-01
					I-131	<6.05E+00	0.00E+00	6.05E+00
					Cs-134	<8.28E+00	0.00E+00	8.28E+00
					Cs-137	<6.40E+00	0.00E+00	6.40E+00
					BaLa-140	<5.85E+00	0.00E+00	5.85E+00
					Be-7	<5.07E+01	0.00E+00	5.07E+01
					K-40	1.38E+03	2.26E+02	1.04E+02

Sample ID:	515865	Sample Dates:	1/21/2020 - 1/21/2020		Nuclide	Activity	2 Sigma Error	MDA
					LLI-131	<6.40E-01	0.00E+00	6.40E-01
					I-131	<6.65E+00	0.00E+00	6.65E+00
					Cs-134	<5.87E+00	0.00E+00	5.87E+00
					Cs-137	<8.42E+00	0.00E+00	8.42E+00
					BaLa-140	<2.14E+00	0.00E+00	2.14E+00
					Be-7	<4.80E+01	0.00E+00	4.80E+01
					K-40	1.45E+03	2.26E+02	1.78E+01

# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (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
516486	2/4/2020 - 2/4/2020	LLI-131	<6.06E-01	0.00E+00	6.06E-01
		I-131	<8.23E+00	0.00E+00	8.23E+00
		Cs-134	<8.75E+00	0.00E+00	8.75E+00
		Cs-137	<8.14E+00	0.00E+00	8.14E+00
		BaLa-140	<2.16E+00	0.00E+00	2.16E+00
		Be-7	<5.08E+01	0.00E+00	5.08E+01
		K-40	1.43E+03	2.35E+02	1.32E+02
517388	2/18/2020 - 2/18/2020	LLI-131	<5.93E-01	0.00E+00	5.93E-01
		I-131	<5.87E+00	0.00E+00	5.87E+00
		Cs-134	<5.14E+00	0.00E+00	5.14E+00
		Cs-137	<6.93E+00	0.00E+00	6.93E+00
		BaLa-140	<5.88E+00	0.00E+00	5.88E+00
		Be-7	<4.57E+01	0.00E+00	4.57E+01
		K-40	1.03E+03	1.94E+02	1.18E+02
518685	3/3/2020 - 3/3/2020	LLI-131	<6.48E-01	0.00E+00	6.48E-01
		I-131	<7.44E+00	0.00E+00	7.44E+00
		Cs-134	<7.22E+00	0.00E+00	7.22E+00
		Cs-137	<7.32E+00	0.00E+00	7.32E+00
		BaLa-140	<2.14E+00	0.00E+00	2.14E+00
		Be-7	<4.18E+01	0.00E+00	4.18E+01
		K-40	1.38E+03	2.26E+02	1.10E+02
519675	3/17/2020 - 3/17/2020	LLI-131	<6.23E-01	0.00E+00	6.23E-01
		I-131	<7.34E+00	0.00E+00	7.34E+00
		Cs-134	<6.55E+00	0.00E+00	6.55E+00
		Cs-137	<6.82E+00	0.00E+00	6.82E+00
		BaLa-140	<6.05E+00	0.00E+00	6.05E+00
		Be-7	<5.86E+01	0.00E+00	5.86E+01
		K-40	1.48E+03	2.36E+02	1.14E+02
520491	3/31/2020 - 3/31/2020	LLI-131	<6.40E-01	0.00E+00	6.40E-01
		I-131	<7.06E+00	0.00E+00	7.06E+00
		Cs-134	<9.49E+00	0.00E+00	9.49E+00
		Cs-137	<9.10E+00	0.00E+00	9.10E+00
		BaLa-140	<8.47E+00	0.00E+00	8.47E+00
		Be-7	<5.32E+01	0.00E+00	5.32E+01
		K-40	1.56E+03	2.60E+02	1.93E+02
521584	4/14/2020 - 4/14/2020	LLI-131	<6.35E-01	0.00E+00	6.35E-01
		I-131	<6.12E+00	0.00E+00	6.12E+00
		Cs-134	<7.68E+00	0.00E+00	7.68E+00
		Cs-137	<5.81E+00	0.00E+00	5.81E+00
		BaLa-140	<8.48E+00	0.00E+00	8.48E+00
		Be-7	<4.19E+01	0.00E+00	4.19E+01
		K-40	1.42E+03	2.30E+02	1.09E+02
522325	4/28/2020 - 4/28/2020	LLI-131	<6.31E-01	0.00E+00	6.31E-01
		I-131	<5.86E+00	0.00E+00	5.86E+00
		Cs-134	<5.87E+00	0.00E+00	5.87E+00
		Cs-137	<8.77E+00	0.00E+00	8.77E+00
		BaLa-140	<8.48E+00	0.00E+00	8.48E+00
		Be-7	<6.43E+01	0.00E+00	6.43E+01
		K-40	1.64E+03	2.50E+02	1.03E+02
523080	5/12/2020 - 5/12/2020	LLI-131	<6.37E-01	0.00E+00	6.37E-01
		I-131	<6.26E+00	0.00E+00	6.26E+00
		Cs-134	<5.03E+00	0.00E+00	5.03E+00
		Cs-137	<7.61E+00	0.00E+00	7.61E+00
		BaLa-140	<5.77E+00	0.00E+00	5.77E+00

# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (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
523080	5/12/2020 - 5/12/2020	Be-7	<5.00E+01	0.00E+00	5.00E+01
		K-40	1.64E+03	2.47E+02	7.84E+01
523854	5/26/2020 - 5/26/2020	LLI-131	<5.69E-01	0.00E+00	5.69E-01
		I-131	<6.39E+00	0.00E+00	6.39E+00
		Cs-134	<9.61E+00	0.00E+00	9.61E+00
		Cs-137	<8.86E+00	0.00E+00	8.86E+00
		BaLa-140	<6.05E+00	0.00E+00	6.05E+00
		Be-7	<5.62E+01	0.00E+00	5.62E+01
		K-40	1.33E+03	2.15E+02	1.80E+01
524740	6/8/2020 - 6/8/2020	LLI-131	<5.97E-01	0.00E+00	5.97E-01
		I-131	<7.28E+00	0.00E+00	7.28E+00
		Cs-134	<8.65E+00	0.00E+00	8.65E+00
		Cs-137	<9.10E+00	0.00E+00	9.10E+00
		BaLa-140	<8.81E+00	0.00E+00	8.81E+00
		Be-7	<5.12E+01	0.00E+00	5.12E+01
		K-40	1.62E+03	2.43E+02	1.78E+01
525340	6/23/2020 - 6/23/2020	LLI-131	<6.39E-01	0.00E+00	6.39E-01
		I-131	<6.17E+00	0.00E+00	6.17E+00
		Cs-134	<8.19E+00	0.00E+00	8.19E+00
		Cs-137	<8.77E+00	0.00E+00	8.77E+00
		BaLa-140	<5.99E+00	0.00E+00	5.99E+00
		Be-7	<5.11E+01	0.00E+00	5.11E+01
		K-40	1.45E+03	2.33E+02	1.09E+02
525918	7/7/2020 - 7/7/2020	LLI-131	<6.13E-01	0.00E+00	6.13E-01
		I-131	<6.68E+00	0.00E+00	6.68E+00
		Cs-134	<8.25E+00	0.00E+00	8.25E+00
		Cs-137	<6.22E+00	0.00E+00	6.22E+00
		BaLa-140	<6.53E+00	0.00E+00	6.53E+00
		Be-7	<5.17E+01	0.00E+00	5.17E+01
		K-40	1.33E+03	2.21E+02	1.92E+01
526539	7/21/2020 - 7/21/2020	LLI-131	<5.39E-01	0.00E+00	5.39E-01
		I-131	<8.57E+00	0.00E+00	8.57E+00
		Cs-134	<9.09E+00	0.00E+00	9.09E+00
		Cs-137	<8.77E+00	0.00E+00	8.77E+00
		BaLa-140	<2.21E+00	0.00E+00	2.21E+00
		Be-7	<6.49E+01	0.00E+00	6.49E+01
		K-40	1.45E+03	2.26E+02	1.78E+01
527337	8/4/2020 - 8/4/2020	LLI-131	<6.49E-01	0.00E+00	6.49E-01
		I-131	<5.21E+00	0.00E+00	5.21E+00
		Cs-134	<8.61E+00	0.00E+00	8.61E+00
		Cs-137	<7.61E+00	0.00E+00	7.61E+00
		BaLa-140	<8.81E+00	0.00E+00	8.81E+00
		Be-7	<5.54E+01	0.00E+00	5.54E+01
		K-40	1.42E+03	2.27E+02	8.62E+01
527928	8/18/2020 - 8/18/2020	LLI-131	<6.36E-01	0.00E+00	6.36E-01
		I-131	<5.27E+00	0.00E+00	5.27E+00
		Cs-134	<8.18E+00	0.00E+00	8.18E+00
		Cs-137	<9.73E+00	0.00E+00	9.73E+00
		BaLa-140	<2.13E+00	0.00E+00	2.13E+00
		Be-7	<3.84E+01	0.00E+00	3.84E+01
		K-40	1.38E+03	2.19E+02	1.78E+01
529010	9/1/2020 - 9/1/2020	LLI-131	<5.66E-01	0.00E+00	5.66E-01



# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (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
529010	9/1/2020 - 9/1/2020	I-131	<7.39E+00	0.00E+00	7.39E+00
		Cs-134	<7.24E+00	0.00E+00	7.24E+00
		Cs-137	<8.14E+00	0.00E+00	8.14E+00
		BaLa-140	<2.23E+00	0.00E+00	2.23E+00
		Be-7	<5.85E+01	0.00E+00	5.85E+01
		K-40	1.03E+03	1.92E+02	1.03E+02
530303	9/15/2020 - 9/15/2020	LLI-131	<6.47E-01	0.00E+00	6.47E-01
		I-131	<6.35E+00	0.00E+00	6.35E+00
		Cs-134	<8.18E+00	0.00E+00	8.18E+00
		Cs-137	<7.67E+00	0.00E+00	7.67E+00
		BaLa-140	<5.78E+00	0.00E+00	5.78E+00
		Be-7	<5.56E+01	0.00E+00	5.56E+01
531080	9/29/2020 - 9/29/2020	LLI-131	<6.15E-01	0.00E+00	6.15E-01
		I-131	<7.27E+00	0.00E+00	7.27E+00
		Cs-134	<8.64E+00	0.00E+00	8.64E+00
		Cs-137	<8.06E+00	0.00E+00	8.06E+00
		BaLa-140	<5.79E+00	0.00E+00	5.79E+00
		Be-7	<2.97E+01	0.00E+00	2.97E+01
532088	10/13/2020 - 10/13/2020	LLI-131	<3.66E-01	0.00E+00	3.66E-01
		I-131	<7.23E+00	0.00E+00	7.23E+00
		Cs-134	<7.15E+00	0.00E+00	7.15E+00
		Cs-137	<8.77E+00	0.00E+00	8.77E+00
		BaLa-140	<2.20E+00	0.00E+00	2.20E+00
		Be-7	<5.37E+01	0.00E+00	5.37E+01
532821	10/27/2020 - 10/27/2020	LLI-131	<6.47E-01	0.00E+00	6.47E-01
		I-131	<7.22E+00	0.00E+00	7.22E+00
		Cs-134	<6.63E+00	0.00E+00	6.63E+00
		Cs-137	<1.12E+01	0.00E+00	1.12E+01
		BaLa-140	<2.24E+00	0.00E+00	2.24E+00
		Be-7	<5.38E+01	0.00E+00	5.38E+01
533809	11/10/2020 - 11/10/2020	LLI-131	<6.22E-01	0.00E+00	6.22E-01
		I-131	<4.64E+00	0.00E+00	4.64E+00
		Cs-134	<7.68E+00	0.00E+00	7.68E+00
		Cs-137	<9.73E+00	0.00E+00	9.73E+00
		BaLa-140	<5.82E+00	0.00E+00	5.82E+00
		Be-7	<5.08E+01	0.00E+00	5.08E+01
534568	11/24/2020 - 11/24/2020	LLI-131	<6.30E-01	0.00E+00	6.30E-01
		I-131	<8.06E+00	0.00E+00	8.06E+00
		Cs-134	<9.88E+00	0.00E+00	9.88E+00
		Cs-137	<8.42E+00	0.00E+00	8.42E+00
		BaLa-140	<8.46E+00	0.00E+00	8.46E+00
		Be-7	<4.80E+01	0.00E+00	4.80E+01
535899	12/8/2020 - 12/8/2020	LLI-131	<6.41E-01	0.00E+00	6.41E-01
		I-131	<5.34E+00	0.00E+00	5.34E+00
		Cs-134	<7.79E+00	0.00E+00	7.79E+00
		Cs-137	<8.54E+00	0.00E+00	8.54E+00
		BaLa-140	<9.57E+00	0.00E+00	9.57E+00
		Be-7	<4.85E+01	0.00E+00	4.85E+01

# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (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
535899	12/8/2020 - 12/8/2020	K-40	1.46E+03	2.30E+02	6.90E+01
536547	12/21/2020 - 12/21/2020	LLI-131	<6.35E-01	0.00E+00	6.35E-01
		I-131	<6.43E+00	0.00E+00	6.43E+00
		Cs-134	<6.55E+00	0.00E+00	6.55E+00
		Cs-137	<1.09E+01	0.00E+00	1.09E+01
		BaLa-140	<9.76E+00	0.00E+00	9.76E+00
		Be-7	<3.87E+01	0.00E+00	3.87E+01
		K-40	1.71E+03	2.60E+02	1.31E+02

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
518686	4/7/2020 - 4/7/2020	Mn-54	<1.16E+02	0.00E+00	1.16E+02
		Co-58	<9.36E+01	0.00E+00	9.36E+01
		Fe-59	<2.26E+02	0.00E+00	2.26E+02
		Co-60	<1.23E+02	0.00E+00	1.23E+02
		Zn-65	<1.98E+02	0.00E+00	1.98E+02
		Zr-95	<1.77E+02	0.00E+00	1.77E+02
		Nb-95	<1.06E+02	0.00E+00	1.06E+02
		I-131	<2.72E+02	0.00E+00	2.72E+02
		Cs-134	<1.04E+02	0.00E+00	1.04E+02
		Cs-137	<8.43E+01	0.00E+00	8.43E+01
		Be-7	<8.27E+02	0.00E+00	8.27E+02
		K-40	1.76E+04	2.55E+03	1.06E+03
		Co-57	<6.09E+01	0.00E+00	6.09E+01
		Mo-99	<1.35E+05	0.00E+00	1.35E+05
		Ag-110M	<6.65E+01	0.00E+00	6.65E+01
		Sb-122	<1.60E+04	0.00E+00	1.60E+04
		Sb-125	<2.04E+02	0.00E+00	2.04E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
530001	10/13/2020 - 10/13/2020	Mn-54	<7.30E+01	0.00E+00	7.30E+01
		Co-58	<7.37E+01	0.00E+00	7.37E+01
		Fe-59	<1.36E+02	0.00E+00	1.36E+02
		Co-60	<8.23E+01	0.00E+00	8.23E+01
		Zn-65	<1.62E+02	0.00E+00	1.62E+02
		Zr-95	<8.99E+01	0.00E+00	8.99E+01
		Nb-95	<7.63E+01	0.00E+00	7.63E+01
		I-131	<1.10E+02	0.00E+00	1.10E+02
		Cs-134	<6.64E+01	0.00E+00	6.64E+01
		Cs-137	<7.31E+01	0.00E+00	7.31E+01
		Be-7	<6.80E+02	0.00E+00	6.80E+02
		K-40	1.76E+04	2.39E+03	6.84E+02
		Co-57	<4.44E+01	0.00E+00	4.44E+01
		Mo-99	<2.98E+03	0.00E+00	2.98E+03
		Ag-110M	<5.48E+01	0.00E+00	5.48E+01
		Sb-122	<5.93E+02	0.00E+00	5.93E+02
		Sb-125	<1.43E+02	0.00E+00	1.43E+02

Sample Point 210 [ INDICATOR - SE @ 2.31 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
518687	4/7/2020 - 4/7/2020	Mn-54	<6.52E+01	0.00E+00	6.52E+01
		Co-58	<5.06E+01	0.00E+00	5.06E+01
		Fe-59	<1.61E+02	0.00E+00	1.61E+02
		Co-60	<4.25E+01	0.00E+00	4.25E+01
		Zn-65	<1.70E+02	0.00E+00	1.70E+02
		Zr-95	<1.09E+02	0.00E+00	1.09E+02
		Nb-95	<6.83E+01	0.00E+00	6.83E+01
		I-131	<2.85E+02	0.00E+00	2.85E+02
		Cs-134	<7.83E+01	0.00E+00	7.83E+01
		Cs-137	<6.55E+01	0.00E+00	6.55E+01
		Be-7	<4.67E+02	0.00E+00	4.67E+02
		K-40	1.31E+04	1.93E+03	8.89E+02

# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

Media Type: SEDIMENT\_SHORE Concentration (Activity): pCi/kg

Sample Point 210 [ INDICATOR - SE @ 2.31 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
518687	4/7/2020 - 4/7/2020	Co-57	<4.60E+01	0.00E+00	4.60E+01
		Mo-99	<5.78E+04	0.00E+00	5.78E+04
		Ag-110M	<5.58E+01	0.00E+00	5.58E+01
		Sb-122	<1.30E+04	0.00E+00	1.30E+04
		Sb-125	<1.31E+02	0.00E+00	1.31E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
530002	10/13/2020 - 10/13/2020	Mn-54	<7.06E+01	0.00E+00	7.06E+01
		Co-58	<5.82E+01	0.00E+00	5.82E+01
		Fe-59	<1.02E+02	0.00E+00	1.02E+02
		Co-60	<7.77E+01	0.00E+00	7.77E+01
		Zn-65	<1.46E+02	0.00E+00	1.46E+02
		Zr-95	<1.37E+02	0.00E+00	1.37E+02
		Nb-95	<6.62E+01	0.00E+00	6.62E+01
		I-131	<8.81E+01	0.00E+00	8.81E+01
		Cs-134	<7.11E+01	0.00E+00	7.11E+01
		Cs-137	<6.41E+01	0.00E+00	6.41E+01
		Be-7	<5.33E+02	0.00E+00	5.33E+02
		K-40	1.10E+04	1.71E+03	1.32E+02
		Co-57	<4.02E+01	0.00E+00	4.02E+01
		Mo-99	<2.81E+03	0.00E+00	2.81E+03
		Ag-110M	<5.14E+01	0.00E+00	5.14E+01
		Sb-122	<3.78E+02	0.00E+00	3.78E+02
		Sb-125	<1.20E+02	0.00E+00	1.20E+02

Sample Point 262 [ CONTROL - NNE @ 4.19 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
518688	4/7/2020 - 4/7/2020	Mn-54	<6.33E+01	0.00E+00	6.33E+01
		Co-58	<6.24E+01	0.00E+00	6.24E+01
		Fe-59	<1.63E+02	0.00E+00	1.63E+02
		Co-60	<5.32E+01	0.00E+00	5.32E+01
		Zn-65	<1.23E+02	0.00E+00	1.23E+02
		Zr-95	<7.99E+01	0.00E+00	7.99E+01
		Nb-95	<7.69E+01	0.00E+00	7.69E+01
		I-131	<2.68E+02	0.00E+00	2.68E+02
		Cs-134	<7.40E+01	0.00E+00	7.40E+01
		Cs-137	<4.33E+01	0.00E+00	4.33E+01
		Be-7	<5.24E+02	0.00E+00	5.24E+02
		K-40	5.80E+03	1.13E+03	4.67E+02
		Co-57	<5.09E+01	0.00E+00	5.09E+01
		Mo-99	<7.29E+04	0.00E+00	7.29E+04
		Ag-110M	<4.33E+01	0.00E+00	4.33E+01
		Sb-122	<1.03E+04	0.00E+00	1.03E+04
		Sb-125	<1.14E+02	0.00E+00	1.14E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
530003	10/13/2020 - 10/13/2020	Mn-54	<9.57E+01	0.00E+00	9.57E+01
		Co-58	<7.72E+01	0.00E+00	7.72E+01
		Fe-59	<1.57E+02	0.00E+00	1.57E+02
		Co-60	<7.46E+01	0.00E+00	7.46E+01
		Zn-65	<1.53E+02	0.00E+00	1.53E+02
		Zr-95	<1.24E+02	0.00E+00	1.24E+02
		Nb-95	<9.64E+01	0.00E+00	9.64E+01
		I-131	<1.41E+02	0.00E+00	1.41E+02
		Cs-134	<8.40E+01	0.00E+00	8.40E+01
		Cs-137	<8.88E+01	0.00E+00	8.88E+01
		Be-7	<6.65E+02	0.00E+00	6.65E+02
		K-40	6.77E+03	1.43E+03	8.92E+02
		Co-57	<5.79E+01	0.00E+00	5.79E+01
		Mo-99	<3.96E+03	0.00E+00	3.96E+03
		Ag-110M	<7.84E+01	0.00E+00	7.84E+01
		Sb-122	<5.97E+02	0.00E+00	5.97E+02
		Sb-125	<2.01E+02	0.00E+00	2.01E+02

# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (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
515715	12/31/2019 - 1/28/2020	Mn-54	<2.69E+00	0.00E+00	2.69E+00
		Co-58	<4.16E+00	0.00E+00	4.16E+00
		Fe-59	<8.58E+00	0.00E+00	8.58E+00
		Co-60	<4.37E+00	0.00E+00	4.37E+00
		Zn-65	<8.06E+00	0.00E+00	8.06E+00
		Zr-95	<8.90E+00	0.00E+00	8.90E+00
		Nb-95	<5.61E+00	0.00E+00	5.61E+00
		I-131	<1.12E+01	0.00E+00	1.12E+01
		Cs-134	<4.63E+00	0.00E+00	4.63E+00
		Cs-137	<4.41E+00	0.00E+00	4.41E+00
		BaLa-140	<6.58E+00	0.00E+00	6.58E+00
		Be-7	<4.68E+01	0.00E+00	4.68E+01
		K-40	2.97E+01	3.09E+01	4.79E+01
517234	1/28/2020 - 2/25/2020	Mn-54	<3.13E+00	0.00E+00	3.13E+00
		Co-58	<2.47E+00	0.00E+00	2.47E+00
		Fe-59	<5.35E+00	0.00E+00	5.35E+00
		Co-60	<2.69E+00	0.00E+00	2.69E+00
		Zn-65	<5.69E+00	0.00E+00	5.69E+00
		Zr-95	<4.20E+00	0.00E+00	4.20E+00
		Nb-95	<2.66E+00	0.00E+00	2.66E+00
		I-131	<1.08E+01	0.00E+00	1.08E+01
		Cs-134	<2.57E+00	0.00E+00	2.57E+00
		Cs-137	<2.64E+00	0.00E+00	2.64E+00
		BaLa-140	<5.70E+00	0.00E+00	5.70E+00
		Be-7	<2.19E+01	0.00E+00	2.19E+01
		K-40	<4.04E+01	0.00E+00	4.04E+01
519404	2/25/2020 - 3/24/2020	Mn-54	<2.99E+00	0.00E+00	2.99E+00
		Co-58	<3.21E+00	0.00E+00	3.21E+00
		Fe-59	<7.32E+00	0.00E+00	7.32E+00
		Co-60	<3.69E+00	0.00E+00	3.69E+00
		Zn-65	<4.21E+00	0.00E+00	4.21E+00
		Zr-95	<7.54E+00	0.00E+00	7.54E+00
		Nb-95	<4.13E+00	0.00E+00	4.13E+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	<3.01E+00	0.00E+00	3.01E+00
		BaLa-140	<7.78E+00	0.00E+00	7.78E+00
		Be-7	<2.73E+01	0.00E+00	2.73E+01
		K-40	2.92E+01	3.06E+01	4.89E+01
516434	12/31/2019 - 4/21/2020	H3SW	9.62E+03	2.91E+02	1.77E+02
521270	3/24/2020 - 4/21/2020	Mn-54	<3.08E+00	0.00E+00	3.08E+00
		Co-58	<3.44E+00	0.00E+00	3.44E+00
		Fe-59	<6.10E+00	0.00E+00	6.10E+00
		Co-60	<3.26E+00	0.00E+00	3.26E+00
		Zn-65	<6.69E+00	0.00E+00	6.69E+00
		Zr-95	<6.31E+00	0.00E+00	6.31E+00
		Nb-95	<3.73E+00	0.00E+00	3.73E+00
		I-131	<9.93E+00	0.00E+00	9.93E+00
		Cs-134	<2.56E+00	0.00E+00	2.56E+00
		Cs-137	<2.39E+00	0.00E+00	2.39E+00
		BaLa-140	<7.35E+00	0.00E+00	7.35E+00
		Be-7	<2.75E+01	0.00E+00	2.75E+01
		K-40	<3.23E+01	0.00E+00	3.23E+01
522838	4/21/2020 - 5/19/2020	Mn-54	<3.14E+00	0.00E+00	3.14E+00
		Co-58	<3.10E+00	0.00E+00	3.10E+00
		Fe-59	<6.69E+00	0.00E+00	6.69E+00
		Co-60	<4.06E+00	0.00E+00	4.06E+00

# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (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
522838	4/21/2020 - 5/19/2020	Zn-65	<7.20E+00	0.00E+00	7.20E+00
		Zr-95	<6.14E+00	0.00E+00	6.14E+00
		Nb-95	<4.45E+00	0.00E+00	4.45E+00
		I-131	<1.10E+01	0.00E+00	1.10E+01
		Cs-134	<4.56E+00	0.00E+00	4.56E+00
		Cs-137	<3.91E+00	0.00E+00	3.91E+00
		BaLa-140	<6.86E+00	0.00E+00	6.86E+00
		Be-7	<3.61E+01	0.00E+00	3.61E+01
		K-40	4.55E+01	2.70E+01	3.55E+01
		524503	5/19/2020 - 6/16/2020	Mn-54	<2.76E+00
Co-58	<3.05E+00			0.00E+00	3.05E+00
Fe-59	<5.04E+00			0.00E+00	5.04E+00
Co-60	<3.27E+00			0.00E+00	3.27E+00
Zn-65	<5.10E+00			0.00E+00	5.10E+00
Zr-95	<5.21E+00			0.00E+00	5.21E+00
Nb-95	<3.85E+00			0.00E+00	3.85E+00
I-131	<1.16E+01			0.00E+00	1.16E+01
Cs-134	<3.83E+00			0.00E+00	3.83E+00
Cs-137	<3.11E+00			0.00E+00	3.11E+00
BaLa-140	<7.84E+00			0.00E+00	7.84E+00
Be-7	<3.05E+01			0.00E+00	3.05E+01
K-40	4.69E+01			3.11E+01	4.53E+01
522526	4/21/2020 - 7/14/2020	H3SW	7.47E+03	2.63E+02	1.87E+02
525820	6/16/2020 - 7/14/2020	Mn-54	<3.82E+00	0.00E+00	3.82E+00
		Co-58	<2.98E+00	0.00E+00	2.98E+00
		Fe-59	<9.17E+00	0.00E+00	9.17E+00
		Co-60	<3.61E+00	0.00E+00	3.61E+00
		Zn-65	<5.31E+00	0.00E+00	5.31E+00
		Zr-95	<6.12E+00	0.00E+00	6.12E+00
		Nb-95	<4.17E+00	0.00E+00	4.17E+00
		I-131	<1.17E+01	0.00E+00	1.17E+01
		Cs-134	<3.75E+00	0.00E+00	3.75E+00
		Cs-137	<3.39E+00	0.00E+00	3.39E+00
		BaLa-140	<6.95E+00	0.00E+00	6.95E+00
		Be-7	<3.27E+01	0.00E+00	3.27E+01
		K-40	3.93E+01	3.02E+01	4.43E+01
527088	7/14/2020 - 8/11/2020	Mn-54	<3.53E+00	0.00E+00	3.53E+00
		Co-58	<3.72E+00	0.00E+00	3.72E+00
		Fe-59	<6.99E+00	0.00E+00	6.99E+00
		Co-60	<4.00E+00	0.00E+00	4.00E+00
		Zn-65	<5.67E+00	0.00E+00	5.67E+00
		Zr-95	<7.39E+00	0.00E+00	7.39E+00
		Nb-95	<4.62E+00	0.00E+00	4.62E+00
		I-131	<1.16E+01	0.00E+00	1.16E+01
		Cs-134	<4.10E+00	0.00E+00	4.10E+00
		Cs-137	<3.36E+00	0.00E+00	3.36E+00
		BaLa-140	<7.71E+00	0.00E+00	7.71E+00
		Be-7	<2.69E+01	0.00E+00	2.69E+01
		K-40	1.12E+02	3.71E+01	3.82E+01
528911	8/11/2020 - 9/9/2020	Mn-54	<3.88E+00	0.00E+00	3.88E+00
		Co-58	<3.52E+00	0.00E+00	3.52E+00
		Fe-59	<6.69E+00	0.00E+00	6.69E+00
		Co-60	<3.94E+00	0.00E+00	3.94E+00
		Zn-65	<6.94E+00	0.00E+00	6.94E+00
		Zr-95	<6.68E+00	0.00E+00	6.68E+00
		Nb-95	<3.66E+00	0.00E+00	3.66E+00
		I-131	<1.16E+01	0.00E+00	1.16E+01

# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (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
528911	8/11/2020 - 9/9/2020	Cs-134	<3.12E+00	0.00E+00	3.12E+00
		Cs-137	<2.73E+00	0.00E+00	2.73E+00
		BaLa-140	<4.57E+00	0.00E+00	4.57E+00
		Be-7	<3.23E+01	0.00E+00	3.23E+01
		K-40	<5.82E+01	0.00E+00	5.82E+01
527291	7/14/2020 - 10/6/2020	H3SW	1.34E+04	3.31E+02	1.83E+02
530685	9/9/2020 - 10/6/2020	Mn-54	<2.92E+00	0.00E+00	2.92E+00
		Co-58	<3.67E+00	0.00E+00	3.67E+00
		Fe-59	<8.11E+00	0.00E+00	8.11E+00
		Co-60	<3.39E+00	0.00E+00	3.39E+00
		Zn-65	<6.87E+00	0.00E+00	6.87E+00
		Zr-95	<5.70E+00	0.00E+00	5.70E+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	<3.12E+00	0.00E+00	3.12E+00
		Cs-137	<3.60E+00	0.00E+00	3.60E+00
		BaLa-140	<5.95E+00	0.00E+00	5.95E+00
		Be-7	<3.26E+01	0.00E+00	3.26E+01
		K-40	1.13E+02	4.06E+01	4.66E+01
532594	10/6/2020 - 11/3/2020	Mn-54	<2.96E+00	0.00E+00	2.96E+00
		Co-58	<3.75E+00	0.00E+00	3.75E+00
		Fe-59	<7.72E+00	0.00E+00	7.72E+00
		Co-60	<4.23E+00	0.00E+00	4.23E+00
		Zn-65	<7.25E+00	0.00E+00	7.25E+00
		Zr-95	<4.77E+00	0.00E+00	4.77E+00
		Nb-95	<4.86E+00	0.00E+00	4.86E+00
		I-131	<1.13E+01	0.00E+00	1.13E+01
		Cs-134	<4.37E+00	0.00E+00	4.37E+00
		Cs-137	<2.04E+00	0.00E+00	2.04E+00
		BaLa-140	<1.14E+01	0.00E+00	1.14E+01
		Be-7	<3.06E+01	0.00E+00	3.06E+01
		K-40	<4.95E+01	0.00E+00	4.95E+01
534190	11/3/2020 - 12/1/2020	Mn-54	<3.91E+00	0.00E+00	3.91E+00
		Co-58	<3.22E+00	0.00E+00	3.22E+00
		Fe-59	<8.04E+00	0.00E+00	8.04E+00
		Co-60	<4.52E+00	0.00E+00	4.52E+00
		Zn-65	<5.13E+00	0.00E+00	5.13E+00
		Zr-95	<6.04E+00	0.00E+00	6.04E+00
		Nb-95	<5.37E+00	0.00E+00	5.37E+00
		I-131	<1.16E+01	0.00E+00	1.16E+01
		Cs-134	<3.24E+00	0.00E+00	3.24E+00
		Cs-137	<3.80E+00	0.00E+00	3.80E+00
		BaLa-140	<9.07E+00	0.00E+00	9.07E+00
		Be-7	<3.39E+01	0.00E+00	3.39E+01
		K-40	7.37E+01	3.61E+01	4.44E+01
533286	10/6/2020 - 12/29/2020	H3SW	1.17E+04	3.22E+02	1.94E+02
536304	12/1/2020 - 12/29/2020	Mn-54	<2.14E+00	0.00E+00	2.14E+00
		Co-58	<3.19E+00	0.00E+00	3.19E+00
		Fe-59	<6.68E+00	0.00E+00	6.68E+00
		Co-60	<3.29E+00	0.00E+00	3.29E+00
		Zn-65	<5.00E+00	0.00E+00	5.00E+00
		Zr-95	<6.09E+00	0.00E+00	6.09E+00
		Nb-95	<3.84E+00	0.00E+00	3.84E+00
		I-131	<1.11E+01	0.00E+00	1.11E+01
		Cs-134	<3.45E+00	0.00E+00	3.45E+00

# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (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
536304	12/1/2020 - 12/29/2020	Cs-137	<3.15E+00	0.00E+00	3.15E+00
		BaLa-140	<8.14E+00	0.00E+00	8.14E+00
		Be-7	<2.57E+01	0.00E+00	2.57E+01
		K-40	5.57E+01	3.10E+01	4.32E+01

Sample Point 211 [ INDICATOR - ESE @ 4.06 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
515716	12/31/2019 - 1/28/2020	Mn-54	<2.75E+00	0.00E+00	2.75E+00
		Co-58	<3.47E+00	0.00E+00	3.47E+00
		Fe-59	<6.12E+00	0.00E+00	6.12E+00
		Co-60	<3.80E+00	0.00E+00	3.80E+00
		Zn-65	<7.00E+00	0.00E+00	7.00E+00
		Zr-95	<6.15E+00	0.00E+00	6.15E+00
		Nb-95	<4.30E+00	0.00E+00	4.30E+00
		I-131	<1.20E+01	0.00E+00	1.20E+01
		Cs-134	<3.55E+00	0.00E+00	3.55E+00
		Cs-137	<2.94E+00	0.00E+00	2.94E+00
		BaLa-140	<7.64E+00	0.00E+00	7.64E+00
		Be-7	<3.01E+01	0.00E+00	3.01E+01
		K-40	8.32E+01	2.76E+01	1.99E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
517235	1/28/2020 - 2/25/2020	Mn-54	<2.41E+00	0.00E+00	2.41E+00
		Co-58	<3.53E+00	0.00E+00	3.53E+00
		Fe-59	<6.06E+00	0.00E+00	6.06E+00
		Co-60	<2.58E+00	0.00E+00	2.58E+00
		Zn-65	<5.89E+00	0.00E+00	5.89E+00
		Zr-95	<7.20E+00	0.00E+00	7.20E+00
		Nb-95	<3.68E+00	0.00E+00	3.68E+00
		I-131	<1.19E+01	0.00E+00	1.19E+01
		Cs-134	<3.83E+00	0.00E+00	3.83E+00
		Cs-137	<3.00E+00	0.00E+00	3.00E+00
		BaLa-140	<6.12E+00	0.00E+00	6.12E+00
		Be-7	<3.29E+01	0.00E+00	3.29E+01
		K-40	1.10E+02	3.46E+01	3.50E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
519405	2/25/2020 - 3/24/2020	Mn-54	<2.92E+00	0.00E+00	2.92E+00
		Co-58	<3.25E+00	0.00E+00	3.25E+00
		Fe-59	<6.83E+00	0.00E+00	6.83E+00
		Co-60	<2.91E+00	0.00E+00	2.91E+00
		Zn-65	<6.64E+00	0.00E+00	6.64E+00
		Zr-95	<4.86E+00	0.00E+00	4.86E+00
		Nb-95	<3.23E+00	0.00E+00	3.23E+00
		I-131	<1.01E+01	0.00E+00	1.01E+01
		Cs-134	<3.00E+00	0.00E+00	3.00E+00
		Cs-137	<3.03E+00	0.00E+00	3.03E+00
		BaLa-140	<9.11E+00	0.00E+00	9.11E+00
		Be-7	<2.52E+01	0.00E+00	2.52E+01
		K-40	<4.81E+01	0.00E+00	4.81E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
516435	12/31/2019 - 4/21/2020	H3SW	4.67E+02	1.19E+02	1.78E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
521271	3/24/2020 - 4/21/2020	Mn-54	<3.06E+00	0.00E+00	3.06E+00
		Co-58	<3.00E+00	0.00E+00	3.00E+00
		Fe-59	<5.16E+00	0.00E+00	5.16E+00
		Co-60	<2.60E+00	0.00E+00	2.60E+00
		Zn-65	<6.43E+00	0.00E+00	6.43E+00
		Zr-95	<5.17E+00	0.00E+00	5.17E+00
		Nb-95	<4.16E+00	0.00E+00	4.16E+00
		I-131	<1.11E+01	0.00E+00	1.11E+01
		Cs-134	<3.32E+00	0.00E+00	3.32E+00
		Cs-137	<2.62E+00	0.00E+00	2.62E+00
		BaLa-140	<5.85E+00	0.00E+00	5.85E+00

# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (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
521271	3/24/2020 - 4/21/2020	Be-7	<2.40E+01	0.00E+00	2.40E+01
		K-40	5.95E+01	2.61E+01	3.06E+01
522839	4/21/2020 - 5/19/2020	Mn-54	<4.34E+00	0.00E+00	4.34E+00
		Co-58	<4.40E+00	0.00E+00	4.40E+00
		Fe-59	<9.89E+00	0.00E+00	9.89E+00
		Co-60	<4.51E+00	0.00E+00	4.51E+00
		Zn-65	<1.02E+01	0.00E+00	1.02E+01
		Zr-95	<7.81E+00	0.00E+00	7.81E+00
		Nb-95	<5.73E+00	0.00E+00	5.73E+00
		I-131	<1.17E+01	0.00E+00	1.17E+01
		Cs-134	<4.83E+00	0.00E+00	4.83E+00
		Cs-137	<3.88E+00	0.00E+00	3.88E+00
		BaLa-140	<1.02E+01	0.00E+00	1.02E+01
		Be-7	<2.79E+01	0.00E+00	2.79E+01
		K-40	1.04E+02	4.17E+01	3.98E+01
524504	5/19/2020 - 6/16/2020	Mn-54	<2.83E+00	0.00E+00	2.83E+00
		Co-58	<3.53E+00	0.00E+00	3.53E+00
		Fe-59	<6.24E+00	0.00E+00	6.24E+00
		Co-60	<3.60E+00	0.00E+00	3.60E+00
		Zn-65	<7.85E+00	0.00E+00	7.85E+00
		Zr-95	<5.79E+00	0.00E+00	5.79E+00
		Nb-95	<4.46E+00	0.00E+00	4.46E+00
		I-131	<1.11E+01	0.00E+00	1.11E+01
		Cs-134	<3.91E+00	0.00E+00	3.91E+00
		Cs-137	<3.00E+00	0.00E+00	3.00E+00
		BaLa-140	<6.48E+00	0.00E+00	6.48E+00
		Be-7	<2.74E+01	0.00E+00	2.74E+01
		K-40	7.15E+01	4.01E+01	5.65E+01
522527	4/21/2020 - 7/14/2020	H3SW	3.39E+02	1.19E+02	1.86E+02
525821	6/16/2020 - 7/14/2020	Mn-54	<2.70E+00	0.00E+00	2.70E+00
		Co-58	<3.60E+00	0.00E+00	3.60E+00
		Fe-59	<8.51E+00	0.00E+00	8.51E+00
		Co-60	<3.80E+00	0.00E+00	3.80E+00
		Zn-65	<6.23E+00	0.00E+00	6.23E+00
		Zr-95	<6.63E+00	0.00E+00	6.63E+00
		Nb-95	<4.72E+00	0.00E+00	4.72E+00
		I-131	<1.17E+01	0.00E+00	1.17E+01
		Cs-134	<3.00E+00	0.00E+00	3.00E+00
		Cs-137	<3.40E+00	0.00E+00	3.40E+00
		BaLa-140	<6.90E+00	0.00E+00	6.90E+00
		Be-7	<3.04E+01	0.00E+00	3.04E+01
		K-40	9.14E+01	4.09E+01	5.16E+01
527089	7/14/2020 - 8/11/2020	Mn-54	<3.75E+00	0.00E+00	3.75E+00
		Co-58	<3.39E+00	0.00E+00	3.39E+00
		Fe-59	<7.99E+00	0.00E+00	7.99E+00
		Co-60	<3.25E+00	0.00E+00	3.25E+00
		Zn-65	<5.64E+00	0.00E+00	5.64E+00
		Zr-95	<6.43E+00	0.00E+00	6.43E+00
		Nb-95	<4.93E+00	0.00E+00	4.93E+00
		I-131	<1.17E+01	0.00E+00	1.17E+01
		Cs-134	<4.45E+00	0.00E+00	4.45E+00
		Cs-137	<3.56E+00	0.00E+00	3.56E+00
		BaLa-140	<6.88E+00	0.00E+00	6.88E+00
		Be-7	<3.75E+01	0.00E+00	3.75E+01
		K-40	7.48E+01	3.51E+01	4.46E+01



# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (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
528912	8/11/2020 - 9/9/2020	Mn-54	<3.17E+00	0.00E+00	3.17E+00
		Co-58	<3.02E+00	0.00E+00	3.02E+00
		Fe-59	<8.09E+00	0.00E+00	8.09E+00
		Co-60	<2.89E+00	0.00E+00	2.89E+00
		Zn-65	<6.69E+00	0.00E+00	6.69E+00
		Zr-95	<4.95E+00	0.00E+00	4.95E+00
		Nb-95	<3.83E+00	0.00E+00	3.83E+00
		I-131	<1.19E+01	0.00E+00	1.19E+01
		Cs-134	<3.23E+00	0.00E+00	3.23E+00
		Cs-137	<2.64E+00	0.00E+00	2.64E+00
		BaLa-140	<5.65E+00	0.00E+00	5.65E+00
		Be-7	<2.53E+01	0.00E+00	2.53E+01
		K-40	9.43E+01	3.80E+01	4.77E+01
		527292	7/14/2020 - 10/6/2020	H3SW	4.89E+02
530686	9/9/2020 - 10/6/2020	Mn-54	<2.72E+00	0.00E+00	2.72E+00
		Co-58	<2.84E+00	0.00E+00	2.84E+00
		Fe-59	<7.74E+00	0.00E+00	7.74E+00
		Co-60	<2.76E+00	0.00E+00	2.76E+00
		Zn-65	<6.33E+00	0.00E+00	6.33E+00
		Zr-95	<6.52E+00	0.00E+00	6.52E+00
		Nb-95	<4.70E+00	0.00E+00	4.70E+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	<3.37E+00	0.00E+00	3.37E+00
		BaLa-140	<8.33E+00	0.00E+00	8.33E+00
		Be-7	<2.76E+01	0.00E+00	2.76E+01
		K-40	7.57E+01	3.98E+01	5.44E+01
		532595	10/6/2020 - 11/3/2020	Mn-54	<2.87E+00
Co-58	<3.73E+00			0.00E+00	3.73E+00
Fe-59	<6.56E+00			0.00E+00	6.56E+00
Co-60	<2.98E+00			0.00E+00	2.98E+00
Zn-65	<5.09E+00			0.00E+00	5.09E+00
Zr-95	<6.04E+00			0.00E+00	6.04E+00
Nb-95	<4.69E+00			0.00E+00	4.69E+00
I-131	<1.17E+01			0.00E+00	1.17E+01
Cs-134	<3.75E+00			0.00E+00	3.75E+00
Cs-137	<3.37E+00			0.00E+00	3.37E+00
BaLa-140	<8.97E+00			0.00E+00	8.97E+00
Be-7	<3.14E+01			0.00E+00	3.14E+01
K-40	7.20E+01			3.03E+01	3.33E+01
534191	11/3/2020 - 12/1/2020			Mn-54	<3.03E+00
		Co-58	<2.52E+00	0.00E+00	2.52E+00
		Fe-59	<5.24E+00	0.00E+00	5.24E+00
		Co-60	<2.67E+00	0.00E+00	2.67E+00
		Zn-65	<5.58E+00	0.00E+00	5.58E+00
		Zr-95	<5.05E+00	0.00E+00	5.05E+00
		Nb-95	<3.65E+00	0.00E+00	3.65E+00
		I-131	<9.44E+00	0.00E+00	9.44E+00
		Cs-134	<2.86E+00	0.00E+00	2.86E+00
		Cs-137	<2.70E+00	0.00E+00	2.70E+00
		BaLa-140	<7.09E+00	0.00E+00	7.09E+00
		Be-7	<2.92E+01	0.00E+00	2.92E+01
		K-40	7.87E+01	2.75E+01	2.86E+01
		533287	10/6/2020 - 12/29/2020	H3SW	3.40E+02
536305	12/1/2020 - 12/29/2020	Mn-54	<2.72E+00	0.00E+00	2.72E+00

# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (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
536305	12/1/2020 - 12/29/2020	Co-58	<2.49E+00	0.00E+00	2.49E+00
		Fe-59	<4.57E+00	0.00E+00	4.57E+00
		Co-60	<2.48E+00	0.00E+00	2.48E+00
		Zn-65	<4.29E+00	0.00E+00	4.29E+00
		Zr-95	<5.20E+00	0.00E+00	5.20E+00
		Nb-95	<3.53E+00	0.00E+00	3.53E+00
		I-131	<9.90E+00	0.00E+00	9.90E+00
		Cs-134	<3.45E+00	0.00E+00	3.45E+00
		Cs-137	<2.28E+00	0.00E+00	2.28E+00
		BaLa-140	<8.63E+00	0.00E+00	8.63E+00
		Be-7	<2.33E+01	0.00E+00	2.33E+01
		K-40	1.57E+01	2.15E+01	3.55E+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
518402	12/12/2019 - 3/12/2020	mR/Std Qtr	20.63
524139	3/12/2020 - 6/11/2020	mR/Std Qtr	17.20
529281	6/11/2020 - 9/21/2020	mR/Std Qtr	17.57
535446	9/21/2020 - 12/16/2020	mR/Std Qtr	15.95

Sample Point 201 [ INDICATOR - NE @ 0.53 miles ]

TLD RING TLD\_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
518403	12/12/2019 - 3/12/2020	mR/Std Qtr	20.51
524140	3/12/2020 - 6/11/2020	mR/Std Qtr	16.76
529282	6/11/2020 - 9/21/2020	mR/Std Qtr	17.26
535447	9/21/2020 - 12/16/2020	mR/Std Qtr	15.07

Sample Point 203 [ INDICATOR - ESE @ 0.38 miles ]

TLD RING TLD\_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
518404	12/12/2019 - 3/12/2020	mR/Std Qtr	19.76
524141	3/12/2020 - 6/11/2020	mR/Std Qtr	17.78
529283	6/11/2020 - 9/21/2020	mR/Std Qtr	18.36
535448	9/21/2020 - 12/16/2020	mR/Std Qtr	16.79

Sample Point 204 [ INDICATOR - SSW @ 0.48 miles ]

TLD RING TLD\_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
518405	12/12/2019 - 3/12/2020	mR/Std Qtr	19.04
524142	3/12/2020 - 6/11/2020	mR/Std Qtr	16.19
529284	6/11/2020 - 9/21/2020	mR/Std Qtr	16.24
535449	9/21/2020 - 12/16/2020	mR/Std Qtr	16.40

# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 205 [ INDICATOR - SW @ 0.5 miles ]

TLD RING TLD\_INNER

Sample ID	Sample Dates	Nuclide	Activity
518406	12/12/2019 - 3/12/2020	mR/Std Qtr	22.13
524143	3/12/2020 - 6/11/2020	mR/Std Qtr	17.84
529285	6/11/2020 - 9/21/2020	mR/Std Qtr	19.11
535450	9/21/2020 - 12/16/2020	mR/Std Qtr	16.98

Sample Point 206 [ INDICATOR - WNW @ 0.67 miles ]

TLD RING TLD\_INNER

Sample ID	Sample Dates	Nuclide	Activity
518407	12/12/2019 - 3/12/2020	mR/Std Qtr	24.62
524144	3/12/2020 - 6/11/2020	mR/Std Qtr	19.55
529286	6/11/2020 - 9/21/2020	mR/Std Qtr	22.20
535451	9/21/2020 - 12/16/2020	mR/Std Qtr	19.69

Sample Point 207 [ INDICATOR - NNW @ 0.95 miles ]

TLD RING TLD\_INNER

Sample ID	Sample Dates	Nuclide	Activity
518408	12/12/2019 - 3/12/2020	mR/Std Qtr	21.67
524145	3/12/2020 - 6/11/2020	mR/Std Qtr	19.51
529287	6/11/2020 - 9/21/2020	mR/Std Qtr	19.76
535452	9/21/2020 - 12/16/2020	mR/Std Qtr	18.05

Sample Point 212 [ INDICATOR - E @ 3.32 miles ]

TLD RING TLD\_SPEC

Sample ID	Sample Dates	Nuclide	Activity
518409	12/12/2019 - 3/12/2020	mR/Std Qtr	18.86
524146	3/12/2020 - 6/11/2020	mR/Std Qtr	15.77
529288	6/11/2020 - 9/21/2020	mR/Std Qtr	15.80
535453	9/21/2020 - 12/16/2020	mR/Std Qtr	13.02

Sample Point 217 [ CONTROL - SSE @ 10.3 miles ]

TLD RING TLD\_CTRL

Sample ID	Sample Dates	Nuclide	Activity
518410	12/12/2019 - 3/12/2020	mR/Std Qtr	13.87
524147	3/12/2020 - 6/11/2020	mR/Std Qtr	10.64
529289	6/11/2020 - 9/21/2020	mR/Std Qtr	10.91
535454	9/21/2020 - 12/16/2020	mR/Std Qtr	9.56

Sample Point 222 [ INDICATOR - N @ 0.71 miles ]

TLD RING TLD\_INNER

Sample ID	Sample Dates	Nuclide	Activity
518411	12/12/2019 - 3/12/2020	mR/Std Qtr	18.80

# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

## Sample Point 222 [ INDICATOR - N @ 0.71 miles ]

TLD RING TLD\_INNER

Sample ID:	524148	Sample Dates:	3/12/2020 - 6/11/2020	Nuclide	Activity
				mR/Std Qtr	15.46
Sample ID:	529290	Sample Dates:	6/11/2020 - 9/21/2020	Nuclide	Activity
				mR/Std Qtr	16.71
Sample ID:	535455	Sample Dates:	9/21/2020 - 12/16/2020	Nuclide	Activity
				mR/Std Qtr	16.07

## Sample Point 223 [ INDICATOR - E @ 0.57 miles ]

TLD RING TLD\_INNER

Sample ID:	518412	Sample Dates:	12/12/2019 - 3/12/2020	Nuclide	Activity
				mR/Std Qtr	20.39
Sample ID:	524149	Sample Dates:	3/12/2020 - 6/11/2020	Nuclide	Activity
				mR/Std Qtr	19.20
Sample ID:	529291	Sample Dates:	6/11/2020 - 9/21/2020	Nuclide	Activity
				mR/Std Qtr	20.20
Sample ID:	535456	Sample Dates:	9/21/2020 - 12/16/2020	Nuclide	Activity
				mR/Std Qtr	18.20

## Sample Point 225 [ INDICATOR - SE @ 0.68 miles ]

TLD RING TLD\_INNER

Sample ID:	518413	Sample Dates:	12/12/2019 - 3/12/2020	Nuclide	Activity
				mR/Std Qtr	22.17
Sample ID:	524150	Sample Dates:	3/12/2020 - 6/11/2020	Nuclide	Activity
				mR/Std Qtr	18.54
Sample ID:	529292	Sample Dates:	6/11/2020 - 9/21/2020	Nuclide	Activity
				mR/Std Qtr	19.74
Sample ID:	535457	Sample Dates:	9/21/2020 - 12/16/2020	Nuclide	Activity
				mR/Std Qtr	17.29

## Sample Point 226 [ INDICATOR - S @ 0.48 miles ]

TLD RING TLD\_INNER

Sample ID:	518414	Sample Dates:	12/12/2019 - 3/12/2020	Nuclide	Activity
				mR/Std Qtr	20.23
Sample ID:	524151	Sample Dates:	3/12/2020 - 6/11/2020	Nuclide	Activity
				mR/Std Qtr	17.57
Sample ID:	529293	Sample Dates:	6/11/2020 - 9/21/2020	Nuclide	Activity
				mR/Std Qtr	20.23
Sample ID:	535458	Sample Dates:	9/21/2020 - 12/16/2020	Nuclide	Activity
				mR/Std Qtr	14.98

## Sample Point 227 [ INDICATOR - WSW @ 0.52 miles ]

TLD RING TLD\_INNER

Sample ID:	518415	Sample Dates:	12/12/2019 - 3/12/2020	Nuclide	Activity
				mR/Std Qtr	19.13
Sample ID:	524152	Sample Dates:	3/12/2020 - 6/11/2020	Nuclide	Activity
				mR/Std Qtr	17.21
Sample ID:	529294	Sample Dates:	6/11/2020 - 9/21/2020	Nuclide	Activity
				mR/Std Qtr	17.27
Sample ID:	535459	Sample Dates:	9/21/2020 - 12/16/2020	Nuclide	Activity
				mR/Std Qtr	15.86

## Sample Point 228 [ INDICATOR - W @ 0.61 miles ]

TLD RING TLD\_INNER

Sample ID:	518416	Sample Dates:	12/12/2019 - 3/12/2020	Nuclide	Activity
				mR/Std Qtr	22.27
Sample ID:	524153	Sample Dates:	3/12/2020 - 6/11/2020	Nuclide	Activity
				mR/Std Qtr	17.63

# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 228 [ INDICATOR - W @ 0.61 miles ]

TLD RING TLD\_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
529295	6/11/2020 - 9/21/2020	mR/Std Qtr	19.78
535460	9/21/2020 - 12/16/2020	mR/Std Qtr	15.45

Sample Point 229 [ INDICATOR - NW @ 0.84 miles ]

TLD RING TLD\_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
518417	12/12/2019 - 3/12/2020	mR/Std Qtr	24.03
524154	3/12/2020 - 6/11/2020	mR/Std Qtr	20.68
529296	6/11/2020 - 9/21/2020	mR/Std Qtr	21.09
535461	9/21/2020 - 12/16/2020	mR/Std Qtr	19.69

Sample Point 230 [ INDICATOR - N @ 4.37 miles ]

TLD RING TLD\_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
518418	12/12/2019 - 3/12/2020	mR/Std Qtr	15.48
524155	3/12/2020 - 6/11/2020	mR/Std Qtr	13.05
529297	6/11/2020 - 9/21/2020	mR/Std Qtr	12.88
535462	9/21/2020 - 12/16/2020	mR/Std Qtr	10.59

Sample Point 231 [ INDICATOR - NNE @ 4.21 miles ]

TLD RING TLD\_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
518419	12/12/2019 - 3/12/2020	mR/Std Qtr	19.11
524156	3/12/2020 - 6/11/2020	mR/Std Qtr	16.72
529298	6/11/2020 - 9/21/2020	mR/Std Qtr	18.08
535463	9/21/2020 - 12/16/2020	mR/Std Qtr	14.99

Sample Point 232 [ INDICATOR - NE @ 4.18 miles ]

TLD RING TLD\_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
518420	12/12/2019 - 3/12/2020	mR/Std Qtr	24.76
524157	3/12/2020 - 6/11/2020	mR/Std Qtr	22.58
529299	6/11/2020 - 9/21/2020	mR/Std Qtr	21.71
535464	9/21/2020 - 12/16/2020	mR/Std Qtr	19.43

Sample Point 233 [ INDICATOR - ENE @ 3.95 miles ]

TLD RING TLD\_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
518421	12/12/2019 - 3/12/2020	mR/Std Qtr	16.88
524158	3/12/2020 - 6/11/2020	mR/Std Qtr	14.09
529300	6/11/2020 - 9/21/2020	mR/Std Qtr	14.49

# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 233 [ INDICATOR - ENE @ 3.95 miles ]

TLD RING TLD\_OUTER

Sample ID: 535465	Sample Dates: 9/21/2020 - 12/16/2020	Nuclide	Activity
		mR/Std Qtr	12.03

Sample Point 234 [ INDICATOR - E @ 4.5 miles ]

TLD RING TLD\_OUTER

Sample ID: 518422	Sample Dates: 12/12/2019 - 3/12/2020	Nuclide	Activity
		mR/Std Qtr	19.45

Sample ID: 524159	Sample Dates: 3/12/2020 - 6/11/2020	Nuclide	Activity
		mR/Std Qtr	19.22

Sample ID: 529301	Sample Dates: 6/11/2020 - 9/21/2020	Nuclide	Activity
		mR/Std Qtr	19.02

Sample Point 235 [ INDICATOR - ESE @ 4.07 miles ]

TLD RING TLD\_OUTER

Sample ID: 518423	Sample Dates: 12/12/2019 - 3/12/2020	Nuclide	Activity
		mR/Std Qtr	17.47

Sample ID: 524160	Sample Dates: 3/12/2020 - 6/11/2020	Nuclide	Activity
		mR/Std Qtr	15.19

Sample ID: 529302	Sample Dates: 6/11/2020 - 9/21/2020	Nuclide	Activity
		mR/Std Qtr	14.57

Sample ID: 535467	Sample Dates: 9/21/2020 - 12/16/2020	Nuclide	Activity
		mR/Std Qtr	12.41

Sample Point 236 [ INDICATOR - SE @ 4.25 miles ]

TLD RING TLD\_OUTER

Sample ID: 518424	Sample Dates: 12/12/2019 - 3/12/2020	Nuclide	Activity
		mR/Std Qtr	25.01

Sample Point 237 [ INDICATOR - SSE @ 4.75 miles ]

TLD RING TLD\_OUTER

Sample ID: 518425	Sample Dates: 12/12/2019 - 3/12/2020	Nuclide	Activity
		mR/Std Qtr	24.52

Sample ID: 524162	Sample Dates: 3/12/2020 - 6/11/2020	Nuclide	Activity
		mR/Std Qtr	20.44

Sample ID: 529303	Sample Dates: 6/11/2020 - 9/21/2020	Nuclide	Activity
		mR/Std Qtr	20.98

Sample ID: 535468	Sample Dates: 9/21/2020 - 12/16/2020	Nuclide	Activity
		mR/Std Qtr	20.62

Sample Point 238 [ INDICATOR - S @ 4.02 miles ]

TLD RING TLD\_OUTER

Sample ID: 518426	Sample Dates: 12/12/2019 - 3/12/2020	Nuclide	Activity
		mR/Std Qtr	21.70

Sample ID: 524163	Sample Dates: 3/12/2020 - 6/11/2020	Nuclide	Activity
		mR/Std Qtr	16.75

Sample ID: 529304	Sample Dates: 6/11/2020 - 9/21/2020	Nuclide	Activity
		mR/Std Qtr	17.73

Sample ID: 535469	Sample Dates: 9/21/2020 - 12/16/2020	Nuclide	Activity
		mR/Std Qtr	14.08

Sample Point 239 [ INDICATOR - SSW @ 4.49 miles ]

TLD RING TLD\_OUTER

Sample ID: 518427	Sample Dates: 12/12/2019 - 3/12/2020	Nuclide	Activity
		mR/Std Qtr	20.11

Sample ID: 524164	Sample Dates: 3/12/2020 - 6/11/2020	Nuclide	Activity
		mR/Std Qtr	17.72

Sample ID: 529305	Sample Dates: 6/11/2020 - 9/21/2020	Nuclide	Activity
		mR/Std Qtr	18.57

# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 239 [ INDICATOR - SSW @ 4.49 miles ]

TLD RING TLD\_OUTER

Sample ID:	535470	Sample Dates:	9/21/2020 - 12/16/2020	Nuclide	Activity
				mR/Std Qtr	17.29

Sample Point 240 [ INDICATOR - SW @ 4.07 miles ]

TLD RING TLD\_OUTER

Sample ID:	518428	Sample Dates:	12/12/2019 - 3/12/2020	Nuclide	Activity
				mR/Std Qtr	16.71

Sample ID:	524165	Sample Dates:	3/12/2020 - 6/11/2020	Nuclide	Activity
				mR/Std Qtr	12.56

Sample ID:	529306	Sample Dates:	6/11/2020 - 9/21/2020	Nuclide	Activity
				mR/Std Qtr	13.05

Sample ID:	535471	Sample Dates:	9/21/2020 - 12/16/2020	Nuclide	Activity
				mR/Std Qtr	9.94

Sample Point 241 [ INDICATOR - WSW @ 4.58 miles ]

TLD RING TLD\_OUTER

Sample ID:	518429	Sample Dates:	12/12/2019 - 3/12/2020	Nuclide	Activity
				mR/Std Qtr	15.12

Sample ID:	524166	Sample Dates:	3/12/2020 - 6/11/2020	Nuclide	Activity
				mR/Std Qtr	12.88

Sample ID:	529307	Sample Dates:	6/11/2020 - 9/21/2020	Nuclide	Activity
				mR/Std Qtr	14.10

Sample ID:	535472	Sample Dates:	9/21/2020 - 12/16/2020	Nuclide	Activity
				mR/Std Qtr	11.03

Sample Point 242 [ INDICATOR - W @ 4.56 miles ]

TLD RING TLD\_OUTER

Sample ID:	518430	Sample Dates:	12/12/2019 - 3/12/2020	Nuclide	Activity
				mR/Std Qtr	18.31

Sample ID:	524167	Sample Dates:	3/12/2020 - 6/11/2020	Nuclide	Activity
				mR/Std Qtr	15.34

Sample ID:	529308	Sample Dates:	6/11/2020 - 9/21/2020	Nuclide	Activity
				mR/Std Qtr	16.33

Sample ID:	535473	Sample Dates:	9/21/2020 - 12/16/2020	Nuclide	Activity
				mR/Std Qtr	13.01

Sample Point 243 [ INDICATOR - WNW @ 4.39 miles ]

TLD RING TLD\_OUTER

Sample ID:	518431	Sample Dates:	12/12/2019 - 3/12/2020	Nuclide	Activity
				mR/Std Qtr	18.75

Sample ID:	524168	Sample Dates:	3/12/2020 - 6/11/2020	Nuclide	Activity
				mR/Std Qtr	15.39

Sample ID:	529309	Sample Dates:	6/11/2020 - 9/21/2020	Nuclide	Activity
				mR/Std Qtr	16.06

Sample ID:	535474	Sample Dates:	9/21/2020 - 12/16/2020	Nuclide	Activity
				mR/Std Qtr	15.42

Sample Point 244 [ INDICATOR - NW @ 4.02 miles ]

TLD RING TLD\_OUTER

Sample ID:	518432	Sample Dates:	12/12/2019 - 3/12/2020	Nuclide	Activity
				mR/Std Qtr	22.27

Sample ID:	524169	Sample Dates:	3/12/2020 - 6/11/2020	Nuclide	Activity
				mR/Std Qtr	20.52

Sample ID:	529310	Sample Dates:	6/11/2020 - 9/21/2020	Nuclide	Activity
				mR/Std Qtr	18.75

Sample ID:	535475	Sample Dates:	9/21/2020 - 12/16/2020	Nuclide	Activity
				mR/Std Qtr	19.42

# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 245 [ INDICATOR - NNW @ 4.01 miles ]

TLD RING TLD\_OUTER

Sample ID	Sample Dates	Nuclide	Activity
518433	12/12/2019 - 3/12/2020	mR/Std Qtr	18.38
524170	3/12/2020 - 6/11/2020	mR/Std Qtr	17.47
529311	6/11/2020 - 9/21/2020	mR/Std Qtr	15.98
535476	9/21/2020 - 12/16/2020	mR/Std Qtr	15.17

Sample Point 246 [ INDICATOR - ENE @ 7.87 miles ]

TLD RING TLD\_SPEC

Sample ID	Sample Dates	Nuclide	Activity
518434	12/12/2019 - 3/12/2020	mR/Std Qtr	16.18
524171	3/12/2020 - 6/11/2020	mR/Std Qtr	14.00
529312	6/11/2020 - 9/21/2020	mR/Std Qtr	14.55
535477	9/21/2020 - 12/16/2020	mR/Std Qtr	12.12

Sample Point 247 [ CONTROL - ESE @ 7.33 miles ]

TLD RING TLD\_CTRL

Sample ID	Sample Dates	Nuclide	Activity
518435	12/12/2019 - 3/12/2020	mR/Std Qtr	16.01
524172	3/12/2020 - 6/11/2020	mR/Std Qtr	14.46
529313	6/11/2020 - 9/21/2020	mR/Std Qtr	13.34
535478	9/21/2020 - 12/16/2020	mR/Std Qtr	10.90

Sample Point 248 [ INDICATOR - S @ 6.54 miles ]

TLD RING TLD\_SPEC

Sample ID	Sample Dates	Nuclide	Activity
518436	12/12/2019 - 3/12/2020	mR/Std Qtr	16.90
524173	3/12/2020 - 6/11/2020	mR/Std Qtr	13.84
529314	6/11/2020 - 9/21/2020	mR/Std Qtr	14.94
535479	9/21/2020 - 12/16/2020	mR/Std Qtr	11.26

Sample Point 249 [ INDICATOR - S @ 7.17 miles ]

TLD RING TLD\_SPEC

Sample ID	Sample Dates	Nuclide	Activity
518437	12/12/2019 - 3/12/2020	mR/Std Qtr	18.41
524174	3/12/2020 - 6/11/2020	mR/Std Qtr	17.45
529315	6/11/2020 - 9/21/2020	mR/Std Qtr	17.22
535480	9/21/2020 - 12/16/2020	mR/Std Qtr	13.27

Sample Point 250 [ INDICATOR - WSW @ 10.4 miles ]

TLD RING TLD\_SPEC

Sample ID	Sample Dates	Nuclide	Activity
518438	12/12/2019 - 3/12/2020	mR/Std Qtr	19.12



# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

## Sample Point 250 [ INDICATOR - WSW @ 10.4 miles ]

TLD RING TLD\_SPEC

Sample ID	Sample Dates	Nuclide	Activity
524175	3/12/2020 - 6/11/2020	mR/Std Qtr	16.34
529316	6/11/2020 - 9/21/2020	mR/Std Qtr	16.89
535481	9/21/2020 - 12/16/2020	mR/Std Qtr	12.55

## Sample Point 251 [ CONTROL - WNW @ 9.72 miles ]

TLD RING TLD\_CTRL

Sample ID	Sample Dates	Nuclide	Activity
518439	12/12/2019 - 3/12/2020	mR/Std Qtr	19.69
524176	3/12/2020 - 6/11/2020	mR/Std Qtr	16.21
529317	6/11/2020 - 9/21/2020	mR/Std Qtr	16.55
535482	9/21/2020 - 12/16/2020	mR/Std Qtr	14.24

## Sample Point 255 [ INDICATOR - ENE @ 0.61 miles ]

TLD RING TLD\_INNER

Sample ID	Sample Dates	Nuclide	Activity
518440	12/12/2019 - 3/12/2020	mR/Std Qtr	21.94
524177	3/12/2020 - 6/11/2020	mR/Std Qtr	19.94
529318	6/11/2020 - 9/21/2020	mR/Std Qtr	21.07
535483	9/21/2020 - 12/16/2020	mR/Std Qtr	17.05

## Sample Point 256 [ INDICATOR - SSE @ 0.58 miles ]

TLD RING TLD\_INNER

Sample ID	Sample Dates	Nuclide	Activity
518441	12/12/2019 - 3/12/2020	mR/Std Qtr	21.49
524178	3/12/2020 - 6/11/2020	mR/Std Qtr	19.65
529319	6/11/2020 - 9/21/2020	mR/Std Qtr	20.15
535484	9/21/2020 - 12/16/2020	mR/Std Qtr	16.82

## Sample Point 258 [ INDICATOR - W @ 9.84 miles ]

TLD RING TLD\_SPEC

Sample ID	Sample Dates	Nuclide	Activity
518442	12/12/2019 - 3/12/2020	mR/Std Qtr	20.01
524179	3/12/2020 - 6/11/2020	mR/Std Qtr	17.98
529320	6/11/2020 - 9/21/2020	mR/Std Qtr	16.52
535485	9/21/2020 - 12/16/2020	mR/Std Qtr	14.72

## Sample Point 264 [ INDICATOR - SE @ 4.32 miles ]

TLD RING TLD\_OUTER

Sample ID	Sample Dates	Nuclide	Activity
526500	3/12/2020 - 6/11/2020	mR/Std Qtr	27.73
532631	6/11/2020 - 9/21/2020	mR/Std Qtr	28.55

# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 264 [ INDICATOR - SE @ 4.32 miles ]

TLD RING TLD\_OUTER

Sample ID: 535486 Sample Dates: 9/21/2020 - 12/16/2020 Nuclide Activity  
mR/Std Qtr 24.76

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
514112	1/7/2020 - 1/7/2020		Mn-54	<2.60E+01	0.00E+00	2.60E+01
			Co-58	<2.41E+01	0.00E+00	2.41E+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	<6.11E+01	0.00E+00	6.11E+01
			Zr-95	<4.57E+01	0.00E+00	4.57E+01
			Nb-95	<2.50E+01	0.00E+00	2.50E+01
			I-131	<3.31E+01	0.00E+00	3.31E+01
			Cs-134	<2.85E+01	0.00E+00	2.85E+01
			Cs-137	<2.50E+01	0.00E+00	2.50E+01
			BaLa-140	<3.47E+01	0.00E+00	3.47E+01
			Be-7	2.39E+03	3.67E+02	3.00E+02
			K-40	3.74E+03	5.95E+02	3.65E+02

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
515441	2/4/2020 - 2/4/2020		Mn-54	<2.02E+01	0.00E+00	2.02E+01
			Co-58	<1.92E+01	0.00E+00	1.92E+01
			Fe-59	<4.49E+01	0.00E+00	4.49E+01
			Co-60	<2.31E+01	0.00E+00	2.31E+01
			Zn-65	<5.88E+01	0.00E+00	5.88E+01
			Zr-95	<3.24E+01	0.00E+00	3.24E+01
			Nb-95	<2.13E+01	0.00E+00	2.13E+01
			I-131	<2.10E+01	0.00E+00	2.10E+01
			Cs-134	<2.37E+01	0.00E+00	2.37E+01
			Cs-137	<1.72E+01	0.00E+00	1.72E+01
			BaLa-140	<2.39E+01	0.00E+00	2.39E+01
			Be-7	2.16E+03	3.14E+02	2.15E+02
			K-40	3.78E+03	5.64E+02	3.38E+02

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
516865	3/3/2020 - 3/3/2020		Mn-54	<2.59E+01	0.00E+00	2.59E+01
			Co-58	<2.28E+01	0.00E+00	2.28E+01
			Fe-59	<3.95E+01	0.00E+00	3.95E+01
			Co-60	<2.17E+01	0.00E+00	2.17E+01
			Zn-65	<5.85E+01	0.00E+00	5.85E+01
			Zr-95	<3.40E+01	0.00E+00	3.40E+01
			Nb-95	<1.95E+01	0.00E+00	1.95E+01
			I-131	<1.90E+01	0.00E+00	1.90E+01
			Cs-134	<3.53E+01	0.00E+00	3.53E+01
			Cs-137	<2.12E+01	0.00E+00	2.12E+01
			BaLa-140	<2.34E+01	0.00E+00	2.34E+01
			Be-7	1.48E+03	2.81E+02	2.72E+02
			K-40	4.22E+03	6.57E+02	4.10E+02

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
519374	4/7/2020 - 4/7/2020		Mn-54	<1.56E+01	0.00E+00	1.56E+01
			Co-58	<1.12E+01	0.00E+00	1.12E+01
			Fe-59	<2.84E+01	0.00E+00	2.84E+01
			Co-60	<1.52E+01	0.00E+00	1.52E+01
			Zn-65	<3.04E+01	0.00E+00	3.04E+01
			Zr-95	<2.17E+01	0.00E+00	2.17E+01
			Nb-95	<1.33E+01	0.00E+00	1.33E+01
			I-131	<1.04E+01	0.00E+00	1.04E+01
			Cs-134	<1.52E+01	0.00E+00	1.52E+01
			Cs-137	<1.25E+01	0.00E+00	1.25E+01
			BaLa-140	<1.46E+01	0.00E+00	1.46E+01
			Be-7	9.89E+02	1.68E+02	1.58E+02
			K-40	4.66E+03	5.24E+02	1.45E+02

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
521263	5/5/2020 - 5/5/2020		Mn-54	<1.29E+01	0.00E+00	1.29E+01

# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (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
521263	5/5/2020 - 5/5/2020	MIXEDBLV	Co-58	<1.11E+01	0.00E+00	1.11E+01
			Fe-59	<2.94E+01	0.00E+00	2.94E+01
			Co-60	<1.15E+01	0.00E+00	1.15E+01
			Zn-65	<2.94E+01	0.00E+00	2.94E+01
			Zr-95	<2.12E+01	0.00E+00	2.12E+01
			Nb-95	<1.21E+01	0.00E+00	1.21E+01
			I-131	<1.25E+01	0.00E+00	1.25E+01
			Cs-134	<1.35E+01	0.00E+00	1.35E+01
			Cs-137	<1.15E+01	0.00E+00	1.15E+01
			BaLa-140	<1.37E+01	0.00E+00	1.37E+01
			Be-7	7.57E+02	1.46E+02	1.56E+02
			K-40	3.94E+03	4.71E+02	1.75E+02
			522905	6/2/2020 - 6/2/2020	MIXEDBLV	Mn-54
Co-58	<9.67E+00	0.00E+00				9.67E+00
Fe-59	<2.43E+01	0.00E+00				2.43E+01
Co-60	<1.24E+01	0.00E+00				1.24E+01
Zn-65	<4.22E+01	0.00E+00				4.22E+01
Zr-95	<2.26E+01	0.00E+00				2.26E+01
Nb-95	<1.06E+01	0.00E+00				1.06E+01
I-131	<1.10E+01	0.00E+00				1.10E+01
Cs-134	<1.25E+01	0.00E+00				1.25E+01
Cs-137	<1.12E+01	0.00E+00				1.12E+01
BaLa-140	<1.72E+01	0.00E+00				1.72E+01
Be-7	1.51E+03	2.12E+02				1.47E+02
K-40	3.81E+03	4.72E+02				1.92E+02
524644	7/7/2020 - 7/7/2020	MIXEDBLV	Mn-54	<1.69E+01	0.00E+00	1.69E+01
			Co-58	<1.52E+01	0.00E+00	1.52E+01
			Fe-59	<3.48E+01	0.00E+00	3.48E+01
			Co-60	<1.42E+01	0.00E+00	1.42E+01
			Zn-65	<3.79E+01	0.00E+00	3.79E+01
			Zr-95	<3.01E+01	0.00E+00	3.01E+01
			Nb-95	<1.63E+01	0.00E+00	1.63E+01
			I-131	<1.56E+01	0.00E+00	1.56E+01
			Cs-134	<2.47E+01	0.00E+00	2.47E+01
			Cs-137	<1.45E+01	0.00E+00	1.45E+01
			BaLa-140	<2.00E+01	0.00E+00	2.00E+01
			Be-7	1.35E+03	2.23E+02	2.09E+02
			K-40	4.76E+03	5.87E+02	2.14E+02
527304	8/4/2020 - 8/4/2020	MIXEDBLV	Mn-54	<1.54E+01	0.00E+00	1.54E+01
			Co-58	<1.36E+01	0.00E+00	1.36E+01
			Fe-59	<2.83E+01	0.00E+00	2.83E+01
			Co-60	<1.63E+01	0.00E+00	1.63E+01
			Zn-65	<2.92E+01	0.00E+00	2.92E+01
			Zr-95	<2.50E+01	0.00E+00	2.50E+01
			Nb-95	<1.54E+01	0.00E+00	1.54E+01
			I-131	<1.48E+01	0.00E+00	1.48E+01
			Cs-134	<2.19E+01	0.00E+00	2.19E+01
			Cs-137	<1.28E+01	0.00E+00	1.28E+01
			BaLa-140	<1.78E+01	0.00E+00	1.78E+01
			Be-7	1.55E+03	2.24E+02	1.81E+02
			K-40	3.46E+03	4.55E+02	1.96E+02
529005	9/1/2020 - 9/1/2020	MIXEDBLV	Mn-54	<1.72E+01	0.00E+00	1.72E+01
			Co-58	<1.93E+01	0.00E+00	1.93E+01
			Fe-59	<3.13E+01	0.00E+00	3.13E+01
			Co-60	<1.59E+01	0.00E+00	1.59E+01
			Zn-65	<4.06E+01	0.00E+00	4.06E+01
			Zr-95	<3.05E+01	0.00E+00	3.05E+01
			Nb-95	<1.70E+01	0.00E+00	1.70E+01
			I-131	<1.53E+01	0.00E+00	1.53E+01

# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

Media Type: VEGETATION Concentration (Activity): pCi/kg

Sample Point 200 [ INDICATOR - NNE @ 0.63 miles ]

Sample ID:	529005	Sample Dates:	9/1/2020 - 9/1/2020	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
					Cs-134	<1.92E+01	0.00E+00	1.92E+01
					Cs-137	<1.79E+01	0.00E+00	1.79E+01
					BaLa-140	<1.59E+01	0.00E+00	1.59E+01
					Be-7	1.31E+03	2.18E+02	2.04E+02
					K-40	4.38E+03	5.73E+02	3.21E+02

Sample ID:	531189	Sample Dates:	10/6/2020 - 10/6/2020	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<1.76E+01	0.00E+00	1.76E+01
					Co-58	<1.28E+01	0.00E+00	1.28E+01
					Fe-59	<3.80E+01	0.00E+00	3.80E+01
					Co-60	<1.53E+01	0.00E+00	1.53E+01
					Zn-65	<3.53E+01	0.00E+00	3.53E+01
					Zr-95	<2.60E+01	0.00E+00	2.60E+01
					Nb-95	<1.44E+01	0.00E+00	1.44E+01
					I-131	<1.77E+01	0.00E+00	1.77E+01
					Cs-134	<1.71E+01	0.00E+00	1.71E+01
					Cs-137	<1.15E+01	0.00E+00	1.15E+01
					BaLa-140	<2.16E+01	0.00E+00	2.16E+01
					Be-7	1.27E+03	2.07E+02	1.77E+02
					K-40	5.30E+03	6.42E+02	2.80E+02

Sample ID:	533036	Sample Dates:	11/3/2020 - 11/3/2020	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<1.45E+01	0.00E+00	1.45E+01
					Co-58	<1.15E+01	0.00E+00	1.15E+01
					Fe-59	<2.61E+01	0.00E+00	2.61E+01
					Co-60	<1.10E+01	0.00E+00	1.10E+01
					Zn-65	<3.28E+01	0.00E+00	3.28E+01
					Zr-95	<2.43E+01	0.00E+00	2.43E+01
					Nb-95	<1.14E+01	0.00E+00	1.14E+01
					I-131	<1.13E+01	0.00E+00	1.13E+01
					Cs-134	<1.83E+01	0.00E+00	1.83E+01
					Cs-137	<1.35E+01	0.00E+00	1.35E+01
					BaLa-140	<1.28E+01	0.00E+00	1.28E+01
					Be-7	1.31E+03	1.97E+02	1.46E+02
					K-40	4.31E+03	5.25E+02	1.99E+02

Sample ID:	535159	Sample Dates:	12/1/2020 - 12/1/2020	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<1.89E+01	0.00E+00	1.89E+01
					Co-58	<1.74E+01	0.00E+00	1.74E+01
					Fe-59	<2.87E+01	0.00E+00	2.87E+01
					Co-60	<1.49E+01	0.00E+00	1.49E+01
					Zn-65	<4.13E+01	0.00E+00	4.13E+01
					Zr-95	<4.03E+01	0.00E+00	4.03E+01
					Nb-95	<1.79E+01	0.00E+00	1.79E+01
					I-131	<1.89E+01	0.00E+00	1.89E+01
					Cs-134	<2.37E+01	0.00E+00	2.37E+01
					Cs-137	<2.07E+01	0.00E+00	2.07E+01
					BaLa-140	<2.22E+01	0.00E+00	2.22E+01
					Be-7	1.79E+03	2.65E+02	1.97E+02
					K-40	3.39E+03	4.91E+02	2.81E+02

Sample Point 201 [ INDICATOR - NE @ 0.53 miles ]

Sample ID:	514113	Sample Dates:	1/7/2020 - 1/7/2020	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<2.05E+01	0.00E+00	2.05E+01
					Co-58	<2.28E+01	0.00E+00	2.28E+01
					Fe-59	<5.13E+01	0.00E+00	5.13E+01
					Co-60	<2.04E+01	0.00E+00	2.04E+01
					Zn-65	<6.54E+01	0.00E+00	6.54E+01
					Zr-95	<4.84E+01	0.00E+00	4.84E+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	<2.64E+01	0.00E+00	2.64E+01
					Cs-137	<3.09E+01	0.00E+00	3.09E+01
					BaLa-140	<3.40E+01	0.00E+00	3.40E+01
					Be-7	1.51E+03	3.26E+02	3.63E+02
					K-40	3.79E+03	6.33E+02	4.26E+02

# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (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
515442	2/4/2020 - 2/4/2020	MIXEDBLV	Mn-54	<2.63E+01	0.00E+00	2.63E+01
			Co-58	<2.48E+01	0.00E+00	2.48E+01
			Fe-59	<4.75E+01	0.00E+00	4.75E+01
			Co-60	<3.08E+01	0.00E+00	3.08E+01
			Zn-65	<6.09E+01	0.00E+00	6.09E+01
			Zr-95	<4.86E+01	0.00E+00	4.86E+01
			Nb-95	<2.69E+01	0.00E+00	2.69E+01
			I-131	<3.63E+01	0.00E+00	3.63E+01
			Cs-134	<3.30E+01	0.00E+00	3.30E+01
			Cs-137	<2.65E+01	0.00E+00	2.65E+01
			BaLa-140	<4.05E+01	0.00E+00	4.05E+01
			Be-7	1.27E+03	3.09E+02	3.57E+02
			K-40	2.82E+03	5.42E+02	3.89E+02
516866	3/3/2020 - 3/3/2020	MIXEDBLV	Mn-54	<2.42E+01	0.00E+00	2.42E+01
			Co-58	<2.97E+01	0.00E+00	2.97E+01
			Fe-59	<5.60E+01	0.00E+00	5.60E+01
			Co-60	<2.60E+01	0.00E+00	2.60E+01
			Zn-65	<7.13E+01	0.00E+00	7.13E+01
			Zr-95	<5.42E+01	0.00E+00	5.42E+01
			Nb-95	<3.08E+01	0.00E+00	3.08E+01
			I-131	<4.74E+01	0.00E+00	4.74E+01
			Cs-134	<3.79E+01	0.00E+00	3.79E+01
			Cs-137	<4.47E+01	0.00E+00	4.47E+01
			BaLa-140	<3.33E+01	0.00E+00	3.33E+01
			Be-7	5.68E+03	7.15E+02	4.02E+02
			K-40	5.55E+03	8.46E+02	5.92E+02
519375	4/7/2020 - 4/7/2020	MIXEDBLV	Mn-54	<1.18E+01	0.00E+00	1.18E+01
			Co-58	<1.14E+01	0.00E+00	1.14E+01
			Fe-59	<2.41E+01	0.00E+00	2.41E+01
			Co-60	<1.10E+01	0.00E+00	1.10E+01
			Zn-65	<2.87E+01	0.00E+00	2.87E+01
			Zr-95	<2.37E+01	0.00E+00	2.37E+01
			Nb-95	<1.28E+01	0.00E+00	1.28E+01
			I-131	<1.91E+01	0.00E+00	1.91E+01
			Cs-134	<1.33E+01	0.00E+00	1.33E+01
			Cs-137	2.17E+01	1.33E+01	2.07E+01
			BaLa-140	<1.87E+01	0.00E+00	1.87E+01
			Be-7	3.41E+02	9.54E+01	1.25E+02
			K-40	4.28E+03	4.53E+02	1.89E+02
521264	5/5/2020 - 5/5/2020	MIXEDBLV	Mn-54	<1.68E+01	0.00E+00	1.68E+01
			Co-58	<1.45E+01	0.00E+00	1.45E+01
			Fe-59	<2.89E+01	0.00E+00	2.89E+01
			Co-60	<1.66E+01	0.00E+00	1.66E+01
			Zn-65	<3.51E+01	0.00E+00	3.51E+01
			Zr-95	<2.20E+01	0.00E+00	2.20E+01
			Nb-95	<1.38E+01	0.00E+00	1.38E+01
			I-131	<1.47E+01	0.00E+00	1.47E+01
			Cs-134	<1.82E+01	0.00E+00	1.82E+01
			Cs-137	<2.00E+01	0.00E+00	2.00E+01
			BaLa-140	<1.60E+01	0.00E+00	1.60E+01
			Be-7	5.27E+02	1.49E+02	1.87E+02
			K-40	3.17E+03	4.40E+02	2.12E+02
522906	6/2/2020 - 6/2/2020	MIXEDBLV	Mn-54	<1.61E+01	0.00E+00	1.61E+01
			Co-58	<1.10E+01	0.00E+00	1.10E+01
			Fe-59	<3.15E+01	0.00E+00	3.15E+01
			Co-60	<1.22E+01	0.00E+00	1.22E+01
			Zn-65	<3.05E+01	0.00E+00	3.05E+01
			Zr-95	<2.40E+01	0.00E+00	2.40E+01
			Nb-95	<1.55E+01	0.00E+00	1.55E+01

# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (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
522906	6/2/2020 - 6/2/2020	MIXEDBLV	I-131	<1.48E+01	0.00E+00	1.48E+01
			Cs-134	<1.80E+01	0.00E+00	1.80E+01
			Cs-137	2.37E+01	1.54E+01	2.34E+01
			BaLa-140	<1.78E+01	0.00E+00	1.78E+01
			Be-7	1.83E+03	2.58E+02	1.88E+02
			K-40	3.26E+03	4.55E+02	2.11E+02
524645	7/7/2020 - 7/7/2020	MIXEDBLV	Mn-54	<1.72E+01	0.00E+00	1.72E+01
			Co-58	<1.38E+01	0.00E+00	1.38E+01
			Fe-59	<3.51E+01	0.00E+00	3.51E+01
			Co-60	<1.74E+01	0.00E+00	1.74E+01
			Zn-65	<4.13E+01	0.00E+00	4.13E+01
			Zr-95	<2.67E+01	0.00E+00	2.67E+01
			Nb-95	<1.55E+01	0.00E+00	1.55E+01
			I-131	<1.53E+01	0.00E+00	1.53E+01
			Cs-134	<1.77E+01	0.00E+00	1.77E+01
			Cs-137	<1.86E+01	0.00E+00	1.86E+01
			BaLa-140	<1.68E+01	0.00E+00	1.68E+01
			Be-7	6.14E+02	1.56E+02	1.88E+02
			K-40	3.48E+03	4.80E+02	3.03E+02
			527305	8/4/2020 - 8/4/2020	MIXEDBLV	Mn-54
Co-58	<1.34E+01	0.00E+00				1.34E+01
Fe-59	<3.13E+01	0.00E+00				3.13E+01
Co-60	<1.50E+01	0.00E+00				1.50E+01
Zn-65	<4.02E+01	0.00E+00				4.02E+01
Zr-95	<2.73E+01	0.00E+00				2.73E+01
Nb-95	<1.45E+01	0.00E+00				1.45E+01
I-131	<1.41E+01	0.00E+00				1.41E+01
Cs-134	<1.35E+01	0.00E+00				1.35E+01
Cs-137	3.59E+01	1.43E+01				1.79E+01
BaLa-140	<1.68E+01	0.00E+00				1.68E+01
Be-7	1.82E+03	2.62E+02				1.89E+02
K-40	3.26E+03	4.73E+02				2.86E+02
529006	9/1/2020 - 9/1/2020	MIXEDBLV				Mn-54
			Co-58	<2.21E+01	0.00E+00	2.21E+01
			Fe-59	<4.70E+01	0.00E+00	4.70E+01
			Co-60	<2.66E+01	0.00E+00	2.66E+01
			Zn-65	<4.01E+01	0.00E+00	4.01E+01
			Zr-95	<3.58E+01	0.00E+00	3.58E+01
			Nb-95	<2.58E+01	0.00E+00	2.58E+01
			I-131	<2.26E+01	0.00E+00	2.26E+01
			Cs-134	<2.88E+01	0.00E+00	2.88E+01
			Cs-137	<3.34E+01	0.00E+00	3.34E+01
			BaLa-140	<1.81E+01	0.00E+00	1.81E+01
			Be-7	3.02E+03	4.95E+02	5.61E+02
			K-40	4.56E+03	6.41E+02	3.53E+02
			531190	10/6/2020 - 10/6/2020	MIXEDBLV	Mn-54
Co-58	<1.55E+01	0.00E+00				1.55E+01
Fe-59	<2.64E+01	0.00E+00				2.64E+01
Co-60	<1.97E+01	0.00E+00				1.97E+01
Zn-65	<3.90E+01	0.00E+00				3.90E+01
Zr-95	<3.02E+01	0.00E+00				3.02E+01
Nb-95	<1.34E+01	0.00E+00				1.34E+01
I-131	<2.00E+01	0.00E+00				2.00E+01
Cs-134	<2.21E+01	0.00E+00				2.21E+01
Cs-137	1.52E+01	1.68E+01				2.72E+01
BaLa-140	<1.38E+01	0.00E+00				1.38E+01
Be-7	2.46E+03	3.24E+02				1.94E+02
K-40	2.63E+03	4.30E+02				3.15E+02

# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

Media Type: VEGETATION Concentration (Activity): pCi/kg

Sample Point 201 [ INDICATOR - NE @ 0.53 miles ]

Sample ID:	533037	Sample Dates:	11/3/2020 - 11/3/2020	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<1.75E+01	0.00E+00	1.75E+01
					Co-58	<1.77E+01	0.00E+00	1.77E+01
					Fe-59	<3.19E+01	0.00E+00	3.19E+01
					Co-60	<1.68E+01	0.00E+00	1.68E+01
					Zn-65	<3.70E+01	0.00E+00	3.70E+01
					Zr-95	<3.18E+01	0.00E+00	3.18E+01
					Nb-95	<1.40E+01	0.00E+00	1.40E+01
					I-131	<1.83E+01	0.00E+00	1.83E+01
					Cs-134	<2.23E+01	0.00E+00	2.23E+01
					Cs-137	2.63E+01	1.80E+01	2.75E+01
					BaLa-140	<2.15E+01	0.00E+00	2.15E+01
					Be-7	2.64E+03	3.45E+02	2.23E+02
					K-40	4.32E+03	5.63E+02	2.19E+02

Sample ID:	535160	Sample Dates:	12/1/2020 - 12/1/2020	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<1.42E+01	0.00E+00	1.42E+01
					Co-58	<1.42E+01	0.00E+00	1.42E+01
					Fe-59	<3.24E+01	0.00E+00	3.24E+01
					Co-60	<1.24E+01	0.00E+00	1.24E+01
					Zn-65	<3.61E+01	0.00E+00	3.61E+01
					Zr-95	<2.58E+01	0.00E+00	2.58E+01
					Nb-95	<9.97E+00	0.00E+00	9.97E+00
					I-131	<1.90E+01	0.00E+00	1.90E+01
					Cs-134	<1.79E+01	0.00E+00	1.79E+01
					Cs-137	<1.90E+01	0.00E+00	1.90E+01
					BaLa-140	<1.89E+01	0.00E+00	1.89E+01
					Be-7	2.74E+03	3.43E+02	2.18E+02
					K-40	4.07E+03	5.33E+02	2.39E+02

Sample Point 222 [ INDICATOR - N @ 0.71 miles ]

Sample ID:	514114	Sample Dates:	1/7/2020 - 1/7/2020	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<2.99E+01	0.00E+00	2.99E+01
					Co-58	<2.50E+01	0.00E+00	2.50E+01
					Fe-59	<4.93E+01	0.00E+00	4.93E+01
					Co-60	<3.26E+01	0.00E+00	3.26E+01
					Zn-65	<7.54E+01	0.00E+00	7.54E+01
					Zr-95	<5.27E+01	0.00E+00	5.27E+01
					Nb-95	<2.93E+01	0.00E+00	2.93E+01
					I-131	<2.63E+01	0.00E+00	2.63E+01
					Cs-134	<3.00E+01	0.00E+00	3.00E+01
					Cs-137	<2.73E+01	0.00E+00	2.73E+01
					BaLa-140	<2.69E+01	0.00E+00	2.69E+01
					Be-7	5.67E+02	2.29E+02	3.27E+02
					K-40	2.24E+03	4.80E+02	4.59E+02

Sample ID:	515443	Sample Dates:	2/4/2020 - 2/4/2020	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<1.82E+01	0.00E+00	1.82E+01
					Co-58	<1.72E+01	0.00E+00	1.72E+01
					Fe-59	<3.69E+01	0.00E+00	3.69E+01
					Co-60	<1.92E+01	0.00E+00	1.92E+01
					Zn-65	<3.98E+01	0.00E+00	3.98E+01
					Zr-95	<2.61E+01	0.00E+00	2.61E+01
					Nb-95	<1.57E+01	0.00E+00	1.57E+01
					I-131	<1.92E+01	0.00E+00	1.92E+01
					Cs-134	<2.20E+01	0.00E+00	2.20E+01
					Cs-137	<1.85E+01	0.00E+00	1.85E+01
					BaLa-140	<1.74E+01	0.00E+00	1.74E+01
					Be-7	2.13E+03	3.09E+02	2.24E+02
					K-40	3.73E+03	5.54E+02	3.19E+02

Sample ID:	516867	Sample Dates:	3/3/2020 - 3/3/2020	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<2.77E+01	0.00E+00	2.77E+01
					Co-58	<2.74E+01	0.00E+00	2.74E+01
					Fe-59	<4.91E+01	0.00E+00	4.91E+01
					Co-60	<3.18E+01	0.00E+00	3.18E+01
					Zn-65	<7.82E+01	0.00E+00	7.82E+01

# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (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
516867	3/3/2020 - 3/3/2020	MIXEDBLV	Zr-95	<5.17E+01	0.00E+00	5.17E+01
			Nb-95	<3.01E+01	0.00E+00	3.01E+01
			I-131	<2.73E+01	0.00E+00	2.73E+01
			Cs-134	<2.58E+01	0.00E+00	2.58E+01
			Cs-137	<2.61E+01	0.00E+00	2.61E+01
			BaLa-140	<3.07E+01	0.00E+00	3.07E+01
			Be-7	1.52E+03	3.30E+02	3.47E+02
			K-40	2.50E+03	5.72E+02	5.37E+02
519376	4/7/2020 - 4/7/2020	MIXEDBLV	Mn-54	<2.23E+01	0.00E+00	2.23E+01
			Co-58	<2.47E+01	0.00E+00	2.47E+01
			Fe-59	<4.66E+01	0.00E+00	4.66E+01
			Co-60	<2.18E+01	0.00E+00	2.18E+01
			Zn-65	<5.05E+01	0.00E+00	5.05E+01
			Zr-95	<3.10E+01	0.00E+00	3.10E+01
			Nb-95	<2.18E+01	0.00E+00	2.18E+01
			I-131	<1.88E+01	0.00E+00	1.88E+01
			Cs-134	<2.81E+01	0.00E+00	2.81E+01
			Cs-137	<2.78E+01	0.00E+00	2.78E+01
			BaLa-140	<2.52E+01	0.00E+00	2.52E+01
			Be-7	<1.87E+02	0.00E+00	1.87E+02
			K-40	3.71E+03	6.07E+02	3.07E+02
			521265	5/5/2020 - 5/5/2020	MIXEDBLV	Mn-54
Co-58	<1.21E+01	0.00E+00				1.21E+01
Fe-59	<2.42E+01	0.00E+00				2.42E+01
Co-60	<1.18E+01	0.00E+00				1.18E+01
Zn-65	<2.62E+01	0.00E+00				2.62E+01
Zr-95	<2.43E+01	0.00E+00				2.43E+01
Nb-95	<1.17E+01	0.00E+00				1.17E+01
I-131	<1.30E+01	0.00E+00				1.30E+01
Cs-134	<1.46E+01	0.00E+00				1.47E+01
Cs-137	<1.33E+01	0.00E+00				1.33E+01
BaLa-140	<1.01E+01	0.00E+00				1.01E+01
Be-7	9.77E+02	1.61E+02				1.45E+02
K-40	4.06E+03	4.85E+02				2.25E+02
522907	6/2/2020 - 6/2/2020	MIXEDBLV				Mn-54
			Co-58	<1.33E+01	0.00E+00	1.33E+01
			Fe-59	<2.56E+01	0.00E+00	2.56E+01
			Co-60	<1.76E+01	0.00E+00	1.76E+01
			Zn-65	<3.40E+01	0.00E+00	3.40E+01
			Zr-95	<1.74E+01	0.00E+00	1.74E+01
			Nb-95	<1.52E+01	0.00E+00	1.52E+01
			I-131	<1.44E+01	0.00E+00	1.44E+01
			Cs-134	<1.93E+01	0.00E+00	1.93E+01
			Cs-137	<1.50E+01	0.00E+00	1.50E+01
			BaLa-140	<1.88E+01	0.00E+00	1.88E+01
			Be-7	6.38E+02	1.48E+02	1.71E+02
			K-40	2.47E+03	3.53E+02	1.02E+02
			524646	7/7/2020 - 7/7/2020	MIXEDBLV	Mn-54
Co-58	<1.27E+01	0.00E+00				1.27E+01
Fe-59	<2.70E+01	0.00E+00				2.70E+01
Co-60	<2.18E+01	0.00E+00				2.18E+01
Zn-65	<4.14E+01	0.00E+00				4.14E+01
Zr-95	<2.93E+01	0.00E+00				2.93E+01
Nb-95	<1.38E+01	0.00E+00				1.38E+01
I-131	<1.51E+01	0.00E+00				1.51E+01
Cs-134	<2.22E+01	0.00E+00				2.22E+01
Cs-137	<1.78E+01	0.00E+00				1.78E+01
BaLa-140	<1.52E+01	0.00E+00				1.52E+01
Be-7	7.60E+02	1.63E+02				1.75E+02



# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (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
524646	7/7/2020 - 7/7/2020		K-40	3.49E+03	4.70E+02	1.95E+02
527306	8/4/2020 - 8/4/2020		Mn-54	<1.47E+01	0.00E+00	1.47E+01
			Co-58	<1.30E+01	0.00E+00	1.30E+01
			Fe-59	<2.48E+01	0.00E+00	2.48E+01
			Co-60	<1.48E+01	0.00E+00	1.48E+01
			Zn-65	<3.32E+01	0.00E+00	3.32E+01
			Zr-95	<2.92E+01	0.00E+00	2.92E+01
			Nb-95	<1.55E+01	0.00E+00	1.55E+01
			I-131	<1.31E+01	0.00E+00	1.31E+01
			Cs-134	<1.83E+01	0.00E+00	1.83E+01
			Cs-137	<1.72E+01	0.00E+00	1.72E+01
			BaLa-140	<1.17E+01	0.00E+00	1.17E+01
			Be-7	1.30E+03	2.08E+02	1.79E+02
			K-40	2.48E+03	3.72E+02	2.22E+02
529007	9/1/2020 - 9/1/2020		Mn-54	<1.58E+01	0.00E+00	1.58E+01
			Co-58	<1.45E+01	0.00E+00	1.45E+01
			Fe-59	<2.74E+01	0.00E+00	2.74E+01
			Co-60	<1.70E+01	0.00E+00	1.70E+01
			Zn-65	<3.31E+01	0.00E+00	3.31E+01
			Zr-95	<3.57E+01	0.00E+00	3.57E+01
			Nb-95	<1.72E+01	0.00E+00	1.72E+01
			I-131	<1.62E+01	0.00E+00	1.62E+01
			Cs-134	<1.92E+01	0.00E+00	1.92E+01
			Cs-137	<1.84E+01	0.00E+00	1.84E+01
			BaLa-140	<1.49E+01	0.00E+00	1.49E+01
			Be-7	1.31E+03	2.17E+02	1.90E+02
			K-40	2.76E+03	4.18E+02	2.45E+02
531191	10/6/2020 - 10/6/2020		Mn-54	<1.88E+01	0.00E+00	1.88E+01
			Co-58	<1.55E+01	0.00E+00	1.55E+01
			Fe-59	<2.93E+01	0.00E+00	2.93E+01
			Co-60	<1.75E+01	0.00E+00	1.75E+01
			Zn-65	<4.01E+01	0.00E+00	4.01E+01
			Zr-95	<3.40E+01	0.00E+00	3.40E+01
			Nb-95	<1.96E+01	0.00E+00	1.96E+01
			I-131	<2.05E+01	0.00E+00	2.05E+01
			Cs-134	<2.15E+01	0.00E+00	2.15E+01
			Cs-137	<2.02E+01	0.00E+00	2.02E+01
			BaLa-140	<2.33E+01	0.00E+00	2.33E+01
			Be-7	7.18E+02	1.86E+02	2.24E+02
			K-40	3.45E+03	4.94E+02	2.37E+02
533038	11/3/2020 - 11/3/2020		Mn-54	<1.28E+01	0.00E+00	1.28E+01
			Co-58	<1.60E+01	0.00E+00	1.60E+01
			Fe-59	<3.14E+01	0.00E+00	3.14E+01
			Co-60	<1.56E+01	0.00E+00	1.56E+01
			Zn-65	<3.57E+01	0.00E+00	3.57E+01
			Zr-95	<3.17E+01	0.00E+00	3.17E+01
			Nb-95	<1.43E+01	0.00E+00	1.43E+01
			I-131	<2.57E+01	0.00E+00	2.57E+01
			Cs-134	<1.90E+01	0.00E+00	1.90E+01
			Cs-137	<1.30E+01	0.00E+00	1.30E+01
			BaLa-140	<1.88E+01	0.00E+00	1.88E+01
			Be-7	1.63E+03	2.31E+02	1.69E+02
			K-40	2.76E+03	3.86E+02	2.18E+02
535161	12/1/2020 - 12/1/2020		Mn-54	<1.98E+01	0.00E+00	1.98E+01
			Co-58	<2.02E+01	0.00E+00	2.02E+01
			Fe-59	<3.51E+01	0.00E+00	3.51E+01
			Co-60	<1.89E+01	0.00E+00	1.89E+01

# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

Media Type: VEGETATION Concentration (Activity): pCi/kg

Sample Point 222 [ INDICATOR - N @ 0.71 miles ]

Sample ID:	535161	Sample Dates:	12/1/2020 - 12/1/2020	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
					Zn-65	<4.25E+01	0.00E+00	4.25E+01
					Zr-95	<2.54E+01	0.00E+00	2.54E+01
					Nb-95	<1.91E+01	0.00E+00	1.91E+01
					I-131	<1.71E+01	0.00E+00	1.71E+01
					Cs-134	<2.45E+01	0.00E+00	2.45E+01
					Cs-137	<1.70E+01	0.00E+00	1.70E+01
					BaLa-140	<2.33E+01	0.00E+00	2.33E+01
					Be-7	4.66E+02	1.56E+02	1.95E+02
					K-40	2.03E+03	3.74E+02	1.50E+02

Sample Point 226 [ INDICATOR - S @ 0.48 miles ]

Sample ID:	514115	Sample Dates:	1/7/2020 - 1/7/2020	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<2.10E+01	0.00E+00	2.10E+01
					Co-58	<1.69E+01	0.00E+00	1.69E+01
					Fe-59	<3.80E+01	0.00E+00	3.80E+01
					Co-60	<2.19E+01	0.00E+00	2.19E+01
					Zn-65	<4.32E+01	0.00E+00	4.32E+01
					Zr-95	<3.91E+01	0.00E+00	3.91E+01
					Nb-95	<1.88E+01	0.00E+00	1.88E+01
					I-131	<2.95E+01	0.00E+00	2.95E+01
					Cs-134	<2.83E+01	0.00E+00	2.83E+01
					Cs-137	<2.13E+01	0.00E+00	2.13E+01
					BaLa-140	<2.95E+01	0.00E+00	2.95E+01
					Be-7	1.16E+03	2.40E+02	2.49E+02
					K-40	4.33E+03	5.91E+02	2.06E+02

Sample ID:	515444	Sample Dates:	2/4/2020 - 2/4/2020	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<2.05E+01	0.00E+00	2.05E+01
					Co-58	<1.84E+01	0.00E+00	1.84E+01
					Fe-59	<3.90E+01	0.00E+00	3.90E+01
					Co-60	<2.12E+01	0.00E+00	2.12E+01
					Zn-65	<4.22E+01	0.00E+00	4.22E+01
					Zr-95	<3.54E+01	0.00E+00	3.54E+01
					Nb-95	<2.26E+01	0.00E+00	2.26E+01
					I-131	<1.64E+01	0.00E+00	1.64E+01
					Cs-134	<2.26E+01	0.00E+00	2.26E+01
					Cs-137	<2.13E+01	0.00E+00	2.13E+01
					BaLa-140	<2.20E+01	0.00E+00	2.20E+01
					Be-7	7.81E+02	1.78E+02	1.88E+02
					K-40	4.45E+03	5.91E+02	2.20E+02

Sample ID:	516868	Sample Dates:	3/3/2020 - 3/3/2020	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<1.22E+01	0.00E+00	1.22E+01
					Co-58	<1.30E+01	0.00E+00	1.30E+01
					Fe-59	<3.31E+01	0.00E+00	3.31E+01
					Co-60	<1.58E+01	0.00E+00	1.58E+01
					Zn-65	<3.68E+01	0.00E+00	3.68E+01
					Zr-95	<2.61E+01	0.00E+00	2.61E+01
					Nb-95	<1.62E+01	0.00E+00	1.62E+01
					I-131	<4.11E+01	0.00E+00	4.11E+01
					Cs-134	<1.35E+01	0.00E+00	1.35E+01
					Cs-137	<1.15E+01	0.00E+00	1.15E+01
					BaLa-140	<2.93E+01	0.00E+00	2.93E+01
					Be-7	5.47E+02	1.40E+02	1.76E+02
					K-40	5.56E+03	5.93E+02	2.19E+02

Sample ID:	519377	Sample Dates:	4/7/2020 - 4/7/2020	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<1.86E+01	0.00E+00	1.86E+01
					Co-58	<2.70E+01	0.00E+00	2.70E+01
					Fe-59	<3.87E+01	0.00E+00	3.87E+01
					Co-60	<2.06E+01	0.00E+00	2.06E+01
					Zn-65	<8.65E+01	0.00E+00	8.65E+01
					Zr-95	<4.40E+01	0.00E+00	4.40E+01
					Nb-95	<2.44E+01	0.00E+00	2.44E+01
					I-131	<2.04E+01	0.00E+00	2.04E+01
					Cs-134	<2.47E+01	0.00E+00	2.47E+01

# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (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
519377	4/7/2020 - 4/7/2020		Cs-137	<2.14E+01	0.00E+00	2.14E+01
			BaLa-140	<2.59E+01	0.00E+00	2.59E+01
			Be-7	4.96E+02	1.73E+02	1.99E+02
			K-40	6.16E+03	8.73E+02	4.04E+02
521266	5/5/2020 - 5/5/2020		Mn-54	<1.22E+01	0.00E+00	1.22E+01
			Co-58	<1.03E+01	0.00E+00	1.03E+01
			Fe-59	<2.41E+01	0.00E+00	2.41E+01
			Co-60	<1.23E+01	0.00E+00	1.23E+01
			Zn-65	<2.62E+01	0.00E+00	2.62E+01
			Zr-95	<2.10E+01	0.00E+00	2.10E+01
			Nb-95	<1.22E+01	0.00E+00	1.22E+01
			I-131	<1.25E+01	0.00E+00	1.25E+01
			Cs-134	<1.54E+01	0.00E+00	1.54E+01
			Cs-137	<1.22E+01	0.00E+00	1.22E+01
			BaLa-140	<1.22E+01	0.00E+00	1.22E+01
			Be-7	3.19E+02	1.06E+02	1.42E+02
			K-40	3.05E+03	3.92E+02	1.64E+02
522908	6/2/2020 - 6/2/2020		Mn-54	<1.27E+01	0.00E+00	1.27E+01
			Co-58	<9.93E+00	0.00E+00	9.93E+00
			Fe-59	<2.28E+01	0.00E+00	2.28E+01
			Co-60	<1.28E+01	0.00E+00	1.28E+01
			Zn-65	<2.62E+01	0.00E+00	2.62E+01
			Zr-95	<1.99E+01	0.00E+00	1.99E+01
			Nb-95	<1.07E+01	0.00E+00	1.07E+01
			I-131	<1.10E+01	0.00E+00	1.10E+01
			Cs-134	<1.31E+01	0.00E+00	1.31E+01
			Cs-137	<1.12E+01	0.00E+00	1.12E+01
			BaLa-140	<1.09E+01	0.00E+00	1.09E+01
			Be-7	7.04E+02	1.36E+02	1.61E+02
			K-40	5.99E+03	5.93E+02	1.85E+02
524647	7/7/2020 - 7/7/2020		Mn-54	<2.06E+01	0.00E+00	2.06E+01
			Co-58	<1.76E+01	0.00E+00	1.76E+01
			Fe-59	<4.26E+01	0.00E+00	4.26E+01
			Co-60	<2.31E+01	0.00E+00	2.31E+01
			Zn-65	<3.87E+01	0.00E+00	3.87E+01
			Zr-95	<3.72E+01	0.00E+00	3.72E+01
			Nb-95	<2.16E+01	0.00E+00	2.16E+01
			I-131	<1.93E+01	0.00E+00	1.93E+01
			Cs-134	<2.78E+01	0.00E+00	2.78E+01
			Cs-137	<2.28E+01	0.00E+00	2.28E+01
			BaLa-140	<2.95E+01	0.00E+00	2.95E+01
			Be-7	8.17E+02	1.95E+02	2.17E+02
			K-40	4.28E+03	6.18E+02	3.87E+02
527307	8/4/2020 - 8/4/2020		Mn-54	<1.67E+01	0.00E+00	1.67E+01
			Co-58	<1.65E+01	0.00E+00	1.65E+01
			Fe-59	<3.23E+01	0.00E+00	3.23E+01
			Co-60	<1.67E+01	0.00E+00	1.67E+01
			Zn-65	<4.01E+01	0.00E+00	4.01E+01
			Zr-95	<2.90E+01	0.00E+00	2.90E+01
			Nb-95	<1.54E+01	0.00E+00	1.54E+01
			I-131	<1.45E+01	0.00E+00	1.45E+01
			Cs-134	<2.01E+01	0.00E+00	2.01E+01
			Cs-137	<1.59E+01	0.00E+00	1.59E+01
			BaLa-140	<1.23E+01	0.00E+00	1.23E+01
			Be-7	8.43E+02	1.76E+02	1.97E+02
			K-40	5.55E+03	6.35E+02	1.90E+02
529008	9/1/2020 - 9/1/2020		Nuclide	Activity	2 Sigma Error	MDA
			Mn-54	<1.42E+01	0.00E+00	1.42E+01

# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

Media Type: VEGETATION Concentration (Activity): pCi/kg

Sample Point 226 [ INDICATOR - S @ 0.48 miles ]

Sample ID:	529008	Sample Dates:	9/1/2020 - 9/1/2020	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
					Co-58	<1.14E+01	0.00E+00	1.14E+01
					Fe-59	<2.25E+01	0.00E+00	2.25E+01
					Co-60	<1.45E+01	0.00E+00	1.45E+01
					Zn-65	<3.19E+01	0.00E+00	3.19E+01
					Zr-95	<2.15E+01	0.00E+00	2.15E+01
					Nb-95	<1.22E+01	0.00E+00	1.22E+01
					I-131	<1.26E+01	0.00E+00	1.26E+01
					Cs-134	<1.47E+01	0.00E+00	1.47E+01
					Cs-137	<1.14E+01	0.00E+00	1.14E+01
					BaLa-140	<1.43E+01	0.00E+00	1.43E+01
					Be-7	8.88E+02	1.65E+02	1.74E+02
					K-40	5.23E+03	6.02E+02	2.39E+02

Sample ID:	531192	Sample Dates:	10/6/2020 - 10/6/2020	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<1.59E+01	0.00E+00	1.59E+01
					Co-58	<1.46E+01	0.00E+00	1.46E+01
					Fe-59	<2.67E+01	0.00E+00	2.67E+01
					Co-60	<1.68E+01	0.00E+00	1.68E+01
					Zn-65	<3.21E+01	0.00E+00	3.21E+01
					Zr-95	<2.68E+01	0.00E+00	2.68E+01
					Nb-95	<1.40E+01	0.00E+00	1.40E+01
					I-131	<1.36E+01	0.00E+00	1.36E+01
					Cs-134	<2.11E+01	0.00E+00	2.11E+01
					Cs-137	<1.46E+01	0.00E+00	1.46E+01
					BaLa-140	<1.13E+01	0.00E+00	1.13E+01
					Be-7	1.30E+03	2.08E+02	1.85E+02
					K-40	5.99E+03	6.84E+02	2.62E+02

Sample ID:	533039	Sample Dates:	11/3/2020 - 11/3/2020	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<1.82E+01	0.00E+00	1.82E+01
					Co-58	<1.86E+01	0.00E+00	1.86E+01
					Fe-59	<3.38E+01	0.00E+00	3.38E+01
					Co-60	<2.06E+01	0.00E+00	2.06E+01
					Zn-65	<4.08E+01	0.00E+00	4.08E+01
					Zr-95	<3.01E+01	0.00E+00	3.01E+01
					Nb-95	<1.70E+01	0.00E+00	1.70E+01
					I-131	<1.70E+01	0.00E+00	1.70E+01
					Cs-134	<2.39E+01	0.00E+00	2.39E+01
					Cs-137	<1.88E+01	0.00E+00	1.88E+01
					BaLa-140	<1.91E+01	0.00E+00	1.91E+01
					Be-7	1.30E+03	2.21E+02	1.99E+02
					K-40	5.74E+03	6.66E+02	1.38E+02

Sample ID:	535162	Sample Dates:	12/1/2020 - 12/1/2020	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<1.52E+01	0.00E+00	1.52E+01
					Co-58	<1.58E+01	0.00E+00	1.58E+01
					Fe-59	<3.45E+01	0.00E+00	3.45E+01
					Co-60	<1.93E+01	0.00E+00	1.93E+01
					Zn-65	<2.91E+01	0.00E+00	2.91E+01
					Zr-95	<3.01E+01	0.00E+00	3.01E+01
					Nb-95	<1.60E+01	0.00E+00	1.60E+01
					I-131	<1.63E+01	0.00E+00	1.63E+01
					Cs-134	<2.21E+01	0.00E+00	2.21E+01
					Cs-137	<1.63E+01	0.00E+00	1.63E+01
					BaLa-140	<1.68E+01	0.00E+00	1.68E+01
					Be-7	1.21E+03	1.27E+02	1.45E+02
					K-40	5.15E+03	6.21E+02	2.45E+02

Sample Point 258 [ CONTROL - W @ 9.84 miles ]

Sample ID:	514116	Sample Dates:	1/7/2020 - 1/7/2020	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<2.10E+01	0.00E+00	2.10E+01
					Co-58	<1.86E+01	0.00E+00	1.86E+01
					Fe-59	<3.67E+01	0.00E+00	3.67E+01
					Co-60	<1.87E+01	0.00E+00	1.87E+01
					Zn-65	<4.13E+01	0.00E+00	4.13E+01
					Zr-95	<3.40E+01	0.00E+00	3.40E+01

# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (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
514116	1/7/2020 - 1/7/2020	MIXEDBLV	Nb-95	<1.75E+01	0.00E+00	1.75E+01
			I-131	<1.69E+01	0.00E+00	1.69E+01
			Cs-134	<2.80E+01	0.00E+00	2.80E+01
			Cs-137	<2.00E+01	0.00E+00	2.00E+01
			BaLa-140	<1.80E+01	0.00E+00	1.80E+01
			Be-7	6.38E+02	1.92E+02	2.62E+02
			K-40	4.48E+03	5.72E+02	3.18E+02
515445	2/4/2020 - 2/4/2020	MIXEDBLV	Mn-54	<1.87E+01	0.00E+00	1.87E+01
			Co-58	<1.95E+01	0.00E+00	1.95E+01
			Fe-59	<3.41E+01	0.00E+00	3.41E+01
			Co-60	<1.93E+01	0.00E+00	1.93E+01
			Zn-65	<4.53E+01	0.00E+00	4.53E+01
			Zr-95	<3.31E+01	0.00E+00	3.31E+01
			Nb-95	<2.07E+01	0.00E+00	2.07E+01
			I-131	<1.95E+01	0.00E+00	1.95E+01
			Cs-134	<2.36E+01	0.00E+00	2.36E+01
			Cs-137	<2.33E+01	0.00E+00	2.33E+01
			BaLa-140	<2.03E+01	0.00E+00	2.03E+01
			Be-7	7.97E+02	1.89E+02	2.15E+02
			K-40	4.00E+03	5.84E+02	4.06E+02
516869	3/3/2020 - 3/3/2020	MIXEDBLV	Mn-54	<2.54E+01	0.00E+00	2.54E+01
			Co-58	<2.42E+01	0.00E+00	2.42E+01
			Fe-59	<3.98E+01	0.00E+00	3.98E+01
			Co-60	<2.67E+01	0.00E+00	2.67E+01
			Zn-65	<5.33E+01	0.00E+00	5.33E+01
			Zr-95	<4.83E+01	0.00E+00	4.83E+01
			Nb-95	<2.28E+01	0.00E+00	2.28E+01
			I-131	<2.09E+01	0.00E+00	2.09E+01
			Cs-134	<3.07E+01	0.00E+00	3.07E+01
			Cs-137	<2.69E+01	0.00E+00	2.69E+01
			BaLa-140	<2.03E+01	0.00E+00	2.03E+01
			Be-7	6.04E+02	1.92E+02	2.44E+02
			K-40	4.88E+03	6.93E+02	3.60E+02
519378	4/7/2020 - 4/7/2020	MIXEDBLV	Mn-54	<1.30E+01	0.00E+00	1.30E+01
			Co-58	<1.44E+01	0.00E+00	1.44E+01
			Fe-59	<2.92E+01	0.00E+00	2.92E+01
			Co-60	<1.77E+01	0.00E+00	1.77E+01
			Zn-65	<3.67E+01	0.00E+00	3.67E+01
			Zr-95	<2.23E+01	0.00E+00	2.23E+01
			Nb-95	<1.28E+01	0.00E+00	1.28E+01
			I-131	<1.32E+01	0.00E+00	1.32E+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	<1.80E+01	0.00E+00	1.80E+01
			Be-7	3.37E+02	1.32E+02	1.85E+02
			K-40	3.88E+03	5.07E+02	2.18E+02
521267	5/5/2020 - 5/5/2020	MIXEDBLV	Mn-54	<1.45E+01	0.00E+00	1.45E+01
			Co-58	<1.30E+01	0.00E+00	1.30E+01
			Fe-59	<2.58E+01	0.00E+00	2.58E+01
			Co-60	<1.78E+01	0.00E+00	1.78E+01
			Zn-65	<2.45E+01	0.00E+00	2.45E+01
			Zr-95	<2.01E+01	0.00E+00	2.01E+01
			Nb-95	<1.15E+01	0.00E+00	1.15E+01
			I-131	<1.26E+01	0.00E+00	1.26E+01
			Cs-134	<1.46E+01	0.00E+00	1.46E+01
			Cs-137	<1.31E+01	0.00E+00	1.31E+01
			BaLa-140	<1.24E+01	0.00E+00	1.24E+01
			Be-7	3.70E+02	1.05E+02	1.27E+02
			K-40	2.93E+03	3.97E+02	1.66E+02

# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (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
522909	6/2/2020 - 6/2/2020	MIXEDBLV	Mn-54	<2.08E+01	0.00E+00	2.08E+01
			Co-58	<1.49E+01	0.00E+00	1.49E+01
			Fe-59	<3.49E+01	0.00E+00	3.49E+01
			Co-60	<1.86E+01	0.00E+00	1.86E+01
			Zn-65	<3.82E+01	0.00E+00	3.82E+01
			Zr-95	<3.42E+01	0.00E+00	3.42E+01
			Nb-95	<1.78E+01	0.00E+00	1.78E+01
			I-131	<1.62E+01	0.00E+00	1.62E+01
			Cs-134	<2.27E+01	0.00E+00	2.27E+01
			Cs-137	<1.75E+01	0.00E+00	1.75E+01
			BaLa-140	<1.72E+01	0.00E+00	1.72E+01
			Be-7	9.98E+02	2.01E+02	2.13E+02
			K-40	3.34E+03	4.79E+02	2.58E+02
524648	7/7/2020 - 7/7/2020	MIXEDBLV	Mn-54	<1.37E+01	0.00E+00	1.37E+01
			Co-58	<1.15E+01	0.00E+00	1.15E+01
			Fe-59	<2.62E+01	0.00E+00	2.62E+01
			Co-60	<1.34E+01	0.00E+00	1.34E+01
			Zn-65	<2.70E+01	0.00E+00	2.70E+01
			Zr-95	<2.06E+01	0.00E+00	2.06E+01
			Nb-95	<1.33E+01	0.00E+00	1.33E+01
			I-131	<1.47E+01	0.00E+00	1.47E+01
			Cs-134	<1.97E+01	0.00E+00	1.97E+01
			Cs-137	<1.54E+01	0.00E+00	1.54E+01
			BaLa-140	<1.57E+01	0.00E+00	1.57E+01
			Be-7	1.67E+03	2.36E+02	1.57E+02
			K-40	3.23E+03	4.31E+02	1.17E+02
527308	8/4/2020 - 8/4/2020	MIXEDBLV	Mn-54	<1.37E+01	0.00E+00	1.37E+01
			Co-58	<1.62E+01	0.00E+00	1.62E+01
			Fe-59	<2.71E+01	0.00E+00	2.71E+01
			Co-60	<1.95E+01	0.00E+00	1.95E+01
			Zn-65	<3.04E+01	0.00E+00	3.04E+01
			Zr-95	<3.06E+01	0.00E+00	3.06E+01
			Nb-95	<1.46E+01	0.00E+00	1.46E+01
			I-131	<1.49E+01	0.00E+00	1.49E+01
			Cs-134	<1.92E+01	0.00E+00	1.92E+01
			Cs-137	<1.68E+01	0.00E+00	1.68E+01
			BaLa-140	<1.34E+01	0.00E+00	1.34E+01
			Be-7	1.99E+03	2.75E+02	2.10E+02
			K-40	2.28E+03	3.68E+02	2.73E+02
529009	9/1/2020 - 9/1/2020	MIXEDBLV	Mn-54	<1.66E+01	0.00E+00	1.66E+01
			Co-58	<1.88E+01	0.00E+00	1.88E+01
			Fe-59	<2.83E+01	0.00E+00	2.83E+01
			Co-60	<2.35E+01	0.00E+00	2.35E+01
			Zn-65	<4.09E+01	0.00E+00	4.09E+01
			Zr-95	<3.66E+01	0.00E+00	3.66E+01
			Nb-95	<1.90E+01	0.00E+00	1.90E+01
			I-131	<2.02E+01	0.00E+00	2.02E+01
			Cs-134	<2.94E+01	0.00E+00	2.94E+01
			Cs-137	<1.81E+01	0.00E+00	1.81E+01
			BaLa-140	<2.33E+01	0.00E+00	2.33E+01
			Be-7	2.22E+03	3.15E+02	2.39E+02
			K-40	3.41E+03	5.06E+02	3.14E+02
531193	10/6/2020 - 10/6/2020	MIXEDBLV	Mn-54	<1.62E+01	0.00E+00	1.62E+01
			Co-58	<1.09E+01	0.00E+00	1.09E+01
			Fe-59	<1.90E+01	0.00E+00	1.90E+01
			Co-60	<1.42E+01	0.00E+00	1.42E+01
			Zn-65	<2.20E+01	0.00E+00	2.20E+01
			Zr-95	<2.40E+01	0.00E+00	2.40E+01
Nb-95	<1.26E+01	0.00E+00	1.26E+01			

# CATAWBA Radiological Environmental Monitoring Analysis Report - 2020 (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
531193	10/6/2020 - 10/6/2020		I-131	<1.40E+01	0.00E+00	1.40E+01
			Cs-134	<1.67E+01	0.00E+00	1.67E+01
			Cs-137	<1.29E+01	0.00E+00	1.29E+01
			BaLa-140	<1.39E+01	0.00E+00	1.39E+01
			Be-7	9.59E+02	1.55E+02	1.14E+02
			K-40	2.17E+03	3.24E+02	1.77E+02
533040	11/3/2020 - 11/3/2020		Mn-54	<1.99E+01	0.00E+00	1.99E+01
			Co-58	<2.29E+01	0.00E+00	2.29E+01
			Fe-59	<4.39E+01	0.00E+00	4.39E+01
			Co-60	<1.94E+01	0.00E+00	1.94E+01
			Zn-65	<4.67E+01	0.00E+00	4.67E+01
			Zr-95	<3.82E+01	0.00E+00	3.82E+01
			Nb-95	<2.17E+01	0.00E+00	2.17E+01
			I-131	<1.90E+01	0.00E+00	1.90E+01
			Cs-134	<3.17E+01	0.00E+00	3.17E+01
			Cs-137	<2.47E+01	0.00E+00	2.47E+01
			BaLa-140	<2.35E+01	0.00E+00	2.35E+01
			Be-7	2.12E+03	3.29E+02	2.81E+02
			K-40	2.59E+03	4.69E+02	3.71E+02
			535163	12/1/2020 - 12/1/2020		Mn-54
Co-58	<1.60E+01	0.00E+00				1.60E+01
Fe-59	<3.19E+01	0.00E+00				3.19E+01
Co-60	<1.47E+01	0.00E+00				1.47E+01
Zn-65	<3.82E+01	0.00E+00				3.82E+01
Zr-95	<3.70E+01	0.00E+00				3.70E+01
Nb-95	<1.30E+01	0.00E+00				1.30E+01
I-131	<2.09E+01	0.00E+00				2.09E+01
Cs-134	<2.48E+01	0.00E+00				2.48E+01
Cs-137	<1.97E+01	0.00E+00				1.97E+01
BaLa-140	<1.11E+01	0.00E+00				1.11E+01
Be-7	2.99E+03	3.73E+02				2.04E+02
K-40	4.51E+03	5.99E+02				2.46E+02

**APPENDIX F**

**ERRATA TO  
PREVIOUS REPORTS**

**2020**



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# APPENDIX F

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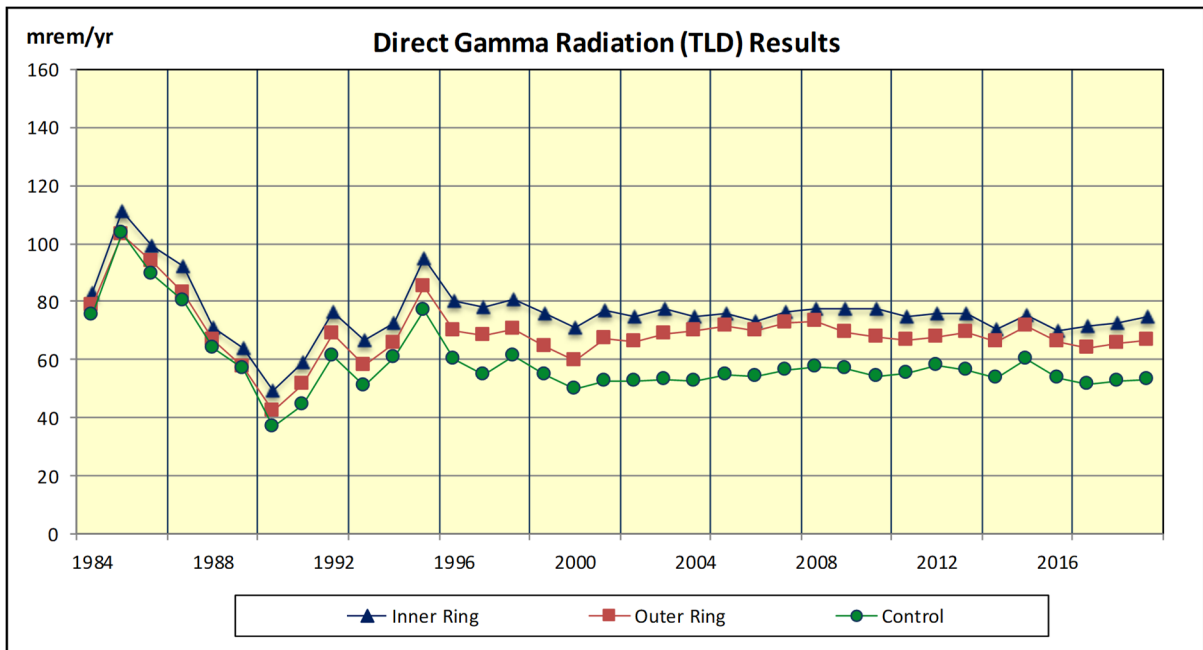
## ERRATA TO THE 2019 CNS AREOR

During the compilation of the 2020 CNS Annual Radiological Environmental Operating Report (AREOR) it was discovered that Figure 3.9 (Direct Gamma Radiation (TLD) Results) and Table 3.9 (Direct Gamma Radiation (TLD) Results) did not display 2019 results in mrem/year as indicated for the Inner Ring, Outer Ring, and Control TLDS. The Data for the 2019 TLDs was displayed in mR/year. To convert mR/year to mrem/year, data (n) is multiplied by 0.95.

The corrected 2019 data is as follows and is included in Figure 3.9 and Table 3.9 below: Inner Ring 7.47E1, Outer Ring 6.70E1, Control TLDs 5.34E1.

This error was self-identified (NCR # 02375510).

Figure 3.9



**Table 3.9 Direct Gamma Radiation (TLD) Results<sup>(1)</sup>**

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	7.47E1	6.70E1	5.34E1

\* Preoperational Data

(1) 2014 AREOR, tabular results converted from mR/yr to mrem/yr (n \* 0.95)

Enclosure 3  
RA-21-0050

**ENCLOSURE 3: [HNP Annual Radiological Environmental Operating Report](#)**



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# **ANNUAL RADIOLOGICAL ENVIRONMENTAL OPERATING REPORT**

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**DUKE ENERGY PROGRESS, LLC**

**SHEARON HARRIS NUCLEAR POWER PLANT**

**2020**



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## 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
CM	Community
DRR	Document Revision Request
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 <sup>3</sup>	picocurie per cubic meter
Q	Quarterly
REMP	Radiological Environmental Monitoring Program
SA	Semiannually
SB	Site Boundary
SM	Semimonthly
SW	Surface Water
TECH SPECS	Technical Specifications
TLD	Thermoluminescent Dosimeter
UFSAR	Updated Final Safety Analysis Report
W	Weekly

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# 1.0 EXECUTIVE SUMMARY

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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 2020.

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 two hundred and ninety samples were analyzed comprising one thousand three hundred and sixty-five test results in order to compile data for the 2020 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 2020 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, thus presenting no significant impact on the environment or public health and safety.



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## 2.0 INTRODUCTION

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### 2.1 SITE DESCRIPTION AND SAMPLE LOCATIONS

Duke Energy Progress, LLC (Duke Energy), Shearon Harris Nuclear Power Plant, is a single-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, 2.1-3, and 2.1-4 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 and 2.1-4 comprises all sample locations within a 10-mile radius of HNP.

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.

### 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),  
 $\chi_i$  = 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

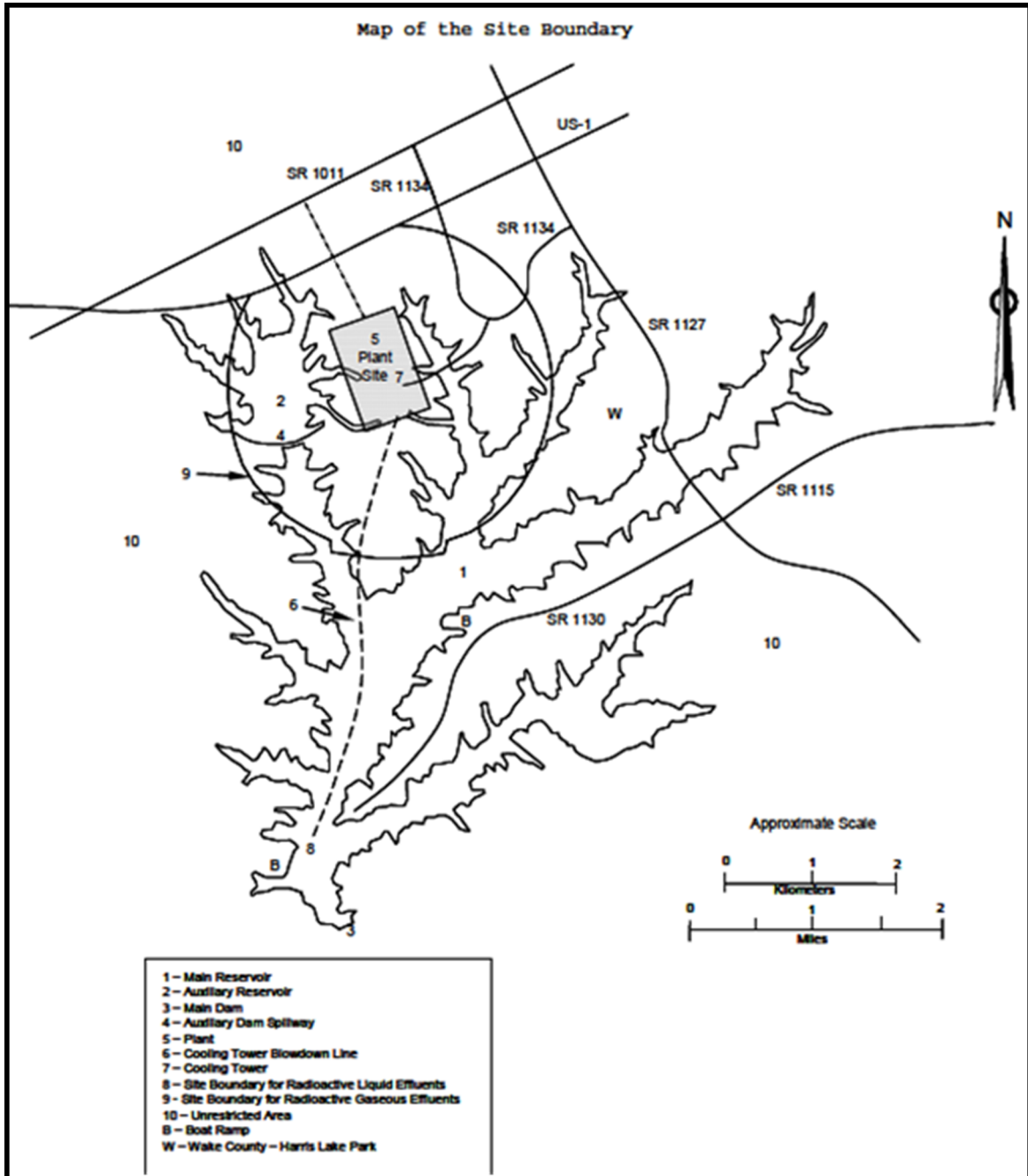
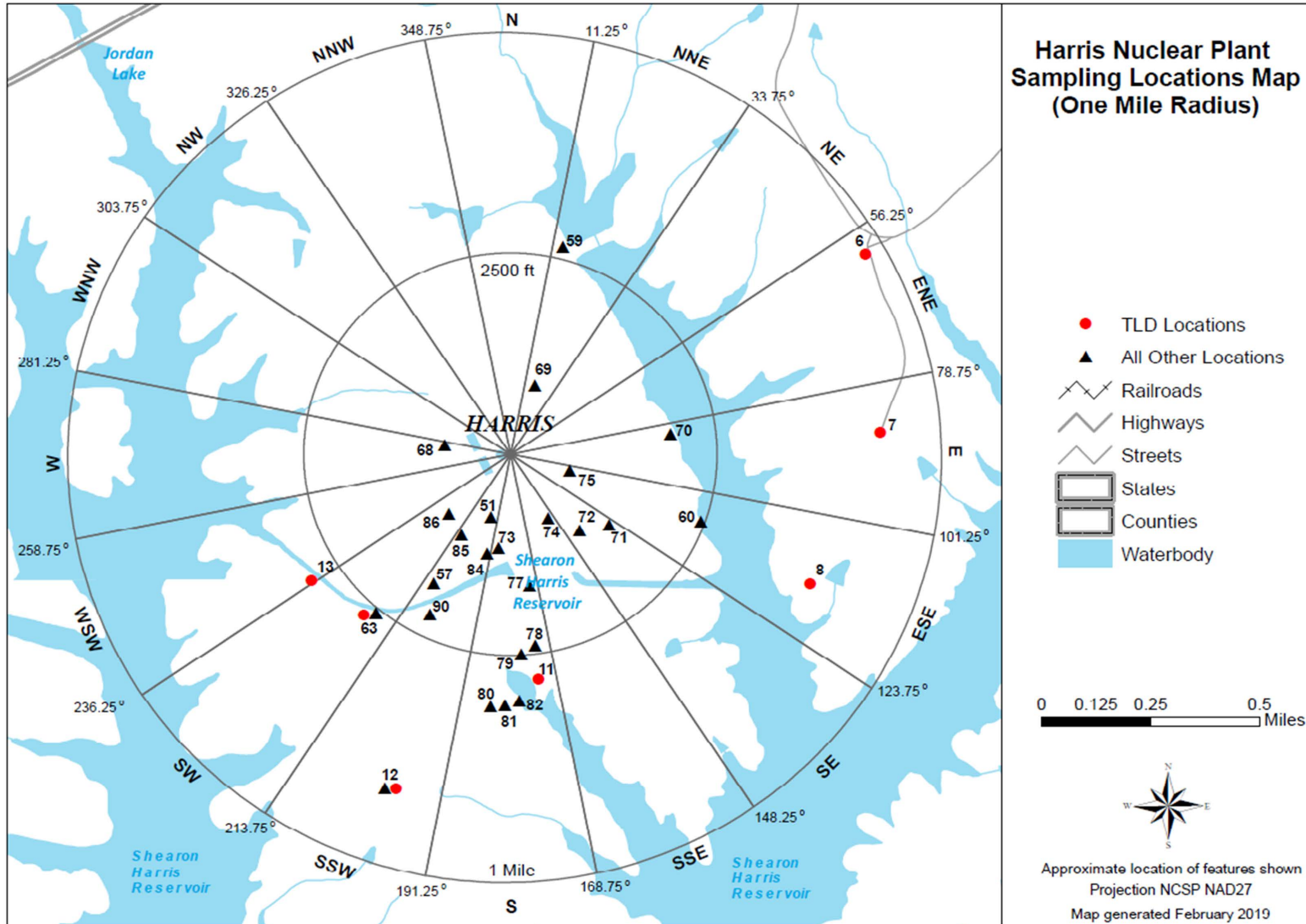
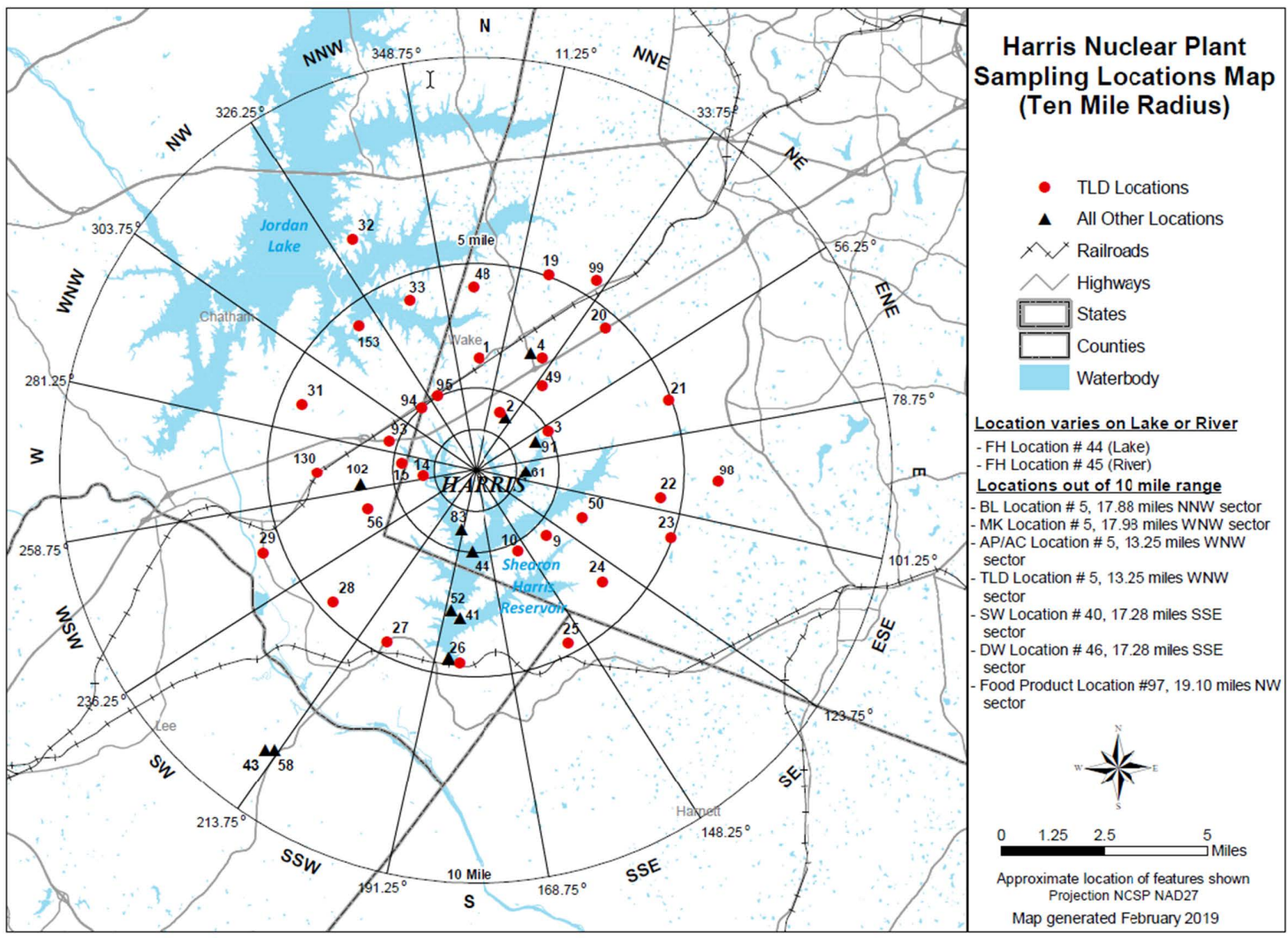


Figure 2.1-2

Harris Nuclear Plant Sampling Locations - One Mile Radius

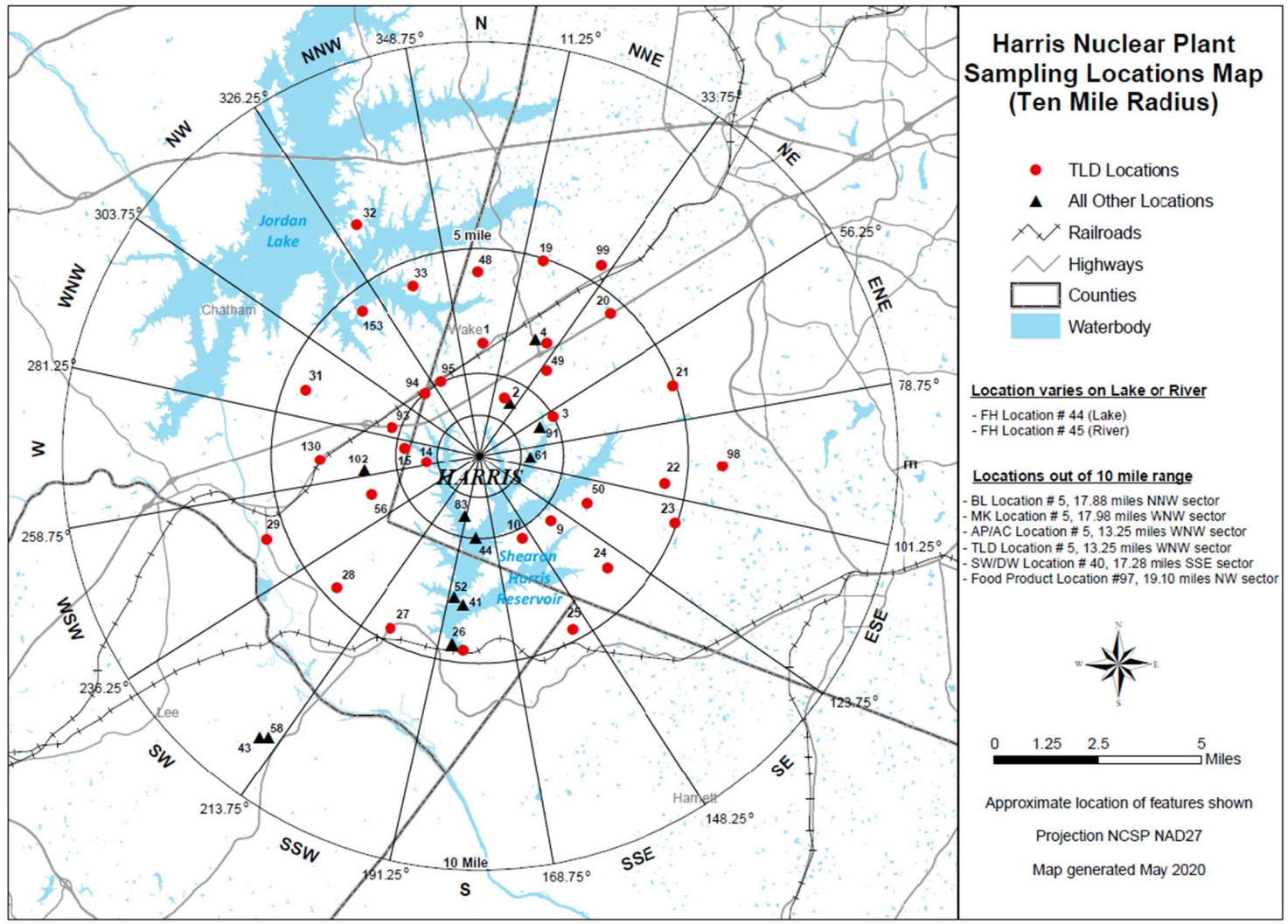


**Figure 2.1-3  
Harris Nuclear Plant Sampling Locations - Ten Mile Radius (HNP ODCM Rev. 028)**



**TLD Location #19 is located in the yard of a Private Residence (0.6 mi. E on SR 1142 from Intersection of SR 1141, NNE Sector, 5.0 mi. from site) in the current revision of the HNP ODCM.**

**Figure 2.1-4  
Harris Nuclear Plant Sampling Locations - Ten Mile Radius (Proposed ODCM Change, DRR# 02326048)**



**On 15APR2020 TLD Location #19 was moved from the yard of a Private Residence to a Power Pole (Humie Olive Rd, NNE Sector, 4.95 mi. from site). DRR # 02326048 was initiated to change the HNP ODCM.**



**TABLE 2.1-A**

**HARRIS NUCLEAR PLANT**

**RADIOLOGICAL MONITORING PROGRAM SAMPLING LOCATIONS**

Table 2.1-A Codes									
A	Annual	BW	BiWeekly	FP	Food Product	Q	Quarterly	SS	Sediment Shoreline
AC	Air Cartridge	C	Control <sup>(5)</sup>	GW	Ground Water	SA	Semiannually	SW	Surface Water
AP	Air Particulate	CM	Community	I	Indicator	SB	Site Boundary	W	Weekly
AV	Aquatic Vegetation	DW	Drinking Water	M	Monthly	SBT	Sediment Bottom		
BLV	Broadleaf Vegetation	FI	Fish	MK	Milk	SM	Semimonthly		

Site#	Type	Location Description <sup>(4)</sup>	AC & AP	SW	DW	SS	SBT	AV	FP <sup>(1)</sup>	Fish (FI)	Milk (Mk)	BLV <sup>(2)</sup>	GW
2	I	1.4 mi. S on SR 1134 from SR 1011 intersection, NNE sector, 1.4 mi. from site.	W/S/ SB										
4	I	0.7 mi. N on SR 1127 from intersection with US, NNE sector, 3.1 mi. from site	W/Q/ CM										
5	C	Pittsboro, WNW sector, >12 mi. from site	W/Q								SM/M	M <sup>(2)(6)</sup>	
12	I	SHNPP Site, SSW sector, 0.9 mi. from site.										M <sup>(2)</sup>	
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								
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/ SB									M <sup>(2)</sup>	
68	I	SHNPP Site (LP-6), N. of Old Steam Generator building, W sector, 0.2 mi. of site.											Q

Site#	Type	Location Description <sup>(4)</sup>	AC & AP	SW	DW	SS	SB	AV	FP <sup>(1)</sup>	Fish (FI)	Milk (Mk)	BLV <sup>(2)</sup>	GW
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, S 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	I	SHNPP Site (BD-MW16), Along the Cooling Tower Blowdown Line, S sector, 1.6 mi. from site.											Q
84	I	SHNPP Site (MW-14), N. of Emergency Service Water Screening Structure, SSW sector, 0.2 mi. from site.											Q
85	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/ SB										
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 <sup>(1)</sup>				
102	I	Goat Farm, W sector, 2.82 mi. from site.									SM <sup>(3)</sup>		

(1) When Available, during Harvest/Growing Season

(2) Broadleaf vegetation refers to any natural vegetation, plants, shrubs, or trees that have wide, flat leaves or leaves with veins which branch from a main vein. Typically leaves are only present during the growing season May through October.

(3) Goat milk is seasonally available. Typically, goats lactate during the spring, summer, and early fall (April through October).

(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) Control sample stations (or background stations) are located in areas that are unaffected by plant operations. All other stations that have the potential to be affected by radioactive emissions from plant operations are considered indicator locations.

(6) BLV is sampled in the NNW Sector but is designated as Location 5 in the HNP ODCM as Pittsboro, >12 mi. from site.

**TABLE 2.1-B**

**HARRIS NUCLEAR PLANT**

**RADIOLOGICAL MONITORING PROGRAM SAMPLING LOCATIONS (TLD SITES)**

Table 2.1-B Codes			
C	Control	OR	Outer Ring
IR	Inner Ring	SI	Special Interest

Site #	Measure Type	Location <sup>(1) (3)</sup>	Distance (miles)	Sector	Site #	Measure Type	Location <sup>(1) (3)</sup>	Distance (miles)	Sector
1	IR	0.1 mi. on SR 1134 from SR 1011 intersection	2.6	N	25	OR	0.2 mi. W on SR 1402 from intersection of SR 1400.	4.7	SSE
2	IR	1.4 mi. S on SR 1134 from SR 1011 intersection	1.4	NNE	26	OR	Harris lake Spillway	4.7	S
3	SI	HE&EC Visitor Center (Population Center)	1.9	ENE	27	OR	NC 42 @ Buckhorn United Methodist Church	4.8	SSW
4	SI	New Hill (Population Center), 0.7 mi. N on SR 1127 from intersection with US 1	3.1	NNE	28	OR	0.6mi. on SR 1924 from intersection of SR 1916.	4.8	SW
5	C	Pittsboro	13.3	WNW	29	OR	Parking Lot of Arclin, Inc. on SR 1916.	5.7	WSW
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	56	IR	SR 1912 at intersection of SR 1912 and SR 1924.	3.0	WSW
13	IR	SHNPP site	0.7	WSW	63	IR	SHNPP site	0.6	SW
14	IR	SHNPP site. Access road to aux. reservoir.	1.5	W	93	IR	SR 1911	2.2	WNW
15	IR	SR 1911.	2.0	W	94	IR	Old US HWY 1	2.0	NW
19 <sup>(2)</sup>	OR	0.6 mi. E on SR 1142 from intersection of SR 1141.	5.0	NNE	95	IR	Bonsal Rd.	2.0	NNW
20	OR	US 1 at intersection SR 1149.	4.5	NE	98	SI	Holly Springs School Complex (Population Center)	5.9	E
21	OR	1.2 mi. W on SR 1152 from intersection SR 1153.	4.8	ENE	99	SI	Friendship High School (Population Center)	5.5	NNE
22	OR	Formerly Ragan's Dairy on SR 1115.	4.3	E	130	OR	Old US HWY 1	3.9	W
23	OR	Intersection of SR 1127 and SR 1116.	4.8	ESE	153	OR	Beaver Creek Road	4.5	NW
24	OR	Sweet Springs Church on SR 1116.	4.0	SE					

(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) Location listed reflects current revision of HNP ODCM. TLD #19 was moved minimally, DRR #02326048 initiated to document change.

(3) One or more instruments, such as a pressurized ion chamber, for measuring and recording dose rate continuously may be used in place of, or in addition to, integrating dosimeters. For the purposes of this table, a thermoluminescent dosimeter (TLD) is considered to be one phosphor; two or more phosphors in a packet are considered as two or more dosimeters. Film badges shall not be used as dosimeters for measuring direct radiation. (The 40 stations is not an absolute number. The number of direct radiation monitoring stations may be reduced according to geographical limitations; e.g., at an ocean site, some sectors will be over water so that the number of dosimeters may be reduced accordingly. The frequency of analysis or readout for TLD systems will depend upon the characteristics of the specific system used and should be selected to obtain optimum dose information within minimal fading.)

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

Analysis	Water (pCi/liter)	Airborne Particulate or Gases (pCi/m <sup>3</sup> )	Fish (pCi/kg-wet)	Milk (pCi/liter)	Food Products (pCi/kg-wet)
H-3	20,000 <sup>(a)</sup>				
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 <sup>(b)</sup>	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 <sup>(c)</sup>	Tritium	Low Level I-131	Gross Beta	TLD
Air Radioiodine	Weekly	X				
Air Particulate	Weekly				(d)	
	Quarterly	X				
Direct Radiation	Quarterly					X
Surface Water	Monthly Composite <sup>(f) (h)</sup>	X	X			
Drinking Water	Monthly Composite <sup>(c) (f) (i)</sup>	X	X		X	
Ground Water	Quarterly <sup>(g)</sup>	X	X			
Bottom Sediment	Semiannually	X				
Shoreline Sediment	Semiannually	X				
Milk	Semimonthly/Monthly <sup>(j) (k)</sup>	X		X		
Fish	Semiannually	X				
Aquatic Vegetation	Annually	X				
Broadleaf Vegetation	Monthly <sup>(a)</sup>	X				
Food Products	Monthly <sup>(b) (l)</sup>	X				

- (a) During growing season per ODCM - May through October
- (b) If harvest occurs more than once a year, sampling shall be performed during each discrete harvest. If harvest occurs continuously, sampling shall be monthly.
- (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.
- (d) Airborne particulate sample filters shall be analyzed for gross beta radioactivity 24 hours or more after sampling to allow for radon and thoron daughter decay. If gross beta activity in air particulate samples is greater than 10 times the yearly mean of control samples, gamma isotopic analysis shall be performed on the individual samples.
- (e) Gamma isotopic analysis means the identification and quantification of gamma emitting radionuclides that may be attributable to the effluents from the facility.
- (f) A composite sample is one in which the rate at which the liquid sampled is uniform and in which the method of sampling employed results in a specimen that is representative of the time-averages concentration at the location being sampled. In this program composite sample aliquots shall be collected at time intervals that are very short (e.g. hourly) relative to the composite period (e.g. monthly) in order to assure obtaining a representative sample.
- (g) Groundwater samples shall be taken when the source is tapped for drinking or irrigation purposes in areas where the hydraulic gradient or recharge properties are suitable for contamination. None of the previously identified locations have been used for drinking water since pre-operational days of Harris Nuclear Project nor have these wells ever been used for irrigation purposes. These wells were abandoned for drinking water purposes prior to plant operations. Since that time, these wells have been used to monitor the hydraulic gradient or gradient properties for the Harris Site and for the operational Radiological Environmental Monitoring Program.
- (h) The “upstream sample” shall be taken at a distance beyond significant influence of the discharge. The “downstream” sample shall be taken in an area beyond the but near the mixing zone. “Upstream” samples in an estuary must be taken far enough upstream to be beyond the plant influence. Salt water shall be sampled only when the receiving water is utilized for recreational activities.
- (i) The dose shall be calculated for the maximum organ and age group, using the methodology and parameters in the ODCM.
- (j) If milk animals are not present or unavailable for sampling at indicator locations, sampling of BLV can be substituted.
- (k) When no milk animals are available at indicator locations, milk sampling of the control location can be reduced to once per month to maintain historical data.
- (l) Attention shall be paid to including samples of tuberous and root food products.

**TABLE 2.2-C**

**DETECTION CAPABILITIES FOR THE *A PRIORI* LOWER LIMIT OF DETECTION**

Analysis	Water (pCi/liter)	Airborne Particulates or Gases (pCi/m <sup>3</sup> )	Fish (pCi/kg-wet)	Milk (pCi/liter)	Food Products (pCi/kg-wet)	Sediment (pCi/kg-dry)
Gross Beta	4	0.01				
H-3	2000 <sup>(a)</sup>					
Mn-54	15		130			
Fe-59	30		260			
Co-58, 60	15		130			
Zn-65	30		260			
Zr-Nb-95	15					
I-131	1 <sup>(b)</sup>	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.

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## 3.0 INTERPRETATION OF RESULTS

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Review of all 2020 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 2020 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 2020. Summary tables containing 2020 information required by Technical Specifications 6.9.1.3 and HNP ODCM E.3 are located in Appendix B. REMP results for 2020 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 2020 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 2020 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 2020. Similarly, there was no significant increase in ambient background radiation levels in the surrounding areas. The 2020 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**

Airborne particulate and radioiodine samples at each of seven locations were composited 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.

In 2020, 363 radioiodine and particulate samples were collected and analyzed, 311 from six 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). The 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 2020. 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 2020. Table 3.1-A shows the highest indicator annual mean and control location annual mean for gross beta in air particulate.

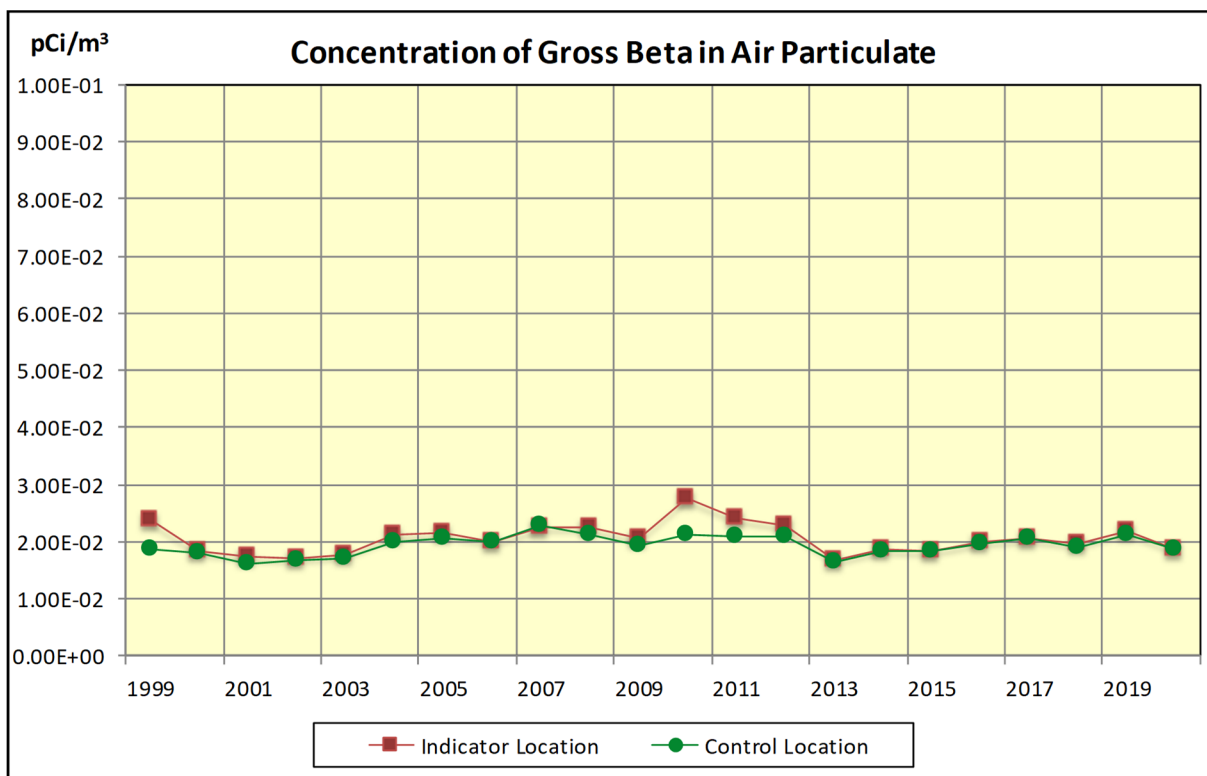
There was no detectable I-131 in air radioiodine samples analyzed in 2020. Table 3.1-B shows the highest indicator annual mean and control location annual mean for I-131 since 1999. No I-131 activity due to HNP operations has been detected during the entire operating history of the plant.

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. Locations #1 (2.6 miles N) and #47 (3.4 miles SSW) were removed. The last sample was obtained on 3JUN2019. The HNP REMP currently has six indicator and one control 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/m³)	Control Location (pCi/m³)
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
2020	1.86E-2	1.87E-2

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

<b>Year</b>	<b>Indicator Location (pCi/m<sup>3</sup>)</b>	<b>Control Location (pCi/m<sup>3</sup>)</b>
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 <sup>(1)</sup>	1.66E-1	1.08E-1
2012	0.00E+0	0.00E+0
2013	0.00E+0	0.00E+0
2014 <sup>(2)</sup>	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
2020	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 and gamma spectroscopy were performed on 39 drinking water monthly composite samples. Two indicator locations were sampled, along with one control location. Indicator location 51 was analyzed monthly for tritium, while the two remaining locations analyses consisted of a quarterly composite.

No gamma emitting radionuclides attributable to plant operations were identified in any 2020 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.

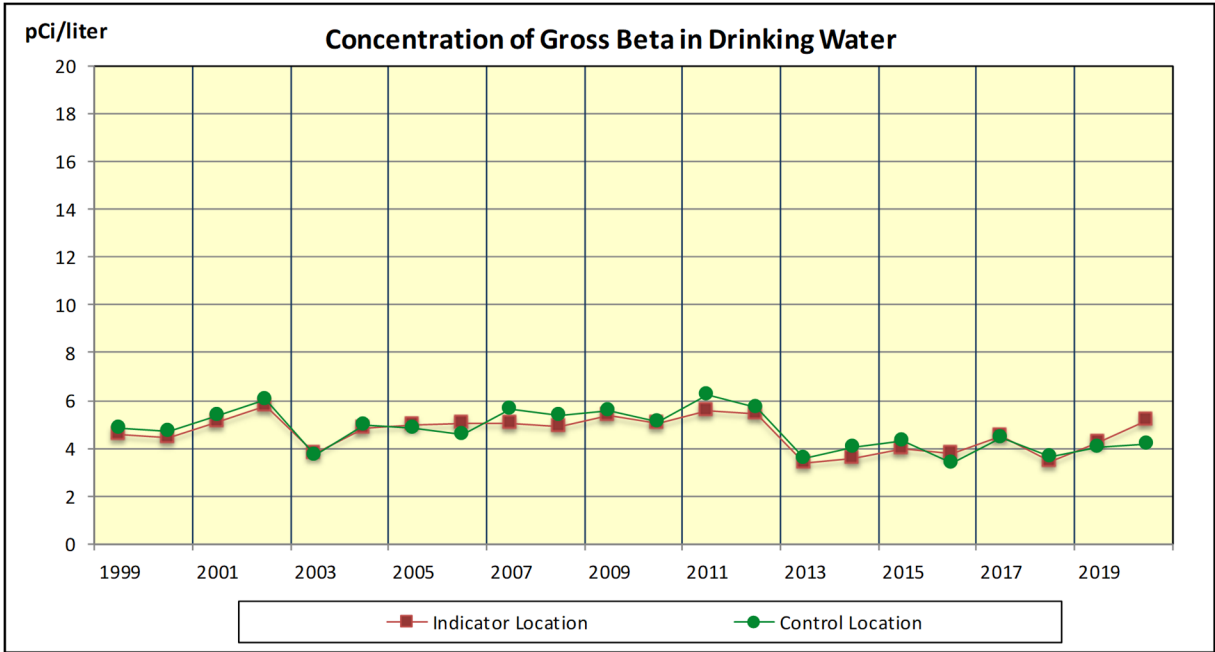
Figure 3.2-1 and Table 3.2 shows highest annual mean gross beta concentrations for the indicator location and control location since 1999. The highest annual mean for the indicator location (downstream of the plant effluent release point) was 5.17 pCi/l in 2020 and the control location concentration was 4.16 pCi/l. The gross beta mean indicator activity and mean control activity increased in 2019 due to an analytical method change affecting analytical sensitivities (NCR # 02303027).

Tritium was detected in thirteen indicator samples from Location 51 and in no control samples during 2020. The mean indicator tritium concentration for 2020 was 3,478 pCi/l, 17.39% 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 2020; therefore, low-level iodine analysis is not required.

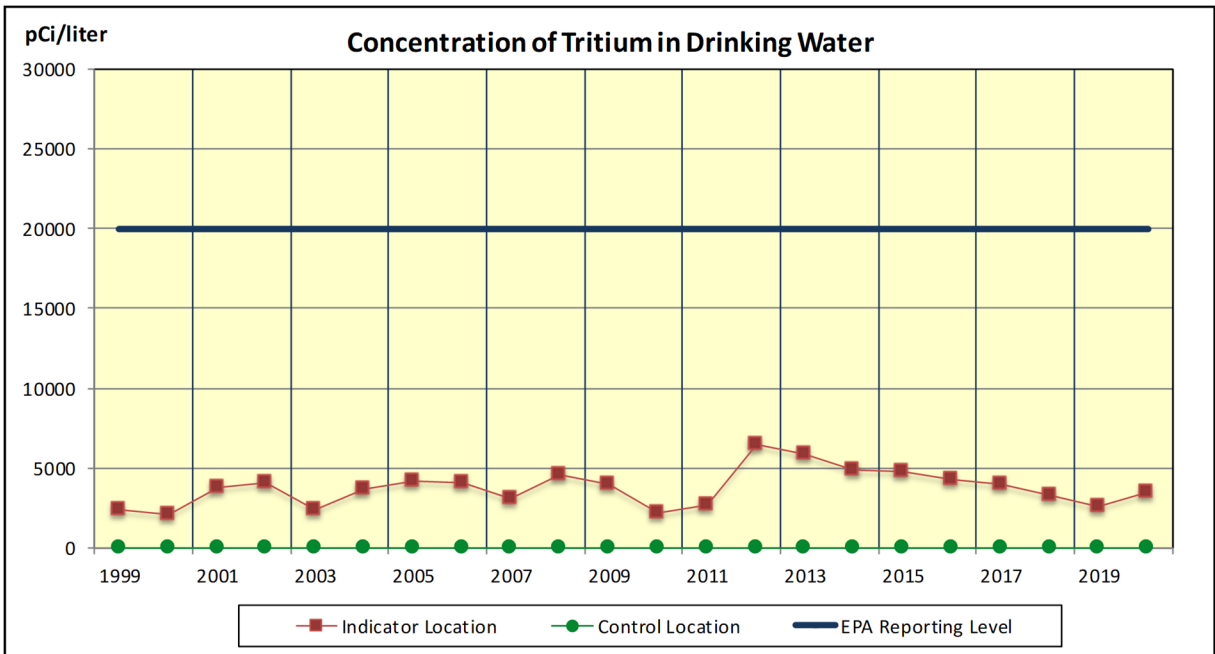
K-40 is a naturally occurring radionuclides that was observed in drinking water samples in 2020.

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 <sup>(1)</sup>	4.25E+0	4.07E+0	2.57E+3	0.00E+0
2020	5.17E+0	4.16E+0	3.48E+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 from two indicator locations and one control location. Indicator location 26 was analyzed monthly for tritium, while the two remaining locations analyses consisted of a quarterly composite.

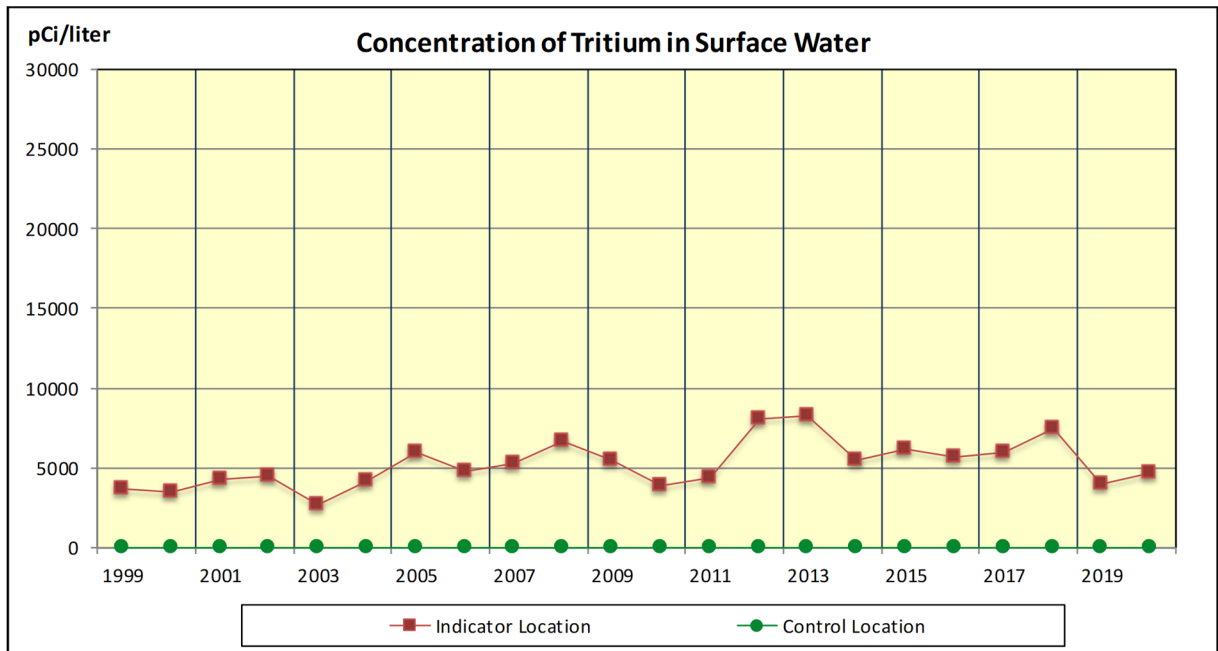
Location 26, Harris Lake Spillway, is the only indicator location sample that contained tritium with an average concentration of 4,711 pCi/l and showed a range of activities from 2,780 to 8,040 pCi/l. Tritium was not detected in the four control samples collected during 2020.

No gamma emitting radionuclides attributable to plant operations were identified in 2020 surface water samples.

Table 3.3 and Figure 3.3 display the highest indicator and control annual means for tritium since 1999.

K-40 and Be-7 are naturally occurring radionuclide that were observed in surface water samples in 2020.

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**

<b>Year</b>	<b>Indicator Location (pCi/l)</b>	<b>Control Location (pCi/l)</b>
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
2020	4.71E+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 via grab samples on site at HNP, there is no control location. In total, eighty-four ground water samples were analyzed for gamma emitters and tritium in 2020. 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 2020 ground water samples.

Tritium was detected in some ground water samples, ranging from 190 pCi/l to 1,010 pCi/l in 2020; 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 2020.



### 3.5 MILK

Biweekly grab samples are collected from the control location and indicator location from late spring to late fall. When the indicator location is not available, the control location is sampled monthly via grab samples.

A total of 36 milk samples were analyzed by gamma spectroscopy and low-level iodine during 2020. 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 2020. However, it is not unusual for Cs-137 to be present in milk samples. It is a constituent of nuclear weapons test fallout and nuclear plant accidents and has been observed in samples from the indicator goat milk location in the past.

K-40 is a naturally occurring radionuclide that was observed in milk samples in 2020.

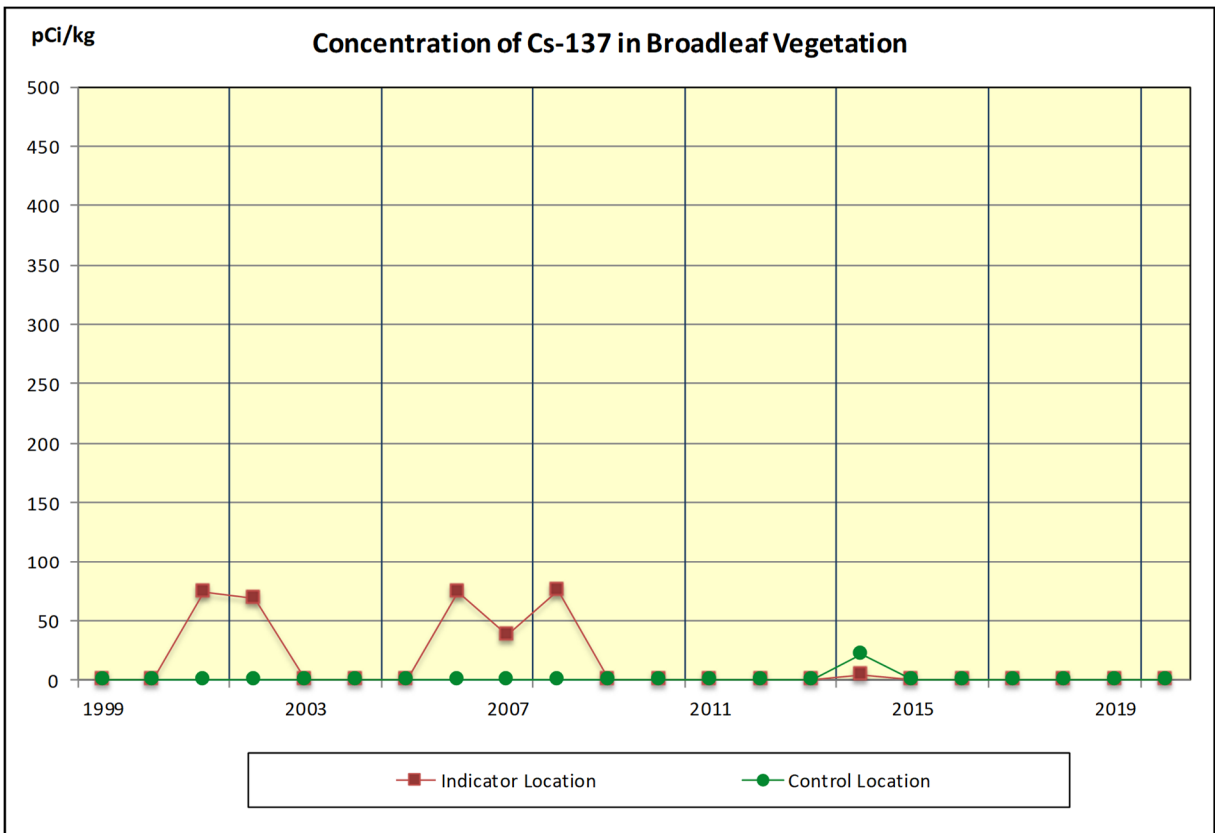
### 3.6 BROADLEAF VEGETATION

Gamma spectroscopy was performed on 18 broadleaf vegetation samples collected in 2020 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 2020.

Figure 3.6



**Table 3.6 Mean Concentration of Cs-137 in Broadleaf Vegetation**

<b>Year</b>	<b>Indicator Location (pCi/kg)</b>	<b>Control Location (pCi/kg)</b>
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
2020	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 via gamma spectroscopy during the 2020 growing season.

K-40 and Be-7 are naturally occurring radionuclides that were observed in food product samples in 2020.

### **3.8 AQUATIC VEGETATION**

In 2020 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 2020.

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 2020.

### **3.9 FISH**

Gamma spectroscopy was performed on the edible portions of the 12 fish samples collected semiannually during 2020; 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 2020.

K-40 is a naturally occurring radionuclide that was observed in fish samples collected during 2020.

### **3.10 SHORELINE SEDIMENT**

Shoreline sediment samples were collected semiannually in 2020 from two indicator locations. There is no control location for this sample media type.

Samples were dried, then sifted to remove rocks and clams prior to analysis. Gamma analyses of the four shoreline sediments detected natural activity in the samples collected during 2020. 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 2020.

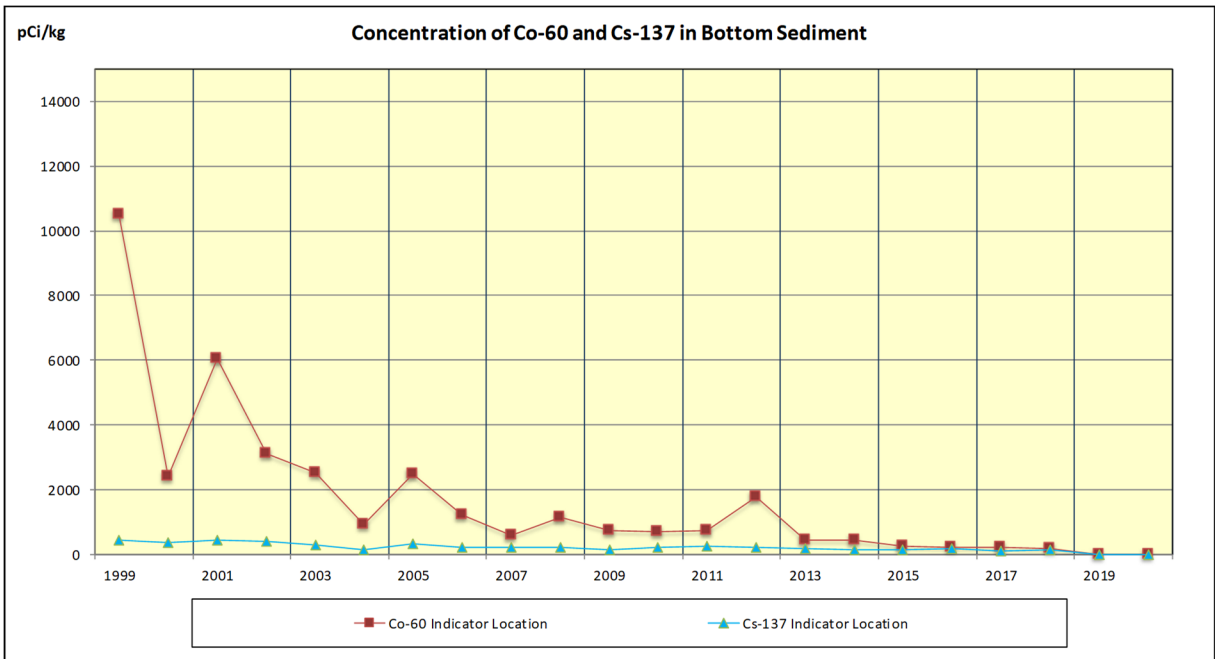
### 3.11 BOTTOM SEDIMENT

During 2020, a total of two bottom sediment samples were analyzed from the indicator location. There is no control location for bottom sediment.

Samples were dried, then sifted to remove rocks and clams prior to gamma analysis. 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 2020.

**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**

<b>YEAR</b>	<b>Control Location</b>	<b>Co-60 (pCi/kg) Indicator Location</b>	<b>Cs-137 (pCi/kg) Indicator Location</b>
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 <sup>(1)</sup>	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
2020	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 ( $\pm 25$  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. Thermoluminescent dosimeter (TLD) locations designated as "inner ring" are located in each of the sixteen meteorological sectors in the general area of the Site Boundary. The eighteen inner ring TLDs are used as indicators. TLD locations designated as "outer ring" are outside the Site Boundary, in each of the sixteen meteorological sectors, and are within 6 – 8 km from the site. All sixteen of the 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. Its purpose is to provide a comparison to indicator locations.

TLDs were used to monitor ambient radiation exposures in the plant environs. In 2020, 161 TLDs were analyzed, 157 at indicator locations and 4 at the control location. TLDs are collected and analyzed quarterly. The TLD with the highest annual mean was 17.3 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.

On 8JAN2020 dual TLDs (alpha and bravo) at each sampling location were implemented at HNP to meet American National Standard ANSI/HPS N13.37-2014, "Environmental Dosimetry – Criteria for System Design and Implementation, for environmental Thermoluminescent Dosimeters (TLD)."

REMP TLD Location #19 (0.6 mi. E on SR 1142 from Intersection of SR 1141, NNE Sector, 5.0 mi. from site) was minimally moved on 15APR2020 from the yard of a private residence to a power pole nearby in the same sector (Humie Olive Rd, NNE Sector 4.95 mi. from site). DRR # 02326048 was initiated to document the location change of TLD #19 for incorporation in the next revision of the HNP ODCM.

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.

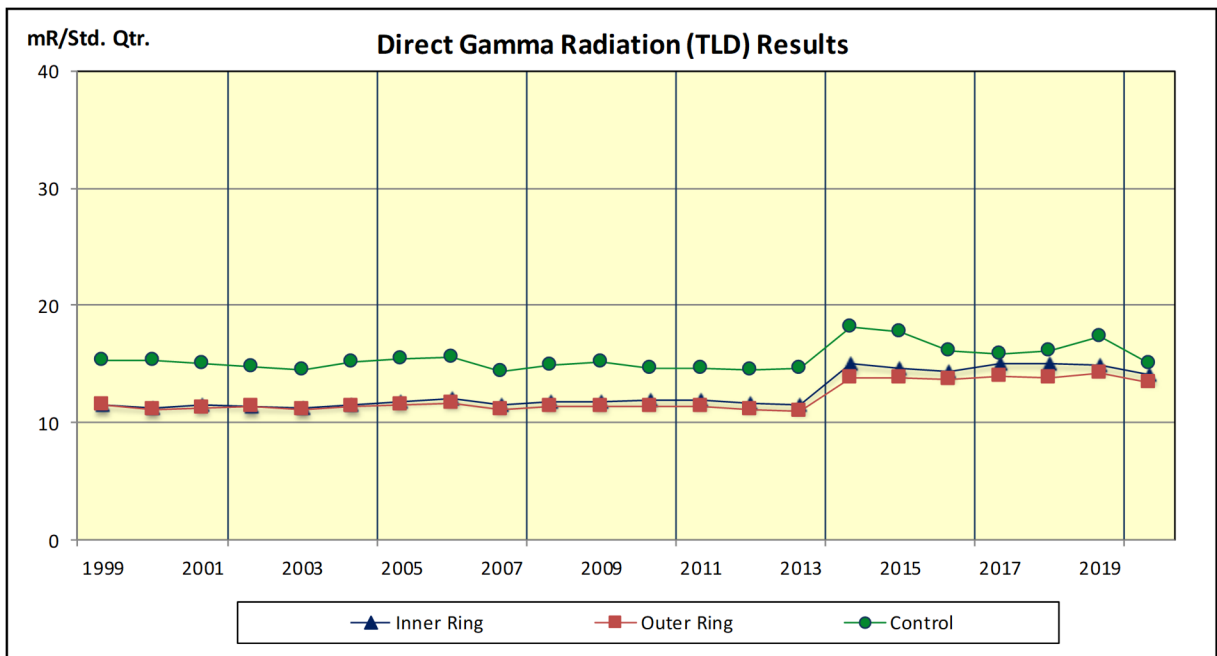
Quarterly, environmental ODCM TLD results are compared by location to its historical data to evaluate any significant changes. The comparison utilizes the location's average exposure history to determine if quarterly results fall within low and high ranges and provides a reliable indication of potential 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 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 2020 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.

**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 <sup>(1)</sup>	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
2020	1.41E+1	1.34E+1	1.51E+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 2020 HNP Annual Land Use Census was conducted July 6 and 7, 2020, as required by the HNP ODCM 4.12.2. The 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, which includes: the nearest residence, the nearest garden greater than 50 square meters (500 square feet), the nearest milk-giving animal, and the nearest meat animal (only identified at the nearest garden or closer in each sector). Poultry and egg laying animals were not classified as meat animals for the purposes of the Land Use Census.

Table 3.13 summarizes the comparison between the 2019 and 2020 census results. A map indicating identified locations is shown in Figure 3.13.

During the 2020 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 2020 land use census.

The Fleet Land Use Procedure AD-CP-ALL-0014 (Revision 4), Land Use Census Evaluation, was revised in 2020 to standardize the approach for the evaluation of Land Use Dose Calculations (NCR # 02343171).

**Table 3.13 Harris Land Use Census Comparison (2019 – 2020)**

**Nearest Pathway (Miles)**

SECTOR	RESIDENCE		GARDEN		MEAT ANIMAL <sup>(1)</sup>		MILK ANIMAL	
	2019	2020	2019	2020	2019	2020	2019	2020
North	2.21	2.21	2.29	2.29	2.21	---*	4.14 <sup>(2)</sup>	4.14 <sup>(2)</sup>
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	---	2.16*	2.01	2.01	---	---
East	1.88	1.88	2.15	2.15	---	---	---	---
East-Southeast	2.73	2.73	2.83	2.83	---	---	---	---
Southeast	4.11	4.11	---	---	---	---	---	---
South-Southeast	4.26	4.26	---	4.33*	---	---	---	---
South	---	---	---	---	---	---	---	---
South-Southwest	3.82	3.82	3.94	3.94	---	---	---	---
Southwest	2.76	2.76	4.32	4.32	---	---	---	---
West-Southwest	4.29	4.29	4.29	4.29	---	---	---	---
West	2.75	2.75	2.82	2.82	---	---	2.82 <sup>(3)</sup>	2.82 <sup>(3)</sup>
West-Northwest	2.13	2.13	4.03	2.91*	---	---	---	---
Northwest	2.24	2.11*	2.91	2.58*	---	---	---	---
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.

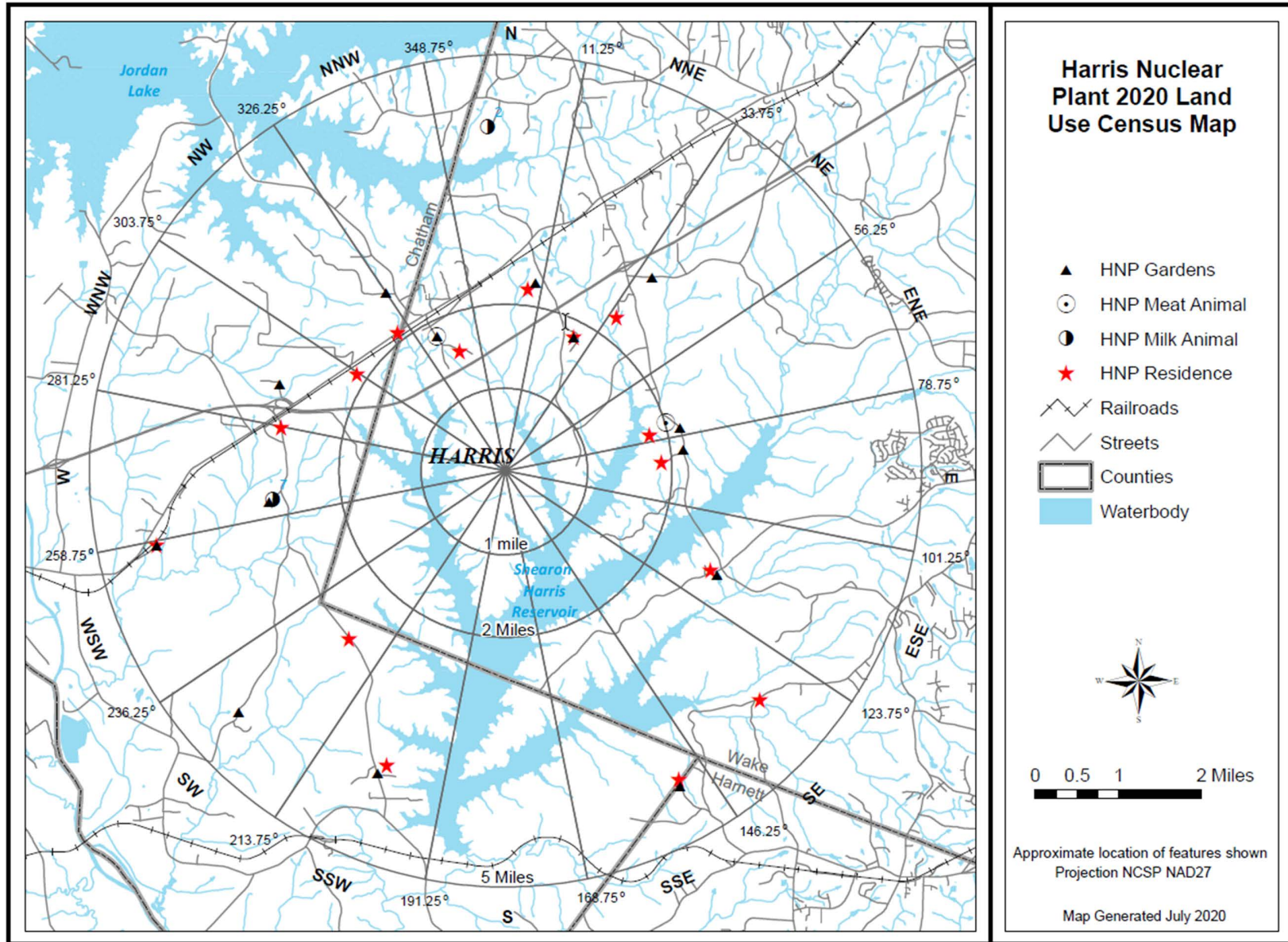
--- Indicates no occurrences within the 5-mile radius

(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 REMF. 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 REMF and milk is collected for 4 - 6 consecutive months per year (Late-Spring to Late-Fall months).

Figure 3.13



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# 4.0 QUALITY ASSURANCE

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## 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; beta analysis in drinking water samples, and Low-Level Iodine-131 analysis in milk samples.

## 4.5 DUKE ENERGY INTERLABORATORY COMPARISON PROGRAM

In 2020 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 2020. 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, mixed gamma in soil, 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 2020 is documented in Table 4.0-A.

Interlaboratory cross check samples from EZA were received and analyzed in two of the four quarters of 2020. Table 4.0-A lists the performance for specific samples. Fifty-one nuclide results were reported to EZA of which forty-nine (96 %) 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 Harris Nuclear Plant Radiological Environmental Monitoring Program surface water, ground water, cow milk, air particulate, air radioiodine, fish, bottom sediment, 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**

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 using the NIST-traceable Hopewell and submits them for analysis of the unknown estimated delivered exposure. A summary of the 2020 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 2020. A summary of the GEL quality assurance program results for the sample media types sent to GEL during 2020 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

#### 2020 Cross Check Results for EnRad Laboratories

Interlaboratory cross check samples from EZA were received and analyzed in two of the four quarters of 2020. 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. Fifty-one nuclide results were reported to EZA of which forty-nine (96 %) 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	E13185	Cs-137	2	pCi	225	238	0.95	Agreement
I-131 in Charcoal Cartridge	E13183	I-131	2	pCi	95.8	91.5	1.05	Agreement
Gamma in Soil	E13184	Ce-141	2	pCi/g	0.199	0.206	0.97	Agreement
		Co-58	2	pCi/g	0.168	0.178	0.94	Agreement
		Co-60	2	pCi/g	0.309	0.347	0.89	Agreement
		Cr-51	2	pCi/g	0.371	0.455	0.82	Agreement
		Cs-134	2	pCi/g	0.226	0.260	0.87	Agreement
		Cs-137	2	pCi/g	0.230	0.257	0.90	Agreement
		Fe-59	2	pCi/g	0.174	0.179	0.97	Agreement
		Mn-54	2	pCi/g	0.238	0.238	1.00	Agreement
		Zn-65	2	pCi/g	0.416	0.399	1.04	Agreement
Gamma in Simulated Vegetation	E13187	Ce-141	2	pCi/g	0.228	0.184	1.24	Agreement
		Co-58	2	pCi/g	0.172	0.159	1.08	Agreement
		Co-60	2	pCi/g	0.312	0.309	1.01	Agreement
		Cr-51	2	pCi/g	0.530	0.405	1.31	Non-Agreement <sup>(1)</sup>
		Cs-134	2	pCi/g	0.239	0.231	1.03	Agreement
		Cs-137	2	pCi/g	0.181	0.164	1.10	Agreement
		Fe-59	2	pCi/g	0.204	0.160	1.28	Non-Agreement <sup>(1)</sup>
		Mn-54	2	pCi/g	0.239	0.212	1.13	Agreement
		Zn-65	2	pCi/g	0.379	0.355	1.07	Agreement

(1) NCR # 02340178

## TABLE 4.0-A (Cont.)

Sample	Sample ID	Nuclide	Quarter	Units	EnRad Value	EZA Value	EnRad/EZA Ratio	Evaluation
Gamma in Simulated Vegetation	E13190	Ce-141	3	pCi/g	0.202	0.204	0.99	Agreement
		Co-58	3	pCi/g	0.213	0.244	0.87	Agreement
		Co-60	3	pCi/g	0.491	0.516	0.95	Agreement
		Cr-51	3	pCi/g	0.424	0.506	0.84	Agreement
		Cs-134	3	pCi/g	0.24	0.272	0.88	Agreement
		Cs-137	3	pCi/g	0.325	0.340	0.95	Agreement
		Fe-59	3	pCi/g	0.270	0.273	0.99	Agreement
		Mn-54	3	pCi/g	0.249	0.245	1.02	Agreement
		Zn-65	3	pCi/g	0.383	0.367	1.04	Agreement
Gamma in Composite Filter	E13188	Ce-141	3	pCi	109	107	1.02	Agreement
		Co-58	3	pCi	130	128	1.01	Agreement
		Co-60	3	pCi	278	271	1.03	Agreement
		Cr-51	3	pCi	247	266	0.93	Agreement
		Cs-134	3	pCi	136	143	0.95	Agreement
		Cs-137	3	pCi	187	179	1.05	Agreement
		Fe-59	3	pCi	152	143	1.06	Agreement
		Mn-54	3	pCi	136	129	1.06	Agreement
		Zn-65	3	pCi	215	193	1.12	Agreement
Gamma in Water	E13189	Ce-141	3	pCi/L	167	160	1.04	Agreement
		Co-58	3	pCi/L	202	191	1.06	Agreement
		Co-60	3	pCi/L	437	404	1.08	Agreement
		Cr-51	3	pCi/L	407	397	1.03	Agreement
		Cs-134	3	pCi/L	215	213	1.01	Agreement
		Cs-137	3	pCi/L	280	267	1.05	Agreement
		Fe-59	3	pCi/L	237	214	1.11	Agreement
		I-131	3	pCi/L	104	95.3	1.09	Agreement
		Mn-54	3	pCi/L	211	192	1.10	Agreement
Zn-65	3	pCi/L	322	288	1.12	Agreement		
Milk LLI-131	E13192	I-131	2	pCi/L	96.8	88.8	1.09	Agreement
Gross Beta in Water	E13191	Cs-137	2	pCi/L	244	240	1.02	Agreement
Tritium in Water	E13193	H-3	3	pCi/L	11900	12000	0.99	Agreement

# TABLE 4.0-B

## 2020 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 2020						2nd Quarter 2020							
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		
100007	59.67	60.97	-2.13	<+/-15%	Pass	102290	59.52	60.59	-1.77	<+/-15%	Pass		
100245	58.87	60.97	-3.44	<+/-15%	Pass	102359	59.12	60.59	-2.43	<+/-15%	Pass		
102059	60.34	60.97	-1.03	<+/-15%	Pass	103194	61.95	60.59	2.24	<+/-15%	Pass		
103098	64.18	60.97	5.26	<+/-15%	Pass	102029	60.76	60.59	0.28	<+/-15%	Pass		
103212	63.01	60.97	3.35	<+/-15%	Pass	102336	61.57	60.59	1.62	<+/-15%	Pass		
100074	60.02	60.97	-1.56	<+/-15%	Pass	103742	62.41	60.59	3.00	<+/-15%	Pass		
103148	62.83	60.97	3.05	<+/-15%	Pass	103721	63.00	60.59	3.98	<+/-15%	Pass		
102407	62.04	60.97	1.75	<+/-15%	Pass	102738	62.59	60.59	3.30	<+/-15%	Pass		
103615	62.69	60.97	2.82	<+/-15%	Pass	100007	58.49	60.59	-3.47	<+/-15%	Pass		
103087	64.32	60.97	5.49	<+/-15%	Pass	102931	61.99	60.59	2.31	<+/-15%	Pass		
Average Bias (B)			1.36				Average Bias (B)			0.91			
Standard Deviation (S)			3.18				Standard Deviation (S)			2.62			
Measure Performance  B +S			4.54	<15%	Pass	Measure Performance  B +S			3.52	<15%	Pass		
3rd Quarter 2020						4th Quarter 2020							
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		
103734	20.89	19.59	6.64	<+/-15%	Pass	103679	42.06	40.15	4.76	<+/-15%	Pass		
103438	21.02	19.59	7.30	<+/-15%	Pass	102783	38.82	40.1	-3.31	<+/-15%	Pass		
102970	18.88	19.59	-3.62	<+/-15%	Pass	103438	43.01	40.15	7.12	<+/-15%	Pass		
102770	20.78	19.59	6.07	<+/-15%	Pass	103734	42.84	40.15	6.70	<+/-15%	Pass		
103602	20.53	19.59	4.80	<+/-15%	Pass	100461	42.34	40.15	5.45	<+/-15%	Pass		
102741	21.03	19.59	7.35	<+/-15%	Pass	103029	42.84	40.15	6.70	<+/-15%	Pass		
102058	19.47	19.59	-0.61	<+/-15%	Pass	100180	38.59	40.15	-3.89	<+/-15%	Pass		
103029	21.06	19.59	7.50	<+/-15%	Pass	103557	43.52	40.15	8.39	<+/-15%	Pass		
103679	20.75	19.59	5.92	<+/-15%	Pass	103199	41.99	40.15	4.58	<+/-15%	Pass		
103557	21.00	19.59	7.20	<+/-15%	Pass	100154	39.71	40.15	-1.10	<+/-15%	Pass		
Average Bias (B)			4.85				Average Bias (B)			3.54			
Standard Deviation (S)			3.83				Standard Deviation (S)			4.55			
Measure Performance  B +S			8.69	<15%	Pass	Measure Performance  B +S			8.09	<15%	Pass		

# TABLE 4.0-C

## 2020 GEL Laboratories, LLC QA Results

Interlaboratory cross check samples from Eckert & Ziegler Analytics (EZA) were received and analyzed by GEL during 2020. 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
I-131 in Milk with EZA	E13173	I-131	2	pCi/L	83.1	81.5	1.02	Agreement
	E13177	I-131	3	pCi/L	94.9	95.0	1.00	Agreement
	E13181	I-131	4	pCi/L	94.4	91.9	1.08	Agreement

**APPENDIX A**

**ENVIRONMENTAL SAMPLING**

**&**

**ANALYSIS PROCEDURES**

**2020**

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# APPENDIX A

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## 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 provides a description of the specific analyses performed on samples collected in the field. Changes to the sampling procedures and analyses procedures are also discussed in the section.

### I. CHANGE OF SAMPLING PROCEDURES

CY NISP-201 Chemistry Quality Assurance Program, Revision 0, Section 7C-Quality Controls for Sampling was implemented during 2020 for the sampling of Drinking Water and Surface Water.

TLD Sampling procedure 752, Direct Radiation Measurement (TLDs) at Harris Nuclear Plant was revised for two changes in 2020. The first change was the implementation of dual TLDs (alpha/bravo) at each sampling location to meet American National Standard ANSI/HPS N13.37-2014, "Environmental Dosimetry – Criteria for System Design and Implementation, for environmental Thermoluminescent Dosimeters (TLD)". The second change documents the minimal move of TLD #19 from a private residence (0.6 mi. E on SR 1142 from Intersection of SR 1141, NNE Sector, 5.0 mi. from site) to a power pole (Humie Olive Rd, NNE Sector 4.95 mi. from site). DRR # 02326048 was initiated document the location change of TLD #19 in the next revision of the HNP ODCM.

### 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**

There were no fundamental changes to analysis procedure methods, but procedures were revised to increase quality control measurements to comply with CY NISP-201 Chemistry Quality Assurance Program, Revision 0, Section 7.



**APPENDIX B**

**RADIOLOGICAL  
ENVIRONMENTAL MONITORING  
PROGRAM**

**SUMMARY OF RESULTS**

**2020**

**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: 2020

Medium or Pathway Sampled or Measured (Unit of Measurement)	Type and Total No. of Measurements Performed	Lower Limit of Detection (LLD) <sup>(1)</sup>	All Indicator Locations Mean <sup>(2)(3)</sup> Range <sup>(2)</sup>	Location w/Highest Annual Mean <sup>(2)</sup>		Control Locations Mean <sup>(2)(3)</sup> Range <sup>(2)</sup>	No. of Non-Routine Report Meas.
				Name, Distance, and Direction	Mean <sup>(2)(3)</sup> Range <sup>(2)</sup>		
Air Particulate (pCi/m <sup>3</sup> )	Gross Beta 363 <sup>(4)</sup>	See Table 2.2-C	1.80E-02 (311/311) 7.90E-03 – 3.66E-02	Loc. # 91 1.6 miles ENE	1.86E-02 (52/52) 8.99E-03 – 2.96E-02	Loc. # 5 1.87E-02 (52/52) 8.29E-03 – 3.90E-02	0
	Gamma 28	See Table 2.2-C	All less than LLD	-----	-----	All less than LLD	0
Air Radioiodine (pCi/m <sup>3</sup> )	I-131 363 <sup>(4)</sup>	See Table 2.2-C	All less than LLD	-----	-----	All less than LLD	0
Drinking Water <sup>(4)(8)</sup> (pCi/l)	Gross Beta 39	4	4.49E+00 (9/26) 3.46E+00 – 5.43E+00	Loc. # 46 NE Harnett Metro Water Treatment Plant - Lillington 17.2 miles SSE	5.17E+00 (5/13) 4.40E+00 – 5.43E+00	Loc. # 58 4.16E+00 (7/13) 3.27E+00 – 5.16E+00	0
	Gamma 39	See Table 2.2-C	All less than LLD	-----	-----	All less than LLD	0
	Tritium <sup>(5)</sup> 21	2000 <sup>(7)</sup>	3.48E+03 (13/17) 1.20E+03 – 5.79E+03	Loc. # 51 Water Treatment Building on Site	3.48E+03 (13/13) 1.20E+03 – 5.79E+03	All less than LLD	0
Surface Water <sup>(4)</sup> (pCi/l)	Gamma 39	See Table 2.2-C	All less than LLD	-----	-----	All less than LLD	0
	Tritium <sup>(5)</sup> 21	2000 <sup>(7)</sup>	4.71E+03 (13/17) 2.78E+03 – 8.04E+03	Loc. # 26 Harris Lake Spillway 4.7 miles S	4 4.71E+3 (13/13) 2.78E+03 – 8.04E+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: 2020

Medium or Pathway Sampled or Measured (Unit of Measurement)	Type and Total No. of Measurements Performed	Lower Limit of Detection (LLD) <sup>(1)</sup>	All Indicator Locations Mean <sup>(2)(3)</sup> Range <sup>(2)</sup>	Location w/Highest Annual Mean <sup>(2)</sup>		Control Locations Mean <sup>(2)(3)</sup> Range <sup>(2)</sup>	No. of Non-Routine Report Meas.
				Name, Distance, and Direction	Mean <sup>(2)(3)</sup> Range <sup>(2)</sup>		
Ground Water (pCi/l)	Gamma 84	See Table 2.2-C	All less than LLD	-----	-----	No Control	0
	Tritium 84	2000 <sup>(7)</sup>	4.25E+02 (16/72) 1.90E+02 – 1.01E+03	Loc. # 83 On Site (BD-MW16) along Cooling Tower Blowdown line 1.6 miles SSW	9.34E+02 (4/4) 8.02E+02 – 1.01E+03	No Control	0
Milk (pCi/l)	I-131 36 <sup>(4)</sup>	See Table 2.2-C	All less than LLD	-----	-----	All less than LLD	0
	Gamma 36 <sup>(4)</sup>	See Table 2.2-C	All less than LLD	-----	-----	All less than LLD	0
Broadleaf Vegetation (pCi/kg, wet)	Gamma 18	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	-----	-----	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: 2020

Medium or Pathway Sampled or Measured (Unit of Measurement)	Type and Total No. of Measurements Performed	Lower Limit of Detection (LLD) <sup>(1)</sup>	All Indicator Locations Mean <sup>(2)(3)</sup> Range <sup>(2)</sup>	Location w/Highest Annual Mean <sup>(2)</sup>		Control Locations Mean <sup>(2)(3)</sup> Range <sup>(2)</sup>	No. of Non-Routine Report Meas.
				Name, Distance, and Direction	Mean <sup>(2)(3)</sup> Range <sup>(2)</sup>		
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) <sup>(6)</sup>	TLD Readout 161 <sup>(4)</sup>	----	1.37E+01 (157/157) 1.04E+01 – 1.83E+01	Loc. # 49 SR 1127, 0.3 mi S of Intersection w/ US 1 2.5 miles NE	1.73E+01 (4/4) 1.63E+01 – 1.83E+01	Loc. # 5 1.51E+01 (4/4) 1.38E+01 – 1.59E+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.

**APPENDIX C**

**SAMPLING DEVIATIONS**

**&**

**UNAVAILABLE ANALYSES**

**2020**

# 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 99.96% availability in 2020.

Location	Scheduled Collection Dates	Code	Description & Action to Prevent Recurrence	Corrective Action
2	3/16 – 3/23/2020	BF	15.21 hours of downtime due to equipment malfunction (blown fuse).	NCR # 02322172
5	4/20 – 4/27/2020	PI	2.83 hours of downtime due to power interruption from severe weather in the area.	NCR # 02327476
91	4/27 – 5/4/2020	PI	4.67 hours of downtime due to power interruption from severe weather in the area.	NCR # 02328886
26	6/15 – 6/22/2020	PI	0.82 hours of downtime due to power interruption from severe weather in the area.	NCR # 02336330
26	6/29 – 7/6/2020	PI	0.97 hours of downtime due to unknown power interruption.	NCR # 02338504

#### **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 98.01% availability in 2020.

Location	Scheduled Collection Dates	Code	Description & Action to Prevent Recurrence	Corrective Action
58	12/23/19 – 1/20/2020	SM	663.42 hours of downtime for monthly composite due to seized motor/rotor on ISCO.	NCR # 02312255
26	6/8 – 7/6/2020	OT	90.48 hours of downtime for monthly composite due to sample line break on ISCO during first half of monthly composite period.	NCR # 02336358
51	7/6 – 8/3/2020	OT	306.8 hours of downtime for monthly composite due to HNP Micro System Water repair.	NCR # 02342700

## C.2 UNAVAILABLE ANALYSES

### TLDs

Location	Scheduled Collection Dates	Code	Description & Action to Prevent Recurrence	Corrective Action
24	4/15 – 7/15/2020	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. New ty-wrap installed at location and cage rehung. Collection procedure was revised in 2021 to inspect apparatus integrity to prevent recurrence.	NCR # 02339739
31	10/14/2020 – 1/12/2021	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. New ty-wrap installed at location and cage rehung. Collection procedure was revised in 2021 to inspect apparatus integrity to prevent recurrence.	NCR # 02365163
94	10/14/2020 – 1/12/2021	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. New ty-wrap installed at location and cage rehung. Collection procedure was revised in 2021 to inspect apparatus integrity to prevent recurrence.	NCR # 02365161

### Air Particulate

Location	Scheduled Collection Dates	Code	Description & Action to Prevent Recurrence	Corrective Action
26	5/26 – 6/1/2020	VN	Sample unavailable due to vandalism at the site location.	NCR # 02333104

### Milk

Location	Scheduled Collection Dates	Code	Description & Action to Prevent Recurrence	Corrective Action
102	6/15/2020	OT	Sample unavailable due to owners being out of town, therefore the sample was missed. Sample successfully collected on 6/22/20.	NCR # 02336311



**APPENDIX D**

**ANALYTICAL DEVIATIONS**

**2020**

No Analytical deviations were incurred for the 2020 HNP Radiological Environmental Monitoring Program.

**APPENDIX E**

**RADIOLOGICAL  
ENVIRONMENTAL MONITORING  
PROGRAM RESULTS**

**2020**

This appendix includes sample analysis report summaries and supportive data generated from each sample medium for 2020.

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
514449	12/30/2019 - 1/6/2020	Beta	1.50E-02	2.39E-03	2.54E-03
514909	1/6/2020 - 1/13/2020	Beta	1.38E-02	2.67E-03	3.07E-03
515239	1/13/2020 - 1/20/2020	Beta	1.67E-02	2.85E-03	3.26E-03
515476	1/20/2020 - 1/27/2020	Beta	1.66E-02	3.00E-03	3.49E-03
515866	1/27/2020 - 2/3/2020	Beta	1.57E-02	2.74E-03	3.06E-03
516126	2/3/2020 - 2/10/2020	Beta	1.64E-02	2.87E-03	3.27E-03
516487	2/10/2020 - 2/17/2020	Beta	1.44E-02	2.63E-03	2.99E-03
516870	2/17/2020 - 2/24/2020	Beta	1.99E-02	3.10E-03	3.25E-03
517389	2/24/2020 - 3/2/2020	Beta	1.44E-02	2.80E-03	3.39E-03
517658	3/2/2020 - 3/9/2020	Beta	1.31E-02	2.69E-03	3.21E-03
518689	3/9/2020 - 3/16/2020	Beta	1.72E-02	2.55E-03	2.74E-03
519297	3/16/2020 - 3/23/2020	Beta	1.86E-02	2.78E-03	2.80E-03
519676	3/23/2020 - 3/30/2020	Beta	1.65E-02	2.95E-03	3.43E-03
520272	12/30/2019 - 3/30/2020	Nuclide	Activity	2 Sigma Error	MDA
		Cs-134	<2.29E-03	0.00E+00	2.29E-03
		Cs-137	<1.20E-03	0.00E+00	1.20E-03
		Be-7	1.75E-01	4.13E-02	3.41E-02
		K-40	2.11E-02	1.38E-02	1.57E-02
520265	3/30/2020 - 4/6/2020	Beta	1.25E-02	2.64E-03	3.23E-03
520492	4/6/2020 - 4/13/2020	Beta	2.43E-02	3.20E-03	3.12E-03
520785	4/13/2020 - 4/20/2020	Beta	1.96E-02	3.06E-03	3.20E-03
521585	4/20/2020 - 4/27/2020	Beta	1.55E-02	2.81E-03	3.26E-03
522019	4/27/2020 - 5/4/2020	Beta	1.40E-02	2.66E-03	3.08E-03
522326	5/4/2020 - 5/11/2020	Beta	1.69E-02	2.45E-03	2.48E-03
522573	5/11/2020 - 5/18/2020	Beta	1.65E-02	3.00E-03	3.50E-03
523081	5/18/2020 - 5/26/2020	Beta	1.17E-02	2.29E-03	2.63E-03
523453	5/26/2020 - 6/1/2020	Beta	1.14E-02	2.85E-03	3.65E-03

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
523855	6/1/2020 - 6/8/2020	Beta	2.61E-02	3.16E-03	2.74E-03
524418	6/8/2020 - 6/15/2020	Beta	1.59E-02	2.85E-03	3.23E-03
524741	6/15/2020 - 6/22/2020	Beta	1.21E-02	2.70E-03	3.38E-03
524972	6/22/2020 - 6/29/2020	Beta	1.88E-02	3.03E-03	3.29E-03
525348	3/30/2020 - 6/29/2020	Cs-134	<1.02E-03	0.00E+00	1.02E-03
		Cs-137	<1.49E-03	0.00E+00	1.49E-03
		Be-7	1.63E-01	3.82E-02	2.93E-02
		K-40	<1.26E-02	0.00E+00	1.26E-02
525341	6/29/2020 - 7/6/2020	Beta	2.09E-02	2.81E-03	2.94E-03
525569	7/6/2020 - 7/13/2020	Beta	1.69E-02	2.89E-03	3.26E-03
525919	7/13/2020 - 7/20/2020	Beta	2.81E-02	3.50E-03	3.50E-03
526253	7/20/2020 - 7/27/2020	Beta	1.64E-02	2.82E-03	3.05E-03
526540	7/27/2020 - 8/3/2020	Beta	1.57E-02	2.88E-03	3.41E-03
526859	8/3/2020 - 8/10/2020	Beta	1.61E-02	2.73E-03	2.95E-03
527338	8/10/2020 - 8/17/2020	Beta	1.50E-02	2.97E-03	3.70E-03
527630	8/17/2020 - 8/24/2020	Beta	1.97E-02	2.68E-03	2.72E-03
527929	8/24/2020 - 8/31/2020	Beta	2.40E-02	3.16E-03	3.05E-03
528678	8/31/2020 - 9/8/2020	Beta	2.48E-02	3.01E-03	2.78E-03
529011	9/8/2020 - 9/14/2020	Beta	1.07E-02	2.98E-03	4.07E-03
530004	9/14/2020 - 9/21/2020	Beta	2.05E-02	2.77E-03	2.83E-03
530304	9/21/2020 - 9/28/2020	Beta	1.92E-02	2.91E-03	2.95E-03
531088	6/29/2020 - 9/28/2020	Cs-134	<1.92E-03	0.00E+00	1.92E-03
		Cs-137	<1.04E-03	0.00E+00	1.04E-03
		Be-7	1.31E-01	3.67E-02	3.97E-02
		K-40	<3.91E-02	0.00E+00	3.91E-02
530576	9/28/2020 - 10/5/2020	Beta	1.70E-02	2.92E-03	3.28E-03
531081	10/5/2020 - 10/12/2020	Beta	3.21E-02	3.68E-03	3.54E-03
531685	10/12/2020 - 10/19/2020	Beta	1.75E-02	2.60E-03	2.78E-03

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
532089	10/19/2020 - 10/26/2020	Beta	1.30E-02	2.65E-03	3.18E-03
532513	10/26/2020 - 11/2/2020	Beta	1.45E-02	2.81E-03	3.26E-03
532822	11/2/2020 - 11/9/2020	Beta	1.99E-02	3.04E-03	3.25E-03
533348	11/9/2020 - 11/16/2020	Beta	1.39E-02	2.80E-03	3.38E-03
533810	11/16/2020 - 11/23/2020	Beta	2.12E-02	3.06E-03	3.12E-03
534110	11/23/2020 - 11/30/2020	Beta	2.65E-02	3.51E-03	3.52E-03
534569	11/30/2020 - 12/7/2020	Beta	1.96E-02	3.07E-03	3.38E-03
535342	12/7/2020 - 12/14/2020	Beta	3.66E-02	3.76E-03	3.04E-03
535900	12/14/2020 - 12/21/2020	Beta	1.68E-02	2.90E-03	3.31E-03
536185	12/21/2020 - 12/28/2020	Beta	1.93E-02	3.03E-03	3.22E-03
536754	9/28/2020 - 12/28/2020	Cs-134	<2.09E-03	0.00E+00	2.09E-03
		Cs-137	<1.59E-03	0.00E+00	1.59E-03
		Be-7	1.40E-01	3.57E-02	2.82E-02
		K-40	4.38E-02	1.82E-02	4.94E-03

Sample Point 4 [ INDICATOR - NNE @ 3.1 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514451	12/30/2019 - 1/6/2020	Beta	1.72E-02	2.50E-03	2.54E-03
514911	1/6/2020 - 1/13/2020	Beta	1.43E-02	2.70E-03	3.07E-03
515241	1/13/2020 - 1/20/2020	Beta	1.60E-02	2.82E-03	3.26E-03
515478	1/20/2020 - 1/27/2020	Beta	1.77E-02	3.06E-03	3.49E-03
515868	1/27/2020 - 2/3/2020	Beta	1.49E-02	2.69E-03	3.06E-03
516128	2/3/2020 - 2/10/2020	Beta	1.71E-02	2.91E-03	3.27E-03
516489	2/10/2020 - 2/17/2020	Beta	1.52E-02	2.68E-03	2.99E-03
516872	2/17/2020 - 2/24/2020	Beta	2.65E-02	3.42E-03	3.26E-03
517391	2/24/2020 - 3/2/2020	Beta	1.41E-02	2.78E-03	3.38E-03
517660	3/2/2020 - 3/9/2020	Beta	1.41E-02	2.75E-03	3.21E-03
518691	3/9/2020 - 3/16/2020	Beta	1.64E-02	2.53E-03	2.77E-03
519299	3/16/2020 - 3/23/2020	Beta	1.62E-02	2.47E-03	2.52E-03

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
519678	3/23/2020 - 3/30/2020	Beta	1.60E-02	2.93E-03	3.43E-03
520274	12/30/2019 - 3/30/2020	Nuclide	Activity	2 Sigma Error	MDA
		Cs-134	<1.50E-03	0.00E+00	1.50E-03
		Cs-137	<8.39E-04	0.00E+00	8.39E-04
		Be-7	1.48E-01	3.83E-02	3.33E-02
		K-40	<1.59E-02	0.00E+00	1.59E-02
520267	3/30/2020 - 4/6/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	1.19E-02	2.61E-03	3.23E-03
520494	4/6/2020 - 4/13/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	2.62E-02	3.29E-03	3.12E-03
520787	4/13/2020 - 4/20/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	2.15E-02	3.16E-03	3.21E-03
521587	4/20/2020 - 4/27/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	1.47E-02	2.77E-03	3.25E-03
522021	4/27/2020 - 5/4/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	1.48E-02	2.70E-03	3.08E-03
522328	5/4/2020 - 5/11/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	1.89E-02	2.56E-03	2.49E-03
522575	5/11/2020 - 5/18/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	1.80E-02	3.06E-03	3.49E-03
523083	5/18/2020 - 5/26/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	9.73E-03	2.18E-03	2.64E-03
523455	5/26/2020 - 6/1/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	9.28E-03	2.71E-03	3.64E-03
523857	6/1/2020 - 6/8/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	2.41E-02	3.08E-03	2.75E-03
524420	6/8/2020 - 6/15/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	1.39E-02	2.74E-03	3.23E-03
524743	6/15/2020 - 6/22/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	9.45E-03	2.54E-03	3.39E-03
524974	6/22/2020 - 6/29/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	2.28E-02	3.22E-03	3.29E-03
525350	3/30/2020 - 6/29/2020	Nuclide	Activity	2 Sigma Error	MDA
		Cs-134	<1.79E-03	0.00E+00	1.79E-03
		Cs-137	<1.20E-03	0.00E+00	1.20E-03
		Be-7	1.18E-01	3.51E-02	3.73E-02
		K-40	<3.09E-02	0.00E+00	3.09E-02
525343	6/29/2020 - 7/6/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	2.12E-02	2.83E-03	2.94E-03
525571	7/6/2020 - 7/13/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	1.32E-02	2.70E-03	3.26E-03
525921	7/13/2020 - 7/20/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	2.62E-02	3.41E-03	3.50E-03
526255	7/20/2020 - 7/27/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	1.73E-02	2.86E-03	3.05E-03
526542	7/27/2020 - 8/3/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	1.75E-02	2.97E-03	3.40E-03
526861	8/3/2020 - 8/10/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	1.61E-02	2.74E-03	2.96E-03

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
527340	8/10/2020 - 8/17/2020	Beta	1.64E-02	3.04E-03	3.70E-03
527632	8/17/2020 - 8/24/2020	Beta	2.01E-02	2.71E-03	2.72E-03
527931	8/24/2020 - 8/31/2020	Beta	1.87E-02	2.90E-03	3.05E-03
528680	8/31/2020 - 9/8/2020	Beta	2.26E-02	2.91E-03	2.78E-03
529013	9/8/2020 - 9/14/2020	Beta	1.19E-02	3.05E-03	4.07E-03
530006	9/14/2020 - 9/21/2020	Beta	2.04E-02	2.76E-03	2.83E-03
530306	9/21/2020 - 9/28/2020	Beta	2.23E-02	3.05E-03	2.95E-03
531090	6/29/2020 - 9/28/2020	Cs-134	<1.89E-03	0.00E+00	1.89E-03
		Cs-137	<1.02E-03	0.00E+00	1.02E-03
		Be-7	1.20E-01	3.11E-02	2.60E-02
		K-40	<3.26E-02	0.00E+00	3.26E-02
530578	9/28/2020 - 10/5/2020	Beta	1.70E-02	2.91E-03	3.27E-03
531083	10/5/2020 - 10/12/2020	Beta	2.83E-02	3.53E-03	3.55E-03
531687	10/12/2020 - 10/19/2020	Beta	1.87E-02	2.66E-03	2.77E-03
532091	10/19/2020 - 10/26/2020	Beta	1.26E-02	2.63E-03	3.18E-03
532515	10/26/2020 - 11/2/2020	Beta	1.53E-02	2.84E-03	3.26E-03
532824	11/2/2020 - 11/9/2020	Beta	1.59E-02	2.83E-03	3.25E-03
533350	11/9/2020 - 11/16/2020	Beta	1.36E-02	2.78E-03	3.38E-03
533812	11/16/2020 - 11/23/2020	Beta	2.01E-02	3.00E-03	3.12E-03
534112	11/23/2020 - 11/30/2020	Beta	2.62E-02	3.49E-03	3.52E-03
534571	11/30/2020 - 12/7/2020	Beta	2.19E-02	3.17E-03	3.38E-03
535344	12/7/2020 - 12/14/2020	Beta	3.31E-02	3.61E-03	3.04E-03
535902	12/14/2020 - 12/21/2020	Beta	2.16E-02	3.13E-03	3.31E-03
536187	12/21/2020 - 12/28/2020	Beta	2.16E-02	3.15E-03	3.22E-03
536756	9/28/2020 - 12/28/2020	Cs-134	<1.00E-03	0.00E+00	1.00E-03
		Cs-137	<1.46E-03	0.00E+00	1.46E-03
		Be-7	1.67E-01	3.71E-02	2.48E-02
		K-40	<3.88E-02	0.00E+00	3.88E-02

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
514452	12/30/2019 - 1/6/2020	Beta	1.50E-02	2.34E-03	2.46E-03
514912	1/6/2020 - 1/13/2020	Beta	1.51E-02	2.76E-03	3.09E-03
515242	1/13/2020 - 1/20/2020	Beta	1.48E-02	2.78E-03	3.31E-03
515479	1/20/2020 - 1/27/2020	Beta	1.66E-02	2.97E-03	3.42E-03
515869	1/27/2020 - 2/3/2020	Beta	1.82E-02	2.87E-03	3.05E-03
516129	2/3/2020 - 2/10/2020	Beta	1.49E-02	2.80E-03	3.28E-03
516490	2/10/2020 - 2/17/2020	Beta	1.53E-02	2.71E-03	3.04E-03
516873	2/17/2020 - 2/24/2020	Beta	2.40E-02	3.25E-03	3.19E-03
517392	2/24/2020 - 3/2/2020	Beta	1.14E-02	2.63E-03	3.39E-03
517661	3/2/2020 - 3/9/2020	Beta	1.16E-02	2.61E-03	3.21E-03
518692	3/9/2020 - 3/16/2020	Beta	1.87E-02	2.66E-03	2.82E-03
519300	3/16/2020 - 3/23/2020	Beta	1.73E-02	2.50E-03	2.47E-03
519679	3/23/2020 - 3/30/2020	Beta	1.43E-02	2.82E-03	3.40E-03
520275	12/30/2019 - 3/30/2020	Cs-134	<1.59E-03	0.00E+00	1.59E-03
		Cs-137	<1.45E-03	0.00E+00	1.45E-03
		Be-7	1.17E-01	1.72E-02	3.22E-02
		K-40	<2.56E-02	0.00E+00	2.56E-02
520268	3/30/2020 - 4/6/2020	Beta	1.28E-02	2.68E-03	3.26E-03
520495	4/6/2020 - 4/13/2020	Beta	2.58E-02	3.30E-03	3.17E-03
520788	4/13/2020 - 4/20/2020	Beta	2.18E-02	3.14E-03	3.15E-03
521588	4/20/2020 - 4/27/2020	Beta	1.57E-02	2.85E-03	3.30E-03
522022	4/27/2020 - 5/4/2020	Beta	1.48E-02	2.72E-03	3.11E-03
522329	5/4/2020 - 5/11/2020	Beta	1.91E-02	2.59E-03	2.52E-03
522576	5/11/2020 - 5/18/2020	Beta	1.89E-02	3.06E-03	3.43E-03
523084	5/18/2020 - 5/26/2020	Beta	8.29E-03	2.09E-03	2.64E-03
523456	5/26/2020 - 6/1/2020	Beta	1.46E-02	3.03E-03	3.62E-03



# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
523858	6/1/2020 - 6/8/2020	Beta	2.69E-02	3.25E-03	2.81E-03
524421	6/8/2020 - 6/15/2020	Beta	1.63E-02	2.83E-03	3.17E-03
524744	6/15/2020 - 6/22/2020	Beta	1.06E-02	2.60E-03	3.36E-03
524975	6/22/2020 - 6/29/2020	Beta	2.01E-02	3.10E-03	3.31E-03
525351	3/30/2020 - 6/29/2020	Cs-134	<1.62E-03	0.00E+00	1.62E-03
		Cs-137	<1.32E-03	0.00E+00	1.32E-03
		Be-7	1.71E-01	4.37E-02	4.64E-02
		K-40	2.17E-02	1.52E-02	1.96E-02
525344	6/29/2020 - 7/6/2020	Beta	2.30E-02	2.92E-03	2.96E-03
525572	7/6/2020 - 7/13/2020	Beta	1.63E-02	2.85E-03	3.24E-03
525922	7/13/2020 - 7/20/2020	Beta	3.11E-02	3.61E-03	3.49E-03
526256	7/20/2020 - 7/27/2020	Beta	1.68E-02	2.83E-03	3.07E-03
526543	7/27/2020 - 8/3/2020	Beta	1.69E-02	2.94E-03	3.39E-03
526862	8/3/2020 - 8/10/2020	Beta	1.69E-02	2.77E-03	2.94E-03
527341	8/10/2020 - 8/17/2020	Beta	1.64E-02	3.05E-03	3.71E-03
527633	8/17/2020 - 8/24/2020	Beta	2.27E-02	2.82E-03	2.73E-03
527932	8/24/2020 - 8/31/2020	Beta	2.51E-02	3.20E-03	3.04E-03
528681	8/31/2020 - 9/8/2020	Beta	2.37E-02	2.97E-03	2.79E-03
529014	9/8/2020 - 9/14/2020	Beta	1.15E-02	3.02E-03	4.06E-03
530007	9/14/2020 - 9/21/2020	Beta	2.25E-02	2.87E-03	2.84E-03
530307	9/21/2020 - 9/28/2020	Beta	2.24E-02	3.09E-03	2.99E-03
531091	6/29/2020 - 9/28/2020	Cs-134	<1.48E-03	0.00E+00	1.48E-03
		Cs-137	<1.71E-03	0.00E+00	1.71E-03
		Be-7	1.49E-01	3.69E-02	3.36E-02
		K-40	<3.33E-02	0.00E+00	3.33E-02
530579	9/28/2020 - 10/5/2020	Beta	1.97E-02	3.03E-03	3.24E-03
531084	10/5/2020 - 10/12/2020	Beta	3.17E-02	3.64E-03	3.51E-03
531688	10/12/2020 - 10/19/2020	Beta	1.74E-02	2.61E-03	2.79E-03

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
532092	10/19/2020 - 10/26/2020	Beta	1.45E-02	2.76E-03	3.23E-03
532516	10/26/2020 - 11/2/2020	Beta	1.30E-02	2.69E-03	3.21E-03
532825	11/2/2020 - 11/9/2020	Beta	2.07E-02	3.07E-03	3.23E-03
533351	11/9/2020 - 11/16/2020	Beta	1.33E-02	2.77E-03	3.39E-03
533813	11/16/2020 - 11/23/2020	Beta	1.87E-02	2.98E-03	3.18E-03
534113	11/23/2020 - 11/30/2020	Beta	2.97E-02	3.60E-03	3.45E-03
534572	11/30/2020 - 12/7/2020	Beta	1.73E-02	2.95E-03	3.37E-03
535345	12/7/2020 - 12/14/2020	Beta	3.90E-02	3.87E-03	3.06E-03
535903	12/14/2020 - 12/21/2020	Beta	2.17E-02	3.17E-03	3.36E-03
536188	12/21/2020 - 12/28/2020	Beta	2.16E-02	3.12E-03	3.17E-03
536757	9/28/2020 - 12/28/2020	Cs-134	<2.24E-03	0.00E+00	2.24E-03
		Cs-137	<8.10E-04	0.00E+00	8.10E-04
		Be-7	1.11E-01	3.35E-02	3.58E-02
		K-40	<3.57E-02	0.00E+00	3.57E-02

## Sample Point 26 [ INDICATOR - S @ 4.7 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514450	12/30/2019 - 1/6/2020	Beta	1.69E-02	2.49E-03	2.54E-03
514910	1/6/2020 - 1/13/2020	Beta	1.60E-02	2.80E-03	3.07E-03
515240	1/13/2020 - 1/20/2020	Beta	1.41E-02	2.75E-03	3.31E-03
515477	1/20/2020 - 1/27/2020	Beta	1.87E-02	3.08E-03	3.44E-03
515867	1/27/2020 - 2/3/2020	Beta	1.77E-02	2.85E-03	3.08E-03
516127	2/3/2020 - 2/10/2020	Beta	1.41E-02	2.74E-03	3.25E-03
516488	2/10/2020 - 2/17/2020	Beta	1.50E-02	2.69E-03	3.03E-03
516871	2/17/2020 - 2/24/2020	Beta	2.10E-02	3.12E-03	3.20E-03
517390	2/24/2020 - 3/2/2020	Beta	1.36E-02	2.75E-03	3.38E-03
517659	3/2/2020 - 3/9/2020	Beta	1.38E-02	2.73E-03	3.22E-03
518690	3/9/2020 - 3/16/2020	Beta	1.76E-02	2.61E-03	2.80E-03
519298	3/16/2020 - 3/23/2020	Beta	1.58E-02	2.43E-03	2.48E-03

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
519677	3/23/2020 - 3/30/2020	Beta	1.07E-02	2.63E-03	3.43E-03
520273	12/30/2019 - 3/30/2020	Cs-134	<1.46E-03	0.00E+00	1.46E-03
		Cs-137	<1.19E-03	0.00E+00	1.19E-03
		Be-7	1.55E-01	3.80E-02	3.08E-02
		K-40	<2.92E-02	0.00E+00	2.92E-02
520266	3/30/2020 - 4/6/2020	Beta	1.44E-02	2.75E-03	3.25E-03
520493	4/6/2020 - 4/13/2020	Beta	2.14E-02	3.09E-03	3.16E-03
520786	4/13/2020 - 4/20/2020	Beta	2.05E-02	3.08E-03	3.16E-03
521586	4/20/2020 - 4/27/2020	Beta	1.55E-02	2.81E-03	3.25E-03
522020	4/27/2020 - 5/4/2020	Beta	1.35E-02	2.63E-03	3.08E-03
522327	5/4/2020 - 5/11/2020	Beta	1.85E-02	2.56E-03	2.52E-03
522574	5/11/2020 - 5/18/2020	Beta	1.58E-02	2.89E-03	3.40E-03
523082	5/18/2020 - 5/26/2020	Beta	1.08E-02	2.25E-03	2.66E-03
523856	6/1/2020 - 6/8/2020	Beta	2.62E-02	3.22E-03	2.81E-03
524419	6/8/2020 - 6/15/2020	Beta	1.55E-02	2.81E-03	3.20E-03
524742	6/15/2020 - 6/22/2020	Beta	7.96E-03	2.45E-03	3.38E-03
524973	6/22/2020 - 6/29/2020	Beta	1.96E-02	3.07E-03	3.29E-03
525349	3/30/2020 - 6/29/2020	Cs-134	<1.47E-03	0.00E+00	1.47E-03
		Cs-137	<1.83E-03	0.00E+00	1.83E-03
		Be-7	1.51E-01	3.74E-02	2.53E-02
		K-40	<3.40E-02	0.00E+00	3.40E-02
525342	6/29/2020 - 7/6/2020	Beta	2.06E-02	2.73E-03	2.84E-03
525570	7/6/2020 - 7/13/2020	Beta	1.48E-02	2.87E-03	3.40E-03
525920	7/13/2020 - 7/20/2020	Beta	2.73E-02	3.46E-03	3.50E-03
526254	7/20/2020 - 7/27/2020	Beta	1.60E-02	2.79E-03	3.06E-03
526541	7/27/2020 - 8/3/2020	Beta	1.29E-02	2.68E-03	3.32E-03
526860	8/3/2020 - 8/10/2020	Beta	1.46E-02	2.70E-03	3.03E-03
527339	8/10/2020 - 8/17/2020	Beta	1.66E-02	3.04E-03	3.69E-03

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
527631	8/17/2020 - 8/24/2020	Beta	2.06E-02	2.73E-03	2.73E-03
527930	8/24/2020 - 8/31/2020	Beta	1.79E-02	2.79E-03	2.95E-03
528679	8/31/2020 - 9/8/2020	Beta	2.11E-02	2.90E-03	2.87E-03
529012	9/8/2020 - 9/14/2020	Beta	1.12E-02	3.00E-03	4.06E-03
530005	9/14/2020 - 9/21/2020	Beta	1.90E-02	2.71E-03	2.84E-03
530305	9/21/2020 - 9/28/2020	Beta	2.18E-02	3.05E-03	2.98E-03
531089	6/29/2020 - 9/28/2020	Cs-134	<2.12E-03	0.00E+00	2.12E-03
		Cs-137	<1.91E-03	0.00E+00	1.91E-03
		Be-7	1.33E-01	3.42E-02	3.18E-02
		K-40	<3.93E-02	0.00E+00	3.93E-02
530577	9/28/2020 - 10/5/2020	Beta	1.77E-02	2.95E-03	3.27E-03
531082	10/5/2020 - 10/12/2020	Beta	2.71E-02	3.46E-03	3.51E-03
531686	10/12/2020 - 10/19/2020	Beta	1.94E-02	2.69E-03	2.78E-03
532090	10/19/2020 - 10/26/2020	Beta	1.39E-02	2.72E-03	3.21E-03
532514	10/26/2020 - 11/2/2020	Beta	1.43E-02	2.78E-03	3.23E-03
532823	11/2/2020 - 11/9/2020	Beta	2.28E-02	3.17E-03	3.24E-03
533349	11/9/2020 - 11/16/2020	Beta	1.28E-02	2.74E-03	3.39E-03
533811	11/16/2020 - 11/23/2020	Beta	2.07E-02	3.06E-03	3.16E-03
534111	11/23/2020 - 11/30/2020	Beta	2.45E-02	3.37E-03	3.46E-03
534570	11/30/2020 - 12/7/2020	Beta	1.56E-02	2.87E-03	3.38E-03
535343	12/7/2020 - 12/14/2020	Beta	3.19E-02	3.56E-03	3.04E-03
535901	12/14/2020 - 12/21/2020	Beta	1.77E-02	2.98E-03	3.36E-03
536186	12/21/2020 - 12/28/2020	Beta	1.89E-02	2.95E-03	3.13E-03
536755	9/28/2020 - 12/28/2020	Cs-134	<2.13E-03	0.00E+00	2.13E-03
		Cs-137	<1.44E-03	0.00E+00	1.44E-03
		Be-7	1.43E-01	3.50E-02	2.86E-02
		K-40	<3.15E-02	0.00E+00	3.15E-02

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
514453	12/30/2019 - 1/6/2020	Beta	1.64E-02	2.46E-03	2.52E-03
514913	1/6/2020 - 1/13/2020	Beta	1.31E-02	2.64E-03	3.09E-03
515243	1/13/2020 - 1/20/2020	Beta	1.63E-02	2.82E-03	3.24E-03
515480	1/20/2020 - 1/27/2020	Beta	1.55E-02	2.96E-03	3.52E-03
515870	1/27/2020 - 2/3/2020	Beta	1.55E-02	2.72E-03	3.04E-03
516130	2/3/2020 - 2/10/2020	Beta	1.31E-02	2.71E-03	3.29E-03
516491	2/10/2020 - 2/17/2020	Beta	1.62E-02	2.72E-03	2.97E-03
516874	2/17/2020 - 2/24/2020	Beta	1.94E-02	3.08E-03	3.27E-03
517393	2/24/2020 - 3/2/2020	Beta	1.31E-02	2.73E-03	3.38E-03
517662	3/2/2020 - 3/9/2020	Beta	1.14E-02	2.59E-03	3.22E-03
518693	3/9/2020 - 3/16/2020	Beta	1.61E-02	2.50E-03	2.76E-03
519301	3/16/2020 - 3/23/2020	Beta	1.75E-02	2.54E-03	2.53E-03
519680	3/23/2020 - 3/30/2020	Beta	1.26E-02	2.73E-03	3.40E-03
520276	12/30/2019 - 3/30/2020	Cs-134	<1.47E-03	0.00E+00	1.47E-03
		Cs-137	<1.67E-03	0.00E+00	1.67E-03
		Be-7	1.00E-01	3.28E-02	3.50E-02
		K-40	<3.27E-02	0.00E+00	3.27E-02
520269	3/30/2020 - 4/6/2020	Beta	1.28E-02	2.68E-03	3.26E-03
520496	4/6/2020 - 4/13/2020	Beta	2.28E-02	3.11E-03	3.10E-03
520789	4/13/2020 - 4/20/2020	Beta	1.83E-02	3.00E-03	3.22E-03
521589	4/20/2020 - 4/27/2020	Beta	1.54E-02	2.80E-03	3.24E-03
522023	4/27/2020 - 5/4/2020	Beta	1.33E-02	2.66E-03	3.14E-03
522330	5/4/2020 - 5/11/2020	Beta	1.75E-02	2.46E-03	2.44E-03
522577	5/11/2020 - 5/18/2020	Beta	1.36E-02	2.87E-03	3.55E-03
523085	5/18/2020 - 5/26/2020	Beta	9.46E-03	2.14E-03	2.61E-03
523457	5/26/2020 - 6/1/2020	Beta	1.26E-02	2.94E-03	3.69E-03

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
523859	6/1/2020 - 6/8/2020	Beta	2.58E-02	3.13E-03	2.71E-03
524422	6/8/2020 - 6/15/2020	Beta	1.64E-02	2.88E-03	3.25E-03
524745	6/15/2020 - 6/22/2020	Beta	1.20E-02	2.67E-03	3.36E-03
524976	6/22/2020 - 6/29/2020	Beta	1.78E-02	3.00E-03	3.32E-03
525352	3/30/2020 - 6/29/2020	Cs-134	<1.60E-03	0.00E+00	1.60E-03
		Cs-137	<1.31E-03	0.00E+00	1.31E-03
		Be-7	1.36E-01	3.71E-02	3.81E-02
		K-40	2.20E-02	1.42E-02	1.66E-02
525345	6/29/2020 - 7/6/2020	Beta	2.42E-02	2.97E-03	2.97E-03
525573	7/6/2020 - 7/13/2020	Beta	1.35E-02	2.69E-03	3.22E-03
525923	7/13/2020 - 7/20/2020	Beta	2.36E-02	3.29E-03	3.48E-03
526257	7/20/2020 - 7/27/2020	Beta	1.49E-02	2.74E-03	3.07E-03
526544	7/27/2020 - 8/3/2020	Beta	1.66E-02	2.95E-03	3.44E-03
526863	8/3/2020 - 8/10/2020	Beta	1.61E-02	2.71E-03	2.91E-03
527342	8/10/2020 - 8/17/2020	Beta	1.48E-02	2.95E-03	3.69E-03
527634	8/17/2020 - 8/24/2020	Beta	1.90E-02	2.66E-03	2.74E-03
527933	8/24/2020 - 8/31/2020	Beta	2.24E-02	3.07E-03	3.03E-03
528682	8/31/2020 - 9/8/2020	Beta	2.03E-02	2.83E-03	2.83E-03
529015	9/8/2020 - 9/14/2020	Beta	7.90E-03	2.77E-03	3.98E-03
530008	9/14/2020 - 9/21/2020	Beta	1.84E-02	2.69E-03	2.85E-03
530308	9/21/2020 - 9/28/2020	Beta	1.85E-02	2.86E-03	2.94E-03
531092	6/29/2020 - 9/28/2020	Cs-134	<1.92E-03	0.00E+00	1.92E-03
		Cs-137	<2.10E-03	0.00E+00	2.10E-03
		Be-7	1.26E-01	3.80E-02	4.28E-02
		K-40	2.46E-02	1.52E-02	1.66E-02
530580	9/28/2020 - 10/5/2020	Beta	1.94E-02	3.06E-03	3.31E-03
531085	10/5/2020 - 10/12/2020	Beta	2.66E-02	3.44E-03	3.52E-03
531689	10/12/2020 - 10/19/2020	Beta	2.00E-02	2.72E-03	2.78E-03

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
532093	10/19/2020 - 10/26/2020	Beta	1.33E-02	2.66E-03	3.16E-03
532517	10/26/2020 - 11/2/2020	Beta	1.64E-02	2.92E-03	3.27E-03
532826	11/2/2020 - 11/9/2020	Beta	1.74E-02	2.90E-03	3.23E-03
533352	11/9/2020 - 11/16/2020	Beta	1.55E-02	2.89E-03	3.40E-03
533814	11/16/2020 - 11/23/2020	Beta	2.06E-02	3.02E-03	3.11E-03
534114	11/23/2020 - 11/30/2020	Beta	2.57E-02	3.48E-03	3.54E-03
534573	11/30/2020 - 12/7/2020	Beta	1.83E-02	2.98E-03	3.35E-03
535346	12/7/2020 - 12/14/2020	Beta	2.99E-02	3.49E-03	3.07E-03
535904	12/14/2020 - 12/21/2020	Beta	1.70E-02	2.90E-03	3.29E-03
536189	12/21/2020 - 12/28/2020	Beta	2.01E-02	3.08E-03	3.24E-03
536758	9/28/2020 - 12/28/2020	Cs-134	<1.00E-03	0.00E+00	1.00E-03
		Cs-137	<1.67E-03	0.00E+00	1.67E-03
		Be-7	1.33E-01	3.27E-02	2.30E-02
		K-40	1.63E-02	1.22E-02	1.48E-02

## Sample Point 90 [ INDICATOR - SSW @ 0.5 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514454	12/30/2019 - 1/6/2020	Beta	1.64E-02	2.46E-03	2.52E-03
514914	1/6/2020 - 1/13/2020	Beta	1.43E-02	2.71E-03	3.09E-03
515244	1/13/2020 - 1/21/2020	Beta	1.53E-02	2.52E-03	2.84E-03
515481	1/21/2020 - 1/27/2020	Beta	1.67E-02	3.40E-03	4.14E-03
515871	1/27/2020 - 2/3/2020	Beta	1.86E-02	2.88E-03	3.04E-03
516131	2/3/2020 - 2/10/2020	Beta	1.44E-02	2.78E-03	3.29E-03
516492	2/10/2020 - 2/17/2020	Beta	1.44E-02	2.62E-03	2.97E-03
516875	2/17/2020 - 2/24/2020	Beta	2.24E-02	3.23E-03	3.27E-03
517394	2/24/2020 - 3/2/2020	Beta	1.27E-02	2.70E-03	3.38E-03
517663	3/2/2020 - 3/9/2020	Beta	1.60E-02	2.86E-03	3.22E-03
518694	3/9/2020 - 3/16/2020	Beta	1.82E-02	2.61E-03	2.76E-03
519302	3/16/2020 - 3/23/2020	Beta	1.75E-02	2.54E-03	2.53E-03

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
519681	3/23/2020 - 3/30/2020	Beta	1.55E-02	2.88E-03	3.40E-03
520277	12/30/2019 - 3/30/2020	Nuclide	Activity	2 Sigma Error	MDA
		Cs-134	<1.91E-03	0.00E+00	1.91E-03
		Cs-137	<1.19E-03	0.00E+00	1.19E-03
		Be-7	1.61E-01	3.79E-02	2.77E-02
		K-40	<2.79E-02	0.00E+00	2.79E-02
520270	3/30/2020 - 4/6/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	1.38E-02	2.73E-03	3.26E-03
520497	4/6/2020 - 4/13/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	2.45E-02	3.19E-03	3.10E-03
520790	4/13/2020 - 4/20/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	2.40E-02	3.30E-03	3.22E-03
521590	4/20/2020 - 4/27/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	1.31E-02	2.68E-03	3.24E-03
522024	4/27/2020 - 5/4/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	1.50E-02	2.75E-03	3.14E-03
522331	5/4/2020 - 5/11/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	1.92E-02	2.54E-03	2.44E-03
522578	5/11/2020 - 5/18/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	1.56E-02	2.97E-03	3.55E-03
523086	5/18/2020 - 5/26/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	1.07E-02	2.22E-03	2.61E-03
523458	5/26/2020 - 6/1/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	1.13E-02	2.86E-03	3.69E-03
523860	6/1/2020 - 6/8/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	2.63E-02	3.15E-03	2.71E-03
524423	6/8/2020 - 6/15/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	1.58E-02	2.86E-03	3.25E-03
524746	6/15/2020 - 6/22/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	9.20E-03	2.51E-03	3.36E-03
524977	6/22/2020 - 6/29/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	2.47E-02	3.33E-03	3.32E-03
525353	3/30/2020 - 6/29/2020	Nuclide	Activity	2 Sigma Error	MDA
		Cs-134	<1.63E-03	0.00E+00	1.63E-03
		Cs-137	<8.18E-04	0.00E+00	8.18E-04
		Be-7	1.30E-01	3.35E-02	2.73E-02
		K-40	<3.05E-02	0.00E+00	3.05E-02
525346	6/29/2020 - 7/6/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	1.90E-02	2.74E-03	2.97E-03
525574	7/6/2020 - 7/13/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	1.31E-02	2.68E-03	3.22E-03
525924	7/13/2020 - 7/20/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	2.48E-02	3.34E-03	3.48E-03
526258	7/20/2020 - 7/27/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	1.79E-02	2.90E-03	3.07E-03
526545	7/27/2020 - 8/3/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	1.39E-02	2.81E-03	3.44E-03
526864	8/3/2020 - 8/10/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	1.52E-02	2.66E-03	2.91E-03



# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
527343	8/10/2020 - 8/17/2020	Beta	1.63E-02	3.03E-03	3.69E-03
527635	8/17/2020 - 8/24/2020	Beta	2.10E-02	2.76E-03	2.74E-03
527934	8/24/2020 - 8/31/2020	Beta	1.90E-02	2.90E-03	3.03E-03
528683	8/31/2020 - 9/8/2020	Beta	2.25E-02	2.93E-03	2.83E-03
529016	9/8/2020 - 9/14/2020	Beta	1.20E-02	3.00E-03	3.98E-03
530009	9/14/2020 - 9/21/2020	Beta	2.07E-02	2.79E-03	2.85E-03
530309	9/21/2020 - 9/28/2020	Beta	2.35E-02	3.11E-03	2.94E-03
531093	6/29/2020 - 9/28/2020	Cs-134	<1.78E-03	0.00E+00	1.78E-03
		Cs-137	<1.46E-03	0.00E+00	1.46E-03
		Be-7	1.41E-01	3.41E-02	2.77E-02
		K-40	<3.20E-02	0.00E+00	3.20E-02
530581	9/28/2020 - 10/5/2020	Beta	1.74E-02	2.95E-03	3.31E-03
531086	10/5/2020 - 10/12/2020	Beta	3.35E-02	3.72E-03	3.52E-03
531690	10/12/2020 - 10/19/2020	Beta	1.91E-02	2.68E-03	2.78E-03
532094	10/19/2020 - 10/26/2020	Beta	1.29E-02	2.64E-03	3.16E-03
532518	10/26/2020 - 11/2/2020	Beta	1.52E-02	2.86E-03	3.27E-03
532827	11/2/2020 - 11/9/2020	Beta	2.10E-02	3.07E-03	3.23E-03
533353	11/9/2020 - 11/16/2020	Beta	1.55E-02	2.89E-03	3.39E-03
533815	11/16/2020 - 11/23/2020	Beta	1.80E-02	2.89E-03	3.11E-03
534115	11/23/2020 - 11/30/2020	Beta	2.49E-02	3.45E-03	3.54E-03
534574	11/30/2020 - 12/7/2020	Beta	2.14E-02	3.13E-03	3.35E-03
535347	12/7/2020 - 12/14/2020	Beta	3.41E-02	3.67E-03	3.07E-03
535905	12/14/2020 - 12/21/2020	Beta	1.75E-02	2.92E-03	3.29E-03
536190	12/21/2020 - 12/28/2020	Beta	2.16E-02	3.17E-03	3.24E-03
536759	9/28/2020 - 12/28/2020	Cs-134	<1.77E-03	0.00E+00	1.77E-03
		Cs-137	<1.19E-03	0.00E+00	1.19E-03
		Be-7	1.60E-01	3.89E-02	3.51E-02
		K-40	3.44E-02	1.68E-02	1.55E-02

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
514455	12/30/2019 - 1/6/2020	Beta	1.63E-02	2.45E-03	2.53E-03
514915	1/6/2020 - 1/13/2020	Beta	2.09E-02	3.09E-03	3.08E-03
515245	1/13/2020 - 1/20/2020	Beta	1.81E-02	2.91E-03	3.24E-03
515482	1/20/2020 - 1/27/2020	Beta	1.90E-02	3.14E-03	3.52E-03
515872	1/27/2020 - 2/3/2020	Beta	1.68E-02	2.79E-03	3.04E-03
516132	2/3/2020 - 2/10/2020	Beta	1.93E-02	3.04E-03	3.29E-03
516493	2/10/2020 - 2/17/2020	Beta	1.82E-02	2.83E-03	2.97E-03
516876	2/17/2020 - 2/24/2020	Beta	2.17E-02	3.20E-03	3.26E-03
517395	2/24/2020 - 3/2/2020	Beta	1.67E-02	2.92E-03	3.39E-03
517664	3/2/2020 - 3/9/2020	Beta	1.58E-02	2.85E-03	3.22E-03
518695	3/9/2020 - 3/16/2020	Beta	2.12E-02	2.74E-03	2.76E-03
519303	3/16/2020 - 3/23/2020	Beta	1.68E-02	2.51E-03	2.53E-03
519682	3/23/2020 - 3/30/2020	Beta	1.52E-02	2.87E-03	3.40E-03
520278	12/30/2019 - 3/30/2020	Cs-134	<2.21E-03	0.00E+00	2.21E-03
		Cs-137	<1.37E-03	0.00E+00	1.37E-03
		Be-7	1.48E-01	3.94E-02	3.72E-02
		K-40	1.63E-02	1.23E-02	1.48E-02
520271	3/30/2020 - 4/6/2020	Beta	1.29E-02	2.68E-03	3.26E-03
520498	4/6/2020 - 4/13/2020	Beta	2.37E-02	3.17E-03	3.10E-03
520791	4/13/2020 - 4/20/2020	Beta	2.09E-02	3.14E-03	3.22E-03
521591	4/20/2020 - 4/27/2020	Beta	1.52E-02	2.80E-03	3.24E-03
522025	4/27/2020 - 5/4/2020	Beta	1.42E-02	2.74E-03	3.20E-03
522332	5/4/2020 - 5/11/2020	Beta	1.72E-02	2.44E-03	2.44E-03
522579	5/11/2020 - 5/18/2020	Beta	1.67E-02	3.00E-03	3.50E-03
523087	5/18/2020 - 5/26/2020	Beta	1.02E-02	2.22E-03	2.67E-03
523459	5/26/2020 - 6/1/2020	Beta	1.18E-02	2.83E-03	3.58E-03

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
523861	6/1/2020 - 6/8/2020	Beta	2.81E-02	3.26E-03	2.74E-03
524424	6/8/2020 - 6/15/2020	Beta	1.81E-02	2.98E-03	3.24E-03
524747	6/15/2020 - 6/22/2020	Beta	8.99E-03	2.48E-03	3.32E-03
524978	6/22/2020 - 6/29/2020	Beta	2.01E-02	3.14E-03	3.36E-03
525354	3/30/2020 - 6/29/2020	Cs-134	<1.50E-03	0.00E+00	1.50E-03
		Cs-137	<1.23E-03	0.00E+00	1.23E-03
		Be-7	1.72E-01	3.68E-02	1.62E-02
		K-40	1.51E-02	1.28E-02	1.74E-02
525347	6/29/2020 - 7/6/2020	Beta	2.02E-02	2.72E-03	2.84E-03
525575	7/6/2020 - 7/13/2020	Beta	1.43E-02	2.83E-03	3.38E-03
525925	7/13/2020 - 7/20/2020	Beta	2.37E-02	3.30E-03	3.49E-03
526259	7/20/2020 - 7/27/2020	Beta	2.39E-02	3.22E-03	3.07E-03
526546	7/27/2020 - 8/3/2020	Beta	1.71E-02	2.88E-03	3.28E-03
526865	8/3/2020 - 8/10/2020	Beta	1.57E-02	2.78E-03	3.06E-03
527344	8/10/2020 - 8/17/2020	Beta	1.50E-02	2.97E-03	3.69E-03
527636	8/17/2020 - 8/24/2020	Beta	1.78E-02	2.60E-03	2.73E-03
527935	8/24/2020 - 8/31/2020	Beta	2.15E-02	2.99E-03	2.97E-03
528684	8/31/2020 - 9/8/2020	Beta	2.33E-02	3.00E-03	2.86E-03
529017	9/8/2020 - 9/15/2020	Beta	1.47E-02	2.89E-03	3.53E-03
530010	9/15/2020 - 9/21/2020	Beta	1.90E-02	2.97E-03	3.25E-03
530310	9/21/2020 - 9/28/2020	Beta	2.01E-02	2.94E-03	2.94E-03
531094	6/29/2020 - 9/28/2020	Cs-134	<1.24E-03	0.00E+00	1.24E-03
		Cs-137	<1.55E-03	0.00E+00	1.55E-03
		Be-7	1.30E-01	3.39E-02	3.19E-02
		K-40	<3.74E-02	0.00E+00	3.74E-02
530582	9/28/2020 - 10/5/2020	Beta	1.63E-02	2.89E-03	3.30E-03
531087	10/5/2020 - 10/12/2020	Beta	2.84E-02	3.50E-03	3.51E-03
531691	10/12/2020 - 10/19/2020	Beta	2.07E-02	2.76E-03	2.79E-03

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
532095	10/19/2020 - 10/26/2020	Beta	1.49E-02	2.75E-03	3.17E-03
532519	10/26/2020 - 11/2/2020	Beta	1.70E-02	2.95E-03	3.27E-03
532828	11/2/2020 - 11/9/2020	Beta	1.69E-02	2.87E-03	3.23E-03
533354	11/9/2020 - 11/16/2020	Beta	1.75E-02	3.00E-03	3.39E-03
533816	11/16/2020 - 11/23/2020	Beta	2.34E-02	3.17E-03	3.12E-03
534116	11/23/2020 - 11/30/2020	Beta	2.38E-02	3.40E-03	3.54E-03
534575	11/30/2020 - 12/7/2020	Beta	1.96E-02	3.05E-03	3.35E-03
535348	12/7/2020 - 12/14/2020	Beta	2.96E-02	3.47E-03	3.06E-03
535906	12/14/2020 - 12/21/2020	Beta	1.71E-02	2.92E-03	3.31E-03
536191	12/21/2020 - 12/28/2020	Beta	2.27E-02	3.24E-03	3.26E-03
536760	9/28/2020 - 12/28/2020	Cs-134	<1.29E-03	0.00E+00	1.29E-03
		Cs-137	<1.23E-03	0.00E+00	1.23E-03
		Be-7	1.49E-01	3.65E-02	2.99E-02
		K-40	<2.42E-02	0.00E+00	2.42E-02

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
514463	12/30/2019 - 1/6/2020	I-131	<2.16E-02	0.00E+00	2.16E-02
		Cs-134	<1.83E-02	0.00E+00	1.83E-02
		Cs-137	<1.67E-02	0.00E+00	1.67E-02
		Be-7	<1.42E-01	0.00E+00	1.42E-01
		K-40	4.64E-01	1.92E-01	2.12E-01
514916	1/6/2020 - 1/13/2020	I-131	<1.85E-02	0.00E+00	1.85E-02
		Cs-134	<1.26E-02	0.00E+00	1.26E-02
		Cs-137	<1.25E-02	0.00E+00	1.25E-02
		Be-7	<1.13E-01	0.00E+00	1.13E-01
		K-40	2.46E-01	1.32E-01	1.50E-01
515246	1/13/2020 - 1/20/2020	I-131	<1.73E-02	0.00E+00	1.73E-02
		Cs-134	<1.23E-02	0.00E+00	1.23E-02
		Cs-137	<1.73E-02	0.00E+00	1.73E-02
		Be-7	<8.73E-02	0.00E+00	8.73E-02
		K-40	5.26E-01	1.88E-01	1.82E-01
515483	1/20/2020 - 1/27/2020	I-131	<2.00E-02	0.00E+00	2.00E-02
		Cs-134	<1.74E-02	0.00E+00	1.74E-02
		Cs-137	<1.96E-02	0.00E+00	1.96E-02
		Be-7	<1.35E-01	0.00E+00	1.35E-01
		K-40	2.80E-01	1.86E-01	2.65E-01
515873	1/27/2020 - 2/3/2020	I-131	<1.96E-02	0.00E+00	1.96E-02
		Cs-134	<1.88E-02	0.00E+00	1.88E-02
		Cs-137	<1.71E-02	0.00E+00	1.71E-02

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
515873	1/27/2020 - 2/3/2020	Be-7	<1.36E-01	0.00E+00	1.36E-01
		K-40	5.48E-01	2.30E-01	2.84E-01
516133	2/3/2020 - 2/10/2020	I-131	<1.39E-02	0.00E+00	1.39E-02
		Cs-134	<9.63E-03	0.00E+00	9.63E-03
		Cs-137	<1.34E-02	0.00E+00	1.34E-02
		Be-7	<1.16E-01	0.00E+00	1.16E-01
		K-40	2.16E-01	1.73E-01	2.58E-01
516494	2/10/2020 - 2/17/2020	I-131	<1.74E-02	0.00E+00	1.74E-02
		Cs-134	<1.54E-02	0.00E+00	1.54E-02
		Cs-137	<1.33E-02	0.00E+00	1.33E-02
		Be-7	<9.68E-02	0.00E+00	9.68E-02
		K-40	4.05E-01	1.43E-01	3.23E-02
516877	2/17/2020 - 2/24/2020	I-131	<2.10E-02	0.00E+00	2.10E-02
		Cs-134	<1.89E-02	0.00E+00	1.89E-02
		Cs-137	<1.83E-02	0.00E+00	1.83E-02
		Be-7	<1.23E-01	0.00E+00	1.23E-01
		K-40	4.91E-01	1.79E-01	1.43E-01
517396	2/24/2020 - 3/2/2020	I-131	<1.93E-02	0.00E+00	1.93E-02
		Cs-134	<1.59E-02	0.00E+00	1.59E-02
		Cs-137	<1.08E-02	0.00E+00	1.08E-02
		Be-7	<1.12E-01	0.00E+00	1.12E-01
		K-40	3.87E-01	1.57E-01	1.47E-01
517665	3/2/2020 - 3/9/2020	I-131	<1.96E-02	0.00E+00	1.96E-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	<1.51E-01	0.00E+00	1.51E-01
		K-40	3.61E-01	1.72E-01	2.00E-01
518696	3/9/2020 - 3/16/2020	I-131	<2.17E-02	0.00E+00	2.17E-02
		Cs-134	<1.77E-02	0.00E+00	1.77E-02
		Cs-137	<1.56E-02	0.00E+00	1.56E-02
		Be-7	<1.36E-01	0.00E+00	1.36E-01
		K-40	5.39E-01	1.76E-01	1.16E-01
519304	3/16/2020 - 3/23/2020	I-131	<2.75E-02	0.00E+00	2.75E-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	<1.62E-01	0.00E+00	1.62E-01
		K-40	4.87E-01	2.09E-01	2.31E-01
519683	3/23/2020 - 3/30/2020	I-131	<1.87E-02	0.00E+00	1.87E-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	<1.01E-01	0.00E+00	1.01E-01
		K-40	4.61E-01	2.01E-01	2.45E-01
520279	3/30/2020 - 4/6/2020	I-131	<2.38E-02	0.00E+00	2.38E-02
		Cs-134	<1.95E-02	0.00E+00	1.95E-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	2.86E-01	1.49E-01	1.71E-01
520499	4/6/2020 - 4/13/2020	I-131	<3.52E-02	0.00E+00	3.52E-02

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
520499	4/6/2020 - 4/13/2020	Cs-134	<2.07E-02	0.00E+00	2.07E-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	5.82E-01	1.89E-01	1.47E-01
520792	4/13/2020 - 4/20/2020	I-131	<1.86E-02	0.00E+00	1.86E-02
		Cs-134	<1.67E-02	0.00E+00	1.67E-02
		Cs-137	<1.68E-02	0.00E+00	1.68E-02
		Be-7	2.50E-02	8.99E-02	1.59E-01
		K-40	4.00E-01	1.91E-01	2.35E-01
521592	4/20/2020 - 4/27/2020	I-131	<2.14E-02	0.00E+00	2.14E-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	<1.47E-01	0.00E+00	1.47E-01
		K-40	4.13E-01	1.91E-01	2.31E-01
522026	4/27/2020 - 5/4/2020	I-131	<1.81E-02	0.00E+00	1.81E-02
		Cs-134	<2.04E-02	0.00E+00	2.04E-02
		Cs-137	<1.55E-02	0.00E+00	1.55E-02
		Be-7	<1.10E-01	0.00E+00	1.10E-01
		K-40	3.85E-01	1.67E-01	1.80E-01
522333	5/4/2020 - 5/11/2020	I-131	<1.61E-02	0.00E+00	1.61E-02
		Cs-134	<1.57E-02	0.00E+00	1.57E-02
		Cs-137	<1.15E-02	0.00E+00	1.15E-02
		Be-7	1.51E-02	8.30E-02	1.48E-01
		K-40	4.31E-01	1.58E-01	1.18E-01
522580	5/11/2020 - 5/18/2020	I-131	<1.16E-02	0.00E+00	1.16E-02
		Cs-134	<1.57E-02	0.00E+00	1.57E-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	5.25E-01	2.09E-01	2.37E-01
523088	5/18/2020 - 5/26/2020	I-131	<1.40E-02	0.00E+00	1.40E-02
		Cs-134	<9.59E-03	0.00E+00	9.59E-03
		Cs-137	<1.28E-02	0.00E+00	1.28E-02
		Be-7	<8.97E-02	0.00E+00	8.97E-02
		K-40	3.76E-01	1.43E-01	1.06E-01
523460	5/26/2020 - 6/1/2020	I-131	<2.11E-02	0.00E+00	2.11E-02
		Cs-134	<1.89E-02	0.00E+00	1.89E-02
		Cs-137	<1.78E-02	0.00E+00	1.78E-02
		Be-7	<1.23E-01	0.00E+00	1.23E-01
		K-40	4.18E-01	2.03E-01	2.46E-01
523862	6/1/2020 - 6/8/2020	I-131	<1.63E-02	0.00E+00	1.63E-02
		Cs-134	<1.82E-02	0.00E+00	1.82E-02
		Cs-137	<1.58E-02	0.00E+00	1.58E-02
		Be-7	<1.09E-01	0.00E+00	1.09E-01
		K-40	5.71E-01	1.86E-01	1.49E-01
524425	6/8/2020 - 6/15/2020	I-131	<1.43E-02	0.00E+00	1.43E-02
		Cs-134	<1.91E-02	0.00E+00	1.91E-02
		Cs-137	<1.36E-02	0.00E+00	1.36E-02
		Be-7	<1.02E-01	0.00E+00	1.02E-01
		K-40	3.29E-01	1.51E-01	1.44E-01

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
524748	6/15/2020 - 6/22/2020	I-131	<1.86E-02	0.00E+00	1.86E-02
		Cs-134	<1.69E-02	0.00E+00	1.69E-02
		Cs-137	<1.01E-02	0.00E+00	1.01E-02
		Be-7	<1.11E-01	0.00E+00	1.11E-01
		K-40	<1.65E-01	0.00E+00	1.65E-01
524979	6/22/2020 - 6/29/2020	I-131	<1.65E-02	0.00E+00	1.65E-02
		Cs-134	<1.54E-02	0.00E+00	1.54E-02
		Cs-137	<1.18E-02	0.00E+00	1.18E-02
		Be-7	<1.01E-01	0.00E+00	1.01E-01
		K-40	5.99E-01	2.04E-01	1.93E-01
525355	6/29/2020 - 7/6/2020	I-131	<2.00E-02	0.00E+00	2.00E-02
		Cs-134	<1.36E-02	0.00E+00	1.36E-02
		Cs-137	<1.31E-02	0.00E+00	1.31E-02
		Be-7	<1.12E-01	0.00E+00	1.12E-01
		K-40	4.66E-01	1.75E-01	1.62E-01
525576	7/6/2020 - 7/13/2020	I-131	<1.67E-02	0.00E+00	1.67E-02
		Cs-134	<1.55E-02	0.00E+00	1.55E-02
		Cs-137	<1.34E-02	0.00E+00	1.34E-02
		Be-7	<6.46E-02	0.00E+00	6.46E-02
		K-40	<2.94E-01	0.00E+00	2.94E-01
525929	7/13/2020 - 7/20/2020	I-131	<1.96E-02	0.00E+00	1.96E-02
		Cs-134	<1.53E-02	0.00E+00	1.53E-02
		Cs-137	<1.63E-02	0.00E+00	1.63E-02
		Be-7	<9.33E-02	0.00E+00	9.33E-02
		K-40	3.90E-01	1.52E-01	1.18E-01
526260	7/20/2020 - 7/27/2020	I-131	<1.71E-02	0.00E+00	1.71E-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	<9.71E-02	0.00E+00	9.71E-02
		K-40	4.62E-01	1.86E-01	2.02E-01
526547	7/27/2020 - 8/3/2020	I-131	<2.17E-02	0.00E+00	2.17E-02
		Cs-134	<1.81E-02	0.00E+00	1.81E-02
		Cs-137	<1.32E-02	0.00E+00	1.32E-02
		Be-7	<1.20E-01	0.00E+00	1.20E-01
		K-40	<3.64E-01	0.00E+00	3.64E-01
526866	8/3/2020 - 8/10/2020	I-131	<1.69E-02	0.00E+00	1.69E-02
		Cs-134	<1.75E-02	0.00E+00	1.75E-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	5.68E-01	1.87E-01	1.47E-01
527345	8/10/2020 - 8/17/2020	I-131	<1.88E-02	0.00E+00	1.88E-02
		Cs-134	<1.45E-02	0.00E+00	1.45E-02
		Cs-137	<1.39E-02	0.00E+00	1.39E-02
		Be-7	<1.34E-01	0.00E+00	1.34E-01
		K-40	4.72E-01	2.00E-01	2.36E-01
527637	8/17/2020 - 8/24/2020	I-131	<1.65E-02	0.00E+00	1.65E-02
		Cs-134	<1.73E-02	0.00E+00	1.73E-02
		Cs-137	<1.55E-02	0.00E+00	1.55E-02
		Be-7	<1.20E-01	0.00E+00	1.20E-01
		K-40	4.46E-01	2.18E-01	2.91E-01

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
527936	8/24/2020 - 8/31/2020	I-131	<1.59E-02	0.00E+00	1.59E-02
		Cs-134	<1.86E-02	0.00E+00	1.86E-02
		Cs-137	<1.37E-02	0.00E+00	1.37E-02
		Be-7	<1.00E-01	0.00E+00	1.00E-01
		K-40	5.02E-01	1.76E-01	1.45E-01
528685	8/31/2020 - 9/8/2020	I-131	<1.33E-02	0.00E+00	1.33E-02
		Cs-134	<1.71E-02	0.00E+00	1.71E-02
		Cs-137	<1.65E-02	0.00E+00	1.65E-02
		Be-7	<1.00E-01	0.00E+00	1.00E-01
		K-40	5.96E-01	1.86E-01	1.62E-01
529018	9/8/2020 - 9/14/2020	I-131	<2.09E-02	0.00E+00	2.09E-02
		Cs-134	<2.02E-02	0.00E+00	2.02E-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	6.33E-01	2.40E-01	2.64E-01
530011	9/14/2020 - 9/21/2020	I-131	<1.66E-02	0.00E+00	1.66E-02
		Cs-134	<1.12E-02	0.00E+00	1.12E-02
		Cs-137	<1.69E-02	0.00E+00	1.69E-02
		Be-7	<1.04E-01	0.00E+00	1.04E-01
		K-40	<3.58E-01	0.00E+00	3.58E-01
530311	9/21/2020 - 9/28/2020	I-131	<2.03E-02	0.00E+00	2.03E-02
		Cs-134	<1.00E-02	0.00E+00	1.00E-02
		Cs-137	<8.69E-03	0.00E+00	8.69E-03
		Be-7	<1.06E-01	0.00E+00	1.06E-01
		K-40	5.26E-01	1.64E-01	3.24E-02
530583	9/28/2020 - 10/5/2020	I-131	<1.38E-02	0.00E+00	1.38E-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	<8.60E-02	0.00E+00	8.60E-02
		K-40	2.51E-01	1.25E-01	1.16E-01
531095	10/5/2020 - 10/12/2020	I-131	<1.83E-02	0.00E+00	1.83E-02
		Cs-134	<1.37E-02	0.00E+00	1.37E-02
		Cs-137	<1.33E-02	0.00E+00	1.33E-02
		Be-7	<1.27E-01	0.00E+00	1.27E-01
		K-40	4.88E-01	2.07E-01	2.48E-01
531692	10/12/2020 - 10/19/2020	I-131	<1.65E-02	0.00E+00	1.65E-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	<1.23E-01	0.00E+00	1.23E-01
		K-40	4.92E-01	2.19E-01	2.79E-01
532096	10/19/2020 - 10/26/2020	I-131	<1.72E-02	0.00E+00	1.72E-02
		Cs-134	<1.13E-02	0.00E+00	1.13E-02
		Cs-137	<1.41E-02	0.00E+00	1.41E-02
		Be-7	<1.00E-01	0.00E+00	1.00E-01
		K-40	4.40E-01	1.75E-01	1.79E-01
532520	10/26/2020 - 11/2/2020	I-131	<1.91E-02	0.00E+00	1.91E-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	<1.10E-01	0.00E+00	1.10E-01
		K-40	4.72E-01	1.90E-01	2.05E-01



# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
532829	11/2/2020 - 11/9/2020	I-131	<2.18E-02	0.00E+00	2.18E-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	3.03E-02	9.36E-02	1.63E-01
		K-40	6.03E-01	2.08E-01	2.02E-01
533355	11/9/2020 - 11/16/2020	I-131	<2.10E-02	0.00E+00	2.10E-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	<1.12E-01	0.00E+00	1.12E-01
		K-40	6.76E-01	2.22E-01	2.15E-01
533817	11/16/2020 - 11/23/2020	I-131	<1.94E-02	0.00E+00	1.94E-02
		Cs-134	<1.23E-02	0.00E+00	1.23E-02
		Cs-137	<1.66E-02	0.00E+00	1.66E-02
		Be-7	<1.08E-01	0.00E+00	1.08E-01
		K-40	7.18E-01	1.97E-01	3.36E-02
534117	11/23/2020 - 11/30/2020	I-131	<2.05E-02	0.00E+00	2.05E-02
		Cs-134	<1.81E-02	0.00E+00	1.81E-02
		Cs-137	<1.92E-02	0.00E+00	1.92E-02
		Be-7	<1.31E-01	0.00E+00	1.31E-01
		K-40	5.58E-01	2.28E-01	2.71E-01
534576	11/30/2020 - 12/7/2020	I-131	<2.09E-02	0.00E+00	2.09E-02
		Cs-134	<1.59E-02	0.00E+00	1.59E-02
		Cs-137	<1.54E-02	0.00E+00	1.54E-02
		Be-7	<1.04E-01	0.00E+00	1.04E-01
		K-40	4.78E-01	1.95E-01	2.17E-01
535349	12/7/2020 - 12/14/2020	I-131	<1.48E-02	0.00E+00	1.48E-02
		Cs-134	<1.38E-02	0.00E+00	1.38E-02
		Cs-137	<7.84E-03	0.00E+00	7.84E-03
		Be-7	<9.41E-02	0.00E+00	9.41E-02
		K-40	3.83E-01	1.69E-01	1.83E-01
535907	12/14/2020 - 12/21/2020	I-131	<1.96E-02	0.00E+00	1.96E-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	<1.17E-01	0.00E+00	1.17E-01
		K-40	7.06E-01	2.17E-01	1.94E-01
536192	12/21/2020 - 12/28/2020	I-131	<3.00E-02	0.00E+00	3.00E-02
		Cs-134	<1.34E-02	0.00E+00	1.34E-02
		Cs-137	<1.48E-02	0.00E+00	1.48E-02
		Be-7	<9.05E-02	0.00E+00	9.05E-02
		K-40	<3.23E-01	0.00E+00	3.23E-01
<b>Sample Point 4 [ INDICATOR - NNE @ 3.1 miles ]</b>					
514465	12/30/2019 - 1/6/2020	I-131	<1.67E-02	0.00E+00	1.67E-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	<1.21E-01	0.00E+00	1.21E-01
		K-40	3.30E-01	1.44E-01	1.37E-01
514918	1/6/2020 - 1/13/2020	I-131	<1.55E-02	0.00E+00	1.55E-02
		Cs-134	<1.87E-02	0.00E+00	1.87E-02
		Cs-137	<1.48E-02	0.00E+00	1.48E-02

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
514918	1/6/2020 - 1/13/2020	Be-7	<8.99E-02	0.00E+00	8.99E-02
		K-40	<3.60E-01	0.00E+00	3.60E-01
515248	1/13/2020 - 1/20/2020	I-131	<1.97E-02	0.00E+00	1.97E-02
		Cs-134	<1.82E-02	0.00E+00	1.82E-02
		Cs-137	<1.41E-02	0.00E+00	1.41E-02
		Be-7	<1.00E-01	0.00E+00	1.00E-01
		K-40	4.01E-01	1.66E-01	1.72E-01
515485	1/20/2020 - 1/27/2020	I-131	<1.46E-02	0.00E+00	1.46E-02
		Cs-134	<1.57E-02	0.00E+00	1.57E-02
		Cs-137	<1.55E-02	0.00E+00	1.55E-02
		Be-7	<1.09E-01	0.00E+00	1.09E-01
		K-40	3.43E-01	1.57E-01	1.65E-01
515875	1/27/2020 - 2/3/2020	I-131	<1.30E-02	0.00E+00	1.30E-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	<1.10E-01	0.00E+00	1.10E-01
		K-40	2.48E-01	1.52E-01	2.03E-01
516135	2/3/2020 - 2/10/2020	I-131	<2.17E-02	0.00E+00	2.17E-02
		Cs-134	<1.55E-02	0.00E+00	1.55E-02
		Cs-137	<1.80E-02	0.00E+00	1.80E-02
		Be-7	<1.15E-01	0.00E+00	1.15E-01
		K-40	5.18E-01	2.03E-01	2.27E-01
516496	2/10/2020 - 2/17/2020	I-131	<1.71E-02	0.00E+00	1.71E-02
		Cs-134	<1.22E-02	0.00E+00	1.22E-02
		Cs-137	<1.27E-02	0.00E+00	1.27E-02
		Be-7	<8.51E-02	0.00E+00	8.51E-02
		K-40	2.34E-01	1.33E-01	1.61E-01
516879	2/17/2020 - 2/24/2020	I-131	<1.88E-02	0.00E+00	1.88E-02
		Cs-134	<1.82E-02	0.00E+00	1.82E-02
		Cs-137	<1.67E-02	0.00E+00	1.67E-02
		Be-7	<1.52E-01	0.00E+00	1.52E-01
		K-40	3.00E-01	1.81E-01	2.45E-01
517398	2/24/2020 - 3/2/2020	I-131	<1.59E-02	0.00E+00	1.59E-02
		Cs-134	<1.49E-02	0.00E+00	1.49E-02
		Cs-137	<1.59E-02	0.00E+00	1.59E-02
		Be-7	<9.58E-02	0.00E+00	9.58E-02
		K-40	<2.51E-01	0.00E+00	2.51E-01
517667	3/2/2020 - 3/9/2020	I-131	<1.78E-02	0.00E+00	1.78E-02
		Cs-134	<1.37E-02	0.00E+00	1.37E-02
		Cs-137	<1.40E-02	0.00E+00	1.40E-02
		Be-7	<9.74E-02	0.00E+00	9.74E-02
		K-40	1.91E-01	1.27E-01	1.66E-01
518698	3/9/2020 - 3/16/2020	I-131	<1.66E-02	0.00E+00	1.66E-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	<1.21E-01	0.00E+00	1.21E-01
		K-40	3.70E-01	1.82E-01	2.31E-01
519306	3/16/2020 - 3/23/2020	Nuclide	Activity	2 Sigma Error	MDA
		I-131	<1.98E-02	0.00E+00	1.98E-02

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
519306	3/16/2020 - 3/23/2020	Cs-134	<1.74E-02	0.00E+00	1.74E-02
		Cs-137	<1.56E-02	0.00E+00	1.56E-02
		Be-7	<1.10E-01	0.00E+00	1.10E-01
		K-40	4.85E-01	1.76E-01	1.46E-01
519685	3/23/2020 - 3/30/2020	I-131	<1.73E-02	0.00E+00	1.73E-02
		Cs-134	<1.15E-02	0.00E+00	1.15E-02
		Cs-137	<7.67E-03	0.00E+00	7.67E-03
		Be-7	<1.01E-01	0.00E+00	1.01E-01
520281	3/30/2020 - 4/6/2020	K-40	8.38E-02	1.09E-01	1.78E-01
		I-131	<1.60E-02	0.00E+00	1.60E-02
		Cs-134	<1.36E-02	0.00E+00	1.36E-02
		Cs-137	<1.78E-02	0.00E+00	1.78E-02
520501	4/6/2020 - 4/13/2020	Be-7	<7.45E-02	0.00E+00	7.45E-02
		K-40	3.28E-01	1.67E-01	2.05E-01
		I-131	<3.01E-02	0.00E+00	3.01E-02
		Cs-134	<1.70E-02	0.00E+00	1.70E-02
520794	4/13/2020 - 4/20/2020	Cs-137	<1.90E-02	0.00E+00	1.90E-02
		Be-7	<1.25E-01	0.00E+00	1.25E-01
		K-40	4.27E-01	1.87E-01	2.22E-01
		I-131	<2.13E-02	0.00E+00	2.13E-02
521594	4/20/2020 - 4/27/2020	Cs-134	<1.49E-02	0.00E+00	1.49E-02
		Cs-137	<1.29E-02	0.00E+00	1.29E-02
		Be-7	<1.12E-01	0.00E+00	1.12E-01
		K-40	2.23E-01	1.25E-01	1.40E-01
522028	4/27/2020 - 5/4/2020	I-131	<1.80E-02	0.00E+00	1.80E-02
		Cs-134	<8.94E-03	0.00E+00	8.94E-03
		Cs-137	<1.62E-02	0.00E+00	1.62E-02
		Be-7	<1.24E-01	0.00E+00	1.24E-01
522335	5/4/2020 - 5/11/2020	K-40	6.07E-01	1.92E-01	1.41E-01
		I-131	<1.35E-02	0.00E+00	1.35E-02
		Cs-134	<1.88E-02	0.00E+00	1.88E-02
		Cs-137	<1.28E-02	0.00E+00	1.28E-02
522582	5/11/2020 - 5/18/2020	Be-7	<1.12E-01	0.00E+00	1.12E-01
		K-40	3.98E-01	1.68E-01	1.81E-01
		I-131	<1.69E-02	0.00E+00	1.69E-02
		Cs-134	<1.75E-02	0.00E+00	1.75E-02
523090	5/18/2020 - 5/26/2020	Cs-137	<1.30E-02	0.00E+00	1.30E-02
		Be-7	<1.09E-01	0.00E+00	1.09E-01
		K-40	3.03E-01	1.61E-01	1.96E-01
		I-131	<1.92E-02	0.00E+00	1.92E-02
		Cs-134	<1.09E-02	0.00E+00	1.09E-02
		Cs-137	<1.35E-02	0.00E+00	1.35E-02
		Be-7	<9.99E-02	0.00E+00	9.99E-02
		K-40	5.07E-01	1.59E-01	1.02E-01

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
523462	5/26/2020 - 6/1/2020	I-131	<2.33E-02	0.00E+00	2.33E-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	<1.47E-01	0.00E+00	1.47E-01
		K-40	4.89E-01	2.11E-01	2.41E-01
523864	6/1/2020 - 6/8/2020	I-131	<1.57E-02	0.00E+00	1.57E-02
		Cs-134	<1.19E-02	0.00E+00	1.19E-02
		Cs-137	<1.37E-02	0.00E+00	1.37E-02
		Be-7	<8.71E-02	0.00E+00	8.71E-02
		K-40	<3.32E-01	0.00E+00	3.32E-01
524427	6/8/2020 - 6/15/2020	I-131	<1.57E-02	0.00E+00	1.57E-02
		Cs-134	<1.53E-02	0.00E+00	1.53E-02
		Cs-137	<1.67E-02	0.00E+00	1.67E-02
		Be-7	<1.12E-01	0.00E+00	1.12E-01
		K-40	5.29E-01	1.91E-01	1.85E-01
524750	6/15/2020 - 6/22/2020	I-131	<1.82E-02	0.00E+00	1.82E-02
		Cs-134	<1.27E-02	0.00E+00	1.27E-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	3.26E-01	1.46E-01	1.41E-01
524981	6/22/2020 - 6/29/2020	I-131	<1.66E-02	0.00E+00	1.66E-02
		Cs-134	<1.33E-02	0.00E+00	1.33E-02
		Cs-137	<1.42E-02	0.00E+00	1.42E-02
		Be-7	<1.05E-01	0.00E+00	1.05E-01
		K-40	3.47E-01	2.05E-01	2.90E-01
525357	6/29/2020 - 7/6/2020	I-131	<1.71E-02	0.00E+00	1.71E-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	<9.84E-02	0.00E+00	9.84E-02
		K-40	3.22E-01	1.55E-01	1.79E-01
525578	7/6/2020 - 7/13/2020	I-131	<2.24E-02	0.00E+00	2.24E-02
		Cs-134	<2.13E-02	0.00E+00	2.13E-02
		Cs-137	<1.01E-02	0.00E+00	1.01E-02
		Be-7	<9.78E-02	0.00E+00	9.78E-02
		K-40	2.90E-01	1.88E-01	2.69E-01
525931	7/13/2020 - 7/20/2020	I-131	<1.72E-02	0.00E+00	1.72E-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	<9.44E-02	0.00E+00	9.44E-02
		K-40	5.63E-01	1.91E-01	1.67E-01
526262	7/20/2020 - 7/27/2020	I-131	<1.72E-02	0.00E+00	1.72E-02
		Cs-134	<1.73E-02	0.00E+00	1.73E-02
		Cs-137	<1.66E-02	0.00E+00	1.66E-02
		Be-7	<1.03E-01	0.00E+00	1.03E-01
		K-40	3.14E-01	1.75E-01	2.32E-01
526549	7/27/2020 - 8/3/2020	I-131	<2.05E-02	0.00E+00	2.05E-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	<1.20E-01	0.00E+00	1.20E-01
		K-40	5.17E-01	1.76E-01	1.36E-01

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
526868	8/3/2020 - 8/10/2020	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	<1.13E-01	0.00E+00	1.13E-01
		K-40	4.50E-01	2.05E-01	2.57E-01
527347	8/10/2020 - 8/17/2020	I-131	<1.53E-02	0.00E+00	1.53E-02
		Cs-134	<1.92E-02	0.00E+00	1.92E-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	2.74E-01	1.97E-01	2.94E-01
527639	8/17/2020 - 8/24/2020	I-131	<1.76E-02	0.00E+00	1.76E-02
		Cs-134	<1.94E-02	0.00E+00	1.94E-02
		Cs-137	<1.57E-02	0.00E+00	1.57E-02
		Be-7	<6.76E-02	0.00E+00	6.76E-02
		K-40	3.23E-01	1.50E-01	1.59E-01
527938	8/24/2020 - 8/31/2020	I-131	<1.67E-02	0.00E+00	1.67E-02
		Cs-134	<1.87E-02	0.00E+00	1.87E-02
		Cs-137	<1.13E-02	0.00E+00	1.13E-02
		Be-7	<1.26E-01	0.00E+00	1.26E-01
		K-40	4.71E-01	1.74E-01	1.62E-01
528687	8/31/2020 - 9/8/2020	I-131	<1.97E-02	0.00E+00	1.97E-02
		Cs-134	<1.18E-02	0.00E+00	1.18E-02
		Cs-137	<1.36E-02	0.00E+00	1.36E-02
		Be-7	<1.05E-01	0.00E+00	1.05E-01
		K-40	4.46E-01	1.82E-01	2.16E-01
529020	9/8/2020 - 9/14/2020	I-131	<2.37E-02	0.00E+00	2.37E-02
		Cs-134	<1.98E-02	0.00E+00	1.98E-02
		Cs-137	<1.44E-02	0.00E+00	1.44E-02
		Be-7	<1.46E-01	0.00E+00	1.46E-01
		K-40	7.67E-01	2.40E-01	1.75E-01
530013	9/14/2020 - 9/21/2020	I-131	<2.10E-02	0.00E+00	2.10E-02
		Cs-134	<1.17E-02	0.00E+00	1.17E-02
		Cs-137	<1.26E-02	0.00E+00	1.26E-02
		Be-7	<1.09E-01	0.00E+00	1.09E-01
		K-40	5.69E-01	2.13E-01	2.34E-01
530313	9/21/2020 - 9/28/2020	I-131	<1.54E-02	0.00E+00	1.54E-02
		Cs-134	<2.57E-03	0.00E+00	2.57E-03
		Cs-137	<1.07E-02	0.00E+00	1.07E-02
		Be-7	<8.29E-02	0.00E+00	8.29E-02
		K-40	2.94E-01	1.73E-01	2.34E-01
530585	9/28/2020 - 10/5/2020	I-131	<1.85E-02	0.00E+00	1.85E-02
		Cs-134	<1.98E-02	0.00E+00	1.98E-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	<4.02E-01	0.00E+00	4.02E-01
531097	10/5/2020 - 10/12/2020	I-131	<2.00E-02	0.00E+00	2.00E-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	<1.15E-01	0.00E+00	1.15E-01
		K-40	4.87E-01	2.06E-01	2.47E-01

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
531694	10/12/2020 - 10/19/2020	I-131	<1.77E-02	0.00E+00	1.77E-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	<9.73E-02	0.00E+00	9.73E-02
		K-40	7.22E-01	2.30E-01	2.28E-01
532098	10/19/2020 - 10/26/2020	I-131	<1.85E-02	0.00E+00	1.85E-02
		Cs-134	<1.49E-02	0.00E+00	1.49E-02
		Cs-137	<1.29E-02	0.00E+00	1.29E-02
		Be-7	<1.14E-01	0.00E+00	1.14E-01
		K-40	5.60E-01	1.88E-01	1.63E-01
532522	10/26/2020 - 11/2/2020	I-131	<1.90E-02	0.00E+00	1.90E-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	<1.29E-01	0.00E+00	1.29E-01
		K-40	4.97E-01	2.13E-01	2.49E-01
532831	11/2/2020 - 11/9/2020	I-131	<1.68E-02	0.00E+00	1.68E-02
		Cs-134	<1.51E-02	0.00E+00	1.51E-02
		Cs-137	<1.65E-02	0.00E+00	1.65E-02
		Be-7	<1.17E-01	0.00E+00	1.17E-01
		K-40	4.21E-01	1.56E-01	1.16E-01
533357	11/9/2020 - 11/16/2020	I-131	<1.63E-02	0.00E+00	1.63E-02
		Cs-134	<1.70E-02	0.00E+00	1.70E-02
		Cs-137	<1.10E-02	0.00E+00	1.10E-02
		Be-7	<6.76E-02	0.00E+00	6.76E-02
		K-40	<3.17E-01	0.00E+00	3.17E-01
533819	11/16/2020 - 11/23/2020	I-131	<1.82E-02	0.00E+00	1.82E-02
		Cs-134	<1.54E-02	0.00E+00	1.54E-02
		Cs-137	<1.56E-02	0.00E+00	1.56E-02
		Be-7	<1.04E-01	0.00E+00	1.04E-01
		K-40	5.10E-01	2.25E-01	2.92E-01
534119	11/23/2020 - 11/30/2020	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	<1.24E-01	0.00E+00	1.24E-01
		K-40	5.28E-01	2.03E-01	2.16E-01
534578	11/30/2020 - 12/7/2020	I-131	<2.07E-02	0.00E+00	2.07E-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	<1.17E-01	0.00E+00	1.17E-01
		K-40	4.97E-01	2.14E-01	2.65E-01
535351	12/7/2020 - 12/14/2020	I-131	<1.83E-02	0.00E+00	1.83E-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	<1.13E-01	0.00E+00	1.13E-01
		K-40	5.20E-01	2.02E-01	2.23E-01
535909	12/14/2020 - 12/21/2020	I-131	<1.26E-02	0.00E+00	1.26E-02
		Cs-134	<1.54E-02	0.00E+00	1.54E-02
		Cs-137	<1.27E-02	0.00E+00	1.27E-02
		Be-7	<9.82E-02	0.00E+00	9.82E-02
		K-40	3.68E-01	1.44E-01	1.08E-01

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
536194	12/21/2020 - 12/28/2020	I-131	<4.24E-02	0.00E+00	4.24E-02
		Cs-134	<1.52E-02	0.00E+00	1.52E-02
		Cs-137	<2.07E-02	0.00E+00	2.07E-02
		Be-7	<1.12E-01	0.00E+00	1.12E-01
		K-40	4.28E-01	1.67E-01	1.39E-01

## Sample Point 5 [ CONTROL - WNW @ 12 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514466	12/30/2019 - 1/6/2020	I-131	<1.69E-02	0.00E+00	1.69E-02
		Cs-134	<1.57E-02	0.00E+00	1.57E-02
		Cs-137	<1.22E-02	0.00E+00	1.22E-02
		Be-7	<9.50E-02	0.00E+00	9.50E-02
		K-40	3.43E-01	1.45E-01	1.32E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514919	1/6/2020 - 1/13/2020	I-131	<2.59E-02	0.00E+00	2.59E-02
		Cs-134	<1.85E-02	0.00E+00	1.85E-02
		Cs-137	<1.84E-02	0.00E+00	1.84E-02
		Be-7	<1.53E-01	0.00E+00	1.53E-01
		K-40	6.54E-01	2.18E-01	2.06E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
515249	1/13/2020 - 1/20/2020	I-131	<1.62E-02	0.00E+00	1.62E-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	<7.24E-02	0.00E+00	7.24E-02
		K-40	1.23E-01	1.18E-01	1.78E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
515486	1/20/2020 - 1/27/2020	I-131	<1.69E-02	0.00E+00	1.69E-02
		Cs-134	<1.68E-02	0.00E+00	1.68E-02
		Cs-137	<1.52E-02	0.00E+00	1.52E-02
		Be-7	<8.83E-02	0.00E+00	8.83E-02
		K-40	2.10E-01	1.42E-01	1.93E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
515876	1/27/2020 - 2/3/2020	I-131	<1.54E-02	0.00E+00	1.54E-02
		Cs-134	<1.36E-02	0.00E+00	1.36E-02
		Cs-137	<1.45E-02	0.00E+00	1.45E-02
		Be-7	<1.04E-01	0.00E+00	1.04E-01
		K-40	2.42E-01	1.56E-01	2.14E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
516136	2/3/2020 - 2/10/2020	I-131	<1.79E-02	0.00E+00	1.79E-02
		Cs-134	<1.71E-02	0.00E+00	1.71E-02
		Cs-137	<1.01E-02	0.00E+00	1.01E-02
		Be-7	<9.85E-02	0.00E+00	9.85E-02
		K-40	4.59E-01	2.24E-01	2.98E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
516497	2/10/2020 - 2/17/2020	I-131	<1.35E-02	0.00E+00	1.35E-02
		Cs-134	<1.67E-02	0.00E+00	1.67E-02
		Cs-137	<1.25E-02	0.00E+00	1.25E-02
		Be-7	<7.83E-02	0.00E+00	7.83E-02
		K-40	2.77E-01	1.32E-01	1.26E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
516880	2/17/2020 - 2/24/2020	I-131	<1.71E-02	0.00E+00	1.71E-02
		Cs-134	<2.03E-02	0.00E+00	2.03E-02
		Cs-137	<1.65E-02	0.00E+00	1.65E-02
		Be-7	<8.47E-02	0.00E+00	8.47E-02
		K-40	6.12E-01	2.05E-01	1.88E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
517399	2/24/2020 - 3/2/2020	I-131	<2.02E-02	0.00E+00	2.02E-02
		Cs-134	<1.83E-02	0.00E+00	1.83E-02
		Cs-137	<1.45E-02	0.00E+00	1.45E-02

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
517399	2/24/2020 - 3/2/2020	Be-7	<7.04E-02	0.00E+00	7.04E-02
		K-40	<3.59E-01	0.00E+00	3.59E-01
517668	3/2/2020 - 3/9/2020	I-131	<1.14E-02	0.00E+00	1.14E-02
		Cs-134	<1.56E-02	0.00E+00	1.56E-02
		Cs-137	<1.42E-02	0.00E+00	1.42E-02
		Be-7	<7.44E-02	0.00E+00	7.44E-02
		K-40	<1.68E-01	0.00E+00	1.68E-01
518699	3/9/2020 - 3/16/2020	I-131	<1.69E-02	0.00E+00	1.69E-02
		Cs-134	<1.66E-02	0.00E+00	1.66E-02
		Cs-137	<1.16E-02	0.00E+00	1.16E-02
		Be-7	<1.02E-01	0.00E+00	1.02E-01
		K-40	3.79E-01	1.48E-01	1.12E-01
519307	3/16/2020 - 3/23/2020	I-131	<2.00E-02	0.00E+00	2.00E-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	<1.23E-01	0.00E+00	1.23E-01
		K-40	3.88E-01	1.54E-01	1.30E-01
519686	3/23/2020 - 3/30/2020	I-131	<1.84E-02	0.00E+00	1.84E-02
		Cs-134	<1.16E-02	0.00E+00	1.16E-02
		Cs-137	<1.45E-02	0.00E+00	1.45E-02
		Be-7	<1.16E-01	0.00E+00	1.16E-01
		K-40	<1.50E-01	0.00E+00	1.50E-01
520282	3/30/2020 - 4/6/2020	I-131	<1.49E-02	0.00E+00	1.49E-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	<8.92E-02	0.00E+00	8.92E-02
		K-40	2.85E-01	1.35E-01	1.34E-01
520502	4/6/2020 - 4/13/2020	I-131	<2.34E-02	0.00E+00	2.34E-02
		Cs-134	<1.58E-02	0.00E+00	1.58E-02
		Cs-137	<9.79E-03	0.00E+00	9.79E-03
		Be-7	<8.27E-02	0.00E+00	8.27E-02
		K-40	2.17E-01	1.23E-01	1.42E-01
520795	4/13/2020 - 4/20/2020	I-131	<3.99E-02	0.00E+00	3.99E-02
		Cs-134	<1.73E-02	0.00E+00	1.73E-02
		Cs-137	<1.85E-02	0.00E+00	1.85E-02
		Be-7	<1.50E-01	0.00E+00	1.50E-01
		K-40	5.09E-01	1.68E-01	3.54E-02
521595	4/20/2020 - 4/27/2020	I-131	<1.62E-02	0.00E+00	1.62E-02
		Cs-134	<1.53E-02	0.00E+00	1.53E-02
		Cs-137	<1.32E-02	0.00E+00	1.32E-02
		Be-7	<1.05E-01	0.00E+00	1.05E-01
		K-40	5.11E-01	2.03E-01	2.30E-01
522029	4/27/2020 - 5/4/2020	I-131	<1.33E-02	0.00E+00	1.33E-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	<9.64E-02	0.00E+00	9.64E-02
		K-40	1.33E-01	9.98E-02	1.28E-01
522336	5/4/2020 - 5/11/2020	Nuclide	Activity	2 Sigma Error	MDA
		I-131	<1.59E-02	0.00E+00	1.59E-02



# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
522336	5/4/2020 - 5/11/2020	Cs-134	<1.55E-02	0.00E+00	1.55E-02
		Cs-137	<1.40E-02	0.00E+00	1.40E-02
		Be-7	<9.67E-02	0.00E+00	9.67E-02
		K-40	3.21E-01	1.87E-01	2.59E-01
522583	5/11/2020 - 5/18/2020	I-131	<1.22E-02	0.00E+00	1.22E-02
		Cs-134	<1.25E-02	0.00E+00	1.25E-02
		Cs-137	<1.42E-02	0.00E+00	1.42E-02
		Be-7	<9.47E-02	0.00E+00	9.47E-02
		K-40	<3.75E-01	0.00E+00	3.75E-01
523091	5/18/2020 - 5/26/2020	I-131	<1.53E-02	0.00E+00	1.53E-02
		Cs-134	<1.54E-02	0.00E+00	1.54E-02
		Cs-137	<1.42E-02	0.00E+00	1.42E-02
		Be-7	<9.46E-02	0.00E+00	9.46E-02
		K-40	3.85E-01	1.71E-01	2.08E-01
523463	5/26/2020 - 6/1/2020	I-131	<1.78E-02	0.00E+00	1.78E-02
		Cs-134	<1.87E-02	0.00E+00	1.87E-02
		Cs-137	<1.76E-02	0.00E+00	1.76E-02
		Be-7	<7.83E-02	0.00E+00	7.83E-02
		K-40	5.23E-01	2.00E-01	1.85E-01
523865	6/1/2020 - 6/8/2020	I-131	<1.50E-02	0.00E+00	1.50E-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	<7.75E-02	0.00E+00	7.75E-02
		K-40	<2.93E-01	0.00E+00	2.93E-01
524428	6/8/2020 - 6/15/2020	I-131	<1.69E-02	0.00E+00	1.69E-02
		Cs-134	<1.04E-02	0.00E+00	1.04E-02
		Cs-137	<1.00E-02	0.00E+00	1.00E-02
		Be-7	<1.02E-01	0.00E+00	1.02E-01
		K-40	<2.98E-01	0.00E+00	2.98E-01
524751	6/15/2020 - 6/22/2020	I-131	<1.81E-02	0.00E+00	1.81E-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	<1.15E-01	0.00E+00	1.15E-01
		K-40	1.85E-01	9.98E-02	3.58E-02
524982	6/22/2020 - 6/29/2020	I-131	<1.61E-02	0.00E+00	1.61E-02
		Cs-134	<1.38E-02	0.00E+00	1.38E-02
		Cs-137	<1.41E-02	0.00E+00	1.41E-02
		Be-7	<9.92E-02	0.00E+00	9.92E-02
		K-40	3.01E-01	1.71E-01	2.26E-01
525358	6/29/2020 - 7/6/2020	I-131	<2.02E-02	0.00E+00	2.02E-02
		Cs-134	<1.68E-02	0.00E+00	1.68E-02
		Cs-137	<1.73E-02	0.00E+00	1.73E-02
		Be-7	<9.94E-02	0.00E+00	9.94E-02
		K-40	<3.26E-01	0.00E+00	3.26E-01
525579	7/6/2020 - 7/13/2020	I-131	<1.92E-02	0.00E+00	1.92E-02
		Cs-134	<1.15E-02	0.00E+00	1.15E-02
		Cs-137	<1.38E-02	0.00E+00	1.38E-02
		Be-7	<9.27E-02	0.00E+00	9.27E-02
		K-40	5.74E-01	1.88E-01	1.50E-01

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
525932	7/13/2020 - 7/20/2020	I-131	<2.18E-02	0.00E+00	2.18E-02
		Cs-134	<1.60E-02	0.00E+00	1.60E-02
		Cs-137	<1.17E-02	0.00E+00	1.17E-02
		Be-7	<1.05E-01	0.00E+00	1.05E-01
		K-40	3.98E-01	1.56E-01	1.31E-01
526263	7/20/2020 - 7/27/2020	I-131	<1.67E-02	0.00E+00	1.67E-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	<1.08E-01	0.00E+00	1.08E-01
		K-40	3.64E-01	1.61E-01	1.74E-01
526550	7/27/2020 - 8/3/2020	I-131	<1.58E-02	0.00E+00	1.58E-02
		Cs-134	<1.60E-02	0.00E+00	1.60E-02
		Cs-137	<1.50E-02	0.00E+00	1.50E-02
		Be-7	<8.89E-02	0.00E+00	8.89E-02
		K-40	4.65E-01	1.90E-01	2.12E-01
526869	8/3/2020 - 8/10/2020	I-131	<2.09E-02	0.00E+00	2.09E-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	2.98E-02	6.25E-02	1.09E-01
		K-40	5.96E-01	1.84E-01	1.18E-01
527348	8/10/2020 - 8/17/2020	I-131	<1.41E-02	0.00E+00	1.41E-02
		Cs-134	<1.68E-02	0.00E+00	1.68E-02
		Cs-137	<1.52E-02	0.00E+00	1.52E-02
		Be-7	<9.39E-02	0.00E+00	9.39E-02
		K-40	3.02E-01	2.06E-01	3.03E-01
527640	8/17/2020 - 8/24/2020	I-131	<2.07E-02	0.00E+00	2.07E-02
		Cs-134	<1.44E-02	0.00E+00	1.44E-02
		Cs-137	<8.95E-03	0.00E+00	8.95E-03
		Be-7	<7.27E-02	0.00E+00	7.27E-02
		K-40	4.11E-01	1.79E-01	2.05E-01
527939	8/24/2020 - 8/31/2020	I-131	<1.45E-02	0.00E+00	1.45E-02
		Cs-134	<1.42E-02	0.00E+00	1.42E-02
		Cs-137	<1.16E-02	0.00E+00	1.16E-02
		Be-7	<9.33E-02	0.00E+00	9.33E-02
		K-40	2.49E-01	1.46E-01	1.86E-01
528688	8/31/2020 - 9/8/2020	I-131	<1.62E-02	0.00E+00	1.62E-02
		Cs-134	<1.44E-02	0.00E+00	1.44E-02
		Cs-137	<1.24E-02	0.00E+00	1.24E-02
		Be-7	<8.72E-02	0.00E+00	8.72E-02
		K-40	4.58E-01	1.70E-01	1.77E-01
529021	9/8/2020 - 9/14/2020	I-131	<1.76E-02	0.00E+00	1.76E-02
		Cs-134	<1.88E-02	0.00E+00	1.88E-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	5.94E-01	2.26E-01	2.44E-01
530014	9/14/2020 - 9/21/2020	I-131	<1.48E-02	0.00E+00	1.48E-02
		Cs-134	<1.38E-02	0.00E+00	1.38E-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	6.49E-01	2.18E-01	2.13E-01

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
530314	9/21/2020 - 9/28/2020	I-131	<2.16E-02	0.00E+00	2.16E-02
		Cs-134	<1.22E-02	0.00E+00	1.22E-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	5.80E-01	1.81E-01	3.57E-02
530586	9/28/2020 - 10/5/2020	I-131	<1.50E-02	0.00E+00	1.50E-02
		Cs-134	<1.90E-02	0.00E+00	1.90E-02
		Cs-137	<9.02E-03	0.00E+00	9.02E-03
		Be-7	<9.26E-02	0.00E+00	9.26E-02
		K-40	<3.44E-01	0.00E+00	3.44E-01
531098	10/5/2020 - 10/12/2020	I-131	<1.67E-02	0.00E+00	1.67E-02
		Cs-134	<1.37E-02	0.00E+00	1.37E-02
		Cs-137	<9.01E-03	0.00E+00	9.01E-03
		Be-7	<9.32E-02	0.00E+00	9.32E-02
		K-40	3.81E-01	1.51E-01	1.21E-01
531695	10/12/2020 - 10/19/2020	I-131	<1.75E-02	0.00E+00	1.75E-02
		Cs-134	<1.87E-02	0.00E+00	1.87E-02
		Cs-137	<1.95E-02	0.00E+00	1.95E-02
		Be-7	<9.98E-02	0.00E+00	9.98E-02
		K-40	3.87E-01	1.93E-01	2.50E-01
532099	10/19/2020 - 10/26/2020	I-131	<2.11E-02	0.00E+00	2.11E-02
		Cs-134	<8.85E-03	0.00E+00	8.85E-03
		Cs-137	<9.85E-03	0.00E+00	9.85E-03
		Be-7	<7.11E-02	0.00E+00	7.11E-02
		K-40	4.92E-01	1.34E-01	1.27E-01
532523	10/26/2020 - 11/2/2020	I-131	<1.96E-02	0.00E+00	1.96E-02
		Cs-134	<1.37E-02	0.00E+00	1.37E-02
		Cs-137	<1.40E-02	0.00E+00	1.40E-02
		Be-7	<1.19E-01	0.00E+00	1.19E-01
		K-40	4.35E-01	1.74E-01	1.76E-01
532832	11/2/2020 - 11/9/2020	I-131	<1.61E-02	0.00E+00	1.61E-02
		Cs-134	<1.68E-02	0.00E+00	1.68E-02
		Cs-137	<1.25E-02	0.00E+00	1.25E-02
		Be-7	<8.36E-02	0.00E+00	8.36E-02
		K-40	<3.31E-01	0.00E+00	3.31E-01
533358	11/9/2020 - 11/16/2020	I-131	<1.68E-02	0.00E+00	1.68E-02
		Cs-134	<1.15E-02	0.00E+00	1.15E-02
		Cs-137	<1.39E-02	0.00E+00	1.39E-02
		Be-7	<1.15E-01	0.00E+00	1.15E-01
		K-40	5.67E-01	1.93E-01	1.74E-01
533820	11/16/2020 - 11/23/2020	I-131	<1.29E-02	0.00E+00	1.29E-02
		Cs-134	<1.65E-02	0.00E+00	1.65E-02
		Cs-137	<1.55E-02	0.00E+00	1.55E-02
		Be-7	<1.08E-01	0.00E+00	1.08E-01
		K-40	4.42E-01	1.69E-01	1.56E-01
534120	11/23/2020 - 11/30/2020	I-131	<1.74E-02	0.00E+00	1.74E-02
		Cs-134	<1.46E-02	0.00E+00	1.46E-02
		Cs-137	<1.27E-02	0.00E+00	1.27E-02
		Be-7	<1.23E-01	0.00E+00	1.23E-01
		K-40	7.87E-01	2.08E-01	3.38E-02

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
534579	11/30/2020 - 12/7/2020	I-131	<1.71E-02	0.00E+00	1.71E-02
		Cs-134	<1.53E-02	0.00E+00	1.53E-02
		Cs-137	<1.32E-02	0.00E+00	1.32E-02
		Be-7	<7.30E-02	0.00E+00	7.30E-02
		K-40	2.87E-01	1.22E-01	3.38E-02
535352	12/7/2020 - 12/14/2020	I-131	<1.79E-02	0.00E+00	1.79E-02
		Cs-134	<1.48E-02	0.00E+00	1.48E-02
		Cs-137	<1.27E-02	0.00E+00	1.27E-02
		Be-7	<9.88E-02	0.00E+00	9.88E-02
		K-40	<2.79E-01	0.00E+00	2.79E-01
535910	12/14/2020 - 12/21/2020	I-131	<1.75E-02	0.00E+00	1.75E-02
		Cs-134	<1.23E-02	0.00E+00	1.23E-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	6.60E-01	1.85E-01	3.25E-02
536195	12/21/2020 - 12/28/2020	I-131	<3.47E-02	0.00E+00	3.47E-02
		Cs-134	<2.01E-02	0.00E+00	2.01E-02
		Cs-137	<1.62E-02	0.00E+00	1.62E-02
		Be-7	<9.44E-02	0.00E+00	9.44E-02
		K-40	2.98E-01	1.86E-01	2.61E-01
<b>Sample Point 26 [ INDICATOR - S @ 4.7 miles ]</b>					
514464	12/30/2019 - 1/6/2020	I-131	<1.85E-02	0.00E+00	1.85E-02
		Cs-134	<1.82E-02	0.00E+00	1.82E-02
		Cs-137	<1.62E-02	0.00E+00	1.62E-02
		Be-7	<1.08E-01	0.00E+00	1.08E-01
		K-40	<3.77E-01	0.00E+00	3.77E-01
514917	1/6/2020 - 1/13/2020	I-131	<1.26E-02	0.00E+00	1.26E-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	<1.04E-01	0.00E+00	1.04E-01
		K-40	3.14E-01	1.49E-01	1.59E-01
515247	1/13/2020 - 1/20/2020	I-131	<1.89E-02	0.00E+00	1.89E-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	<1.04E-01	0.00E+00	1.04E-01
		K-40	3.61E-01	1.72E-01	2.06E-01
515484	1/20/2020 - 1/27/2020	I-131	<1.79E-02	0.00E+00	1.79E-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	<8.51E-02	0.00E+00	8.51E-02
		K-40	4.18E-01	1.82E-01	2.07E-01
515874	1/27/2020 - 2/3/2020	I-131	<2.01E-02	0.00E+00	2.01E-02
		Cs-134	<1.68E-02	0.00E+00	1.68E-02
		Cs-137	<1.17E-02	0.00E+00	1.17E-02
		Be-7	<9.59E-02	0.00E+00	9.59E-02
		K-40	4.62E-01	1.67E-01	1.32E-01
516134	2/3/2020 - 2/10/2020	I-131	<2.23E-02	0.00E+00	2.23E-02
		Cs-134	<1.46E-02	0.00E+00	1.46E-02
		Cs-137	<1.78E-02	0.00E+00	1.78E-02

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
516134	2/3/2020 - 2/10/2020	Be-7	<1.45E-01	0.00E+00	1.45E-01
		K-40	5.30E-01	1.81E-01	1.34E-01
516495	2/10/2020 - 2/17/2020	I-131	<1.55E-02	0.00E+00	1.55E-02
		Cs-134	<1.58E-02	0.00E+00	1.58E-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	4.32E-01	1.61E-01	1.29E-01
516878	2/17/2020 - 2/24/2020	I-131	<2.18E-02	0.00E+00	2.18E-02
		Cs-134	<1.56E-02	0.00E+00	1.56E-02
		Cs-137	<1.48E-02	0.00E+00	1.48E-02
		Be-7	<9.88E-02	0.00E+00	9.88E-02
		K-40	5.26E-01	1.93E-01	1.88E-01
517397	2/24/2020 - 3/2/2020	I-131	<1.96E-02	0.00E+00	1.96E-02
		Cs-134	<1.84E-02	0.00E+00	1.84E-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	5.56E-01	1.79E-01	1.21E-01
517666	3/2/2020 - 3/9/2020	I-131	<1.73E-02	0.00E+00	1.73E-02
		Cs-134	<1.63E-02	0.00E+00	1.63E-02
		Cs-137	<1.48E-02	0.00E+00	1.48E-02
		Be-7	<8.50E-02	0.00E+00	8.50E-02
		K-40	4.01E-01	1.83E-01	2.17E-01
518697	3/9/2020 - 3/16/2020	I-131	<1.72E-02	0.00E+00	1.72E-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	<9.28E-02	0.00E+00	9.28E-02
		K-40	5.91E-01	1.93E-01	1.61E-01
519305	3/16/2020 - 3/23/2020	I-131	<1.89E-02	0.00E+00	1.89E-02
		Cs-134	<1.47E-02	0.00E+00	1.47E-02
		Cs-137	<1.70E-02	0.00E+00	1.70E-02
		Be-7	<9.65E-02	0.00E+00	9.65E-02
		K-40	3.47E-01	1.71E-01	2.06E-01
519684	3/23/2020 - 3/30/2020	I-131	<1.79E-02	0.00E+00	1.79E-02
		Cs-134	<1.52E-02	0.00E+00	1.52E-02
		Cs-137	<1.62E-02	0.00E+00	1.62E-02
		Be-7	<9.88E-02	0.00E+00	9.88E-02
		K-40	2.87E-01	1.49E-01	1.76E-01
520280	3/30/2020 - 4/6/2020	I-131	<1.71E-02	0.00E+00	1.71E-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	<1.10E-01	0.00E+00	1.10E-01
		K-40	4.25E-01	1.72E-01	1.75E-01
520500	4/6/2020 - 4/13/2020	I-131	<2.80E-02	0.00E+00	2.80E-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	<1.15E-01	0.00E+00	1.15E-01
		K-40	<3.83E-01	0.00E+00	3.83E-01
520793	4/13/2020 - 4/20/2020	I-131	<2.54E-02	0.00E+00	2.54E-02

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
520793	4/13/2020 - 4/20/2020	Cs-134	<9.13E-03	0.00E+00	9.13E-03
		Cs-137	<1.60E-02	0.00E+00	1.60E-02
		Be-7	<9.93E-02	0.00E+00	9.93E-02
		K-40	4.04E-01	1.75E-01	1.90E-01
521593	4/20/2020 - 4/27/2020	I-131	<1.60E-02	0.00E+00	1.60E-02
		Cs-134	<1.36E-02	0.00E+00	1.36E-02
		Cs-137	<1.68E-02	0.00E+00	1.68E-02
		Be-7	<1.12E-01	0.00E+00	1.12E-01
		K-40	4.04E-01	1.83E-01	2.17E-01
522027	4/27/2020 - 5/4/2020	I-131	<1.86E-02	0.00E+00	1.86E-02
		Cs-134	<1.65E-02	0.00E+00	1.65E-02
		Cs-137	<1.65E-02	0.00E+00	1.65E-02
		Be-7	<9.09E-02	0.00E+00	9.09E-02
		K-40	3.78E-01	1.63E-01	1.73E-01
522334	5/4/2020 - 5/11/2020	I-131	<1.89E-02	0.00E+00	1.89E-02
		Cs-134	<1.86E-02	0.00E+00	1.86E-02
		Cs-137	<1.31E-02	0.00E+00	1.31E-02
		Be-7	<1.05E-01	0.00E+00	1.05E-01
		K-40	2.99E-01	1.52E-01	1.77E-01
522581	5/11/2020 - 5/18/2020	I-131	<1.57E-02	0.00E+00	1.57E-02
		Cs-134	<1.90E-02	0.00E+00	1.90E-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	6.43E-01	1.96E-01	1.39E-01
523089	5/18/2020 - 5/26/2020	I-131	<1.90E-02	0.00E+00	1.90E-02
		Cs-134	<1.66E-02	0.00E+00	1.66E-02
		Cs-137	<1.16E-02	0.00E+00	1.16E-02
		Be-7	<9.82E-02	0.00E+00	9.82E-02
		K-40	5.52E-01	1.76E-01	1.46E-01
523863	6/1/2020 - 6/8/2020	I-131	<1.92E-02	0.00E+00	1.92E-02
		Cs-134	<1.42E-02	0.00E+00	1.42E-02
		Cs-137	<1.79E-02	0.00E+00	1.79E-02
		Be-7	<1.03E-01	0.00E+00	1.03E-01
		K-40	2.77E-01	1.51E-01	1.88E-01
524426	6/8/2020 - 6/15/2020	I-131	<2.42E-02	0.00E+00	2.42E-02
		Cs-134	<1.85E-02	0.00E+00	1.85E-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	4.67E-01	2.01E-01	2.40E-01
524749	6/15/2020 - 6/22/2020	I-131	<1.90E-02	0.00E+00	1.90E-02
		Cs-134	<1.63E-02	0.00E+00	1.63E-02
		Cs-137	<1.54E-02	0.00E+00	1.54E-02
		Be-7	<1.04E-01	0.00E+00	1.04E-01
		K-40	<3.13E-01	0.00E+00	3.13E-01
524980	6/22/2020 - 6/29/2020	I-131	<1.45E-02	0.00E+00	1.45E-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	<1.21E-01	0.00E+00	1.21E-01
		K-40	6.46E-01	2.13E-01	2.05E-01

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
525356	6/29/2020 - 7/6/2020	I-131	<2.04E-02	0.00E+00	2.04E-02
		Cs-134	<1.29E-02	0.00E+00	1.29E-02
		Cs-137	<1.64E-02	0.00E+00	1.64E-02
		Be-7	<8.90E-02	0.00E+00	8.90E-02
		K-40	2.82E-01	1.61E-01	2.13E-01
525577	7/6/2020 - 7/13/2020	I-131	<2.09E-02	0.00E+00	2.09E-02
		Cs-134	<1.70E-02	0.00E+00	1.70E-02
		Cs-137	<1.92E-02	0.00E+00	1.92E-02
		Be-7	<1.12E-01	0.00E+00	1.12E-01
		K-40	5.75E-01	2.01E-01	1.85E-01
525930	7/13/2020 - 7/20/2020	I-131	<1.66E-02	0.00E+00	1.66E-02
		Cs-134	<1.82E-02	0.00E+00	1.82E-02
		Cs-137	<1.45E-02	0.00E+00	1.45E-02
		Be-7	<8.97E-02	0.00E+00	8.97E-02
		K-40	6.06E-01	2.01E-01	1.82E-01
526261	7/20/2020 - 7/27/2020	I-131	<1.81E-02	0.00E+00	1.81E-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	<8.28E-02	0.00E+00	8.28E-02
		K-40	5.32E-01	1.83E-01	1.52E-01
526548	7/27/2020 - 8/3/2020	I-131	<1.75E-02	0.00E+00	1.75E-02
		Cs-134	<1.41E-02	0.00E+00	1.41E-02
		Cs-137	<1.86E-02	0.00E+00	1.86E-02
		Be-7	<9.55E-02	0.00E+00	9.55E-02
		K-40	3.86E-01	1.84E-01	2.29E-01
526867	8/3/2020 - 8/10/2020	I-131	<1.70E-02	0.00E+00	1.70E-02
		Cs-134	<1.58E-02	0.00E+00	1.58E-02
		Cs-137	<1.21E-02	0.00E+00	1.21E-02
		Be-7	<1.03E-01	0.00E+00	1.03E-01
		K-40	7.04E-01	2.09E-01	1.46E-01
527346	8/10/2020 - 8/17/2020	I-131	<1.93E-02	0.00E+00	1.93E-02
		Cs-134	<1.36E-02	0.00E+00	1.36E-02
		Cs-137	<1.09E-02	0.00E+00	1.09E-02
		Be-7	<9.97E-02	0.00E+00	9.97E-02
		K-40	5.18E-01	1.90E-01	1.86E-01
527638	8/17/2020 - 8/24/2020	I-131	<1.52E-02	0.00E+00	1.52E-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	<8.99E-02	0.00E+00	8.99E-02
		K-40	4.85E-01	1.58E-01	3.29E-02
527937	8/24/2020 - 8/31/2020	I-131	<2.08E-02	0.00E+00	2.08E-02
		Cs-134	<1.68E-02	0.00E+00	1.68E-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	4.47E-01	1.85E-01	2.11E-01
528686	8/31/2020 - 9/8/2020	I-131	<1.97E-02	0.00E+00	1.97E-02
		Cs-134	<1.52E-02	0.00E+00	1.52E-02
		Cs-137	<1.42E-02	0.00E+00	1.42E-02
		Be-7	<8.04E-02	0.00E+00	8.04E-02
		K-40	4.25E-01	1.74E-01	1.94E-01

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
529019	9/8/2020 - 9/14/2020	I-131	<2.32E-02	0.00E+00	2.32E-02
		Cs-134	<1.75E-02	0.00E+00	1.75E-02
		Cs-137	<1.15E-02	0.00E+00	1.15E-02
		Be-7	<1.57E-01	0.00E+00	1.57E-01
		K-40	6.56E-01	2.30E-01	2.27E-01
530012	9/14/2020 - 9/21/2020	I-131	<1.48E-02	0.00E+00	1.48E-02
		Cs-134	<1.40E-02	0.00E+00	1.40E-02
		Cs-137	<9.20E-03	0.00E+00	9.20E-03
		Be-7	<8.04E-02	0.00E+00	8.04E-02
		K-40	3.99E-01	1.82E-01	2.11E-01
530312	9/21/2020 - 9/28/2020	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	<1.20E-01	0.00E+00	1.20E-01
		K-40	3.80E-01	1.70E-01	1.93E-01
530584	9/28/2020 - 10/5/2020	I-131	<1.95E-02	0.00E+00	1.95E-02
		Cs-134	<1.37E-02	0.00E+00	1.37E-02
		Cs-137	<1.43E-02	0.00E+00	1.43E-02
		Be-7	<9.51E-02	0.00E+00	9.51E-02
		K-40	3.07E-01	1.81E-01	2.42E-01
531096	10/5/2020 - 10/12/2020	I-131	<1.96E-02	0.00E+00	1.96E-02
		Cs-134	<1.66E-02	0.00E+00	1.66E-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	6.20E-01	1.95E-01	1.51E-01
531693	10/12/2020 - 10/19/2020	I-131	<1.56E-02	0.00E+00	1.56E-02
		Cs-134	<1.37E-02	0.00E+00	1.37E-02
		Cs-137	<1.00E-02	0.00E+00	1.00E-02
		Be-7	<1.08E-01	0.00E+00	1.08E-01
		K-40	4.87E-01	2.02E-01	2.36E-01
532097	10/19/2020 - 10/26/2020	I-131	<1.69E-02	0.00E+00	1.69E-02
		Cs-134	<1.91E-02	0.00E+00	1.91E-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	5.28E-01	1.76E-01	1.29E-01
532521	10/26/2020 - 11/2/2020	I-131	<1.38E-02	0.00E+00	1.38E-02
		Cs-134	<9.20E-03	0.00E+00	9.20E-03
		Cs-137	<1.49E-02	0.00E+00	1.49E-02
		Be-7	<9.07E-02	0.00E+00	9.07E-02
		K-40	2.31E-01	1.45E-01	1.90E-01
532830	11/2/2020 - 11/9/2020	I-131	<1.46E-02	0.00E+00	1.46E-02
		Cs-134	<1.99E-02	0.00E+00	1.99E-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	6.21E-01	1.99E-01	1.65E-01
533356	11/9/2020 - 11/16/2020	I-131	<1.43E-02	0.00E+00	1.43E-02
		Cs-134	<1.64E-02	0.00E+00	1.64E-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	4.73E-01	2.08E-01	2.48E-01



# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
533818	11/16/2020 - 11/23/2020	I-131	<2.13E-02	0.00E+00	2.13E-02
		Cs-134	<1.65E-02	0.00E+00	1.65E-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	5.98E-01	2.05E-01	2.03E-01
534118	11/23/2020 - 11/30/2020	I-131	<2.15E-02	0.00E+00	2.15E-02
		Cs-134	<1.56E-02	0.00E+00	1.56E-02
		Cs-137	<2.02E-02	0.00E+00	2.02E-02
		Be-7	<1.23E-01	0.00E+00	1.23E-01
		K-40	7.87E-01	2.18E-01	1.18E-01
534577	11/30/2020 - 12/7/2020	I-131	<1.77E-02	0.00E+00	1.77E-02
		Cs-134	<1.87E-02	0.00E+00	1.87E-02
		Cs-137	<1.86E-02	0.00E+00	1.86E-02
		Be-7	<1.22E-01	0.00E+00	1.22E-01
		K-40	3.72E-01	1.64E-01	1.79E-01
535350	12/7/2020 - 12/14/2020	I-131	<1.67E-02	0.00E+00	1.67E-02
		Cs-134	<1.87E-02	0.00E+00	1.87E-02
		Cs-137	<1.32E-02	0.00E+00	1.32E-02
		Be-7	<9.26E-02	0.00E+00	9.26E-02
		K-40	5.72E-01	2.09E-01	2.25E-01
535908	12/14/2020 - 12/21/2020	I-131	<2.36E-02	0.00E+00	2.36E-02
		Cs-134	<1.09E-02	0.00E+00	1.09E-02
		Cs-137	<1.01E-02	0.00E+00	1.01E-02
		Be-7	<9.09E-02	0.00E+00	9.09E-02
		K-40	5.75E-01	1.45E-01	1.28E-01
536193	12/21/2020 - 12/28/2020	I-131	<3.94E-02	0.00E+00	3.94E-02
		Cs-134	<1.57E-02	0.00E+00	1.57E-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	6.15E-01	2.06E-01	1.71E-01

## Sample Point 63 [ INDICATOR - SW @ 0.6 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514467	12/30/2019 - 1/6/2020	I-131	<1.60E-02	0.00E+00	1.60E-02
		Cs-134	<1.85E-02	0.00E+00	1.85E-02
		Cs-137	<1.59E-02	0.00E+00	1.59E-02
		Be-7	<7.04E-02	0.00E+00	7.04E-02
		K-40	<3.96E-01	0.00E+00	3.96E-01
514920	1/6/2020 - 1/13/2020	I-131	<1.84E-02	0.00E+00	1.84E-02
		Cs-134	<1.17E-02	0.00E+00	1.17E-02
		Cs-137	<1.53E-02	0.00E+00	1.53E-02
		Be-7	<9.53E-02	0.00E+00	9.53E-02
		K-40	3.25E-01	1.61E-01	1.89E-01
515250	1/13/2020 - 1/20/2020	I-131	<1.43E-02	0.00E+00	1.43E-02
		Cs-134	<1.41E-02	0.00E+00	1.41E-02
		Cs-137	<1.35E-02	0.00E+00	1.35E-02
		Be-7	<1.07E-01	0.00E+00	1.07E-01
		K-40	<8.94E-02	0.00E+00	8.94E-02
515487	1/20/2020 - 1/27/2020	I-131	<1.58E-02	0.00E+00	1.58E-02
		Cs-134	<2.00E-02	0.00E+00	2.00E-02
		Cs-137	<1.60E-02	0.00E+00	1.60E-02

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
515487	1/20/2020 - 1/27/2020	Be-7	<1.19E-01	0.00E+00	1.19E-01
		K-40	4.63E-01	1.83E-01	1.71E-01
515877	1/27/2020 - 2/3/2020	I-131	<1.25E-02	0.00E+00	1.25E-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	<9.67E-02	0.00E+00	9.67E-02
		K-40	1.83E-01	1.60E-01	2.42E-01
516137	2/3/2020 - 2/10/2020	I-131	<1.69E-02	0.00E+00	1.69E-02
		Cs-134	<1.63E-02	0.00E+00	1.63E-02
		Cs-137	<1.41E-02	0.00E+00	1.41E-02
		Be-7	<4.25E-02	0.00E+00	4.25E-02
		K-40	<3.31E-01	0.00E+00	3.31E-01
516498	2/10/2020 - 2/17/2020	I-131	<1.72E-02	0.00E+00	1.72E-02
		Cs-134	<1.40E-02	0.00E+00	1.40E-02
		Cs-137	<1.56E-02	0.00E+00	1.56E-02
		Be-7	<9.92E-02	0.00E+00	9.92E-02
		K-40	2.62E-01	1.30E-01	1.25E-01
516881	2/17/2020 - 2/24/2020	I-131	<2.12E-02	0.00E+00	2.12E-02
		Cs-134	<2.26E-02	0.00E+00	2.26E-02
		Cs-137	<1.62E-02	0.00E+00	1.62E-02
		Be-7	<1.53E-01	0.00E+00	1.53E-01
		K-40	5.34E-01	1.97E-01	1.89E-01
517400	2/24/2020 - 3/2/2020	I-131	<1.99E-02	0.00E+00	1.99E-02
		Cs-134	<1.34E-02	0.00E+00	1.34E-02
		Cs-137	<1.78E-02	0.00E+00	1.78E-02
		Be-7	<1.36E-01	0.00E+00	1.36E-01
		K-40	3.36E-01	1.53E-01	1.58E-01
517669	3/2/2020 - 3/9/2020	I-131	<1.61E-02	0.00E+00	1.61E-02
		Cs-134	<1.65E-02	0.00E+00	1.65E-02
		Cs-137	<1.56E-02	0.00E+00	1.56E-02
		Be-7	<1.20E-01	0.00E+00	1.20E-01
		K-40	1.96E-01	1.45E-01	2.04E-01
518700	3/9/2020 - 3/16/2020	I-131	<1.37E-02	0.00E+00	1.37E-02
		Cs-134	<1.75E-02	0.00E+00	1.75E-02
		Cs-137	<1.27E-02	0.00E+00	1.27E-02
		Be-7	<8.59E-02	0.00E+00	8.59E-02
		K-40	<2.61E-01	0.00E+00	2.61E-01
519308	3/16/2020 - 3/23/2020	I-131	<1.96E-02	0.00E+00	1.96E-02
		Cs-134	<1.30E-02	0.00E+00	1.30E-02
		Cs-137	<1.36E-02	0.00E+00	1.36E-02
		Be-7	<9.66E-02	0.00E+00	9.66E-02
		K-40	2.79E-01	1.37E-01	1.40E-01
519687	3/23/2020 - 3/30/2020	I-131	<1.64E-02	0.00E+00	1.64E-02
		Cs-134	<1.22E-02	0.00E+00	1.22E-02
		Cs-137	<1.52E-02	0.00E+00	1.52E-02
		Be-7	<9.34E-02	0.00E+00	9.34E-02
		K-40	<3.17E-01	0.00E+00	3.17E-01
520283	3/30/2020 - 4/6/2020	I-131	<1.77E-02	0.00E+00	1.77E-02

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
520283	3/30/2020 - 4/6/2020	Cs-134	<1.78E-02	0.00E+00	1.78E-02
		Cs-137	<1.20E-02	0.00E+00	1.20E-02
		Be-7	<8.60E-02	0.00E+00	8.60E-02
		K-40	<1.37E-01	0.00E+00	1.37E-01
520503	4/6/2020 - 4/13/2020	I-131	<2.59E-02	0.00E+00	2.59E-02
		Cs-134	<1.01E-02	0.00E+00	1.01E-02
		Cs-137	<1.22E-02	0.00E+00	1.22E-02
		Be-7	<9.25E-02	0.00E+00	9.25E-02
		K-40	2.79E-01	1.36E-01	1.43E-01
520796	4/13/2020 - 4/20/2020	I-131	<2.19E-02	0.00E+00	2.19E-02
		Cs-134	<1.51E-02	0.00E+00	1.51E-02
		Cs-137	<1.67E-02	0.00E+00	1.67E-02
		Be-7	<8.87E-02	0.00E+00	8.87E-02
		K-40	<3.26E-01	0.00E+00	3.26E-01
521596	4/20/2020 - 4/27/2020	I-131	<1.44E-02	0.00E+00	1.44E-02
		Cs-134	<1.67E-02	0.00E+00	1.67E-02
		Cs-137	<1.17E-02	0.00E+00	1.17E-02
		Be-7	2.79E-02	6.01E-02	1.05E-01
		K-40	3.27E-01	1.46E-01	1.42E-01
522030	4/27/2020 - 5/4/2020	I-131	<1.56E-02	0.00E+00	1.56E-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	<9.02E-02	0.00E+00	9.02E-02
		K-40	1.30E-01	1.19E-01	1.78E-01
522337	5/4/2020 - 5/11/2020	I-131	<1.49E-02	0.00E+00	1.49E-02
		Cs-134	<1.53E-02	0.00E+00	1.53E-02
		Cs-137	<5.85E-03	0.00E+00	5.85E-03
		Be-7	<7.48E-02	0.00E+00	7.48E-02
		K-40	<2.22E-01	0.00E+00	2.22E-01
522584	5/11/2020 - 5/18/2020	I-131	<1.78E-02	0.00E+00	1.78E-02
		Cs-134	<1.91E-02	0.00E+00	1.91E-02
		Cs-137	<1.31E-02	0.00E+00	1.31E-02
		Be-7	<1.27E-01	0.00E+00	1.27E-01
		K-40	5.19E-01	2.25E-01	2.79E-01
523092	5/18/2020 - 5/26/2020	I-131	<1.40E-02	0.00E+00	1.40E-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	1.86E-01	1.12E-01	1.38E-01
523464	5/26/2020 - 6/1/2020	I-131	<2.48E-02	0.00E+00	2.48E-02
		Cs-134	<1.91E-02	0.00E+00	1.91E-02
		Cs-137	<1.80E-02	0.00E+00	1.80E-02
		Be-7	<1.05E-01	0.00E+00	1.05E-01
		K-40	5.74E-01	2.60E-01	3.34E-01
523866	6/1/2020 - 6/8/2020	I-131	<1.54E-02	0.00E+00	1.54E-02
		Cs-134	<1.22E-02	0.00E+00	1.22E-02
		Cs-137	<1.06E-02	0.00E+00	1.06E-02
		Be-7	<8.56E-02	0.00E+00	8.56E-02
		K-40	1.36E-01	1.18E-01	1.73E-01

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
524429	6/8/2020 - 6/15/2020	I-131	<1.88E-02	0.00E+00	1.88E-02
		Cs-134	<1.94E-02	0.00E+00	1.94E-02
		Cs-137	<1.43E-02	0.00E+00	1.43E-02
		Be-7	<1.08E-01	0.00E+00	1.08E-01
		K-40	4.58E-01	1.88E-01	2.05E-01
524752	6/15/2020 - 6/22/2020	I-131	<1.97E-02	0.00E+00	1.97E-02
		Cs-134	<1.67E-02	0.00E+00	1.67E-02
		Cs-137	<1.49E-02	0.00E+00	1.49E-02
		Be-7	<1.12E-01	0.00E+00	1.12E-01
		K-40	5.33E-01	1.95E-01	1.99E-01
524983	6/22/2020 - 6/29/2020	I-131	<1.49E-02	0.00E+00	1.49E-02
		Cs-134	<1.72E-02	0.00E+00	1.72E-02
		Cs-137	<1.28E-02	0.00E+00	1.28E-02
		Be-7	4.39E-02	5.80E-02	9.54E-02
		K-40	2.48E-01	1.16E-01	1.96E-01
525359	6/29/2020 - 7/6/2020	I-131	<2.30E-02	0.00E+00	2.30E-02
		Cs-134	<1.46E-02	0.00E+00	1.46E-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	3.99E-01	1.90E-01	2.36E-01
525580	7/6/2020 - 7/13/2020	I-131	<1.51E-02	0.00E+00	1.51E-02
		Cs-134	<1.56E-02	0.00E+00	1.56E-02
		Cs-137	<1.40E-02	0.00E+00	1.40E-02
		Be-7	<1.02E-01	0.00E+00	1.02E-01
		K-40	3.76E-01	1.61E-01	1.68E-01
525933	7/13/2020 - 7/20/2020	I-131	<1.88E-02	0.00E+00	1.88E-02
		Cs-134	<1.43E-02	0.00E+00	1.43E-02
		Cs-137	<1.84E-02	0.00E+00	1.84E-02
		Be-7	<8.78E-02	0.00E+00	8.78E-02
		K-40	<3.35E-01	0.00E+00	3.35E-01
526264	7/20/2020 - 7/27/2020	I-131	<1.60E-02	0.00E+00	1.60E-02
		Cs-134	<1.27E-02	0.00E+00	1.27E-02
		Cs-137	<1.46E-02	0.00E+00	1.46E-02
		Be-7	<1.06E-01	0.00E+00	1.06E-01
		K-40	3.24E-01	1.66E-01	2.03E-01
526551	7/27/2020 - 8/3/2020	I-131	<2.28E-02	0.00E+00	2.28E-02
		Cs-134	<1.77E-02	0.00E+00	1.77E-02
		Cs-137	<1.47E-02	0.00E+00	1.47E-02
		Be-7	<9.94E-02	0.00E+00	9.94E-02
		K-40	4.92E-01	1.70E-01	1.21E-01
526870	8/3/2020 - 8/10/2020	I-131	<1.71E-02	0.00E+00	1.71E-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	<9.70E-02	0.00E+00	9.70E-02
		K-40	4.33E-01	1.88E-01	2.20E-01
527349	8/10/2020 - 8/17/2020	I-131	<1.83E-02	0.00E+00	1.83E-02
		Cs-134	<1.13E-02	0.00E+00	1.13E-02
		Cs-137	<1.57E-02	0.00E+00	1.57E-02
		Be-7	<8.04E-02	0.00E+00	8.04E-02
		K-40	4.33E-01	1.62E-01	1.37E-01

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
527641	8/17/2020 - 8/24/2020	I-131	<1.41E-02	0.00E+00	1.41E-02
		Cs-134	<1.95E-02	0.00E+00	1.95E-02
		Cs-137	<1.58E-02	0.00E+00	1.58E-02
		Be-7	<1.09E-01	0.00E+00	1.09E-01
		K-40	3.52E-01	1.70E-01	2.04E-01
527940	8/24/2020 - 8/31/2020	I-131	<1.85E-02	0.00E+00	1.85E-02
		Cs-134	<1.41E-02	0.00E+00	1.41E-02
		Cs-137	<1.69E-02	0.00E+00	1.69E-02
		Be-7	<1.14E-01	0.00E+00	1.14E-01
		K-40	3.84E-01	1.65E-01	1.79E-01
528689	8/31/2020 - 9/8/2020	I-131	<1.85E-02	0.00E+00	1.85E-02
		Cs-134	<1.55E-02	0.00E+00	1.55E-02
		Cs-137	<1.17E-02	0.00E+00	1.17E-02
		Be-7	<8.75E-02	0.00E+00	8.75E-02
		K-40	5.07E-01	1.83E-01	1.91E-01
529022	9/8/2020 - 9/14/2020	I-131	<2.29E-02	0.00E+00	2.29E-02
		Cs-134	<1.90E-02	0.00E+00	1.90E-02
		Cs-137	<1.77E-02	0.00E+00	1.77E-02
		Be-7	<1.11E-01	0.00E+00	1.11E-01
		K-40	3.68E-01	1.47E-01	3.83E-02
530015	9/14/2020 - 9/21/2020	I-131	<1.98E-02	0.00E+00	1.98E-02
		Cs-134	<1.83E-02	0.00E+00	1.83E-02
		Cs-137	<1.93E-02	0.00E+00	1.93E-02
		Be-7	<1.09E-01	0.00E+00	1.09E-01
		K-40	6.35E-01	2.08E-01	1.88E-01
530315	9/21/2020 - 9/28/2020	I-131	<1.89E-02	0.00E+00	1.89E-02
		Cs-134	<1.31E-02	0.00E+00	1.31E-02
		Cs-137	<1.66E-02	0.00E+00	1.66E-02
		Be-7	<9.38E-02	0.00E+00	9.38E-02
		K-40	6.11E-01	1.88E-01	1.33E-01
530587	9/28/2020 - 10/5/2020	I-131	<1.41E-02	0.00E+00	1.41E-02
		Cs-134	<1.40E-02	0.00E+00	1.40E-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	3.34E-01	1.33E-01	3.48E-02
531099	10/5/2020 - 10/12/2020	I-131	<1.87E-02	0.00E+00	1.87E-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	<1.15E-01	0.00E+00	1.15E-01
		K-40	5.46E-01	1.99E-01	1.88E-01
531696	10/12/2020 - 10/19/2020	I-131	<2.03E-02	0.00E+00	2.03E-02
		Cs-134	<2.00E-02	0.00E+00	2.00E-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	5.99E-01	1.89E-01	1.35E-01
532100	10/19/2020 - 10/26/2020	I-131	<1.40E-02	0.00E+00	1.40E-02
		Cs-134	<1.33E-02	0.00E+00	1.33E-02
		Cs-137	<1.36E-02	0.00E+00	1.36E-02
		Be-7	<8.73E-02	0.00E+00	8.73E-02
		K-40	5.07E-01	1.73E-01	1.32E-01

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
532524	10/26/2020 - 11/2/2020	I-131	<1.64E-02	0.00E+00	1.64E-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	<1.13E-01	0.00E+00	1.13E-01
		K-40	5.94E-01	1.82E-01	3.50E-02
532833	11/2/2020 - 11/9/2020	I-131	<1.81E-02	0.00E+00	1.81E-02
		Cs-134	<2.24E-02	0.00E+00	2.24E-02
		Cs-137	<1.66E-02	0.00E+00	1.66E-02
		Be-7	<8.83E-02	0.00E+00	8.83E-02
		K-40	4.54E-01	1.81E-01	1.90E-01
533359	11/9/2020 - 11/16/2020	I-131	<1.74E-02	0.00E+00	1.74E-02
		Cs-134	<1.54E-02	0.00E+00	1.54E-02
		Cs-137	<1.46E-02	0.00E+00	1.46E-02
		Be-7	<8.49E-02	0.00E+00	8.49E-02
		K-40	3.86E-01	1.83E-01	2.23E-01
533821	11/16/2020 - 11/23/2020	I-131	<1.25E-02	0.00E+00	1.25E-02
		Cs-134	<1.13E-02	0.00E+00	1.13E-02
		Cs-137	<1.22E-02	0.00E+00	1.22E-02
		Be-7	<8.16E-02	0.00E+00	8.16E-02
		K-40	4.56E-01	1.61E-01	1.15E-01
534121	11/23/2020 - 11/30/2020	I-131	<1.68E-02	0.00E+00	1.68E-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	<1.06E-01	0.00E+00	1.06E-01
		K-40	<3.71E-01	0.00E+00	3.71E-01
534580	11/30/2020 - 12/7/2020	I-131	<1.53E-02	0.00E+00	1.53E-02
		Cs-134	<1.60E-02	0.00E+00	1.60E-02
		Cs-137	<1.31E-02	0.00E+00	1.31E-02
		Be-7	<1.17E-01	0.00E+00	1.17E-01
		K-40	4.68E-01	1.88E-01	1.96E-01
535353	12/7/2020 - 12/14/2020	I-131	<1.94E-02	0.00E+00	1.94E-02
		Cs-134	<1.55E-02	0.00E+00	1.55E-02
		Cs-137	<1.19E-02	0.00E+00	1.19E-02
		Be-7	<9.87E-02	0.00E+00	9.87E-02
		K-40	5.86E-01	1.94E-01	1.62E-01
535911	12/14/2020 - 12/21/2020	I-131	<1.57E-02	0.00E+00	1.57E-02
		Cs-134	<1.22E-02	0.00E+00	1.22E-02
		Cs-137	<1.06E-02	0.00E+00	1.06E-02
		Be-7	<8.97E-02	0.00E+00	8.97E-02
		K-40	2.20E-01	1.35E-01	1.74E-01
536196	12/21/2020 - 12/28/2020	I-131	<3.71E-02	0.00E+00	3.71E-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	<1.38E-01	0.00E+00	1.38E-01
		K-40	4.36E-01	1.93E-01	2.28E-01
<b>Sample Point 90 [ INDICATOR - SSW @ 0.5 miles ]</b>					
514468	12/30/2019 - 1/6/2020	I-131	<2.01E-02	0.00E+00	2.01E-02
		Cs-134	<1.82E-02	0.00E+00	1.82E-02
		Cs-137	<1.66E-02	0.00E+00	1.66E-02

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
514468	12/30/2019 - 1/6/2020	Be-7	<1.53E-01	0.00E+00	1.53E-01
		K-40	5.67E-01	2.04E-01	2.05E-01
514921	1/6/2020 - 1/13/2020	I-131	<1.81E-02	0.00E+00	1.81E-02
		Cs-134	<1.54E-02	0.00E+00	1.54E-02
		Cs-137	<1.75E-02	0.00E+00	1.75E-02
		Be-7	<1.08E-01	0.00E+00	1.08E-01
		K-40	3.60E-01	1.74E-01	2.10E-01
515251	1/13/2020 - 1/21/2020	I-131	<1.47E-02	0.00E+00	1.47E-02
		Cs-134	<1.38E-02	0.00E+00	1.38E-02
		Cs-137	<1.12E-02	0.00E+00	1.12E-02
		Be-7	<8.36E-02	0.00E+00	8.36E-02
		K-40	<2.27E-01	0.00E+00	2.27E-01
515488	1/21/2020 - 1/27/2020	I-131	<2.64E-02	0.00E+00	2.64E-02
		Cs-134	<1.97E-02	0.00E+00	1.97E-02
		Cs-137	<1.91E-02	0.00E+00	1.91E-02
		Be-7	8.74E-02	9.24E-02	1.47E-01
		K-40	8.19E-01	2.67E-01	2.50E-01
515878	1/27/2020 - 2/3/2020	I-131	<2.17E-02	0.00E+00	2.17E-02
		Cs-134	<1.67E-02	0.00E+00	1.67E-02
		Cs-137	<1.49E-02	0.00E+00	1.49E-02
		Be-7	<1.48E-01	0.00E+00	1.48E-01
		K-40	4.26E-01	1.58E-01	1.12E-01
516138	2/3/2020 - 2/10/2020	I-131	<1.70E-02	0.00E+00	1.70E-02
		Cs-134	<1.54E-02	0.00E+00	1.54E-02
		Cs-137	<1.53E-02	0.00E+00	1.53E-02
		Be-7	<1.14E-01	0.00E+00	1.14E-01
		K-40	<2.80E-01	0.00E+00	2.80E-01
516499	2/10/2020 - 2/17/2020	I-131	<2.03E-02	0.00E+00	2.03E-02
		Cs-134	<1.49E-02	0.00E+00	1.49E-02
		Cs-137	<1.40E-02	0.00E+00	1.40E-02
		Be-7	<1.31E-01	0.00E+00	1.31E-01
		K-40	4.09E-01	1.72E-01	1.83E-01
516882	2/17/2020 - 2/24/2020	I-131	<1.94E-02	0.00E+00	1.94E-02
		Cs-134	<1.59E-02	0.00E+00	1.59E-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	6.20E-01	1.95E-01	1.36E-01
517401	2/24/2020 - 3/2/2020	I-131	<1.62E-02	0.00E+00	1.62E-02
		Cs-134	<1.52E-02	0.00E+00	1.52E-02
		Cs-137	<1.08E-02	0.00E+00	1.08E-02
		Be-7	<9.29E-02	0.00E+00	9.29E-02
		K-40	<1.15E-01	0.00E+00	1.15E-01
517670	3/2/2020 - 3/9/2020	I-131	<1.43E-02	0.00E+00	1.43E-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	<1.08E-01	0.00E+00	1.08E-01
		K-40	3.88E-01	1.66E-01	1.61E-01
518701	3/9/2020 - 3/16/2020	Nuclide	Activity	2 Sigma Error	MDA
		I-131	<1.46E-02	0.00E+00	1.46E-02

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
518701	3/9/2020 - 3/16/2020	Cs-134	<1.22E-02	0.00E+00	1.22E-02
		Cs-137	<1.19E-02	0.00E+00	1.19E-02
		Be-7	<9.84E-02	0.00E+00	9.84E-02
		K-40	3.45E-01	1.25E-01	1.46E-01
519309	3/16/2020 - 3/23/2020	I-131	<1.78E-02	0.00E+00	1.78E-02
		Cs-134	<1.21E-02	0.00E+00	1.21E-02
		Cs-137	<1.14E-02	0.00E+00	1.14E-02
		Be-7	<8.31E-02	0.00E+00	8.31E-02
		K-40	<3.54E-02	0.00E+00	3.54E-02
519688	3/23/2020 - 3/30/2020	I-131	<1.78E-02	0.00E+00	1.78E-02
		Cs-134	<1.59E-02	0.00E+00	1.59E-02
		Cs-137	<1.76E-02	0.00E+00	1.76E-02
		Be-7	<9.30E-02	0.00E+00	9.30E-02
		K-40	4.19E-01	1.88E-01	2.26E-01
520284	3/30/2020 - 4/6/2020	I-131	<1.54E-02	0.00E+00	1.54E-02
		Cs-134	<1.81E-02	0.00E+00	1.81E-02
		Cs-137	<1.42E-02	0.00E+00	1.42E-02
		Be-7	<9.02E-02	0.00E+00	9.02E-02
		K-40	2.87E-01	1.53E-01	1.80E-01
520504	4/6/2020 - 4/13/2020	I-131	<2.95E-02	0.00E+00	2.95E-02
		Cs-134	<1.30E-02	0.00E+00	1.30E-02
		Cs-137	<1.20E-02	0.00E+00	1.20E-02
		Be-7	<9.71E-02	0.00E+00	9.71E-02
		K-40	2.58E-01	1.48E-01	1.84E-01
520797	4/13/2020 - 4/20/2020	I-131	<1.98E-02	0.00E+00	1.98E-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	<1.06E-01	0.00E+00	1.06E-01
		K-40	4.94E-01	1.89E-01	1.92E-01
521597	4/20/2020 - 4/27/2020	I-131	<1.51E-02	0.00E+00	1.51E-02
		Cs-134	<1.25E-02	0.00E+00	1.25E-02
		Cs-137	<1.37E-02	0.00E+00	1.37E-02
		Be-7	<1.14E-01	0.00E+00	1.14E-01
		K-40	2.36E-01	1.30E-01	1.51E-01
522031	4/27/2020 - 5/4/2020	I-131	<1.57E-02	0.00E+00	1.57E-02
		Cs-134	<1.47E-02	0.00E+00	1.47E-02
		Cs-137	<1.62E-02	0.00E+00	1.62E-02
		Be-7	<9.47E-02	0.00E+00	9.47E-02
		K-40	<3.03E-01	0.00E+00	3.03E-01
522338	5/4/2020 - 5/11/2020	I-131	<1.57E-02	0.00E+00	1.57E-02
		Cs-134	<1.48E-02	0.00E+00	1.48E-02
		Cs-137	<1.06E-02	0.00E+00	1.06E-02
		Be-7	<8.55E-02	0.00E+00	8.55E-02
		K-40	<1.30E-01	0.00E+00	1.30E-01
522585	5/11/2020 - 5/18/2020	I-131	<1.57E-02	0.00E+00	1.57E-02
		Cs-134	<2.08E-02	0.00E+00	2.08E-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	5.22E-01	1.88E-01	1.69E-01



# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
523093	5/18/2020 - 5/26/2020	I-131	<1.33E-02	0.00E+00	1.33E-02
		Cs-134	<1.46E-02	0.00E+00	1.46E-02
		Cs-137	<1.09E-02	0.00E+00	1.09E-02
		Be-7	<7.73E-02	0.00E+00	7.73E-02
		K-40	2.73E-01	1.43E-01	1.79E-01
523465	5/26/2020 - 6/1/2020	I-131	<1.75E-02	0.00E+00	1.75E-02
		Cs-134	<2.10E-02	0.00E+00	2.10E-02
		Cs-137	<1.41E-02	0.00E+00	1.41E-02
		Be-7	<1.11E-01	0.00E+00	1.11E-01
		K-40	<1.39E-01	0.00E+00	1.39E-01
523867	6/1/2020 - 6/8/2020	I-131	<1.16E-02	0.00E+00	1.16E-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	<8.50E-02	0.00E+00	8.50E-02
		K-40	3.11E-01	1.53E-01	1.71E-01
524430	6/8/2020 - 6/15/2020	I-131	<1.71E-02	0.00E+00	1.71E-02
		Cs-134	<1.21E-02	0.00E+00	1.21E-02
		Cs-137	<1.30E-02	0.00E+00	1.30E-02
		Be-7	<8.79E-02	0.00E+00	8.79E-02
		K-40	2.56E-01	1.54E-01	2.00E-01
524753	6/15/2020 - 6/22/2020	I-131	<2.22E-02	0.00E+00	2.22E-02
		Cs-134	<1.50E-02	0.00E+00	1.50E-02
		Cs-137	<1.42E-02	0.00E+00	1.42E-02
		Be-7	<1.01E-01	0.00E+00	1.01E-01
		K-40	3.73E-01	1.77E-01	2.17E-01
524984	6/22/2020 - 6/29/2020	I-131	<1.44E-02	0.00E+00	1.44E-02
		Cs-134	<1.47E-02	0.00E+00	1.47E-02
		Cs-137	<1.97E-02	0.00E+00	1.97E-02
		Be-7	<8.44E-02	0.00E+00	8.44E-02
		K-40	4.35E-01	1.70E-01	1.43E-01
525360	6/29/2020 - 7/6/2020	I-131	<1.83E-02	0.00E+00	1.83E-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	4.41E-01	1.93E-01	2.29E-01
525581	7/6/2020 - 7/13/2020	I-131	<1.54E-02	0.00E+00	1.54E-02
		Cs-134	<1.60E-02	0.00E+00	1.60E-02
		Cs-137	<1.67E-02	0.00E+00	1.67E-02
		Be-7	<1.10E-01	0.00E+00	1.10E-01
		K-40	3.64E-01	1.49E-01	1.26E-01
525934	7/13/2020 - 7/20/2020	I-131	<2.18E-02	0.00E+00	2.18E-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	<9.82E-02	0.00E+00	9.82E-02
		K-40	1.35E-01	1.54E-01	2.48E-01
526265	7/20/2020 - 7/27/2020	I-131	<1.63E-02	0.00E+00	1.63E-02
		Cs-134	<1.70E-02	0.00E+00	1.70E-02
		Cs-137	<9.09E-03	0.00E+00	9.09E-03
		Be-7	<8.95E-02	0.00E+00	8.95E-02
		K-40	<9.34E-02	0.00E+00	9.34E-02

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
526552	7/27/2020 - 8/3/2020	I-131	<1.87E-02	0.00E+00	1.87E-02
		Cs-134	<1.75E-02	0.00E+00	1.75E-02
		Cs-137	<1.51E-02	0.00E+00	1.51E-02
		Be-7	<1.09E-01	0.00E+00	1.09E-01
		K-40	4.33E-01	1.95E-01	2.39E-01
526871	8/3/2020 - 8/10/2020	I-131	<1.84E-02	0.00E+00	1.84E-02
		Cs-134	<1.65E-02	0.00E+00	1.65E-02
		Cs-137	<8.81E-03	0.00E+00	8.81E-03
		Be-7	<1.17E-01	0.00E+00	1.17E-01
		K-40	6.76E-01	2.00E-01	1.42E-01
527350	8/10/2020 - 8/17/2020	I-131	<1.72E-02	0.00E+00	1.72E-02
		Cs-134	<1.25E-02	0.00E+00	1.25E-02
		Cs-137	<1.24E-02	0.00E+00	1.24E-02
		Be-7	<1.32E-01	0.00E+00	1.32E-01
		K-40	4.48E-01	2.16E-01	2.86E-01
527642	8/17/2020 - 8/24/2020	I-131	<1.74E-02	0.00E+00	1.74E-02
		Cs-134	<1.89E-02	0.00E+00	1.89E-02
		Cs-137	<1.33E-02	0.00E+00	1.33E-02
		Be-7	<1.08E-01	0.00E+00	1.08E-01
		K-40	2.78E-01	1.69E-01	2.30E-01
527941	8/24/2020 - 8/31/2020	I-131	<2.03E-02	0.00E+00	2.03E-02
		Cs-134	<1.52E-02	0.00E+00	1.52E-02
		Cs-137	<2.00E-02	0.00E+00	2.00E-02
		Be-7	<1.06E-01	0.00E+00	1.06E-01
		K-40	3.55E-01	1.96E-01	2.63E-01
528690	8/31/2020 - 9/8/2020	I-131	<1.76E-02	0.00E+00	1.76E-02
		Cs-134	<1.21E-02	0.00E+00	1.21E-02
		Cs-137	<1.18E-02	0.00E+00	1.18E-02
		Be-7	<8.91E-02	0.00E+00	8.91E-02
		K-40	3.99E-01	1.50E-01	1.32E-01
529023	9/8/2020 - 9/14/2020	I-131	<1.80E-02	0.00E+00	1.80E-02
		Cs-134	<1.90E-02	0.00E+00	1.90E-02
		Cs-137	<1.23E-02	0.00E+00	1.23E-02
		Be-7	<1.26E-01	0.00E+00	1.26E-01
		K-40	7.23E-01	2.18E-01	1.39E-01
530016	9/14/2020 - 9/21/2020	I-131	<1.82E-02	0.00E+00	1.82E-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	<1.19E-01	0.00E+00	1.19E-01
		K-40	5.66E-01	2.02E-01	1.99E-01
530316	9/21/2020 - 9/28/2020	I-131	<1.59E-02	0.00E+00	1.59E-02
		Cs-134	<1.76E-02	0.00E+00	1.76E-02
		Cs-137	<1.52E-02	0.00E+00	1.52E-02
		Be-7	<1.18E-01	0.00E+00	1.18E-01
		K-40	3.42E-01	2.01E-01	2.83E-01
530588	9/28/2020 - 10/5/2020	I-131	<1.63E-02	0.00E+00	1.63E-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	<1.17E-01	0.00E+00	1.17E-01
		K-40	3.25E-01	1.77E-01	2.31E-01

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
531100	10/5/2020 - 10/12/2020	I-131	<1.79E-02	0.00E+00	1.79E-02
		Cs-134	<1.68E-02	0.00E+00	1.68E-02
		Cs-137	<1.62E-02	0.00E+00	1.62E-02
		Be-7	<1.04E-01	0.00E+00	1.04E-01
		K-40	6.35E-01	2.04E-01	1.76E-01
531697	10/12/2020 - 10/19/2020	I-131	<1.95E-02	0.00E+00	1.95E-02
		Cs-134	<1.53E-02	0.00E+00	1.53E-02
		Cs-137	<1.78E-02	0.00E+00	1.78E-02
		Be-7	<1.34E-01	0.00E+00	1.34E-01
		K-40	6.57E-01	1.99E-01	1.40E-01
532101	10/19/2020 - 10/26/2020	I-131	<2.21E-02	0.00E+00	2.21E-02
		Cs-134	<1.58E-02	0.00E+00	1.58E-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	5.26E-01	1.95E-01	1.93E-01
532525	10/26/2020 - 11/2/2020	I-131	<1.62E-02	0.00E+00	1.62E-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	<9.19E-02	0.00E+00	9.19E-02
		K-40	3.60E-01	1.83E-01	2.31E-01
532834	11/2/2020 - 11/9/2020	I-131	<1.88E-02	0.00E+00	1.88E-02
		Cs-134	<1.86E-02	0.00E+00	1.86E-02
		Cs-137	<1.76E-02	0.00E+00	1.76E-02
		Be-7	<1.11E-01	0.00E+00	1.11E-01
		K-40	7.34E-01	2.10E-01	1.46E-01
533360	11/9/2020 - 11/16/2020	I-131	<1.62E-02	0.00E+00	1.62E-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	<1.16E-01	0.00E+00	1.16E-01
		K-40	6.20E-01	1.96E-01	1.50E-01
533822	11/16/2020 - 11/23/2020	I-131	<1.76E-02	0.00E+00	1.76E-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	<1.15E-01	0.00E+00	1.15E-01
		K-40	4.77E-01	1.61E-01	3.49E-02
534122	11/23/2020 - 11/30/2020	I-131	<1.81E-02	0.00E+00	1.81E-02
		Cs-134	<2.15E-02	0.00E+00	2.15E-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	5.02E-01	1.96E-01	1.94E-01
534581	11/30/2020 - 12/7/2020	I-131	<1.94E-02	0.00E+00	1.94E-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	<1.35E-01	0.00E+00	1.35E-01
		K-40	5.50E-01	1.87E-01	1.57E-01
535354	12/7/2020 - 12/14/2020	I-131	<1.81E-02	0.00E+00	1.81E-02
		Cs-134	<1.78E-02	0.00E+00	1.78E-02
		Cs-137	<1.19E-02	0.00E+00	1.19E-02
		Be-7	<8.51E-02	0.00E+00	8.51E-02
		K-40	6.67E-01	2.10E-01	1.77E-01

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
535912	12/14/2020 - 12/21/2020	I-131	<1.85E-02	0.00E+00	1.85E-02
		Cs-134	<1.21E-02	0.00E+00	1.21E-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	4.40E-01	1.92E-01	2.28E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
536197	12/21/2020 - 12/28/2020	I-131	<3.68E-02	0.00E+00	3.68E-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	<1.17E-01	0.00E+00	1.17E-01
		K-40	2.85E-01	1.74E-01	2.36E-01

Sample Point 91 [ INDICATOR - ENE @ 1.6 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514469	12/30/2019 - 1/6/2020	I-131	<2.11E-02	0.00E+00	2.11E-02
		Cs-134	<1.68E-02	0.00E+00	1.68E-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	6.03E-01	1.91E-01	1.42E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514922	1/6/2020 - 1/13/2020	I-131	<1.91E-02	0.00E+00	1.91E-02
		Cs-134	<8.99E-03	0.00E+00	8.99E-03
		Cs-137	<1.57E-02	0.00E+00	1.57E-02
		Be-7	<6.79E-02	0.00E+00	6.79E-02
		K-40	3.13E-01	1.38E-01	1.24E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
515252	1/13/2020 - 1/20/2020	I-131	<2.14E-02	0.00E+00	2.14E-02
		Cs-134	<1.48E-02	0.00E+00	1.48E-02
		Cs-137	<1.56E-02	0.00E+00	1.56E-02
		Be-7	<1.25E-01	0.00E+00	1.25E-01
		K-40	3.58E-01	1.61E-01	1.78E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
515489	1/20/2020 - 1/27/2020	I-131	<1.99E-02	0.00E+00	1.99E-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	<1.53E-01	0.00E+00	1.53E-01
		K-40	6.57E-01	2.12E-01	1.78E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
515879	1/27/2020 - 2/3/2020	I-131	<1.41E-02	0.00E+00	1.41E-02
		Cs-134	<1.25E-02	0.00E+00	1.25E-02
		Cs-137	<9.87E-03	0.00E+00	9.87E-03
		Be-7	<1.13E-01	0.00E+00	1.13E-01
		K-40	4.46E-01	1.62E-01	1.22E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
516139	2/3/2020 - 2/10/2020	I-131	<2.05E-02	0.00E+00	2.05E-02
		Cs-134	<1.49E-02	0.00E+00	1.49E-02
		Cs-137	<1.12E-02	0.00E+00	1.12E-02
		Be-7	<1.09E-01	0.00E+00	1.09E-01
		K-40	1.45E-01	1.19E-01	1.70E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
516500	2/10/2020 - 2/17/2020	I-131	<2.05E-02	0.00E+00	2.05E-02
		Cs-134	<1.48E-02	0.00E+00	1.48E-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	4.07E-01	1.86E-01	2.28E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
516883	2/17/2020 - 2/24/2020	I-131	<2.13E-02	0.00E+00	2.13E-02
		Cs-134	<1.82E-02	0.00E+00	1.82E-02
		Cs-137	<1.67E-02	0.00E+00	1.67E-02

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
516883	2/17/2020 - 2/24/2020	Be-7	<1.42E-01	0.00E+00	1.42E-01
		K-40	6.75E-01	2.09E-01	1.53E-01
517402	2/24/2020 - 3/2/2020	I-131	<1.60E-02	0.00E+00	1.60E-02
		Cs-134	<1.22E-02	0.00E+00	1.22E-02
		Cs-137	<1.04E-02	0.00E+00	1.04E-02
		Be-7	<1.02E-01	0.00E+00	1.02E-01
		K-40	3.92E-01	1.52E-01	1.99E-01
517671	3/2/2020 - 3/9/2020	I-131	<2.25E-02	0.00E+00	2.25E-02
		Cs-134	<1.92E-02	0.00E+00	1.92E-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	5.36E-01	1.94E-01	1.83E-01
518702	3/9/2020 - 3/16/2020	I-131	<1.77E-02	0.00E+00	1.77E-02
		Cs-134	<1.58E-02	0.00E+00	1.58E-02
		Cs-137	<1.43E-02	0.00E+00	1.43E-02
		Be-7	<1.09E-01	0.00E+00	1.09E-01
		K-40	3.12E-01	1.69E-01	2.15E-01
519310	3/16/2020 - 3/23/2020	I-131	<1.80E-02	0.00E+00	1.80E-02
		Cs-134	<1.40E-02	0.00E+00	1.40E-02
		Cs-137	<1.38E-02	0.00E+00	1.38E-02
		Be-7	<8.72E-02	0.00E+00	8.72E-02
		K-40	<2.78E-01	0.00E+00	2.78E-01
519689	3/23/2020 - 3/30/2020	I-131	<2.09E-02	0.00E+00	2.09E-02
		Cs-134	<1.99E-02	0.00E+00	1.99E-02
		Cs-137	<1.55E-02	0.00E+00	1.55E-02
		Be-7	<1.32E-01	0.00E+00	1.32E-01
		K-40	<3.89E-01	0.00E+00	3.89E-01
520285	3/30/2020 - 4/6/2020	I-131	<2.08E-02	0.00E+00	2.08E-02
		Cs-134	<1.38E-02	0.00E+00	1.38E-02
		Cs-137	<1.58E-02	0.00E+00	1.58E-02
		Be-7	<1.47E-01	0.00E+00	1.47E-01
		K-40	4.09E-01	1.92E-01	2.34E-01
520505	4/6/2020 - 4/13/2020	I-131	<3.61E-02	0.00E+00	3.61E-02
		Cs-134	<1.95E-02	0.00E+00	1.95E-02
		Cs-137	<1.40E-02	0.00E+00	1.40E-02
		Be-7	<1.40E-01	0.00E+00	1.40E-01
		K-40	4.91E-01	1.78E-01	1.60E-01
520798	4/13/2020 - 4/20/2020	I-131	<2.97E-02	0.00E+00	2.97E-02
		Cs-134	<1.83E-02	0.00E+00	1.83E-02
		Cs-137	<1.89E-02	0.00E+00	1.89E-02
		Be-7	<1.48E-01	0.00E+00	1.48E-01
		K-40	4.98E-01	1.77E-01	1.29E-01
521598	4/20/2020 - 4/27/2020	I-131	<1.64E-02	0.00E+00	1.64E-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	<1.09E-01	0.00E+00	1.09E-01
		K-40	<1.64E-01	0.00E+00	1.64E-01
522032	4/27/2020 - 5/4/2020	I-131	<1.86E-02	0.00E+00	1.86E-02

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
522032	4/27/2020 - 5/4/2020	Cs-134	<1.65E-02	0.00E+00	1.65E-02
		Cs-137	<1.43E-02	0.00E+00	1.43E-02
		Be-7	3.68E-02	6.57E-02	1.13E-01
		K-40	3.61E-01	1.39E-01	3.49E-02
522339	5/4/2020 - 5/11/2020	I-131	<1.78E-02	0.00E+00	1.78E-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	<7.41E-02	0.00E+00	7.41E-02
		K-40	<3.44E-01	0.00E+00	3.44E-01
522586	5/11/2020 - 5/18/2020	I-131	<1.71E-02	0.00E+00	1.71E-02
		Cs-134	<1.62E-02	0.00E+00	1.62E-02
		Cs-137	<1.63E-02	0.00E+00	1.63E-02
		Be-7	<8.35E-02	0.00E+00	8.35E-02
		K-40	4.19E-01	2.09E-01	2.77E-01
523094	5/18/2020 - 5/26/2020	I-131	<1.25E-02	0.00E+00	1.25E-02
		Cs-134	<1.28E-02	0.00E+00	1.28E-02
		Cs-137	<1.30E-02	0.00E+00	1.30E-02
		Be-7	<8.30E-02	0.00E+00	8.30E-02
		K-40	4.67E-01	1.66E-01	1.37E-01
523466	5/26/2020 - 6/1/2020	I-131	<1.84E-02	0.00E+00	1.84E-02
		Cs-134	<1.78E-02	0.00E+00	1.78E-02
		Cs-137	<1.53E-02	0.00E+00	1.53E-02
		Be-7	<1.44E-01	0.00E+00	1.44E-01
		K-40	1.58E-01	1.54E-01	2.35E-01
523868	6/1/2020 - 6/8/2020	I-131	<1.94E-02	0.00E+00	1.94E-02
		Cs-134	<1.70E-02	0.00E+00	1.70E-02
		Cs-137	<1.14E-02	0.00E+00	1.14E-02
		Be-7	<1.22E-01	0.00E+00	1.22E-01
		K-40	<4.13E-01	0.00E+00	4.13E-01
524431	6/8/2020 - 6/15/2020	I-131	<1.59E-02	0.00E+00	1.59E-02
		Cs-134	<1.66E-02	0.00E+00	1.66E-02
		Cs-137	<1.36E-02	0.00E+00	1.36E-02
		Be-7	<1.15E-01	0.00E+00	1.15E-01
		K-40	<3.46E-01	0.00E+00	3.46E-01
524754	6/15/2020 - 6/22/2020	I-131	<1.73E-02	0.00E+00	1.73E-02
		Cs-134	<1.21E-02	0.00E+00	1.21E-02
		Cs-137	<1.78E-02	0.00E+00	1.78E-02
		Be-7	<8.09E-02	0.00E+00	8.09E-02
		K-40	3.15E-01	1.84E-01	2.55E-01
524985	6/22/2020 - 6/29/2020	I-131	<1.95E-02	0.00E+00	1.95E-02
		Cs-134	<1.19E-02	0.00E+00	1.19E-02
		Cs-137	<1.56E-02	0.00E+00	1.56E-02
		Be-7	<1.04E-01	0.00E+00	1.04E-01
		K-40	5.30E-01	1.88E-01	1.69E-01
525361	6/29/2020 - 7/6/2020	I-131	<1.96E-02	0.00E+00	1.96E-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	<9.70E-02	0.00E+00	9.70E-02
		K-40	6.50E-01	1.91E-01	1.25E-01

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
525582	7/6/2020 - 7/13/2020	I-131	<1.64E-02	0.00E+00	1.64E-02
		Cs-134	<1.61E-02	0.00E+00	1.61E-02
		Cs-137	<1.39E-02	0.00E+00	1.39E-02
		Be-7	<1.15E-01	0.00E+00	1.15E-01
		K-40	3.45E-01	1.50E-01	1.33E-01
525935	7/13/2020 - 7/20/2020	I-131	<1.79E-02	0.00E+00	1.79E-02
		Cs-134	<1.88E-02	0.00E+00	1.88E-02
		Cs-137	<1.45E-02	0.00E+00	1.45E-02
		Be-7	<1.20E-01	0.00E+00	1.20E-01
		K-40	3.40E-01	1.65E-01	1.95E-01
526266	7/20/2020 - 7/27/2020	I-131	<2.06E-02	0.00E+00	2.06E-02
		Cs-134	<1.76E-02	0.00E+00	1.76E-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	2.87E-01	1.55E-01	1.91E-01
526553	7/27/2020 - 8/3/2020	I-131	<1.62E-02	0.00E+00	1.62E-02
		Cs-134	<1.75E-02	0.00E+00	1.75E-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	2.53E-01	1.72E-01	2.49E-01
526872	8/3/2020 - 8/10/2020	I-131	<1.78E-02	0.00E+00	1.78E-02
		Cs-134	<1.75E-02	0.00E+00	1.75E-02
		Cs-137	<1.69E-02	0.00E+00	1.69E-02
		Be-7	<1.02E-01	0.00E+00	1.02E-01
		K-40	6.23E-01	1.94E-01	1.26E-01
527351	8/10/2020 - 8/17/2020	I-131	<1.51E-02	0.00E+00	1.51E-02
		Cs-134	<1.54E-02	0.00E+00	1.54E-02
		Cs-137	<1.18E-02	0.00E+00	1.18E-02
		Be-7	<1.16E-01	0.00E+00	1.16E-01
		K-40	<1.36E-01	0.00E+00	1.36E-01
527643	8/17/2020 - 8/24/2020	I-131	<1.74E-02	0.00E+00	1.74E-02
		Cs-134	<1.76E-02	0.00E+00	1.76E-02
		Cs-137	<1.46E-02	0.00E+00	1.46E-02
		Be-7	<1.20E-01	0.00E+00	1.20E-01
		K-40	4.62E-01	1.88E-01	2.08E-01
527942	8/24/2020 - 8/31/2020	I-131	<1.75E-02	0.00E+00	1.75E-02
		Cs-134	<1.38E-02	0.00E+00	1.38E-02
		Cs-137	<1.55E-02	0.00E+00	1.55E-02
		Be-7	<8.92E-02	0.00E+00	8.92E-02
		K-40	4.42E-01	1.79E-01	1.95E-01
528691	8/31/2020 - 9/8/2020	I-131	<1.83E-02	0.00E+00	1.83E-02
		Cs-134	<1.07E-02	0.00E+00	1.07E-02
		Cs-137	<1.26E-02	0.00E+00	1.26E-02
		Be-7	<1.12E-01	0.00E+00	1.12E-01
		K-40	<3.59E-01	0.00E+00	3.59E-01
529024	9/8/2020 - 9/15/2020	I-131	<1.48E-02	0.00E+00	1.48E-02
		Cs-134	<1.80E-02	0.00E+00	1.80E-02
		Cs-137	<1.50E-02	0.00E+00	1.50E-02
		Be-7	<8.73E-02	0.00E+00	8.73E-02
		K-40	6.29E-01	1.83E-01	3.34E-02

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
530017	9/15/2020 - 9/21/2020	I-131	<1.73E-02	0.00E+00	1.73E-02
		Cs-134	<1.47E-02	0.00E+00	1.47E-02
		Cs-137	<1.62E-02	0.00E+00	1.62E-02
		Be-7	<1.41E-01	0.00E+00	1.41E-01
		K-40	<4.96E-01	0.00E+00	4.96E-01
530317	9/21/2020 - 9/28/2020	I-131	<1.88E-02	0.00E+00	1.88E-02
		Cs-134	<1.68E-02	0.00E+00	1.68E-02
		Cs-137	<1.39E-02	0.00E+00	1.39E-02
		Be-7	<1.01E-01	0.00E+00	1.01E-01
		K-40	5.37E-01	2.19E-01	2.68E-01
530589	9/28/2020 - 10/5/2020	I-131	<1.73E-02	0.00E+00	1.73E-02
		Cs-134	<1.48E-02	0.00E+00	1.48E-02
		Cs-137	<1.02E-02	0.00E+00	1.02E-02
		Be-7	<1.14E-01	0.00E+00	1.14E-01
		K-40	5.52E-01	1.99E-01	1.98E-01
531101	10/5/2020 - 10/12/2020	I-131	<1.55E-02	0.00E+00	1.55E-02
		Cs-134	<1.43E-02	0.00E+00	1.43E-02
		Cs-137	<1.37E-02	0.00E+00	1.37E-02
		Be-7	<1.07E-01	0.00E+00	1.07E-01
		K-40	4.60E-01	1.61E-01	1.11E-01
531698	10/12/2020 - 10/19/2020	I-131	<1.58E-02	0.00E+00	1.58E-02
		Cs-134	<1.72E-02	0.00E+00	1.72E-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	4.79E-01	1.94E-01	2.06E-01
532102	10/19/2020 - 10/26/2020	I-131	<2.02E-02	0.00E+00	2.02E-02
		Cs-134	<1.41E-02	0.00E+00	1.41E-02
		Cs-137	<1.50E-02	0.00E+00	1.50E-02
		Be-7	1.96E-02	7.76E-02	1.39E-01
		K-40	4.23E-01	1.82E-01	2.00E-01
532526	10/26/2020 - 11/2/2020	I-131	<1.75E-02	0.00E+00	1.75E-02
		Cs-134	<1.68E-02	0.00E+00	1.68E-02
		Cs-137	<1.59E-02	0.00E+00	1.59E-02
		Be-7	<9.64E-02	0.00E+00	9.64E-02
		K-40	7.02E-01	2.15E-01	1.47E-01
532835	11/2/2020 - 11/9/2020	I-131	<1.82E-02	0.00E+00	1.82E-02
		Cs-134	<1.35E-02	0.00E+00	1.35E-02
		Cs-137	<1.54E-02	0.00E+00	1.54E-02
		Be-7	<1.00E-01	0.00E+00	1.00E-01
		K-40	5.82E-01	1.88E-01	1.36E-01
533361	11/9/2020 - 11/16/2020	I-131	<2.12E-02	0.00E+00	2.12E-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	<1.33E-01	0.00E+00	1.33E-01
		K-40	<4.22E-01	0.00E+00	4.22E-01
533823	11/16/2020 - 11/23/2020	I-131	<2.22E-02	0.00E+00	2.22E-02
		Cs-134	<1.82E-02	0.00E+00	1.82E-02
		Cs-137	<1.65E-02	0.00E+00	1.65E-02
		Be-7	<1.20E-01	0.00E+00	1.20E-01
		K-40	5.08E-01	2.16E-01	2.65E-01



# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
534123	11/23/2020 - 11/30/2020	I-131	<1.97E-02	0.00E+00	1.97E-02
		Cs-134	<2.08E-02	0.00E+00	2.08E-02
		Cs-137	<2.06E-02	0.00E+00	2.06E-02
		Be-7	<1.37E-01	0.00E+00	1.37E-01
		K-40	7.10E-01	2.37E-01	2.38E-01
534582	11/30/2020 - 12/7/2020	I-131	<1.51E-02	0.00E+00	1.51E-02
		Cs-134	<1.79E-02	0.00E+00	1.79E-02
		Cs-137	<1.31E-02	0.00E+00	1.31E-02
		Be-7	<1.14E-01	0.00E+00	1.14E-01
		K-40	5.53E-01	1.98E-01	2.00E-01
535355	12/7/2020 - 12/14/2020	I-131	<2.06E-02	0.00E+00	2.06E-02
		Cs-134	<1.46E-02	0.00E+00	1.46E-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	7.35E-01	2.12E-01	1.50E-01
535913	12/14/2020 - 12/21/2020	I-131	<1.98E-02	0.00E+00	1.98E-02
		Cs-134	<1.40E-02	0.00E+00	1.40E-02
		Cs-137	<1.57E-02	0.00E+00	1.57E-02
		Be-7	<9.75E-02	0.00E+00	9.75E-02
		K-40	5.29E-01	1.82E-01	1.60E-01
536198	12/21/2020 - 12/28/2020	I-131	<3.68E-02	0.00E+00	3.68E-02
		Cs-134	<1.53E-02	0.00E+00	1.53E-02
		Cs-137	<1.24E-02	0.00E+00	1.24E-02
		Be-7	<9.60E-02	0.00E+00	9.60E-02
		K-40	4.81E-01	1.86E-01	1.86E-01

Media Type: AQUATIC VEGETATION Concentration (Activity): pCi/kg wet

Sample Point 26 [ INDICATOR - S @ 4.7 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
525926	7/23/2020 - 7/23/2020	Mn-54	<1.14E+01	0.00E+00	1.14E+01
		Co-58	<1.35E+01	0.00E+00	1.35E+01
		Fe-59	<3.62E+01	0.00E+00	3.62E+01
		Co-60	<2.14E+01	0.00E+00	2.14E+01
		Zn-65	<3.36E+01	0.00E+00	3.36E+01
		Zr-95	<2.44E+01	0.00E+00	2.44E+01
		Nb-95	<1.60E+01	0.00E+00	1.60E+01
		I-131	<1.82E+01	0.00E+00	1.82E+01
		Cs-134	<1.85E+01	0.00E+00	1.85E+01
		Cs-137	<1.27E+01	0.00E+00	1.27E+01
		BaLa-140	<2.45E+01	0.00E+00	2.45E+01
		Be-7	1.70E+02	1.04E+02	1.54E+02
		K-40	5.16E+03	6.53E+02	2.69E+02

Sample Point 41 [ INDICATOR - S @ 3.8 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
525927	7/23/2020 - 7/23/2020	Mn-54	<1.20E+01	0.00E+00	1.20E+01
		Co-58	<1.27E+01	0.00E+00	1.27E+01
		Fe-59	<2.72E+01	0.00E+00	2.72E+01
		Co-60	<1.02E+01	0.00E+00	1.02E+01
		Zn-65	<2.65E+01	0.00E+00	2.65E+01
		Zr-95	<2.35E+01	0.00E+00	2.35E+01
		Nb-95	<1.22E+01	0.00E+00	1.22E+01
		I-131	<1.63E+01	0.00E+00	1.63E+01
		Cs-134	<1.34E+01	0.00E+00	1.34E+01
		Cs-137	<1.15E+01	0.00E+00	1.15E+01
		BaLa-140	<1.39E+01	0.00E+00	1.39E+01
		Be-7	2.83E+02	1.13E+02	1.52E+02

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

Media Type: AQUATIC VEGETATION Concentration (Activity): pCi/kg wet

Sample Point 41 [ INDICATOR - S @ 3.8 miles ]

Sample ID:	Sample Dates:		Nuclide	Activity	2 Sigma Error	MDA
525927	7/23/2020 - 7/23/2020		K-40	3.10E+03	4.38E+02	2.12E+02

Sample Point 61 [ CONTROL - E @ 2.5 miles ]

Sample ID:	Sample Dates:		Nuclide	Activity	2 Sigma Error	MDA
525928	7/23/2020 - 7/23/2020		Mn-54	<1.26E+01	0.00E+00	1.26E+01
			Co-58	<1.42E+01	0.00E+00	1.42E+01
			Fe-59	<2.87E+01	0.00E+00	2.87E+01
			Co-60	<1.59E+01	0.00E+00	1.59E+01
			Zn-65	<3.19E+01	0.00E+00	3.19E+01
			Zr-95	<2.47E+01	0.00E+00	2.47E+01
			Nb-95	<1.24E+01	0.00E+00	1.24E+01
			I-131	<1.48E+01	0.00E+00	1.48E+01
			Cs-134	<1.70E+01	0.00E+00	1.70E+01
			Cs-137	<1.34E+01	0.00E+00	1.34E+01
			BaLa-140	<4.29E+00	0.00E+00	4.29E+00
			Be-7	3.68E+02	1.27E+02	1.65E+02
			K-40	5.73E+03	6.72E+02	2.23E+02

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

Sample Point 97 [ CONTROL - NW @ 19.1 miles ]

Sample ID:	Sample Dates:		Nuclide	Activity	2 Sigma Error	MDA
515253	1/6/2020 - 1/6/2020	MIXEDCROPS	I-131	<1.40E+01	0.00E+00	1.40E+01
			Cs-134	<8.99E+00	0.00E+00	8.99E+00
			Cs-137	<8.46E+00	0.00E+00	8.46E+00
			Be-7	9.47E+01	6.28E+01	9.68E+01
			K-40	2.89E+03	3.37E+02	1.41E+02

Sample ID:	Sample Dates:		Nuclide	Activity	2 Sigma Error	MDA
516501	2/3/2020 - 2/3/2020	MIXEDCROPS	I-131	<1.00E+01	0.00E+00	1.00E+01
			Cs-134	<1.09E+01	0.00E+00	1.09E+01
			Cs-137	<9.03E+00	0.00E+00	9.03E+00
			Be-7	1.72E+02	7.42E+01	1.06E+02
			K-40	3.40E+03	3.93E+02	1.40E+02

Sample ID:	Sample Dates:		Nuclide	Activity	2 Sigma Error	MDA
518703	3/2/2020 - 3/2/2020	MIXEDCROPS	I-131	<1.50E+01	0.00E+00	1.50E+01
			Cs-134	<1.49E+01	0.00E+00	1.49E+01
			Cs-137	<1.54E+01	0.00E+00	1.54E+01
			Be-7	<1.10E+02	0.00E+00	1.10E+02
			K-40	5.14E+03	5.71E+02	1.75E+02

Sample ID:	Sample Dates:		Nuclide	Activity	2 Sigma Error	MDA
520799	4/6/2020 - 4/6/2020	MIXEDCROPS	I-131	<1.32E+01	0.00E+00	1.32E+01
			Cs-134	<1.24E+01	0.00E+00	1.24E+01
			Cs-137	<1.13E+01	0.00E+00	1.13E+01
			Be-7	<8.15E+01	0.00E+00	8.15E+01
			K-40	2.46E+03	3.48E+02	1.54E+02

Sample ID:	Sample Dates:		Nuclide	Activity	2 Sigma Error	MDA
522590	5/4/2020 - 5/4/2020	MIXEDCROPS	I-131	<8.48E+00	0.00E+00	8.48E+00
			Cs-134	<1.05E+01	0.00E+00	1.05E+01
			Cs-137	<8.59E+00	0.00E+00	8.59E+00
			Be-7	1.52E+01	4.59E+01	7.92E+01
			K-40	3.01E+03	3.53E+02	1.33E+02

Sample ID:	Sample Dates:		Nuclide	Activity	2 Sigma Error	MDA
524435	6/1/2020 - 6/1/2020	MIXEDCROPS	I-131	<6.93E+00	0.00E+00	6.93E+00
			Cs-134	<7.94E+00	0.00E+00	7.94E+00
			Cs-137	<5.10E+00	0.00E+00	5.10E+00
			Be-7	1.81E+02	5.90E+01	7.54E+01
			K-40	1.77E+03	2.36E+02	1.02E+02

Sample ID:	Sample Dates:		Nuclide	Activity	2 Sigma Error	MDA
525939	7/6/2020 - 7/6/2020	MIXEDCROPS	I-131	<1.10E+01	0.00E+00	1.10E+01
			Cs-134	<9.77E+00	0.00E+00	9.77E+00
			Cs-137	<7.31E+00	0.00E+00	7.31E+00

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
525939	7/6/2020 - 7/6/2020	MIXEDCROPS	Be-7	<6.54E+01	0.00E+00	6.54E+01
			K-40	3.26E+03	3.57E+02	7.35E+01
527355	8/3/2020 - 8/3/2020	MIXEDCROPS	I-131	<8.47E+00	0.00E+00	8.47E+00
			Cs-134	<8.69E+00	0.00E+00	8.69E+00
			Cs-137	<1.15E+01	0.00E+00	1.15E+01
			Be-7	<6.06E+01	0.00E+00	6.06E+01
			K-40	1.87E+03	2.46E+02	9.66E+01
530021	9/8/2020 - 9/8/2020	MIXEDCROPS	I-131	<1.35E+01	0.00E+00	1.35E+01
			Cs-134	<1.24E+01	0.00E+00	1.24E+01
			Cs-137	<1.05E+01	0.00E+00	1.05E+01
			Be-7	<7.23E+01	0.00E+00	7.23E+01
			K-40	3.05E+03	3.74E+02	1.62E+02
531702	10/5/2020 - 10/5/2020	MIXEDCROPS	I-131	<8.12E+00	0.00E+00	8.12E+00
			Cs-134	<7.09E+00	0.00E+00	7.09E+00
			Cs-137	<7.75E+00	0.00E+00	7.75E+00
			Be-7	1.28E+02	5.29E+01	7.37E+01
			K-40	3.41E+03	3.74E+02	9.67E+01
533362	11/2/2020 - 11/2/2020	MIXEDCROPS	I-131	<7.41E+00	0.00E+00	7.41E+00
			Cs-134	<1.12E+01	0.00E+00	1.12E+01
			Cs-137	<8.81E+00	0.00E+00	8.81E+00
			Be-7	8.70E+01	7.01E+01	1.11E+02
			K-40	2.69E+03	3.26E+02	1.32E+02
535914	12/7/2020 - 12/7/2020	MIXEDCROPS	I-131	<7.35E+00	0.00E+00	7.35E+00
			Cs-134	<8.00E+00	0.00E+00	8.00E+00
			Cs-137	<1.02E+01	0.00E+00	1.02E+01
			Be-7	<8.78E+01	0.00E+00	8.78E+01
			K-40	2.24E+03	2.86E+02	1.23E+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		
515883	12/23/2019 - 1/20/2020	Beta	<3.27E+00	0.00E+00	3.27E+00		
		Mn-54	<2.93E+00	0.00E+00	2.93E+00		
		Co-58	<3.18E+00	0.00E+00	3.18E+00		
		Fe-59	<6.50E+00	0.00E+00	6.50E+00		
		Co-60	<2.91E+00	0.00E+00	2.91E+00		
		Zn-65	<5.68E+00	0.00E+00	5.68E+00		
		Zr-95	<5.65E+00	0.00E+00	5.65E+00		
		Nb-95	<4.07E+00	0.00E+00	4.07E+00		
		I-131	<1.05E+01	0.00E+00	1.05E+01		
		Cs-134	<3.03E+00	0.00E+00	3.03E+00		
		Cs-137	<2.92E+00	0.00E+00	2.92E+00		
		BaLa-140	<7.56E+00	0.00E+00	7.56E+00		
		Be-7	<2.90E+01	0.00E+00	2.90E+01		
		K-40	7.32E+01	3.23E+01	4.01E+01		
		517406	1/20/2020 - 2/17/2020	Beta	<3.25E+00	0.00E+00	3.25E+00
				Mn-54	<2.47E+00	0.00E+00	2.47E+00
Co-58	<3.28E+00			0.00E+00	3.28E+00		
Fe-59	<6.60E+00			0.00E+00	6.60E+00		
Co-60	<2.47E+00			0.00E+00	2.47E+00		
Zn-65	<5.38E+00			0.00E+00	5.38E+00		
Zr-95	<6.04E+00			0.00E+00	6.04E+00		
Nb-95	<3.60E+00			0.00E+00	3.60E+00		
I-131	<1.15E+01			0.00E+00	1.15E+01		

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
517406	1/20/2020 - 2/17/2020	Cs-134	<3.12E+00	0.00E+00	3.12E+00
		Cs-137	<2.39E+00	0.00E+00	2.39E+00
		BaLa-140	<8.01E+00	0.00E+00	8.01E+00
		Be-7	<2.64E+01	0.00E+00	2.64E+01
		K-40	<2.67E+01	0.00E+00	2.67E+01
517627	12/23/2019 - 3/16/2020	H3DW	<-1.3E+02	0.00E+00	2.00E+02
519693	2/17/2020 - 3/16/2020	Beta	<3.29E+00	0.00E+00	3.29E+00
		Mn-54	<2.59E+00	0.00E+00	2.59E+00
		Co-58	<3.63E+00	0.00E+00	3.63E+00
		Fe-59	<5.28E+00	0.00E+00	5.28E+00
		Co-60	<1.64E+00	0.00E+00	1.64E+00
		Zn-65	<5.43E+00	0.00E+00	5.43E+00
		Zr-95	<4.16E+00	0.00E+00	4.16E+00
		Nb-95	<4.01E+00	0.00E+00	4.01E+00
		I-131	<1.16E+01	0.00E+00	1.16E+01
		Cs-134	<3.14E+00	0.00E+00	3.14E+00
		Cs-137	<3.58E+00	0.00E+00	3.58E+00
		BaLa-140	<7.06E+00	0.00E+00	7.06E+00
		Be-7	<2.17E+01	0.00E+00	2.17E+01
		K-40	5.49E+01	3.02E+01	4.19E+01
521602	3/16/2020 - 4/13/2020	Beta	<3.31E+00	0.00E+00	3.31E+00
		Mn-54	<1.80E+00	0.00E+00	1.80E+00
		Co-58	<2.12E+00	0.00E+00	2.12E+00
		Fe-59	<3.92E+00	0.00E+00	3.92E+00
		Co-60	<1.82E+00	0.00E+00	1.82E+00
		Zn-65	<4.64E+00	0.00E+00	4.64E+00
		Zr-95	<4.36E+00	0.00E+00	4.36E+00
		Nb-95	<2.80E+00	0.00E+00	2.80E+00
		I-131	<1.19E+01	0.00E+00	1.19E+01
		Cs-134	<1.98E+00	0.00E+00	1.98E+00
		Cs-137	<2.18E+00	0.00E+00	2.18E+00
		BaLa-140	<5.78E+00	0.00E+00	5.78E+00
		Be-7	<2.05E+01	0.00E+00	2.05E+01
		K-40	6.31E+01	2.52E+01	3.52E+01
523098	4/13/2020 - 5/11/2020	Beta	<3.26E+00	0.00E+00	3.26E+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	<6.25E+00	0.00E+00	6.25E+00
		Co-60	<2.26E+00	0.00E+00	2.26E+00
		Zn-65	<7.54E+00	0.00E+00	7.54E+00
		Zr-95	<7.31E+00	0.00E+00	7.31E+00
		Nb-95	<4.21E+00	0.00E+00	4.21E+00
		I-131	<1.14E+01	0.00E+00	1.14E+01
		Cs-134	<3.40E+00	0.00E+00	3.40E+00
		Cs-137	<3.67E+00	0.00E+00	3.67E+00
		BaLa-140	<7.07E+00	0.00E+00	7.07E+00
		Be-7	<2.78E+01	0.00E+00	2.78E+01
		K-40	5.73E+01	2.95E+01	3.75E+01
523869	3/16/2020 - 6/8/2020	H3DW	<2.14E+01	0.00E+00	1.88E+02
524758	5/11/2020 - 6/8/2020	Beta	<3.24E+00	0.00E+00	3.24E+00
		Mn-54	<3.53E+00	0.00E+00	3.53E+00
		Co-58	<4.23E+00	0.00E+00	4.23E+00
		Fe-59	<7.42E+00	0.00E+00	7.42E+00
		Co-60	<3.21E+00	0.00E+00	3.21E+00
		Zn-65	<6.27E+00	0.00E+00	6.27E+00

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
524758	5/11/2020 - 6/8/2020	Zr-95	<7.66E+00	0.00E+00	7.66E+00
		Nb-95	<3.94E+00	0.00E+00	3.94E+00
		I-131	<1.12E+01	0.00E+00	1.12E+01
		Cs-134	<3.37E+00	0.00E+00	3.37E+00
		Cs-137	<3.24E+00	0.00E+00	3.24E+00
		BaLa-140	<7.87E+00	0.00E+00	7.87E+00
		Be-7	<2.60E+01	0.00E+00	2.60E+01
		K-40	9.77E+01	3.44E+01	3.43E+01
		525943	6/8/2020 - 7/6/2020	Beta	5.35E+00
Mn-54	<2.07E+00			0.00E+00	2.07E+00
Co-58	<2.64E+00			0.00E+00	2.64E+00
Fe-59	<4.81E+00			0.00E+00	4.81E+00
Co-60	<2.24E+00			0.00E+00	2.24E+00
Zn-65	<3.70E+00			0.00E+00	3.70E+00
Zr-95	<4.69E+00			0.00E+00	4.69E+00
Nb-95	<2.65E+00			0.00E+00	2.65E+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	<2.70E+00			0.00E+00	2.70E+00
BaLa-140	<6.21E+00			0.00E+00	6.21E+00
Be-7	<2.16E+01			0.00E+00	2.16E+01
K-40	1.13E+02			2.99E+01	3.16E+01
527359	7/6/2020 - 8/3/2020	Beta	5.43E+00	4.48E+00	3.26E+00
		Mn-54	<3.53E+00	0.00E+00	3.53E+00
		Co-58	<3.19E+00	0.00E+00	3.19E+00
		Fe-59	<7.94E+00	0.00E+00	7.94E+00
		Co-60	<3.61E+00	0.00E+00	3.61E+00
		Zn-65	<1.09E+01	0.00E+00	1.09E+01
		Zr-95	<6.73E+00	0.00E+00	6.73E+00
		Nb-95	<4.41E+00	0.00E+00	4.41E+00
		I-131	<1.13E+01	0.00E+00	1.13E+01
		Cs-134	<4.17E+00	0.00E+00	4.17E+00
		Cs-137	<3.19E+00	0.00E+00	3.19E+00
		BaLa-140	<7.18E+00	0.00E+00	7.18E+00
		Be-7	<2.94E+01	0.00E+00	2.94E+01
		K-40	<3.12E+01	0.00E+00	3.12E+01
529028	8/3/2020 - 8/31/2020	Beta	5.38E+00	4.45E+00	3.24E+00
		Mn-54	<3.24E+00	0.00E+00	3.24E+00
		Co-58	<3.33E+00	0.00E+00	3.33E+00
		Fe-59	<8.83E+00	0.00E+00	8.83E+00
		Co-60	<3.24E+00	0.00E+00	3.24E+00
		Zn-65	<5.96E+00	0.00E+00	5.96E+00
		Zr-95	<6.39E+00	0.00E+00	6.39E+00
		Nb-95	<4.18E+00	0.00E+00	4.18E+00
		I-131	<1.18E+01	0.00E+00	1.18E+01
		Cs-134	<3.84E+00	0.00E+00	3.84E+00
		Cs-137	<3.56E+00	0.00E+00	3.56E+00
		BaLa-140	<7.64E+00	0.00E+00	7.64E+00
		Be-7	<3.57E+01	0.00E+00	3.57E+01
		K-40	5.84E+01	3.09E+01	3.93E+01
528864	6/8/2020 - 9/28/2020	H3DW	<8.76E+01	0.00E+00	1.80E+02
531105	8/31/2020 - 9/28/2020	Beta	5.27E+00	4.42E+00	3.22E+00
		Mn-54	<2.65E+00	0.00E+00	2.65E+00
		Co-58	<2.84E+00	0.00E+00	2.84E+00
		Fe-59	<6.20E+00	0.00E+00	6.20E+00
		Co-60	<2.97E+00	0.00E+00	2.97E+00
		Zn-65	<5.49E+00	0.00E+00	5.49E+00

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
531105	8/31/2020 - 9/28/2020	Zr-95	<5.59E+00	0.00E+00	5.59E+00
		Nb-95	<3.76E+00	0.00E+00	3.76E+00
		I-131	<9.46E+00	0.00E+00	9.46E+00
		Cs-134	<2.94E+00	0.00E+00	2.94E+00
		Cs-137	<2.75E+00	0.00E+00	2.75E+00
		BaLa-140	<5.64E+00	0.00E+00	5.64E+00
		Be-7	<2.92E+01	0.00E+00	2.92E+01
		K-40	6.68E+01	3.42E+01	4.68E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
532839	9/28/2020 - 10/26/2020	Beta	<3.24E+00	0.00E+00	3.24E+00
		Mn-54	<2.24E+00	0.00E+00	2.24E+00
		Co-58	<2.92E+00	0.00E+00	2.92E+00
		Fe-59	<6.94E+00	0.00E+00	6.94E+00
		Co-60	<2.69E+00	0.00E+00	2.69E+00
		Zn-65	<6.23E+00	0.00E+00	6.23E+00
		Zr-95	<5.83E+00	0.00E+00	5.83E+00
		Nb-95	<4.31E+00	0.00E+00	4.31E+00
		I-131	<1.07E+01	0.00E+00	1.07E+01
		Cs-134	<3.18E+00	0.00E+00	3.18E+00
		Cs-137	<2.79E+00	0.00E+00	2.79E+00
		BaLa-140	<7.13E+00	0.00E+00	7.13E+00
		Be-7	<2.50E+01	0.00E+00	2.50E+01
		K-40	1.01E+02	3.83E+01	4.80E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
534586	10/26/2020 - 11/23/2020	Beta	<3.24E+00	0.00E+00	3.24E+00
		Mn-54	<1.92E+00	0.00E+00	1.92E+00
		Co-58	<2.10E+00	0.00E+00	2.10E+00
		Fe-59	<3.87E+00	0.00E+00	3.87E+00
		Co-60	<1.90E+00	0.00E+00	1.90E+00
		Zn-65	<4.25E+00	0.00E+00	4.25E+00
		Zr-95	<4.36E+00	0.00E+00	4.36E+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	<2.48E+00	0.00E+00	2.48E+00
		Cs-137	<2.01E+00	0.00E+00	2.01E+00
		BaLa-140	<7.10E+00	0.00E+00	7.10E+00
		Be-7	<2.02E+01	0.00E+00	2.02E+01
		K-40	9.55E+01	2.51E+01	2.85E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
534700	9/28/2020 - 12/21/2020	H3DW	<-4.9E+00	0.00E+00	2.01E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
536343	11/23/2020 - 12/21/2020	Beta	4.40E+00	4.39E+00	3.21E+00
		Mn-54	<2.17E+00	0.00E+00	2.17E+00
		Co-58	<2.31E+00	0.00E+00	2.31E+00
		Fe-59	<4.17E+00	0.00E+00	4.17E+00
		Co-60	<1.86E+00	0.00E+00	1.86E+00
		Zn-65	<4.07E+00	0.00E+00	4.07E+00
		Zr-95	<4.39E+00	0.00E+00	4.39E+00
		Nb-95	<2.41E+00	0.00E+00	2.41E+00
		I-131	<1.16E+01	0.00E+00	1.16E+01
		Cs-134	<2.56E+00	0.00E+00	2.56E+00
		Cs-137	<1.88E+00	0.00E+00	1.88E+00
		BaLa-140	<8.26E+00	0.00E+00	8.26E+00
		Be-7	<2.19E+01	0.00E+00	2.19E+01
		K-40	3.08E+01	2.11E+01	3.17E+01

Sample Point 51 [ INDICATOR - -- @ 0 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
515884	12/23/2019 - 1/20/2020	Beta	<3.27E+00	0.00E+00	3.27E+00
		Mn-54	<2.86E+00	0.00E+00	2.86E+00
		Co-58	<2.78E+00	0.00E+00	2.78E+00
		Fe-59	<5.11E+00	0.00E+00	5.11E+00

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
515884	12/23/2019 - 1/20/2020	Co-60	<2.54E+00	0.00E+00	2.54E+00
		Zn-65	<6.29E+00	0.00E+00	6.29E+00
		Zr-95	<4.76E+00	0.00E+00	4.76E+00
		Nb-95	<4.13E+00	0.00E+00	4.13E+00
		I-131	<1.19E+01	0.00E+00	1.19E+01
		Cs-134	<2.75E+00	0.00E+00	2.75E+00
		Cs-137	<2.23E+00	0.00E+00	2.23E+00
		BaLa-140	<8.66E+00	0.00E+00	8.66E+00
		Be-7	<1.95E+01	0.00E+00	1.95E+01
		K-40	7.99E+01	3.39E+01	4.41E+01
		H3DW	5.58E+03	2.31E+02	1.79E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
517407	1/20/2020 - 2/17/2020	Beta	<3.25E+00	0.00E+00	3.25E+00
		Mn-54	<2.90E+00	0.00E+00	2.90E+00
		Co-58	<2.72E+00	0.00E+00	2.72E+00
		Fe-59	<5.73E+00	0.00E+00	5.73E+00
		Co-60	<2.97E+00	0.00E+00	2.97E+00
		Zn-65	<5.51E+00	0.00E+00	5.51E+00
		Zr-95	<6.16E+00	0.00E+00	6.16E+00
		Nb-95	<4.26E+00	0.00E+00	4.26E+00
		I-131	<1.19E+01	0.00E+00	1.19E+01
		Cs-134	<3.28E+00	0.00E+00	3.28E+00
		Cs-137	<3.06E+00	0.00E+00	3.06E+00
		BaLa-140	<8.31E+00	0.00E+00	8.31E+00
		Be-7	<2.27E+01	0.00E+00	2.27E+01
		K-40	7.65E+01	3.09E+01	3.77E+01
		H3DW	5.79E+03	2.36E+02	1.88E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
519694	2/17/2020 - 3/16/2020	Beta	<3.29E+00	0.00E+00	3.29E+00
		Mn-54	<2.56E+00	0.00E+00	2.56E+00
		Co-58	<2.78E+00	0.00E+00	2.78E+00
		Fe-59	<6.60E+00	0.00E+00	6.60E+00
		Co-60	<2.73E+00	0.00E+00	2.73E+00
		Zn-65	<5.38E+00	0.00E+00	5.38E+00
		Zr-95	<4.32E+00	0.00E+00	4.32E+00
		Nb-95	<3.53E+00	0.00E+00	3.53E+00
		I-131	<1.04E+01	0.00E+00	1.04E+01
		Cs-134	<2.84E+00	0.00E+00	2.84E+00
		Cs-137	<2.38E+00	0.00E+00	2.38E+00
		BaLa-140	<6.71E+00	0.00E+00	6.71E+00
		Be-7	<2.22E+01	0.00E+00	2.22E+01
		K-40	6.79E+01	2.49E+01	2.72E+01
		H3DW	4.72E+03	2.15E+02	1.80E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
521603	3/16/2020 - 4/13/2020	Beta	<3.31E+00	0.00E+00	3.31E+00
		Mn-54	<1.75E+00	0.00E+00	1.75E+00
		Co-58	<2.42E+00	0.00E+00	2.42E+00
		Fe-59	<5.66E+00	0.00E+00	5.66E+00
		Co-60	<1.91E+00	0.00E+00	1.91E+00
		Zn-65	<4.58E+00	0.00E+00	4.58E+00
		Zr-95	<4.03E+00	0.00E+00	4.03E+00
		Nb-95	<2.86E+00	0.00E+00	2.86E+00
		I-131	<1.08E+01	0.00E+00	1.08E+01
		Cs-134	<2.07E+00	0.00E+00	2.07E+00
		Cs-137	<2.05E+00	0.00E+00	2.05E+00
		BaLa-140	<6.66E+00	0.00E+00	6.66E+00
		Be-7	<2.15E+01	0.00E+00	2.15E+01
		K-40	3.86E+01	2.00E+01	2.73E+01
		H3DW	4.68E+03	2.17E+02	1.87E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
523099	4/13/2020 - 5/11/2020	Beta	<3.26E+00	0.00E+00	3.26E+00
		Mn-54	<4.11E+00	0.00E+00	4.11E+00
		Co-58	<3.41E+00	0.00E+00	3.41E+00

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
523099	4/13/2020 - 5/11/2020	Fe-59	<8.90E+00	0.00E+00	8.90E+00
		Co-60	<3.58E+00	0.00E+00	3.58E+00
		Zn-65	<6.50E+00	0.00E+00	6.50E+00
		Zr-95	<6.46E+00	0.00E+00	6.46E+00
		Nb-95	<4.09E+00	0.00E+00	4.09E+00
		I-131	<6.96E+00	0.00E+00	6.96E+00
		Cs-134	<4.15E+00	0.00E+00	4.15E+00
		Cs-137	<3.43E+00	0.00E+00	3.43E+00
		BaLa-140	<6.80E+00	0.00E+00	6.80E+00
		Be-7	<2.98E+01	0.00E+00	2.98E+01
		K-40	<5.99E+01	0.00E+00	5.99E+01
		H3DW	4.70E+03	2.14E+02	1.84E+02
		524759	5/11/2020 - 6/8/2020	Beta	3.46E+00
Mn-54	<3.32E+00			0.00E+00	3.32E+00
Co-58	<3.29E+00			0.00E+00	3.29E+00
Fe-59	<6.74E+00			0.00E+00	6.74E+00
Co-60	<3.30E+00			0.00E+00	3.30E+00
Zn-65	<6.46E+00			0.00E+00	6.46E+00
Zr-95	<5.32E+00			0.00E+00	5.32E+00
Nb-95	<3.93E+00			0.00E+00	3.93E+00
I-131	<1.12E+01			0.00E+00	1.12E+01
Cs-134	<3.42E+00			0.00E+00	3.42E+00
Cs-137	<2.75E+00			0.00E+00	2.75E+00
BaLa-140	<7.24E+00			0.00E+00	7.24E+00
Be-7	<2.40E+01			0.00E+00	2.40E+01
K-40	7.05E+01			3.39E+01	4.67E+01
H3DW	4.23E+03			2.14E+02	2.01E+02
525944	6/8/2020 - 7/6/2020	Beta	3.88E+00	4.35E+00	3.18E+00
		Mn-54	<2.76E+00	0.00E+00	2.76E+00
		Co-58	<3.23E+00	0.00E+00	3.23E+00
		Fe-59	<5.47E+00	0.00E+00	5.47E+00
		Co-60	<2.81E+00	0.00E+00	2.81E+00
		Zn-65	<5.79E+00	0.00E+00	5.79E+00
		Zr-95	<5.62E+00	0.00E+00	5.62E+00
		Nb-95	<3.53E+00	0.00E+00	3.53E+00
		I-131	<1.11E+01	0.00E+00	1.11E+01
		Cs-134	<3.25E+00	0.00E+00	3.25E+00
		Cs-137	<2.89E+00	0.00E+00	2.89E+00
		BaLa-140	<8.03E+00	0.00E+00	8.03E+00
		Be-7	<2.76E+01	0.00E+00	2.76E+01
		K-40	8.29E+01	2.96E+01	3.38E+01
		H3DW	3.98E+03	2.00E+02	1.82E+02
527360	7/6/2020 - 8/3/2020	Beta	3.60E+00	4.44E+00	3.26E+00
		Mn-54	<2.80E+00	0.00E+00	2.80E+00
		Co-58	<2.64E+00	0.00E+00	2.64E+00
		Fe-59	<6.00E+00	0.00E+00	6.00E+00
		Co-60	<2.66E+00	0.00E+00	2.66E+00
		Zn-65	<5.07E+00	0.00E+00	5.07E+00
		Zr-95	<4.47E+00	0.00E+00	4.47E+00
		Nb-95	<3.73E+00	0.00E+00	3.73E+00
		I-131	<1.09E+01	0.00E+00	1.09E+01
		Cs-134	<2.48E+00	0.00E+00	2.48E+00
		Cs-137	<2.67E+00	0.00E+00	2.67E+00
		BaLa-140	<6.39E+00	0.00E+00	6.39E+00
		Be-7	<2.61E+01	0.00E+00	2.61E+01
		K-40	4.42E+01	2.67E+01	3.90E+01
		H3DW	4.00E+03	2.05E+02	1.85E+02
529029	8/3/2020 - 8/31/2020	Beta	3.64E+00	4.41E+00	3.24E+00
		Mn-54	<3.05E+00	0.00E+00	3.05E+00



# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
529029	8/3/2020 - 8/31/2020	Co-58	<3.03E+00	0.00E+00	3.03E+00
		Fe-59	<5.68E+00	0.00E+00	5.68E+00
		Co-60	<3.52E+00	0.00E+00	3.52E+00
		Zn-65	<6.91E+00	0.00E+00	6.91E+00
		Zr-95	<5.38E+00	0.00E+00	5.38E+00
		Nb-95	<4.40E+00	0.00E+00	4.40E+00
		I-131	<1.15E+01	0.00E+00	1.15E+01
		Cs-134	<3.21E+00	0.00E+00	3.21E+00
		Cs-137	<2.39E+00	0.00E+00	2.39E+00
		BaLa-140	<7.96E+00	0.00E+00	7.96E+00
		Be-7	<2.71E+01	0.00E+00	2.71E+01
		K-40	8.20E+01	3.09E+01	3.47E+01
		H3DW	1.51E+03	1.55E+02	1.93E+02
		531106	8/31/2020 - 9/28/2020	Beta	<3.22E+00
Mn-54	<2.88E+00			0.00E+00	2.88E+00
Co-58	<2.43E+00			0.00E+00	2.43E+00
Fe-59	<6.74E+00			0.00E+00	6.74E+00
Co-60	<1.78E+00			0.00E+00	1.78E+00
Zn-65	<8.08E+00			0.00E+00	8.08E+00
Zr-95	<6.75E+00			0.00E+00	6.75E+00
Nb-95	<4.97E+00			0.00E+00	4.97E+00
I-131	<1.16E+01			0.00E+00	1.16E+01
Cs-134	<3.36E+00			0.00E+00	3.36E+00
Cs-137	<3.33E+00			0.00E+00	3.33E+00
BaLa-140	<8.77E+00			0.00E+00	8.77E+00
Be-7	<3.35E+01			0.00E+00	3.35E+01
K-40	<4.95E+01			0.00E+00	4.95E+01
H3DW	2.03E+03	1.61E+02	1.79E+02		
532840	9/28/2020 - 10/26/2020	Beta	<3.24E+00	0.00E+00	3.24E+00
		Mn-54	<4.23E+00	0.00E+00	4.23E+00
		Co-58	<3.52E+00	0.00E+00	3.52E+00
		Fe-59	<7.24E+00	0.00E+00	7.24E+00
		Co-60	<3.15E+00	0.00E+00	3.15E+00
		Zn-65	<7.78E+00	0.00E+00	7.78E+00
		Zr-95	<6.97E+00	0.00E+00	6.97E+00
		Nb-95	<4.83E+00	0.00E+00	4.83E+00
		I-131	<1.14E+01	0.00E+00	1.14E+01
		Cs-134	<3.82E+00	0.00E+00	3.82E+00
		Cs-137	<2.66E+00	0.00E+00	2.66E+00
		BaLa-140	<7.66E+00	0.00E+00	7.66E+00
		Be-7	<3.29E+01	0.00E+00	3.29E+01
		K-40	<6.36E+01	0.00E+00	6.36E+01
H3DW	1.52E+03	1.48E+02	1.77E+02		
534587	10/26/2020 - 11/23/2020	Beta	<3.24E+00	0.00E+00	3.24E+00
		Mn-54	<2.12E+00	0.00E+00	2.12E+00
		Co-58	<2.23E+00	0.00E+00	2.23E+00
		Fe-59	<4.23E+00	0.00E+00	4.23E+00
		Co-60	<1.98E+00	0.00E+00	1.98E+00
		Zn-65	<4.77E+00	0.00E+00	4.77E+00
		Zr-95	<3.88E+00	0.00E+00	3.88E+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	<2.08E+00	0.00E+00	2.08E+00
		Cs-137	<2.03E+00	0.00E+00	2.03E+00
		BaLa-140	<6.68E+00	0.00E+00	6.68E+00
		Be-7	<1.98E+01	0.00E+00	1.98E+01
		K-40	1.00E+02	2.67E+01	3.19E+01
H3DW	1.20E+03	1.45E+02	1.91E+02		
536344	11/23/2020 - 12/21/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	<3.21E+00	0.00E+00	3.21E+00

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 51 [ INDICATOR - -- @ 0 miles ]

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Sample ID:	536344	Sample Dates:	11/23/2020 - 12/21/2020	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<2.04E+00	0.00E+00	2.04E+00
				Co-58	<2.42E+00	0.00E+00	2.42E+00
				Fe-59	<6.41E+00	0.00E+00	6.41E+00
				Co-60	<2.08E+00	0.00E+00	2.08E+00
				Zn-65	<4.50E+00	0.00E+00	4.50E+00
				Zr-95	<4.60E+00	0.00E+00	4.60E+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	<2.36E+00	0.00E+00	2.36E+00
				Cs-137	<2.67E+00	0.00E+00	2.67E+00
				BaLa-140	<6.57E+00	0.00E+00	6.57E+00
				Be-7	<2.48E+01	0.00E+00	2.48E+01
				K-40	8.55E+01	2.76E+01	3.23E+01
				H3DW	1.28E+03	1.47E+02	1.91E+02

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Sample Point 58 [ CONTROL - SW @ 8.47 miles ]

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Sample ID:	515885	Sample Dates:	12/23/2019 - 1/20/2020	Nuclide	Activity	2 Sigma Error	MDA
				Beta	<3.27E+00	0.00E+00	3.27E+00
				Mn-54	<2.96E+00	0.00E+00	2.96E+00
				Co-58	<2.95E+00	0.00E+00	2.95E+00
				Fe-59	<6.02E+00	0.00E+00	6.02E+00
				Co-60	<2.99E+00	0.00E+00	2.99E+00
				Zn-65	<4.68E+00	0.00E+00	4.68E+00
				Zr-95	<3.79E+00	0.00E+00	3.79E+00
				Nb-95	<3.12E+00	0.00E+00	3.12E+00
				I-131	<1.13E+01	0.00E+00	1.13E+01
				Cs-134	<3.01E+00	0.00E+00	3.01E+00
				Cs-137	<2.78E+00	0.00E+00	2.78E+00
				BaLa-140	<8.40E+00	0.00E+00	8.40E+00
				Be-7	<2.57E+01	0.00E+00	2.57E+01
				K-40	<3.98E+01	0.00E+00	3.98E+01

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Sample ID:	517408	Sample Dates:	1/20/2020 - 2/17/2020	Nuclide	Activity	2 Sigma Error	MDA
				Beta	<3.25E+00	0.00E+00	3.25E+00
				Mn-54	<2.61E+00	0.00E+00	2.61E+00
				Co-58	<2.93E+00	0.00E+00	2.93E+00
				Fe-59	<6.79E+00	0.00E+00	6.79E+00
				Co-60	<2.53E+00	0.00E+00	2.53E+00
				Zn-65	<6.45E+00	0.00E+00	6.45E+00
				Zr-95	<5.03E+00	0.00E+00	5.03E+00
				Nb-95	<3.10E+00	0.00E+00	3.10E+00
				I-131	<1.14E+01	0.00E+00	1.14E+01
				Cs-134	<3.17E+00	0.00E+00	3.17E+00
				Cs-137	<2.69E+00	0.00E+00	2.69E+00
				BaLa-140	<5.70E+00	0.00E+00	5.70E+00
				Be-7	<2.38E+01	0.00E+00	2.38E+01
				K-40	<5.16E+01	0.00E+00	5.16E+01

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Sample ID:	519695	Sample Dates:	2/17/2020 - 3/16/2020	Nuclide	Activity	2 Sigma Error	MDA
				Beta	3.61E+00	4.48E+00	3.29E+00
				Mn-54	<3.66E+00	0.00E+00	3.66E+00
				Co-58	<3.56E+00	0.00E+00	3.56E+00
				Fe-59	<7.52E+00	0.00E+00	7.52E+00
				Co-60	<3.52E+00	0.00E+00	3.52E+00
				Zn-65	<8.64E+00	0.00E+00	8.64E+00
				Zr-95	<6.94E+00	0.00E+00	6.94E+00
				Nb-95	<5.39E+00	0.00E+00	5.39E+00
				I-131	<1.18E+01	0.00E+00	1.18E+01
				Cs-134	<3.36E+00	0.00E+00	3.36E+00
				Cs-137	<2.76E+00	0.00E+00	2.76E+00
				BaLa-140	<1.06E+01	0.00E+00	1.06E+01
				Be-7	<3.46E+01	0.00E+00	3.46E+01
				K-40	<5.97E+01	0.00E+00	5.97E+01

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# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
522462	12/23/2019 - 3/16/2020	H3DW	<-1.2E+02	0.00E+00	2.02E+02
521604	3/16/2020 - 4/13/2020	Beta	<3.31E+00	0.00E+00	3.31E+00
		Mn-54	<1.84E+00	0.00E+00	1.84E+00
		Co-58	<2.01E+00	0.00E+00	2.01E+00
		Fe-59	<4.54E+00	0.00E+00	4.54E+00
		Co-60	<1.80E+00	0.00E+00	1.80E+00
		Zn-65	<4.58E+00	0.00E+00	4.58E+00
		Zr-95	<3.45E+00	0.00E+00	3.45E+00
		Nb-95	<2.56E+00	0.00E+00	2.56E+00
		I-131	<1.16E+01	0.00E+00	1.16E+01
		Cs-134	<1.82E+00	0.00E+00	1.82E+00
		Cs-137	<1.55E+00	0.00E+00	1.55E+00
		BaLa-140	<5.89E+00	0.00E+00	5.89E+00
		Be-7	<1.74E+01	0.00E+00	1.74E+01
		K-40	<2.18E+01	0.00E+00	2.18E+01
523100	4/13/2020 - 5/11/2020	Beta	<3.26E+00	0.00E+00	3.26E+00
		Mn-54	<3.13E+00	0.00E+00	3.13E+00
		Co-58	<3.59E+00	0.00E+00	3.59E+00
		Fe-59	<7.67E+00	0.00E+00	7.67E+00
		Co-60	<2.79E+00	0.00E+00	2.79E+00
		Zn-65	<1.25E+01	0.00E+00	1.25E+01
		Zr-95	<6.38E+00	0.00E+00	6.38E+00
		Nb-95	<5.31E+00	0.00E+00	5.31E+00
		I-131	<1.19E+01	0.00E+00	1.19E+01
		Cs-134	<3.23E+00	0.00E+00	3.23E+00
		Cs-137	<3.24E+00	0.00E+00	3.24E+00
		BaLa-140	<9.40E+00	0.00E+00	9.40E+00
		Be-7	<2.37E+01	0.00E+00	2.37E+01
		K-40	1.79E+01	2.49E+01	4.14E+01
523870	3/16/2020 - 6/8/2020	H3DW	<1.42E+01	0.00E+00	1.88E+02
524760	5/11/2020 - 6/8/2020	Beta	3.31E+00	4.41E+00	3.24E+00
		Mn-54	<2.10E+00	0.00E+00	2.10E+00
		Co-58	<2.09E+00	0.00E+00	2.09E+00
		Fe-59	<4.71E+00	0.00E+00	4.71E+00
		Co-60	<1.91E+00	0.00E+00	1.91E+00
		Zn-65	<3.84E+00	0.00E+00	3.84E+00
		Zr-95	<4.17E+00	0.00E+00	4.17E+00
		Nb-95	<2.75E+00	0.00E+00	2.75E+00
		I-131	<8.82E+00	0.00E+00	8.82E+00
		Cs-134	<2.30E+00	0.00E+00	2.30E+00
		Cs-137	<2.07E+00	0.00E+00	2.07E+00
		BaLa-140	<5.23E+00	0.00E+00	5.23E+00
		Be-7	<1.69E+01	0.00E+00	1.69E+01
		K-40	1.07E+02	2.59E+01	2.82E+01
525945	6/8/2020 - 7/6/2020	Beta	5.16E+00	4.37E+00	3.18E+00
		Mn-54	<2.89E+00	0.00E+00	2.89E+00
		Co-58	<2.75E+00	0.00E+00	2.75E+00
		Fe-59	<5.08E+00	0.00E+00	5.08E+00
		Co-60	<3.17E+00	0.00E+00	3.17E+00
		Zn-65	<5.64E+00	0.00E+00	5.64E+00
		Zr-95	<4.54E+00	0.00E+00	4.54E+00
		Nb-95	<3.94E+00	0.00E+00	3.94E+00
		I-131	<1.09E+01	0.00E+00	1.09E+01
		Cs-134	<2.72E+00	0.00E+00	2.72E+00
		Cs-137	<3.43E+00	0.00E+00	3.43E+00
		BaLa-140	<8.69E+00	0.00E+00	8.69E+00
		Be-7	<2.12E+01	0.00E+00	2.12E+01

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
525945	6/8/2020 - 7/6/2020	K-40	3.11E+01	2.47E+01	3.74E+01
527361	7/6/2020 - 8/3/2020	Beta	4.31E+00	4.46E+00	3.26E+00
		Mn-54	<2.88E+00	0.00E+00	2.88E+00
		Co-58	<2.95E+00	0.00E+00	2.95E+00
		Fe-59	<5.41E+00	0.00E+00	5.41E+00
		Co-60	<2.39E+00	0.00E+00	2.39E+00
		Zn-65	<4.63E+00	0.00E+00	4.63E+00
		Zr-95	<5.47E+00	0.00E+00	5.47E+00
		Nb-95	<3.73E+00	0.00E+00	3.73E+00
		I-131	<1.10E+01	0.00E+00	1.10E+01
		Cs-134	<2.67E+00	0.00E+00	2.67E+00
		Cs-137	<2.57E+00	0.00E+00	2.57E+00
		BaLa-140	<6.29E+00	0.00E+00	6.29E+00
		Be-7	<2.73E+01	0.00E+00	2.73E+01
		K-40	9.47E+01	3.27E+01	3.88E+01
529030	8/3/2020 - 8/31/2020	Beta	4.71E+00	4.44E+00	3.24E+00
		Mn-54	<3.58E+00	0.00E+00	3.58E+00
		Co-58	<3.97E+00	0.00E+00	3.97E+00
		Fe-59	<6.85E+00	0.00E+00	6.85E+00
		Co-60	<2.15E+00	0.00E+00	2.15E+00
		Zn-65	<6.12E+00	0.00E+00	6.12E+00
		Zr-95	<6.57E+00	0.00E+00	6.57E+00
		Nb-95	<4.54E+00	0.00E+00	4.54E+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	<3.61E+00	0.00E+00	3.61E+00
		BaLa-140	<8.72E+00	0.00E+00	8.72E+00
		Be-7	<2.85E+01	0.00E+00	2.85E+01
		K-40	7.90E+01	4.20E+01	6.00E+01
528865	6/8/2020 - 9/28/2020	H3DW	<-2.8E+01	0.00E+00	1.80E+02
531107	8/31/2020 - 9/28/2020	Beta	<3.22E+00	0.00E+00	3.22E+00
		Mn-54	<2.65E+00	0.00E+00	2.65E+00
		Co-58	<2.81E+00	0.00E+00	2.81E+00
		Fe-59	<5.15E+00	0.00E+00	5.15E+00
		Co-60	<2.46E+00	0.00E+00	2.46E+00
		Zn-65	<5.79E+00	0.00E+00	5.79E+00
		Zr-95	<5.10E+00	0.00E+00	5.10E+00
		Nb-95	<3.88E+00	0.00E+00	3.88E+00
		I-131	<1.01E+01	0.00E+00	1.01E+01
		Cs-134	<2.81E+00	0.00E+00	2.81E+00
		Cs-137	<2.67E+00	0.00E+00	2.67E+00
		BaLa-140	<3.80E+00	0.00E+00	3.80E+00
		Be-7	<2.43E+01	0.00E+00	2.43E+01
		K-40	6.02E+01	3.36E+01	4.91E+01
532841	9/28/2020 - 10/26/2020	Beta	4.72E+00	4.43E+00	3.24E+00
		Mn-54	<2.84E+00	0.00E+00	2.84E+00
		Co-58	<3.16E+00	0.00E+00	3.16E+00
		Fe-59	<6.57E+00	0.00E+00	6.57E+00
		Co-60	<2.74E+00	0.00E+00	2.74E+00
		Zn-65	<6.11E+00	0.00E+00	6.11E+00
		Zr-95	<4.22E+00	0.00E+00	4.22E+00
		Nb-95	<3.63E+00	0.00E+00	3.63E+00
		I-131	<1.14E+01	0.00E+00	1.14E+01
		Cs-134	<2.46E+00	0.00E+00	2.46E+00
		Cs-137	<2.35E+00	0.00E+00	2.35E+00
		BaLa-140	<5.55E+00	0.00E+00	5.55E+00
		Be-7	<2.47E+01	0.00E+00	2.47E+01

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
532841	9/28/2020 - 10/26/2020		K-40	8.71E+01	3.00E+01	3.39E+01
534588	10/26/2020 - 11/23/2020		Beta	<3.24E+00	0.00E+00	3.24E+00
			Mn-54	<1.76E+00	0.00E+00	1.76E+00
			Co-58	<2.17E+00	0.00E+00	2.17E+00
			Fe-59	<3.92E+00	0.00E+00	3.92E+00
			Co-60	<2.00E+00	0.00E+00	2.00E+00
			Zn-65	<3.43E+00	0.00E+00	3.43E+00
			Zr-95	<3.58E+00	0.00E+00	3.58E+00
			Nb-95	<2.66E+00	0.00E+00	2.66E+00
			I-131	<9.84E+00	0.00E+00	9.84E+00
			Cs-134	<1.89E+00	0.00E+00	1.89E+00
			Cs-137	<1.64E+00	0.00E+00	1.64E+00
			BaLa-140	<5.65E+00	0.00E+00	5.65E+00
			Be-7	<1.48E+01	0.00E+00	1.48E+01
			K-40	<2.88E+01	0.00E+00	2.88E+01
534701	9/28/2020 - 12/21/2020		H3DW	<-7.1E+01	0.00E+00	2.00E+02
536345	11/23/2020 - 12/21/2020		Beta	3.27E+00	4.36E+00	3.21E+00
			Mn-54	<1.76E+00	0.00E+00	1.76E+00
			Co-58	<2.34E+00	0.00E+00	2.34E+00
			Fe-59	<3.84E+00	0.00E+00	3.84E+00
			Co-60	<2.22E+00	0.00E+00	2.22E+00
			Zn-65	<4.57E+00	0.00E+00	4.57E+00
			Zr-95	<3.97E+00	0.00E+00	3.97E+00
			Nb-95	<2.87E+00	0.00E+00	2.87E+00
			I-131	<1.19E+01	0.00E+00	1.19E+01
			Cs-134	<2.32E+00	0.00E+00	2.32E+00
			Cs-137	<2.08E+00	0.00E+00	2.08E+00
			BaLa-140	<6.95E+00	0.00E+00	6.95E+00
			Be-7	<1.87E+01	0.00E+00	1.87E+01
			K-40	8.02E+01	2.21E+01	2.38E+01

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

Sample Point 44 [ INDICATOR - -- @ 0 miles ]

Sample ID:	Sample Dates:		Nuclide	Activity	2 Sigma Error	MDA
520419	4/16/2020 - 4/16/2020	BOTMFEEDER	Mn-54	<6.25E+01	0.00E+00	6.25E+01
			Co-58	<7.09E+01	0.00E+00	7.09E+01
			Fe-59	<1.68E+02	0.00E+00	1.68E+02
			Co-60	<6.47E+01	0.00E+00	6.47E+01
			Zn-65	<1.34E+02	0.00E+00	1.34E+02
			Nb-95	<6.25E+01	0.00E+00	6.25E+01
			I-131	<1.27E+02	0.00E+00	1.27E+02
			Cs-134	<6.30E+01	0.00E+00	6.30E+01
			Cs-137	<4.99E+01	0.00E+00	4.99E+01
			Be-7	<5.35E+02	0.00E+00	5.35E+02
			K-40	5.03E+03	1.07E+03	8.81E+02
			Ag-110M	<5.50E+01	0.00E+00	5.50E+01
			Sb-122	<1.03E+03	0.00E+00	1.03E+03
			Sb-125	<1.51E+02	0.00E+00	1.51E+02
520417	4/17/2020 - 4/17/2020	FREESWIM	Mn-54	<5.12E+01	0.00E+00	5.12E+01
			Co-58	<5.14E+01	0.00E+00	5.14E+01
			Fe-59	<7.47E+01	0.00E+00	7.47E+01
			Co-60	<6.37E+01	0.00E+00	6.37E+01
			Zn-65	<1.29E+02	0.00E+00	1.29E+02
			Nb-95	<7.02E+01	0.00E+00	7.02E+01
			I-131	<1.10E+02	0.00E+00	1.10E+02
			Cs-134	<6.26E+01	0.00E+00	6.26E+01
			Cs-137	<4.09E+01	0.00E+00	4.09E+01
			Be-7	<5.13E+02	0.00E+00	5.13E+02

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 44 [ INDICATOR - -- @ 0 miles ]

Sample ID:	Sample Dates:	FREESWIM	Nuclide	Activity	2 Sigma Error	MDA
520417	4/17/2020 - 4/17/2020	FREESWIM	K-40	4.80E+03	1.17E+03	1.10E+03
			Ag-110M	<4.00E+01	0.00E+00	4.00E+01
			Sb-122	<8.54E+02	0.00E+00	8.54E+02
			Sb-125	<1.15E+02	0.00E+00	1.15E+02
520418	4/17/2020 - 4/17/2020	FREESWIM	Mn-54	<8.42E+01	0.00E+00	8.42E+01
			Co-58	<7.50E+01	0.00E+00	7.50E+01
			Fe-59	<1.32E+02	0.00E+00	1.32E+02
			Co-60	<7.99E+01	0.00E+00	7.99E+01
			Zn-65	<1.22E+02	0.00E+00	1.22E+02
			Nb-95	<7.90E+01	0.00E+00	7.90E+01
			I-131	<1.64E+02	0.00E+00	1.64E+02
			Cs-134	<6.38E+01	0.00E+00	6.38E+01
			Cs-137	<7.13E+01	0.00E+00	7.13E+01
			Be-7	<4.80E+02	0.00E+00	4.80E+02
			K-40	4.37E+03	1.26E+03	1.30E+03
			Ag-110M	<5.04E+01	0.00E+00	5.04E+01
			Sb-122	<1.17E+03	0.00E+00	1.17E+03
			Sb-125	<1.87E+02	0.00E+00	1.87E+02
			530750	10/21/2020 - 10/21/2020	FREESWIM	Mn-54
Co-58	<6.34E+01	0.00E+00				6.34E+01
Fe-59	<1.43E+02	0.00E+00				1.43E+02
Co-60	<5.57E+01	0.00E+00				5.57E+01
Zn-65	<1.40E+02	0.00E+00				1.40E+02
Nb-95	<6.46E+01	0.00E+00				6.46E+01
I-131	<1.35E+02	0.00E+00				1.35E+02
Cs-134	<7.76E+01	0.00E+00				7.76E+01
Cs-137	<6.95E+01	0.00E+00				6.95E+01
Be-7	<5.57E+02	0.00E+00				5.57E+02
K-40	4.84E+03	1.07E+03				1.40E+02
Ag-110M	<5.19E+01	0.00E+00				5.19E+01
Sb-122	<1.23E+03	0.00E+00				1.23E+03
Sb-125	<1.32E+02	0.00E+00				1.32E+02
530751	10/21/2020 - 10/21/2020	FREESWIM				Mn-54
			Co-58	<5.30E+01	0.00E+00	5.30E+01
			Fe-59	<1.12E+02	0.00E+00	1.12E+02
			Co-60	<6.48E+01	0.00E+00	6.48E+01
			Zn-65	<1.02E+02	0.00E+00	1.02E+02
			Nb-95	<6.27E+01	0.00E+00	6.27E+01
			I-131	<9.23E+01	0.00E+00	9.23E+01
			Cs-134	<6.70E+01	0.00E+00	6.70E+01
			Cs-137	<3.58E+01	0.00E+00	3.58E+01
			Be-7	<3.74E+02	0.00E+00	3.74E+02
			K-40	3.79E+03	9.66E+02	8.24E+02
			Ag-110M	<4.54E+01	0.00E+00	4.54E+01
			Sb-122	<9.86E+02	0.00E+00	9.86E+02
			Sb-125	<1.52E+02	0.00E+00	1.52E+02
			530752	10/21/2020 - 10/21/2020	BOTMFEEDER	Mn-54
Co-58	<1.03E+02	0.00E+00				1.03E+02
Fe-59	<2.06E+02	0.00E+00				2.06E+02
Co-60	<8.41E+01	0.00E+00				8.41E+01
Zn-65	<1.79E+02	0.00E+00				1.79E+02
Nb-95	<8.89E+01	0.00E+00				8.89E+01
I-131	<1.63E+02	0.00E+00				1.63E+02
Cs-134	<4.17E+01	0.00E+00				4.17E+01
Cs-137	<7.77E+01	0.00E+00				7.77E+01
Be-7	<7.13E+02	0.00E+00				7.13E+02
K-40	3.81E+03	1.29E+03				1.37E+03
Ag-110M	<5.88E+01	0.00E+00				5.88E+01
Sb-122	<1.72E+03	0.00E+00				1.72E+03

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 44 [ INDICATOR - -- @ 0 miles ]

Sample ID:	Sample Dates:	BOTMFEEDER	Nuclide	Activity	2 Sigma Error	MDA
530752	10/21/2020 - 10/21/2020		Sb-125	<1.71E+02	0.00E+00	1.71E+02

Sample Point 45 [ CONTROL - -- @ 0 miles ]

Sample ID:	Sample Dates:	FREESWIM	Nuclide	Activity	2 Sigma Error	MDA
520420	4/16/2020 - 4/16/2020		Mn-54	<6.56E+01	0.00E+00	6.56E+01
			Co-58	<3.75E+01	0.00E+00	3.75E+01
			Fe-59	<1.16E+02	0.00E+00	1.16E+02
			Co-60	<5.44E+01	0.00E+00	5.44E+01
			Zn-65	<1.07E+02	0.00E+00	1.07E+02
			Nb-95	<3.99E+01	0.00E+00	3.99E+01
			I-131	<9.60E+01	0.00E+00	9.60E+01
			Cs-134	<7.74E+01	0.00E+00	7.74E+01
			Cs-137	<4.44E+01	0.00E+00	4.44E+01
			Be-7	<3.07E+02	0.00E+00	3.07E+02
			K-40	3.65E+03	9.21E+02	6.54E+02
			Ag-110M	<3.77E+01	0.00E+00	3.77E+01
			Sb-122	<6.94E+02	0.00E+00	6.94E+02
			Sb-125	<1.47E+02	0.00E+00	1.47E+02

Sample ID:	Sample Dates:	FREESWIM	Nuclide	Activity	2 Sigma Error	MDA
520421	4/16/2020 - 4/16/2020		Mn-54	<4.44E+01	0.00E+00	4.44E+01
			Co-58	<4.74E+01	0.00E+00	4.74E+01
			Fe-59	<1.54E+02	0.00E+00	1.54E+02
			Co-60	<6.12E+01	0.00E+00	6.12E+01
			Zn-65	<7.84E+01	0.00E+00	7.84E+01
			Nb-95	<5.78E+01	0.00E+00	5.78E+01
			I-131	<9.29E+01	0.00E+00	9.29E+01
			Cs-134	<5.32E+01	0.00E+00	5.32E+01
			Cs-137	<4.90E+01	0.00E+00	4.90E+01
			Be-7	<3.38E+02	0.00E+00	3.38E+02
			K-40	2.97E+03	8.56E+02	7.10E+02
			Ag-110M	<3.91E+01	0.00E+00	3.91E+01
			Sb-122	<6.55E+02	0.00E+00	6.55E+02
			Sb-125	<1.24E+02	0.00E+00	1.24E+02

Sample ID:	Sample Dates:	BOTMFEEDER	Nuclide	Activity	2 Sigma Error	MDA
520422	4/16/2020 - 4/16/2020		Mn-54	<4.56E+01	0.00E+00	4.56E+01
			Co-58	<5.18E+01	0.00E+00	5.18E+01
			Fe-59	<1.22E+02	0.00E+00	1.22E+02
			Co-60	<5.39E+01	0.00E+00	5.39E+01
			Zn-65	<1.28E+02	0.00E+00	1.28E+02
			Nb-95	<5.82E+01	0.00E+00	5.82E+01
			I-131	<9.73E+01	0.00E+00	9.73E+01
			Cs-134	<5.71E+01	0.00E+00	5.71E+01
			Cs-137	<5.88E+01	0.00E+00	5.88E+01
			Be-7	<4.64E+02	0.00E+00	4.64E+02
			K-40	4.10E+03	9.79E+02	6.81E+02
			Ag-110M	<2.64E+01	0.00E+00	2.64E+01
			Sb-122	<1.06E+03	0.00E+00	1.06E+03
			Sb-125	<1.05E+02	0.00E+00	1.05E+02

Sample ID:	Sample Dates:	FREESWIM	Nuclide	Activity	2 Sigma Error	MDA
530753	10/22/2020 - 10/22/2020		Mn-54	<5.09E+01	0.00E+00	5.09E+01
			Co-58	<7.06E+01	0.00E+00	7.06E+01
			Fe-59	<1.43E+02	0.00E+00	1.43E+02
			Co-60	<3.46E+01	0.00E+00	3.46E+01
			Zn-65	<1.11E+02	0.00E+00	1.11E+02
			Nb-95	<7.28E+01	0.00E+00	7.28E+01
			I-131	<1.13E+02	0.00E+00	1.13E+02
			Cs-134	<6.28E+01	0.00E+00	6.28E+01
			Cs-137	<5.69E+01	0.00E+00	5.69E+01
			Be-7	<4.88E+02	0.00E+00	4.88E+02
			K-40	4.63E+03	1.03E+03	5.13E+02
			Ag-110M	<5.62E+01	0.00E+00	5.62E+01
			Sb-122	<9.86E+02	0.00E+00	9.86E+02

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 45 [ CONTROL - -- @ 0 miles ]

Sample ID:	Sample Dates:	Location:	Nuclide	Activity	2 Sigma Error	MDA
530753	10/22/2020 - 10/22/2020	FREESWIM	Sb-125	<1.34E+02	0.00E+00	1.34E+02
530754	10/22/2020 - 10/22/2020	FREESWIM	Mn-54	<4.70E+01	0.00E+00	4.70E+01
			Co-58	<4.34E+01	0.00E+00	4.34E+01
			Fe-59	<8.16E+01	0.00E+00	8.16E+01
			Co-60	<3.45E+01	0.00E+00	3.45E+01
			Zn-65	<1.07E+02	0.00E+00	1.07E+02
			Nb-95	<4.63E+01	0.00E+00	4.63E+01
			I-131	<8.29E+01	0.00E+00	8.29E+01
			Cs-134	<4.77E+01	0.00E+00	4.77E+01
			Cs-137	<3.91E+01	0.00E+00	3.91E+01
			Be-7	<3.20E+02	0.00E+00	3.20E+02
			K-40	3.15E+03	7.71E+02	5.24E+02
			Ag-110M	<2.21E+01	0.00E+00	2.21E+01
			Sb-122	<8.60E+02	0.00E+00	8.60E+02
			Sb-125	<1.02E+02	0.00E+00	1.02E+02
530755	10/22/2020 - 10/22/2020	BOTMFEEDER	Mn-54	<5.47E+01	0.00E+00	5.47E+01
			Co-58	<4.84E+01	0.00E+00	4.84E+01
			Fe-59	<1.07E+02	0.00E+00	1.07E+02
			Co-60	<5.48E+01	0.00E+00	5.48E+01
			Zn-65	<1.13E+02	0.00E+00	1.13E+02
			Nb-95	<6.71E+01	0.00E+00	6.71E+01
			I-131	<1.10E+02	0.00E+00	1.10E+02
			Cs-134	<4.73E+01	0.00E+00	4.73E+01
			Cs-137	<6.03E+01	0.00E+00	6.03E+01
			Be-7	<3.24E+02	0.00E+00	3.24E+02
			K-40	4.07E+03	9.17E+02	5.02E+02
			Ag-110M	<4.63E+01	0.00E+00	4.63E+01
			Sb-122	<7.50E+02	0.00E+00	7.50E+02
			Sb-125	<1.11E+02	0.00E+00	1.11E+02

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
516072	2/18/2020 - 2/18/2020	Mn-54	<5.69E+00	0.00E+00	5.69E+00
		Co-58	<5.89E+00	0.00E+00	5.89E+00
		Fe-59	<1.16E+01	0.00E+00	1.16E+01
		Co-60	<4.47E+00	0.00E+00	4.47E+00
		Zn-65	<2.29E+01	0.00E+00	2.29E+01
		Zr-95	<1.14E+01	0.00E+00	1.14E+01
		Nb-95	<8.76E+00	0.00E+00	8.76E+00
		I-131	<7.42E+00	0.00E+00	7.42E+00
		Cs-134	<5.92E+00	0.00E+00	5.92E+00
		Cs-137	<5.77E+00	0.00E+00	5.77E+00
		BaLa-140	<8.29E+00	0.00E+00	8.29E+00
		Be-7	<3.23E+01	0.00E+00	3.23E+01
		K-40	6.99E+01	4.55E+01	6.34E+01
		H3GW	<1.20E+01	0.00E+00	1.85E+02
522855	5/13/2020 - 5/13/2020	Mn-54	<5.89E+00	0.00E+00	5.89E+00
		Co-58	<6.30E+00	0.00E+00	6.30E+00
		Fe-59	<9.75E+00	0.00E+00	9.75E+00
		Co-60	<7.00E+00	0.00E+00	7.00E+00
		Zn-65	<1.15E+01	0.00E+00	1.15E+01
		Zr-95	<1.19E+01	0.00E+00	1.19E+01
		Nb-95	<7.69E+00	0.00E+00	7.69E+00
		I-131	<8.12E+00	0.00E+00	8.12E+00
		Cs-134	<7.06E+00	0.00E+00	7.06E+00
		Cs-137	<5.73E+00	0.00E+00	5.73E+00
		BaLa-140	<8.74E+00	0.00E+00	8.74E+00
		Be-7	<4.83E+01	0.00E+00	4.83E+01



# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 57 [ INDICATOR - SSW @ 0.4 miles ]

Sample ID:	522855	Sample Dates:	5/13/2020 - 5/13/2020	Nuclide	Activity	2 Sigma Error	MDA
				K-40	1.62E+02	8.40E+01	1.20E+02
				H3GW	<-5.5E+01	0.00E+00	1.89E+02

Sample ID:	511396	Sample Dates:	8/24/2020 - 8/24/2020	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<7.58E+00	0.00E+00	7.58E+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	<6.79E+00	0.00E+00	6.79E+00
				Zn-65	<9.13E+00	0.00E+00	9.13E+00
				Zr-95	<1.17E+01	0.00E+00	1.17E+01
				Nb-95	<7.18E+00	0.00E+00	7.18E+00
				I-131	<1.00E+01	0.00E+00	1.00E+01
				Cs-134	<4.77E+00	0.00E+00	4.77E+00
				Cs-137	<5.11E+00	0.00E+00	5.11E+00
				BaLa-140	<6.85E+00	0.00E+00	6.85E+00
				Be-7	<4.36E+01	0.00E+00	4.36E+01
				K-40	<1.36E+02	0.00E+00	1.36E+02
				H3GW	<3.99E+01	0.00E+00	1.81E+02

Sample ID:	526796	Sample Dates:	11/16/2020 - 11/16/2020	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<5.90E+00	0.00E+00	5.90E+00
				Co-58	<4.56E+00	0.00E+00	4.56E+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	<1.28E+01	0.00E+00	1.28E+01
				Zr-95	<1.19E+01	0.00E+00	1.19E+01
				Nb-95	<6.25E+00	0.00E+00	6.25E+00
				I-131	<9.98E+00	0.00E+00	9.98E+00
				Cs-134	<6.59E+00	0.00E+00	6.59E+00
				Cs-137	<7.26E+00	0.00E+00	7.26E+00
				BaLa-140	<8.61E+00	0.00E+00	8.61E+00
				Be-7	<4.38E+01	0.00E+00	4.38E+01
				K-40	<1.22E+02	0.00E+00	1.22E+02
				H3GW	<-8.1E+01	0.00E+00	1.93E+02

Sample Point 59 [ INDICATOR - NNE @ 0.5 miles ]

Sample ID:	516073	Sample Dates:	2/18/2020 - 2/18/2020	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<5.91E+00	0.00E+00	5.91E+00
				Co-58	<5.06E+00	0.00E+00	5.06E+00
				Fe-59	<9.89E+00	0.00E+00	9.89E+00
				Co-60	<5.83E+00	0.00E+00	5.83E+00
				Zn-65	<8.83E+00	0.00E+00	8.83E+00
				Zr-95	<7.96E+00	0.00E+00	7.96E+00
				Nb-95	<5.83E+00	0.00E+00	5.83E+00
				I-131	<7.69E+00	0.00E+00	7.69E+00
				Cs-134	<4.30E+00	0.00E+00	4.30E+00
				Cs-137	<5.16E+00	0.00E+00	5.16E+00
				BaLa-140	<6.58E+00	0.00E+00	6.58E+00
				Be-7	<4.97E+01	0.00E+00	4.97E+01
				K-40	8.68E+01	6.31E+01	9.35E+01
				H3GW	<1.22E+02	0.00E+00	1.85E+02

Sample ID:	522856	Sample Dates:	5/14/2020 - 5/14/2020	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<3.62E+00	0.00E+00	3.62E+00
				Co-58	<4.38E+00	0.00E+00	4.38E+00
				Fe-59	<7.65E+00	0.00E+00	7.65E+00
				Co-60	<3.88E+00	0.00E+00	3.88E+00
				Zn-65	<7.11E+00	0.00E+00	7.11E+00
				Zr-95	<6.27E+00	0.00E+00	6.27E+00
				Nb-95	<4.29E+00	0.00E+00	4.29E+00
				I-131	<5.17E+00	0.00E+00	5.17E+00
				Cs-134	<4.54E+00	0.00E+00	4.54E+00
				Cs-137	<3.94E+00	0.00E+00	3.94E+00
				BaLa-140	<5.85E+00	0.00E+00	5.85E+00
				Be-7	9.50E+00	2.20E+01	3.75E+01
				K-40	1.50E+02	5.03E+01	6.06E+01

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
522856	5/14/2020 - 5/14/2020	H3GW	<-4.8E+01	0.00E+00	1.89E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
511397	8/24/2020 - 8/24/2020	Mn-54	<6.33E+00	0.00E+00	6.33E+00
		Co-58	<5.36E+00	0.00E+00	5.36E+00
		Fe-59	<1.13E+01	0.00E+00	1.13E+01
		Co-60	<6.30E+00	0.00E+00	6.30E+00
		Zn-65	<1.35E+01	0.00E+00	1.35E+01
		Zr-95	<9.36E+00	0.00E+00	9.36E+00
		Nb-95	<7.54E+00	0.00E+00	7.54E+00
		I-131	<9.67E+00	0.00E+00	9.67E+00
		Cs-134	<7.64E+00	0.00E+00	7.64E+00
		Cs-137	<6.31E+00	0.00E+00	6.31E+00
		BaLa-140	<6.69E+00	0.00E+00	6.69E+00
		Be-7	<4.20E+01	0.00E+00	4.20E+01
		K-40	1.56E+02	6.72E+01	8.00E+01
		H3GW	<2.58E+01	0.00E+00	1.81E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
526797	11/16/2020 - 11/16/2020	Mn-54	<5.88E+00	0.00E+00	5.88E+00
		Co-58	<5.88E+00	0.00E+00	5.88E+00
		Fe-59	<1.15E+01	0.00E+00	1.15E+01
		Co-60	<5.98E+00	0.00E+00	5.98E+00
		Zn-65	<1.26E+01	0.00E+00	1.26E+01
		Zr-95	<1.16E+01	0.00E+00	1.16E+01
		Nb-95	<5.07E+00	0.00E+00	5.07E+00
		I-131	<9.85E+00	0.00E+00	9.85E+00
		Cs-134	<6.78E+00	0.00E+00	6.78E+00
		Cs-137	<5.69E+00	0.00E+00	5.69E+00
		BaLa-140	<6.81E+00	0.00E+00	6.81E+00
		Be-7	<4.33E+01	0.00E+00	4.33E+01
		K-40	<1.23E+02	0.00E+00	1.23E+02
		H3GW	<-2.9E+01	0.00E+00	1.94E+02

Sample Point 60 [ INDICATOR - ESE @ 0.5 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
516074	2/18/2020 - 2/18/2020	Mn-54	<6.43E+00	0.00E+00	6.43E+00
		Co-58	<6.65E+00	0.00E+00	6.65E+00
		Fe-59	<1.08E+01	0.00E+00	1.08E+01
		Co-60	<8.78E+00	0.00E+00	8.78E+00
		Zn-65	<1.20E+01	0.00E+00	1.20E+01
		Zr-95	<9.50E+00	0.00E+00	9.50E+00
		Nb-95	<6.79E+00	0.00E+00	6.79E+00
		I-131	<8.61E+00	0.00E+00	8.61E+00
		Cs-134	<7.38E+00	0.00E+00	7.38E+00
		Cs-137	<6.56E+00	0.00E+00	6.56E+00
		BaLa-140	<6.76E+00	0.00E+00	6.76E+00
		Be-7	<4.32E+01	0.00E+00	4.32E+01
		K-40	1.30E+02	6.16E+01	7.49E+01
		H3GW	<5.26E+01	0.00E+00	1.84E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
522857	5/13/2020 - 5/13/2020	Mn-54	<5.07E+00	0.00E+00	5.07E+00
		Co-58	<5.90E+00	0.00E+00	5.90E+00
		Fe-59	<1.31E+01	0.00E+00	1.31E+01
		Co-60	<4.76E+00	0.00E+00	4.76E+00
		Zn-65	<9.89E+00	0.00E+00	9.89E+00
		Zr-95	<1.19E+01	0.00E+00	1.19E+01
		Nb-95	<5.37E+00	0.00E+00	5.37E+00
		I-131	<9.22E+00	0.00E+00	9.22E+00
		Cs-134	<7.98E+00	0.00E+00	7.98E+00
		Cs-137	<6.92E+00	0.00E+00	6.92E+00
		BaLa-140	<1.12E+01	0.00E+00	1.12E+01
		Be-7	<4.80E+01	0.00E+00	4.80E+01
		K-40	1.08E+02	7.83E+01	1.19E+02

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
522857	5/13/2020 - 5/13/2020	H3GW	<-1.4E+02	0.00E+00	1.90E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
511398	8/24/2020 - 8/24/2020	Mn-54	<6.07E+00	0.00E+00	6.07E+00
		Co-58	<5.90E+00	0.00E+00	5.90E+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	<1.17E+01	0.00E+00	1.17E+01
		Zr-95	<9.59E+00	0.00E+00	9.59E+00
		Nb-95	<6.40E+00	0.00E+00	6.40E+00
		I-131	<8.23E+00	0.00E+00	8.23E+00
		Cs-134	<5.70E+00	0.00E+00	5.70E+00
		Cs-137	<7.09E+00	0.00E+00	7.09E+00
		BaLa-140	<7.63E+00	0.00E+00	7.63E+00
		Be-7	<5.22E+01	0.00E+00	5.22E+01
		K-40	<1.22E+02	0.00E+00	1.22E+02
		H3GW	<-1.6E+01	0.00E+00	1.81E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
526798	11/16/2020 - 11/16/2020	Mn-54	<5.30E+00	0.00E+00	5.30E+00
		Co-58	<4.70E+00	0.00E+00	4.70E+00
		Fe-59	<1.21E+01	0.00E+00	1.21E+01
		Co-60	<5.59E+00	0.00E+00	5.59E+00
		Zn-65	<1.20E+01	0.00E+00	1.20E+01
		Zr-95	<1.20E+01	0.00E+00	1.20E+01
		Nb-95	<5.33E+00	0.00E+00	5.33E+00
		I-131	<1.03E+01	0.00E+00	1.03E+01
		Cs-134	<5.07E+00	0.00E+00	5.07E+00
		Cs-137	<4.66E+00	0.00E+00	4.66E+00
		BaLa-140	<6.85E+00	0.00E+00	6.85E+00
		Be-7	<4.42E+01	0.00E+00	4.42E+01
		K-40	6.73E+01	5.41E+01	8.04E+01
		H3GW	<-3.6E+01	0.00E+00	1.92E+02

Sample Point 68 [ INDICATOR - W @ 0.2 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
516075	2/18/2020 - 2/18/2020	Mn-54	<5.11E+00	0.00E+00	5.11E+00
		Co-58	<4.79E+00	0.00E+00	4.79E+00
		Fe-59	<1.16E+01	0.00E+00	1.16E+01
		Co-60	<3.04E+00	0.00E+00	3.04E+00
		Zn-65	<1.43E+01	0.00E+00	1.43E+01
		Zr-95	<8.78E+00	0.00E+00	8.78E+00
		Nb-95	<4.59E+00	0.00E+00	4.59E+00
		I-131	<7.82E+00	0.00E+00	7.82E+00
		Cs-134	<4.30E+00	0.00E+00	4.30E+00
		Cs-137	<5.73E+00	0.00E+00	5.73E+00
		BaLa-140	<6.37E+00	0.00E+00	6.37E+00
		Be-7	<3.57E+01	0.00E+00	3.57E+01
		K-40	<9.06E+01	0.00E+00	9.06E+01
		H3GW	<6.51E+01	0.00E+00	1.86E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
522858	5/11/2020 - 5/11/2020	Mn-54	<4.53E+00	0.00E+00	4.53E+00
		Co-58	<6.29E+00	0.00E+00	6.29E+00
		Fe-59	<8.68E+00	0.00E+00	8.68E+00
		Co-60	<5.98E+00	0.00E+00	5.98E+00
		Zn-65	<1.13E+01	0.00E+00	1.13E+01
		Zr-95	<1.06E+01	0.00E+00	1.06E+01
		Nb-95	<7.00E+00	0.00E+00	7.00E+00
		I-131	<9.42E+00	0.00E+00	9.42E+00
		Cs-134	<7.38E+00	0.00E+00	7.38E+00
		Cs-137	<5.09E+00	0.00E+00	5.09E+00
		BaLa-140	<9.64E+00	0.00E+00	9.64E+00
		Be-7	<4.67E+01	0.00E+00	4.67E+01
		K-40	1.34E+02	6.09E+01	7.15E+01

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
522858	5/11/2020 - 5/11/2020	H3GW	<-2.6E+01	0.00E+00	1.90E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
511399	8/24/2020 - 8/24/2020	Mn-54	<5.88E+00	0.00E+00	5.88E+00
		Co-58	<5.20E+00	0.00E+00	5.20E+00
		Fe-59	<1.02E+01	0.00E+00	1.02E+01
		Co-60	<5.56E+00	0.00E+00	5.56E+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	<6.96E+00	0.00E+00	6.96E+00
		I-131	<9.85E+00	0.00E+00	9.85E+00
		Cs-134	<6.35E+00	0.00E+00	6.35E+00
		Cs-137	<5.50E+00	0.00E+00	5.50E+00
		BaLa-140	<1.15E+01	0.00E+00	1.15E+01
		Be-7	<4.32E+01	0.00E+00	4.32E+01
		K-40	1.37E+02	6.03E+01	6.83E+01
		H3GW	<4.93E+01	0.00E+00	1.81E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
526799	11/16/2020 - 11/16/2020	Mn-54	<5.26E+00	0.00E+00	5.26E+00
		Co-58	<5.88E+00	0.00E+00	5.88E+00
		Fe-59	<1.20E+01	0.00E+00	1.20E+01
		Co-60	<6.36E+00	0.00E+00	6.36E+00
		Zn-65	<1.56E+01	0.00E+00	1.56E+01
		Zr-95	<1.06E+01	0.00E+00	1.06E+01
		Nb-95	<7.34E+00	0.00E+00	7.34E+00
		I-131	<9.82E+00	0.00E+00	9.82E+00
		Cs-134	<6.78E+00	0.00E+00	6.78E+00
		Cs-137	<7.16E+00	0.00E+00	7.16E+00
		BaLa-140	<1.03E+01	0.00E+00	1.03E+01
		Be-7	<3.82E+01	0.00E+00	3.82E+01
		K-40	1.51E+02	5.74E+01	5.19E+01
		H3GW	<4.5E+01	0.00E+00	1.93E+02

Sample Point 69 [ INDICATOR - NNE @ 0.2 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
516076	2/17/2020 - 2/17/2020	Mn-54	<5.47E+00	0.00E+00	5.47E+00
		Co-58	<5.67E+00	0.00E+00	5.67E+00
		Fe-59	<1.20E+01	0.00E+00	1.20E+01
		Co-60	<5.98E+00	0.00E+00	5.98E+00
		Zn-65	<1.32E+01	0.00E+00	1.32E+01
		Zr-95	<9.91E+00	0.00E+00	9.91E+00
		Nb-95	<7.18E+00	0.00E+00	7.18E+00
		I-131	<1.11E+01	0.00E+00	1.11E+01
		Cs-134	<8.60E+00	0.00E+00	8.60E+00
		Cs-137	<5.87E+00	0.00E+00	5.87E+00
		BaLa-140	<8.85E+00	0.00E+00	8.85E+00
		Be-7	<4.57E+01	0.00E+00	4.57E+01
		K-40	7.98E+01	6.44E+01	9.79E+01
		H3GW	<5.02E+01	0.00E+00	1.84E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
522859	5/11/2020 - 5/11/2020	Mn-54	<4.90E+00	0.00E+00	4.90E+00
		Co-58	<5.52E+00	0.00E+00	5.52E+00
		Fe-59	<9.93E+00	0.00E+00	9.93E+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	<9.27E+00	0.00E+00	9.27E+00
		Nb-95	<6.46E+00	0.00E+00	6.46E+00
		I-131	<8.97E+00	0.00E+00	8.97E+00
		Cs-134	<6.80E+00	0.00E+00	6.80E+00
		Cs-137	<5.16E+00	0.00E+00	5.16E+00
		BaLa-140	<7.76E+00	0.00E+00	7.76E+00
		Be-7	<3.62E+01	0.00E+00	3.62E+01
		K-40	<1.04E+02	0.00E+00	1.04E+02

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 69 [ INDICATOR - NNE @ 0.2 miles ]

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Sample ID: 522859	Sample Dates: 5/11/2020 - 5/11/2020	Nuclide	Activity	2 Sigma Error	MDA
		H3GW	<-4.8E+00	0.00E+00	1.90E+02

Sample ID: 511400	Sample Dates: 8/24/2020 - 8/24/2020	Nuclide	Activity	2 Sigma Error	MDA
		Mn-54	<5.53E+00	0.00E+00	5.53E+00
		Co-58	<3.65E+00	0.00E+00	3.65E+00
		Fe-59	<1.32E+01	0.00E+00	1.32E+01
		Co-60	<5.83E+00	0.00E+00	5.83E+00
		Zn-65	<1.04E+01	0.00E+00	1.04E+01
		Zr-95	<8.84E+00	0.00E+00	8.84E+00
		Nb-95	<5.62E+00	0.00E+00	5.62E+00
		I-131	<1.02E+01	0.00E+00	1.02E+01
		Cs-134	<5.21E+00	0.00E+00	5.21E+00
		Cs-137	<5.55E+00	0.00E+00	5.55E+00
		BaLa-140	<1.06E+01	0.00E+00	1.06E+01
		Be-7	<4.87E+01	0.00E+00	4.87E+01
		K-40	1.35E+02	6.22E+01	7.54E+01
		H3GW	<-9.4E+00	0.00E+00	1.81E+02

Sample ID: 526800	Sample Dates: 11/16/2020 - 11/16/2020	Nuclide	Activity	2 Sigma Error	MDA
		Mn-54	<7.31E+00	0.00E+00	7.31E+00
		Co-58	<6.63E+00	0.00E+00	6.63E+00
		Fe-59	<1.33E+01	0.00E+00	1.33E+01
		Co-60	<7.09E+00	0.00E+00	7.09E+00
		Zn-65	<1.50E+01	0.00E+00	1.50E+01
		Zr-95	<1.08E+01	0.00E+00	1.08E+01
		Nb-95	<6.74E+00	0.00E+00	6.74E+00
		I-131	<9.87E+00	0.00E+00	9.87E+00
		Cs-134	<6.93E+00	0.00E+00	6.93E+00
		Cs-137	<7.26E+00	0.00E+00	7.26E+00
		BaLa-140	<1.02E+01	0.00E+00	1.02E+01
		Be-7	<5.51E+01	0.00E+00	5.51E+01
		K-40	1.47E+02	6.26E+01	6.83E+01
		H3GW	<4.32E+01	0.00E+00	1.94E+02

Sample Point 70 [ INDICATOR - E @ 0.4 miles ]

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Sample ID: 516077	Sample Dates: 2/17/2020 - 2/17/2020	Nuclide	Activity	2 Sigma Error	MDA
		Mn-54	<5.48E+00	0.00E+00	5.48E+00
		Co-58	<5.47E+00	0.00E+00	5.47E+00
		Fe-59	<1.03E+01	0.00E+00	1.03E+01
		Co-60	<5.12E+00	0.00E+00	5.12E+00
		Zn-65	<1.90E+01	0.00E+00	1.90E+01
		Zr-95	<9.14E+00	0.00E+00	9.14E+00
		Nb-95	<7.22E+00	0.00E+00	7.22E+00
		I-131	<7.27E+00	0.00E+00	7.27E+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	<9.79E+00	0.00E+00	9.79E+00
		Be-7	<4.05E+01	0.00E+00	4.05E+01
		K-40	<4.59E+01	0.00E+00	4.59E+01
		H3GW	<-2.4E+00	0.00E+00	1.87E+02

Sample ID: 522860	Sample Dates: 5/11/2020 - 5/11/2020	Nuclide	Activity	2 Sigma Error	MDA
		Mn-54	<4.80E+00	0.00E+00	4.80E+00
		Co-58	<6.31E+00	0.00E+00	6.31E+00
		Fe-59	<1.02E+01	0.00E+00	1.02E+01
		Co-60	<3.14E+00	0.00E+00	3.14E+00
		Zn-65	<1.37E+01	0.00E+00	1.37E+01
		Zr-95	<9.94E+00	0.00E+00	9.94E+00
		Nb-95	<4.82E+00	0.00E+00	4.82E+00
		I-131	<7.44E+00	0.00E+00	7.44E+00
		Cs-134	<5.36E+00	0.00E+00	5.36E+00
		Cs-137	<6.26E+00	0.00E+00	6.26E+00
		BaLa-140	<8.00E+00	0.00E+00	8.00E+00
		Be-7	<4.66E+01	0.00E+00	4.66E+01
		K-40	2.70E+01	4.70E+01	8.03E+01

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
522860	5/11/2020 - 5/11/2020	H3GW	<2.40E+00	0.00E+00	1.90E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
511401	8/24/2020 - 8/24/2020	Mn-54	<5.99E+00	0.00E+00	5.99E+00
		Co-58	<5.73E+00	0.00E+00	5.73E+00
		Fe-59	<9.12E+00	0.00E+00	9.12E+00
		Co-60	<5.86E+00	0.00E+00	5.86E+00
		Zn-65	<1.19E+01	0.00E+00	1.19E+01
		Zr-95	<9.58E+00	0.00E+00	9.58E+00
		Nb-95	<7.35E+00	0.00E+00	7.35E+00
		I-131	<9.35E+00	0.00E+00	9.35E+00
		Cs-134	<7.78E+00	0.00E+00	7.78E+00
		Cs-137	<7.72E+00	0.00E+00	7.72E+00
		BaLa-140	<1.08E+01	0.00E+00	1.08E+01
		Be-7	<4.72E+01	0.00E+00	4.72E+01
		K-40	1.60E+02	7.06E+01	8.53E+01
		H3GW	<-7.3E+01	0.00E+00	1.81E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
526801	11/16/2020 - 11/16/2020	Mn-54	<6.35E+00	0.00E+00	6.35E+00
		Co-58	<5.85E+00	0.00E+00	5.85E+00
		Fe-59	<1.31E+01	0.00E+00	1.31E+01
		Co-60	<7.31E+00	0.00E+00	7.31E+00
		Zn-65	<1.19E+01	0.00E+00	1.19E+01
		Zr-95	<9.06E+00	0.00E+00	9.06E+00
		Nb-95	<7.03E+00	0.00E+00	7.03E+00
		I-131	<1.12E+01	0.00E+00	1.12E+01
		Cs-134	<7.28E+00	0.00E+00	7.28E+00
		Cs-137	<7.49E+00	0.00E+00	7.49E+00
		BaLa-140	<2.07E+00	0.00E+00	2.07E+00
		Be-7	<5.24E+01	0.00E+00	5.24E+01
		K-40	2.00E+02	6.76E+01	6.25E+01
		H3GW	<-1.2E+02	0.00E+00	1.90E+02

Sample Point 71 [ INDICATOR - SE @ 0.3 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
516078	2/17/2020 - 2/17/2020	Mn-54	<7.29E+00	0.00E+00	7.29E+00
		Co-58	<6.39E+00	0.00E+00	6.39E+00
		Fe-59	<1.24E+01	0.00E+00	1.24E+01
		Co-60	<6.99E+00	0.00E+00	6.99E+00
		Zn-65	<1.24E+01	0.00E+00	1.24E+01
		Zr-95	<1.12E+01	0.00E+00	1.12E+01
		Nb-95	<7.25E+00	0.00E+00	7.25E+00
		I-131	<9.88E+00	0.00E+00	9.88E+00
		Cs-134	<7.81E+00	0.00E+00	7.81E+00
		Cs-137	<7.88E+00	0.00E+00	7.88E+00
		BaLa-140	<9.57E+00	0.00E+00	9.57E+00
		Be-7	<5.18E+01	0.00E+00	5.18E+01
		K-40	1.49E+02	7.10E+01	9.21E+01
		H3GW	<7.35E+01	0.00E+00	1.83E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
522861	5/11/2020 - 5/11/2020	Mn-54	<5.30E+00	0.00E+00	5.30E+00
		Co-58	<5.23E+00	0.00E+00	5.23E+00
		Fe-59	<9.98E+00	0.00E+00	9.98E+00
		Co-60	<7.09E+00	0.00E+00	7.09E+00
		Zn-65	<1.44E+01	0.00E+00	1.44E+01
		Zr-95	<8.12E+00	0.00E+00	8.12E+00
		Nb-95	<6.11E+00	0.00E+00	6.11E+00
		I-131	<7.14E+00	0.00E+00	7.14E+00
		Cs-134	<5.64E+00	0.00E+00	5.64E+00
		Cs-137	<6.01E+00	0.00E+00	6.01E+00
		BaLa-140	<7.18E+00	0.00E+00	7.18E+00
		Be-7	<4.21E+01	0.00E+00	4.21E+01
		K-40	8.71E+01	5.80E+01	8.11E+01

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
522861	5/11/2020 - 5/11/2020	H3GW	<3.57E+01	0.00E+00	1.88E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
511402	8/24/2020 - 8/24/2020	Mn-54	<4.50E+00	0.00E+00	4.50E+00
		Co-58	<5.28E+00	0.00E+00	5.28E+00
		Fe-59	<1.19E+01	0.00E+00	1.19E+01
		Co-60	<3.64E+00	0.00E+00	3.64E+00
		Zn-65	<1.05E+01	0.00E+00	1.05E+01
		Zr-95	<1.18E+01	0.00E+00	1.18E+01
		Nb-95	<6.79E+00	0.00E+00	6.79E+00
		I-131	<8.41E+00	0.00E+00	8.41E+00
		Cs-134	<5.21E+00	0.00E+00	5.21E+00
		Cs-137	<4.66E+00	0.00E+00	4.66E+00
		BaLa-140	<8.76E+00	0.00E+00	8.76E+00
		Be-7	<3.96E+01	0.00E+00	3.96E+01
		K-40	1.47E+02	6.22E+01	7.80E+01
		H3GW	<-6.6E+01	0.00E+00	1.81E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
526802	11/16/2020 - 11/16/2020	Mn-54	<5.49E+00	0.00E+00	5.49E+00
		Co-58	<5.02E+00	0.00E+00	5.02E+00
		Fe-59	<1.39E+01	0.00E+00	1.39E+01
		Co-60	<5.12E+00	0.00E+00	5.12E+00
		Zn-65	<8.18E+00	0.00E+00	8.18E+00
		Zr-95	<1.08E+01	0.00E+00	1.08E+01
		Nb-95	<5.69E+00	0.00E+00	5.69E+00
		I-131	<6.98E+00	0.00E+00	6.98E+00
		Cs-134	<6.13E+00	0.00E+00	6.13E+00
		Cs-137	<4.90E+00	0.00E+00	4.90E+00
		BaLa-140	<9.38E+00	0.00E+00	9.38E+00
		Be-7	<4.83E+01	0.00E+00	4.83E+01
		K-40	6.34E+01	4.61E+01	6.42E+01
		H3GW	<-6.2E+01	0.00E+00	1.90E+02

Sample Point 72 [ INDICATOR - SE @ 0.2 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
516079	2/17/2020 - 2/17/2020	Mn-54	<4.92E+00	0.00E+00	4.92E+00
		Co-58	<4.91E+00	0.00E+00	4.91E+00
		Fe-59	<1.00E+01	0.00E+00	1.00E+01
		Co-60	<4.71E+00	0.00E+00	4.71E+00
		Zn-65	<2.39E+01	0.00E+00	2.39E+01
		Zr-95	<8.86E+00	0.00E+00	8.86E+00
		Nb-95	<8.38E+00	0.00E+00	8.38E+00
		I-131	<7.93E+00	0.00E+00	7.93E+00
		Cs-134	<4.41E+00	0.00E+00	4.41E+00
		Cs-137	<4.55E+00	0.00E+00	4.55E+00
		BaLa-140	<6.69E+00	0.00E+00	6.69E+00
		Be-7	<3.83E+01	0.00E+00	3.83E+01
		K-40	6.12E+01	3.99E+01	5.80E+01
		H3GW	<6.48E+01	0.00E+00	1.85E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
522862	5/11/2020 - 5/11/2020	Mn-54	<6.23E+00	0.00E+00	6.23E+00
		Co-58	<6.49E+00	0.00E+00	6.49E+00
		Fe-59	<1.36E+01	0.00E+00	1.36E+01
		Co-60	<6.37E+00	0.00E+00	6.37E+00
		Zn-65	<1.13E+01	0.00E+00	1.13E+01
		Zr-95	<1.19E+01	0.00E+00	1.19E+01
		Nb-95	<6.68E+00	0.00E+00	6.68E+00
		I-131	<1.07E+01	0.00E+00	1.07E+01
		Cs-134	<7.27E+00	0.00E+00	7.27E+00
		Cs-137	<5.88E+00	0.00E+00	5.88E+00
		BaLa-140	<1.04E+01	0.00E+00	1.04E+01
		Be-7	<4.04E+01	0.00E+00	4.04E+01
		K-40	1.44E+02	7.33E+01	1.01E+02

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
522862	5/11/2020 - 5/11/2020	H3GW	<9.57E+00	0.00E+00	1.89E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
511403	8/24/2020 - 8/24/2020	Mn-54	<5.82E+00	0.00E+00	5.82E+00
		Co-58	<5.67E+00	0.00E+00	5.67E+00
		Fe-59	<1.13E+01	0.00E+00	1.13E+01
		Co-60	<5.61E+00	0.00E+00	5.61E+00
		Zn-65	<9.53E+00	0.00E+00	9.53E+00
		Zr-95	<1.16E+01	0.00E+00	1.16E+01
		Nb-95	<6.58E+00	0.00E+00	6.58E+00
		I-131	<1.02E+01	0.00E+00	1.02E+01
		Cs-134	<7.40E+00	0.00E+00	7.40E+00
		Cs-137	<5.65E+00	0.00E+00	5.65E+00
		BaLa-140	<1.00E+01	0.00E+00	1.00E+01
		Be-7	<4.70E+01	0.00E+00	4.70E+01
		K-40	1.86E+02	6.42E+01	7.24E+01
		H3GW	<-1.4E+01	0.00E+00	1.81E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
526803	11/16/2020 - 11/16/2020	Mn-54	<5.99E+00	0.00E+00	5.99E+00
		Co-58	<4.76E+00	0.00E+00	4.76E+00
		Fe-59	<1.07E+01	0.00E+00	1.07E+01
		Co-60	<5.76E+00	0.00E+00	5.76E+00
		Zn-65	<1.07E+01	0.00E+00	1.07E+01
		Zr-95	<9.94E+00	0.00E+00	9.94E+00
		Nb-95	<6.57E+00	0.00E+00	6.57E+00
		I-131	<1.10E+01	0.00E+00	1.10E+01
		Cs-134	<5.95E+00	0.00E+00	5.95E+00
		Cs-137	<6.28E+00	0.00E+00	6.28E+00
		BaLa-140	<1.05E+01	0.00E+00	1.05E+01
		Be-7	1.03E+01	3.16E+01	4.30E+01
		K-40	1.28E+02	6.47E+01	9.04E+01
		H3GW	<3.20E+01	0.00E+00	1.90E+02

Sample Point 73 [ INDICATOR - S @ 0.2 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
516080	2/17/2020 - 2/17/2020	Mn-54	<3.52E+00	0.00E+00	3.52E+00
		Co-58	<2.97E+00	0.00E+00	2.97E+00
		Fe-59	<6.35E+00	0.00E+00	6.35E+00
		Co-60	<3.74E+00	0.00E+00	3.74E+00
		Zn-65	<6.68E+00	0.00E+00	6.68E+00
		Zr-95	<6.27E+00	0.00E+00	6.27E+00
		Nb-95	<4.37E+00	0.00E+00	4.37E+00
		I-131	<6.05E+00	0.00E+00	6.05E+00
		Cs-134	<3.40E+00	0.00E+00	3.40E+00
		Cs-137	<3.83E+00	0.00E+00	3.83E+00
		BaLa-140	<4.91E+00	0.00E+00	4.91E+00
		Be-7	<3.00E+01	0.00E+00	3.00E+01
		K-40	1.10E+02	4.51E+01	6.27E+01
		H3GW	<7.71E+01	0.00E+00	1.86E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
522863	5/13/2020 - 5/13/2020	Mn-54	<5.77E+00	0.00E+00	5.77E+00
		Co-58	<5.70E+00	0.00E+00	5.70E+00
		Fe-59	<1.10E+01	0.00E+00	1.10E+01
		Co-60	<5.49E+00	0.00E+00	5.49E+00
		Zn-65	<1.40E+01	0.00E+00	1.40E+01
		Zr-95	<1.16E+01	0.00E+00	1.16E+01
		Nb-95	<6.12E+00	0.00E+00	6.12E+00
		I-131	<1.03E+01	0.00E+00	1.03E+01
		Cs-134	<5.53E+00	0.00E+00	5.53E+00
		Cs-137	<5.80E+00	0.00E+00	5.80E+00
		BaLa-140	<6.14E+00	0.00E+00	6.14E+00
		Be-7	<4.56E+01	0.00E+00	4.56E+01
		K-40	1.83E+02	6.83E+01	7.25E+01



# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
522863	5/13/2020 - 5/13/2020	H3GW	<1.92E+01	0.00E+00	1.89E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
511404	8/24/2020 - 8/24/2020	Mn-54	<6.30E+00	0.00E+00	6.30E+00
		Co-58	<5.40E+00	0.00E+00	5.40E+00
		Fe-59	<1.08E+01	0.00E+00	1.08E+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	<1.06E+01	0.00E+00	1.06E+01
		Nb-95	<8.38E+00	0.00E+00	8.38E+00
		I-131	<1.13E+01	0.00E+00	1.13E+01
		Cs-134	<6.40E+00	0.00E+00	6.40E+00
		Cs-137	<6.60E+00	0.00E+00	6.60E+00
		BaLa-140	<8.23E+00	0.00E+00	8.23E+00
		Be-7	<4.75E+01	0.00E+00	4.75E+01
		K-40	<1.18E+02	0.00E+00	1.18E+02
		H3GW	<1.16E+02	0.00E+00	1.82E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
526804	11/16/2020 - 11/16/2020	Mn-54	<5.33E+00	0.00E+00	5.33E+00
		Co-58	<5.31E+00	0.00E+00	5.31E+00
		Fe-59	<8.46E+00	0.00E+00	8.46E+00
		Co-60	<7.78E+00	0.00E+00	7.78E+00
		Zn-65	<1.28E+01	0.00E+00	1.28E+01
		Zr-95	<7.51E+00	0.00E+00	7.51E+00
		Nb-95	<6.65E+00	0.00E+00	6.65E+00
		I-131	<9.00E+00	0.00E+00	9.00E+00
		Cs-134	<5.21E+00	0.00E+00	5.21E+00
		Cs-137	<4.02E+00	0.00E+00	4.02E+00
		BaLa-140	<1.02E+01	0.00E+00	1.02E+01
		Be-7	<5.45E+01	0.00E+00	5.45E+01
		K-40	1.87E+02	6.04E+01	4.08E+01
		H3GW	<-8.3E+01	0.00E+00	1.90E+02

## Sample Point 74 [ INDICATOR - SSE @ 0.2 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
516081	2/19/2020 - 2/19/2020	Mn-54	<3.42E+00	0.00E+00	3.42E+00
		Co-58	<5.18E+00	0.00E+00	5.18E+00
		Fe-59	<1.31E+01	0.00E+00	1.31E+01
		Co-60	<7.09E+00	0.00E+00	7.09E+00
		Zn-65	<1.12E+01	0.00E+00	1.12E+01
		Zr-95	<1.25E+01	0.00E+00	1.25E+01
		Nb-95	<7.42E+00	0.00E+00	7.42E+00
		I-131	<7.84E+00	0.00E+00	7.84E+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	<5.40E+00	0.00E+00	5.40E+00
		Be-7	<4.16E+01	0.00E+00	4.16E+01
		K-40	7.76E+01	5.70E+01	8.25E+01
		H3GW	<7.20E+01	0.00E+00	1.85E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
522864	5/13/2020 - 5/13/2020	Mn-54	<4.86E+00	0.00E+00	4.86E+00
		Co-58	<5.18E+00	0.00E+00	5.18E+00
		Fe-59	<9.63E+00	0.00E+00	9.63E+00
		Co-60	<6.22E+00	0.00E+00	6.22E+00
		Zn-65	<9.60E+00	0.00E+00	9.60E+00
		Zr-95	<9.51E+00	0.00E+00	9.51E+00
		Nb-95	<7.61E+00	0.00E+00	7.61E+00
		I-131	<8.06E+00	0.00E+00	8.06E+00
		Cs-134	<6.36E+00	0.00E+00	6.37E+00
		Cs-137	<6.20E+00	0.00E+00	6.20E+00
		BaLa-140	<8.46E+00	0.00E+00	8.46E+00
		Be-7	<5.02E+01	0.00E+00	5.02E+01
		K-40	1.30E+02	7.99E+01	1.17E+02

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
522864	5/13/2020 - 5/13/2020	H3GW	<5.76E+01	0.00E+00	1.89E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
511405	8/25/2020 - 8/25/2020	Mn-54	<6.42E+00	0.00E+00	6.42E+00
		Co-58	<5.15E+00	0.00E+00	5.15E+00
		Fe-59	<1.24E+01	0.00E+00	1.24E+01
		Co-60	<6.36E+00	0.00E+00	6.36E+00
		Zn-65	<1.13E+01	0.00E+00	1.13E+01
		Zr-95	<1.12E+01	0.00E+00	1.12E+01
		Nb-95	<7.34E+00	0.00E+00	7.34E+00
		I-131	<6.85E+00	0.00E+00	6.85E+00
		Cs-134	<5.61E+00	0.00E+00	5.61E+00
		Cs-137	<5.69E+00	0.00E+00	5.69E+00
		BaLa-140	<6.40E+00	0.00E+00	6.40E+00
		Be-7	3.33E+00	3.24E+01	5.82E+01
		K-40	6.34E+01	6.66E+01	1.07E+02
		H3GW	<6.81E+01	0.00E+00	1.81E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
526805	11/17/2020 - 11/17/2020	Mn-54	<6.16E+00	0.00E+00	6.16E+00
		Co-58	<5.32E+00	0.00E+00	5.32E+00
		Fe-59	<1.18E+01	0.00E+00	1.18E+01
		Co-60	<6.46E+00	0.00E+00	6.46E+00
		Zn-65	<1.34E+01	0.00E+00	1.34E+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	<9.42E+00	0.00E+00	9.42E+00
		Cs-134	<7.22E+00	0.00E+00	7.22E+00
		Cs-137	<6.27E+00	0.00E+00	6.27E+00
		BaLa-140	<6.90E+00	0.00E+00	6.90E+00
		Be-7	<5.39E+01	0.00E+00	5.39E+01
		K-40	2.13E+02	7.64E+01	8.84E+01
		H3GW	<0.00E+00	0.00E+00	1.93E+02

Sample Point 75 [ INDICATOR - ESE @ 0.1 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
516082	2/18/2020 - 2/18/2020	Mn-54	<4.99E+00	0.00E+00	4.99E+00
		Co-58	<5.53E+00	0.00E+00	5.53E+00
		Fe-59	<1.11E+01	0.00E+00	1.11E+01
		Co-60	<5.28E+00	0.00E+00	5.28E+00
		Zn-65	<1.21E+01	0.00E+00	1.21E+01
		Zr-95	<9.67E+00	0.00E+00	9.67E+00
		Nb-95	<7.31E+00	0.00E+00	7.31E+00
		I-131	<1.02E+01	0.00E+00	1.02E+01
		Cs-134	<5.84E+00	0.00E+00	5.84E+00
		Cs-137	<6.19E+00	0.00E+00	6.19E+00
		BaLa-140	<1.13E+01	0.00E+00	1.13E+01
		Be-7	<4.53E+01	0.00E+00	4.53E+01
		K-40	1.24E+02	6.92E+01	9.80E+01
		H3GW	<8.88E+01	0.00E+00	1.85E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
522865	5/11/2020 - 5/11/2020	Mn-54	<5.68E+00	0.00E+00	5.68E+00
		Co-58	<7.19E+00	0.00E+00	7.19E+00
		Fe-59	<1.09E+01	0.00E+00	1.09E+01
		Co-60	<7.98E+00	0.00E+00	7.98E+00
		Zn-65	<1.32E+01	0.00E+00	1.32E+01
		Zr-95	<9.52E+00	0.00E+00	9.52E+00
		Nb-95	<7.00E+00	0.00E+00	7.00E+00
		I-131	<8.76E+00	0.00E+00	8.76E+00
		Cs-134	<6.57E+00	0.00E+00	6.57E+00
		Cs-137	<6.71E+00	0.00E+00	6.71E+00
		BaLa-140	<6.84E+00	0.00E+00	6.84E+00
		Be-7	<4.22E+01	0.00E+00	4.22E+01
		K-40	1.27E+02	6.58E+01	8.67E+01

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
522865	5/11/2020 - 5/11/2020	H3GW	<-4.8E+01	0.00E+00	1.89E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
511406	8/25/2020 - 8/25/2020	Mn-54	<6.89E+00	0.00E+00	6.89E+00
		Co-58	<6.06E+00	0.00E+00	6.06E+00
		Fe-59	<1.35E+01	0.00E+00	1.35E+01
		Co-60	<8.05E+00	0.00E+00	8.05E+00
		Zn-65	<1.16E+01	0.00E+00	1.16E+01
		Zr-95	<9.90E+00	0.00E+00	9.90E+00
		Nb-95	<5.94E+00	0.00E+00	5.94E+00
		I-131	<1.16E+01	0.00E+00	1.16E+01
		Cs-134	<5.47E+00	0.00E+00	5.47E+00
		Cs-137	<6.39E+00	0.00E+00	6.39E+00
		BaLa-140	<9.60E+00	0.00E+00	9.60E+00
		Be-7	<5.54E+01	0.00E+00	5.54E+01
		K-40	1.55E+02	8.00E+01	1.11E+02
		H3GW	<-7.3E+01	0.00E+00	1.81E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
526806	11/17/2020 - 11/17/2020	Mn-54	<6.25E+00	0.00E+00	6.25E+00
		Co-58	<4.93E+00	0.00E+00	4.93E+00
		Fe-59	<1.08E+01	0.00E+00	1.08E+01
		Co-60	<6.01E+00	0.00E+00	6.01E+00
		Zn-65	<1.47E+01	0.00E+00	1.47E+01
		Zr-95	<9.46E+00	0.00E+00	9.46E+00
		Nb-95	<5.50E+00	0.00E+00	5.50E+00
		I-131	<7.34E+00	0.00E+00	7.34E+00
		Cs-134	<6.12E+00	0.00E+00	6.12E+00
		Cs-137	<5.12E+00	0.00E+00	5.12E+00
		BaLa-140	<8.53E+00	0.00E+00	8.53E+00
		Be-7	<3.42E+01	0.00E+00	3.42E+01
		K-40	<9.81E+01	0.00E+00	9.81E+01
		H3GW	<-9.8E+01	0.00E+00	1.94E+02

## Sample Point 77 [ INDICATOR - S @ 0.4 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
516084	2/17/2020 - 2/17/2020	Mn-54	<6.23E+00	0.00E+00	6.23E+00
		Co-58	<5.61E+00	0.00E+00	5.61E+00
		Fe-59	<1.25E+01	0.00E+00	1.25E+01
		Co-60	<7.45E+00	0.00E+00	7.45E+00
		Zn-65	<1.05E+01	0.00E+00	1.05E+01
		Zr-95	<1.19E+01	0.00E+00	1.19E+01
		Nb-95	<6.84E+00	0.00E+00	6.84E+00
		I-131	<9.95E+00	0.00E+00	9.95E+00
		Cs-134	<5.03E+00	0.00E+00	5.03E+00
		Cs-137	<5.81E+00	0.00E+00	5.81E+00
		BaLa-140	<1.14E+01	0.00E+00	1.14E+01
		Be-7	<4.60E+01	0.00E+00	4.60E+01
		K-40	<1.03E+02	0.00E+00	1.03E+02
		H3GW	<1.48E+02	0.00E+00	1.84E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
522867	5/11/2020 - 5/11/2020	Mn-54	<5.91E+00	0.00E+00	5.91E+00
		Co-58	<4.30E+00	0.00E+00	4.30E+00
		Fe-59	<9.95E+00	0.00E+00	9.95E+00
		Co-60	<6.21E+00	0.00E+00	6.21E+00
		Zn-65	<1.23E+01	0.00E+00	1.23E+01
		Zr-95	<6.40E+00	0.00E+00	6.40E+00
		Nb-95	<4.95E+00	0.00E+00	4.95E+00
		I-131	<6.92E+00	0.00E+00	6.92E+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	<1.02E+01	0.00E+00	1.02E+01
		Be-7	<4.37E+01	0.00E+00	4.37E+01
		K-40	<8.33E+01	0.00E+00	8.33E+01

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
522867	5/11/2020 - 5/11/2020	H3GW	<9.69E+01	0.00E+00	1.91E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
511407	8/24/2020 - 8/24/2020	Mn-54	<6.67E+00	0.00E+00	6.67E+00
		Co-58	<7.24E+00	0.00E+00	7.24E+00
		Fe-59	<9.69E+00	0.00E+00	9.69E+00
		Co-60	<7.41E+00	0.00E+00	7.41E+00
		Zn-65	<1.29E+01	0.00E+00	1.29E+01
		Zr-95	<1.03E+01	0.00E+00	1.03E+01
		Nb-95	<7.07E+00	0.00E+00	7.07E+00
		I-131	<1.02E+01	0.00E+00	1.02E+01
		Cs-134	<5.73E+00	0.00E+00	5.73E+00
		Cs-137	<6.30E+00	0.00E+00	6.30E+00
		BaLa-140	<1.18E+01	0.00E+00	1.18E+01
		Be-7	<4.64E+01	0.00E+00	4.64E+01
		K-40	1.10E+02	7.66E+01	1.18E+02
		H3GW	<1.13E+02	0.00E+00	1.81E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
526808	11/16/2020 - 11/16/2020	Mn-54	<5.80E+00	0.00E+00	5.80E+00
		Co-58	<5.17E+00	0.00E+00	5.17E+00
		Fe-59	<1.02E+01	0.00E+00	1.02E+01
		Co-60	<5.50E+00	0.00E+00	5.50E+00
		Zn-65	<1.30E+01	0.00E+00	1.30E+01
		Zr-95	<9.46E+00	0.00E+00	9.46E+00
		Nb-95	<6.44E+00	0.00E+00	6.44E+00
		I-131	<1.04E+01	0.00E+00	1.04E+01
		Cs-134	<6.89E+00	0.00E+00	6.89E+00
		Cs-137	<7.08E+00	0.00E+00	7.08E+00
		BaLa-140	<8.20E+00	0.00E+00	8.20E+00
		Be-7	<5.87E+01	0.00E+00	5.87E+01
		K-40	1.92E+02	6.62E+01	6.15E+01
		H3GW	<1.60E+02	0.00E+00	1.97E+02

Sample Point 78 [ INDICATOR - S @ 0.5 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
516085	2/17/2020 - 2/17/2020	Mn-54	<5.42E+00	0.00E+00	5.42E+00
		Co-58	<5.10E+00	0.00E+00	5.10E+00
		Fe-59	<1.19E+01	0.00E+00	1.19E+01
		Co-60	<4.56E+00	0.00E+00	4.56E+00
		Zn-65	<1.23E+01	0.00E+00	1.23E+01
		Zr-95	<9.58E+00	0.00E+00	9.58E+00
		Nb-95	<7.26E+00	0.00E+00	7.26E+00
		I-131	<1.16E+01	0.00E+00	1.16E+01
		Cs-134	<6.24E+00	0.00E+00	6.24E+00
		Cs-137	<5.41E+00	0.00E+00	5.41E+00
		BaLa-140	<1.15E+01	0.00E+00	1.15E+01
		Be-7	<4.56E+01	0.00E+00	4.56E+01
		K-40	1.42E+02	6.45E+01	8.16E+01
		H3GW	<1.61E+02	0.00E+00	1.83E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
522868	5/11/2020 - 5/11/2020	Mn-54	<4.80E+00	0.00E+00	4.80E+00
		Co-58	<4.71E+00	0.00E+00	4.71E+00
		Fe-59	<7.82E+00	0.00E+00	7.82E+00
		Co-60	<3.96E+00	0.00E+00	3.96E+00
		Zn-65	<1.74E+01	0.00E+00	1.74E+01
		Zr-95	<6.59E+00	0.00E+00	6.59E+00
		Nb-95	<6.85E+00	0.00E+00	6.85E+00
		I-131	<7.00E+00	0.00E+00	7.00E+00
		Cs-134	<5.36E+00	0.00E+00	5.36E+00
		Cs-137	<5.91E+00	0.00E+00	5.91E+00
		BaLa-140	<8.02E+00	0.00E+00	8.02E+00
		Be-7	<3.77E+01	0.00E+00	3.77E+01
		K-40	5.38E+01	5.50E+01	8.69E+01

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
522868	5/11/2020 - 5/11/2020	H3GW	<1.79E+02	0.00E+00	1.90E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
511408	8/24/2020 - 8/24/2020	Mn-54	<5.90E+00	0.00E+00	5.90E+00
		Co-58	<7.86E+00	0.00E+00	7.86E+00
		Fe-59	<1.37E+01	0.00E+00	1.37E+01
		Co-60	<8.06E+00	0.00E+00	8.06E+00
		Zn-65	<9.97E+00	0.00E+00	9.97E+00
		Zr-95	<1.10E+01	0.00E+00	1.10E+01
		Nb-95	<6.05E+00	0.00E+00	6.05E+00
		I-131	<1.05E+01	0.00E+00	1.05E+01
		Cs-134	<7.41E+00	0.00E+00	7.41E+00
		Cs-137	<6.25E+00	0.00E+00	6.25E+00
		BaLa-140	<9.78E+00	0.00E+00	9.78E+00
		Be-7	<4.71E+01	0.00E+00	4.71E+01
		K-40	1.14E+02	6.82E+01	9.59E+01
		H3GW	2.00E+02	1.12E+02	1.81E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
526809	11/16/2020 - 11/16/2020	Mn-54	<6.16E+00	0.00E+00	6.16E+00
		Co-58	<4.63E+00	0.00E+00	4.63E+00
		Fe-59	<9.38E+00	0.00E+00	9.38E+00
		Co-60	<5.50E+00	0.00E+00	5.50E+00
		Zn-65	<1.05E+01	0.00E+00	1.05E+01
		Zr-95	<1.02E+01	0.00E+00	1.02E+01
		Nb-95	<6.55E+00	0.00E+00	6.55E+00
		I-131	<8.58E+00	0.00E+00	8.58E+00
		Cs-134	<6.89E+00	0.00E+00	6.89E+00
		Cs-137	<4.58E+00	0.00E+00	4.58E+00
		BaLa-140	<9.63E+00	0.00E+00	9.63E+00
		Be-7	<4.34E+01	0.00E+00	4.34E+01
		K-40	1.44E+02	6.81E+01	8.65E+01
		H3GW	3.09E+02	1.24E+02	1.97E+02

Sample Point 79 [ INDICATOR - S @ 0.5 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
516086	2/17/2020 - 2/17/2020	Mn-54	<4.79E+00	0.00E+00	4.79E+00
		Co-58	<4.00E+00	0.00E+00	4.00E+00
		Fe-59	<9.30E+00	0.00E+00	9.30E+00
		Co-60	<5.86E+00	0.00E+00	5.86E+00
		Zn-65	<9.59E+00	0.00E+00	9.59E+00
		Zr-95	<8.22E+00	0.00E+00	8.22E+00
		Nb-95	<8.62E+00	0.00E+00	8.62E+00
		I-131	<1.02E+01	0.00E+00	1.02E+01
		Cs-134	<7.38E+00	0.00E+00	7.38E+00
		Cs-137	<6.02E+00	0.00E+00	6.02E+00
		BaLa-140	<9.86E+00	0.00E+00	9.86E+00
		Be-7	<4.54E+01	0.00E+00	4.54E+01
		K-40	9.04E+01	6.17E+01	8.84E+01
		H3GW	2.05E+02	1.15E+02	1.87E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
522869	5/11/2020 - 5/11/2020	Mn-54	<4.96E+00	0.00E+00	4.96E+00
		Co-58	<7.61E+00	0.00E+00	7.61E+00
		Fe-59	<1.41E+01	0.00E+00	1.41E+01
		Co-60	<6.66E+00	0.00E+00	6.66E+00
		Zn-65	<1.46E+01	0.00E+00	1.46E+01
		Zr-95	<1.16E+01	0.00E+00	1.16E+01
		Nb-95	<5.33E+00	0.00E+00	5.33E+00
		I-131	<1.13E+01	0.00E+00	1.13E+01
		Cs-134	<7.22E+00	0.00E+00	7.22E+00
		Cs-137	<7.08E+00	0.00E+00	7.08E+00
		BaLa-140	<8.15E+00	0.00E+00	8.15E+00
		Be-7	<4.71E+01	0.00E+00	4.71E+01
		K-40	2.05E+02	7.68E+01	8.84E+01

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
522869	5/11/2020 - 5/11/2020	H3GW	<1.61E+02	0.00E+00	1.90E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
511409	8/24/2020 - 8/24/2020	Mn-54	<5.39E+00	0.00E+00	5.39E+00
		Co-58	<5.37E+00	0.00E+00	5.37E+00
		Fe-59	<1.24E+01	0.00E+00	1.24E+01
		Co-60	<6.99E+00	0.00E+00	6.99E+00
		Zn-65	<1.30E+01	0.00E+00	1.30E+01
		Zr-95	<1.08E+01	0.00E+00	1.08E+01
		Nb-95	<8.75E+00	0.00E+00	8.75E+00
		I-131	<1.13E+01	0.00E+00	1.13E+01
		Cs-134	<6.68E+00	0.00E+00	6.68E+00
		Cs-137	<7.08E+00	0.00E+00	7.08E+00
		BaLa-140	<9.55E+00	0.00E+00	9.55E+00
		Be-7	<4.98E+01	0.00E+00	4.98E+01
		K-40	1.97E+02	7.26E+01	7.95E+01
		H3GW	1.90E+02	1.11E+02	1.81E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
526810	11/16/2020 - 11/16/2020	Mn-54	<6.44E+00	0.00E+00	6.44E+00
		Co-58	<5.18E+00	0.00E+00	5.18E+00
		Fe-59	<8.26E+00	0.00E+00	8.26E+00
		Co-60	<5.69E+00	0.00E+00	5.69E+00
		Zn-65	<1.08E+01	0.00E+00	1.08E+01
		Zr-95	<1.20E+01	0.00E+00	1.20E+01
		Nb-95	<6.67E+00	0.00E+00	6.67E+00
		I-131	<9.59E+00	0.00E+00	9.59E+00
		Cs-134	<6.04E+00	0.00E+00	6.04E+00
		Cs-137	<5.94E+00	0.00E+00	5.94E+00
		BaLa-140	<8.43E+00	0.00E+00	8.43E+00
		Be-7	<3.80E+01	0.00E+00	3.80E+01
		K-40	1.52E+02	5.90E+01	6.02E+01
		H3GW	2.43E+02	1.22E+02	1.97E+02

Sample Point 80 [ INDICATOR - S @ 0.6 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
516087	2/18/2020 - 2/18/2020	Mn-54	<4.41E+00	0.00E+00	4.41E+00
		Co-58	<6.13E+00	0.00E+00	6.13E+00
		Fe-59	<1.23E+01	0.00E+00	1.23E+01
		Co-60	<5.83E+00	0.00E+00	5.83E+00
		Zn-65	<1.39E+01	0.00E+00	1.39E+01
		Zr-95	<9.28E+00	0.00E+00	9.28E+00
		Nb-95	<5.44E+00	0.00E+00	5.44E+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	<4.52E+00	0.00E+00	4.52E+00
		BaLa-140	<6.72E+00	0.00E+00	6.72E+00
		Be-7	<4.37E+01	0.00E+00	4.37E+01
		K-40	<7.21E+01	0.00E+00	7.21E+01
		H3GW	2.93E+02	1.18E+02	1.87E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
522870	5/11/2020 - 5/11/2020	Mn-54	<4.66E+00	0.00E+00	4.66E+00
		Co-58	<5.09E+00	0.00E+00	5.09E+00
		Fe-59	<9.33E+00	0.00E+00	9.33E+00
		Co-60	<7.52E+00	0.00E+00	7.52E+00
		Zn-65	<1.17E+01	0.00E+00	1.17E+01
		Zr-95	<1.17E+01	0.00E+00	1.17E+01
		Nb-95	<6.88E+00	0.00E+00	6.88E+00
		I-131	<9.79E+00	0.00E+00	9.79E+00
		Cs-134	<6.38E+00	0.00E+00	6.38E+00
		Cs-137	<5.52E+00	0.00E+00	5.52E+00
		BaLa-140	<9.76E+00	0.00E+00	9.76E+00
		Be-7	<4.60E+01	0.00E+00	4.60E+01
		K-40	1.65E+02	6.52E+01	7.17E+01

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
522870	5/11/2020 - 5/11/2020	H3GW	2.94E+02	1.15E+02	1.82E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
511410	8/24/2020 - 8/24/2020	Mn-54	<5.89E+00	0.00E+00	5.89E+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	<6.22E+00	0.00E+00	6.22E+00
		Zn-65	<1.17E+01	0.00E+00	1.17E+01
		Zr-95	<1.07E+01	0.00E+00	1.07E+01
		Nb-95	<7.75E+00	0.00E+00	7.75E+00
		I-131	<1.13E+01	0.00E+00	1.13E+01
		Cs-134	<8.19E+00	0.00E+00	8.19E+00
		Cs-137	<7.62E+00	0.00E+00	7.62E+00
		BaLa-140	<6.66E+00	0.00E+00	6.66E+00
		Be-7	<5.24E+01	0.00E+00	5.24E+01
		K-40	1.97E+02	7.00E+01	7.26E+01
		H3GW	<1.74E+02	0.00E+00	1.81E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
526811	11/16/2020 - 11/16/2020	Mn-54	<5.48E+00	0.00E+00	5.48E+00
		Co-58	<5.89E+00	0.00E+00	5.89E+00
		Fe-59	<1.46E+01	0.00E+00	1.46E+01
		Co-60	<7.06E+00	0.00E+00	7.06E+00
		Zn-65	<1.13E+01	0.00E+00	1.13E+01
		Zr-95	<8.21E+00	0.00E+00	8.21E+00
		Nb-95	<6.24E+00	0.00E+00	6.24E+00
		I-131	<1.02E+01	0.00E+00	1.02E+01
		Cs-134	<6.99E+00	0.00E+00	6.99E+00
		Cs-137	<5.30E+00	0.00E+00	5.30E+00
		BaLa-140	<1.04E+01	0.00E+00	1.04E+01
		Be-7	<3.83E+01	0.00E+00	3.83E+01
		K-40	1.18E+02	5.89E+01	7.28E+01
		H3GW	2.84E+02	1.22E+02	1.95E+02

Sample Point 81 [ INDICATOR - S @ 0.6 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
516088	2/18/2020 - 2/18/2020	Mn-54	<6.25E+00	0.00E+00	6.25E+00
		Co-58	<6.14E+00	0.00E+00	6.14E+00
		Fe-59	<1.03E+01	0.00E+00	1.03E+01
		Co-60	<7.81E+00	0.00E+00	7.81E+00
		Zn-65	<1.01E+01	0.00E+00	1.01E+01
		Zr-95	<1.19E+01	0.00E+00	1.19E+01
		Nb-95	<7.13E+00	0.00E+00	7.13E+00
		I-131	<1.06E+01	0.00E+00	1.06E+01
		Cs-134	<5.78E+00	0.00E+00	5.78E+00
		Cs-137	<5.72E+00	0.00E+00	5.72E+00
		BaLa-140	<9.18E+00	0.00E+00	9.18E+00
		Be-7	<4.11E+01	0.00E+00	4.11E+01
		K-40	<1.06E+02	0.00E+00	1.06E+02
		H3GW	3.11E+02	1.18E+02	1.87E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
522871	5/13/2020 - 5/13/2020	Mn-54	<5.16E+00	0.00E+00	5.16E+00
		Co-58	<5.45E+00	0.00E+00	5.45E+00
		Fe-59	<1.16E+01	0.00E+00	1.16E+01
		Co-60	<5.59E+00	0.00E+00	5.59E+00
		Zn-65	<1.17E+01	0.00E+00	1.17E+01
		Zr-95	<1.19E+01	0.00E+00	1.19E+01
		Nb-95	<6.88E+00	0.00E+00	6.88E+00
		I-131	<8.28E+00	0.00E+00	8.28E+00
		Cs-134	<6.53E+00	0.00E+00	6.53E+00
		Cs-137	<5.66E+00	0.00E+00	5.66E+00
		BaLa-140	<7.78E+00	0.00E+00	7.78E+00
		Be-7	3.67E-02	2.18E+01	4.10E+01
		K-40	1.75E+02	7.73E+01	1.01E+02

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
522871	5/13/2020 - 5/13/2020	H3GW	2.76E+02	1.16E+02	1.84E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
511411	8/24/2020 - 8/24/2020	Mn-54	<5.03E+00	0.00E+00	5.03E+00
		Co-58	<7.35E+00	0.00E+00	7.35E+00
		Fe-59	<1.31E+01	0.00E+00	1.31E+01
		Co-60	<5.98E+00	0.00E+00	5.98E+00
		Zn-65	<1.20E+01	0.00E+00	1.20E+01
		Zr-95	<1.20E+01	0.00E+00	1.20E+01
		Nb-95	<7.17E+00	0.00E+00	7.17E+00
		I-131	<9.88E+00	0.00E+00	9.88E+00
		Cs-134	<6.12E+00	0.00E+00	6.12E+00
		Cs-137	<5.30E+00	0.00E+00	5.30E+00
		BaLa-140	<7.91E+00	0.00E+00	7.91E+00
		Be-7	<4.78E+01	0.00E+00	4.78E+01
		K-40	<1.08E+02	0.00E+00	1.08E+02
		H3GW	2.54E+02	1.13E+02	1.81E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
526812	11/16/2020 - 11/16/2020	Mn-54	<6.43E+00	0.00E+00	6.43E+00
		Co-58	<6.83E+00	0.00E+00	6.83E+00
		Fe-59	<1.17E+01	0.00E+00	1.17E+01
		Co-60	<6.21E+00	0.00E+00	6.21E+00
		Zn-65	<1.65E+01	0.00E+00	1.65E+01
		Zr-95	<1.04E+01	0.00E+00	1.04E+01
		Nb-95	<5.65E+00	0.00E+00	5.65E+00
		I-131	<9.75E+00	0.00E+00	9.75E+00
		Cs-134	<7.37E+00	0.00E+00	7.37E+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	<5.08E+01	0.00E+00	5.08E+01
		K-40	1.58E+02	7.21E+01	9.21E+01
		H3GW	2.02E+02	1.20E+02	1.95E+02

Sample Point 82 [ INDICATOR - S @ 0.6 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
516089	2/18/2020 - 2/18/2020	Mn-54	<4.80E+00	0.00E+00	4.80E+00
		Co-58	<4.97E+00	0.00E+00	4.97E+00
		Fe-59	<1.21E+01	0.00E+00	1.21E+01
		Co-60	<5.12E+00	0.00E+00	5.12E+00
		Zn-65	<1.93E+01	0.00E+00	1.93E+01
		Zr-95	<1.17E+01	0.00E+00	1.17E+01
		Nb-95	<7.03E+00	0.00E+00	7.03E+00
		I-131	<9.96E+00	0.00E+00	9.96E+00
		Cs-134	<5.63E+00	0.00E+00	5.63E+00
		Cs-137	<6.09E+00	0.00E+00	6.09E+00
		BaLa-140	<8.93E+00	0.00E+00	8.93E+00
		Be-7	<4.66E+01	0.00E+00	4.66E+01
		K-40	<5.59E+01	0.00E+00	5.59E+01
		H3GW	<1.58E+02	0.00E+00	1.87E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
522872	5/13/2020 - 5/13/2020	Mn-54	<5.89E+00	0.00E+00	5.89E+00
		Co-58	<5.66E+00	0.00E+00	5.66E+00
		Fe-59	<9.06E+00	0.00E+00	9.06E+00
		Co-60	<6.89E+00	0.00E+00	6.89E+00
		Zn-65	<1.43E+01	0.00E+00	1.43E+01
		Zr-95	<8.33E+00	0.00E+00	8.33E+00
		Nb-95	<6.66E+00	0.00E+00	6.66E+00
		I-131	<8.39E+00	0.00E+00	8.39E+00
		Cs-134	<6.99E+00	0.00E+00	6.99E+00
		Cs-137	<5.73E+00	0.00E+00	5.73E+00
		BaLa-140	<8.11E+00	0.00E+00	8.11E+00
		Be-7	<4.81E+01	0.00E+00	4.81E+01
		K-40	4.97E+01	4.70E+01	7.22E+01



# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
522872	5/13/2020 - 5/13/2020	H3GW	<5.51E+01	0.00E+00	1.83E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
511412	8/24/2020 - 8/24/2020	Mn-54	<6.45E+00	0.00E+00	6.45E+00
		Co-58	<6.30E+00	0.00E+00	6.30E+00
		Fe-59	<1.17E+01	0.00E+00	1.17E+01
		Co-60	<5.42E+00	0.00E+00	5.42E+00
		Zn-65	<1.33E+01	0.00E+00	1.33E+01
		Zr-95	<1.19E+01	0.00E+00	1.19E+01
		Nb-95	<5.64E+00	0.00E+00	5.64E+00
		I-131	<1.01E+01	0.00E+00	1.01E+01
		Cs-134	<5.95E+00	0.00E+00	5.95E+00
		Cs-137	<5.55E+00	0.00E+00	5.55E+00
		BaLa-140	<1.08E+01	0.00E+00	1.08E+01
		Be-7	<5.52E+01	0.00E+00	5.52E+01
		K-40	2.16E+02	8.72E+01	1.12E+02
		H3GW	<0.00E+00	0.00E+00	1.81E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
526813	11/16/2020 - 11/16/2020	Mn-54	<5.57E+00	0.00E+00	5.57E+00
		Co-58	<4.94E+00	0.00E+00	4.94E+00
		Fe-59	<1.15E+01	0.00E+00	1.15E+01
		Co-60	<3.94E+00	0.00E+00	3.94E+00
		Zn-65	<1.04E+01	0.00E+00	1.04E+01
		Zr-95	<1.19E+01	0.00E+00	1.19E+01
		Nb-95	<5.98E+00	0.00E+00	5.98E+00
		I-131	<9.40E+00	0.00E+00	9.40E+00
		Cs-134	<6.04E+00	0.00E+00	6.04E+00
		Cs-137	<6.06E+00	0.00E+00	6.06E+00
		BaLa-140	<9.94E+00	0.00E+00	9.94E+00
		Be-7	<4.17E+01	0.00E+00	4.17E+01
		K-40	1.25E+02	5.78E+01	7.21E+01
		H3GW	<6.29E+01	0.00E+00	1.96E+02

Sample Point 83 [ INDICATOR - SSW @ 1.6 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
516090	2/18/2020 - 2/18/2020	Mn-54	<5.53E+00	0.00E+00	5.53E+00
		Co-58	<5.07E+00	0.00E+00	5.07E+00
		Fe-59	<9.93E+00	0.00E+00	9.93E+00
		Co-60	<6.56E+00	0.00E+00	6.56E+00
		Zn-65	<1.10E+01	0.00E+00	1.10E+01
		Zr-95	<8.44E+00	0.00E+00	8.44E+00
		Nb-95	<7.16E+00	0.00E+00	7.16E+00
		I-131	<1.01E+01	0.00E+00	1.01E+01
		Cs-134	<6.60E+00	0.00E+00	6.60E+00
		Cs-137	<4.75E+00	0.00E+00	4.75E+00
		BaLa-140	<1.14E+01	0.00E+00	1.14E+01
		Be-7	<5.27E+01	0.00E+00	5.27E+01
		K-40	<8.82E+01	0.00E+00	8.82E+01
		H3GW	9.48E+02	1.37E+02	1.87E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
522873	5/13/2020 - 5/13/2020	Mn-54	<4.69E+00	0.00E+00	4.69E+00
		Co-58	<5.31E+00	0.00E+00	5.31E+00
		Fe-59	<1.04E+01	0.00E+00	1.04E+01
		Co-60	<5.64E+00	0.00E+00	5.64E+00
		Zn-65	<2.29E+01	0.00E+00	2.29E+01
		Zr-95	<7.15E+00	0.00E+00	7.15E+00
		Nb-95	<7.58E+00	0.00E+00	7.58E+00
		I-131	<7.16E+00	0.00E+00	7.16E+00
		Cs-134	<6.40E+00	0.00E+00	6.40E+00
		Cs-137	<4.70E+00	0.00E+00	4.70E+00
		BaLa-140	<4.68E+00	0.00E+00	4.68E+00
		Be-7	<4.19E+01	0.00E+00	4.19E+01
		K-40	3.11E+01	3.42E+01	5.43E+01

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
522873	5/13/2020 - 5/13/2020	H3GW	1.01E+03	1.37E+02	1.83E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
511413	8/25/2020 - 8/25/2020	Mn-54	<5.62E+00	0.00E+00	5.62E+00
		Co-58	<6.47E+00	0.00E+00	6.47E+00
		Fe-59	<1.39E+01	0.00E+00	1.39E+01
		Co-60	<7.03E+00	0.00E+00	7.03E+00
		Zn-65	<1.33E+01	0.00E+00	1.33E+01
		Zr-95	<1.20E+01	0.00E+00	1.20E+01
		Nb-95	<6.95E+00	0.00E+00	6.95E+00
		I-131	<1.13E+01	0.00E+00	1.13E+01
		Cs-134	<7.97E+00	0.00E+00	7.97E+00
		Cs-137	<6.82E+00	0.00E+00	6.82E+00
		BaLa-140	<1.04E+01	0.00E+00	1.04E+01
		Be-7	<5.28E+01	0.00E+00	5.28E+01
		K-40	1.46E+02	7.02E+01	9.51E+01
		H3GW	9.75E+02	1.34E+02	1.81E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
526814	11/16/2020 - 11/16/2020	Mn-54	<3.97E+00	0.00E+00	3.97E+00
		Co-58	<5.94E+00	0.00E+00	5.94E+00
		Fe-59	<7.89E+00	0.00E+00	7.89E+00
		Co-60	<6.40E+00	0.00E+00	6.40E+00
		Zn-65	<9.12E+00	0.00E+00	9.12E+00
		Zr-95	<1.08E+01	0.00E+00	1.08E+01
		Nb-95	<6.74E+00	0.00E+00	6.74E+00
		I-131	<8.78E+00	0.00E+00	8.78E+00
		Cs-134	<6.59E+00	0.00E+00	6.59E+00
		Cs-137	<4.66E+00	0.00E+00	4.66E+00
		BaLa-140	<1.09E+01	0.00E+00	1.09E+01
		Be-7	<3.94E+01	0.00E+00	3.94E+01
		K-40	<1.03E+02	0.00E+00	1.03E+02
		H3GW	8.02E+02	1.39E+02	1.97E+02

## Sample Point 84 [ GWPI - SSW @ 0.24 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
516091	2/17/2020 - 2/17/2020	Mn-54	<5.92E+00	0.00E+00	5.92E+00
		Co-58	<6.73E+00	0.00E+00	6.73E+00
		Fe-59	<1.01E+01	0.00E+00	1.01E+01
		Co-60	<5.83E+00	0.00E+00	5.83E+00
		Zn-65	<1.34E+01	0.00E+00	1.34E+01
		Zr-95	<1.05E+01	0.00E+00	1.05E+01
		Nb-95	<5.77E+00	0.00E+00	5.77E+00
		I-131	<7.99E+00	0.00E+00	7.99E+00
		Cs-134	<6.61E+00	0.00E+00	6.61E+00
		Cs-137	<4.28E+00	0.00E+00	4.28E+00
		BaLa-140	<1.08E+01	0.00E+00	1.08E+01
		Be-7	<4.64E+01	0.00E+00	4.64E+01
		K-40	5.61E+01	4.45E+01	6.41E+01
		H3GW	<3.30E+01	0.00E+00	1.87E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
522874	5/13/2020 - 5/13/2020	Mn-54	<5.94E+00	0.00E+00	5.94E+00
		Co-58	<4.28E+00	0.00E+00	4.28E+00
		Fe-59	<1.36E+01	0.00E+00	1.36E+01
		Co-60	<6.59E+00	0.00E+00	6.59E+00
		Zn-65	<1.17E+01	0.00E+00	1.17E+01
		Zr-95	<1.19E+01	0.00E+00	1.19E+01
		Nb-95	<7.21E+00	0.00E+00	7.21E+00
		I-131	<6.65E+00	0.00E+00	6.65E+00
		Cs-134	<5.24E+00	0.00E+00	5.24E+00
		Cs-137	<7.04E+00	0.00E+00	7.04E+00
		BaLa-140	<7.29E+00	0.00E+00	7.29E+00
		Be-7	<4.11E+01	0.00E+00	4.11E+01
		K-40	<9.99E+01	0.00E+00	9.99E+01

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
522874	5/13/2020 - 5/13/2020	H3GW	<2.53E+01	0.00E+00	1.84E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
511414	8/24/2020 - 8/24/2020	Mn-54	<6.63E+00	0.00E+00	6.63E+00
		Co-58	<4.99E+00	0.00E+00	4.99E+00
		Fe-59	<1.42E+01	0.00E+00	1.42E+01
		Co-60	<7.13E+00	0.00E+00	7.13E+00
		Zn-65	<1.27E+01	0.00E+00	1.27E+01
		Zr-95	<1.03E+01	0.00E+00	1.03E+01
		Nb-95	<7.56E+00	0.00E+00	7.56E+00
		I-131	<9.63E+00	0.00E+00	9.63E+00
		Cs-134	<6.81E+00	0.00E+00	6.81E+00
		Cs-137	<6.25E+00	0.00E+00	6.25E+00
		BaLa-140	<1.12E+01	0.00E+00	1.12E+01
		Be-7	<4.49E+01	0.00E+00	4.49E+01
		K-40	1.52E+02	7.20E+01	9.31E+01
		H3GW	<-3.0E+01	0.00E+00	1.82E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
526815	11/16/2020 - 11/16/2020	Mn-54	<6.16E+00	0.00E+00	6.16E+00
		Co-58	<5.56E+00	0.00E+00	5.56E+00
		Fe-59	<9.72E+00	0.00E+00	9.72E+00
		Co-60	<5.16E+00	0.00E+00	5.16E+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	<6.83E+00	0.00E+00	6.83E+00
		I-131	<1.18E+01	0.00E+00	1.18E+01
		Cs-134	<6.44E+00	0.00E+00	6.44E+00
		Cs-137	<6.14E+00	0.00E+00	6.14E+00
		BaLa-140	<1.02E+01	0.00E+00	1.02E+01
		Be-7	<5.46E+01	0.00E+00	5.46E+01
		K-40	1.02E+02	5.85E+01	7.76E+01
		H3GW	<-6.4E+01	0.00E+00	1.90E+02

Sample Point 85 [ GWPI - SSW @ 0.22 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
516092	2/17/2020 - 2/17/2020	Mn-54	<5.06E+00	0.00E+00	5.06E+00
		Co-58	<5.28E+00	0.00E+00	5.28E+00
		Fe-59	<1.29E+01	0.00E+00	1.29E+01
		Co-60	<6.31E+00	0.00E+00	6.31E+00
		Zn-65	<1.45E+01	0.00E+00	1.45E+01
		Zr-95	<9.70E+00	0.00E+00	9.70E+00
		Nb-95	<5.99E+00	0.00E+00	5.99E+00
		I-131	<1.09E+01	0.00E+00	1.09E+01
		Cs-134	<6.20E+00	0.00E+00	6.20E+00
		Cs-137	<6.02E+00	0.00E+00	6.01E+00
		BaLa-140	<1.07E+01	0.00E+00	1.07E+01
		Be-7	<4.12E+01	0.00E+00	4.12E+01
		K-40	<1.14E+02	0.00E+00	1.14E+02
		H3GW	<7.08E+01	0.00E+00	1.87E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
522875	5/13/2020 - 5/13/2020	Mn-54	<6.62E+00	0.00E+00	6.62E+00
		Co-58	<4.93E+00	0.00E+00	4.93E+00
		Fe-59	<1.01E+01	0.00E+00	1.01E+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	<1.06E+01	0.00E+00	1.06E+01
		Nb-95	<7.23E+00	0.00E+00	7.23E+00
		I-131	<9.44E+00	0.00E+00	9.44E+00
		Cs-134	<6.13E+00	0.00E+00	6.13E+00
		Cs-137	<6.58E+00	0.00E+00	6.58E+00
		BaLa-140	<1.12E+01	0.00E+00	1.12E+01
		Be-7	<4.19E+01	0.00E+00	4.19E+01
		K-40	2.22E+02	7.07E+01	6.04E+01

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 85 [ GWPI - SSW @ 0.22 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
522875	5/13/2020 - 5/13/2020	H3GW	<-3.2E+01	0.00E+00	1.82E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
511415	8/24/2020 - 8/24/2020	Mn-54	<6.12E+00	0.00E+00	6.12E+00
		Co-58	<5.65E+00	0.00E+00	5.65E+00
		Fe-59	<1.43E+01	0.00E+00	1.43E+01
		Co-60	<5.66E+00	0.00E+00	5.66E+00
		Zn-65	<1.32E+01	0.00E+00	1.32E+01
		Zr-95	<1.19E+01	0.00E+00	1.19E+01
		Nb-95	<6.98E+00	0.00E+00	6.98E+00
		I-131	<1.16E+01	0.00E+00	1.16E+01
		Cs-134	<7.82E+00	0.00E+00	7.82E+00
		Cs-137	<5.94E+00	0.00E+00	5.94E+00
		BaLa-140	<9.70E+00	0.00E+00	9.70E+00
		Be-7	<5.14E+01	0.00E+00	5.14E+01
		K-40	9.46E+01	5.67E+01	7.80E+01
		H3GW	<-2.7E+01	0.00E+00	1.81E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
526816	11/16/2020 - 11/16/2020	Mn-54	<4.72E+00	0.00E+00	4.72E+00
		Co-58	<5.14E+00	0.00E+00	5.14E+00
		Fe-59	<9.37E+00	0.00E+00	9.37E+00
		Co-60	<7.61E+00	0.00E+00	7.61E+00
		Zn-65	<1.24E+01	0.00E+00	1.24E+01
		Zr-95	<1.21E+01	0.00E+00	1.21E+01
		Nb-95	<6.91E+00	0.00E+00	6.91E+00
		I-131	<1.15E+01	0.00E+00	1.15E+01
		Cs-134	<6.25E+00	0.00E+00	6.25E+00
		Cs-137	<6.31E+00	0.00E+00	6.31E+00
		BaLa-140	<8.79E+00	0.00E+00	8.79E+00
		Be-7	<5.46E+01	0.00E+00	5.46E+01
		K-40	1.84E+02	6.45E+01	5.92E+01
		H3GW	<-6.9E+01	0.00E+00	1.91E+02

## Sample Point 86 [ GWPI - SW @ 0.2 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
516093	2/17/2020 - 2/17/2020	Mn-54	<6.27E+00	0.00E+00	6.27E+00
		Co-58	<4.73E+00	0.00E+00	4.73E+00
		Fe-59	<8.79E+00	0.00E+00	8.79E+00
		Co-60	<6.37E+00	0.00E+00	6.37E+00
		Zn-65	<1.14E+01	0.00E+00	1.14E+01
		Zr-95	<1.14E+01	0.00E+00	1.14E+01
		Nb-95	<7.80E+00	0.00E+00	7.80E+00
		I-131	<9.37E+00	0.00E+00	9.37E+00
		Cs-134	<6.35E+00	0.00E+00	6.35E+00
		Cs-137	<6.39E+00	0.00E+00	6.39E+00
		BaLa-140	<9.23E+00	0.00E+00	9.23E+00
		Be-7	<3.87E+01	0.00E+00	3.87E+01
		K-40	8.89E+01	6.51E+01	9.67E+01
		H3GW	<1.11E+02	0.00E+00	1.87E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
522876	5/12/2020 - 5/12/2020	Mn-54	<6.99E+00	0.00E+00	6.99E+00
		Co-58	<5.12E+00	0.00E+00	5.12E+00
		Fe-59	<1.19E+01	0.00E+00	1.19E+01
		Co-60	<6.65E+00	0.00E+00	6.65E+00
		Zn-65	<1.30E+01	0.00E+00	1.30E+01
		Zr-95	<1.05E+01	0.00E+00	1.05E+01
		Nb-95	<6.12E+00	0.00E+00	6.12E+00
		I-131	<9.67E+00	0.00E+00	9.67E+00
		Cs-134	<6.47E+00	0.00E+00	6.47E+00
		Cs-137	<5.23E+00	0.00E+00	5.23E+00
		BaLa-140	<9.45E+00	0.00E+00	9.45E+00
		Be-7	<4.32E+01	0.00E+00	4.32E+01
		K-40	2.07E+02	7.53E+01	8.37E+01

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
522876	5/12/2020 - 5/12/2020	H3GW	<7.97E+01	0.00E+00	1.82E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
511416	8/24/2020 - 8/24/2020	Mn-54	<4.88E+00	0.00E+00	4.88E+00
		Co-58	<4.82E+00	0.00E+00	4.82E+00
		Fe-59	<9.94E+00	0.00E+00	9.94E+00
		Co-60	<5.43E+00	0.00E+00	5.43E+00
		Zn-65	<1.28E+01	0.00E+00	1.28E+01
		Zr-95	<1.13E+01	0.00E+00	1.13E+01
		Nb-95	<6.97E+00	0.00E+00	6.97E+00
		I-131	<9.45E+00	0.00E+00	9.45E+00
		Cs-134	<6.58E+00	0.00E+00	6.58E+00
		Cs-137	<7.36E+00	0.00E+00	7.36E+00
		BaLa-140	<1.08E+01	0.00E+00	1.08E+01
		Be-7	<4.23E+01	0.00E+00	4.23E+01
		K-40	1.35E+02	6.49E+01	8.23E+01
		H3GW	<1.37E+01	0.00E+00	1.82E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
526817	11/16/2020 - 11/16/2020	Mn-54	<6.43E+00	0.00E+00	6.43E+00
		Co-58	<5.89E+00	0.00E+00	5.89E+00
		Fe-59	<1.09E+01	0.00E+00	1.09E+01
		Co-60	<7.38E+00	0.00E+00	7.38E+00
		Zn-65	<1.20E+01	0.00E+00	1.20E+01
		Zr-95	<1.10E+01	0.00E+00	1.10E+01
		Nb-95	<5.58E+00	0.00E+00	5.58E+00
		I-131	<8.62E+00	0.00E+00	8.62E+00
		Cs-134	<5.62E+00	0.00E+00	5.62E+00
		Cs-137	<5.09E+00	0.00E+00	5.09E+00
		BaLa-140	<7.95E+00	0.00E+00	7.95E+00
		Be-7	<5.19E+01	0.00E+00	5.19E+01
		K-40	1.33E+02	6.91E+01	9.22E+01
		H3GW	<5.0E+01	0.00E+00	1.90E+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
510765	1/6/2020 - 1/6/2020	LLI-131	<6.48E-01	0.00E+00	6.48E-01
		I-131	<6.69E+00	0.00E+00	6.69E+00
		Cs-134	<8.76E+00	0.00E+00	8.76E+00
		Cs-137	<6.40E+00	0.00E+00	6.40E+00
		BaLa-140	<6.08E+00	0.00E+00	6.08E+00
		Be-7	<4.85E+01	0.00E+00	4.85E+01
		K-40	1.62E+03	2.46E+02	8.17E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
511419	2/3/2020 - 2/3/2020	LLI-131	<6.46E-01	0.00E+00	6.46E-01
		I-131	<7.48E+00	0.00E+00	7.48E+00
		Cs-134	<8.80E+00	0.00E+00	8.80E+00
		Cs-137	<9.58E+00	0.00E+00	9.58E+00
		BaLa-140	<2.23E+00	0.00E+00	2.23E+00
		Be-7	<4.90E+01	0.00E+00	4.90E+01
		K-40	1.32E+03	2.22E+02	1.11E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
512115	3/2/2020 - 3/2/2020	LLI-131	<6.45E-01	0.00E+00	6.45E-01
		I-131	<7.77E+00	0.00E+00	7.77E+00
		Cs-134	<9.89E+00	0.00E+00	9.89E+00
		Cs-137	<6.34E+00	0.00E+00	6.34E+00
		BaLa-140	<7.62E+00	0.00E+00	7.62E+00
		Be-7	<4.55E+01	0.00E+00	4.55E+01
		K-40	1.39E+03	2.29E+02	1.21E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514117	4/6/2020 - 4/6/2020	LLI-131	<5.88E-01	0.00E+00	5.88E-01
		I-131	<7.11E+00	0.00E+00	7.11E+00

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
514117	4/6/2020 - 4/6/2020	Cs-134	<8.77E+00	0.00E+00	8.77E+00
		Cs-137	<5.28E+00	0.00E+00	5.28E+00
		BaLa-140	<2.24E+00	0.00E+00	2.24E+00
		Be-7	<5.44E+01	0.00E+00	5.44E+01
		K-40	1.34E+03	2.23E+02	1.13E+02
515440	5/4/2020 - 5/4/2020	LLI-131	<5.85E-01	0.00E+00	5.85E-01
		I-131	<6.94E+00	0.00E+00	6.94E+00
		Cs-134	<7.24E+00	0.00E+00	7.24E+00
		Cs-137	<7.75E+00	0.00E+00	7.75E+00
		BaLa-140	<8.95E+00	0.00E+00	8.95E+00
519647	5/18/2020 - 5/18/2020	Be-7	<5.39E+01	0.00E+00	5.39E+01
		K-40	1.50E+03	2.36E+02	8.55E+01
		LLI-131	<6.15E-01	0.00E+00	6.15E-01
		I-131	<6.97E+00	0.00E+00	6.97E+00
		Cs-134	<8.78E+00	0.00E+00	8.78E+00
521521	6/1/2020 - 6/1/2020	Cs-137	<7.77E+00	0.00E+00	7.77E+00
		BaLa-140	<6.53E+00	0.00E+00	6.53E+00
		Be-7	<5.17E+01	0.00E+00	5.17E+01
		K-40	1.24E+03	2.21E+02	1.23E+02
		LLI-131	<5.77E-01	0.00E+00	5.77E-01
522290	6/15/2020 - 6/15/2020	I-131	<7.41E+00	0.00E+00	7.41E+00
		Cs-134	<7.65E+00	0.00E+00	7.65E+00
		Cs-137	<7.20E+00	0.00E+00	7.20E+00
		BaLa-140	<8.80E+00	0.00E+00	8.80E+00
		Be-7	<5.54E+01	0.00E+00	5.54E+01
523052	6/29/2020 - 6/29/2020	K-40	1.36E+03	2.21E+02	7.48E+01
		LLI-131	<5.80E-01	0.00E+00	5.80E-01
		I-131	<8.21E+00	0.00E+00	8.21E+00
		Cs-134	<6.62E+00	0.00E+00	6.62E+00
		Cs-137	<6.39E+00	0.00E+00	6.39E+00
523715	7/13/2020 - 7/13/2020	BaLa-140	<6.31E+00	0.00E+00	6.31E+00
		Be-7	<5.16E+01	0.00E+00	5.16E+01
		K-40	1.61E+03	2.45E+02	8.71E+01
		LLI-131	<6.47E-01	0.00E+00	6.47E-01
		I-131	<7.56E+00	0.00E+00	7.56E+00
524651	7/27/2020 - 7/27/2020	Cs-134	<7.69E+00	0.00E+00	7.69E+00
		Cs-137	<6.34E+00	0.00E+00	6.34E+00
		BaLa-140	<7.63E+00	0.00E+00	7.63E+00
		Be-7	<4.23E+01	0.00E+00	4.23E+01
		K-40	1.53E+03	2.38E+02	8.50E+01
523715	7/13/2020 - 7/13/2020	LLI-131	<6.43E-01	0.00E+00	6.43E-01
		I-131	<6.74E+00	0.00E+00	6.74E+00
		Cs-134	<8.15E+00	0.00E+00	8.15E+00
		Cs-137	<7.61E+00	0.00E+00	7.61E+00
		BaLa-140	<6.05E+00	0.00E+00	6.05E+00
524651	7/27/2020 - 7/27/2020	Be-7	<5.78E+01	0.00E+00	5.78E+01
		K-40	1.61E+03	2.42E+02	1.78E+01
		LLI-131	<6.24E-01	0.00E+00	6.24E-01
		I-131	<5.62E+00	0.00E+00	5.62E+00
		Cs-134	<5.95E+00	0.00E+00	5.95E+00
524651	7/27/2020 - 7/27/2020	Cs-137	<4.55E+00	0.00E+00	4.55E+00
		BaLa-140	<6.05E+00	0.00E+00	6.05E+00
		Be-7	<3.51E+01	0.00E+00	3.51E+01
		LLI-131	<6.24E-01	0.00E+00	6.24E-01
		I-131	<5.62E+00	0.00E+00	5.62E+00

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
524651	7/27/2020 - 7/27/2020	K-40	1.28E+03	2.16E+02	1.01E+02
524944	8/10/2020 - 8/10/2020	LLI-131	<6.51E-01	0.00E+00	6.51E-01
		I-131	<6.80E+00	0.00E+00	6.80E+00
		Cs-134	<9.50E+00	0.00E+00	9.50E+00
		Cs-137	<7.67E+00	0.00E+00	7.67E+00
		BaLa-140	<8.83E+00	0.00E+00	8.83E+00
		Be-7	<4.85E+01	0.00E+00	4.85E+01
		K-40	1.39E+03	2.25E+02	9.70E+01
525539	8/24/2020 - 8/24/2020	LLI-131	<6.49E-01	0.00E+00	6.49E-01
		I-131	<7.92E+00	0.00E+00	7.92E+00
		Cs-134	<8.29E+00	0.00E+00	8.29E+00
		Cs-137	<8.51E+00	0.00E+00	8.51E+00
		BaLa-140	<2.25E+00	0.00E+00	2.25E+00
		Be-7	<5.38E+01	0.00E+00	5.38E+01
		K-40	1.44E+03	2.26E+02	1.80E+01
526225	9/8/2020 - 9/8/2020	LLI-131	<6.65E-01	0.00E+00	6.65E-01
		I-131	<6.35E+00	0.00E+00	6.35E+00
		Cs-134	<4.02E+00	0.00E+00	4.02E+00
		Cs-137	<8.77E+00	0.00E+00	8.77E+00
		BaLa-140	<7.93E+00	0.00E+00	7.93E+00
		Be-7	<4.60E+01	0.00E+00	4.60E+01
		K-40	1.52E+03	2.39E+02	1.07E+02
526831	9/21/2020 - 9/21/2020	LLI-131	<5.85E-01	0.00E+00	5.85E-01
		I-131	<7.49E+00	0.00E+00	7.49E+00
		Cs-134	<6.55E+00	0.00E+00	6.55E+00
		Cs-137	<7.67E+00	0.00E+00	7.67E+00
		BaLa-140	<6.01E+00	0.00E+00	6.01E+00
		Be-7	<6.07E+01	0.00E+00	6.07E+01
		K-40	1.32E+03	2.21E+02	1.17E+02
527542	10/5/2020 - 10/5/2020	LLI-131	<6.19E-01	0.00E+00	6.19E-01
		I-131	<6.94E+00	0.00E+00	6.94E+00
		Cs-134	<7.15E+00	0.00E+00	7.15E+00
		Cs-137	<8.06E+00	0.00E+00	8.06E+00
		BaLa-140	<7.54E+00	0.00E+00	7.54E+00
		Be-7	<7.23E+01	0.00E+00	7.23E+01
		K-40	1.46E+03	2.34E+02	1.14E+02
527893	10/19/2020 - 10/19/2020	LLI-131	<6.19E-01	0.00E+00	6.19E-01
		I-131	<6.65E+00	0.00E+00	6.65E+00
		Cs-134	<5.93E+00	0.00E+00	5.93E+00
		Cs-137	<7.73E+00	0.00E+00	7.73E+00
		BaLa-140	<2.21E+00	0.00E+00	2.21E+00
		Be-7	<3.86E+01	0.00E+00	3.86E+01
		K-40	1.51E+03	2.32E+02	1.78E+01
528972	11/2/2020 - 11/2/2020	LLI-131	<6.46E-01	0.00E+00	6.46E-01
		I-131	<5.63E+00	0.00E+00	5.63E+00
		Cs-134	<8.33E+00	0.00E+00	8.33E+00
		Cs-137	<8.91E+00	0.00E+00	8.91E+00
		BaLa-140	<6.11E+00	0.00E+00	6.11E+00
		Be-7	<5.93E+01	0.00E+00	5.93E+01
		K-40	1.45E+03	2.33E+02	9.98E+01
530213	11/16/2020 - 11/16/2020	LLI-131	<6.11E-01	0.00E+00	6.11E-01
		I-131	<6.51E+00	0.00E+00	6.51E+00

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
530213	11/16/2020 - 11/16/2020	Cs-134	<7.15E+00	0.00E+00	7.15E+00
		Cs-137	<6.82E+00	0.00E+00	6.82E+00
		BaLa-140	<6.02E+00	0.00E+00	6.02E+00
		Be-7	<4.84E+01	0.00E+00	4.84E+01
		K-40	1.40E+03	2.30E+02	1.25E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
531018	11/30/2020 - 11/30/2020	LLI-131	<6.75E-01	0.00E+00	6.75E-01
		I-131	<1.33E+01	0.00E+00	1.33E+01
		Cs-134	<9.34E+00	0.00E+00	9.34E+00
		Cs-137	<6.79E+00	0.00E+00	6.79E+00
		BaLa-140	<9.57E+00	0.00E+00	9.57E+00
		Be-7	<5.32E+01	0.00E+00	5.32E+01
K-40	1.51E+03	2.46E+02	1.19E+02		

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
532752	12/14/2020 - 12/14/2020	LLI-131	<6.47E-01	0.00E+00	6.47E-01
		I-131	<6.39E+00	0.00E+00	6.39E+00
		Cs-134	<5.87E+00	0.00E+00	5.87E+00
		Cs-137	<8.77E+00	0.00E+00	8.77E+00
		BaLa-140	<6.31E+00	0.00E+00	6.31E+00
		Be-7	<3.92E+01	0.00E+00	3.92E+01
K-40	1.52E+03	2.43E+02	1.34E+02		

## Sample Point 102 [ INDICATOR - W @ 2.82 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
520453	5/4/2020 - 5/4/2020	LLI-131	<6.17E-01	0.00E+00	6.17E-01
		I-131	<6.27E+00	0.00E+00	6.27E+00
		Cs-134	<7.22E+00	0.00E+00	7.22E+00
		Cs-137	<9.17E+00	0.00E+00	9.17E+00
		BaLa-140	<6.11E+00	0.00E+00	6.11E+00
		Be-7	<5.12E+01	0.00E+00	5.12E+01
K-40	1.92E+03	2.70E+02	1.78E+01		

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
519646	5/18/2020 - 5/18/2020	LLI-131	<6.06E-01	0.00E+00	6.06E-01
		I-131	<7.19E+00	0.00E+00	7.19E+00
		Cs-134	<9.22E+00	0.00E+00	9.22E+00
		Cs-137	<6.92E+00	0.00E+00	6.92E+00
		BaLa-140	<8.97E+00	0.00E+00	8.97E+00
		Be-7	<3.93E+01	0.00E+00	3.93E+01
K-40	1.78E+03	2.61E+02	7.46E+01		

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
521520	6/1/2020 - 6/1/2020	LLI-131	<6.39E-01	0.00E+00	6.39E-01
		I-131	<8.11E+00	0.00E+00	8.11E+00
		Cs-134	<7.69E+00	0.00E+00	7.69E+00
		Cs-137	<1.00E+01	0.00E+00	1.00E+01
		BaLa-140	<6.09E+00	0.00E+00	6.09E+00
		Be-7	<4.86E+01	0.00E+00	4.86E+01
K-40	1.97E+03	2.79E+02	8.65E+01		

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
522289	6/22/2020 - 6/22/2020	LLI-131	<5.40E-01	0.00E+00	5.40E-01
		I-131	<6.69E+00	0.00E+00	6.69E+00
		Cs-134	<7.69E+00	0.00E+00	7.69E+00
		Cs-137	<8.77E+00	0.00E+00	8.77E+00
		BaLa-140	<6.13E+00	0.00E+00	6.13E+00
		Be-7	<4.25E+01	0.00E+00	4.25E+01
K-40	1.87E+03	2.72E+02	1.08E+02		

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
523051	6/29/2020 - 6/29/2020	LLI-131	<6.04E-01	0.00E+00	6.04E-01
		I-131	<6.42E+00	0.00E+00	6.42E+00
		Cs-134	<9.28E+00	0.00E+00	9.28E+00
		Cs-137	<7.77E+00	0.00E+00	7.77E+00
		BaLa-140	<8.29E+00	0.00E+00	8.29E+00



# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
523051	6/29/2020 - 6/29/2020	Be-7	<3.20E+01	0.00E+00	3.20E+01
		K-40	2.15E+03	3.00E+02	1.92E+01
523714	7/13/2020 - 7/13/2020	LLI-131	<6.44E-01	0.00E+00	6.44E-01
		I-131	<7.83E+00	0.00E+00	7.83E+00
		Cs-134	<8.74E+00	0.00E+00	8.74E+00
		Cs-137	<7.32E+00	0.00E+00	7.32E+00
		BaLa-140	<8.96E+00	0.00E+00	8.96E+00
		Be-7	<5.86E+01	0.00E+00	5.86E+01
		K-40	2.17E+03	2.98E+02	1.09E+02
524650	7/27/2020 - 7/27/2020	LLI-131	<5.70E-01	0.00E+00	5.70E-01
		I-131	<7.64E+00	0.00E+00	7.64E+00
		Cs-134	<7.82E+00	0.00E+00	7.82E+00
		Cs-137	<7.80E+00	0.00E+00	7.80E+00
		BaLa-140	<6.16E+00	0.00E+00	6.16E+00
		Be-7	<5.94E+01	0.00E+00	5.94E+01
		K-40	1.95E+03	2.75E+02	1.81E+01
524943	8/10/2020 - 8/10/2020	LLI-131	<6.31E-01	0.00E+00	6.31E-01
		I-131	<6.60E+00	0.00E+00	6.60E+00
		Cs-134	<9.89E+00	0.00E+00	9.89E+00
		Cs-137	<9.73E+00	0.00E+00	9.73E+00
		BaLa-140	<7.67E+00	0.00E+00	7.67E+00
		Be-7	<4.56E+01	0.00E+00	4.56E+01
		K-40	2.23E+03	2.99E+02	1.78E+01
525538	8/24/2020 - 8/24/2020	LLI-131	<6.47E-01	0.00E+00	6.47E-01
		I-131	<7.12E+00	0.00E+00	7.12E+00
		Cs-134	<8.19E+00	0.00E+00	8.19E+00
		Cs-137	<8.42E+00	0.00E+00	8.42E+00
		BaLa-140	<7.66E+00	0.00E+00	7.66E+00
		Be-7	<5.13E+01	0.00E+00	5.13E+01
		K-40	1.91E+03	2.70E+02	1.78E+01
526224	9/8/2020 - 9/8/2020	LLI-131	<6.31E-01	0.00E+00	6.31E-01
		I-131	<9.35E+00	0.00E+00	9.35E+00
		Cs-134	<7.70E+00	0.00E+00	7.70E+00
		Cs-137	<8.77E+00	0.00E+00	8.77E+00
		BaLa-140	<6.35E+00	0.00E+00	6.35E+00
		Be-7	<5.69E+01	0.00E+00	5.69E+01
		K-40	1.77E+03	2.60E+02	8.17E+01
526830	9/21/2020 - 9/21/2020	LLI-131	<6.10E-01	0.00E+00	6.10E-01
		I-131	<8.60E+00	0.00E+00	8.60E+00
		Cs-134	<9.62E+00	0.00E+00	9.62E+00
		Cs-137	<6.89E+00	0.00E+00	6.89E+00
		BaLa-140	<8.97E+00	0.00E+00	8.97E+00
		Be-7	<5.87E+01	0.00E+00	5.87E+01
		K-40	1.81E+03	2.66E+02	9.94E+01
527541	10/5/2020 - 10/5/2020	LLI-131	<6.15E-01	0.00E+00	6.15E-01
		I-131	<6.35E+00	0.00E+00	6.35E+00
		Cs-134	<7.80E+00	0.00E+00	7.80E+00
		Cs-137	<7.36E+00	0.00E+00	7.36E+00
		BaLa-140	<7.73E+00	0.00E+00	7.73E+00
		Be-7	<5.69E+01	0.00E+00	5.69E+01
		K-40	1.98E+03	2.79E+02	6.81E+01
527892	10/19/2020 - 10/19/2020	Nuclide	Activity	2 Sigma Error	MDA
		LLI-131	<6.29E-01	0.00E+00	6.29E-01

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

Media Type: MILK Concentration (Activity): pCi/l

Sample Point 102 [ INDICATOR - W @ 2.82 miles ]

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Sample ID:	527892	Sample Dates:	10/19/2020 - 10/19/2020	Nuclide	Activity	2 Sigma Error	MDA
				I-131	<7.27E+00	0.00E+00	7.27E+00
				Cs-134	<9.20E+00	0.00E+00	9.20E+00
				Cs-137	<7.75E+00	0.00E+00	7.75E+00
				BaLa-140	<6.12E+00	0.00E+00	6.12E+00
				Be-7	<5.86E+01	0.00E+00	5.86E+01
				K-40	1.96E+03	2.81E+02	1.08E+02

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Sample ID:	528971	Sample Dates:	11/2/2020 - 11/2/2020	Nuclide	Activity	2 Sigma Error	MDA
				LLI-131	<6.39E-01	0.00E+00	6.39E-01
				I-131	<6.06E+00	0.00E+00	6.06E+00
				Cs-134	<5.15E+00	0.00E+00	5.15E+00
				Cs-137	<9.89E+00	0.00E+00	9.89E+00
				BaLa-140	<2.27E+00	0.00E+00	2.27E+00
				Be-7	<3.94E+01	0.00E+00	3.94E+01
				K-40	1.67E+03	2.52E+02	8.44E+01

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Sample ID:	530212	Sample Dates:	11/16/2020 - 11/16/2020	Nuclide	Activity	2 Sigma Error	MDA
				LLI-131	<5.86E-01	0.00E+00	5.86E-01
				I-131	<7.94E+00	0.00E+00	7.94E+00
				Cs-134	<4.08E+00	0.00E+00	4.08E+00
				Cs-137	<8.19E+00	0.00E+00	8.19E+00
				BaLa-140	<6.19E+00	0.00E+00	6.19E+00
				Be-7	<4.30E+01	0.00E+00	4.30E+01
				K-40	2.07E+03	2.87E+02	1.81E+01

Media Type: SEDIMENT\_BOTTOM Concentration (Activity): pCi/kg dry

Sample Point 52 [ INDICATOR - S @ 3.8 miles ]

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Sample ID:	515490	Sample Dates:	1/22/2020 - 1/22/2020	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<3.58E+01	0.00E+00	3.58E+01
				Co-58	<3.16E+01	0.00E+00	3.16E+01
				Fe-59	<9.14E+01	0.00E+00	9.14E+01
				Co-60	<3.56E+01	0.00E+00	3.56E+01
				Zn-65	<8.74E+01	0.00E+00	8.74E+01
				Zr-95	<8.96E+01	0.00E+00	8.96E+01
				Nb-95	<4.78E+01	0.00E+00	4.78E+01
				I-131	<2.00E+02	0.00E+00	2.00E+02
				Cs-134	<5.06E+01	0.00E+00	5.06E+01
				Cs-137	<6.41E+01	0.00E+00	6.41E+01
				Be-7	<3.42E+02	0.00E+00	3.42E+02
				K-40	6.62E+03	1.01E+03	4.74E+02
				Co-57	<2.69E+01	0.00E+00	2.69E+01
				Mo-99	<4.12E+04	0.00E+00	4.12E+04
				Ag-110M	<3.17E+01	0.00E+00	3.17E+01
				Sb-122	<6.68E+03	0.00E+00	6.68E+03
				Sb-125	<9.45E+01	0.00E+00	9.45E+01

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Sample ID:	526267	Sample Dates:	7/23/2020 - 7/23/2020	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<4.04E+01	0.00E+00	4.04E+01
				Co-58	<4.19E+01	0.00E+00	4.19E+01
				Fe-59	<7.37E+01	0.00E+00	7.37E+01
				Co-60	<3.90E+01	0.00E+00	3.90E+01
				Zn-65	<8.38E+01	0.00E+00	8.38E+01
				Zr-95	<6.93E+01	0.00E+00	6.93E+01
				Nb-95	<4.71E+01	0.00E+00	4.71E+01
				I-131	<6.25E+01	0.00E+00	6.25E+01
				Cs-134	<5.45E+01	0.00E+00	5.45E+01
				Cs-137	<5.35E+01	0.00E+00	5.35E+01
				Be-7	<3.97E+02	0.00E+00	3.97E+02
				K-40	1.06E+04	1.39E+03	5.71E+02
				Co-57	<2.94E+01	0.00E+00	2.94E+01
				Mo-99	<1.78E+03	0.00E+00	1.78E+03
				Ag-110M	<3.64E+01	0.00E+00	3.64E+01
				Sb-122	<2.44E+02	0.00E+00	2.44E+02
				Sb-125	<9.67E+01	0.00E+00	9.67E+01

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# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

Media Type: SEDIMENT\_SHORE Concentration (Activity): pCi/kg dry

Sample Point 26 [ INDICATOR - S @ 4.6 miles ]

Sample ID:	515491	Sample Dates:	1/22/2020 - 1/22/2020	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<5.39E+01	0.00E+00	5.39E+01
				Co-58	<4.93E+01	0.00E+00	4.93E+01
				Fe-59	<1.44E+02	0.00E+00	1.44E+02
				Co-60	<4.55E+01	0.00E+00	4.55E+01
				Zn-65	<1.08E+02	0.00E+00	1.08E+02
				Zr-95	<9.54E+01	0.00E+00	9.54E+01
				Nb-95	<7.60E+01	0.00E+00	7.60E+01
				I-131	<3.00E+02	0.00E+00	3.00E+02
				Cs-134	<5.92E+01	0.00E+00	5.92E+01
				Cs-137	<4.79E+01	0.00E+00	4.79E+01
				Be-7	<4.00E+02	0.00E+00	4.00E+02
				K-40	8.37E+03	1.45E+03	1.32E+02
				Co-57	<4.18E+01	0.00E+00	4.18E+01
				Mo-99	<6.91E+04	0.00E+00	6.91E+04
				Ag-110M	<5.04E+01	0.00E+00	5.04E+01
				Sb-122	<8.88E+03	0.00E+00	8.88E+03
				Sb-125	<1.26E+02	0.00E+00	1.26E+02

Sample ID:	526268	Sample Dates:	7/23/2020 - 7/23/2020	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<5.07E+01	0.00E+00	5.07E+01
				Co-58	<6.21E+01	0.00E+00	6.21E+01
				Fe-59	<9.26E+01	0.00E+00	9.26E+01
				Co-60	<5.43E+01	0.00E+00	5.43E+01
				Zn-65	<1.08E+02	0.00E+00	1.08E+02
				Zr-95	<1.03E+02	0.00E+00	1.03E+02
				Nb-95	<5.38E+01	0.00E+00	5.38E+01
				I-131	<9.33E+01	0.00E+00	9.33E+01
				Cs-134	<7.57E+01	0.00E+00	7.57E+01
				Cs-137	<5.55E+01	0.00E+00	5.55E+01
				Be-7	<6.53E+02	0.00E+00	6.53E+02
				K-40	1.10E+04	1.81E+03	1.01E+03
				Co-57	<4.15E+01	0.00E+00	4.15E+01
				Mo-99	<2.53E+03	0.00E+00	2.53E+03
				Ag-110M	<5.27E+01	0.00E+00	5.27E+01
				Sb-122	<4.56E+02	0.00E+00	4.56E+02
				Sb-125	<1.49E+02	0.00E+00	1.49E+02

Sample Point 41 [ INDICATOR - S @ 3.8 miles ]

Sample ID:	515492	Sample Dates:	1/22/2020 - 1/22/2020	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<5.78E+01	0.00E+00	5.78E+01
				Co-58	<6.03E+01	0.00E+00	6.03E+01
				Fe-59	<8.77E+01	0.00E+00	8.77E+01
				Co-60	<4.88E+01	0.00E+00	4.88E+01
				Zn-65	<1.00E+02	0.00E+00	1.00E+02
				Zr-95	<6.26E+01	0.00E+00	6.26E+01
				Nb-95	<8.04E+01	0.00E+00	8.04E+01
				I-131	<2.02E+02	0.00E+00	2.02E+02
				Cs-134	<6.62E+01	0.00E+00	6.62E+01
				Cs-137	<6.33E+01	0.00E+00	6.33E+01
				Be-7	<4.18E+02	0.00E+00	4.18E+02
				K-40	1.13E+04	1.71E+03	4.99E+02
				Co-57	<3.68E+01	0.00E+00	3.68E+01
				Mo-99	<4.79E+04	0.00E+00	4.79E+04
				Ag-110M	<3.17E+01	0.00E+00	3.17E+01
				Sb-122	<1.10E+04	0.00E+00	1.10E+04
				Sb-125	<1.17E+02	0.00E+00	1.17E+02

Sample ID:	526269	Sample Dates:	7/23/2020 - 7/23/2020	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<5.21E+01	0.00E+00	5.21E+01
				Co-58	<4.80E+01	0.00E+00	4.80E+01
				Fe-59	<1.18E+02	0.00E+00	1.18E+02
				Co-60	<6.95E+01	0.00E+00	6.95E+01
				Zn-65	<1.08E+02	0.00E+00	1.08E+02
				Zr-95	<7.15E+01	0.00E+00	7.15E+01
				Nb-95	<4.91E+01	0.00E+00	4.91E+01
				I-131	<9.17E+01	0.00E+00	9.17E+01

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

Media Type: SEDIMENT\_SHORE Concentration (Activity): pCi/kg dry

Sample Point 41 [ INDICATOR - S @ 3.8 miles ]

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Sample ID:	526269	Sample Dates:	7/23/2020 - 7/23/2020	Nuclide	Activity	2 Sigma Error	MDA
				Cs-134	<5.83E+01	0.00E+00	5.83E+01
				Cs-137	<5.32E+01	0.00E+00	5.32E+01
				Be-7	<5.63E+02	0.00E+00	5.63E+02
				K-40	1.11E+04	1.71E+03	4.98E+02
				Co-57	<3.75E+01	0.00E+00	3.75E+01
				Mo-99	<2.09E+03	0.00E+00	2.09E+03
				Ag-110M	<4.57E+01	0.00E+00	4.57E+01
				Sb-122	<3.19E+02	0.00E+00	3.19E+02
				Sb-125	<1.18E+02	0.00E+00	1.18E+02

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

Sample Point 26 [ INDICATOR - S @ 4.7 miles ]

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Sample ID:	515880	Sample Dates:	12/23/2019 - 1/20/2020	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<2.19E+00	0.00E+00	2.19E+00
				Co-58	<3.02E+00	0.00E+00	3.02E+00
				Fe-59	<5.87E+00	0.00E+00	5.87E+00
				Co-60	<2.11E+00	0.00E+00	2.11E+00
				Zn-65	<3.90E+00	0.00E+00	3.90E+00
				Zr-95	<5.16E+00	0.00E+00	5.16E+00
				Nb-95	<3.44E+00	0.00E+00	3.44E+00
				I-131	<1.02E+01	0.00E+00	1.02E+01
				Cs-134	<3.09E+00	0.00E+00	3.09E+00
				Cs-137	<2.75E+00	0.00E+00	2.75E+00
				BaLa-140	<5.00E+00	0.00E+00	5.00E+00
				Be-7	<2.54E+01	0.00E+00	2.54E+01
				K-40	9.17E+01	3.05E+01	3.55E+01
				H3SW	8.04E+03	2.67E+02	1.77E+02

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Sample ID:	517403	Sample Dates:	1/20/2020 - 2/17/2020	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<2.46E+00	0.00E+00	2.46E+00
				Co-58	<2.95E+00	0.00E+00	2.95E+00
				Fe-59	<5.72E+00	0.00E+00	5.72E+00
				Co-60	<2.64E+00	0.00E+00	2.64E+00
				Zn-65	<5.06E+00	0.00E+00	5.06E+00
				Zr-95	<3.29E+00	0.00E+00	3.29E+00
				Nb-95	<3.36E+00	0.00E+00	3.36E+00
				I-131	<1.05E+01	0.00E+00	1.05E+01
				Cs-134	<2.72E+00	0.00E+00	2.72E+00
				Cs-137	<2.80E+00	0.00E+00	2.80E+00
				BaLa-140	<7.53E+00	0.00E+00	7.53E+00
				Be-7	<2.60E+01	0.00E+00	2.60E+01
				K-40	8.19E+01	2.84E+01	3.22E+01
				H3SW	6.89E+03	2.53E+02	1.88E+02

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Sample ID:	519690	Sample Dates:	2/17/2020 - 3/16/2020	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<3.10E+00	0.00E+00	3.10E+00
				Co-58	<3.29E+00	0.00E+00	3.29E+00
				Fe-59	<5.79E+00	0.00E+00	5.79E+00
				Co-60	<2.46E+00	0.00E+00	2.46E+00
				Zn-65	<5.13E+00	0.00E+00	5.13E+00
				Zr-95	<5.07E+00	0.00E+00	5.07E+00
				Nb-95	<3.70E+00	0.00E+00	3.70E+00
				I-131	<1.17E+01	0.00E+00	1.17E+01
				Cs-134	<2.85E+00	0.00E+00	2.85E+00
				Cs-137	<3.20E+00	0.00E+00	3.20E+00
				BaLa-140	<5.24E+00	0.00E+00	5.24E+00
				Be-7	<3.02E+01	0.00E+00	3.02E+01
				K-40	5.95E+01	4.07E+01	6.23E+01
				H3SW	5.63E+03	2.31E+02	1.80E+02

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Sample ID:	521599	Sample Dates:	3/16/2020 - 4/13/2020	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<1.43E+00	0.00E+00	1.43E+00
				Co-58	<1.79E+00	0.00E+00	1.79E+00
				Fe-59	<3.80E+00	0.00E+00	3.80E+00
				Co-60	<1.73E+00	0.00E+00	1.73E+00

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# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
521599	3/16/2020 - 4/13/2020	Zn-65	<3.31E+00	0.00E+00	3.31E+00
		Zr-95	<3.56E+00	0.00E+00	3.56E+00
		Nb-95	<2.06E+00	0.00E+00	2.06E+00
		I-131	<9.96E+00	0.00E+00	9.96E+00
		Cs-134	<2.03E+00	0.00E+00	2.03E+00
		Cs-137	<1.18E+00	0.00E+00	1.18E+00
		BaLa-140	<4.65E+00	0.00E+00	4.65E+00
		Be-7	<1.52E+01	0.00E+00	1.52E+01
		K-40	3.69E+01	1.62E+01	2.20E+01
		H3SW	5.65E+03	2.33E+02	1.87E+02
		523095	4/13/2020 - 5/11/2020	Mn-54	<3.73E+00
Co-58	<4.37E+00			0.00E+00	4.37E+00
Fe-59	<9.48E+00			0.00E+00	9.48E+00
Co-60	<4.02E+00			0.00E+00	4.02E+00
Zn-65	<1.10E+01			0.00E+00	1.10E+01
Zr-95	<6.93E+00			0.00E+00	6.93E+00
Nb-95	<5.36E+00			0.00E+00	5.36E+00
I-131	<8.96E+00			0.00E+00	8.96E+00
Cs-134	<4.41E+00			0.00E+00	4.41E+00
Cs-137	<4.07E+00			0.00E+00	4.07E+00
BaLa-140	<5.97E+00			0.00E+00	5.97E+00
Be-7	<4.49E+01			0.00E+00	4.49E+01
K-40	<7.65E+01			0.00E+00	7.65E+01
H3SW	5.42E+03			2.27E+02	1.86E+02
524755	5/11/2020 - 6/8/2020	Mn-54	<2.93E+00	0.00E+00	2.93E+00
		Co-58	<3.26E+00	0.00E+00	3.26E+00
		Fe-59	<6.27E+00	0.00E+00	6.27E+00
		Co-60	<2.94E+00	0.00E+00	2.93E+00
		Zn-65	<5.83E+00	0.00E+00	5.83E+00
		Zr-95	<4.36E+00	0.00E+00	4.36E+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	<2.96E+00	0.00E+00	2.96E+00
		Cs-137	<2.72E+00	0.00E+00	2.72E+00
		BaLa-140	<4.61E+00	0.00E+00	4.61E+00
		Be-7	<2.48E+01	0.00E+00	2.48E+01
		K-40	4.21E+01	2.61E+01	3.43E+01
		H3SW	4.88E+03	2.25E+02	2.01E+02
525940	6/8/2020 - 7/6/2020	Mn-54	<3.10E+00	0.00E+00	3.10E+00
		Co-58	<3.00E+00	0.00E+00	3.00E+00
		Fe-59	<7.58E+00	0.00E+00	7.58E+00
		Co-60	<2.06E+00	0.00E+00	2.06E+00
		Zn-65	<6.58E+00	0.00E+00	6.58E+00
		Zr-95	<7.25E+00	0.00E+00	7.25E+00
		Nb-95	<4.04E+00	0.00E+00	4.04E+00
		I-131	<1.16E+01	0.00E+00	1.16E+01
		Cs-134	<3.13E+00	0.00E+00	3.13E+00
		Cs-137	<2.26E+00	0.00E+00	2.26E+00
		BaLa-140	<9.93E+00	0.00E+00	9.93E+00
		Be-7	1.97E+00	1.98E+01	3.50E+01
		K-40	6.62E+01	3.20E+01	4.31E+01
		H3SW	4.50E+03	2.11E+02	1.85E+02
527356	7/6/2020 - 8/3/2020	Mn-54	<3.30E+00	0.00E+00	3.30E+00
		Co-58	<3.17E+00	0.00E+00	3.17E+00
		Fe-59	<5.18E+00	0.00E+00	5.18E+00
		Co-60	<2.61E+00	0.00E+00	2.61E+00
		Zn-65	<9.02E+00	0.00E+00	9.02E+00
		Zr-95	<6.51E+00	0.00E+00	6.51E+00
		Nb-95	<3.85E+00	0.00E+00	3.85E+00

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
527356	7/6/2020 - 8/3/2020	I-131	<1.15E+01	0.00E+00	1.15E+01
		Cs-134	<2.57E+00	0.00E+00	2.57E+00
		Cs-137	<2.78E+00	0.00E+00	2.78E+00
		BaLa-140	<8.50E+00	0.00E+00	8.50E+00
		Be-7	<2.89E+01	0.00E+00	2.89E+01
		K-40	<3.04E+01	0.00E+00	3.04E+01
		H3SW	3.99E+03	2.05E+02	1.85E+02
529025	8/3/2020 - 8/31/2020	Mn-54	<3.52E+00	0.00E+00	3.52E+00
		Co-58	<3.62E+00	0.00E+00	3.62E+00
		Fe-59	<7.46E+00	0.00E+00	7.46E+00
		Co-60	<3.45E+00	0.00E+00	3.45E+00
		Zn-65	<6.37E+00	0.00E+00	6.37E+00
		Zr-95	<4.93E+00	0.00E+00	4.93E+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	<2.97E+00	0.00E+00	2.97E+00
		Cs-137	<3.23E+00	0.00E+00	3.23E+00
		BaLa-140	<8.14E+00	0.00E+00	8.14E+00
		Be-7	<3.24E+01	0.00E+00	3.24E+01
		K-40	8.66E+01	3.97E+01	5.48E+01
		H3SW	3.34E+03	1.96E+02	1.95E+02
531102	8/31/2020 - 9/28/2020	Mn-54	<2.76E+00	0.00E+00	2.76E+00
		Co-58	<3.93E+00	0.00E+00	3.93E+00
		Fe-59	<8.51E+00	0.00E+00	8.51E+00
		Co-60	<3.84E+00	0.00E+00	3.84E+00
		Zn-65	<6.46E+00	0.00E+00	6.46E+00
		Zr-95	<7.33E+00	0.00E+00	7.33E+00
		Nb-95	<4.53E+00	0.00E+00	4.53E+00
		I-131	<1.15E+01	0.00E+00	1.15E+01
		Cs-134	<3.70E+00	0.00E+00	3.70E+00
		Cs-137	<3.51E+00	0.00E+00	3.51E+00
		BaLa-140	<1.02E+01	0.00E+00	1.02E+01
		Be-7	<3.03E+01	0.00E+00	3.03E+01
		K-40	1.02E+02	4.14E+01	5.15E+01
		H3SW	3.32E+03	1.89E+02	1.79E+02
532836	9/28/2020 - 10/26/2020	Mn-54	<3.03E+00	0.00E+00	3.03E+00
		Co-58	<3.24E+00	0.00E+00	3.24E+00
		Fe-59	<7.70E+00	0.00E+00	7.70E+00
		Co-60	<4.48E+00	0.00E+00	4.48E+00
		Zn-65	<5.39E+00	0.00E+00	5.39E+00
		Zr-95	<5.99E+00	0.00E+00	5.99E+00
		Nb-95	<4.93E+00	0.00E+00	4.93E+00
		I-131	<1.20E+01	0.00E+00	1.20E+01
		Cs-134	<3.61E+00	0.00E+00	3.61E+00
		Cs-137	<3.64E+00	0.00E+00	3.64E+00
		BaLa-140	<5.82E+00	0.00E+00	5.82E+00
		Be-7	<3.16E+01	0.00E+00	3.16E+01
		K-40	5.24E+01	3.59E+01	5.29E+01
		H3SW	3.47E+03	1.92E+02	1.77E+02
534583	10/26/2020 - 11/23/2020	Mn-54	<1.93E+00	0.00E+00	1.93E+00
		Co-58	<1.96E+00	0.00E+00	1.96E+00
		Fe-59	<4.63E+00	0.00E+00	4.63E+00
		Co-60	<1.86E+00	0.00E+00	1.86E+00
		Zn-65	<3.48E+00	0.00E+00	3.48E+00
		Zr-95	<4.33E+00	0.00E+00	4.33E+00
		Nb-95	<2.78E+00	0.00E+00	2.78E+00
		I-131	<1.19E+01	0.00E+00	1.19E+01
		Cs-134	<2.42E+00	0.00E+00	2.42E+00
		Cs-137	<2.07E+00	0.00E+00	2.07E+00

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
534583	10/26/2020 - 11/23/2020	BaLa-140	<6.33E+00	0.00E+00	6.33E+00
		Be-7	<2.01E+01	0.00E+00	2.01E+01
		K-40	8.30E+01	2.58E+01	3.34E+01
		H3SW	3.33E+03	1.93E+02	1.92E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
536340	11/23/2020 - 12/21/2020	Mn-54	<1.68E+00	0.00E+00	1.68E+00
		Co-58	<1.80E+00	0.00E+00	1.80E+00
		Fe-59	<4.10E+00	0.00E+00	4.10E+00
		Co-60	<1.35E+00	0.00E+00	1.35E+00
		Zn-65	<3.04E+00	0.00E+00	3.04E+00
		Zr-95	<3.37E+00	0.00E+00	3.37E+00
		Nb-95	<2.39E+00	0.00E+00	2.39E+00
		I-131	<1.00E+01	0.00E+00	1.00E+01
		Cs-134	<1.78E+00	0.00E+00	1.78E+00
		Cs-137	<1.64E+00	0.00E+00	1.64E+00
		BaLa-140	<4.88E+00	0.00E+00	4.88E+00
		Be-7	<1.60E+01	0.00E+00	1.60E+01
		K-40	8.01E+01	1.98E+01	2.22E+01
		H3SW	2.78E+03	1.80E+02	1.90E+02

Sample Point 40 [ INDICATOR - SSE @ 17.2 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
515881	12/23/2019 - 1/20/2020	Mn-54	<3.54E+00	0.00E+00	3.54E+00
		Co-58	<3.44E+00	0.00E+00	3.44E+00
		Fe-59	<3.47E+00	0.00E+00	3.47E+00
		Co-60	<2.51E+00	0.00E+00	2.51E+00
		Zn-65	<7.53E+00	0.00E+00	7.53E+00
		Zr-95	<7.28E+00	0.00E+00	7.28E+00
		Nb-95	<4.08E+00	0.00E+00	4.08E+00
		I-131	<1.19E+01	0.00E+00	1.19E+01
		Cs-134	<2.93E+00	0.00E+00	2.93E+00
		Cs-137	<2.97E+00	0.00E+00	2.97E+00
		BaLa-140	<6.44E+00	0.00E+00	6.44E+00
		Be-7	<2.73E+01	0.00E+00	2.73E+01
		K-40	<2.48E+01	0.00E+00	2.48E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
517404	1/20/2020 - 2/17/2020	Mn-54	<1.91E+00	0.00E+00	1.91E+00
		Co-58	<2.26E+00	0.00E+00	2.26E+00
		Fe-59	<3.91E+00	0.00E+00	3.91E+00
		Co-60	<1.82E+00	0.00E+00	1.82E+00
		Zn-65	<3.49E+00	0.00E+00	3.49E+00
		Zr-95	<4.50E+00	0.00E+00	4.50E+00
		Nb-95	<2.78E+00	0.00E+00	2.78E+00
		I-131	<1.09E+01	0.00E+00	1.09E+01
		Cs-134	<2.45E+00	0.00E+00	2.45E+00
		Cs-137	<2.11E+00	0.00E+00	2.11E+00
		BaLa-140	<6.78E+00	0.00E+00	6.78E+00
		Be-7	<2.05E+01	0.00E+00	2.05E+01
		K-40	8.33E+01	2.54E+01	3.22E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
517629	12/23/2019 - 3/16/2020	H3SW	<-5.3E+01	0.00E+00	2.01E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
519691	2/17/2020 - 3/16/2020	Mn-54	<2.75E+00	0.00E+00	2.75E+00
		Co-58	<3.56E+00	0.00E+00	3.56E+00
		Fe-59	<7.54E+00	0.00E+00	7.54E+00
		Co-60	<3.53E+00	0.00E+00	3.53E+00
		Zn-65	<6.99E+00	0.00E+00	6.99E+00
		Zr-95	<5.03E+00	0.00E+00	5.03E+00
		Nb-95	<4.22E+00	0.00E+00	4.22E+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	<3.33E+00	0.00E+00	3.33E+00

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
519691	2/17/2020 - 3/16/2020	BaLa-140	<7.76E+00	0.00E+00	7.76E+00
		Be-7	<2.25E+01	0.00E+00	2.25E+01
		K-40	9.07E+01	3.18E+01	3.19E+01
521600	3/16/2020 - 4/13/2020	Mn-54	<1.73E+00	0.00E+00	1.73E+00
		Co-58	<1.74E+00	0.00E+00	1.74E+00
		Fe-59	<4.55E+00	0.00E+00	4.55E+00
		Co-60	<1.70E+00	0.00E+00	1.70E+00
		Zn-65	<3.04E+00	0.00E+00	3.04E+00
		Zr-95	<3.54E+00	0.00E+00	3.54E+00
		Nb-95	<2.48E+00	0.00E+00	2.48E+00
		I-131	<1.13E+01	0.00E+00	1.13E+01
		Cs-134	<1.87E+00	0.00E+00	1.87E+00
		Cs-137	<1.65E+00	0.00E+00	1.65E+00
		BaLa-140	<5.14E+00	0.00E+00	5.14E+00
		Be-7	<1.74E+01	0.00E+00	1.74E+01
		K-40	8.76E+01	2.10E+01	2.39E+01
523096	4/13/2020 - 5/11/2020	Mn-54	<2.74E+00	0.00E+00	2.74E+00
		Co-58	<2.83E+00	0.00E+00	2.83E+00
		Fe-59	<4.60E+00	0.00E+00	4.60E+00
		Co-60	<3.00E+00	0.00E+00	3.00E+00
		Zn-65	<6.07E+00	0.00E+00	6.07E+00
		Zr-95	<5.86E+00	0.00E+00	5.86E+00
		Nb-95	<3.72E+00	0.00E+00	3.72E+00
		I-131	<1.03E+01	0.00E+00	1.03E+01
		Cs-134	<2.83E+00	0.00E+00	2.83E+00
		Cs-137	<2.98E+00	0.00E+00	2.98E+00
		BaLa-140	<6.48E+00	0.00E+00	6.48E+00
		Be-7	<2.88E+01	0.00E+00	2.88E+01
		K-40	1.01E+02	3.07E+01	3.11E+01
523873	3/16/2020 - 6/8/2020	H3SW	<4.74E+01	0.00E+00	1.88E+02
524756	5/11/2020 - 6/8/2020	Mn-54	<3.22E+00	0.00E+00	3.22E+00
		Co-58	<2.34E+00	0.00E+00	2.34E+00
		Fe-59	<5.89E+00	0.00E+00	5.89E+00
		Co-60	<3.26E+00	0.00E+00	3.26E+00
		Zn-65	<6.25E+00	0.00E+00	6.25E+00
		Zr-95	<6.66E+00	0.00E+00	6.66E+00
		Nb-95	<3.65E+00	0.00E+00	3.65E+00
		I-131	<1.19E+01	0.00E+00	1.19E+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	<7.92E+00	0.00E+00	7.92E+00
		Be-7	<2.15E+01	0.00E+00	2.15E+01
		K-40	7.22E+01	3.49E+01	4.70E+01
525941	6/8/2020 - 7/6/2020	Mn-54	<2.29E+00	0.00E+00	2.29E+00
		Co-58	<2.82E+00	0.00E+00	2.82E+00
		Fe-59	<5.45E+00	0.00E+00	5.45E+00
		Co-60	<2.88E+00	0.00E+00	2.88E+00
		Zn-65	<5.90E+00	0.00E+00	5.90E+00
		Zr-95	<6.61E+00	0.00E+00	6.61E+00
		Nb-95	<3.47E+00	0.00E+00	3.47E+00
		I-131	<1.17E+01	0.00E+00	1.17E+01
		Cs-134	<3.99E+00	0.00E+00	3.99E+00
		Cs-137	<3.13E+00	0.00E+00	3.13E+00
		BaLa-140	<7.51E+00	0.00E+00	7.51E+00
		Be-7	<2.87E+01	0.00E+00	2.87E+01
		K-40	7.94E+01	3.03E+01	3.24E+01



# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
527357	7/6/2020 - 8/3/2020	Mn-54	<3.36E+00	0.00E+00	3.36E+00
		Co-58	<3.26E+00	0.00E+00	3.26E+00
		Fe-59	<7.24E+00	0.00E+00	7.24E+00
		Co-60	<3.66E+00	0.00E+00	3.66E+00
		Zn-65	<7.44E+00	0.00E+00	7.44E+00
		Zr-95	<7.06E+00	0.00E+00	7.06E+00
		Nb-95	<3.99E+00	0.00E+00	3.99E+00
		I-131	<1.16E+01	0.00E+00	1.16E+01
		Cs-134	<3.97E+00	0.00E+00	3.97E+00
		Cs-137	<2.85E+00	0.00E+00	2.85E+00
		BaLa-140	<6.48E+00	0.00E+00	6.48E+00
		Be-7	<3.20E+01	0.00E+00	3.20E+01
		K-40	8.26E+01	3.65E+01	4.73E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
529026	8/3/2020 - 8/31/2020	Mn-54	<3.18E+00	0.00E+00	3.18E+00
		Co-58	<3.24E+00	0.00E+00	3.24E+00
		Fe-59	<5.94E+00	0.00E+00	5.94E+00
		Co-60	<3.35E+00	0.00E+00	3.35E+00
		Zn-65	<6.39E+00	0.00E+00	6.39E+00
		Zr-95	<5.74E+00	0.00E+00	5.74E+00
		Nb-95	<4.57E+00	0.00E+00	4.57E+00
		I-131	<1.13E+01	0.00E+00	1.13E+01
		Cs-134	<3.15E+00	0.00E+00	3.15E+00
		Cs-137	<3.70E+00	0.00E+00	3.70E+00
		BaLa-140	<7.93E+00	0.00E+00	7.93E+00
		Be-7	<2.66E+01	0.00E+00	2.66E+01
		K-40	1.10E+02	3.44E+01	3.60E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
528866	6/8/2020 - 9/28/2020	H3SW	<9.00E+01	0.00E+00	1.80E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
531103	8/31/2020 - 9/28/2020	Mn-54	<3.36E+00	0.00E+00	3.36E+00
		Co-58	<3.04E+00	0.00E+00	3.04E+00
		Fe-59	<6.40E+00	0.00E+00	6.40E+00
		Co-60	<2.99E+00	0.00E+00	2.99E+00
		Zn-65	<6.69E+00	0.00E+00	6.69E+00
		Zr-95	<7.25E+00	0.00E+00	7.25E+00
		Nb-95	<4.34E+00	0.00E+00	4.34E+00
		I-131	<1.17E+01	0.00E+00	1.17E+01
		Cs-134	<3.72E+00	0.00E+00	3.72E+00
		Cs-137	<3.46E+00	0.00E+00	3.46E+00
		BaLa-140	<8.37E+00	0.00E+00	8.37E+00
		Be-7	<3.54E+01	0.00E+00	3.54E+01
		K-40	8.70E+01	3.87E+01	4.86E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
532837	9/28/2020 - 10/26/2020	Mn-54	<2.98E+00	0.00E+00	2.98E+00
		Co-58	<3.49E+00	0.00E+00	3.49E+00
		Fe-59	<6.15E+00	0.00E+00	6.15E+00
		Co-60	<2.61E+00	0.00E+00	2.61E+00
		Zn-65	<4.83E+00	0.00E+00	4.83E+00
		Zr-95	<5.73E+00	0.00E+00	5.73E+00
		Nb-95	<3.31E+00	0.00E+00	3.31E+00
		I-131	<1.14E+01	0.00E+00	1.14E+01
		Cs-134	<2.92E+00	0.00E+00	2.92E+00
		Cs-137	<3.42E+00	0.00E+00	3.42E+00
		BaLa-140	<4.86E+00	0.00E+00	4.86E+00
		Be-7	<2.86E+01	0.00E+00	2.86E+01
		K-40	<4.41E+01	0.00E+00	4.41E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
534584	10/26/2020 - 11/23/2020	Mn-54	<1.89E+00	0.00E+00	1.89E+00
		Co-58	<2.37E+00	0.00E+00	2.37E+00
		Fe-59	<4.57E+00	0.00E+00	4.57E+00
		Co-60	<2.00E+00	0.00E+00	2.00E+00

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
534584	10/26/2020 - 11/23/2020	Zn-65	<4.04E+00	0.00E+00	4.04E+00
		Zr-95	<4.11E+00	0.00E+00	4.11E+00
		Nb-95	<2.53E+00	0.00E+00	2.53E+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	<2.04E+00	0.00E+00	2.04E+00
		BaLa-140	<5.33E+00	0.00E+00	5.33E+00
		Be-7	<1.90E+01	0.00E+00	1.90E+01
		K-40	6.32E+01	2.14E+01	2.77E+01
		<hr/>			
534702	9/28/2020 - 12/21/2020	H3SW	<4.10E+01	0.00E+00	1.98E+02
		<hr/>			
536341	11/23/2020 - 12/21/2020	Mn-54	<2.83E+00	0.00E+00	2.83E+00
		Co-58	<3.26E+00	0.00E+00	3.26E+00
		Fe-59	<5.60E+00	0.00E+00	5.60E+00
		Co-60	<2.20E+00	0.00E+00	2.20E+00
		Zn-65	<6.09E+00	0.00E+00	6.09E+00
		Zr-95	<5.43E+00	0.00E+00	5.43E+00
		Nb-95	<3.74E+00	0.00E+00	3.74E+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	<2.53E+00	0.00E+00	2.53E+00
		BaLa-140	<6.71E+00	0.00E+00	6.71E+00
		Be-7	<2.60E+01	0.00E+00	2.60E+01
		K-40	6.55E+01	2.77E+01	3.59E+01

Sample Point 43 [ CONTROL - SW @ 8.47 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
515882	12/23/2019 - 1/20/2020	Mn-54	<2.83E+00	0.00E+00	2.83E+00
		Co-58	<3.50E+00	0.00E+00	3.50E+00
		Fe-59	<6.74E+00	0.00E+00	6.74E+00
		Co-60	<1.48E+00	0.00E+00	1.48E+00
		Zn-65	<4.87E+00	0.00E+00	4.87E+00
		Zr-95	<5.64E+00	0.00E+00	5.64E+00
		Nb-95	<3.86E+00	0.00E+00	3.86E+00
		I-131	<1.16E+01	0.00E+00	1.17E+01
		Cs-134	<3.25E+00	0.00E+00	3.25E+00
		Cs-137	<2.83E+00	0.00E+00	2.83E+00
		BaLa-140	<7.15E+00	0.00E+00	7.15E+00
		Be-7	<2.74E+01	0.00E+00	2.74E+01
		K-40	<4.48E+01	0.00E+00	4.48E+01
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517405	1/20/2020 - 2/17/2020	Mn-54	<3.09E+00	0.00E+00	3.09E+00
		Co-58	<2.38E+00	0.00E+00	2.38E+00
		Fe-59	<6.00E+00	0.00E+00	6.00E+00
		Co-60	<2.98E+00	0.00E+00	2.98E+00
		Zn-65	<5.79E+00	0.00E+00	5.79E+00
		Zr-95	<3.97E+00	0.00E+00	3.97E+00
		Nb-95	<3.27E+00	0.00E+00	3.27E+00
		I-131	<1.06E+01	0.00E+00	1.06E+01
		Cs-134	<3.42E+00	0.00E+00	3.42E+00
		Cs-137	<2.75E+00	0.00E+00	2.75E+00
		BaLa-140	<9.25E+00	0.00E+00	9.25E+00
		Be-7	<2.57E+01	0.00E+00	2.57E+01
		K-40	1.11E+01	1.86E+01	3.17E+01
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517630	12/23/2019 - 3/16/2020	H3SW	<-7.8E+01	0.00E+00	2.03E+02
<hr/>					
519692	2/17/2020 - 3/16/2020	Mn-54	<2.34E+00	0.00E+00	2.34E+00
		Co-58	<2.90E+00	0.00E+00	2.90E+00
		Fe-59	<5.69E+00	0.00E+00	5.69E+00

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
519692	2/17/2020 - 3/16/2020	Co-60	<2.68E+00	0.00E+00	2.68E+00
		Zn-65	<5.28E+00	0.00E+00	5.28E+00
		Zr-95	<4.61E+00	0.00E+00	4.61E+00
		Nb-95	<3.94E+00	0.00E+00	3.94E+00
		I-131	<1.10E+01	0.00E+00	1.10E+01
		Cs-134	<2.83E+00	0.00E+00	2.83E+00
		Cs-137	<2.88E+00	0.00E+00	2.88E+00
		BaLa-140	<5.81E+00	0.00E+00	5.81E+00
		Be-7	<2.57E+01	0.00E+00	2.57E+01
		K-40	6.53E+01	2.79E+01	3.64E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
521601	3/16/2020 - 4/13/2020	Mn-54	<1.82E+00	0.00E+00	1.82E+00
		Co-58	<1.97E+00	0.00E+00	1.97E+00
		Fe-59	<3.35E+00	0.00E+00	3.35E+00
		Co-60	<1.85E+00	0.00E+00	1.85E+00
		Zn-65	<4.12E+00	0.00E+00	4.12E+00
		Zr-95	<4.11E+00	0.00E+00	4.11E+00
		Nb-95	<2.82E+00	0.00E+00	2.82E+00
		I-131	<1.06E+01	0.00E+00	1.06E+01
		Cs-134	<2.30E+00	0.00E+00	2.30E+00
		Cs-137	<2.39E+00	0.00E+00	2.39E+00
		BaLa-140	<6.86E+00	0.00E+00	6.86E+00
		Be-7	<2.02E+01	0.00E+00	2.02E+01
		K-40	5.82E+01	2.14E+01	2.65E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
523097	4/13/2020 - 5/11/2020	Mn-54	<4.19E+00	0.00E+00	4.19E+00
		Co-58	<3.37E+00	0.00E+00	3.37E+00
		Fe-59	<7.46E+00	0.00E+00	7.46E+00
		Co-60	<3.45E+00	0.00E+00	3.45E+00
		Zn-65	<1.03E+01	0.00E+00	1.03E+01
		Zr-95	<7.68E+00	0.00E+00	7.68E+00
		Nb-95	<5.40E+00	0.00E+00	5.40E+00
		I-131	<1.13E+01	0.00E+00	1.13E+01
		Cs-134	<3.97E+00	0.00E+00	3.97E+00
		Cs-137	<4.55E+00	0.00E+00	4.55E+00
		BaLa-140	<1.05E+01	0.00E+00	1.05E+01
		Be-7	<3.26E+01	0.00E+00	3.26E+01
		K-40	6.91E+01	3.73E+01	4.72E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
523874	3/16/2020 - 6/8/2020	H3SW	<-4.3E+01	0.00E+00	1.88E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
524757	5/11/2020 - 6/8/2020	Mn-54	<4.18E+00	0.00E+00	4.18E+00
		Co-58	<3.48E+00	0.00E+00	3.48E+00
		Fe-59	<1.02E+01	0.00E+00	1.02E+01
		Co-60	<3.56E+00	0.00E+00	3.56E+00
		Zn-65	<5.08E+00	0.00E+00	5.08E+00
		Zr-95	<5.73E+00	0.00E+00	5.73E+00
		Nb-95	<4.16E+00	0.00E+00	4.16E+00
		I-131	<1.17E+01	0.00E+00	1.17E+01
		Cs-134	<4.28E+00	0.00E+00	4.28E+00
		Cs-137	<4.18E+00	0.00E+00	4.18E+00
		BaLa-140	<9.93E+00	0.00E+00	9.93E+00
		Be-7	<4.24E+01	0.00E+00	4.24E+01
		K-40	4.40E+01	3.46E+01	5.05E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
525942	6/8/2020 - 7/6/2020	Mn-54	<1.68E+00	0.00E+00	1.68E+00
		Co-58	<2.61E+00	0.00E+00	2.61E+00
		Fe-59	<5.91E+00	0.00E+00	5.91E+00
		Co-60	<2.22E+00	0.00E+00	2.22E+00
		Zn-65	<6.20E+00	0.00E+00	6.20E+00
		Zr-95	<4.84E+00	0.00E+00	4.84E+00
		Nb-95	<3.69E+00	0.00E+00	3.69E+00

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
525942	6/8/2020 - 7/6/2020	I-131	<1.14E+01	0.00E+00	1.14E+01
		Cs-134	<3.29E+00	0.00E+00	3.29E+00
		Cs-137	<2.14E+00	0.00E+00	2.14E+00
		BaLa-140	<9.12E+00	0.00E+00	9.12E+00
		Be-7	<2.30E+01	0.00E+00	2.30E+01
		K-40	2.44E+01	2.44E+01	3.85E+01
527358	7/6/2020 - 8/3/2020	Mn-54	<2.49E+00	0.00E+00	2.49E+00
		Co-58	<2.99E+00	0.00E+00	2.99E+00
		Fe-59	<7.25E+00	0.00E+00	7.25E+00
		Co-60	<2.39E+00	0.00E+00	2.39E+00
		Zn-65	<5.12E+00	0.00E+00	5.12E+00
		Zr-95	<6.03E+00	0.00E+00	6.03E+00
		Nb-95	<3.75E+00	0.00E+00	3.75E+00
		I-131	<1.20E+01	0.00E+00	1.20E+01
		Cs-134	<2.92E+00	0.00E+00	2.92E+00
		Cs-137	<2.67E+00	0.00E+00	2.67E+00
		BaLa-140	<6.20E+00	0.00E+00	6.20E+00
		Be-7	<2.92E+01	0.00E+00	2.92E+01
		K-40	8.06E+01	3.14E+01	3.88E+01
		529027	8/3/2020 - 8/31/2020	Mn-54	<2.99E+00
Co-58	<4.48E+00			0.00E+00	4.48E+00
Fe-59	<8.21E+00			0.00E+00	8.21E+00
Co-60	<4.32E+00			0.00E+00	4.32E+00
Zn-65	<8.24E+00			0.00E+00	8.24E+00
Zr-95	<7.57E+00			0.00E+00	7.57E+00
Nb-95	<4.43E+00			0.00E+00	4.43E+00
I-131	<1.18E+01			0.00E+00	1.19E+01
Cs-134	<3.45E+00			0.00E+00	3.45E+00
Cs-137	<3.54E+00			0.00E+00	3.54E+00
BaLa-140	<7.58E+00			0.00E+00	7.58E+00
Be-7	<3.59E+01			0.00E+00	3.59E+01
K-40	6.81E+01			3.19E+01	3.78E+01
528867	6/8/2020 - 9/28/2020			H3SW	<-5.0E+01
531104	8/31/2020 - 9/28/2020	Mn-54	<1.84E+00	0.00E+00	1.84E+00
		Co-58	<3.32E+00	0.00E+00	3.32E+00
		Fe-59	<3.74E+00	0.00E+00	3.74E+00
		Co-60	<3.54E+00	0.00E+00	3.54E+00
		Zn-65	<6.54E+00	0.00E+00	6.54E+00
		Zr-95	<4.80E+00	0.00E+00	4.80E+00
		Nb-95	<3.48E+00	0.00E+00	3.48E+00
		I-131	<1.12E+01	0.00E+00	1.12E+01
		Cs-134	<3.20E+00	0.00E+00	3.20E+00
		Cs-137	<2.48E+00	0.00E+00	2.48E+00
		BaLa-140	<7.42E+00	0.00E+00	7.42E+00
		Be-7	<2.63E+01	0.00E+00	2.63E+01
		K-40	<4.63E+01	0.00E+00	4.63E+01
		532838	9/28/2020 - 10/26/2020	Mn-54	<2.99E+00
Co-58	<2.96E+00			0.00E+00	2.96E+00
Fe-59	<7.51E+00			0.00E+00	7.51E+00
Co-60	<3.03E+00			0.00E+00	3.03E+00
Zn-65	<6.98E+00			0.00E+00	6.98E+00
Zr-95	<5.59E+00			0.00E+00	5.59E+00
Nb-95	<4.44E+00			0.00E+00	4.44E+00
I-131	<1.19E+01			0.00E+00	1.19E+01
Cs-134	<4.45E+00			0.00E+00	4.45E+00
Cs-137	<3.78E+00			0.00E+00	3.78E+00
BaLa-140	<9.99E+00			0.00E+00	9.99E+00

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
532838	9/28/2020 - 10/26/2020	Be-7	<3.55E+01	0.00E+00	3.55E+01
		K-40	7.25E+01	3.92E+01	5.28E+01
534585	10/26/2020 - 11/23/2020	Mn-54	<1.65E+00	0.00E+00	1.65E+00
		Co-58	<1.87E+00	0.00E+00	1.87E+00
		Fe-59	<3.51E+00	0.00E+00	3.51E+00
		Co-60	<1.88E+00	0.00E+00	1.88E+00
		Zn-65	<3.33E+00	0.00E+00	3.33E+00
		Zr-95	<3.19E+00	0.00E+00	3.19E+00
		Nb-95	<2.31E+00	0.00E+00	2.31E+00
		I-131	<9.44E+00	0.00E+00	9.44E+00
		Cs-134	<1.86E+00	0.00E+00	1.86E+00
		Cs-137	<1.81E+00	0.00E+00	1.81E+00
		BaLa-140	<5.63E+00	0.00E+00	5.63E+00
		Be-7	<1.67E+01	0.00E+00	1.67E+01
		K-40	8.09E+01	2.05E+01	2.45E+01
534703	9/28/2020 - 12/21/2020	H3SW	<-3.1E+01	0.00E+00	1.98E+02
536342	11/23/2020 - 12/21/2020	Mn-54	<1.97E+00	0.00E+00	1.97E+00
		Co-58	<1.77E+00	0.00E+00	1.77E+00
		Fe-59	<4.13E+00	0.00E+00	4.13E+00
		Co-60	<1.75E+00	0.00E+00	1.75E+00
		Zn-65	<4.07E+00	0.00E+00	4.07E+00
		Zr-95	<3.12E+00	0.00E+00	3.12E+00
		Nb-95	<2.43E+00	0.00E+00	2.43E+00
		I-131	<1.09E+01	0.00E+00	1.09E+01
		Cs-134	<1.80E+00	0.00E+00	1.80E+00
		Cs-137	<1.67E+00	0.00E+00	1.67E+00
		BaLa-140	<5.68E+00	0.00E+00	5.68E+00
		Be-7	<1.93E+01	0.00E+00	1.93E+01
		K-40	8.42E+01	1.94E+01	1.74E+01

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
518443	1/8/2020 - 4/14/2020	mR/Std Qtr	16.68
524180	4/14/2020 - 7/15/2020	mR/Std Qtr	14.79
529321	7/15/2020 - 10/14/2020	mR/Std Qtr	12.39
535487	10/14/2020 - 1/12/2021	mR/Std Qtr	16.11

Sample Point 2 [ INDICATOR - NNE @ 1.4 miles ]

TLD RING TLD\_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
518451	1/8/2020 - 4/14/2020	mR/Std Qtr	16.57
524188	4/14/2020 - 7/15/2020	mR/Std Qtr	15.93
529329	7/15/2020 - 10/14/2020	mR/Std Qtr	13.74
535495	10/14/2020 - 1/12/2021	mR/Std Qtr	16.05

Sample Point 3 [ INDICATOR - ENE @ 1.9 miles ]

TLD RING TLD\_SPEC

Sample ID:	Sample Dates:	Nuclide	Activity
518462	1/8/2020 - 4/15/2020	mR/Std Qtr	11.21

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 3 [ INDICATOR - ENE @ 1.9 miles ]

TLD RING TLD\_SPEC

Sample ID	Sample Dates	Nuclide	Activity
524199	4/15/2020 - 7/15/2020	mR/Std Qtr	13.74
529340	7/15/2020 - 10/14/2020	mR/Std Qtr	12.14
535506	10/14/2020 - 1/12/2021	mR/Std Qtr	13.12

Sample Point 4 [ INDICATOR - NNE @ 3.1 miles ]

TLD RING TLD\_SPEC

Sample ID	Sample Dates	Nuclide	Activity
518466	1/8/2020 - 4/14/2020	mR/Std Qtr	13.20
524203	4/14/2020 - 7/15/2020	mR/Std Qtr	13.10
529344	7/15/2020 - 10/14/2020	mR/Std Qtr	11.77
535510	10/14/2020 - 1/12/2021	mR/Std Qtr	12.94

Sample Point 5 [ CONTROL - WNW @ 12 miles ]

TLD RING TLD\_CTRL

Sample ID	Sample Dates	Nuclide	Activity
518469	1/8/2020 - 4/15/2020	mR/Std Qtr	13.83
524206	4/15/2020 - 7/15/2020	mR/Std Qtr	15.77
529347	7/15/2020 - 10/14/2020	mR/Std Qtr	14.71
535513	10/14/2020 - 1/12/2021	mR/Std Qtr	15.90

Sample Point 6 [ INDICATOR - ENE @ 0.8 miles ]

TLD RING TLD\_INNER

Sample ID	Sample Dates	Nuclide	Activity
518472	1/8/2020 - 4/14/2020	mR/Std Qtr	12.94
524209	4/14/2020 - 7/15/2020	mR/Std Qtr	14.06
529350	7/15/2020 - 10/14/2020	mR/Std Qtr	13.01
535516	10/14/2020 - 1/12/2021	mR/Std Qtr	16.11

Sample Point 7 [ INDICATOR - E @ 0.7 miles ]

TLD RING TLD\_INNER

Sample ID	Sample Dates	Nuclide	Activity
518474	1/8/2020 - 4/14/2020	mR/Std Qtr	13.64
524211	4/14/2020 - 7/15/2020	mR/Std Qtr	13.58
529352	7/15/2020 - 10/14/2020	mR/Std Qtr	13.46
535518	10/14/2020 - 1/12/2021	mR/Std Qtr	16.05

Sample Point 8 [ INDICATOR - ESE @ 0.6 miles ]

TLD RING TLD\_INNER

Sample ID	Sample Dates	Nuclide	Activity
518479	1/8/2020 - 4/14/2020	mR/Std Qtr	11.98
524216	4/14/2020 - 7/15/2020	mR/Std Qtr	14.82

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 8 [ INDICATOR - ESE @ 0.6 miles ]

TLD RING TLD\_INNER

Sample ID:	529357	Sample Dates:	7/15/2020 - 10/14/2020	Nuclide	Activity
				mR/Std Qtr	12.85

Sample ID:	535523	Sample Dates:	10/14/2020 - 1/12/2021	Nuclide	Activity
				mR/Std Qtr	13.07

Sample Point 9 [ INDICATOR - SE @ 2.2 miles ]

TLD RING TLD\_INNER

Sample ID:	518480	Sample Dates:	1/8/2020 - 4/14/2020	Nuclide	Activity
				mR/Std Qtr	12.45

Sample ID:	524217	Sample Dates:	4/14/2020 - 7/15/2020	Nuclide	Activity
				mR/Std Qtr	13.16

Sample ID:	529358	Sample Dates:	7/15/2020 - 10/14/2020	Nuclide	Activity
				mR/Std Qtr	11.13

Sample ID:	535524	Sample Dates:	10/14/2020 - 1/12/2021	Nuclide	Activity
				mR/Std Qtr	12.83

Sample Point 10 [ INDICATOR - SSE @ 2.2 miles ]

TLD RING TLD\_INNER

Sample ID:	518444	Sample Dates:	1/8/2020 - 4/14/2020	Nuclide	Activity
				mR/Std Qtr	10.04

Sample ID:	524181	Sample Dates:	4/14/2020 - 7/15/2020	Nuclide	Activity
				mR/Std Qtr	12.79

Sample ID:	529322	Sample Dates:	7/15/2020 - 10/14/2020	Nuclide	Activity
				mR/Std Qtr	12.43

Sample ID:	535488	Sample Dates:	10/14/2020 - 1/12/2021	Nuclide	Activity
				mR/Std Qtr	14.30

Sample Point 11 [ INDICATOR - S @ 0.6 miles ]

TLD RING TLD\_INNER

Sample ID:	518445	Sample Dates:	1/8/2020 - 4/14/2020	Nuclide	Activity
				mR/Std Qtr	12.40

Sample ID:	524182	Sample Dates:	4/14/2020 - 7/15/2020	Nuclide	Activity
				mR/Std Qtr	12.25

Sample ID:	529323	Sample Dates:	7/15/2020 - 10/14/2020	Nuclide	Activity
				mR/Std Qtr	11.02

Sample ID:	535489	Sample Dates:	10/14/2020 - 1/12/2021	Nuclide	Activity
				mR/Std Qtr	12.40

Sample Point 12 [ INDICATOR - SSW @ 0.9 miles ]

TLD RING TLD\_INNER

Sample ID:	518446	Sample Dates:	1/8/2020 - 4/14/2020	Nuclide	Activity
				mR/Std Qtr	11.27

Sample ID:	524183	Sample Dates:	4/14/2020 - 7/15/2020	Nuclide	Activity
				mR/Std Qtr	12.06

Sample ID:	529324	Sample Dates:	7/15/2020 - 10/14/2020	Nuclide	Activity
				mR/Std Qtr	12.12

Sample ID:	535490	Sample Dates:	10/14/2020 - 1/12/2021	Nuclide	Activity
				mR/Std Qtr	12.77

Sample Point 13 [ INDICATOR - WSW @ 0.7 miles ]

TLD RING TLD\_INNER

Sample ID:	518447	Sample Dates:	1/8/2020 - 4/14/2020	Nuclide	Activity
				mR/Std Qtr	14.30

Sample ID:	524184	Sample Dates:	4/14/2020 - 7/15/2020	Nuclide	Activity
				mR/Std Qtr	13.29

Sample ID:	529325	Sample Dates:	7/15/2020 - 10/14/2020	Nuclide	Activity
				mR/Std Qtr	12.24

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 13 [ INDICATOR - WSW @ 0.7 miles ]

TLD RING TLD\_INNER

Sample ID:	535491	Sample Dates:	10/14/2020 - 1/12/2021	Nuclide	Activity
				mR/Std Qtr	13.69

Sample Point 14 [ INDICATOR - W @ 1.5 miles ]

TLD RING TLD\_INNER

Sample ID:	518448	Sample Dates:	1/8/2020 - 4/15/2020	Nuclide	Activity
				mR/Std Qtr	13.41

Sample ID:	524185	Sample Dates:	4/15/2020 - 7/15/2020	Nuclide	Activity
				mR/Std Qtr	15.44

Sample ID:	529326	Sample Dates:	7/15/2020 - 10/14/2020	Nuclide	Activity
				mR/Std Qtr	14.16

Sample ID:	535492	Sample Dates:	10/14/2020 - 1/12/2021	Nuclide	Activity
				mR/Std Qtr	17.23

Sample Point 15 [ INDICATOR - W @ 2 miles ]

TLD RING TLD\_INNER

Sample ID:	518449	Sample Dates:	1/8/2020 - 4/15/2020	Nuclide	Activity
				mR/Std Qtr	10.60

Sample ID:	524186	Sample Dates:	4/15/2020 - 7/15/2020	Nuclide	Activity
				mR/Std Qtr	12.94

Sample ID:	529327	Sample Dates:	7/15/2020 - 10/14/2020	Nuclide	Activity
				mR/Std Qtr	11.87

Sample ID:	535493	Sample Dates:	10/14/2020 - 1/12/2021	Nuclide	Activity
				mR/Std Qtr	13.92

Sample Point 19 [ INDICATOR - NNE @ 4.95 miles ]

TLD RING TLD\_OUTER

Sample ID:	518450	Sample Dates:	1/8/2020 - 4/15/2020	Nuclide	Activity
				mR/Std Qtr	11.24

Sample ID:	524187	Sample Dates:	4/15/2020 - 7/15/2020	Nuclide	Activity
				mR/Std Qtr	14.93

Sample ID:	529328	Sample Dates:	7/15/2020 - 10/14/2020	Nuclide	Activity
				mR/Std Qtr	14.92

Sample ID:	535494	Sample Dates:	10/14/2020 - 1/12/2021	Nuclide	Activity
				mR/Std Qtr	17.16

Sample Point 20 [ INDICATOR - NE @ 4.5 miles ]

TLD RING TLD\_OUTER

Sample ID:	518452	Sample Dates:	1/8/2020 - 4/14/2020	Nuclide	Activity
				mR/Std Qtr	15.88

Sample ID:	524189	Sample Dates:	4/14/2020 - 7/15/2020	Nuclide	Activity
				mR/Std Qtr	17.38

Sample ID:	529330	Sample Dates:	7/15/2020 - 10/14/2020	Nuclide	Activity
				mR/Std Qtr	15.95

Sample ID:	535496	Sample Dates:	10/14/2020 - 1/12/2021	Nuclide	Activity
				mR/Std Qtr	16.75

Sample Point 21 [ INDICATOR - ENE @ 4.8 miles ]

TLD RING TLD\_OUTER

Sample ID:	518453	Sample Dates:	1/8/2020 - 4/14/2020	Nuclide	Activity
				mR/Std Qtr	12.82

Sample ID:	524190	Sample Dates:	4/14/2020 - 7/15/2020	Nuclide	Activity
				mR/Std Qtr	15.11

Sample ID:	529331	Sample Dates:	7/15/2020 - 10/14/2020	Nuclide	Activity
				mR/Std Qtr	13.45

Sample ID:	535497	Sample Dates:	10/14/2020 - 1/12/2021	Nuclide	Activity
				mR/Std Qtr	13.99



# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 22 [ INDICATOR - E @ 4.3 miles ]

TLD RING TLD\_OUTER

Sample ID:	518454	Sample Dates:	1/8/2020 - 4/14/2020	Nuclide	Activity
				mR/Std Qtr	11.52
Sample ID:	524191	Sample Dates:	4/14/2020 - 7/15/2020	Nuclide	Activity
				mR/Std Qtr	11.85
Sample ID:	529332	Sample Dates:	7/15/2020 - 10/14/2020	Nuclide	Activity
				mR/Std Qtr	10.87
Sample ID:	535498	Sample Dates:	10/14/2020 - 1/12/2021	Nuclide	Activity
				mR/Std Qtr	13.44

Sample Point 23 [ INDICATOR - ESE @ 4.8 miles ]

TLD RING TLD\_OUTER

Sample ID:	518455	Sample Dates:	1/8/2020 - 4/14/2020	Nuclide	Activity
				mR/Std Qtr	14.36
Sample ID:	524192	Sample Dates:	4/14/2020 - 7/15/2020	Nuclide	Activity
				mR/Std Qtr	14.41
Sample ID:	529333	Sample Dates:	7/15/2020 - 10/14/2020	Nuclide	Activity
				mR/Std Qtr	12.65
Sample ID:	535499	Sample Dates:	10/14/2020 - 1/12/2021	Nuclide	Activity
				mR/Std Qtr	13.37

Sample Point 24 [ INDICATOR - SE @ 4 miles ]

TLD RING TLD\_OUTER

Sample ID:	518456	Sample Dates:	1/8/2020 - 4/14/2020	Nuclide	Activity
				mR/Std Qtr	13.77
Sample ID:	529334	Sample Dates:	7/15/2020 - 10/14/2020	Nuclide	Activity
				mR/Std Qtr	12.23
Sample ID:	535500	Sample Dates:	10/14/2020 - 1/12/2021	Nuclide	Activity
				mR/Std Qtr	13.08

Sample Point 25 [ INDICATOR - SSE @ 4.7 miles ]

TLD RING TLD\_OUTER

Sample ID:	518457	Sample Dates:	1/8/2020 - 4/14/2020	Nuclide	Activity
				mR/Std Qtr	12.61
Sample ID:	524194	Sample Dates:	4/14/2020 - 7/15/2020	Nuclide	Activity
				mR/Std Qtr	14.01
Sample ID:	529335	Sample Dates:	7/15/2020 - 10/14/2020	Nuclide	Activity
				mR/Std Qtr	12.13
Sample ID:	535501	Sample Dates:	10/14/2020 - 1/12/2021	Nuclide	Activity
				mR/Std Qtr	15.37

Sample Point 26 [ INDICATOR - S @ 4.7 miles ]

TLD RING TLD\_OUTER

Sample ID:	518458	Sample Dates:	1/8/2020 - 4/15/2020	Nuclide	Activity
				mR/Std Qtr	11.94
Sample ID:	524195	Sample Dates:	4/15/2020 - 7/15/2020	Nuclide	Activity
				mR/Std Qtr	13.18
Sample ID:	529336	Sample Dates:	7/15/2020 - 10/14/2020	Nuclide	Activity
				mR/Std Qtr	11.97
Sample ID:	535502	Sample Dates:	10/14/2020 - 1/12/2021	Nuclide	Activity
				mR/Std Qtr	12.37

Sample Point 27 [ INDICATOR - SSW @ 4.8 miles ]

TLD RING TLD\_OUTER

Sample ID:	518459	Sample Dates:	1/8/2020 - 4/15/2020	Nuclide	Activity
				mR/Std Qtr	11.11
Sample ID:	524196	Sample Dates:	4/15/2020 - 7/15/2020	Nuclide	Activity
				mR/Std Qtr	10.71

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 27 [ INDICATOR - SSW @ 4.8 miles ]

TLD RING TLD\_OUTER

Sample ID:	529337	Sample Dates:	7/15/2020 - 10/14/2020	Nuclide	Activity
				mR/Std Qtr	10.61

Sample ID:	535503	Sample Dates:	10/14/2020 - 1/12/2021	Nuclide	Activity
				mR/Std Qtr	11.17

Sample Point 28 [ INDICATOR - SW @ 4.8 miles ]

TLD RING TLD\_OUTER

Sample ID:	518460	Sample Dates:	1/8/2020 - 4/15/2020	Nuclide	Activity
				mR/Std Qtr	12.52

Sample ID:	524197	Sample Dates:	4/15/2020 - 7/15/2020	Nuclide	Activity
				mR/Std Qtr	11.03

Sample ID:	529338	Sample Dates:	7/15/2020 - 10/14/2020	Nuclide	Activity
				mR/Std Qtr	11.63

Sample ID:	535504	Sample Dates:	10/14/2020 - 1/12/2021	Nuclide	Activity
				mR/Std Qtr	12.46

Sample Point 29 [ INDICATOR - WSW @ 5.7 miles ]

TLD RING TLD\_OUTER

Sample ID:	518461	Sample Dates:	1/8/2020 - 4/14/2020	Nuclide	Activity
				mR/Std Qtr	17.80

Sample ID:	524198	Sample Dates:	4/14/2020 - 7/15/2020	Nuclide	Activity
				mR/Std Qtr	15.79

Sample ID:	529339	Sample Dates:	7/15/2020 - 10/14/2020	Nuclide	Activity
				mR/Std Qtr	15.13

Sample ID:	535505	Sample Dates:	10/14/2020 - 1/12/2021	Nuclide	Activity
				mR/Std Qtr	16.99

Sample Point 31 [ INDICATOR - WNW @ 4.7 miles ]

TLD RING TLD\_OUTER

Sample ID:	518463	Sample Dates:	1/8/2020 - 4/14/2020	Nuclide	Activity
				mR/Std Qtr	11.06

Sample ID:	524200	Sample Dates:	4/14/2020 - 7/15/2020	Nuclide	Activity
				mR/Std Qtr	12.03

Sample ID:	529341	Sample Dates:	7/15/2020 - 10/14/2020	Nuclide	Activity
				mR/Std Qtr	11.04

Sample Point 32 [ INDICATOR - NNW @ 6.4 miles ]

TLD RING TLD\_SPEC

Sample ID:	518464	Sample Dates:	1/8/2020 - 4/14/2020	Nuclide	Activity
				mR/Std Qtr	13.69

Sample ID:	524201	Sample Dates:	4/14/2020 - 7/15/2020	Nuclide	Activity
				mR/Std Qtr	13.61

Sample ID:	529342	Sample Dates:	7/15/2020 - 10/14/2020	Nuclide	Activity
				mR/Std Qtr	13.50

Sample ID:	535508	Sample Dates:	10/14/2020 - 1/12/2021	Nuclide	Activity
				mR/Std Qtr	14.56

Sample Point 33 [ INDICATOR - NNW @ 4.5 miles ]

TLD RING TLD\_OUTER

Sample ID:	518465	Sample Dates:	1/8/2020 - 4/14/2020	Nuclide	Activity
				mR/Std Qtr	11.85

Sample ID:	524202	Sample Dates:	4/14/2020 - 7/15/2020	Nuclide	Activity
				mR/Std Qtr	12.96

Sample ID:	529343	Sample Dates:	7/15/2020 - 10/14/2020	Nuclide	Activity
				mR/Std Qtr	11.65

Sample ID:	535509	Sample Dates:	10/14/2020 - 1/12/2021	Nuclide	Activity
				mR/Std Qtr	12.90

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 48 [ INDICATOR - N @ 4.5 miles ]

TLD RING TLD\_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
518467	1/8/2020 - 4/14/2020	mR/Std Qtr	14.92
524204	4/14/2020 - 7/15/2020	mR/Std Qtr	14.65
529345	7/15/2020 - 10/14/2020	mR/Std Qtr	13.89
535511	10/14/2020 - 1/12/2021	mR/Std Qtr	16.21

Sample Point 49 [ INDICATOR - NE @ 2.5 miles ]

TLD RING TLD\_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
518468	1/8/2020 - 4/14/2020	mR/Std Qtr	16.27
524205	4/14/2020 - 7/15/2020	mR/Std Qtr	17.25
529346	7/15/2020 - 10/14/2020	mR/Std Qtr	17.38
535512	10/14/2020 - 1/12/2021	mR/Std Qtr	18.30

Sample Point 50 [ INDICATOR - ESE @ 2.6 miles ]

TLD RING TLD\_SPEC

Sample ID:	Sample Dates:	Nuclide	Activity
518470	1/8/2020 - 4/14/2020	mR/Std Qtr	12.18
524207	4/14/2020 - 7/15/2020	mR/Std Qtr	12.42
529348	7/15/2020 - 10/14/2020	mR/Std Qtr	10.95
535514	10/14/2020 - 1/12/2021	mR/Std Qtr	13.02

Sample Point 56 [ INDICATOR - WSW @ 3 miles ]

TLD RING TLD\_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
518471	1/8/2020 - 4/15/2020	mR/Std Qtr	12.90
524208	4/15/2020 - 7/15/2020	mR/Std Qtr	12.19
529349	7/15/2020 - 10/14/2020	mR/Std Qtr	10.40
535515	10/14/2020 - 1/12/2021	mR/Std Qtr	13.23

Sample Point 63 [ INDICATOR - SW @ 0.6 miles ]

TLD RING TLD\_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
518473	1/8/2020 - 4/14/2020	mR/Std Qtr	16.16
524210	4/14/2020 - 7/15/2020	mR/Std Qtr	17.10
529351	7/15/2020 - 10/14/2020	mR/Std Qtr	15.79
535517	10/14/2020 - 1/12/2021	mR/Std Qtr	16.23

Sample Point 93 [ INDICATOR - WNW @ 2.2 miles ]

TLD RING TLD\_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
518481	1/8/2020 - 4/15/2020	mR/Std Qtr	14.23

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 93 [ INDICATOR - WNW @ 2.2 miles ]

TLD RING TLD\_INNER

Sample ID:	524218	Sample Dates:	4/15/2020 - 7/15/2020	Nuclide	Activity
				mR/Std Qtr	18.27

Sample ID:	529359	Sample Dates:	7/15/2020 - 10/14/2020	Nuclide	Activity
				mR/Std Qtr	14.75

Sample ID:	535525	Sample Dates:	10/14/2020 - 1/12/2021	Nuclide	Activity
				mR/Std Qtr	15.14

Sample Point 94 [ INDICATOR - NW @ 2 miles ]

TLD RING TLD\_INNER

Sample ID:	518482	Sample Dates:	1/8/2020 - 4/15/2020	Nuclide	Activity
				mR/Std Qtr	15.84

Sample ID:	524219	Sample Dates:	4/15/2020 - 7/15/2020	Nuclide	Activity
				mR/Std Qtr	16.78

Sample ID:	529360	Sample Dates:	7/15/2020 - 10/14/2020	Nuclide	Activity
				mR/Std Qtr	15.11

Sample Point 95 [ INDICATOR - NNW @ 2 miles ]

TLD RING TLD\_INNER

Sample ID:	518483	Sample Dates:	1/8/2020 - 4/15/2020	Nuclide	Activity
				mR/Std Qtr	14.40

Sample ID:	524220	Sample Dates:	4/15/2020 - 7/15/2020	Nuclide	Activity
				mR/Std Qtr	14.90

Sample ID:	529361	Sample Dates:	7/15/2020 - 10/14/2020	Nuclide	Activity
				mR/Std Qtr	13.10

Sample ID:	535527	Sample Dates:	10/14/2020 - 1/12/2021	Nuclide	Activity
				mR/Std Qtr	15.95

Sample Point 98 [ INDICATOR - E @ 5.9 miles ]

TLD RING TLD\_SPEC

Sample ID:	518484	Sample Dates:	1/8/2020 - 4/14/2020	Nuclide	Activity
				mR/Std Qtr	14.19

Sample ID:	524221	Sample Dates:	4/14/2020 - 7/15/2020	Nuclide	Activity
				mR/Std Qtr	13.83

Sample ID:	529362	Sample Dates:	7/15/2020 - 10/14/2020	Nuclide	Activity
				mR/Std Qtr	13.08

Sample ID:	535528	Sample Dates:	10/14/2020 - 1/12/2021	Nuclide	Activity
				mR/Std Qtr	14.95

Sample Point 99 [ INDICATOR - NNE @ 5.47 miles ]

TLD RING TLD\_SPEC

Sample ID:	518485	Sample Dates:	1/8/2020 - 4/14/2020	Nuclide	Activity
				mR/Std Qtr	14.45

Sample ID:	524222	Sample Dates:	4/14/2020 - 7/15/2020	Nuclide	Activity
				mR/Std Qtr	13.93

Sample ID:	529363	Sample Dates:	7/15/2020 - 10/14/2020	Nuclide	Activity
				mR/Std Qtr	12.32

Sample ID:	535529	Sample Dates:	10/14/2020 - 1/12/2021	Nuclide	Activity
				mR/Std Qtr	16.49

Sample Point 130 [ INDICATOR - W @ 3.85 miles ]

TLD RING TLD\_OUTER

Sample ID:	518486	Sample Dates:	1/8/2020 - 4/14/2020	Nuclide	Activity
				mR/Std Qtr	12.54

Sample ID:	524223	Sample Dates:	4/14/2020 - 7/15/2020	Nuclide	Activity
				mR/Std Qtr	12.87

Sample ID:	529364	Sample Dates:	7/15/2020 - 10/14/2020	Nuclide	Activity
				mR/Std Qtr	10.98

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 130 [ INDICATOR - W @ 3.85 miles ]

TLD RING TLD\_OUTER

Sample ID: 535530	Sample Dates: 10/14/2020 - 1/12/2021	Nuclide	Activity
		mR/Std Qtr	14.38

Sample Point 153 [ INDICATOR - NW @ 4.51 miles ]

TLD RING TLD\_OUTER

Sample ID: 518487	Sample Dates: 1/8/2020 - 4/14/2020	Nuclide	Activity
		mR/Std Qtr	13.19

Sample ID: 524224	Sample Dates: 4/14/2020 - 7/15/2020	Nuclide	Activity
		mR/Std Qtr	14.54

Sample ID: 529365	Sample Dates: 7/15/2020 - 10/14/2020	Nuclide	Activity
		mR/Std Qtr	12.88

Sample ID: 535531	Sample Dates: 10/14/2020 - 1/12/2021	Nuclide	Activity
		mR/Std Qtr	14.74

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

Sample Point 5 [ CONTROL - NNW @ 12 miles ]

Sample ID: 522588	Sample Dates: 5/4/2020 - 5/4/2020	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
			Mn-54	<1.40E+01	0.00E+00	1.40E+01
			Co-58	<1.23E+01	0.00E+00	1.23E+01
			Fe-59	<2.24E+01	0.00E+00	2.24E+01
			Co-60	<1.33E+01	0.00E+00	1.33E+01
			Zn-65	<2.73E+01	0.00E+00	2.73E+01
			Zr-95	<2.73E+01	0.00E+00	2.73E+01
			Nb-95	<1.37E+01	0.00E+00	1.37E+01
			I-131	<1.26E+01	0.00E+00	1.26E+01
			Cs-134	<1.55E+01	0.00E+00	1.55E+01
			Cs-137	<1.18E+01	0.00E+00	1.18E+01
			BaLa-140	<1.46E+01	0.00E+00	1.46E+01
			Be-7	8.47E+02	1.55E+02	1.58E+02
			K-40	4.13E+03	4.88E+02	1.74E+02

Sample ID: 524433	Sample Dates: 6/1/2020 - 6/1/2020	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
			Mn-54	<1.27E+01	0.00E+00	1.27E+01
			Co-58	<1.31E+01	0.00E+00	1.31E+01
			Fe-59	<2.44E+01	0.00E+00	2.44E+01
			Co-60	<1.21E+01	0.00E+00	1.21E+01
			Zn-65	<2.45E+01	0.00E+00	2.45E+01
			Zr-95	<1.67E+01	0.00E+00	1.67E+01
			Nb-95	<1.08E+01	0.00E+00	1.08E+01
			I-131	<1.16E+01	0.00E+00	1.16E+01
			Cs-134	<1.36E+01	0.00E+00	1.36E+01
			Cs-137	<1.27E+01	0.00E+00	1.27E+01
			BaLa-140	<8.81E+00	0.00E+00	8.81E+00
			Be-7	1.45E+03	2.00E+02	1.44E+02
			K-40	3.48E+03	4.22E+02	1.97E+02

Sample ID: 525937	Sample Dates: 7/6/2020 - 7/6/2020	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
			Mn-54	<1.51E+01	0.00E+00	1.51E+01
			Co-58	<1.46E+01	0.00E+00	1.46E+01
			Fe-59	<2.91E+01	0.00E+00	2.91E+01
			Co-60	<1.35E+01	0.00E+00	1.35E+01
			Zn-65	<3.51E+01	0.00E+00	3.51E+01
			Zr-95	<2.68E+01	0.00E+00	2.68E+01
			Nb-95	<1.70E+01	0.00E+00	1.70E+01
			I-131	<2.24E+01	0.00E+00	2.24E+01
			Cs-134	<1.44E+01	0.00E+00	1.44E+01
			Cs-137	<1.74E+01	0.00E+00	1.74E+01
			BaLa-140	<2.22E+01	0.00E+00	2.22E+01
			Be-7	1.58E+03	2.12E+02	1.35E+02
			K-40	4.30E+03	5.29E+02	2.73E+02

Sample ID: 527353	Sample Dates: 8/3/2020 - 8/3/2020	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
			Mn-54	<1.24E+01	0.00E+00	1.24E+01
			Co-58	<1.30E+01	0.00E+00	1.30E+01
			Fe-59	<2.40E+01	0.00E+00	2.40E+01

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 5 [ CONTROL - NNW @ 12 miles ]

Sample ID:	527353	Sample Dates:	8/3/2020 - 8/3/2020	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
					Co-60	<1.23E+01	0.00E+00	1.23E+01
					Zn-65	<2.53E+01	0.00E+00	2.53E+01
					Zr-95	<2.41E+01	0.00E+00	2.41E+01
					Nb-95	<1.24E+01	0.00E+00	1.24E+01
					I-131	<1.43E+01	0.00E+00	1.43E+01
					Cs-134	<1.80E+01	0.00E+00	1.80E+01
					Cs-137	<1.32E+01	0.00E+00	1.32E+01
					BaLa-140	<1.52E+01	0.00E+00	1.52E+01
					Be-7	1.98E+03	2.45E+02	1.58E+02
					K-40	3.91E+03	4.59E+02	1.64E+02

Sample ID:	530019	Sample Dates:	9/8/2020 - 9/8/2020	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<1.69E+01	0.00E+00	1.69E+01
					Co-58	<1.44E+01	0.00E+00	1.44E+01
					Fe-59	<2.81E+01	0.00E+00	2.81E+01
					Co-60	<1.26E+01	0.00E+00	1.26E+01
					Zn-65	<3.84E+01	0.00E+00	3.84E+01
					Zr-95	<2.65E+01	0.00E+00	2.65E+01
					Nb-95	<1.70E+01	0.00E+00	1.70E+01
					I-131	<2.09E+01	0.00E+00	2.09E+01
					Cs-134	<1.94E+01	0.00E+00	1.94E+01
					Cs-137	<1.75E+01	0.00E+00	1.75E+01
					BaLa-140	<1.29E+01	0.00E+00	1.29E+01
					Be-7	2.34E+03	3.01E+02	1.90E+02
					K-40	4.58E+03	5.50E+02	2.16E+02

Sample ID:	531700	Sample Dates:	10/5/2020 - 10/5/2020	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<1.66E+01	0.00E+00	1.66E+01
					Co-58	<1.30E+01	0.00E+00	1.30E+01
					Fe-59	<3.77E+01	0.00E+00	3.77E+01
					Co-60	<1.54E+01	0.00E+00	1.54E+01
					Zn-65	<3.21E+01	0.00E+00	3.21E+01
					Zr-95	<2.79E+01	0.00E+00	2.79E+01
					Nb-95	<1.82E+01	0.00E+00	1.82E+01
					I-131	<2.19E+01	0.00E+00	2.19E+01
					Cs-134	<2.38E+01	0.00E+00	2.38E+01
					Cs-137	<1.21E+01	0.00E+00	1.21E+01
					BaLa-140	<1.28E+01	0.00E+00	1.28E+01
					Be-7	2.37E+03	2.98E+02	2.00E+02
					K-40	4.85E+03	5.77E+02	2.66E+02

Sample Point 12 [ INDICATOR - SSW @ 0.9 miles ]

Sample ID:	522587	Sample Dates:	5/4/2020 - 5/4/2020	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<1.53E+01	0.00E+00	1.53E+01
					Co-58	<1.62E+01	0.00E+00	1.62E+01
					Fe-59	<2.89E+01	0.00E+00	2.89E+01
					Co-60	<1.84E+01	0.00E+00	1.84E+01
					Zn-65	<4.13E+01	0.00E+00	4.13E+01
					Zr-95	<2.75E+01	0.00E+00	2.75E+01
					Nb-95	<1.51E+01	0.00E+00	1.51E+01
					I-131	<1.75E+01	0.00E+00	1.75E+01
					Cs-134	<1.79E+01	0.00E+00	1.79E+01
					Cs-137	<1.14E+01	0.00E+00	1.14E+01
					BaLa-140	<2.02E+01	0.00E+00	2.02E+01
					Be-7	1.85E+03	2.63E+02	2.07E+02
					K-40	2.90E+03	4.23E+02	2.15E+02

Sample ID:	524432	Sample Dates:	6/1/2020 - 6/1/2020	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<1.55E+01	0.00E+00	1.55E+01
					Co-58	<1.75E+01	0.00E+00	1.75E+01
					Fe-59	<3.31E+01	0.00E+00	3.31E+01
					Co-60	<1.53E+01	0.00E+00	1.53E+01
					Zn-65	<3.26E+01	0.00E+00	3.26E+01
					Zr-95	<2.66E+01	0.00E+00	2.66E+01
					Nb-95	<1.44E+01	0.00E+00	1.44E+01
					I-131	<1.58E+01	0.00E+00	1.58E+01

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
524432	6/1/2020 - 6/1/2020		Cs-134	<2.34E+01	0.00E+00	2.34E+01
			Cs-137	<1.87E+01	0.00E+00	1.87E+01
			BaLa-140	<2.22E+01	0.00E+00	2.22E+01
			Be-7	1.01E+03	1.97E+02	2.03E+02
			K-40	2.78E+03	4.29E+02	2.48E+02
525936	7/6/2020 - 7/6/2020		Mn-54	<1.25E+01	0.00E+00	1.25E+01
			Co-58	<1.19E+01	0.00E+00	1.19E+01
			Fe-59	<2.50E+01	0.00E+00	2.50E+01
			Co-60	<1.28E+01	0.00E+00	1.28E+01
			Zn-65	<2.61E+01	0.00E+00	2.61E+01
			Zr-95	<2.02E+01	0.00E+00	2.02E+01
			Nb-95	<1.24E+01	0.00E+00	1.24E+01
			I-131	<2.00E+01	0.00E+00	2.00E+01
			Cs-134	<1.45E+01	0.00E+00	1.45E+01
			Cs-137	<1.27E+01	0.00E+00	1.27E+01
			BaLa-140	<1.92E+01	0.00E+00	1.92E+01
			Be-7	1.60E+03	2.29E+02	1.68E+02
			K-40	2.19E+03	3.27E+02	2.00E+02
527352	8/3/2020 - 8/3/2020		Mn-54	<1.23E+01	0.00E+00	1.23E+01
			Co-58	<1.09E+01	0.00E+00	1.09E+01
			Fe-59	<2.57E+01	0.00E+00	2.57E+01
			Co-60	<9.09E+00	0.00E+00	9.09E+00
			Zn-65	<2.95E+01	0.00E+00	2.95E+01
			Zr-95	<1.95E+01	0.00E+00	1.95E+01
			Nb-95	<1.17E+01	0.00E+00	1.17E+01
			I-131	<1.31E+01	0.00E+00	1.31E+01
			Cs-134	<1.20E+01	0.00E+00	1.20E+01
			Cs-137	<1.07E+01	0.00E+00	1.07E+01
			BaLa-140	<1.28E+01	0.00E+00	1.28E+01
			Be-7	3.67E+03	3.84E+02	1.41E+02
			K-40	2.00E+03	2.95E+02	2.18E+02
530018	9/8/2020 - 9/8/2020		Mn-54	<1.37E+01	0.00E+00	1.37E+01
			Co-58	<1.37E+01	0.00E+00	1.37E+01
			Fe-59	<2.73E+01	0.00E+00	2.73E+01
			Co-60	<1.76E+01	0.00E+00	1.76E+01
			Zn-65	<3.29E+01	0.00E+00	3.29E+01
			Zr-95	<3.15E+01	0.00E+00	3.15E+01
			Nb-95	<1.69E+01	0.00E+00	1.69E+01
			I-131	<1.77E+01	0.00E+00	1.77E+01
			Cs-134	<1.64E+01	0.00E+00	1.64E+01
			Cs-137	<1.84E+01	0.00E+00	1.84E+01
			BaLa-140	<2.39E+01	0.00E+00	2.39E+01
			Be-7	2.50E+03	3.22E+02	2.24E+02
			K-40	2.50E+03	3.80E+02	2.20E+02
531699	10/5/2020 - 10/5/2020		Mn-54	<1.46E+01	0.00E+00	1.46E+01
			Co-58	<9.91E+00	0.00E+00	9.91E+00
			Fe-59	<2.09E+01	0.00E+00	2.09E+01
			Co-60	<1.55E+01	0.00E+00	1.55E+01
			Zn-65	<3.02E+01	0.00E+00	3.02E+01
			Zr-95	<1.73E+01	0.00E+00	1.73E+01
			Nb-95	<1.33E+01	0.00E+00	1.33E+01
			I-131	<1.83E+01	0.00E+00	1.83E+01
			Cs-134	<1.51E+01	0.00E+00	1.51E+01
			Cs-137	<1.32E+01	0.00E+00	1.32E+01
			BaLa-140	<1.89E+01	0.00E+00	1.89E+01
			Be-7	3.89E+03	4.29E+02	1.58E+02
			K-40	1.48E+03	2.77E+02	2.19E+02

# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (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
522589	5/4/2020 - 5/4/2020	MIXEDBLV	Mn-54	<1.74E+01	0.00E+00	1.74E+01
			Co-58	<1.74E+01	0.00E+00	1.74E+01
			Fe-59	<2.60E+01	0.00E+00	2.60E+01
			Co-60	<1.65E+01	0.00E+00	1.65E+01
			Zn-65	<3.69E+01	0.00E+00	3.69E+01
			Zr-95	<3.07E+01	0.00E+00	3.07E+01
			Nb-95	<1.72E+01	0.00E+00	1.72E+01
			I-131	<1.59E+01	0.00E+00	1.59E+01
			Cs-134	<1.22E+01	0.00E+00	1.22E+01
			Cs-137	<1.56E+01	0.00E+00	1.56E+01
			BaLa-140	<2.00E+01	0.00E+00	2.00E+01
			Be-7	9.16E+02	1.92E+02	2.10E+02
			K-40	3.10E+03	4.60E+02	2.95E+02
			524434	6/1/2020 - 6/1/2020	MIXEDBLV	Mn-54
Co-58	<1.32E+01	0.00E+00				1.32E+01
Fe-59	<2.65E+01	0.00E+00				2.65E+01
Co-60	<1.16E+01	0.00E+00				1.16E+01
Zn-65	<3.14E+01	0.00E+00				3.14E+01
Zr-95	<2.13E+01	0.00E+00				2.13E+01
Nb-95	<9.82E+00	0.00E+00				9.82E+00
I-131	<1.18E+01	0.00E+00				1.18E+01
Cs-134	<1.65E+01	0.00E+00				1.65E+01
Cs-137	<1.45E+01	0.00E+00				1.45E+01
BaLa-140	<1.59E+01	0.00E+00				1.59E+01
Be-7	1.05E+03	1.83E+02				1.79E+02
K-40	2.75E+03	3.93E+02				2.30E+02
525938	7/6/2020 - 7/6/2020	MIXEDBLV				Mn-54
			Co-58	<1.54E+01	0.00E+00	1.54E+01
			Fe-59	<3.30E+01	0.00E+00	3.30E+01
			Co-60	<1.59E+01	0.00E+00	1.59E+01
			Zn-65	<3.97E+01	0.00E+00	3.97E+01
			Zr-95	<3.02E+01	0.00E+00	3.02E+01
			Nb-95	<1.65E+01	0.00E+00	1.65E+01
			I-131	<2.33E+01	0.00E+00	2.33E+01
			Cs-134	<1.74E+01	0.00E+00	1.74E+01
			Cs-137	<1.53E+01	0.00E+00	1.53E+01
			BaLa-140	<2.29E+01	0.00E+00	2.29E+01
			Be-7	1.89E+03	2.78E+02	2.10E+02
			K-40	3.12E+03	4.48E+02	2.16E+02
			527354	8/3/2020 - 8/3/2020	MIXEDBLV	Mn-54
Co-58	<1.15E+01	0.00E+00				1.15E+01
Fe-59	<2.77E+01	0.00E+00				2.77E+01
Co-60	<1.80E+01	0.00E+00				1.80E+01
Zn-65	<2.74E+01	0.00E+00				2.74E+01
Zr-95	<2.40E+01	0.00E+00				2.40E+01
Nb-95	<1.12E+01	0.00E+00				1.12E+01
I-131	<1.27E+01	0.00E+00				1.27E+01
Cs-134	<1.36E+01	0.00E+00				1.36E+01
Cs-137	<1.23E+01	0.00E+00				1.23E+01
BaLa-140	<1.63E+01	0.00E+00				1.63E+01
Be-7	2.35E+03	3.00E+02				1.99E+02
K-40	2.40E+03	3.50E+02				1.70E+02
530020	9/8/2020 - 9/8/2020	MIXEDBLV				Mn-54
			Co-58	<1.39E+01	0.00E+00	1.39E+01
			Fe-59	<4.20E+01	0.00E+00	4.20E+01
			Co-60	<2.28E+01	0.00E+00	2.28E+01
			Zn-65	<3.74E+01	0.00E+00	3.74E+01
			Zr-95	<2.83E+01	0.00E+00	2.83E+01
			Nb-95	<1.68E+01	0.00E+00	1.68E+01



# HARRIS Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 63 [ INDICATOR - SW @ 0.6 miles ]

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Sample ID:	530020	Sample Dates:	9/8/2020 - 9/8/2020	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
					I-131	<2.38E+01	0.00E+00	2.38E+01
					Cs-134	<1.68E+01	0.00E+00	1.68E+01
					Cs-137	<1.48E+01	0.00E+00	1.48E+01
					BaLa-140	<1.51E+01	0.00E+00	1.51E+01
					Be-7	1.06E+03	2.07E+02	2.18E+02
					K-40	2.84E+03	4.43E+02	3.12E+02

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Sample ID:	531701	Sample Dates:	10/5/2020 - 10/5/2020	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<1.22E+01	0.00E+00	1.22E+01
					Co-58	<1.45E+01	0.00E+00	1.45E+01
					Fe-59	<3.33E+01	0.00E+00	3.33E+01
					Co-60	<1.42E+01	0.00E+00	1.42E+01
					Zn-65	<2.62E+01	0.00E+00	2.62E+01
					Zr-95	<2.36E+01	0.00E+00	2.36E+01
					Nb-95	<1.05E+01	0.00E+00	1.05E+01
					I-131	<2.13E+01	0.00E+00	2.13E+01
					Cs-134	<1.53E+01	0.00E+00	1.53E+01
					Cs-137	<1.37E+01	0.00E+00	1.37E+01
					BaLa-140	<1.54E+01	0.00E+00	1.54E+01
					Be-7	1.68E+03	2.49E+02	2.02E+02
					K-40	2.58E+03	3.71E+02	1.97E+02

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**APPENDIX F**

**ERRATA TO**  
**PREVIOUS REPORTS**

**2020**

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# APPENDIX F

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## ERRATA TO THE 2019 HNP AREOR

The footnote in Table 2.1-A of Section 2.0 (Introduction) incorrectly identifies that Ground Water Well 83 (BD-MW-16) was added to the HNP REMP Program with the 28<sup>th</sup> revision of the HNP ODCM (29MAY2019). The footnote should have been applied to Ground Water Well 86 (MW-12).

This was an administrative error identified during the 2020 HNP NOS Audit (NCR # 02331393).

Enclosure 4  
RA-21-0050

**ENCLOSURE 4: [MNS Annual Radiological Environmental Operating Report](#)**



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# **ANNUAL RADIOLOGICAL ENVIRONMENTAL OPERATING REPORT**

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**DUKE ENERGY CORPORATION  
MCGUIRE NUCLEAR STATION  
Units 1 and 2**

**2020**



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**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
CM	Community
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 <sup>3</sup>	picocurie per cubic meter
Q	Quarterly
REMP	Radiological Environmental Monitoring Program
SA	Semiannually
SB	Site Boundary
SI	Special Interest
SLCs	Selected Licensee Commitments
SM	Semimonthly
TECH SPECS	Technical Specifications
TLD	Thermoluminescent Dosimeter
UFSAR	Updated Final Safety Analysis Report
W	Weekly



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# 1.0 EXECUTIVE SUMMARY

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This Annual Radiological Environmental Operating Report describes the McGuire Nuclear Station Radiological Environmental Monitoring Program (REMP), and the program results for the calendar year 2020.

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-nine samples were analyzed comprising 1,250 test results to compile data for the 2020 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 2020 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, thus presenting no significant impact on the environment or public health and safety.

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## **2.0 INTRODUCTION**

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### **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.

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 two significant figures.

### **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 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),  
 $\chi_i$  = 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

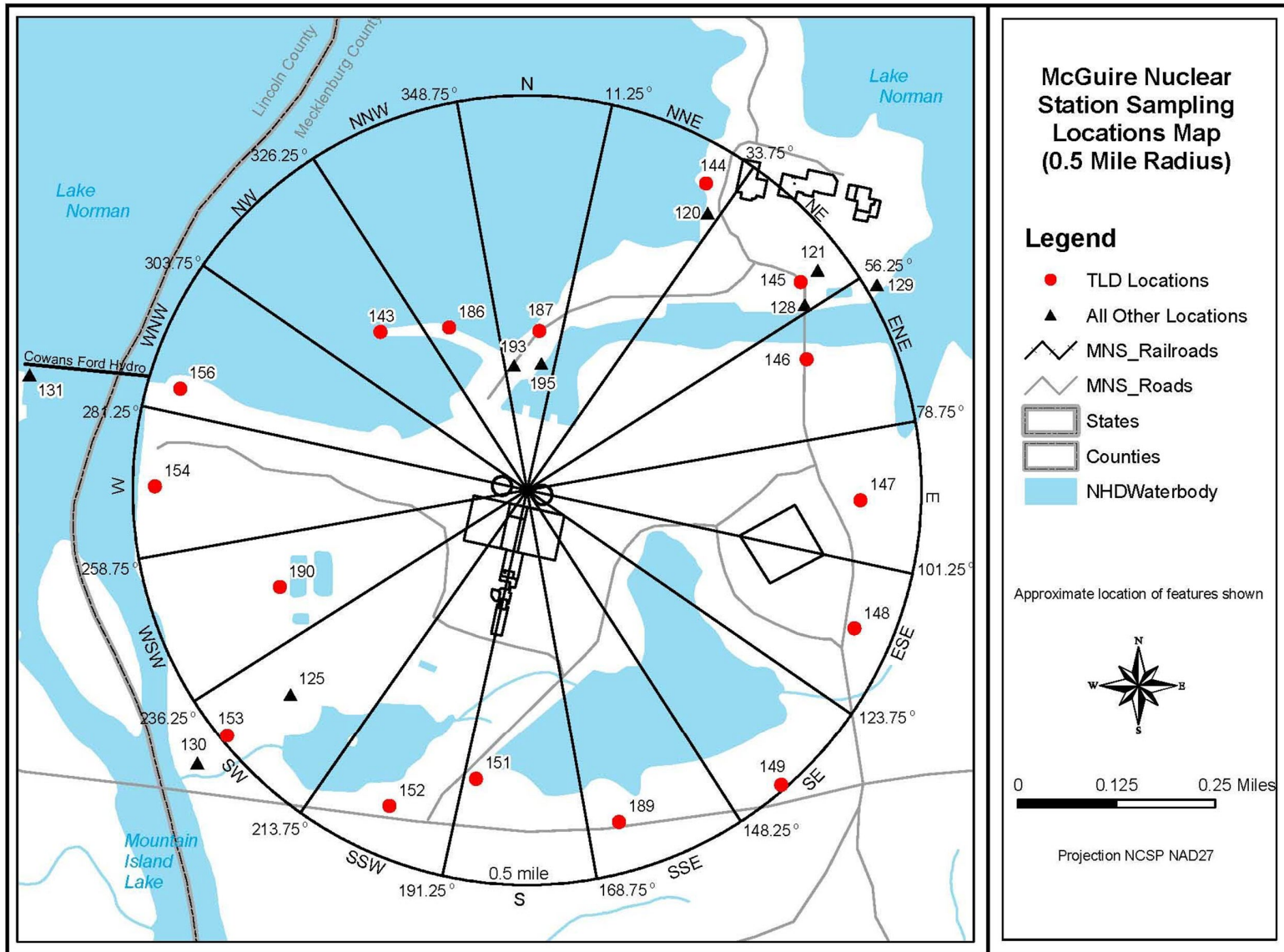
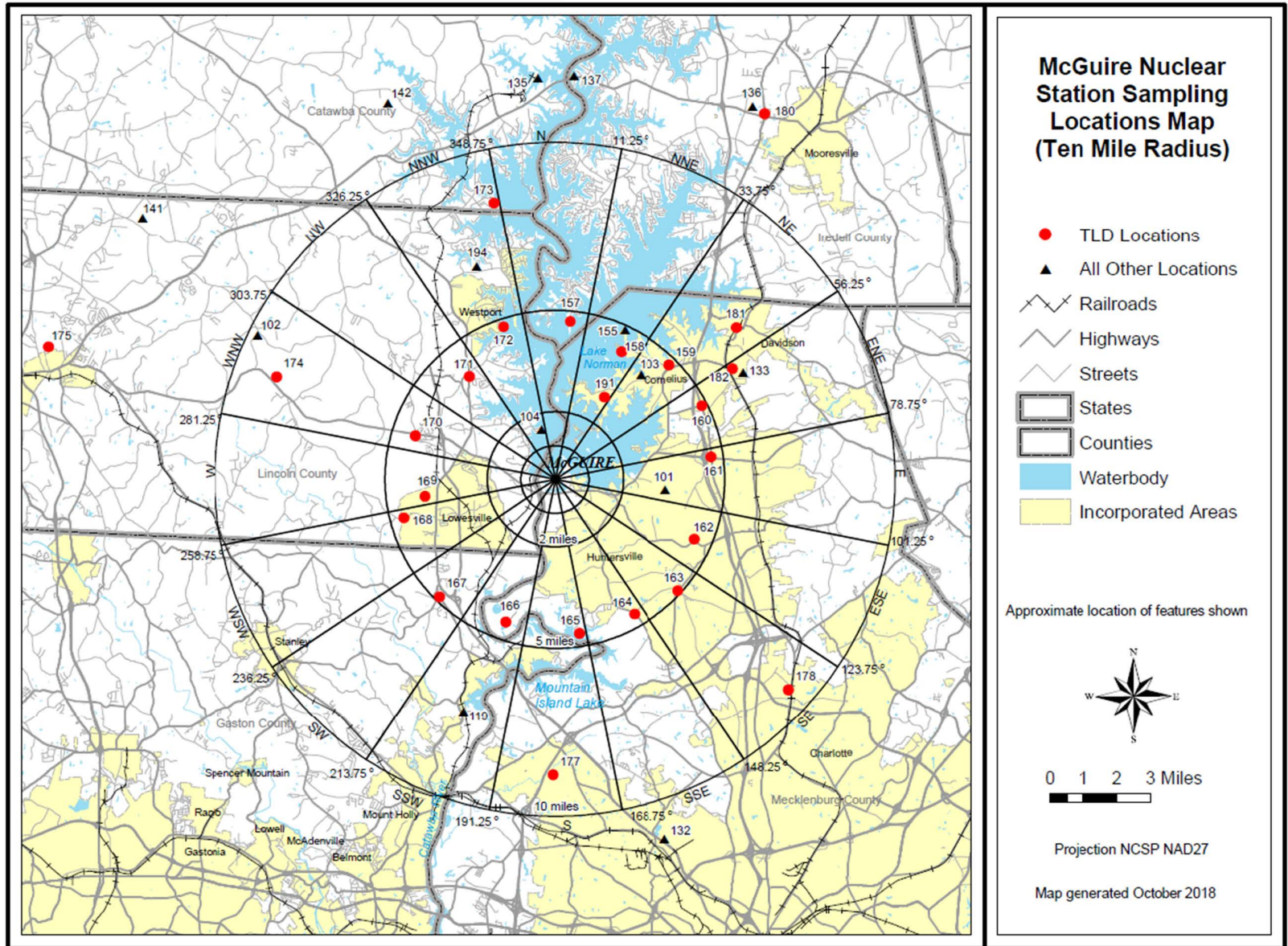


Figure 2.1-2



**TABLE 2.1-A**

**MCGUIRE RADIOLOGICAL MONITORING PROGRAM  
SAMPLING LOCATIONS**

Table 2.1-A Codes			
C	Control <sup>(c)</sup>	SA	Semiannually
CM	Community	SB	Site Boundary
I	Indicator	W	Weekly
M	Monthly		

Site #	Measure Type	Location Description <sup>(e)</sup>	Air Rad. & Part.	Surface Water <sup>(d)</sup>	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, CM <sup>(f)</sup>							
119	I	Mt. Holly Municipal Water Supply ( 7.40 mi SSW )			M					
120	I	Site Boundary ( 0.46 mi NNE )	W, SB							M ( b )
121	I	Site Boundary ( 0.47 mi NE )	W, SB							
125	I	Site Boundary ( 0.38 mi SW )	W, SB							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	Mooresville 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

(c) The purpose of this sample is to obtain background information. If it is not practical to establish control locations in accordance with the distance and wind direction criteria, other sites that provide valid background data may be substituted.

(d) The "upstream sample" shall be taken at a distance beyond significant influence of the discharge. The "downstream" sample shall be taken in an area beyond but near the mixing zone. "Upstream" samples in an estuary must be taken far enough upstream to be beyond the plant influence. Saltwater shall be sampled only when the receiving water is utilized for recreational activities.

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

(f) Community air sampling replacement in progress, NCR # 02335752



**TABLE 2.1-B**

**MCGUIRE RADIOLOGICAL MONITORING PROGRAM  
SAMPLING LOCATIONS (TLD SITES) <sup>(b)</sup>**

Table 2.1-B Codes			
C	Control <sup>(a)</sup>	OR	Outer Ring
IR	Inner Ring	SI	Special Interest

Site #	Measure Type	Location	Distance <sup>(c)</sup> (miles)	Sector	Site #	Measure Type	Location	Distance <sup>(c)</sup> (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 REFUGE 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	OR	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					

- (a) The purpose of this sample is to obtain background information. If it is not practical to establish control locations in accordance with the distance and wind direction criteria, other sites that provide valid background data may be substituted.
- (b) One or more instruments, such as a pressurized ion chamber, for measuring and recording dose rate continuously may be used in place of, or in addition to, integrating dosimeters. For the purposes of this table, a thermoluminescent dosimeter (TLD) is considered to be one phosphor; two or more phosphors in a packet are considered as two or more dosimeters. Film badges shall not be used as dosimeters for measuring direct radiation. The forty stations is not an absolute number. The number of direct radiation monitoring stations may be reduced according to geographical limitations; e.g., at an ocean site, some sections will be over water so that the number of dosimeters may be reduced accordingly. The frequency of analysis or readout for TLD systems will depend upon the characteristics of the specific system used and should be selected to obtain optimum dose information with minimal fading.
- (c) 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 <sup>3</sup> )	Fish (pCi/kg-wet)	Milk (pCi/liter)	BroadLeaf Vegetation (pCi/kg-wet)
H-3	20,000 <sup>(a)(b)</sup>				
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) For drinking water samples. This is 40CFR Part 141 value. 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 <sup>(d)</sup>	Tritium	Low Level I-131	Gross Beta	TLD
Air Radioiodine	Weekly	X				
Air	Weekly				(c)	
Particulate	Quarterly Composite	X				
Direct Radiation (TLD)	Quarterly					X
Surface	Monthly Composite <sup>(e)</sup>	X				
Water	Quarterly Composite		X			
Drinking	Monthly Composite <sup>(e)</sup>	X		(a)	X	
Water	Quarterly Composite		X			
Shoreline Sediment	Semiannually	X				
Milk	Semimonthly	X		X		
Fish	Semiannually	X				
Broadleaf Vegetation	Monthly <sup>(b)</sup>	X				
Food Products	Monthly <sup>(f)</sup>	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
- (c) Airborne particulate sample filters shall be analyzed for gross beta radioactivity 24 hours or more after sampling to allow for radon and thoron daughter decay. If gross beta activity in air particulate samples is greater than ten times the yearly mean of control samples, gamma isotopic analysis shall be performed on the individual samples.
- (d) Gamma isotopic analysis means the identification and quantification of gamma-emitting radionuclides that may be attributable to the effluents from the facility.
- (e) A composite sample is one in which the quantity (aliquot) of liquid sampled is proportional to the quantity of flowing liquid and in which the method of sampling employed results in a specimen that is representative of the liquid flow. In this program composite sample aliquots shall be collected at time intervals that are very short (e.g., hourly) relative to the compositing period (e.g., monthly) in order to assure obtaining a representative sample.
- (f) If harvest occurs more than once a year, sampling shall be performed during each discrete harvest. If harvest occurs continuously, sampling shall be monthly. Attention shall be paid to including samples of tuberous and root food products

**TABLE 2.2-C**

**MAXIMUM VALUES FOR THE *A PRIORI* LOWER LIMITS OF DETECTION <sup>(c)(d)</sup>**

Analysis	Water (pCi/liter)	Air Particulates or Gases (pCi/m <sup>3</sup> )	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 <sup>(a)</sup>					
Mn-54	15		130			
Fe-59	30		260			
Co-58, 60	15		130			
Zn-65	30		260			
Zr-Nb-95	15					
I-131	1 <sup>(b)</sup>	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.

(c) Lower Limit of Detection is defined in Section 2.3.2

(d) This list does not mean that only these nuclides are to be considered. Other peaks that are identifiable, together with those of the above nuclides, shall also be analyzed and reported in the Annual Radiological Environmental Operating Report.

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## 3.0 INTERPRETATION OF RESULTS

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Review of 2020 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 2020 information required by Technical Specification Administrative Control 5.6.2 are located in Appendix B. McGuire 2020 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 2020 was 2.71% for drinking water tritium at the North Mecklenburg Water Treatment Facility (Location 101). Only Selected Licensee Commitments radionuclides were detected in 2020.

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 2020. Similarly, there was no significant increase in ambient background radiation levels in the surrounding areas. The 2020 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**

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.

In 2020, 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). The radioiodine samples received a weekly gamma analysis. K-40 and Be-7 observed in air samples are naturally occurring radionuclides.

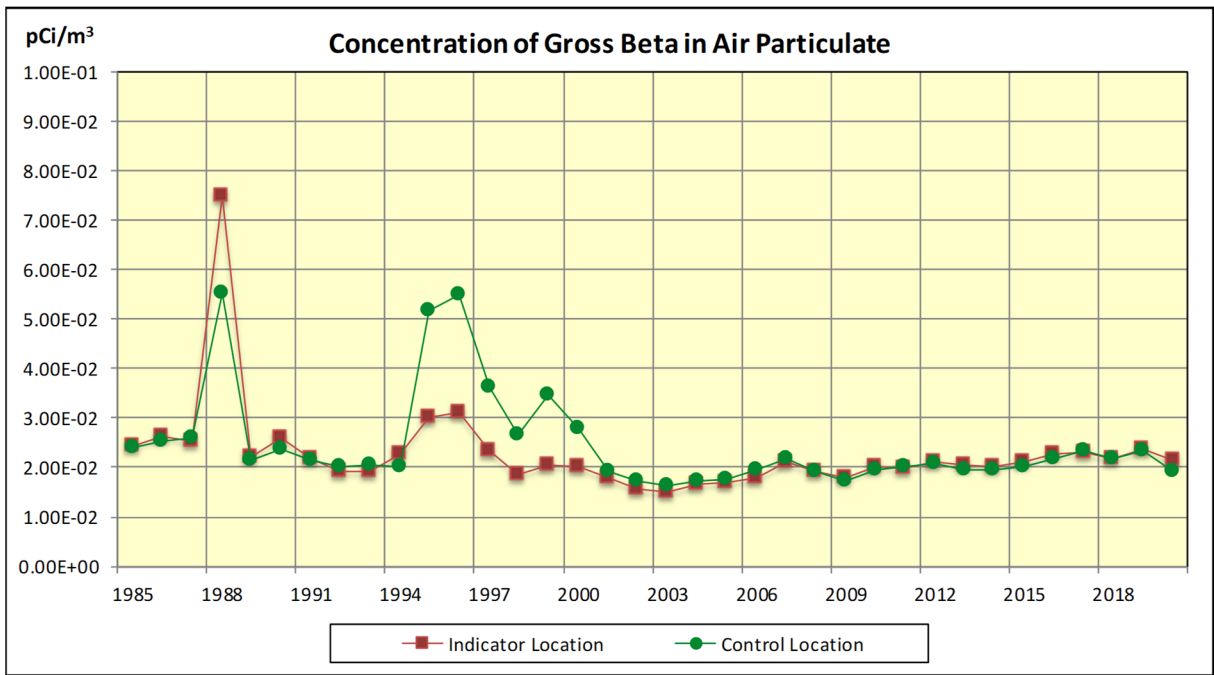
Gross beta analyses indicated  $2.13\text{E-}2$  pCi/m<sup>3</sup> at the location with the highest annual mean and  $1.91\text{E-}2$  pCi/m<sup>3</sup> at the control location. No gamma emitting radionuclide attributable to MNS plant operation has been detected in any air samples since 2004 when Co-58 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 2020, no reporting levels were approached.

In 2020, Nuclear Oversight (NOS) determined that air sampling location 103 (Cottonwood Substation, 4.20 miles NE) was not the most appropriate community location based on MNS SLC 16.11.13 requirements. The geography and population demographics have changed considerably since Location 103 was initially deemed the community air sampler. Location 103 does not have a higher D/Q value than many other newer communities closer to the McGuire site. A replacement community air sampling location has been identified but not yet implemented at the time of this report compilation (NCR # 02335752).

Figure 3.1





**Table 3.1-A Mean Concentrations of Radionuclides in Air Particulate**

YEAR	Cs-137 Indicator (pCi/m <sup>3</sup> )	Cs-137 Control (pCi/m <sup>3</sup> )	Beta Indicator (pCi/m <sup>3</sup> )	Beta Control (pCi/m <sup>3</sup> )
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 <sup>(1)</sup>	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 <sup>(2)</sup>	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 <sup>(3)</sup>	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
2020	0.00E0	0.00E0	2.13E-2	1.91E-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)**

<b>Year</b>	<b>Indicator Location (pCi/m<sup>3</sup>)</b>	<b>Control Location (pCi/m<sup>3</sup>)</b>
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 <sup>(1)</sup>	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 <sup>(2)</sup>	6.00E-2	5.46E-2
2012	0.00E0	0.00E0
2013	0.00E0	0.00E0
2014 <sup>(3)</sup>	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
2020	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 2020, 65 drinking water samples were analyzed for gross beta and gamma emitting radionuclides. Fifty-two samples were collected from the 4 indicator locations and 13 from the control location. Monthly composite samples were collected and received a gross beta and gamma analysis. 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 2020 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 4.75 pCi/l at the location with the highest annual mean and 4.25 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 (NCR # 02303031).

Tritium was detected in 12 of the 16 indicator composite samples taken in 2020. The 2020 highest mean indicator tritium concentration from location 101 was 487 pCi/liter, which is 2.44% 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 2020; 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

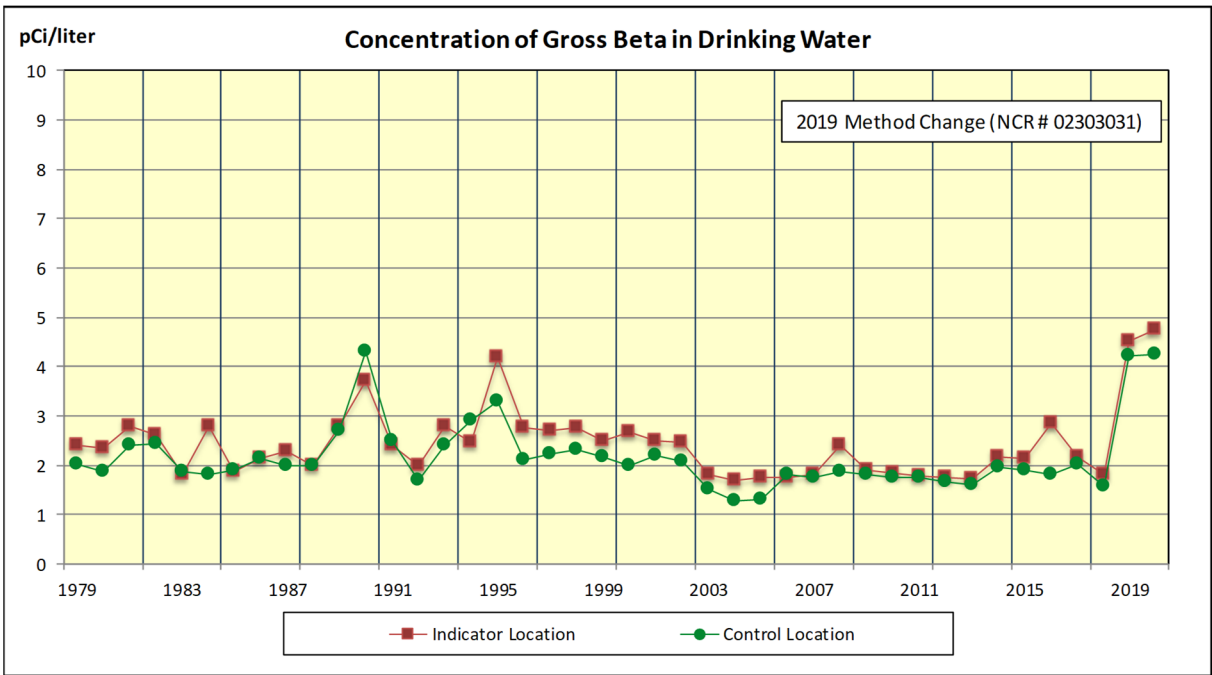
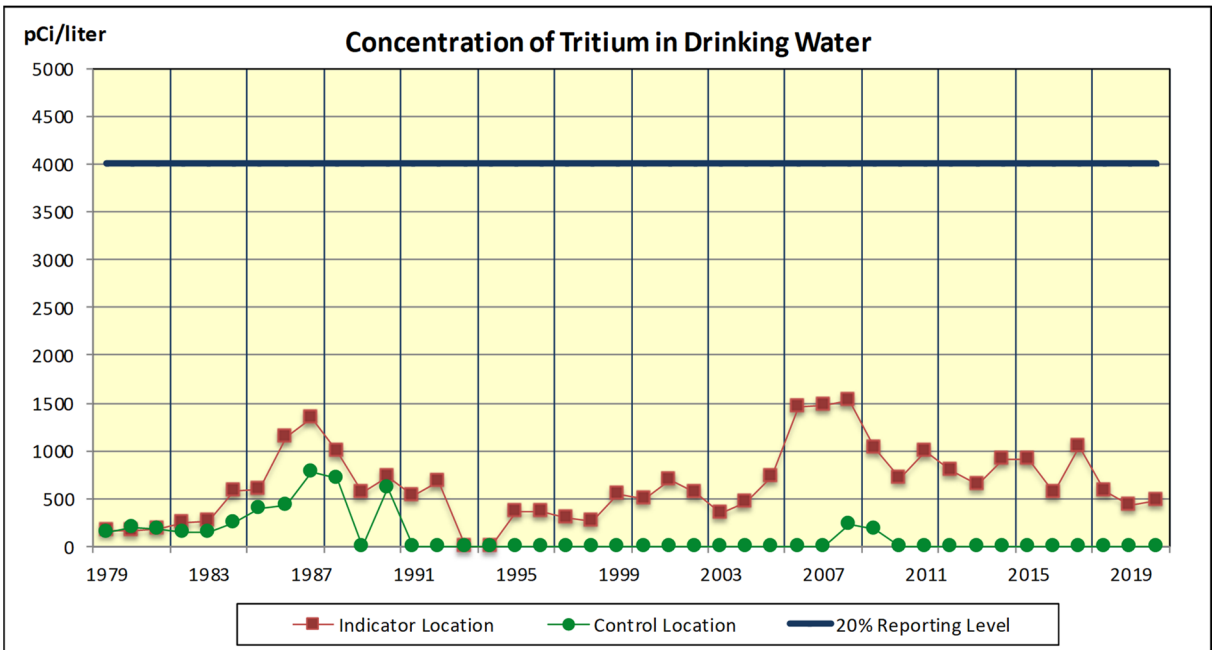


Figure 3.2-2



**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 <sup>(1)</sup>	4.51E0	4.22E0	4.36E2	0.00E0
2020	4.75E0	4.25E0	4.87E2	0.00E0

0.00E0 indicates no detectable measurements

(1) Gross beta preparation/analysis methodology change (NCR # 02303031)

### 3.3 SURFACE WATER

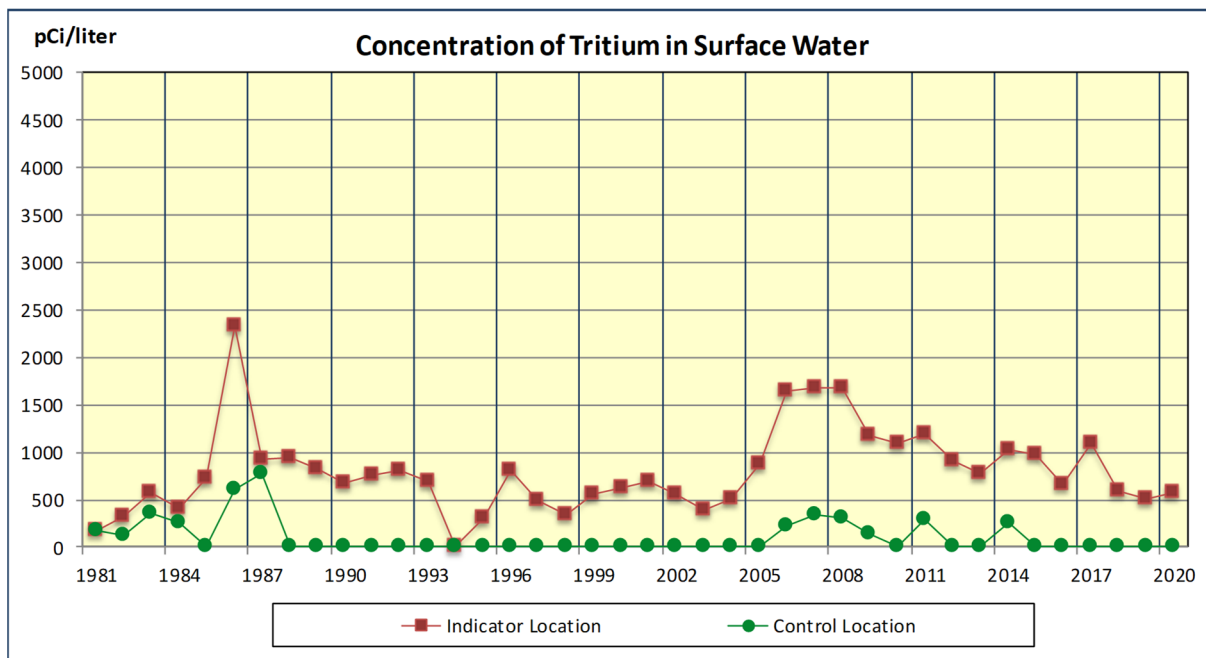
In 2020, 39 surface water samples were analyzed for gamma emitting radionuclides, 26 at the 2 indicator locations and 13 at the control location. Monthly composite samples were collected and received a gamma analysis. The samples were composited to create 12 quarterly composite period samples for tritium analysis.

No detectable gamma activity attributable to MNS plant operation was found in surface water samples in 2020 and has not been detected since 1988. K-40 observed in some surface water samples is a naturally occurring radionuclide. Tritium was detected in 7 of 8 indicator composite samples taken in 2020. Tritium was not detected in any of the 4 control location composite samples in 2020.

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
2020	5.76E2	0.00E0

0.00E0 indicates no detectable measurements

### 3.4 MILK

In 2020, 26 milk samples from the control location were analyzed for low level I-131 and other gamma emitting radionuclides. Biweekly grab samples were collected at one location and each received a gamma and low-level Iodine-131 (LLI-131) analysis. No indicator dairies were sampled during 2020 and none were identified by the 2020 land use census.

There were no gamma emitting radionuclides due to MNS plant operations identified in milk samples in 2020. 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.

Table 3.4 gives indicator location highest annual means and control means since 1979 for Cs-137. Since no Cs-137 was detected in 2020, 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**

<b>YEAR</b>	<b>Cs-137 Indicator (pCi/l)</b>	<b>Cs-137 Control (pCi/l)</b>
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 <sup>(1)</sup>	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 <sup>(2)</sup>	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
2020	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 2020, 48 broadleaf vegetation samples were analyzed, 36 at the three indicator locations and 12 at the control location. Monthly samples were collected as available and each received a gamma analysis.

There were no gamma emitting radionuclides attributable to MNS plant operation identified in any indicator or control location broadleaf vegetation samples in 2020. 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 <sup>(1)</sup>	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 <sup>(2)</sup>	2.29E1	0.00E0
2012	0.00E0	0.00E0
2013	0.00E0	0.00E0
2014 <sup>(3)</sup>	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
2020	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 2020, 12 food products (crops) samples were analyzed from 1 indicator location. Monthly samples were collected as available and each received a gamma analysis. 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 2020, 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 <sup>(1)</sup>	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 <sup>(2)</sup>	3.06E1
2012	0.00E0
2013	0.00E0
2014 <sup>(3)</sup>	0.00E0
2015	0.00E0
2016	0.00E0
2017	0.00E0
2018	0.00E0
2019	0.00E0
2020	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

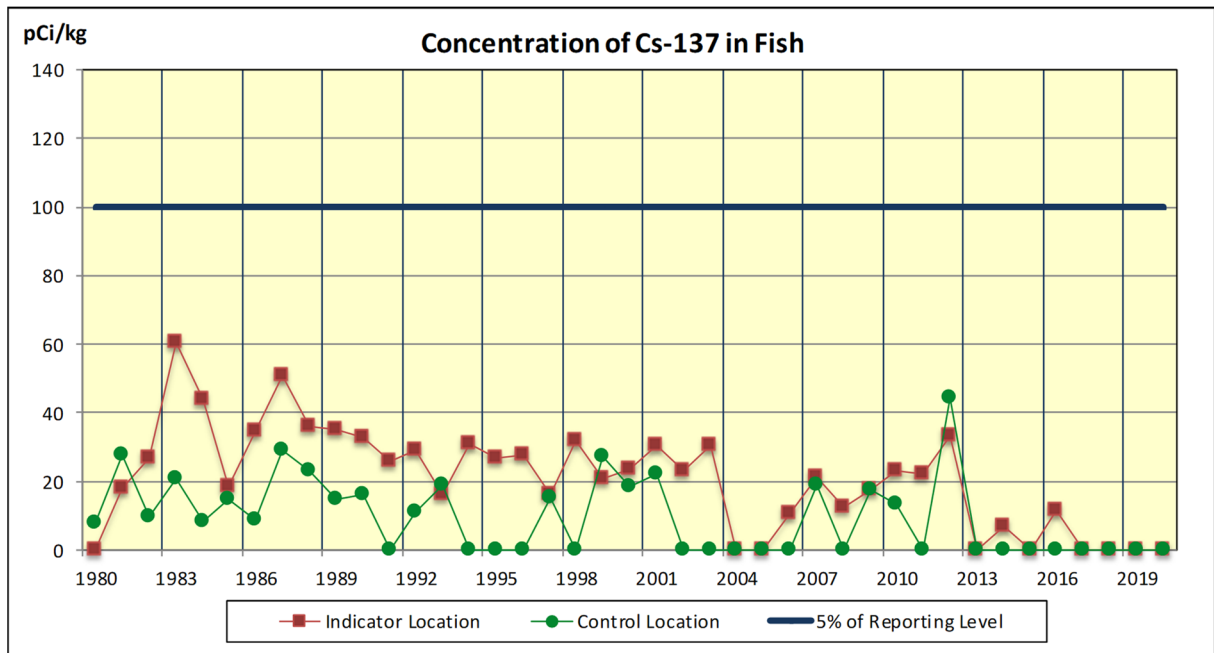
In 2020, 12 fish samples were analyzed for gamma emitting radionuclides, 6 at the indicator location and 6 at the control location. Semiannual samples were collected, and a gamma analysis was performed on the edible portions of each sample. Boney fish (i.e. Sunfish) were prepared for analysis whole minus the head and tail portions.

Gamma spectroscopy analysis indicated no gamma emitting radionuclides attributable to MNS plant operation identified in any indicator or control location fish samples in 2020.

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 Concentrationsleast 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 <sup>(1)</sup>	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 <sup>(2)</sup>	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
2020	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

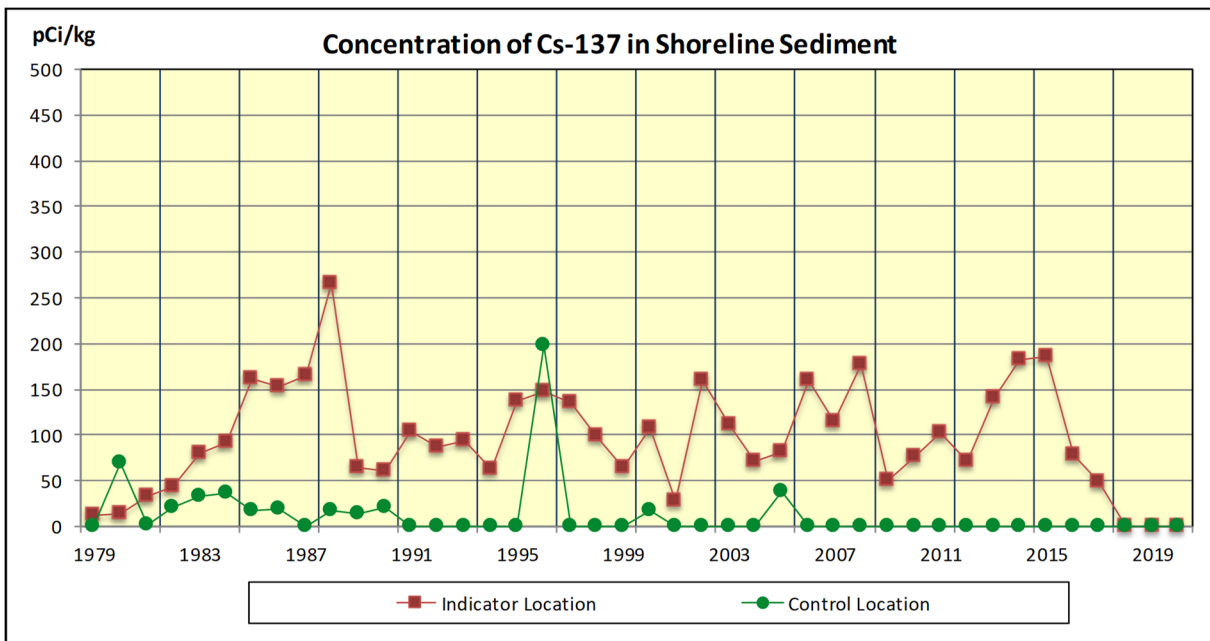
In 2020, 6 shoreline sediment samples were analyzed, 4 from 2 indicator locations and 2 at the control location. Semiannual samples were collected, and a gamma analysis was performed on each following the drying and removal of rocks and clams.

Gamma spectroscopy analysis indicated no gamma emitting radionuclides attributable to MNS plant operation identified in any indicator or control location shoreline sediment samples in 2020.

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 observed in shoreline samples is a naturally occurring radionuclide.

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 <sup>(1)</sup>	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 <sup>(2)</sup>	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
2020	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 near the site boundary 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" (6 to 8 kilometer range) 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 2020, 163 Thermoluminescent Dosimeters (TLDs) were analyzed, 159 at indicator locations and 4 at the control location. A gamma exposure rate was determined for each TLD. 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 are listed in Table 2.1-B.

Based on Appendix B TLD data, the highest annual total dose was 95.0 mrem at indicator location 170, which is 4.32 miles WNW 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 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 quarter 2020 TLD from location 145 (0.47 miles NE) result of 21.0 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.

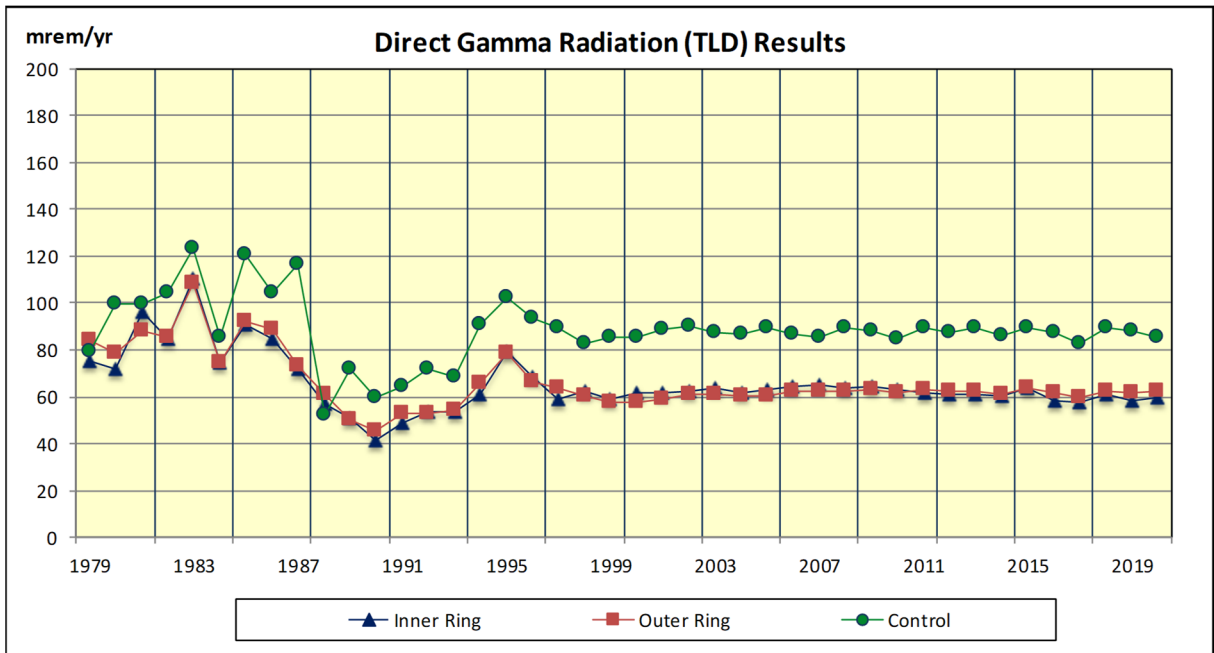
A TLD intercomparison program is conducted as part of the quality assurance program. Results of this program are included in section 4.7.

### **3.9.2 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<sup>(1)</sup>**

YEAR	Inner Ring Average (mrem/yr)	Outer Ring Average (mrem/yr)	Control (mrem/yr)
1979	7.51E1	8.38E1	7.90E1
1980	7.16E1 <sup>†</sup>	7.88E1 <sup>†</sup>	9.98E1 <sup>†</sup>
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
2020	6.00E1	6.24E1	8.56E1

<sup>†</sup> 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 2020 MNS Land Use Census (LUC) was conducted on 6/3/2020 and 6/4/2020 during the growing season as required by SLC 16.11.14 to identify within 8 kilometers (5.0 miles) from the plant the nearest location from the site boundary in each of the sixteen meteorological sectors, the following: nearest residence, nearest garden greater than 50 square meters or 500 square feet, and the nearest milk-giving animal (cow, goat, etc.).

The primary method of performing the land use census is visual inspection from the roadside within the five (5) mile radius. 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.

Table 3.10 summarizes the land use census results that was conducted within five miles of MNS. A map indicating identified locations is shown in Figure 3.10.

During the 2020 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 2020 land use census.

The fleet Land Use Procedure AD-CP-ALL-0014 (Revision 4), Land Use Census Evaluation, was revised in 2020 to standardize the approach for the evaluation of Land Use Dose Calculations (NCR # 02343171).

**Table 3.10 McGuire 2020 Land Use Census Results**

**Performed 6/3 - 6/4/2020  
Nearest Pathways (Miles)**

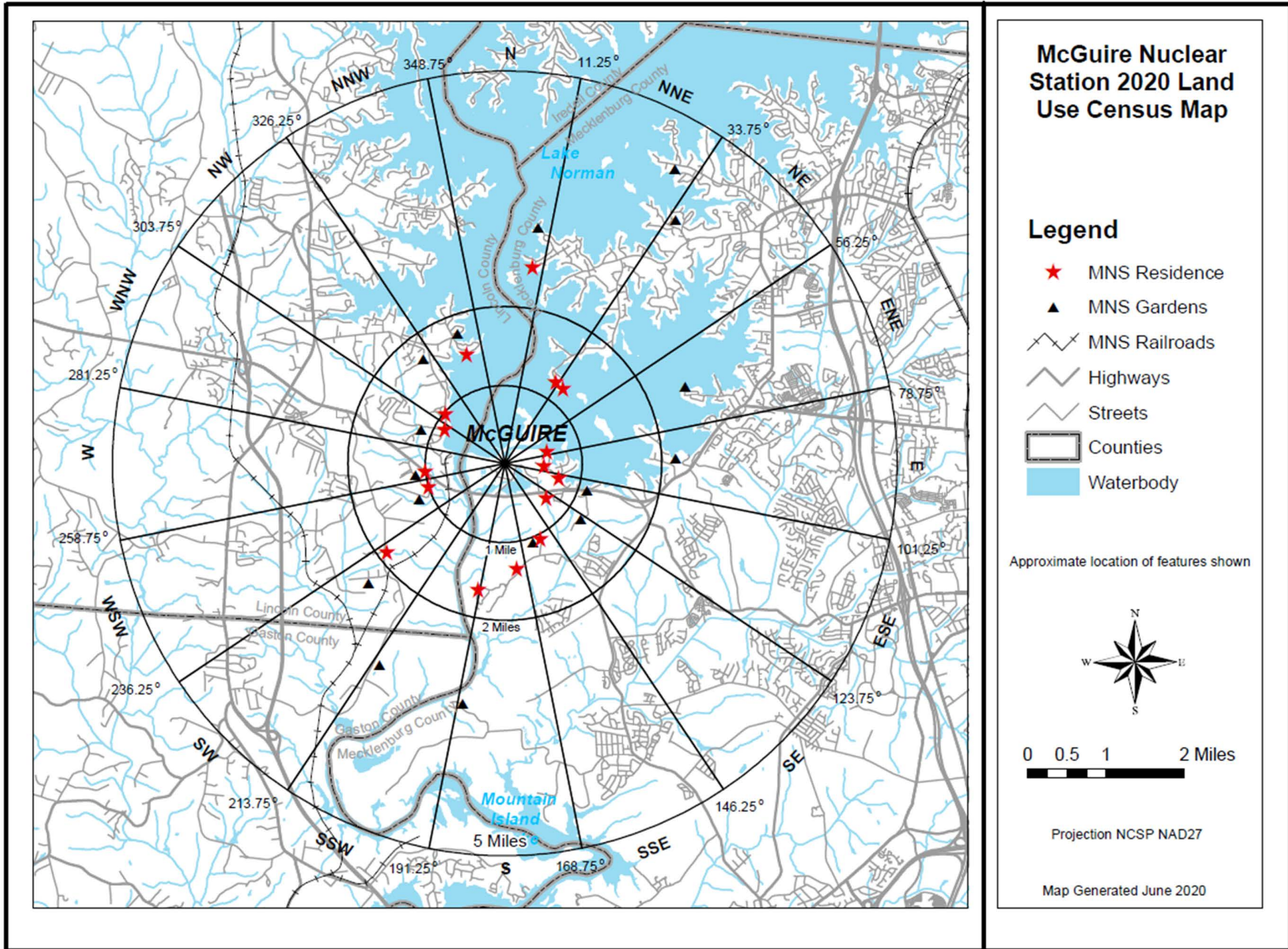
SECTOR	RESIDENCE		GARDEN		MILK ANIMAL	
	2019	2020	2019	2020	2019	2020
North	2.53	2.53	3.03	3.03	---	---
North-Northeast	1.23	1.23	4.34	4.34	---	---
Northeast	1.21	1.21	3.80	3.80	---	---
East-Northeast	0.56	0.56	2.50	2.50	---	---
East	0.50	0.50	2.11	2.11	---	---
East-Southeast	0.69	0.71*	1.10	1.10	---	---
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	3.11*	---	---
South-Southwest	1.64	1.64	3.02	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	---	---

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





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## 4.0 QUALITY ASSURANCE

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### 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 gross beta in water, low-level Iodine-131 in milk, and tritium analyses in drinking water, surface water, and ground water samples.

## **4.5 DUKE ENERGY INTERLABORATORY COMPARISON PROGRAM**

In 2020 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 2020. 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, mixed gamma in soil, 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 2020 is documented in Table 4.0-A.

Interlaboratory cross check samples from EZA were received and analyzed in two of the four quarters of 2020. Table 4.0-A lists the performance for specific samples. Fifty-one nuclide results were reported to EZA of which forty-nine (96 %) 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 (INTERNAL 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 using the NIST-traceable Hopewell and submits them for analysis of the unknown estimated delivered exposure. A summary of the 2020 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 2020. A summary of the GEL quality assurance program results for the sample media types sent to GEL during 2020 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

#### 2020 Cross Check Results for EnRad Laboratories

Interlaboratory cross check samples from EZA were received and analyzed in two of the four quarters of 2020. 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. Fifty-one nuclide results were reported to EZA of which forty-nine (96 %) 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	E13185	Cs-137	2	pCi	225	238	0.95	Agreement
I-131 in Charcoal Cartridge	E13183	I-131	2	pCi	95.8	91.5	1.05	Agreement
Gamma in Soil	E13184	Ce-141	2	pCi/g	0.199	0.206	0.97	Agreement
		Co-58	2	pCi/g	0.168	0.178	0.94	Agreement
		Co-60	2	pCi/g	0.309	0.347	0.89	Agreement
		Cr-51	2	pCi/g	0.371	0.455	0.82	Agreement
		Cs-134	2	pCi/g	0.226	0.260	0.87	Agreement
		Cs-137	2	pCi/g	0.230	0.257	0.90	Agreement
		Fe-59	2	pCi/g	0.174	0.179	0.97	Agreement
		Mn-54	2	pCi/g	0.238	0.238	1.00	Agreement
		Zn-65	2	pCi/g	0.416	0.399	1.04	Agreement
Gamma in Simulated Vegetation	E13187	Ce-141	2	pCi/g	0.228	0.184	1.24	Agreement
		Co-58	2	pCi/g	0.172	0.159	1.08	Agreement
		Co-60	2	pCi/g	0.312	0.309	1.01	Agreement
		Cr-51	2	pCi/g	0.530	0.405	1.31	Non-Agreement <sup>(1)</sup>
		Cs-134	2	pCi/g	0.239	0.231	1.03	Agreement
		Cs-137	2	pCi/g	0.181	0.164	1.10	Agreement
		Fe-59	2	pCi/g	0.204	0.160	1.28	Non-Agreement <sup>(1)</sup>
		Mn-54	2	pCi/g	0.239	0.212	1.13	Agreement
		Zn-65	2	pCi/g	0.379	0.355	1.07	Agreement

(1) NCR # 02340178

## TABLE 4.0-A (Cont.)

Sample	Sample ID	Nuclide	Quarter	Units	EnRad Value	EZA Value	EnRad/EZA Ratio	Evaluation
Gamma in Simulated Vegetation	E13190	Ce-141	3	pCi/g	0.202	0.204	0.99	Agreement
		Co-58	3	pCi/g	0.213	0.244	0.87	Agreement
		Co-60	3	pCi/g	0.491	0.516	0.95	Agreement
		Cr-51	3	pCi/g	0.424	0.506	0.84	Agreement
		Cs-134	3	pCi/g	0.240	0.272	0.88	Agreement
		Cs-137	3	pCi/g	0.325	0.340	0.95	Agreement
		Fe-59	3	pCi/g	0.270	0.273	0.99	Agreement
		Mn-54	3	pCi/g	0.249	0.245	1.02	Agreement
		Zn-65	3	pCi/g	0.383	0.367	1.04	Agreement
Gamma in Composite Filter	E13188	Ce-141	3	pCi	109	107	1.02	Agreement
		Co-58	3	pCi	130	128	1.01	Agreement
		Co-60	3	pCi	278	271	1.03	Agreement
		Cr-51	3	pCi	247	266	0.93	Agreement
		Cs-134	3	pCi	136	143	0.95	Agreement
		Cs-137	3	pCi	187	179	1.05	Agreement
		Fe-59	3	pCi	152	143	1.06	Agreement
		Mn-54	3	pCi	136	129	1.06	Agreement
		Zn-65	3	pCi	215	193	1.12	Agreement
Gamma in Water	E13189	Ce-141	3	pCi/L	167	160	1.04	Agreement
		Co-58	3	pCi/L	202	191	1.06	Agreement
		Co-60	3	pCi/L	437	404	1.08	Agreement
		Cr-51	3	pCi/L	407	397	1.03	Agreement
		Cs-134	3	pCi/L	215	213	1.01	Agreement
		Cs-137	3	pCi/L	280	267	1.05	Agreement
		Fe-59	3	pCi/L	237	214	1.11	Agreement
		I-131	3	pCi/L	104	95.3	1.09	Agreement
		Mn-54	3	pCi/L	211	192	1.10	Agreement
Zn-65	3	pCi/L	322	288	1.12	Agreement		
Milk LLI-131	E13192	I-131	2	pCi/L	96.8	88.8	1.09	Agreement
Gross Beta in Water	E13191	Cs-137	2	pCi/L	244	240	1.02	Agreement
Tritium in Water	E13193	H-3	3	pCi/L	11900	12000	0.99	Agreement

# TABLE 4.0-B

## 2020 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 2020						2nd Quarter 2020						
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	
100007	59.67	60.97	-2.13	<+/-15%	Pass	102290	59.52	60.59	-1.77	<+/-15%	Pass	
100245	58.87	60.97	-3.44	<+/-15%	Pass	102359	59.12	60.59	-2.43	<+/-15%	Pass	
102059	60.34	60.97	-1.03	<+/-15%	Pass	103194	61.95	60.59	2.24	<+/-15%	Pass	
103098	64.18	60.97	5.26	<+/-15%	Pass	102029	60.76	60.59	0.28	<+/-15%	Pass	
103212	63.01	60.97	3.35	<+/-15%	Pass	102336	61.57	60.59	1.62	<+/-15%	Pass	
100074	60.02	60.97	-1.56	<+/-15%	Pass	103742	62.41	60.59	3.00	<+/-15%	Pass	
103148	62.83	60.97	3.05	<+/-15%	Pass	103721	63.00	60.59	3.98	<+/-15%	Pass	
102407	62.04	60.97	1.75	<+/-15%	Pass	102738	62.59	60.59	3.30	<+/-15%	Pass	
103615	62.69	60.97	2.82	<+/-15%	Pass	100007	58.49	60.59	-3.47	<+/-15%	Pass	
103087	64.32	60.97	5.49	<+/-15%	Pass	102931	61.99	60.59	2.31	<+/-15%	Pass	
Average Bias (B)			1.36				Average Bias (B)			0.91		
Standard Deviation (S)			3.18				Standard Deviation (S)			2.62		
Measure Performance  B +S			4.54	<15%	Pass	Measure Performance  B +S			3.52	<15%	Pass	
3rd Quarter 2020						4th Quarter 2020						
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	
103734	20.89	19.59	6.64	<+/-15%	Pass	103679	42.06	40.15	4.76	<+/-15%	Pass	
103438	21.02	19.59	7.30	<+/-15%	Pass	102783	38.82	40.15	-3.31	<+/-15%	Pass	
102970	18.88	19.59	-3.62	<+/-15%	Pass	103438	43.01	40.15	7.12	<+/-15%	Pass	
102770	20.78	19.59	6.07	<+/-15%	Pass	103734	42.84	40.15	6.70	<+/-15%	Pass	
103602	20.53	19.59	4.80	<+/-15%	Pass	100461	42.34	40.15	5.45	<+/-15%	Pass	
102741	21.03	19.59	7.35	<+/-15%	Pass	103029	42.84	40.15	6.70	<+/-15%	Pass	
102058	19.47	19.59	-0.61	<+/-15%	Pass	100180	38.59	40.15	-3.89	<+/-15%	Pass	
103029	21.06	19.59	7.50	<+/-15%	Pass	103557	43.52	40.15	8.39	<+/-15%	Pass	
103679	20.75	19.59	5.92	<+/-15%	Pass	103199	41.99	40.15	4.58	<+/-15%	Pass	
103557	21.00	19.59	7.20	<+/-15%	Pass	100154	39.71	40.15	-1.10	<+/-15%	Pass	
Average Bias (B)			4.85				Average Bias (B)			3.54		
Standard Deviation (S)			3.83				Standard Deviation (S)			4.55		
Measure Performance  B +S			8.69	<15%	Pass	Measure Performance  B +S			8.09	<15%	Pass	

# TABLE 4.0-C

## 2020 GEL Laboratories, LLC QA Results

Interlaboratory cross check samples from Eckert & Ziegler Analytics (EZA) were received and analyzed by GEL during 2020. 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
I-131 in Milk with EZA	E13173	I-131	2	pCi/L	83.1	81.5	1.02	Agreement
	E13177	I-131	3	pCi/L	94.9	95.0	1.00	Agreement
	E13181	I-131	4	pCi/L	94.4	91.9	1.08	Agreement

**APPENDIX A**

**ENVIRONMENTAL SAMPLING  
&  
ANALYSIS PROCEDURES**

---

# APPENDIX A

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## 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, and Environmental Services.

This appendix provides a description of the specific analyses performed on samples collected in the field. Changes to the sampling procedures and analyses procedures are also discussed in the section.

### I. CHANGE OF SAMPLING PROCEDURES

CY NISP-201 (Revision 0) Chemistry Quality Assurance Program Section 7C-Quality Controls for Sampling was implemented during 2020 for the sampling of Drinking Water and Surface Water.

### 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**

There were no fundamental changes to analysis procedure methods, but procedures were revised to increase quality control measurements to comply with CY NISP-201 Chemistry Quality Assurance Program Section 7.

**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 2020

Medium or Pathway Sampled or Measured (Unit of Measurement)	Type and Total No. of Measurements Performed	Lower Limit of Detection (LLD) <sup>(1)</sup>	All Indicator Locations <sup>(2) (3)</sup> Mean Range	Location w/Highest Annual Mean		Control Locations Mean Range <sup>(2) (3)</sup>	No. of Non-Routine Report Meas.
				Name, Distance, and Direction	Mean Range <sup>(2) (3)</sup>		
Air Particulate (pCi/m <sup>3</sup> )	Gross Beta 364 <sup>(4)</sup>	See Table 2.2-C	2.00E-2 (312/312) 7.15E-3 – 3.98E-2	195 (0.19 mi N)	2.13E-2 (52/52) 8.60E-3 – 3.66E-2	102 (9.89 mi WNW) 1.91E-2 (52/52) 7.51E-3 – 3.40E-2	0
	Gamma 28 <sup>(4)</sup>	See Table 2.2-C	All less than LLD	----	----	All less than LLD	0
Air Radioiodine (pCi/m <sup>3</sup> )	Gamma 364 <sup>(4)</sup>	See Table 2.2-C	All less than LLD	----	----	All less than LLD	0
Drinking Water (pCi/l)	Gross Beta 65 <sup>(4)</sup>	4	4.29E+00 (9/52) 3.36E+00 – 5.56E+00	119 (7.40 mi SSW)	4.75E+00 (2/13) 3.94E+00 – 5.56E+00	136 (12.7 mi NNE) 4.25E+00 (3/13) 3.59E+00 – 4.81E+00	0
	Gamma 65 <sup>(4)</sup>	See Table 2.2-C	All less than LLD	----	----	All less than LLD	0
	Tritium <sup>(4) (6)</sup> 20	2000	3.46E+2 (12/16) 2.10E+02 – 5.41E+02	101 (3.31 mi E)	4.87E+02 (4/4) 4.29E+02 – 5.41E+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 <sup>(6)</sup> 12	2000	4.34E+2 (7/8) 1.90E+02 – 7.26E+02	128 (0.45 mi NE)	5.76E+2 (4/4) 4.59E+02 – 7.26E+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 26	See Table 2.2-C	No Indicator Location	----	----	All less than LLD	0

**MCGUIRE NUCLEAR STATION  
RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM DATA SUMMARY**

McGuire Nuclear Station  
Mecklenburg County, North Carolina

Docket Numbers 50-369, 370  
Calendar Year 2020

Medium or Pathway Sampled or Measured (Unit of Measurement)	Type and Total No. of Measurements Performed	Lower Limit of Detection (LLD) <sup>(1)</sup>	All Indicator Locations <sup>(2)(3)</sup> Mean Range	Location w/Highest Annual Mean		Control Locations Mean Range <sup>(2)(3)</sup>	No. of Non-Routine Report Meas.
				Name, Distance, and Direction	Mean Range <sup>(2)(3)</sup>		
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 <sup>(4)</sup>	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 163 <sup>(4)(5)</sup>	-----	1.68E+01 (159/159) 9.75E+00 – 3.02E+01	170 (4.32 mi WNW)	2.50E+01 (4/4) 2.21E+01 – 3.02E+01	175 (15.5 mi WNW) 2.25E+01 (4/4) 2.00E+01 – 2.64E+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 ( $n * 0.95$  ergs/g-Roentgen)<sup>1</sup>.
6. Quarterly tritium composites determined using quarter days (92 days +/- 25% (23 days)).

<sup>1</sup> Cember, H. (2009). Introduction to Health Physics, 4<sup>th</sup> 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 99.89% availability in 2020.

Location	Scheduled Collection Dates	Code	Description & Action to Prevent Recurrence	Corrective Action
103	2/3 – 2/10/2020	PI	2.23 hours downtime due to power interruption, cause indeterminate.	NCR # 02315237
133	10/19 – 10/26/2020	CN	23.58 hours downtime due to construction.	NCR # 02354858
125	10/26 – 11/2/2020	PI	43.8 hours downtime due to onsite power outage, breaker repair.	NCR # 02355495 NCR # 02355934

#### 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 99.99% availability in 2020.

Location	Scheduled Collection Dates	Code	Description & Action to Prevent Recurrence	Corrective Action
194	9/8 – 10/5/2020	PM	4 hours downtime due to power interruption caused by a preventive maintenance breaker replacement.	NCR # 02351832

## C.2 UNAVAILABLE ANALYSES

### Irrigated Gardens

Location	Scheduled Collection Dates	Code	Description & Action to Prevent Recurrence	Corrective Action
3.03 Miles North	Not Applicable	OT	The 2018 Land Use Census (LUC) field survey identified an irrigated garden located in the N sector, 3.03 miles from the McGuire site. The garden owner at that time indicated they would not be willing to participate in the MNS REMP, making the location unavailable for the sampling program. The garden was subsequently identified again by the 2019 and 2020 McGuire LUC but remained unavailable for the REMP since the owner was still unwilling to participate. The McGuire REMP broadleaf vegetation sampling location 193 was in place and being routinely sampled during this time and is in the N sector at the site boundary @ 0.19 miles. Location 193 D/Q @ 0.2 miles is 8.295E-07 and the D/Q @ 3.03 miles North is 1.689E-09. The 3.03 miles north location is not a component of the REMP.	NCR # 02342818

### TLD

Location	Scheduled Collection Dates	Code	Description & Action to Prevent Recurrence	Corrective Action
152	9/16 – 12/14/2020	VN	TLD missing at time of collection due to vandalism, theft.	NCR # 02362109



**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

#### **TLDs**

McGuire environmental Alpha (A) and Bravo (B) TLDs are co-located TLDs at each TLD location adjacently placed to comply with ANSI/HPS N13.37-2014 Section 7.1 Paragraph 7. The 3Q2020 TLD collection indicated vandalism with one of the two co-located location 166 TLDs. The Alpha (A) TLD was intact, available, collected, and did not appear to have experienced any tampering or vandalism. The Bravo (B) TLD was found on the ground. The Alpha (A) TLD was analyzed but was not averaged with the unusable Bravo (B) TLD.

Location	Scheduled		Code	Description & Action to Prevent Recurrence	Corrective Action
	Collection Dates				
166	6/10 – 9/16/2020		VN	Bravo TLD vandalized, unusable, 1 TLD reported.	NCR # 02348960

**APPENDIX E**

**RADIOLOGICAL  
ENVIRONMENTAL MONITORING  
PROGRAM RESULTS**

**2020**

This appendix includes sample analysis report summaries and supportive data generated from each sample medium for 2020.

# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
514923	12/30/2019 - 1/6/2020	Beta	1.39E-02	2.81E-03	3.42E-03
515256	1/6/2020 - 1/13/2020	Beta	1.25E-02	2.74E-03	3.44E-03
515493	1/13/2020 - 1/20/2020	Beta	1.47E-02	2.80E-03	3.28E-03
515886	1/20/2020 - 1/27/2020	Beta	1.92E-02	2.66E-03	2.68E-03
516140	1/27/2020 - 2/3/2020	Beta	1.51E-02	2.74E-03	3.10E-03
516504	2/3/2020 - 2/10/2020	Beta	1.35E-02	2.79E-03	3.43E-03
516884	2/10/2020 - 2/17/2020	Beta	1.79E-02	2.51E-03	2.46E-03
517409	2/17/2020 - 2/24/2020	Beta	2.05E-02	3.02E-03	2.99E-03
517672	2/24/2020 - 3/2/2020	Beta	1.53E-02	2.50E-03	2.82E-03
518706	3/2/2020 - 3/9/2020	Beta	1.37E-02	2.41E-03	2.74E-03
519311	3/9/2020 - 3/16/2020	Beta	1.50E-02	2.86E-03	3.43E-03
519696	3/16/2020 - 3/23/2020	Beta	1.62E-02	2.87E-03	3.21E-03
520286	3/23/2020 - 3/30/2020	Beta	1.52E-02	2.74E-03	3.14E-03
520293	12/30/2019 - 3/30/2020	Nuclide	Activity	2 Sigma Error	MDA
		Cs-134	<1.61E-03	0.00E+00	1.61E-03
		Cs-137	<1.65E-03	0.00E+00	1.65E-03
		Be-7	1.51E-01	3.88E-02	3.79E-02
		K-40	<2.91E-02	0.00E+00	2.91E-02
520508	3/30/2020 - 4/6/2020	Beta	1.58E-02	2.87E-03	3.34E-03
520800	4/6/2020 - 4/13/2020	Beta	2.18E-02	2.86E-03	2.95E-03
521605	4/13/2020 - 4/20/2020	Beta	2.65E-02	3.35E-03	3.11E-03
522033	4/20/2020 - 4/27/2020	Beta	1.65E-02	2.75E-03	2.97E-03
522342	4/27/2020 - 5/4/2020	Beta	1.94E-02	2.65E-03	2.63E-03
522591	5/4/2020 - 5/11/2020	Beta	1.95E-02	2.95E-03	3.01E-03
523101	5/11/2020 - 5/18/2020	Beta	1.92E-02	3.00E-03	3.13E-03
523467	5/18/2020 - 5/26/2020	Beta	7.51E-03	2.14E-03	2.91E-03
523875	5/26/2020 - 6/1/2020	Beta	1.29E-02	3.09E-03	3.95E-03
524436	6/1/2020 - 6/8/2020	Beta	2.61E-02	3.30E-03	3.21E-03



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m<sup>3</sup>

Sample Point 102 [ CONTROL - WNW @ 9.89 miles ]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
524761	6/8/2020 - 6/15/2020	Beta	1.79E-02	2.62E-03	2.75E-03
524986	6/15/2020 - 6/22/2020	Beta	1.22E-02	2.64E-03	3.25E-03
525364	6/22/2020 - 6/29/2020	Beta	2.09E-02	3.01E-03	2.94E-03
525371	3/30/2020 - 6/29/2020	Cs-134	<2.04E-03	0.00E+00	2.04E-03
		Cs-137	<1.20E-03	0.00E+00	1.20E-03
		Be-7	1.51E-01	3.65E-02	2.95E-02
		K-40	<3.05E-02	0.00E+00	3.05E-02
525583	6/29/2020 - 7/6/2020	Beta	2.19E-02	2.88E-03	3.04E-03
525946	7/6/2020 - 7/13/2020	Beta	1.60E-02	2.63E-03	3.00E-03
526270	7/13/2020 - 7/20/2020	Beta	3.08E-02	3.19E-03	2.86E-03
526556	7/20/2020 - 7/27/2020	Beta	1.79E-02	2.87E-03	3.00E-03
526873	7/27/2020 - 8/3/2020	Beta	1.81E-02	2.65E-03	2.85E-03
527362	8/3/2020 - 8/10/2020	Beta	2.04E-02	3.14E-03	3.40E-03
527644	8/10/2020 - 8/17/2020	Beta	1.99E-02	3.04E-03	3.22E-03
527945	8/17/2020 - 8/24/2020	Beta	2.76E-02	3.36E-03	2.98E-03
528692	8/24/2020 - 8/31/2020	Beta	1.78E-02	3.08E-03	3.64E-03
529031	8/31/2020 - 9/8/2020	Beta	2.50E-02	2.95E-03	2.64E-03
530022	9/8/2020 - 9/14/2020	Beta	1.77E-02	3.17E-03	3.52E-03
530320	9/14/2020 - 9/22/2020	Beta	1.87E-02	2.86E-03	3.15E-03
530590	9/22/2020 - 9/28/2020	Beta	2.13E-02	3.26E-03	3.30E-03
531115	6/29/2020 - 9/28/2020	Cs-134	<1.46E-03	0.00E+00	1.46E-03
		Cs-137	<8.22E-04	0.00E+00	8.22E-04
		Be-7	1.34E-01	3.29E-02	2.68E-02
		K-40	<3.73E-02	0.00E+00	3.73E-02
531108	9/28/2020 - 10/5/2020	Beta	1.43E-02	2.99E-03	3.82E-03
531703	10/5/2020 - 10/12/2020	Beta	3.40E-02	3.20E-03	2.46E-03
532105	10/12/2020 - 10/19/2020	Beta	1.62E-02	2.93E-03	3.42E-03
532527	10/19/2020 - 10/26/2020	Beta	2.03E-02	2.90E-03	2.76E-03
532842	10/26/2020 - 11/2/2020	Beta	1.51E-02	2.95E-03	3.62E-03



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
533363	11/2/2020 - 11/9/2020	Beta	2.48E-02	3.19E-03	2.93E-03
533826	11/9/2020 - 11/16/2020	Beta	1.75E-02	2.86E-03	3.09E-03
534124	11/16/2020 - 11/23/2020	Beta	1.78E-02	3.01E-03	3.45E-03
534589	11/23/2020 - 11/30/2020	Beta	3.01E-02	3.49E-03	3.21E-03
534715	11/30/2020 - 12/7/2020	Beta	2.04E-02	3.07E-03	3.32E-03
535356	12/7/2020 - 12/14/2020	Beta	3.36E-02	3.70E-03	3.35E-03
535917	12/14/2020 - 12/21/2020	Beta	1.85E-02	2.98E-03	3.29E-03
536199	12/21/2020 - 12/28/2020	Beta	2.04E-02	3.05E-03	3.18E-03
536775	9/28/2020 - 12/28/2020	Cs-134	<1.62E-03	0.00E+00	1.62E-03
		Cs-137	<1.45E-03	0.00E+00	1.45E-03
		Be-7	1.29E-01	3.71E-02	3.99E-02
		K-40	<3.67E-02	0.00E+00	3.67E-02

Sample Point 103 [ INDICATOR - NE @ 4.2 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514924	12/30/2019 - 1/6/2020	Beta	1.42E-02	2.87E-03	3.50E-03
515257	1/6/2020 - 1/13/2020	Beta	1.29E-02	2.74E-03	3.39E-03
515494	1/13/2020 - 1/20/2020	Beta	1.44E-02	2.81E-03	3.33E-03
515887	1/20/2020 - 1/27/2020	Beta	1.99E-02	2.64E-03	2.59E-03
516141	1/27/2020 - 2/3/2020	Beta	1.81E-02	2.98E-03	3.22E-03
516505	2/3/2020 - 2/10/2020	Beta	1.01E-02	2.58E-03	3.40E-03
516885	2/10/2020 - 2/17/2020	Beta	1.32E-02	2.29E-03	2.50E-03
517410	2/17/2020 - 2/24/2020	Beta	1.91E-02	2.90E-03	2.91E-03
517673	2/24/2020 - 3/2/2020	Beta	1.15E-02	2.35E-03	2.90E-03
518707	3/2/2020 - 3/9/2020	Beta	1.41E-02	2.39E-03	2.69E-03
519312	3/9/2020 - 3/16/2020	Beta	1.84E-02	3.07E-03	3.49E-03
519697	3/16/2020 - 3/23/2020	Beta	1.50E-02	2.75E-03	3.12E-03
520287	3/23/2020 - 3/30/2020	Beta	1.47E-02	2.75E-03	3.20E-03
520294	12/30/2019 - 3/30/2020	Cs-134	<1.78E-03	0.00E+00	1.78E-03
		Cs-137	<1.03E-03	0.00E+00	1.03E-03
		Be-7	1.35E-01	3.64E-02	3.50E-02
		K-40	<3.39E-02	0.00E+00	3.39E-02



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
520509	3/30/2020 - 4/6/2020	Beta	1.97E-02	3.05E-03	3.31E-03
520801	4/6/2020 - 4/13/2020	Beta	2.19E-02	2.88E-03	2.98E-03
521606	4/13/2020 - 4/20/2020	Beta	2.16E-02	3.09E-03	3.08E-03
522034	4/20/2020 - 4/27/2020	Beta	1.44E-02	2.65E-03	3.00E-03
522343	4/27/2020 - 5/4/2020	Beta	1.75E-02	2.54E-03	2.61E-03
522592	5/4/2020 - 5/11/2020	Beta	2.00E-02	3.00E-03	3.04E-03
523102	5/11/2020 - 5/18/2020	Beta	1.77E-02	2.90E-03	3.10E-03
523468	5/18/2020 - 5/26/2020	Beta	7.15E-03	2.13E-03	2.94E-03
523876	5/26/2020 - 6/1/2020	Beta	1.17E-02	2.99E-03	3.90E-03
524437	6/1/2020 - 6/8/2020	Beta	2.28E-02	3.17E-03	3.24E-03
524762	6/8/2020 - 6/15/2020	Beta	1.69E-02	2.55E-03	2.72E-03
524987	6/15/2020 - 6/22/2020	Beta	1.42E-02	2.77E-03	3.29E-03
525365	6/22/2020 - 6/29/2020	Beta	1.82E-02	2.85E-03	2.91E-03
525372	3/30/2020 - 6/29/2020	Beta	2.20E-02	2.91E-03	3.08E-03
		Cs-134	<1.29E-03	0.00E+00	1.29E-03
		Cs-137	<1.06E-03	0.00E+00	1.06E-03
		Be-7	1.32E-01	3.69E-02	3.71E-02
		K-40	<1.26E-02	0.00E+00	1.26E-02
525584	6/29/2020 - 7/6/2020	Beta	2.20E-02	2.91E-03	3.08E-03
525947	7/6/2020 - 7/13/2020	Beta	1.37E-02	2.49E-03	2.95E-03
526271	7/13/2020 - 7/20/2020	Beta	2.87E-02	3.13E-03	2.89E-03
526557	7/20/2020 - 7/27/2020	Beta	1.97E-02	2.97E-03	3.00E-03
526874	7/27/2020 - 8/3/2020	Beta	1.85E-02	2.67E-03	2.86E-03
527363	8/3/2020 - 8/10/2020	Beta	2.02E-02	3.10E-03	3.36E-03
527645	8/10/2020 - 8/17/2020	Beta	2.28E-02	3.20E-03	3.26E-03
527946	8/17/2020 - 8/24/2020	Beta	2.49E-02	3.21E-03	2.95E-03
528693	8/24/2020 - 8/31/2020	Beta	1.93E-02	3.18E-03	3.68E-03
529032	8/31/2020 - 9/8/2020	Beta	2.47E-02	2.93E-03	2.61E-03



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m<sup>3</sup>

Sample Point 103 [ INDICATOR - NE @ 4.2 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
530023	9/8/2020 - 9/14/2020	Beta	1.34E-02	2.95E-03	3.57E-03
530321	9/14/2020 - 9/22/2020	Beta	1.99E-02	2.89E-03	3.12E-03
530591	9/22/2020 - 9/28/2020	Beta	2.03E-02	3.24E-03	3.34E-03
531116	6/29/2020 - 9/28/2020	Cs-134	<1.44E-03	0.00E+00	1.44E-03
		Cs-137	<1.32E-03	0.00E+00	1.32E-03
		Be-7	1.15E-01	3.58E-02	4.21E-02
		K-40	<3.66E-02	0.00E+00	3.66E-02
531109	9/28/2020 - 10/5/2020	Beta	1.41E-02	2.96E-03	3.78E-03
531704	10/5/2020 - 10/12/2020	Beta	3.45E-02	3.24E-03	2.49E-03
532106	10/12/2020 - 10/19/2020	Beta	2.03E-02	3.10E-03	3.38E-03
532528	10/19/2020 - 10/26/2020	Beta	1.73E-02	2.76E-03	2.79E-03
532843	10/26/2020 - 11/2/2020	Beta	1.35E-02	2.85E-03	3.59E-03
533364	11/2/2020 - 11/9/2020	Beta	2.47E-02	3.21E-03	2.96E-03
533827	11/9/2020 - 11/16/2020	Beta	1.78E-02	2.87E-03	3.09E-03
534125	11/16/2020 - 11/23/2020	Beta	1.55E-02	2.89E-03	3.45E-03
534590	11/23/2020 - 11/30/2020	Beta	2.79E-02	3.38E-03	3.18E-03
534716	11/30/2020 - 12/7/2020	Beta	1.90E-02	3.03E-03	3.35E-03
535357	12/7/2020 - 12/14/2020	Beta	3.78E-02	3.83E-03	3.30E-03
535918	12/14/2020 - 12/21/2020	Beta	1.67E-02	2.91E-03	3.34E-03
536200	12/21/2020 - 12/28/2020	Beta	2.01E-02	2.99E-03	3.13E-03
536776	9/28/2020 - 12/28/2020	Cs-134	<2.20E-03	0.00E+00	2.20E-03
		Cs-137	<1.06E-03	0.00E+00	1.06E-03
		Be-7	1.09E-01	3.27E-02	3.28E-02
		K-40	<2.57E-02	0.00E+00	2.57E-02

## Sample Point 120 [ INDICATOR - NNE @ 0.46 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514925	12/30/2019 - 1/6/2020	Beta	1.57E-02	3.01E-03	3.62E-03
515258	1/6/2020 - 1/13/2020	Beta	1.40E-02	2.76E-03	3.35E-03
515495	1/13/2020 - 1/20/2020	Beta	1.95E-02	3.08E-03	3.33E-03
515888	1/20/2020 - 1/27/2020	Beta	1.78E-02	2.58E-03	2.66E-03
516142	1/27/2020 - 2/3/2020	Beta	1.75E-02	2.89E-03	3.13E-03





# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
516506	2/3/2020 - 2/10/2020	Beta	1.55E-02	2.86E-03	3.36E-03
516886	2/10/2020 - 2/17/2020	Beta	1.57E-02	2.42E-03	2.50E-03
517411	2/17/2020 - 2/24/2020	Beta	1.92E-02	2.87E-03	2.85E-03
517674	2/24/2020 - 3/2/2020	Beta	1.41E-02	2.52E-03	2.96E-03
518708	3/2/2020 - 3/9/2020	Beta	1.42E-02	2.40E-03	2.68E-03
519313	3/9/2020 - 3/16/2020	Beta	2.09E-02	3.22E-03	3.51E-03
519698	3/16/2020 - 3/23/2020	Beta	1.59E-02	2.82E-03	3.16E-03
520288	3/23/2020 - 3/30/2020	Beta	1.52E-02	2.78E-03	3.21E-03
520295	12/30/2019 - 3/30/2020	Cs-134	<2.03E-03	0.00E+00	2.03E-03
		Cs-137	<1.19E-03	0.00E+00	1.19E-03
		Be-7	1.61E-01	3.59E-02	2.07E-02
		K-40	<2.67E-02	0.00E+00	2.67E-02
520510	3/30/2020 - 4/6/2020	Beta	1.91E-02	3.04E-03	3.34E-03
520802	4/6/2020 - 4/13/2020	Beta	2.30E-02	2.91E-03	2.95E-03
521607	4/13/2020 - 4/20/2020	Beta	2.31E-02	3.13E-03	3.02E-03
522035	4/20/2020 - 4/27/2020	Beta	1.68E-02	2.82E-03	3.06E-03
522344	4/27/2020 - 5/4/2020	Beta	1.76E-02	2.56E-03	2.62E-03
522593	5/4/2020 - 5/11/2020	Beta	1.87E-02	2.92E-03	3.02E-03
523103	5/11/2020 - 5/18/2020	Beta	2.02E-02	2.99E-03	3.05E-03
523469	5/18/2020 - 5/26/2020	Beta	9.37E-03	2.30E-03	2.99E-03
523877	5/26/2020 - 6/1/2020	Beta	1.07E-02	2.94E-03	3.93E-03
524438	6/1/2020 - 6/8/2020	Beta	2.44E-02	3.24E-03	3.23E-03
524763	6/8/2020 - 6/15/2020	Beta	1.75E-02	2.55E-03	2.67E-03
524988	6/15/2020 - 6/22/2020	Beta	1.44E-02	2.82E-03	3.35E-03
525366	6/22/2020 - 6/29/2020	Beta	2.32E-02	3.12E-03	2.93E-03
525373	3/30/2020 - 6/29/2020	Cs-134	<1.59E-03	0.00E+00	1.59E-03
		Cs-137	<1.30E-03	0.00E+00	1.30E-03
		Be-7	1.54E-01	3.75E-02	2.80E-02
		K-40	<3.43E-02	0.00E+00	3.43E-02



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m<sup>3</sup>

Sample Point 120 [ INDICATOR - NNE @ 0.46 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
525585	6/29/2020 - 7/6/2020	Beta	2.14E-02	2.88E-03	3.07E-03
525948	7/6/2020 - 7/13/2020	Beta	1.65E-02	2.58E-03	2.90E-03
526272	7/13/2020 - 7/20/2020	Beta	3.30E-02	3.33E-03	2.94E-03
526558	7/20/2020 - 7/27/2020	Beta	2.38E-02	3.17E-03	3.01E-03
526875	7/27/2020 - 8/3/2020	Beta	2.06E-02	2.77E-03	2.86E-03
527364	8/3/2020 - 8/10/2020	Beta	2.30E-02	3.19E-03	3.30E-03
527646	8/10/2020 - 8/17/2020	Beta	2.44E-02	3.32E-03	3.32E-03
527947	8/17/2020 - 8/24/2020	Beta	2.46E-02	3.20E-03	2.96E-03
528694	8/24/2020 - 8/31/2020	Beta	2.02E-02	3.20E-03	3.67E-03
529033	8/31/2020 - 9/8/2020	Beta	2.50E-02	2.90E-03	2.55E-03
530024	9/8/2020 - 9/14/2020	Beta	1.37E-02	3.04E-03	3.69E-03
530322	9/14/2020 - 9/22/2020	Beta	1.76E-02	2.80E-03	3.13E-03
530592	9/22/2020 - 9/28/2020	Beta	2.52E-02	3.48E-03	3.32E-03
531117	6/29/2020 - 9/28/2020	Beta	1.51E-02	2.95E-03	3.70E-03
531110	9/28/2020 - 10/5/2020	Beta	1.51E-02	2.95E-03	3.70E-03
531705	10/5/2020 - 10/12/2020	Beta	3.21E-02	3.20E-03	2.56E-03
532107	10/12/2020 - 10/19/2020	Beta	1.59E-02	2.85E-03	3.32E-03
532529	10/19/2020 - 10/26/2020	Beta	1.86E-02	2.86E-03	2.82E-03
532844	10/26/2020 - 11/2/2020	Beta	1.23E-02	2.74E-03	3.52E-03
533365	11/2/2020 - 11/9/2020	Beta	2.33E-02	3.18E-03	3.03E-03
533828	11/9/2020 - 11/16/2020	Beta	1.84E-02	2.90E-03	3.09E-03
534126	11/16/2020 - 11/23/2020	Beta	1.73E-02	2.98E-03	3.45E-03
534591	11/23/2020 - 11/30/2020	Beta	2.96E-02	3.41E-03	3.12E-03
534717	11/30/2020 - 12/7/2020	Beta	2.05E-02	3.15E-03	3.43E-03
		Cs-134	<1.76E-03	0.00E+00	1.76E-03
		Cs-137	<1.45E-03	0.00E+00	1.45E-03
		Be-7	1.72E-01	3.86E-02	3.21E-02
		K-40	3.02E-02	1.44E-02	4.54E-03



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m<sup>3</sup>

Sample Point 120 [ INDICATOR - NNE @ 0.46 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
535358	12/7/2020 - 12/14/2020	Beta	3.51E-02	3.69E-03	3.25E-03
535919	12/14/2020 - 12/21/2020	Beta	1.81E-02	2.99E-03	3.35E-03
536201	12/21/2020 - 12/28/2020	Beta	2.06E-02	3.02E-03	3.13E-03
536777	9/28/2020 - 12/28/2020	Cs-134	<1.93E-03	0.00E+00	1.93E-03
		Cs-137	<1.58E-03	0.00E+00	1.58E-03
		Be-7	1.25E-01	3.64E-02	3.70E-02
		K-40	1.51E-02	1.32E-02	1.80E-02

Sample Point 121 [ INDICATOR - NE @ 0.47 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514926	12/30/2019 - 1/6/2020	Beta	1.49E-02	2.96E-03	3.59E-03
515259	1/6/2020 - 1/13/2020	Beta	1.61E-02	2.88E-03	3.36E-03
515496	1/13/2020 - 1/20/2020	Beta	1.84E-02	3.02E-03	3.33E-03
515889	1/20/2020 - 1/27/2020	Beta	2.22E-02	2.78E-03	2.65E-03
516143	1/27/2020 - 2/3/2020	Beta	1.73E-02	2.89E-03	3.14E-03
516507	2/3/2020 - 2/10/2020	Beta	1.44E-02	2.79E-03	3.36E-03
516887	2/10/2020 - 2/17/2020	Beta	2.04E-02	2.65E-03	2.50E-03
517412	2/17/2020 - 2/24/2020	Beta	2.48E-02	3.14E-03	2.86E-03
517675	2/24/2020 - 3/2/2020	Beta	1.54E-02	2.58E-03	2.95E-03
518709	3/2/2020 - 3/9/2020	Beta	1.74E-02	2.56E-03	2.68E-03
519314	3/9/2020 - 3/16/2020	Beta	1.94E-02	3.14E-03	3.51E-03
519699	3/16/2020 - 3/23/2020	Beta	1.71E-02	2.90E-03	3.18E-03
520289	3/23/2020 - 3/30/2020	Beta	1.42E-02	2.71E-03	3.18E-03
520296	12/30/2019 - 3/30/2020	Cs-134	<1.29E-03	0.00E+00	1.29E-03
		Cs-137	<1.06E-03	0.00E+00	1.06E-03
		Be-7	1.46E-01	3.58E-02	2.67E-02
		K-40	<1.26E-02	0.00E+00	1.26E-02
520511	3/30/2020 - 4/6/2020	Beta	2.10E-02	3.14E-03	3.34E-03
520803	4/6/2020 - 4/13/2020	Beta	2.71E-02	3.08E-03	2.95E-03
521608	4/13/2020 - 4/20/2020	Beta	2.61E-02	3.28E-03	3.04E-03
522036	4/20/2020 - 4/27/2020	Beta	1.43E-02	2.67E-03	3.04E-03
522345	4/27/2020 - 5/4/2020	Beta	1.90E-02	2.62E-03	2.62E-03



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m<sup>3</sup>

Sample Point 121 [ INDICATOR - NE @ 0.47 miles ]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
522594	5/4/2020 - 5/11/2020	Beta	2.40E-02	3.18E-03	3.02E-03
523104	5/11/2020 - 5/18/2020	Beta	2.05E-02	3.01E-03	3.06E-03
523470	5/18/2020 - 5/26/2020	Beta	9.78E-03	2.31E-03	2.98E-03
523878	5/26/2020 - 6/1/2020	Beta	1.46E-02	3.17E-03	3.92E-03
524439	6/1/2020 - 6/8/2020	Beta	2.35E-02	3.20E-03	3.23E-03
524764	6/8/2020 - 6/15/2020	Beta	1.62E-02	2.50E-03	2.69E-03
524989	6/15/2020 - 6/22/2020	Beta	1.64E-02	2.92E-03	3.33E-03
525367	6/22/2020 - 6/29/2020	Beta	2.34E-02	3.13E-03	2.93E-03
525374	3/30/2020 - 6/29/2020	Cs-134	<1.01E-03	0.00E+00	1.01E-03
		Cs-137	<1.58E-03	0.00E+00	1.58E-03
		Be-7	1.27E-01	3.69E-02	3.97E-02
		K-40	<3.09E-02	0.00E+00	3.09E-02
525586	6/29/2020 - 7/6/2020	Beta	2.09E-02	2.85E-03	3.06E-03
525949	7/6/2020 - 7/13/2020	Beta	1.65E-02	2.60E-03	2.92E-03
526273	7/13/2020 - 7/20/2020	Beta	3.15E-02	3.26E-03	2.92E-03
526559	7/20/2020 - 7/27/2020	Beta	1.91E-02	2.94E-03	3.01E-03
526876	7/27/2020 - 8/3/2020	Beta	2.07E-02	2.78E-03	2.86E-03
527365	8/3/2020 - 8/10/2020	Beta	2.06E-02	3.09E-03	3.32E-03
527647	8/10/2020 - 8/17/2020	Beta	2.43E-02	3.30E-03	3.30E-03
527948	8/17/2020 - 8/24/2020	Beta	3.04E-02	3.46E-03	2.95E-03
528695	8/24/2020 - 8/31/2020	Beta	2.00E-02	3.20E-03	3.67E-03
529034	8/31/2020 - 9/8/2020	Beta	2.50E-02	2.91E-03	2.58E-03
530025	9/8/2020 - 9/14/2020	Beta	1.50E-02	3.09E-03	3.64E-03
530323	9/14/2020 - 9/22/2020	Beta	2.00E-02	2.90E-03	3.13E-03
530593	9/22/2020 - 9/28/2020	Beta	2.55E-02	3.50E-03	3.32E-03
531118	6/29/2020 - 9/28/2020	Cs-134	<1.02E-03	0.00E+00	1.02E-03
		Cs-137	<1.06E-03	0.00E+00	1.06E-03
		Be-7	1.32E-01	3.09E-02	1.60E-02
		K-40	<2.85E-02	0.00E+00	2.85E-02



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
531111	9/28/2020 - 10/5/2020	Beta	2.07E-02	3.24E-03	3.73E-03
531706	10/5/2020 - 10/12/2020	Beta	3.51E-02	3.30E-03	2.53E-03
532108	10/12/2020 - 10/19/2020	Beta	2.32E-02	3.21E-03	3.33E-03
532530	10/19/2020 - 10/26/2020	Beta	1.88E-02	2.86E-03	2.82E-03
532845	10/26/2020 - 11/2/2020	Beta	1.58E-02	2.93E-03	3.54E-03
533366	11/2/2020 - 11/9/2020	Beta	2.85E-02	3.41E-03	3.00E-03
533829	11/9/2020 - 11/16/2020	Beta	1.91E-02	2.94E-03	3.09E-03
534127	11/16/2020 - 11/23/2020	Beta	1.92E-02	3.08E-03	3.45E-03
534592	11/23/2020 - 11/30/2020	Beta	3.23E-02	3.54E-03	3.14E-03
534718	11/30/2020 - 12/7/2020	Beta	2.15E-02	3.18E-03	3.40E-03
535359	12/7/2020 - 12/14/2020	Beta	3.77E-02	3.80E-03	3.26E-03
535920	12/14/2020 - 12/21/2020	Beta	1.92E-02	3.04E-03	3.35E-03
536202	12/21/2020 - 12/28/2020	Beta	2.29E-02	3.13E-03	3.14E-03
536778	9/28/2020 - 12/28/2020	Cs-134	<1.61E-03	0.00E+00	1.61E-03
		Cs-137	<1.99E-03	0.00E+00	1.99E-03
		Be-7	1.47E-01	3.60E-02	3.08E-02
		K-40	2.82E-02	1.48E-02	1.31E-02

## Sample Point 125 [ INDICATOR - SW @ 0.38 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514927	12/30/2019 - 1/6/2020	Beta	1.77E-02	3.10E-03	3.59E-03
515260	1/6/2020 - 1/13/2020	Beta	1.24E-02	2.68E-03	3.36E-03
515497	1/13/2020 - 1/20/2020	Beta	1.56E-02	2.87E-03	3.33E-03
515890	1/20/2020 - 1/27/2020	Beta	1.88E-02	2.62E-03	2.64E-03
516144	1/27/2020 - 2/3/2020	Beta	2.19E-02	3.13E-03	3.15E-03
516508	2/3/2020 - 2/10/2020	Beta	1.46E-02	2.80E-03	3.36E-03
516888	2/10/2020 - 2/17/2020	Beta	1.64E-02	2.45E-03	2.50E-03
517413	2/17/2020 - 2/24/2020	Beta	2.22E-02	3.02E-03	2.86E-03
517676	2/24/2020 - 3/2/2020	Beta	1.42E-02	2.52E-03	2.95E-03
518710	3/2/2020 - 3/9/2020	Beta	1.21E-02	2.29E-03	2.69E-03



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m<sup>3</sup>

Sample Point 125 [ INDICATOR - SW @ 0.38 miles ]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
519315	3/9/2020 - 3/16/2020	Beta	2.06E-02	3.18E-03	3.48E-03
519700	3/16/2020 - 3/23/2020	Beta	1.66E-02	2.86E-03	3.16E-03
520290	3/23/2020 - 3/30/2020	Beta	1.17E-02	2.58E-03	3.21E-03
520297	12/30/2019 - 3/30/2020	Cs-134	<1.59E-03	0.00E+00	1.59E-03
		Cs-137	<8.92E-04	0.00E+00	8.92E-04
		Be-7	1.55E-01	3.87E-02	3.13E-02
		K-40	<3.44E-02	0.00E+00	3.44E-02
520512	3/30/2020 - 4/6/2020	Beta	1.73E-02	2.94E-03	3.34E-03
520804	4/6/2020 - 4/13/2020	Beta	2.10E-02	2.83E-03	2.96E-03
521609	4/13/2020 - 4/20/2020	Beta	2.27E-02	3.12E-03	3.05E-03
522037	4/20/2020 - 4/27/2020	Beta	1.08E-02	2.46E-03	3.03E-03
522346	4/27/2020 - 5/4/2020	Beta	1.67E-02	2.51E-03	2.62E-03
522595	5/4/2020 - 5/11/2020	Beta	2.15E-02	3.06E-03	3.02E-03
523105	5/11/2020 - 5/18/2020	Beta	1.79E-02	2.89E-03	3.08E-03
523471	5/18/2020 - 5/26/2020	Beta	8.23E-03	2.21E-03	2.96E-03
523879	5/26/2020 - 6/1/2020	Beta	1.32E-02	3.09E-03	3.92E-03
524440	6/1/2020 - 6/8/2020	Beta	2.01E-02	3.04E-03	3.23E-03
524765	6/8/2020 - 6/15/2020	Beta	1.65E-02	2.52E-03	2.69E-03
524990	6/15/2020 - 6/22/2020	Beta	1.50E-02	2.83E-03	3.32E-03
525368	6/22/2020 - 6/29/2020	Beta	1.98E-02	2.94E-03	2.93E-03
525375	3/30/2020 - 6/29/2020	Cs-134	<1.76E-03	0.00E+00	1.76E-03
		Cs-137	<1.55E-03	0.00E+00	1.55E-03
		Be-7	1.14E-01	3.48E-02	3.80E-02
		K-40	1.49E-02	1.50E-02	2.29E-02
525587	6/29/2020 - 7/6/2020	Beta	2.24E-02	2.92E-03	3.07E-03
525950	7/6/2020 - 7/13/2020	Beta	1.95E-02	2.74E-03	2.93E-03
526274	7/13/2020 - 7/20/2020	Beta	3.03E-02	3.21E-03	2.91E-03
526560	7/20/2020 - 7/27/2020	Beta	2.16E-02	3.06E-03	3.00E-03
526877	7/27/2020 - 8/3/2020	Beta	1.95E-02	2.72E-03	2.86E-03



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
527366	8/3/2020 - 8/10/2020	Beta	2.44E-02	3.27E-03	3.33E-03
527648	8/10/2020 - 8/17/2020	Beta	3.01E-02	3.56E-03	3.29E-03
527949	8/17/2020 - 8/24/2020	Beta	2.80E-02	3.36E-03	2.96E-03
528696	8/24/2020 - 8/31/2020	Beta	1.57E-02	3.00E-03	3.67E-03
529035	8/31/2020 - 9/8/2020	Beta	2.32E-02	2.84E-03	2.59E-03
530026	9/8/2020 - 9/14/2020	Beta	1.80E-02	3.26E-03	3.62E-03
530324	9/14/2020 - 9/22/2020	Beta	2.23E-02	3.01E-03	3.13E-03
530594	9/22/2020 - 9/28/2020	Beta	2.38E-02	3.40E-03	3.32E-03
531119	6/29/2020 - 9/28/2020	Cs-134	<1.76E-03	0.00E+00	1.76E-03
		Cs-137	<1.30E-03	0.00E+00	1.30E-03
		Be-7	1.71E-01	4.21E-02	4.11E-02
		K-40	<3.78E-02	0.00E+00	3.78E-02
531112	9/28/2020 - 10/5/2020	Beta	1.60E-02	3.03E-03	3.74E-03
531707	10/5/2020 - 10/12/2020	Beta	3.48E-02	3.27E-03	2.51E-03
532109	10/12/2020 - 10/19/2020	Beta	1.88E-02	3.02E-03	3.36E-03
532531	10/19/2020 - 10/26/2020	Beta	2.06E-02	2.95E-03	2.81E-03
532846	10/26/2020 - 11/2/2020	Beta	1.45E-02	3.62E-03	4.80E-03
533367	11/2/2020 - 11/9/2020	Beta	2.60E-02	3.29E-03	2.99E-03
533830	11/9/2020 - 11/16/2020	Beta	1.91E-02	2.94E-03	3.09E-03
534128	11/16/2020 - 11/23/2020	Beta	1.99E-02	3.11E-03	3.45E-03
534593	11/23/2020 - 11/30/2020	Beta	2.84E-02	3.38E-03	3.15E-03
534719	11/30/2020 - 12/7/2020	Beta	1.98E-02	3.09E-03	3.39E-03
535360	12/7/2020 - 12/14/2020	Beta	3.98E-02	3.88E-03	3.27E-03
535921	12/14/2020 - 12/21/2020	Beta	1.87E-02	3.02E-03	3.35E-03
536203	12/21/2020 - 12/28/2020	Beta	2.44E-02	3.20E-03	3.13E-03
536779	9/28/2020 - 12/28/2020	Cs-134	<1.95E-03	0.00E+00	1.95E-03
		Cs-137	<1.60E-03	0.00E+00	1.60E-03
		Be-7	1.43E-01	3.62E-02	3.16E-02
		K-40	2.99E-02	1.61E-02	1.61E-02



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m<sup>3</sup>

Sample Point 133 [ INDICATOR - ENE @ 6.23 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514928	12/30/2019 - 1/6/2020	Beta	1.22E-02	2.77E-03	3.51E-03
515261	1/6/2020 - 1/13/2020	Beta	1.72E-02	2.96E-03	3.39E-03
515498	1/13/2020 - 1/20/2020	Beta	1.67E-02	2.93E-03	3.33E-03
515891	1/20/2020 - 1/27/2020	Beta	1.99E-02	2.63E-03	2.59E-03
516145	1/27/2020 - 2/3/2020	Beta	1.83E-02	2.99E-03	3.22E-03
516509	2/3/2020 - 2/10/2020	Beta	1.34E-02	2.73E-03	3.35E-03
516889	2/10/2020 - 2/17/2020	Beta	1.54E-02	2.41E-03	2.50E-03
517414	2/17/2020 - 2/24/2020	Beta	2.09E-02	2.99E-03	2.91E-03
517677	2/24/2020 - 3/2/2020	Beta	1.36E-02	2.47E-03	2.90E-03
518711	3/2/2020 - 3/9/2020	Beta	1.62E-02	2.50E-03	2.69E-03
519316	3/9/2020 - 3/16/2020	Beta	1.58E-02	2.96E-03	3.49E-03
519701	3/16/2020 - 3/23/2020	Beta	1.74E-02	2.88E-03	3.13E-03
520291	3/23/2020 - 3/30/2020	Beta	1.42E-02	2.72E-03	3.20E-03
520298	12/30/2019 - 3/30/2020	Cs-134	<1.90E-03	0.00E+00	1.90E-03
		Cs-137	<1.32E-03	0.00E+00	1.32E-03
		Be-7	1.42E-01	3.50E-02	2.63E-02
		K-40	<3.15E-02	0.00E+00	3.15E-02
520513	3/30/2020 - 4/6/2020	Beta	1.79E-02	2.95E-03	3.30E-03
520805	4/6/2020 - 4/13/2020	Beta	1.99E-02	2.80E-03	2.99E-03
521610	4/13/2020 - 4/20/2020	Beta	2.30E-02	3.16E-03	3.08E-03
522038	4/20/2020 - 4/27/2020	Beta	1.46E-02	2.67E-03	3.00E-03
522347	4/27/2020 - 5/4/2020	Beta	1.58E-02	2.46E-03	2.61E-03
522596	5/4/2020 - 5/11/2020	Beta	1.99E-02	2.99E-03	3.04E-03
523106	5/11/2020 - 5/18/2020	Beta	1.72E-02	2.87E-03	3.11E-03
523472	5/18/2020 - 5/26/2020	Beta	7.88E-03	2.18E-03	2.94E-03
523880	5/26/2020 - 6/1/2020	Beta	1.40E-02	3.12E-03	3.89E-03
524441	6/1/2020 - 6/8/2020	Beta	2.30E-02	3.19E-03	3.25E-03





# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m<sup>3</sup>

Sample Point 133 [ INDICATOR - ENE @ 6.23 miles ]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
524766	6/8/2020 - 6/15/2020	Beta	1.48E-02	2.45E-03	2.72E-03
524991	6/15/2020 - 6/22/2020	Beta	1.35E-02	2.73E-03	3.29E-03
525369	6/22/2020 - 6/29/2020	Beta	2.14E-02	3.02E-03	2.91E-03
525376	3/30/2020 - 6/29/2020	Cs-134	<1.24E-03	0.00E+00	1.24E-03
		Cs-137	<1.63E-03	0.00E+00	1.63E-03
		Be-7	1.42E-01	4.01E-02	4.47E-02
		K-40	2.77E-02	2.01E-02	2.87E-02
525588	6/29/2020 - 7/6/2020	Beta	2.18E-02	2.90E-03	3.08E-03
525951	7/6/2020 - 7/13/2020	Beta	1.46E-02	2.53E-03	2.96E-03
526275	7/13/2020 - 7/20/2020	Beta	3.07E-02	3.21E-03	2.89E-03
526561	7/20/2020 - 7/27/2020	Beta	1.85E-02	2.90E-03	3.00E-03
526878	7/27/2020 - 8/3/2020	Beta	2.08E-02	2.77E-03	2.85E-03
527367	8/3/2020 - 8/10/2020	Beta	2.06E-02	3.11E-03	3.37E-03
527649	8/10/2020 - 8/17/2020	Beta	2.64E-02	3.37E-03	3.26E-03
527950	8/17/2020 - 8/24/2020	Beta	2.83E-02	3.36E-03	2.95E-03
528697	8/24/2020 - 8/31/2020	Beta	1.99E-02	3.20E-03	3.68E-03
529036	8/31/2020 - 9/8/2020	Beta	2.17E-02	2.78E-03	2.61E-03
530027	9/8/2020 - 9/14/2020	Beta	1.57E-02	3.10E-03	3.58E-03
530325	9/14/2020 - 9/22/2020	Beta	1.88E-02	2.84E-03	3.12E-03
530595	9/22/2020 - 9/28/2020	Beta	2.26E-02	3.36E-03	3.34E-03
531120	6/29/2020 - 9/28/2020	Cs-134	<1.78E-03	0.00E+00	1.78E-03
		Cs-137	<1.20E-03	0.00E+00	1.20E-03
		Be-7	1.54E-01	3.79E-02	3.62E-02
		K-40	3.29E-02	1.76E-02	1.94E-02
531113	9/28/2020 - 10/5/2020	Beta	1.32E-02	2.91E-03	3.77E-03
531708	10/5/2020 - 10/12/2020	Beta	3.52E-02	3.27E-03	2.49E-03
532110	10/12/2020 - 10/19/2020	Beta	1.92E-02	3.06E-03	3.38E-03
532532	10/19/2020 - 10/26/2020	Beta	1.78E-02	3.07E-03	3.24E-03
532847	10/26/2020 - 11/2/2020	Beta	1.40E-02	2.87E-03	3.58E-03



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
533368	11/2/2020 - 11/9/2020	Beta	2.53E-02	3.24E-03	2.96E-03
533831	11/9/2020 - 11/16/2020	Beta	1.71E-02	2.84E-03	3.09E-03
534129	11/16/2020 - 11/23/2020	Beta	1.67E-02	2.96E-03	3.45E-03
534594	11/23/2020 - 11/30/2020	Beta	3.18E-02	3.55E-03	3.18E-03
534720	11/30/2020 - 12/7/2020	Beta	2.24E-02	3.19E-03	3.35E-03
535361	12/7/2020 - 12/14/2020	Beta	3.77E-02	3.83E-03	3.30E-03
535922	12/14/2020 - 12/21/2020	Beta	1.97E-02	3.07E-03	3.35E-03
536204	12/21/2020 - 12/28/2020	Beta	2.29E-02	3.13E-03	3.14E-03
536780	9/28/2020 - 12/28/2020	Cs-134	<1.47E-03	0.00E+00	1.47E-03
		Cs-137	<1.20E-03	0.00E+00	1.20E-03
		Be-7	1.50E-01	3.84E-02	3.68E-02
		K-40	1.92E-02	1.43E-02	1.86E-02

## Sample Point 195 [ INDICATOR - N @ 0.19 miles ]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
514929	12/30/2019 - 1/6/2020	Beta	1.72E-02	3.09E-03	3.60E-03
515262	1/6/2020 - 1/13/2020	Beta	1.76E-02	2.96E-03	3.36E-03
515499	1/13/2020 - 1/20/2020	Beta	2.04E-02	3.12E-03	3.33E-03
515892	1/20/2020 - 1/27/2020	Beta	2.57E-02	2.93E-03	2.66E-03
516146	1/27/2020 - 2/3/2020	Beta	2.25E-02	3.15E-03	3.14E-03
516510	2/3/2020 - 2/10/2020	Beta	1.54E-02	2.85E-03	3.36E-03
516890	2/10/2020 - 2/17/2020	Beta	1.89E-02	2.59E-03	2.50E-03
517415	2/17/2020 - 2/24/2020	Beta	2.45E-02	3.12E-03	2.85E-03
517678	2/24/2020 - 3/2/2020	Beta	1.51E-02	2.57E-03	2.97E-03
518712	3/2/2020 - 3/9/2020	Beta	1.74E-02	2.56E-03	2.68E-03
519317	3/9/2020 - 3/16/2020	Beta	2.12E-02	3.23E-03	3.51E-03
519702	3/16/2020 - 3/23/2020	Beta	1.82E-02	2.94E-03	3.16E-03
520292	3/23/2020 - 3/30/2020	Beta	1.63E-02	2.84E-03	3.21E-03
520299	12/30/2019 - 3/30/2020	Cs-134	<2.17E-03	0.00E+00	2.17E-03
		Cs-137	<1.34E-03	0.00E+00	1.34E-03
		Be-7	1.44E-01	4.18E-02	4.72E-02
		K-40	3.70E-02	1.61E-02	4.56E-03



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
520514	3/30/2020 - 4/6/2020	Beta	2.15E-02	3.16E-03	3.34E-03
520806	4/6/2020 - 4/13/2020	Beta	2.45E-02	2.97E-03	2.96E-03
521611	4/13/2020 - 4/20/2020	Beta	2.41E-02	3.17E-03	3.03E-03
522039	4/20/2020 - 4/27/2020	Beta	1.61E-02	2.79E-03	3.05E-03
522348	4/27/2020 - 5/4/2020	Beta	1.67E-02	2.51E-03	2.62E-03
522597	5/4/2020 - 5/11/2020	Beta	1.95E-02	2.96E-03	3.02E-03
523107	5/11/2020 - 5/18/2020	Beta	2.12E-02	3.05E-03	3.05E-03
523473	5/18/2020 - 5/26/2020	Beta	8.60E-03	2.26E-03	2.99E-03
523881	5/26/2020 - 6/1/2020	Beta	1.46E-02	3.17E-03	3.92E-03
524442	6/1/2020 - 6/8/2020	Beta	2.21E-02	3.13E-03	3.22E-03
524767	6/8/2020 - 6/15/2020	Beta	1.96E-02	2.65E-03	2.67E-03
524992	6/15/2020 - 6/22/2020	Beta	1.60E-02	2.91E-03	3.34E-03
525370	6/22/2020 - 6/29/2020	Beta	2.19E-02	3.06E-03	2.93E-03
525377	3/30/2020 - 6/29/2020	Cs-134	<1.92E-03	0.00E+00	1.92E-03
		Cs-137	<1.20E-03	0.00E+00	1.20E-03
		Be-7	1.62E-01	3.92E-02	3.49E-02
		K-40	<2.37E-02	0.00E+00	2.37E-02
525589	6/29/2020 - 7/6/2020	Beta	2.44E-02	3.01E-03	3.07E-03
525952	7/6/2020 - 7/13/2020	Beta	2.08E-02	2.79E-03	2.90E-03
526276	7/13/2020 - 7/20/2020	Beta	3.66E-02	3.46E-03	2.93E-03
526562	7/20/2020 - 7/27/2020	Beta	2.14E-02	3.06E-03	3.01E-03
526879	7/27/2020 - 8/3/2020	Beta	1.99E-02	2.74E-03	2.86E-03
527368	8/3/2020 - 8/10/2020	Beta	2.23E-02	3.16E-03	3.30E-03
527650	8/10/2020 - 8/17/2020	Beta	2.45E-02	3.33E-03	3.32E-03
527951	8/17/2020 - 8/24/2020	Beta	3.04E-02	3.47E-03	2.96E-03
528698	8/24/2020 - 8/31/2020	Beta	1.94E-02	3.17E-03	3.67E-03
529037	8/31/2020 - 9/8/2020	Beta	2.48E-02	2.89E-03	2.56E-03



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
530028	9/8/2020 - 9/14/2020	Beta	1.74E-02	3.28E-03	3.68E-03
530326	9/14/2020 - 9/22/2020	Beta	2.23E-02	3.01E-03	3.13E-03
530596	9/22/2020 - 9/28/2020	Beta	2.63E-02	3.53E-03	3.32E-03
531121	6/29/2020 - 9/28/2020	Cs-134	<1.61E-03	0.00E+00	1.61E-03
		Cs-137	<1.55E-03	0.00E+00	1.55E-03
		Be-7	1.21E-01	3.64E-02	4.20E-02
		K-40	<3.46E-02	0.00E+00	3.46E-02
531114	9/28/2020 - 10/5/2020	Beta	1.70E-02	3.05E-03	3.70E-03
531709	10/5/2020 - 10/12/2020	Beta	3.65E-02	3.37E-03	2.56E-03
532111	10/12/2020 - 10/19/2020	Beta	1.95E-02	3.04E-03	3.33E-03
532533	10/19/2020 - 10/26/2020	Beta	1.93E-02	2.89E-03	2.82E-03
532848	10/26/2020 - 11/2/2020	Beta	1.22E-02	2.73E-03	3.52E-03
533369	11/2/2020 - 11/9/2020	Beta	2.90E-02	3.47E-03	3.02E-03
533832	11/9/2020 - 11/16/2020	Beta	1.53E-02	2.74E-03	3.09E-03
534130	11/16/2020 - 11/23/2020	Beta	1.70E-02	2.96E-03	3.45E-03
534595	11/23/2020 - 11/30/2020	Beta	2.81E-02	3.36E-03	3.12E-03
534721	11/30/2020 - 12/7/2020	Beta	2.44E-02	3.32E-03	3.42E-03
535362	12/7/2020 - 12/14/2020	Beta	3.57E-02	3.71E-03	3.25E-03
535923	12/14/2020 - 12/21/2020	Beta	2.06E-02	3.11E-03	3.35E-03
536205	12/21/2020 - 12/28/2020	Beta	2.54E-02	3.24E-03	3.13E-03
536781	9/28/2020 - 12/28/2020	Cs-134	<1.02E-03	0.00E+00	1.02E-03
		Cs-137	<1.06E-03	0.00E+00	1.06E-03
		Be-7	1.19E-01	3.60E-02	3.91E-02
		K-40	<2.71E-02	0.00E+00	2.71E-02

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
514490	12/30/2019 - 1/6/2020	I-131	<1.66E-02	0.00E+00	1.66E-02
		Cs-134	<9.00E-03	0.00E+00	9.00E-03
		Cs-137	<1.15E-02	0.00E+00	1.15E-02
		Be-7	<9.20E-02	0.00E+00	9.20E-02
		K-40	5.31E-01	1.45E-01	1.43E-01
514930	1/6/2020 - 1/13/2020	I-131	<1.80E-02	0.00E+00	1.80E-02
		Cs-134	<1.30E-02	0.00E+00	1.30E-02
		Cs-137	<7.93E-03	0.00E+00	7.93E-03
		Be-7	<8.15E-02	0.00E+00	8.15E-02



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
514930	1/6/2020 - 1/13/2020	K-40	2.75E-01	1.71E-01	2.34E-01
515263	1/13/2020 - 1/20/2020	I-131	<1.90E-02	0.00E+00	1.90E-02
		Cs-134	<1.87E-02	0.00E+00	1.87E-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	7.77E-01	2.08E-01	3.45E-02
515500	1/20/2020 - 1/27/2020	I-131	<1.72E-02	0.00E+00	1.72E-02
		Cs-134	<2.03E-02	0.00E+00	2.03E-02
		Cs-137	<9.10E-03	0.00E+00	9.10E-03
		Be-7	<1.24E-01	0.00E+00	1.24E-01
		K-40	5.49E-01	2.17E-01	2.52E-01
515893	1/27/2020 - 2/3/2020	I-131	<1.90E-02	0.00E+00	1.90E-02
		Cs-134	<1.25E-02	0.00E+00	1.25E-02
		Cs-137	<1.54E-02	0.00E+00	1.54E-02
		Be-7	<1.36E-01	0.00E+00	1.36E-01
		K-40	6.10E-01	1.91E-01	1.30E-01
516147	2/3/2020 - 2/10/2020	I-131	<1.53E-02	0.00E+00	1.53E-02
		Cs-134	<1.55E-02	0.00E+00	1.55E-02
		Cs-137	<1.34E-02	0.00E+00	1.34E-02
		Be-7	<8.88E-02	0.00E+00	8.88E-02
		K-40	4.80E-01	1.70E-01	1.30E-01
516511	2/10/2020 - 2/17/2020	I-131	<2.10E-02	0.00E+00	2.10E-02
		Cs-134	<1.67E-02	0.00E+00	1.67E-02
		Cs-137	<1.66E-02	0.00E+00	1.66E-02
		Be-7	<1.38E-01	0.00E+00	1.38E-01
		K-40	6.66E-01	1.99E-01	1.23E-01
516891	2/17/2020 - 2/24/2020	I-131	<2.41E-02	0.00E+00	2.41E-02
		Cs-134	<2.09E-02	0.00E+00	2.09E-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	5.59E-01	1.99E-01	1.86E-01
517416	2/24/2020 - 3/2/2020	I-131	<1.24E-02	0.00E+00	1.24E-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	<9.88E-02	0.00E+00	9.88E-02
		K-40	<2.85E-01	0.00E+00	2.85E-01
517679	3/2/2020 - 3/9/2020	I-131	<2.04E-02	0.00E+00	2.04E-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	<1.37E-01	0.00E+00	1.37E-01
		K-40	5.09E-01	1.83E-01	1.54E-01
518713	3/9/2020 - 3/16/2020	I-131	<1.99E-02	0.00E+00	1.99E-02
		Cs-134	<2.09E-02	0.00E+00	2.09E-02
		Cs-137	<1.65E-02	0.00E+00	1.65E-02
		Be-7	<1.33E-01	0.00E+00	1.33E-01
		K-40	4.95E-01	1.96E-01	2.14E-01
519318	3/16/2020 - 3/23/2020	I-131	<2.14E-02	0.00E+00	2.14E-02
		Cs-134	<1.56E-02	0.00E+00	1.56E-02
		Cs-137	<1.40E-02	0.00E+00	1.40E-02
		Be-7	<1.42E-01	0.00E+00	1.42E-01



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
519318	3/16/2020 - 3/23/2020	K-40	4.58E-01	1.70E-01	1.34E-01
519703	3/23/2020 - 3/30/2020	I-131	<1.78E-02	0.00E+00	1.78E-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	<1.19E-01	0.00E+00	1.19E-01
		K-40	5.41E-01	2.21E-01	2.64E-01
520300	3/30/2020 - 4/6/2020	I-131	<2.09E-02	0.00E+00	2.09E-02
		Cs-134	<1.96E-02	0.00E+00	1.96E-02
		Cs-137	<1.47E-02	0.00E+00	1.47E-02
		Be-7	<1.06E-01	0.00E+00	1.06E-01
		K-40	5.29E-01	2.06E-01	2.31E-01
520515	4/6/2020 - 4/13/2020	I-131	<1.58E-02	0.00E+00	1.58E-02
		Cs-134	<1.80E-02	0.00E+00	1.80E-02
		Cs-137	<1.24E-02	0.00E+00	1.24E-02
		Be-7	<9.93E-02	0.00E+00	9.93E-02
		K-40	4.44E-01	1.86E-01	2.10E-01
520807	4/13/2020 - 4/20/2020	I-131	<1.68E-02	0.00E+00	1.68E-02
		Cs-134	<1.34E-02	0.00E+00	1.34E-02
		Cs-137	<1.11E-02	0.00E+00	1.11E-02
		Be-7	<9.81E-02	0.00E+00	9.81E-02
		K-40	4.97E-01	1.40E-01	1.37E-01
521612	4/20/2020 - 4/27/2020	I-131	<2.07E-02	0.00E+00	2.07E-02
		Cs-134	<1.94E-02	0.00E+00	1.94E-02
		Cs-137	<1.76E-02	0.00E+00	1.76E-02
		Be-7	<1.36E-01	0.00E+00	1.36E-01
		K-40	3.92E-01	1.64E-01	1.61E-01
522040	4/27/2020 - 5/4/2020	I-131	<1.78E-02	0.00E+00	1.78E-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	<1.20E-01	0.00E+00	1.20E-01
		K-40	3.18E-01	1.67E-01	2.09E-01
522349	5/4/2020 - 5/11/2020	I-131	<1.47E-02	0.00E+00	1.47E-02
		Cs-134	<2.10E-02	0.00E+00	2.10E-02
		Cs-137	<1.16E-02	0.00E+00	1.16E-02
		Be-7	<1.02E-01	0.00E+00	1.02E-01
		K-40	4.84E-01	1.70E-01	1.29E-01
522598	5/11/2020 - 5/18/2020	I-131	<1.87E-02	0.00E+00	1.87E-02
		Cs-134	<1.75E-02	0.00E+00	1.75E-02
		Cs-137	<1.51E-02	0.00E+00	1.51E-02
		Be-7	<1.15E-01	0.00E+00	1.15E-01
		K-40	6.65E-01	2.02E-01	1.52E-01
523108	5/18/2020 - 5/26/2020	I-131	<1.19E-02	0.00E+00	1.19E-02
		Cs-134	<1.45E-02	0.00E+00	1.45E-02
		Cs-137	<1.14E-02	0.00E+00	1.14E-02
		Be-7	<8.38E-02	0.00E+00	8.38E-02
		K-40	1.90E-01	1.20E-01	1.58E-01
523474	5/26/2020 - 6/1/2020	I-131	<1.64E-02	0.00E+00	1.64E-02
		Cs-134	<1.59E-02	0.00E+00	1.59E-02
		Cs-137	<1.62E-02	0.00E+00	1.62E-02
		Be-7	<1.06E-01	0.00E+00	1.06E-01



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
523474	5/26/2020 - 6/1/2020	K-40	4.78E-01	2.23E-01	2.77E-01
523882	6/1/2020 - 6/8/2020	I-131	<1.44E-02	0.00E+00	1.44E-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	<1.13E-01	0.00E+00	1.13E-01
		K-40	5.73E-01	2.08E-01	2.23E-01
524443	6/8/2020 - 6/15/2020	I-131	<1.64E-02	0.00E+00	1.64E-02
		Cs-134	<1.63E-02	0.00E+00	1.63E-02
		Cs-137	<1.89E-02	0.00E+00	1.89E-02
		Be-7	<9.82E-02	0.00E+00	9.82E-02
		K-40	4.51E-01	1.55E-01	3.40E-02
524768	6/15/2020 - 6/22/2020	I-131	<1.73E-02	0.00E+00	1.73E-02
		Cs-134	<1.92E-02	0.00E+00	1.92E-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	6.52E-01	2.23E-01	2.35E-01
524993	6/22/2020 - 6/29/2020	I-131	<1.66E-02	0.00E+00	1.66E-02
		Cs-134	<1.60E-02	0.00E+00	1.60E-02
		Cs-137	<1.44E-02	0.00E+00	1.44E-02
		Be-7	<9.90E-02	0.00E+00	9.90E-02
		K-40	5.09E-01	1.73E-01	1.26E-01
525378	6/29/2020 - 7/6/2020	I-131	<1.91E-02	0.00E+00	1.91E-02
		Cs-134	<1.65E-02	0.00E+00	1.65E-02
		Cs-137	<1.60E-02	0.00E+00	1.60E-02
		Be-7	<1.00E-01	0.00E+00	1.00E-01
		K-40	4.07E-01	1.69E-01	1.74E-01
525590	7/6/2020 - 7/13/2020	I-131	<2.13E-02	0.00E+00	2.13E-02
		Cs-134	<1.18E-02	0.00E+00	1.18E-02
		Cs-137	<1.48E-02	0.00E+00	1.48E-02
		Be-7	<1.34E-01	0.00E+00	1.34E-01
		K-40	5.07E-01	1.75E-01	1.32E-01
525953	7/13/2020 - 7/20/2020	I-131	<1.36E-02	0.00E+00	1.36E-02
		Cs-134	<1.67E-02	0.00E+00	1.67E-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	5.46E-01	1.99E-01	2.05E-01
526277	7/20/2020 - 7/27/2020	I-131	<1.90E-02	0.00E+00	1.90E-02
		Cs-134	<1.45E-02	0.00E+00	1.45E-02
		Cs-137	<1.68E-02	0.00E+00	1.68E-02
		Be-7	<1.00E-01	0.00E+00	1.00E-01
		K-40	3.85E-01	1.77E-01	2.09E-01
526563	7/27/2020 - 8/3/2020	I-131	<1.58E-02	0.00E+00	1.58E-02
		Cs-134	<1.25E-02	0.00E+00	1.25E-02
		Cs-137	<1.38E-02	0.00E+00	1.38E-02
		Be-7	<9.53E-02	0.00E+00	9.53E-02
		K-40	6.61E-01	2.17E-01	2.13E-01
526880	8/3/2020 - 8/10/2020	I-131	<1.64E-02	0.00E+00	1.64E-02
		Cs-134	<2.04E-02	0.00E+00	2.04E-02
		Cs-137	<1.48E-02	0.00E+00	1.48E-02
		Be-7	<1.07E-01	0.00E+00	1.07E-01



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
526880	8/3/2020 - 8/10/2020	K-40	3.75E-01	2.03E-01	2.74E-01
527369	8/10/2020 - 8/17/2020	I-131	<2.08E-02	0.00E+00	2.08E-02
		Cs-134	<2.09E-02	0.00E+00	2.09E-02
		Cs-137	<2.07E-02	0.00E+00	2.07E-02
		Be-7	<1.04E-01	0.00E+00	1.04E-01
		K-40	3.06E-01	1.55E-01	1.84E-01
527651	8/17/2020 - 8/24/2020	I-131	<1.23E-02	0.00E+00	1.23E-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	<1.11E-01	0.00E+00	1.11E-01
		K-40	5.83E-01	1.94E-01	1.64E-01
527952	8/24/2020 - 8/31/2020	I-131	<1.69E-02	0.00E+00	1.69E-02
		Cs-134	<1.35E-02	0.00E+00	1.35E-02
		Cs-137	<1.90E-02	0.00E+00	1.90E-02
		Be-7	<9.21E-02	0.00E+00	9.21E-02
		K-40	5.41E-01	2.10E-01	2.38E-01
528699	8/31/2020 - 9/8/2020	I-131	<1.41E-02	0.00E+00	1.41E-02
		Cs-134	<1.44E-02	0.00E+00	1.44E-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	3.97E-01	1.54E-01	1.37E-01
529038	9/8/2020 - 9/14/2020	I-131	<1.72E-02	0.00E+00	1.72E-02
		Cs-134	<1.45E-02	0.00E+00	1.45E-02
		Cs-137	<1.59E-02	0.00E+00	1.59E-02
		Be-7	<1.42E-01	0.00E+00	1.42E-01
		K-40	8.59E-01	2.44E-01	1.70E-01
530029	9/14/2020 - 9/22/2020	I-131	<1.56E-02	0.00E+00	1.56E-02
		Cs-134	<1.01E-02	0.00E+00	1.01E-02
		Cs-137	<1.32E-02	0.00E+00	1.32E-02
		Be-7	<1.11E-01	0.00E+00	1.11E-01
		K-40	3.53E-01	1.63E-01	2.00E-01
530327	9/22/2020 - 9/28/2020	I-131	<1.58E-02	0.00E+00	1.58E-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	<1.26E-01	0.00E+00	1.26E-01
		K-40	4.72E-01	2.03E-01	2.23E-01
530597	9/28/2020 - 10/5/2020	I-131	<2.06E-02	0.00E+00	2.06E-02
		Cs-134	<1.55E-02	0.00E+00	1.55E-02
		Cs-137	<1.47E-02	0.00E+00	1.47E-02
		Be-7	<1.29E-01	0.00E+00	1.29E-01
		K-40	6.50E-01	1.99E-01	1.41E-01
531122	10/5/2020 - 10/12/2020	I-131	<1.46E-02	0.00E+00	1.46E-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	<1.16E-01	0.00E+00	1.16E-01
		K-40	5.58E-01	2.05E-01	2.18E-01
531710	10/12/2020 - 10/19/2020	I-131	<1.79E-02	0.00E+00	1.79E-02
		Cs-134	<1.78E-02	0.00E+00	1.78E-02
		Cs-137	<1.76E-02	0.00E+00	1.76E-02
		Be-7	<1.20E-01	0.00E+00	1.20E-01





# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
531710	10/12/2020 - 10/19/2020	K-40	6.40E-01	2.11E-01	1.96E-01
532112	10/19/2020 - 10/26/2020	I-131	<1.67E-02	0.00E+00	1.67E-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	<1.36E-01	0.00E+00	1.36E-01
		K-40	5.86E-01	1.86E-01	1.34E-01
532534	10/26/2020 - 11/2/2020	I-131	<1.80E-02	0.00E+00	1.80E-02
		Cs-134	<1.55E-02	0.00E+00	1.55E-02
		Cs-137	<1.80E-02	0.00E+00	1.80E-02
		Be-7	<9.47E-02	0.00E+00	9.47E-02
		K-40	5.98E-01	1.90E-01	1.30E-01
532849	11/2/2020 - 11/9/2020	I-131	<1.96E-02	0.00E+00	1.96E-02
		Cs-134	<1.52E-02	0.00E+00	1.52E-02
		Cs-137	<1.64E-02	0.00E+00	1.64E-02
		Be-7	<1.17E-01	0.00E+00	1.17E-01
		K-40	<3.57E-01	0.00E+00	3.57E-01
533370	11/9/2020 - 11/16/2020	I-131	<2.21E-02	0.00E+00	2.21E-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	<1.23E-01	0.00E+00	1.23E-01
		K-40	6.26E-01	1.86E-01	3.46E-02
533833	11/16/2020 - 11/23/2020	I-131	<1.72E-02	0.00E+00	1.72E-02
		Cs-134	<1.81E-02	0.00E+00	1.81E-02
		Cs-137	<1.57E-02	0.00E+00	1.57E-02
		Be-7	<1.14E-01	0.00E+00	1.14E-01
		K-40	4.36E-01	2.26E-01	3.10E-01
534131	11/23/2020 - 11/30/2020	I-131	<1.78E-02	0.00E+00	1.78E-02
		Cs-134	<1.78E-02	0.00E+00	1.78E-02
		Cs-137	<1.54E-02	0.00E+00	1.54E-02
		Be-7	<9.44E-02	0.00E+00	9.44E-02
		K-40	2.86E-01	1.72E-01	2.32E-01
534596	11/30/2020 - 12/7/2020	I-131	<1.93E-02	0.00E+00	1.93E-02
		Cs-134	<1.66E-02	0.00E+00	1.66E-02
		Cs-137	<1.35E-02	0.00E+00	1.35E-02
		Be-7	<1.12E-01	0.00E+00	1.12E-01
		K-40	5.10E-01	2.23E-01	2.82E-01
535363	12/7/2020 - 12/14/2020	I-131	<2.04E-02	0.00E+00	2.04E-02
		Cs-134	<1.97E-02	0.00E+00	1.97E-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	5.92E-01	1.89E-01	1.35E-01
535924	12/14/2020 - 12/21/2020	I-131	<1.59E-02	0.00E+00	1.59E-02
		Cs-134	<1.67E-02	0.00E+00	1.67E-02
		Cs-137	<1.38E-02	0.00E+00	1.38E-02
		Be-7	<1.10E-01	0.00E+00	1.10E-01
		K-40	3.54E-01	1.64E-01	1.88E-01
536206	12/21/2020 - 12/28/2020	I-131	<2.71E-02	0.00E+00	2.71E-02
		Cs-134	<1.12E-02	0.00E+00	1.12E-02
		Cs-137	<1.67E-02	0.00E+00	1.67E-02
		Be-7	<1.45E-01	0.00E+00	1.45E-01



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
536206	12/21/2020 - 12/28/2020	K-40	3.30E-01	1.57E-01	1.68E-01

Sample Point 103 [ INDICATOR - NE @ 4.2 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514491	12/30/2019 - 1/6/2020	I-131	<1.47E-02	0.00E+00	1.47E-02
		Cs-134	<1.72E-02	0.00E+00	1.72E-02
		Cs-137	<1.67E-02	0.00E+00	1.67E-02
		Be-7	<9.86E-02	0.00E+00	9.86E-02
		K-40	3.52E-01	1.52E-01	1.33E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514931	1/6/2020 - 1/13/2020	I-131	<1.97E-02	0.00E+00	1.97E-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	<1.09E-01	0.00E+00	1.09E-01
		K-40	2.91E-01	1.46E-01	1.56E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
515264	1/13/2020 - 1/20/2020	I-131	<1.31E-02	0.00E+00	1.31E-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	<1.08E-01	0.00E+00	1.08E-01
		K-40	4.87E-01	1.96E-01	2.18E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
515501	1/20/2020 - 1/27/2020	I-131	<1.78E-02	0.00E+00	1.78E-02
		Cs-134	<1.83E-02	0.00E+00	1.83E-02
		Cs-137	<1.69E-02	0.00E+00	1.69E-02
		Be-7	7.52E-02	8.60E-02	1.39E-01
		K-40	5.02E-01	1.62E-01	3.32E-02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
515894	1/27/2020 - 2/3/2020	I-131	<1.84E-02	0.00E+00	1.84E-02
		Cs-134	<1.57E-02	0.00E+00	1.57E-02
		Cs-137	<1.61E-02	0.00E+00	1.61E-02
		Be-7	<8.96E-02	0.00E+00	8.96E-02
		K-40	5.23E-01	1.91E-01	1.82E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
516148	2/3/2020 - 2/10/2020	I-131	<1.49E-02	0.00E+00	1.49E-02
		Cs-134	<1.55E-02	0.00E+00	1.55E-02
		Cs-137	<1.47E-02	0.00E+00	1.47E-02
		Be-7	<8.40E-02	0.00E+00	8.40E-02
		K-40	3.42E-01	1.35E-01	3.44E-02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
516512	2/10/2020 - 2/17/2020	I-131	<2.29E-02	0.00E+00	2.29E-02
		Cs-134	<1.70E-02	0.00E+00	1.70E-02
		Cs-137	<1.88E-02	0.00E+00	1.88E-02
		Be-7	<1.21E-01	0.00E+00	1.21E-01
		K-40	5.43E-01	2.19E-01	2.55E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
516892	2/17/2020 - 2/24/2020	I-131	<2.30E-02	0.00E+00	2.30E-02
		Cs-134	<1.35E-02	0.00E+00	1.35E-02
		Cs-137	<1.30E-02	0.00E+00	1.30E-02
		Be-7	<1.37E-01	0.00E+00	1.37E-01
		K-40	5.84E-01	2.00E-01	1.85E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
517417	2/24/2020 - 3/2/2020	I-131	<1.43E-02	0.00E+00	1.43E-02
		Cs-134	<1.06E-02	0.00E+00	1.06E-02
		Cs-137	<1.12E-02	0.00E+00	1.12E-02
		Be-7	<6.84E-02	0.00E+00	6.84E-02
		K-40	3.16E-01	1.48E-01	1.52E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
517680	3/2/2020 - 3/9/2020	I-131	<1.67E-02	0.00E+00	1.67E-02
		Cs-134	<1.60E-02	0.00E+00	1.60E-02



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
517680	3/2/2020 - 3/9/2020	Cs-137	<1.38E-02	0.00E+00	1.38E-02
		Be-7	6.41E-02	6.15E-02	9.47E-02
		K-40	<3.78E-01	0.00E+00	3.78E-01
518714	3/9/2020 - 3/16/2020	I-131	<1.56E-02	0.00E+00	1.56E-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	<1.01E-01	0.00E+00	1.01E-01
		K-40	7.08E-01	2.07E-01	1.42E-01
519319	3/16/2020 - 3/23/2020	I-131	<1.91E-02	0.00E+00	1.91E-02
		Cs-134	<1.38E-02	0.00E+00	1.38E-02
		Cs-137	<1.37E-02	0.00E+00	1.37E-02
		Be-7	<1.11E-01	0.00E+00	1.11E-01
		K-40	5.18E-01	1.91E-01	1.93E-01
519704	3/23/2020 - 3/30/2020	I-131	<1.76E-02	0.00E+00	1.76E-02
		Cs-134	<1.76E-02	0.00E+00	1.76E-02
		Cs-137	<1.46E-02	0.00E+00	1.46E-02
		Be-7	<8.78E-02	0.00E+00	8.78E-02
		K-40	5.07E-01	1.97E-01	2.15E-01
520301	3/30/2020 - 4/6/2020	I-131	<1.91E-02	0.00E+00	1.91E-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	<9.67E-02	0.00E+00	9.67E-02
		K-40	3.14E-01	1.65E-01	2.06E-01
520516	4/6/2020 - 4/13/2020	I-131	<1.49E-02	0.00E+00	1.49E-02
		Cs-134	<1.46E-02	0.00E+00	1.46E-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	3.21E-01	1.40E-01	1.19E-01
520808	4/13/2020 - 4/20/2020	I-131	<2.18E-02	0.00E+00	2.18E-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	<1.10E-01	0.00E+00	1.10E-01
		K-40	5.97E-01	2.06E-01	2.04E-01
521613	4/20/2020 - 4/27/2020	I-131	<2.19E-02	0.00E+00	2.19E-02
		Cs-134	<2.01E-02	0.00E+00	2.01E-02
		Cs-137	<1.63E-02	0.00E+00	1.63E-02
		Be-7	<1.31E-01	0.00E+00	1.31E-01
		K-40	4.26E-01	2.09E-01	2.73E-01
522041	4/27/2020 - 5/4/2020	I-131	<1.56E-02	0.00E+00	1.56E-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	<1.22E-01	0.00E+00	1.22E-01
		K-40	4.80E-01	1.68E-01	1.28E-01
522350	5/4/2020 - 5/11/2020	I-131	<1.70E-02	0.00E+00	1.70E-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	<1.16E-01	0.00E+00	1.16E-01
		K-40	5.60E-01	1.90E-01	1.65E-01
522599	5/11/2020 - 5/18/2020	I-131	<1.89E-02	0.00E+00	1.89E-02
		Cs-134	<1.70E-02	0.00E+00	1.70E-02



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
522599	5/11/2020 - 5/18/2020	Cs-137	<1.63E-02	0.00E+00	1.63E-02
		Be-7	<1.21E-01	0.00E+00	1.21E-01
		K-40	4.00E-01	1.82E-01	2.18E-01
523109	5/18/2020 - 5/26/2020	I-131	<1.43E-02	0.00E+00	1.43E-02
		Cs-134	<1.48E-02	0.00E+00	1.48E-02
		Cs-137	<1.22E-02	0.00E+00	1.22E-02
		Be-7	<8.23E-02	0.00E+00	8.23E-02
		K-40	2.20E-01	1.19E-01	1.35E-01
523475	5/26/2020 - 6/1/2020	I-131	<2.03E-02	0.00E+00	2.03E-02
		Cs-134	<1.98E-02	0.00E+00	1.98E-02
		Cs-137	<2.36E-02	0.00E+00	2.36E-02
		Be-7	<1.20E-01	0.00E+00	1.20E-01
		K-40	4.14E-01	1.97E-01	2.35E-01
523883	6/1/2020 - 6/8/2020	I-131	<1.42E-02	0.00E+00	1.42E-02
		Cs-134	<1.37E-02	0.00E+00	1.37E-02
		Cs-137	<1.40E-02	0.00E+00	1.40E-02
		Be-7	<5.98E-02	0.00E+00	5.98E-02
		K-40	1.68E-01	1.15E-01	1.46E-01
524444	6/8/2020 - 6/15/2020	I-131	<1.91E-02	0.00E+00	1.91E-02
		Cs-134	<1.25E-02	0.00E+00	1.25E-02
		Cs-137	<1.61E-02	0.00E+00	1.61E-02
		Be-7	<9.96E-02	0.00E+00	9.96E-02
		K-40	2.77E-01	1.53E-01	1.92E-01
524769	6/15/2020 - 6/22/2020	I-131	<1.50E-02	0.00E+00	1.50E-02
		Cs-134	<1.27E-02	0.00E+00	1.27E-02
		Cs-137	<1.25E-02	0.00E+00	1.25E-02
		Be-7	<9.52E-02	0.00E+00	9.52E-02
		K-40	5.37E-01	1.99E-01	2.07E-01
524994	6/22/2020 - 6/29/2020	I-131	<1.89E-02	0.00E+00	1.89E-02
		Cs-134	<1.31E-02	0.00E+00	1.31E-02
		Cs-137	<1.56E-02	0.00E+00	1.56E-02
		Be-7	<1.24E-01	0.00E+00	1.24E-01
		K-40	<3.59E-01	0.00E+00	3.59E-01
525379	6/29/2020 - 7/6/2020	I-131	<1.51E-02	0.00E+00	1.51E-02
		Cs-134	<1.46E-02	0.00E+00	1.46E-02
		Cs-137	<1.10E-02	0.00E+00	1.10E-02
		Be-7	<9.33E-02	0.00E+00	9.33E-02
		K-40	<1.36E-01	0.00E+00	1.36E-01
525591	7/6/2020 - 7/13/2020	I-131	<1.74E-02	0.00E+00	1.74E-02
		Cs-134	<1.54E-02	0.00E+00	1.54E-02
		Cs-137	<1.74E-02	0.00E+00	1.74E-02
		Be-7	<9.35E-02	0.00E+00	9.35E-02
		K-40	<3.47E-01	0.00E+00	3.47E-01
525954	7/13/2020 - 7/20/2020	I-131	<1.59E-02	0.00E+00	1.59E-02
		Cs-134	<1.74E-02	0.00E+00	1.74E-02
		Cs-137	<1.50E-02	0.00E+00	1.50E-02
		Be-7	<9.17E-02	0.00E+00	9.17E-02
		K-40	4.37E-01	1.71E-01	1.65E-01
526278	7/20/2020 - 7/27/2020	I-131	<1.67E-02	0.00E+00	1.67E-02
		Cs-134	<1.60E-02	0.00E+00	1.60E-02



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
526278	7/20/2020 - 7/27/2020	Cs-137	<1.45E-02	0.00E+00	1.45E-02
		Be-7	<1.12E-01	0.00E+00	1.12E-01
		K-40	2.79E-01	1.58E-01	2.02E-01
526564	7/27/2020 - 8/3/2020	I-131	<1.52E-02	0.00E+00	1.52E-02
		Cs-134	<1.59E-02	0.00E+00	1.59E-02
		Cs-137	<1.86E-02	0.00E+00	1.86E-02
		Be-7	<1.11E-01	0.00E+00	1.11E-01
		K-40	4.89E-01	1.88E-01	1.95E-01
526881	8/3/2020 - 8/10/2020	I-131	<1.90E-02	0.00E+00	1.90E-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	<1.04E-01	0.00E+00	1.04E-01
		K-40	4.41E-01	1.94E-01	2.30E-01
527370	8/10/2020 - 8/17/2020	I-131	<2.25E-02	0.00E+00	2.25E-02
		Cs-134	<1.35E-02	0.00E+00	1.35E-02
		Cs-137	<1.08E-02	0.00E+00	1.08E-02
		Be-7	<1.07E-01	0.00E+00	1.07E-01
		K-40	4.08E-01	1.78E-01	2.04E-01
527652	8/17/2020 - 8/24/2020	I-131	<1.82E-02	0.00E+00	1.82E-02
		Cs-134	<1.36E-02	0.00E+00	1.36E-02
		Cs-137	<1.38E-02	0.00E+00	1.38E-02
		Be-7	<9.46E-02	0.00E+00	9.46E-02
		K-40	3.59E-01	1.85E-01	2.40E-01
527953	8/24/2020 - 8/31/2020	I-131	<2.07E-02	0.00E+00	2.07E-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	<1.07E-01	0.00E+00	1.07E-01
		K-40	7.49E-01	2.46E-01	2.52E-01
528700	8/31/2020 - 9/8/2020	I-131	<1.66E-02	0.00E+00	1.66E-02
		Cs-134	<1.26E-02	0.00E+00	1.26E-02
		Cs-137	<9.48E-03	0.00E+00	9.48E-03
		Be-7	<9.45E-02	0.00E+00	9.45E-02
		K-40	4.69E-01	1.99E-01	2.51E-01
529039	9/8/2020 - 9/14/2020	I-131	<1.80E-02	0.00E+00	1.80E-02
		Cs-134	<1.80E-02	0.00E+00	1.80E-02
		Cs-137	<2.14E-02	0.00E+00	2.14E-02
		Be-7	<1.24E-01	0.00E+00	1.24E-01
		K-40	6.91E-01	2.70E-01	3.12E-01
530030	9/14/2020 - 9/22/2020	I-131	<1.52E-02	0.00E+00	1.52E-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	<1.07E-01	0.00E+00	1.07E-01
		K-40	3.49E-01	1.52E-01	1.69E-01
530328	9/22/2020 - 9/28/2020	I-131	<2.03E-02	0.00E+00	2.03E-02
		Cs-134	<1.35E-02	0.00E+00	1.35E-02
		Cs-137	<1.37E-02	0.00E+00	1.37E-02
		Be-7	<1.06E-01	0.00E+00	1.06E-01
		K-40	5.93E-01	2.25E-01	2.37E-01
530598	9/28/2020 - 10/5/2020	I-131	<1.99E-02	0.00E+00	1.99E-02
		Cs-134	<1.25E-02	0.00E+00	1.25E-02



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
530598	9/28/2020 - 10/5/2020	Cs-137	<1.76E-02	0.00E+00	1.76E-02
		Be-7	<1.07E-01	0.00E+00	1.07E-01
		K-40	5.84E-01	2.07E-01	2.15E-01
531123	10/5/2020 - 10/12/2020	I-131	<1.67E-02	0.00E+00	1.67E-02
		Cs-134	<1.72E-02	0.00E+00	1.72E-02
		Cs-137	<1.30E-02	0.00E+00	1.30E-02
		Be-7	<1.31E-01	0.00E+00	1.31E-01
		K-40	5.08E-01	1.80E-01	1.62E-01
531711	10/12/2020 - 10/19/2020	I-131	<1.28E-02	0.00E+00	1.28E-02
		Cs-134	<1.04E-02	0.00E+00	1.04E-02
		Cs-137	<1.20E-02	0.00E+00	1.20E-02
		Be-7	<7.79E-02	0.00E+00	7.79E-02
		K-40	5.60E-01	1.39E-01	1.12E-01
532113	10/19/2020 - 10/26/2020	I-131	<1.88E-02	0.00E+00	1.88E-02
		Cs-134	<1.74E-02	0.00E+00	1.74E-02
		Cs-137	<1.61E-02	0.00E+00	1.61E-02
		Be-7	<1.19E-01	0.00E+00	1.19E-01
		K-40	6.09E-01	2.19E-01	2.38E-01
532535	10/26/2020 - 11/2/2020	I-131	<1.54E-02	0.00E+00	1.54E-02
		Cs-134	<1.60E-02	0.00E+00	1.60E-02
		Cs-137	<1.25E-02	0.00E+00	1.25E-02
		Be-7	<1.08E-01	0.00E+00	1.08E-01
		K-40	7.39E-01	2.25E-01	2.03E-01
532850	11/2/2020 - 11/9/2020	I-131	<1.37E-02	0.00E+00	1.37E-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	<9.57E-02	0.00E+00	9.57E-02
		K-40	4.86E-01	1.85E-01	1.89E-01
533371	11/9/2020 - 11/16/2020	I-131	<1.69E-02	0.00E+00	1.69E-02
		Cs-134	<1.61E-02	0.00E+00	1.61E-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	6.73E-01	2.17E-01	2.04E-01
533834	11/16/2020 - 11/23/2020	I-131	<1.78E-02	0.00E+00	1.78E-02
		Cs-134	<1.74E-02	0.00E+00	1.74E-02
		Cs-137	<1.89E-02	0.00E+00	1.89E-02
		Be-7	<1.26E-01	0.00E+00	1.26E-01
		K-40	4.68E-01	2.32E-01	3.13E-01
534132	11/23/2020 - 11/30/2020	I-131	<1.99E-02	0.00E+00	1.99E-02
		Cs-134	<1.54E-02	0.00E+00	1.54E-02
		Cs-137	<1.41E-02	0.00E+00	1.41E-02
		Be-7	<1.07E-01	0.00E+00	1.07E-01
		K-40	4.11E-01	1.94E-01	2.34E-01
534597	11/30/2020 - 12/7/2020	I-131	<1.52E-02	0.00E+00	1.52E-02
		Cs-134	<1.68E-02	0.00E+00	1.68E-02
		Cs-137	<1.32E-02	0.00E+00	1.32E-02
		Be-7	<9.19E-02	0.00E+00	9.19E-02
		K-40	4.47E-01	2.06E-01	2.61E-01
535364	12/7/2020 - 12/14/2020	I-131	<2.09E-02	0.00E+00	2.09E-02
		Cs-134	<1.59E-02	0.00E+00	1.59E-02



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 103 [ INDICATOR - NE @ 4.2 miles ]

Sample ID:	535364	Sample Dates:	12/7/2020 - 12/14/2020	Nuclide	Activity	2 Sigma Error	MDA
				Cs-137	<1.61E-02	0.00E+00	1.61E-02
				Be-7	<7.75E-02	0.00E+00	7.75E-02
				K-40	5.86E-01	2.08E-01	2.16E-01

Sample ID:	535925	Sample Dates:	12/14/2020 - 12/21/2020	Nuclide	Activity	2 Sigma Error	MDA
				I-131	<1.71E-02	0.00E+00	1.71E-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	<1.13E-01	0.00E+00	1.13E-01
				K-40	4.36E-01	1.65E-01	1.42E-01

Sample ID:	536207	Sample Dates:	12/21/2020 - 12/28/2020	Nuclide	Activity	2 Sigma Error	MDA
				I-131	<3.36E-02	0.00E+00	3.36E-02
				Cs-134	<1.61E-02	0.00E+00	1.61E-02
				Cs-137	<1.09E-02	0.00E+00	1.09E-02
				Be-7	<1.10E-01	0.00E+00	1.10E-01
				K-40	<3.06E-01	0.00E+00	3.06E-01

Sample Point 120 [ INDICATOR - NNE @ 0.46 miles ]

Sample ID:	514492	Sample Dates:	12/30/2019 - 1/6/2020	Nuclide	Activity	2 Sigma Error	MDA
				I-131	<1.93E-02	0.00E+00	1.93E-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	<1.58E-01	0.00E+00	1.58E-01
				K-40	3.70E-01	1.80E-01	2.16E-01

Sample ID:	514932	Sample Dates:	1/6/2020 - 1/13/2020	Nuclide	Activity	2 Sigma Error	MDA
				I-131	<2.26E-02	0.00E+00	2.26E-02
				Cs-134	<1.60E-02	0.00E+00	1.60E-02
				Cs-137	<1.55E-02	0.00E+00	1.55E-02
				Be-7	<1.57E-01	0.00E+00	1.57E-01
				K-40	2.70E-01	1.49E-01	1.83E-01

Sample ID:	515265	Sample Dates:	1/13/2020 - 1/20/2020	Nuclide	Activity	2 Sigma Error	MDA
				I-131	<1.38E-02	0.00E+00	1.38E-02
				Cs-134	<1.83E-02	0.00E+00	1.83E-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	2.84E-01	1.56E-01	1.94E-01

Sample ID:	515502	Sample Dates:	1/20/2020 - 1/27/2020	Nuclide	Activity	2 Sigma Error	MDA
				I-131	<1.41E-02	0.00E+00	1.41E-02
				Cs-134	<1.60E-02	0.00E+00	1.60E-02
				Cs-137	<1.25E-02	0.00E+00	1.25E-02
				Be-7	<7.29E-02	0.00E+00	7.29E-02
				K-40	1.68E-01	1.26E-01	1.74E-01

Sample ID:	515895	Sample Dates:	1/27/2020 - 2/3/2020	Nuclide	Activity	2 Sigma Error	MDA
				I-131	<1.56E-02	0.00E+00	1.56E-02
				Cs-134	<1.87E-02	0.00E+00	1.87E-02
				Cs-137	<1.61E-02	0.00E+00	1.61E-02
				Be-7	<9.44E-02	0.00E+00	9.44E-02
				K-40	5.36E-01	1.77E-01	1.22E-01

Sample ID:	516149	Sample Dates:	2/3/2020 - 2/10/2020	Nuclide	Activity	2 Sigma Error	MDA
				I-131	<2.20E-02	0.00E+00	2.20E-02
				Cs-134	<1.75E-02	0.00E+00	1.75E-02
				Cs-137	<1.61E-02	0.00E+00	1.61E-02
				Be-7	<1.52E-01	0.00E+00	1.52E-01
				K-40	4.51E-01	1.88E-01	2.08E-01

Sample ID:	516513	Sample Dates:	2/10/2020 - 2/17/2020	Nuclide	Activity	2 Sigma Error	MDA
				I-131	<2.13E-02	0.00E+00	2.13E-02
				Cs-134	<1.77E-02	0.00E+00	1.77E-02
				Cs-137	<1.88E-02	0.00E+00	1.88E-02
				Be-7	<1.51E-01	0.00E+00	1.51E-01
				K-40	7.03E-01	2.24E-01	2.04E-01



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
516893	2/17/2020 - 2/24/2020	I-131	<2.18E-02	0.00E+00	2.18E-02
		Cs-134	<2.05E-02	0.00E+00	2.05E-02
		Cs-137	<1.27E-02	0.00E+00	1.27E-02
		Be-7	<1.48E-01	0.00E+00	1.48E-01
		K-40	5.24E-01	1.75E-01	1.22E-01
517418	2/24/2020 - 3/2/2020	I-131	<1.69E-02	0.00E+00	1.69E-02
		Cs-134	<1.85E-02	0.00E+00	1.85E-02
		Cs-137	<1.29E-02	0.00E+00	1.29E-02
		Be-7	<1.15E-01	0.00E+00	1.15E-01
		K-40	3.01E-01	1.55E-01	1.73E-01
517681	3/2/2020 - 3/9/2020	I-131	<1.42E-02	0.00E+00	1.42E-02
		Cs-134	<1.18E-02	0.00E+00	1.18E-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	5.83E-01	1.36E-01	8.23E-02
518715	3/9/2020 - 3/16/2020	I-131	<1.49E-02	0.00E+00	1.49E-02
		Cs-134	<1.81E-02	0.00E+00	1.81E-02
		Cs-137	<1.57E-02	0.00E+00	1.57E-02
		Be-7	<1.07E-01	0.00E+00	1.07E-01
		K-40	4.65E-01	1.73E-01	1.57E-01
519320	3/16/2020 - 3/23/2020	I-131	<1.48E-02	0.00E+00	1.48E-02
		Cs-134	<1.86E-02	0.00E+00	1.86E-02
		Cs-137	<1.32E-02	0.00E+00	1.32E-02
		Be-7	<9.79E-02	0.00E+00	9.79E-02
		K-40	<2.98E-01	0.00E+00	2.98E-01
519705	3/23/2020 - 3/30/2020	I-131	<1.70E-02	0.00E+00	1.70E-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	<1.10E-01	0.00E+00	1.10E-01
		K-40	3.66E-01	1.79E-01	2.21E-01
520302	3/30/2020 - 4/6/2020	I-131	<1.64E-02	0.00E+00	1.64E-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	<1.15E-01	0.00E+00	1.15E-01
		K-40	3.60E-01	1.96E-01	2.66E-01
520517	4/6/2020 - 4/13/2020	I-131	<1.55E-02	0.00E+00	1.55E-02
		Cs-134	<1.52E-02	0.00E+00	1.52E-02
		Cs-137	<8.89E-03	0.00E+00	8.89E-03
		Be-7	<9.60E-02	0.00E+00	9.60E-02
		K-40	<2.82E-01	0.00E+00	2.82E-01
520809	4/13/2020 - 4/20/2020	I-131	<2.30E-02	0.00E+00	2.30E-02
		Cs-134	<1.52E-02	0.00E+00	1.52E-02
		Cs-137	<1.59E-02	0.00E+00	1.59E-02
		Be-7	<1.24E-01	0.00E+00	1.24E-01
		K-40	4.29E-01	1.51E-01	3.42E-02
521614	4/20/2020 - 4/27/2020	I-131	<1.55E-02	0.00E+00	1.55E-02
		Cs-134	<1.49E-02	0.00E+00	1.49E-02
		Cs-137	<1.29E-02	0.00E+00	1.29E-02
		Be-7	<9.54E-02	0.00E+00	9.54E-02
		K-40	<1.20E-01	0.00E+00	1.20E-01





# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
522042	4/27/2020 - 5/4/2020	I-131	<1.54E-02	0.00E+00	1.54E-02
		Cs-134	<1.04E-02	0.00E+00	1.04E-02
		Cs-137	<1.39E-02	0.00E+00	1.39E-02
		Be-7	<1.01E-01	0.00E+00	1.01E-01
		K-40	<3.54E-01	0.00E+00	3.54E-01
522351	5/4/2020 - 5/11/2020	I-131	<1.49E-02	0.00E+00	1.49E-02
		Cs-134	<1.63E-02	0.00E+00	1.63E-02
		Cs-137	<1.57E-02	0.00E+00	1.57E-02
		Be-7	<1.10E-01	0.00E+00	1.10E-01
		K-40	5.05E-01	1.72E-01	1.33E-01
522600	5/11/2020 - 5/18/2020	I-131	<1.56E-02	0.00E+00	1.56E-02
		Cs-134	<1.41E-02	0.00E+00	1.41E-02
		Cs-137	<1.36E-02	0.00E+00	1.36E-02
		Be-7	<8.60E-02	0.00E+00	8.60E-02
		K-40	3.16E-01	1.61E-01	1.98E-01
523110	5/18/2020 - 5/26/2020	I-131	<1.47E-02	0.00E+00	1.47E-02
		Cs-134	<1.10E-02	0.00E+00	1.10E-02
		Cs-137	<1.18E-02	0.00E+00	1.18E-02
		Be-7	<8.78E-02	0.00E+00	8.78E-02
		K-40	<3.03E-01	0.00E+00	3.03E-01
523476	5/26/2020 - 6/1/2020	I-131	<2.13E-02	0.00E+00	2.13E-02
		Cs-134	<2.26E-02	0.00E+00	2.26E-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	<3.67E-01	0.00E+00	3.67E-01
523884	6/1/2020 - 6/8/2020	I-131	<1.54E-02	0.00E+00	1.54E-02
		Cs-134	<1.85E-02	0.00E+00	1.85E-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	<3.06E-01	0.00E+00	3.06E-01
524445	6/8/2020 - 6/15/2020	I-131	<2.02E-02	0.00E+00	2.02E-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	<1.14E-01	0.00E+00	1.14E-01
		K-40	4.38E-01	2.03E-01	2.58E-01
524770	6/15/2020 - 6/22/2020	I-131	<1.66E-02	0.00E+00	1.66E-02
		Cs-134	<1.83E-02	0.00E+00	1.83E-02
		Cs-137	<1.79E-02	0.00E+00	1.79E-02
		Be-7	<1.01E-01	0.00E+00	1.01E-01
		K-40	6.94E-01	2.36E-01	2.55E-01
524995	6/22/2020 - 6/29/2020	I-131	<1.64E-02	0.00E+00	1.64E-02
		Cs-134	<1.74E-02	0.00E+00	1.74E-02
		Cs-137	<1.45E-02	0.00E+00	1.45E-02
		Be-7	<1.12E-01	0.00E+00	1.12E-01
		K-40	3.76E-01	1.66E-01	1.78E-01
525380	6/29/2020 - 7/6/2020	I-131	<2.00E-02	0.00E+00	2.00E-02
		Cs-134	<1.52E-02	0.00E+00	1.52E-02
		Cs-137	<1.56E-02	0.00E+00	1.56E-02
		Be-7	<9.67E-02	0.00E+00	9.67E-02
		K-40	3.66E-01	1.56E-01	1.55E-01



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
525592	7/6/2020 - 7/13/2020	I-131	<1.27E-02	0.00E+00	1.27E-02
		Cs-134	<1.02E-02	0.00E+00	1.02E-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	<3.50E-01	0.00E+00	3.50E-01
525955	7/13/2020 - 7/20/2020	I-131	<1.62E-02	0.00E+00	1.62E-02
		Cs-134	<1.35E-02	0.00E+00	1.35E-02
		Cs-137	<1.31E-02	0.00E+00	1.31E-02
		Be-7	<1.17E-01	0.00E+00	1.17E-01
		K-40	3.83E-01	1.65E-01	1.74E-01
526279	7/20/2020 - 7/27/2020	I-131	<1.66E-02	0.00E+00	1.66E-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	<9.68E-02	0.00E+00	9.68E-02
		K-40	3.14E-01	1.34E-01	9.90E-02
526565	7/27/2020 - 8/3/2020	I-131	<1.37E-02	0.00E+00	1.37E-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	<9.62E-02	0.00E+00	9.62E-02
		K-40	2.80E-01	1.46E-01	1.69E-01
526882	8/3/2020 - 8/10/2020	I-131	<1.51E-02	0.00E+00	1.51E-02
		Cs-134	<2.06E-02	0.00E+00	2.06E-02
		Cs-137	<1.29E-02	0.00E+00	1.29E-02
		Be-7	<8.59E-02	0.00E+00	8.59E-02
		K-40	4.11E-01	1.79E-01	2.05E-01
527371	8/10/2020 - 8/17/2020	I-131	<1.88E-02	0.00E+00	1.88E-02
		Cs-134	<1.19E-02	0.00E+00	1.19E-02
		Cs-137	<1.36E-02	0.00E+00	1.36E-02
		Be-7	<8.57E-02	0.00E+00	8.57E-02
		K-40	<3.48E-02	0.00E+00	3.48E-02
527653	8/17/2020 - 8/24/2020	I-131	<1.73E-02	0.00E+00	1.73E-02
		Cs-134	<1.86E-02	0.00E+00	1.86E-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	4.62E-01	1.71E-01	1.51E-01
527954	8/24/2020 - 8/31/2020	I-131	<1.73E-02	0.00E+00	1.73E-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	<1.17E-01	0.00E+00	1.17E-01
		K-40	<4.14E-01	0.00E+00	4.14E-01
528701	8/31/2020 - 9/8/2020	I-131	<1.54E-02	0.00E+00	1.54E-02
		Cs-134	<1.30E-02	0.00E+00	1.30E-02
		Cs-137	<1.43E-02	0.00E+00	1.43E-02
		Be-7	<7.65E-02	0.00E+00	7.65E-02
		K-40	3.95E-01	1.43E-01	1.14E-01
529040	9/8/2020 - 9/14/2020	I-131	<2.30E-02	0.00E+00	2.30E-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	<1.25E-01	0.00E+00	1.25E-01
		K-40	6.95E-01	2.24E-01	1.69E-01



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
530031	9/14/2020 - 9/22/2020	I-131	<1.74E-02	0.00E+00	1.74E-02
		Cs-134	<1.37E-02	0.00E+00	1.37E-02
		Cs-137	<1.23E-02	0.00E+00	1.23E-02
		Be-7	<1.05E-01	0.00E+00	1.05E-01
		K-40	5.07E-01	1.62E-01	1.18E-01
530329	9/22/2020 - 9/28/2020	I-131	<1.85E-02	0.00E+00	1.85E-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	<1.12E-01	0.00E+00	1.12E-01
		K-40	3.32E-01	1.83E-01	2.29E-01
530599	9/28/2020 - 10/5/2020	I-131	<1.73E-02	0.00E+00	1.73E-02
		Cs-134	<1.33E-02	0.00E+00	1.33E-02
		Cs-137	<1.74E-02	0.00E+00	1.74E-02
		Be-7	<1.10E-01	0.00E+00	1.10E-01
		K-40	4.77E-01	1.76E-01	1.64E-01
531124	10/5/2020 - 10/12/2020	I-131	<1.70E-02	0.00E+00	1.70E-02
		Cs-134	<1.47E-02	0.00E+00	1.47E-02
		Cs-137	<1.85E-02	0.00E+00	1.85E-02
		Be-7	<1.09E-01	0.00E+00	1.09E-01
		K-40	7.88E-01	2.20E-01	1.49E-01
531712	10/12/2020 - 10/19/2020	I-131	<1.93E-02	0.00E+00	1.93E-02
		Cs-134	<1.33E-02	0.00E+00	1.33E-02
		Cs-137	<1.22E-02	0.00E+00	1.22E-02
		Be-7	<1.21E-01	0.00E+00	1.21E-01
		K-40	3.64E-01	1.83E-01	2.35E-01
532114	10/19/2020 - 10/26/2020	I-131	<1.86E-02	0.00E+00	1.86E-02
		Cs-134	<2.17E-02	0.00E+00	2.17E-02
		Cs-137	<1.69E-02	0.00E+00	1.69E-02
		Be-7	<1.02E-01	0.00E+00	1.02E-01
		K-40	4.24E-01	1.69E-01	1.61E-01
532536	10/26/2020 - 11/2/2020	I-131	<1.25E-02	0.00E+00	1.25E-02
		Cs-134	<1.25E-02	0.00E+00	1.25E-02
		Cs-137	<9.91E-03	0.00E+00	9.91E-03
		Be-7	<8.74E-02	0.00E+00	8.74E-02
		K-40	3.67E-01	1.77E-01	2.16E-01
532851	11/2/2020 - 11/9/2020	I-131	<1.88E-02	0.00E+00	1.88E-02
		Cs-134	<2.05E-02	0.00E+00	2.05E-02
		Cs-137	<1.47E-02	0.00E+00	1.47E-02
		Be-7	<9.19E-02	0.00E+00	9.19E-02
		K-40	4.49E-01	1.89E-01	2.09E-01
533372	11/9/2020 - 11/16/2020	I-131	<1.78E-02	0.00E+00	1.78E-02
		Cs-134	<1.67E-02	0.00E+00	1.67E-02
		Cs-137	<1.76E-02	0.00E+00	1.76E-02
		Be-7	<1.06E-01	0.00E+00	1.06E-01
		K-40	6.20E-01	1.98E-01	1.64E-01
533835	11/16/2020 - 11/23/2020	I-131	<1.95E-02	0.00E+00	1.95E-02
		Cs-134	<1.74E-02	0.00E+00	1.74E-02
		Cs-137	<1.30E-02	0.00E+00	1.30E-02
		Be-7	<1.13E-01	0.00E+00	1.13E-01
		K-40	5.80E-01	1.92E-01	1.52E-01



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
534133	11/23/2020 - 11/30/2020	I-131	<2.26E-02	0.00E+00	2.26E-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	<1.22E-01	0.00E+00	1.22E-01
		K-40	4.92E-01	1.94E-01	2.09E-01
534598	11/30/2020 - 12/7/2020	I-131	<1.74E-02	0.00E+00	1.74E-02
		Cs-134	<1.46E-02	0.00E+00	1.46E-02
		Cs-137	<1.53E-02	0.00E+00	1.53E-02
		Be-7	<1.12E-01	0.00E+00	1.12E-01
		K-40	6.76E-01	2.15E-01	1.95E-01
535365	12/7/2020 - 12/14/2020	I-131	<1.89E-02	0.00E+00	1.89E-02
		Cs-134	<1.58E-02	0.00E+00	1.58E-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	4.39E-01	1.89E-01	2.20E-01
535926	12/14/2020 - 12/21/2020	I-131	<2.03E-02	0.00E+00	2.03E-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	<1.22E-01	0.00E+00	1.22E-01
		K-40	4.94E-01	1.83E-01	1.57E-01
536208	12/21/2020 - 12/28/2020	I-131	<3.37E-02	0.00E+00	3.37E-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	<1.26E-01	0.00E+00	1.26E-01
		K-40	3.33E-01	1.90E-01	2.61E-01
<b>Sample Point 121 [ INDICATOR - NE @ 0.47 miles ]</b>					
514493	12/30/2019 - 1/6/2020	I-131	<1.72E-02	0.00E+00	1.72E-02
		Cs-134	<2.06E-02	0.00E+00	2.06E-02
		Cs-137	<1.43E-02	0.00E+00	1.43E-02
		Be-7	<1.24E-01	0.00E+00	1.24E-01
		K-40	4.58E-01	1.85E-01	1.93E-01
514933	1/6/2020 - 1/13/2020	I-131	<1.95E-02	0.00E+00	1.95E-02
		Cs-134	<1.60E-02	0.00E+00	1.60E-02
		Cs-137	<1.67E-02	0.00E+00	1.67E-02
		Be-7	<1.20E-01	0.00E+00	1.20E-01
		K-40	<3.43E-01	0.00E+00	3.43E-01
515266	1/13/2020 - 1/20/2020	I-131	<1.53E-02	0.00E+00	1.53E-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	<7.00E-02	0.00E+00	7.00E-02
		K-40	4.04E-01	1.54E-01	1.23E-01
515503	1/20/2020 - 1/27/2020	I-131	<1.76E-02	0.00E+00	1.76E-02
		Cs-134	<1.38E-02	0.00E+00	1.38E-02
		Cs-137	<6.19E-03	0.00E+00	6.19E-03
		Be-7	<1.06E-01	0.00E+00	1.06E-01
		K-40	3.28E-01	1.31E-01	3.42E-02
515896	1/27/2020 - 2/3/2020	I-131	<1.58E-02	0.00E+00	1.58E-02
		Cs-134	<1.44E-02	0.00E+00	1.44E-02
		Cs-137	<1.56E-02	0.00E+00	1.56E-02
		Be-7	<9.66E-02	0.00E+00	9.66E-02
		K-40	<3.52E-01	0.00E+00	3.52E-01



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
516150	2/3/2020 - 2/10/2020	I-131	<1.55E-02	0.00E+00	1.55E-02
		Cs-134	<1.44E-02	0.00E+00	1.44E-02
		Cs-137	<1.51E-02	0.00E+00	1.51E-02
		Be-7	<9.16E-02	0.00E+00	9.16E-02
		K-40	3.50E-01	1.44E-01	1.18E-01
516514	2/10/2020 - 2/17/2020	I-131	<2.15E-02	0.00E+00	2.15E-02
		Cs-134	<1.63E-02	0.00E+00	1.63E-02
		Cs-137	<1.74E-02	0.00E+00	1.74E-02
		Be-7	<1.36E-01	0.00E+00	1.36E-01
		K-40	6.20E-01	1.97E-01	1.43E-01
516894	2/17/2020 - 2/24/2020	I-131	<2.10E-02	0.00E+00	2.10E-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	<1.08E-01	0.00E+00	1.08E-01
		K-40	5.60E-01	2.02E-01	2.06E-01
517419	2/24/2020 - 3/2/2020	I-131	<2.18E-02	0.00E+00	2.18E-02
		Cs-134	<1.59E-02	0.00E+00	1.59E-02
		Cs-137	<1.72E-02	0.00E+00	1.72E-02
		Be-7	<1.41E-01	0.00E+00	1.41E-01
		K-40	3.92E-01	1.80E-01	2.06E-01
517682	3/2/2020 - 3/9/2020	I-131	<1.87E-02	0.00E+00	1.87E-02
		Cs-134	<1.87E-02	0.00E+00	1.87E-02
		Cs-137	<1.71E-02	0.00E+00	1.71E-02
		Be-7	<1.20E-01	0.00E+00	1.20E-01
		K-40	5.86E-01	1.79E-01	3.45E-02
518716	3/9/2020 - 3/16/2020	I-131	<1.35E-02	0.00E+00	1.35E-02
		Cs-134	<1.36E-02	0.00E+00	1.36E-02
		Cs-137	<1.57E-02	0.00E+00	1.57E-02
		Be-7	<7.77E-02	0.00E+00	7.77E-02
		K-40	<2.78E-01	0.00E+00	2.78E-01
519321	3/16/2020 - 3/23/2020	I-131	<2.03E-02	0.00E+00	2.03E-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	<1.38E-01	0.00E+00	1.38E-01
		K-40	5.32E-01	1.80E-01	1.26E-01
519706	3/23/2020 - 3/30/2020	I-131	<1.48E-02	0.00E+00	1.48E-02
		Cs-134	<1.87E-02	0.00E+00	1.87E-02
		Cs-137	<1.17E-02	0.00E+00	1.17E-02
		Be-7	<1.08E-01	0.00E+00	1.08E-01
		K-40	3.04E-01	1.63E-01	2.05E-01
520303	3/30/2020 - 4/6/2020	I-131	<1.93E-02	0.00E+00	1.93E-02
		Cs-134	<1.37E-02	0.00E+00	1.37E-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	<3.28E-01	0.00E+00	3.28E-01
520518	4/6/2020 - 4/13/2020	I-131	<1.58E-02	0.00E+00	1.58E-02
		Cs-134	<1.17E-02	0.00E+00	1.17E-02
		Cs-137	<1.18E-02	0.00E+00	1.18E-02
		Be-7	<8.41E-02	0.00E+00	8.41E-02
		K-40	2.64E-01	1.17E-01	3.41E-02



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
520810	4/13/2020 - 4/20/2020	I-131	<2.52E-02	0.00E+00	2.52E-02
		Cs-134	<1.73E-02	0.00E+00	1.73E-02
		Cs-137	<1.66E-02	0.00E+00	1.66E-02
		Be-7	<1.06E-01	0.00E+00	1.06E-01
		K-40	4.13E-01	1.63E-01	1.54E-01
521615	4/20/2020 - 4/27/2020	I-131	<1.98E-02	0.00E+00	1.98E-02
		Cs-134	<1.56E-02	0.00E+00	1.56E-02
		Cs-137	<1.64E-02	0.00E+00	1.64E-02
		Be-7	<1.30E-01	0.00E+00	1.30E-01
		K-40	2.95E-01	1.49E-01	1.65E-01
522043	4/27/2020 - 5/4/2020	I-131	<1.35E-02	0.00E+00	1.35E-02
		Cs-134	<1.44E-02	0.00E+00	1.44E-02
		Cs-137	<1.45E-02	0.00E+00	1.45E-02
		Be-7	<7.72E-02	0.00E+00	7.72E-02
		K-40	1.47E-01	1.15E-01	1.60E-01
522352	5/4/2020 - 5/11/2020	I-131	<1.80E-02	0.00E+00	1.80E-02
		Cs-134	<1.74E-02	0.00E+00	1.74E-02
		Cs-137	<1.56E-02	0.00E+00	1.56E-02
		Be-7	<1.18E-01	0.00E+00	1.18E-01
		K-40	3.45E-01	1.76E-01	2.21E-01
522601	5/11/2020 - 5/18/2020	I-131	<1.76E-02	0.00E+00	1.76E-02
		Cs-134	<1.66E-02	0.00E+00	1.66E-02
		Cs-137	<1.49E-02	0.00E+00	1.49E-02
		Be-7	<7.82E-02	0.00E+00	7.82E-02
		K-40	4.70E-01	1.80E-01	1.77E-01
523111	5/18/2020 - 5/26/2020	I-131	<1.79E-02	0.00E+00	1.79E-02
		Cs-134	<1.72E-02	0.00E+00	1.72E-02
		Cs-137	<9.65E-03	0.00E+00	9.65E-03
		Be-7	<1.13E-01	0.00E+00	1.13E-01
		K-40	4.45E-01	1.61E-01	1.47E-01
523477	5/26/2020 - 6/1/2020	I-131	<1.79E-02	0.00E+00	1.79E-02
		Cs-134	<1.21E-02	0.00E+00	1.21E-02
		Cs-137	<1.04E-02	0.00E+00	1.04E-02
		Be-7	<1.01E-01	0.00E+00	1.01E-01
		K-40	<3.31E-01	0.00E+00	3.31E-01
523885	6/1/2020 - 6/8/2020	I-131	<1.73E-02	0.00E+00	1.73E-02
		Cs-134	<1.53E-02	0.00E+00	1.53E-02
		Cs-137	<1.68E-02	0.00E+00	1.68E-02
		Be-7	<1.21E-01	0.00E+00	1.21E-01
		K-40	4.54E-01	1.90E-01	2.17E-01
524446	6/8/2020 - 6/15/2020	I-131	<1.49E-02	0.00E+00	1.49E-02
		Cs-134	<1.80E-02	0.00E+00	1.80E-02
		Cs-137	<1.39E-02	0.00E+00	1.39E-02
		Be-7	<1.03E-01	0.00E+00	1.03E-01
		K-40	5.15E-01	1.82E-01	1.67E-01
524771	6/15/2020 - 6/22/2020	I-131	<1.47E-02	0.00E+00	1.47E-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	<7.96E-02	0.00E+00	7.96E-02
		K-40	4.48E-01	1.87E-01	2.06E-01



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
524996	6/22/2020 - 6/29/2020	I-131	<1.38E-02	0.00E+00	1.38E-02
		Cs-134	<1.27E-02	0.00E+00	1.27E-02
		Cs-137	<9.04E-03	0.00E+00	9.04E-03
		Be-7	4.23E-02	6.14E-02	1.03E-01
		K-40	1.83E-01	1.44E-01	2.08E-01
525381	6/29/2020 - 7/6/2020	I-131	<1.71E-02	0.00E+00	1.71E-02
		Cs-134	<1.81E-02	0.00E+00	1.81E-02
		Cs-137	<1.66E-02	0.00E+00	1.66E-02
		Be-7	<9.12E-02	0.00E+00	9.12E-02
		K-40	3.30E-01	1.50E-01	1.56E-01
525593	7/6/2020 - 7/13/2020	I-131	<1.53E-02	0.00E+00	1.53E-02
		Cs-134	<1.44E-02	0.00E+00	1.44E-02
		Cs-137	<1.62E-02	0.00E+00	1.62E-02
		Be-7	<1.05E-01	0.00E+00	1.05E-01
		K-40	3.81E-01	1.95E-01	2.57E-01
525956	7/13/2020 - 7/20/2020	I-131	<1.94E-02	0.00E+00	1.94E-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	<9.04E-02	0.00E+00	9.04E-02
		K-40	<3.53E-01	0.00E+00	3.53E-01
526280	7/20/2020 - 7/27/2020	I-131	<1.93E-02	0.00E+00	1.93E-02
		Cs-134	<1.75E-02	0.00E+00	1.75E-02
		Cs-137	<1.83E-02	0.00E+00	1.83E-02
		Be-7	<1.05E-01	0.00E+00	1.05E-01
		K-40	4.59E-01	1.99E-01	2.39E-01
526566	7/27/2020 - 8/3/2020	I-131	<1.09E-02	0.00E+00	1.09E-02
		Cs-134	<1.13E-02	0.00E+00	1.13E-02
		Cs-137	<8.30E-03	0.00E+00	8.30E-03
		Be-7	<6.57E-02	0.00E+00	6.57E-02
		K-40	5.69E-01	1.56E-01	1.66E-01
526883	8/3/2020 - 8/10/2020	I-131	<1.71E-02	0.00E+00	1.71E-02
		Cs-134	<1.88E-02	0.00E+00	1.88E-02
		Cs-137	<1.62E-02	0.00E+00	1.62E-02
		Be-7	<1.07E-01	0.00E+00	1.07E-01
		K-40	3.74E-01	1.70E-01	1.98E-01
527372	8/10/2020 - 8/17/2020	I-131	<1.56E-02	0.00E+00	1.56E-02
		Cs-134	<1.85E-02	0.00E+00	1.85E-02
		Cs-137	<1.60E-02	0.00E+00	1.60E-02
		Be-7	<9.85E-02	0.00E+00	9.85E-02
		K-40	4.82E-01	1.77E-01	1.64E-01
527654	8/17/2020 - 8/24/2020	I-131	<1.61E-02	0.00E+00	1.61E-02
		Cs-134	<1.56E-02	0.00E+00	1.56E-02
		Cs-137	<1.28E-02	0.00E+00	1.28E-02
		Be-7	<9.99E-02	0.00E+00	9.99E-02
		K-40	4.71E-01	1.56E-01	3.28E-02
527955	8/24/2020 - 8/31/2020	I-131	<1.78E-02	0.00E+00	1.78E-02
		Cs-134	<2.09E-02	0.00E+00	2.09E-02
		Cs-137	<1.66E-02	0.00E+00	1.66E-02
		Be-7	<9.95E-02	0.00E+00	9.95E-02
		K-40	6.40E-01	1.93E-01	1.28E-01



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
528702	8/31/2020 - 9/8/2020	I-131	<1.55E-02	0.00E+00	1.55E-02
		Cs-134	<1.47E-02	0.00E+00	1.47E-02
		Cs-137	<1.21E-02	0.00E+00	1.21E-02
		Be-7	<9.65E-02	0.00E+00	9.65E-02
		K-40	5.37E-01	1.68E-01	1.31E-01
529041	9/8/2020 - 9/14/2020	I-131	<2.18E-02	0.00E+00	2.18E-02
		Cs-134	<2.13E-02	0.00E+00	2.13E-02
		Cs-137	<1.38E-02	0.00E+00	1.38E-02
		Be-7	<1.36E-01	0.00E+00	1.36E-01
		K-40	5.72E-01	2.51E-01	3.01E-01
530032	9/14/2020 - 9/22/2020	I-131	<1.40E-02	0.00E+00	1.40E-02
		Cs-134	<1.70E-02	0.00E+00	1.70E-02
		Cs-137	<1.15E-02	0.00E+00	1.15E-02
		Be-7	<1.10E-01	0.00E+00	1.10E-01
		K-40	5.30E-01	1.78E-01	1.65E-01
530330	9/22/2020 - 9/28/2020	I-131	<1.66E-02	0.00E+00	1.66E-02
		Cs-134	<2.33E-02	0.00E+00	2.33E-02
		Cs-137	<2.14E-02	0.00E+00	2.14E-02
		Be-7	<1.13E-01	0.00E+00	1.13E-01
		K-40	3.65E-01	2.04E-01	2.65E-01
530600	9/28/2020 - 10/5/2020	I-131	<2.08E-02	0.00E+00	2.08E-02
		Cs-134	<1.73E-02	0.00E+00	1.73E-02
		Cs-137	<1.85E-02	0.00E+00	1.85E-02
		Be-7	<1.07E-01	0.00E+00	1.07E-01
		K-40	<3.94E-01	0.00E+00	3.94E-01
531125	10/5/2020 - 10/12/2020	I-131	<2.10E-02	0.00E+00	2.10E-02
		Cs-134	<1.71E-02	0.00E+00	1.71E-02
		Cs-137	<2.28E-03	0.00E+00	2.28E-03
		Be-7	<1.16E-01	0.00E+00	1.16E-01
		K-40	6.70E-01	2.28E-01	2.38E-01
531713	10/12/2020 - 10/19/2020	I-131	<1.69E-02	0.00E+00	1.69E-02
		Cs-134	<1.14E-02	0.00E+00	1.14E-02
		Cs-137	<1.43E-02	0.00E+00	1.43E-02
		Be-7	<1.33E-01	0.00E+00	1.33E-01
		K-40	6.65E-01	2.08E-01	1.83E-01
532115	10/19/2020 - 10/26/2020	I-131	<1.46E-02	0.00E+00	1.46E-02
		Cs-134	<1.44E-02	0.00E+00	1.44E-02
		Cs-137	<1.57E-02	0.00E+00	1.57E-02
		Be-7	<1.14E-01	0.00E+00	1.14E-01
		K-40	5.92E-01	2.15E-01	2.33E-01
532537	10/26/2020 - 11/2/2020	I-131	<1.78E-02	0.00E+00	1.78E-02
		Cs-134	<1.61E-02	0.00E+00	1.61E-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	6.22E-01	2.17E-01	2.17E-01
532852	11/2/2020 - 11/9/2020	I-131	<2.09E-02	0.00E+00	2.09E-02
		Cs-134	<2.09E-02	0.00E+00	2.09E-02
		Cs-137	<1.02E-02	0.00E+00	1.02E-02
		Be-7	<1.11E-01	0.00E+00	1.11E-01
		K-40	7.44E-01	2.03E-01	3.42E-02





# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
533373	11/9/2020 - 11/16/2020	I-131	<1.64E-02	0.00E+00	1.64E-02
		Cs-134	<1.53E-02	0.00E+00	1.53E-02
		Cs-137	<1.96E-02	0.00E+00	1.96E-02
		Be-7	<1.09E-01	0.00E+00	1.09E-01
		K-40	3.93E-01	1.65E-01	1.67E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
533836	11/16/2020 - 11/23/2020	I-131	<2.08E-02	0.00E+00	2.08E-02
		Cs-134	<1.35E-02	0.00E+00	1.35E-02
		Cs-137	<1.54E-02	0.00E+00	1.54E-02
		Be-7	<9.64E-02	0.00E+00	9.64E-02
		K-40	6.73E-01	2.30E-01	2.40E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
534134	11/23/2020 - 11/30/2020	I-131	<1.95E-02	0.00E+00	1.95E-02
		Cs-134	<1.59E-02	0.00E+00	1.59E-02
		Cs-137	<1.66E-02	0.00E+00	1.66E-02
		Be-7	<1.27E-01	0.00E+00	1.27E-01
		K-40	6.02E-01	1.78E-01	3.33E-02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
534599	11/30/2020 - 12/7/2020	I-131	<1.41E-02	0.00E+00	1.41E-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	<1.17E-01	0.00E+00	1.17E-01
		K-40	4.03E-01	2.08E-01	2.78E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
535366	12/7/2020 - 12/14/2020	I-131	<1.84E-02	0.00E+00	1.84E-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	<9.51E-02	0.00E+00	9.51E-02
		K-40	4.59E-01	2.05E-01	2.56E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
535927	12/14/2020 - 12/21/2020	I-131	<1.07E-02	0.00E+00	1.07E-02
		Cs-134	<1.63E-02	0.00E+00	1.63E-02
		Cs-137	<1.41E-02	0.00E+00	1.41E-02
		Be-7	<9.33E-02	0.00E+00	9.33E-02
		K-40	<2.86E-01	0.00E+00	2.86E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
536209	12/21/2020 - 12/28/2020	I-131	<3.04E-02	0.00E+00	3.04E-02
		Cs-134	<1.51E-02	0.00E+00	1.51E-02
		Cs-137	<1.49E-02	0.00E+00	1.49E-02
		Be-7	<1.55E-01	0.00E+00	1.55E-01
		K-40	3.60E-01	1.54E-01	1.53E-01

## Sample Point 125 [ INDICATOR - SW @ 0.38 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514494	12/30/2019 - 1/6/2020	I-131	<1.48E-02	0.00E+00	1.48E-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	<8.31E-02	0.00E+00	8.31E-02
		K-40	<2.27E-01	0.00E+00	2.27E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514934	1/6/2020 - 1/13/2020	I-131	<1.72E-02	0.00E+00	1.72E-02
		Cs-134	<1.52E-02	0.00E+00	1.52E-02
		Cs-137	<1.61E-02	0.00E+00	1.61E-02
		Be-7	<1.15E-01	0.00E+00	1.15E-01
		K-40	3.21E-01	1.87E-01	2.56E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
515267	1/13/2020 - 1/20/2020	I-131	<1.33E-02	0.00E+00	1.33E-02
		Cs-134	<1.36E-02	0.00E+00	1.36E-02
		Cs-137	<1.63E-02	0.00E+00	1.63E-02
		Be-7	<9.74E-02	0.00E+00	9.74E-02
		K-40	4.79E-01	1.60E-01	3.41E-02



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
515504	1/20/2020 - 1/27/2020	I-131	<1.56E-02	0.00E+00	1.56E-02
		Cs-134	<1.62E-02	0.00E+00	1.62E-02
		Cs-137	<1.93E-02	0.00E+00	1.93E-02
		Be-7	<9.34E-02	0.00E+00	9.34E-02
		K-40	<3.06E-01	0.00E+00	3.06E-01
515897	1/27/2020 - 2/3/2020	I-131	<1.67E-02	0.00E+00	1.67E-02
		Cs-134	<1.44E-02	0.00E+00	1.44E-02
		Cs-137	<1.17E-02	0.00E+00	1.17E-02
		Be-7	<1.10E-01	0.00E+00	1.10E-01
		K-40	2.58E-01	1.15E-01	3.33E-02
516151	2/3/2020 - 2/10/2020	I-131	<2.25E-02	0.00E+00	2.25E-02
		Cs-134	<1.53E-02	0.00E+00	1.53E-02
		Cs-137	<1.44E-02	0.00E+00	1.44E-02
		Be-7	<1.28E-01	0.00E+00	1.28E-01
		K-40	5.42E-01	2.11E-01	2.36E-01
516515	2/10/2020 - 2/17/2020	I-131	<1.94E-02	0.00E+00	1.94E-02
		Cs-134	<1.96E-02	0.00E+00	1.96E-02
		Cs-137	<1.26E-02	0.00E+00	1.26E-02
		Be-7	<1.06E-01	0.00E+00	1.06E-01
		K-40	5.63E-01	1.84E-01	1.34E-01
516895	2/17/2020 - 2/24/2020	I-131	<2.15E-02	0.00E+00	2.15E-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	<1.47E-01	0.00E+00	1.47E-01
		K-40	6.01E-01	2.05E-01	1.95E-01
517420	2/24/2020 - 3/2/2020	I-131	<1.99E-02	0.00E+00	1.99E-02
		Cs-134	<1.41E-02	0.00E+00	1.41E-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	5.12E-01	1.89E-01	1.73E-01
517683	3/2/2020 - 3/9/2020	I-131	<1.62E-02	0.00E+00	1.62E-02
		Cs-134	<1.67E-02	0.00E+00	1.67E-02
		Cs-137	<1.50E-02	0.00E+00	1.50E-02
		Be-7	<1.08E-01	0.00E+00	1.08E-01
		K-40	3.65E-01	1.60E-01	1.67E-01
518717	3/9/2020 - 3/16/2020	I-131	<1.61E-02	0.00E+00	1.61E-02
		Cs-134	<9.03E-03	0.00E+00	9.03E-03
		Cs-137	<1.52E-02	0.00E+00	1.52E-02
		Be-7	<8.81E-02	0.00E+00	8.81E-02
		K-40	2.18E-01	1.32E-01	1.64E-01
519322	3/16/2020 - 3/23/2020	I-131	<1.52E-02	0.00E+00	1.52E-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	<9.29E-02	0.00E+00	9.29E-02
		K-40	3.67E-01	1.57E-01	1.56E-01
519707	3/23/2020 - 3/30/2020	I-131	<1.29E-02	0.00E+00	1.29E-02
		Cs-134	<1.44E-02	0.00E+00	1.44E-02
		Cs-137	<1.17E-02	0.00E+00	1.17E-02
		Be-7	<8.70E-02	0.00E+00	8.70E-02
		K-40	<2.40E-01	0.00E+00	2.40E-01



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
520304	3/30/2020 - 4/6/2020	I-131	<1.49E-02	0.00E+00	1.49E-02
		Cs-134	<1.53E-02	0.00E+00	1.53E-02
		Cs-137	<1.09E-02	0.00E+00	1.09E-02
		Be-7	<9.24E-02	0.00E+00	9.24E-02
		K-40	1.36E-01	1.43E-01	2.27E-01
520519	4/6/2020 - 4/13/2020	I-131	<1.67E-02	0.00E+00	1.67E-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	<1.22E-01	0.00E+00	1.22E-01
		K-40	3.70E-01	2.19E-01	3.13E-01
520811	4/13/2020 - 4/20/2020	I-131	<2.05E-02	0.00E+00	2.05E-02
		Cs-134	<1.60E-02	0.00E+00	1.60E-02
		Cs-137	<1.31E-02	0.00E+00	1.31E-02
		Be-7	<9.34E-02	0.00E+00	9.34E-02
		K-40	3.99E-01	1.52E-01	1.15E-01
521616	4/20/2020 - 4/27/2020	I-131	<2.03E-02	0.00E+00	2.03E-02
		Cs-134	<1.63E-02	0.00E+00	1.63E-02
		Cs-137	<1.01E-02	0.00E+00	1.01E-02
		Be-7	<1.01E-01	0.00E+00	1.01E-01
		K-40	4.15E-01	1.79E-01	2.00E-01
522044	4/27/2020 - 5/4/2020	I-131	<1.20E-02	0.00E+00	1.20E-02
		Cs-134	<1.46E-02	0.00E+00	1.46E-02
		Cs-137	<7.82E-03	0.00E+00	7.82E-03
		Be-7	<6.69E-02	0.00E+00	6.69E-02
		K-40	<1.17E-01	0.00E+00	1.17E-01
522353	5/4/2020 - 5/11/2020	I-131	<1.35E-02	0.00E+00	1.35E-02
		Cs-134	<1.43E-02	0.00E+00	1.43E-02
		Cs-137	<1.24E-02	0.00E+00	1.24E-02
		Be-7	<9.89E-02	0.00E+00	9.89E-02
		K-40	2.24E-01	1.33E-01	1.64E-01
522602	5/11/2020 - 5/18/2020	I-131	<1.74E-02	0.00E+00	1.74E-02
		Cs-134	<1.62E-02	0.00E+00	1.62E-02
		Cs-137	<1.39E-02	0.00E+00	1.39E-02
		Be-7	<1.34E-01	0.00E+00	1.34E-01
		K-40	3.57E-01	1.41E-01	3.59E-02
523112	5/18/2020 - 5/26/2020	I-131	<1.71E-02	0.00E+00	1.71E-02
		Cs-134	<1.53E-02	0.00E+00	1.53E-02
		Cs-137	<1.21E-02	0.00E+00	1.21E-02
		Be-7	<9.79E-02	0.00E+00	9.79E-02
		K-40	3.46E-01	1.66E-01	2.10E-01
523478	5/26/2020 - 6/1/2020	I-131	<1.50E-02	0.00E+00	1.50E-02
		Cs-134	<1.37E-02	0.00E+00	1.37E-02
		Cs-137	<9.14E-03	0.00E+00	9.14E-03
		Be-7	<1.03E-01	0.00E+00	1.03E-01
		K-40	<1.59E-01	0.00E+00	1.59E-01
523886	6/1/2020 - 6/8/2020	I-131	<1.43E-02	0.00E+00	1.43E-02
		Cs-134	<1.54E-02	0.00E+00	1.54E-02
		Cs-137	<1.01E-02	0.00E+00	1.01E-02
		Be-7	<9.66E-02	0.00E+00	9.66E-02
		K-40	<1.17E-01	0.00E+00	1.17E-01



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
524447	6/8/2020 - 6/15/2020	I-131	<1.35E-02	0.00E+00	1.35E-02
		Cs-134	<1.26E-02	0.00E+00	1.26E-02
		Cs-137	<9.99E-03	0.00E+00	9.99E-03
		Be-7	<8.35E-02	0.00E+00	8.35E-02
		K-40	2.73E-01	1.51E-01	1.88E-01
524772	6/15/2020 - 6/22/2020	I-131	<1.52E-02	0.00E+00	1.52E-02
		Cs-134	<1.64E-02	0.00E+00	1.64E-02
		Cs-137	<1.17E-02	0.00E+00	1.17E-02
		Be-7	<1.03E-01	0.00E+00	1.03E-01
		K-40	2.84E-01	1.41E-01	1.41E-01
524997	6/22/2020 - 6/29/2020	I-131	<1.69E-02	0.00E+00	1.69E-02
		Cs-134	<1.34E-02	0.00E+00	1.34E-02
		Cs-137	<1.47E-02	0.00E+00	1.47E-02
		Be-7	<1.06E-01	0.00E+00	1.06E-01
		K-40	1.25E-01	1.20E-01	1.79E-01
525382	6/29/2020 - 7/6/2020	I-131	<1.88E-02	0.00E+00	1.88E-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	<1.03E-01	0.00E+00	1.03E-01
		K-40	3.48E-01	1.58E-01	1.74E-01
525594	7/6/2020 - 7/13/2020	I-131	<1.74E-02	0.00E+00	1.74E-02
		Cs-134	<2.05E-02	0.00E+00	2.05E-02
		Cs-137	<1.62E-02	0.00E+00	1.62E-02
		Be-7	<1.38E-01	0.00E+00	1.38E-01
		K-40	4.47E-01	1.94E-01	2.31E-01
525957	7/13/2020 - 7/20/2020	I-131	<1.42E-02	0.00E+00	1.42E-02
		Cs-134	<1.29E-02	0.00E+00	1.29E-02
		Cs-137	<1.28E-02	0.00E+00	1.28E-02
		Be-7	<9.46E-02	0.00E+00	9.46E-02
		K-40	<1.80E-01	0.00E+00	1.80E-01
526281	7/20/2020 - 7/27/2020	I-131	<1.89E-02	0.00E+00	1.89E-02
		Cs-134	<1.53E-02	0.00E+00	1.53E-02
		Cs-137	<1.25E-02	0.00E+00	1.25E-02
		Be-7	<1.26E-01	0.00E+00	1.26E-01
		K-40	3.52E-01	1.91E-01	2.56E-01
526567	7/27/2020 - 8/3/2020	I-131	<1.47E-02	0.00E+00	1.47E-02
		Cs-134	<1.65E-02	0.00E+00	1.65E-02
		Cs-137	<1.75E-02	0.00E+00	1.75E-02
		Be-7	<9.49E-02	0.00E+00	9.49E-02
		K-40	4.91E-01	1.83E-01	1.81E-01
526884	8/3/2020 - 8/10/2020	I-131	<1.58E-02	0.00E+00	1.58E-02
		Cs-134	<1.52E-02	0.00E+00	1.52E-02
		Cs-137	<1.62E-02	0.00E+00	1.62E-02
		Be-7	<9.75E-02	0.00E+00	9.75E-02
		K-40	<3.13E-01	0.00E+00	3.13E-01
527373	8/10/2020 - 8/17/2020	I-131	<1.79E-02	0.00E+00	1.79E-02
		Cs-134	<1.61E-02	0.00E+00	1.61E-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	4.14E-01	1.78E-01	1.97E-01



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
527655	8/17/2020 - 8/24/2020	I-131	<1.57E-02	0.00E+00	1.57E-02
		Cs-134	<1.44E-02	0.00E+00	1.44E-02
		Cs-137	<1.82E-02	0.00E+00	1.82E-02
		Be-7	<1.05E-01	0.00E+00	1.05E-01
		K-40	4.98E-01	1.89E-01	1.91E-01
527956	8/24/2020 - 8/31/2020	I-131	<1.81E-02	0.00E+00	1.81E-02
		Cs-134	<1.56E-02	0.00E+00	1.56E-02
		Cs-137	<1.14E-02	0.00E+00	1.14E-02
		Be-7	<1.05E-01	0.00E+00	1.05E-01
		K-40	6.53E-01	1.95E-01	1.30E-01
528703	8/31/2020 - 9/8/2020	I-131	<1.67E-02	0.00E+00	1.67E-02
		Cs-134	<1.50E-02	0.00E+00	1.50E-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	5.32E-01	1.64E-01	1.10E-01
529042	9/8/2020 - 9/14/2020	I-131	<2.06E-02	0.00E+00	2.06E-02
		Cs-134	<1.36E-02	0.00E+00	1.36E-02
		Cs-137	<1.91E-02	0.00E+00	1.91E-02
		Be-7	<1.13E-01	0.00E+00	1.13E-01
		K-40	5.73E-01	2.11E-01	1.95E-01
530033	9/14/2020 - 9/22/2020	I-131	<1.59E-02	0.00E+00	1.59E-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	<8.34E-02	0.00E+00	8.34E-02
		K-40	5.86E-01	1.70E-01	9.69E-02
530331	9/22/2020 - 9/28/2020	I-131	<1.56E-02	0.00E+00	1.56E-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	<1.06E-01	0.00E+00	1.06E-01
		K-40	3.03E-01	1.72E-01	2.17E-01
530601	9/28/2020 - 10/5/2020	I-131	<1.90E-02	0.00E+00	1.90E-02
		Cs-134	<1.42E-02	0.00E+00	1.42E-02
		Cs-137	<1.43E-02	0.00E+00	1.43E-02
		Be-7	<1.20E-01	0.00E+00	1.20E-01
		K-40	6.36E-01	2.20E-01	2.35E-01
531126	10/5/2020 - 10/12/2020	I-131	<2.04E-02	0.00E+00	2.04E-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	<9.76E-02	0.00E+00	9.76E-02
		K-40	6.63E-01	2.08E-01	1.76E-01
531714	10/12/2020 - 10/19/2020	I-131	<1.37E-02	0.00E+00	1.37E-02
		Cs-134	<1.05E-02	0.00E+00	1.05E-02
		Cs-137	<1.26E-02	0.00E+00	1.26E-02
		Be-7	<1.01E-01	0.00E+00	1.01E-01
		K-40	4.57E-01	1.77E-01	1.71E-01
532116	10/19/2020 - 10/26/2020	I-131	<1.88E-02	0.00E+00	1.88E-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	<1.10E-01	0.00E+00	1.10E-01
		K-40	3.53E-01	2.09E-01	2.92E-01



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
532538	10/26/2020 - 11/2/2020	I-131	<2.44E-02	0.00E+00	2.44E-02
		Cs-134	<1.93E-02	0.00E+00	1.93E-02
		Cs-137	<1.57E-02	0.00E+00	1.57E-02
		Be-7	<1.34E-01	0.00E+00	1.34E-01
		K-40	8.66E-01	2.77E-01	2.46E-01
532853	11/2/2020 - 11/9/2020	I-131	<1.84E-02	0.00E+00	1.84E-02
		Cs-134	<1.76E-02	0.00E+00	1.76E-02
		Cs-137	<1.68E-02	0.00E+00	1.68E-02
		Be-7	<1.12E-01	0.00E+00	1.12E-01
		K-40	5.83E-01	2.16E-01	2.40E-01
533374	11/9/2020 - 11/16/2020	I-131	<1.73E-02	0.00E+00	1.73E-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	<1.19E-01	0.00E+00	1.19E-01
		K-40	5.59E-01	1.89E-01	1.64E-01
533837	11/16/2020 - 11/23/2020	I-131	<1.96E-02	0.00E+00	1.96E-02
		Cs-134	<2.05E-02	0.00E+00	2.05E-02
		Cs-137	<1.39E-02	0.00E+00	1.39E-02
		Be-7	<8.75E-02	0.00E+00	8.75E-02
		K-40	6.85E-01	2.07E-01	1.59E-01
534135	11/23/2020 - 11/30/2020	I-131	<1.71E-02	0.00E+00	1.71E-02
		Cs-134	<1.50E-02	0.00E+00	1.50E-02
		Cs-137	<1.92E-02	0.00E+00	1.92E-02
		Be-7	<1.28E-01	0.00E+00	1.28E-01
		K-40	4.92E-01	1.81E-01	1.75E-01
534600	11/30/2020 - 12/7/2020	I-131	<1.77E-02	0.00E+00	1.77E-02
		Cs-134	<1.45E-02	0.00E+00	1.45E-02
		Cs-137	<1.39E-02	0.00E+00	1.39E-02
		Be-7	<1.14E-01	0.00E+00	1.14E-01
		K-40	7.12E-01	2.20E-01	1.99E-01
535367	12/7/2020 - 12/14/2020	I-131	<1.40E-02	0.00E+00	1.40E-02
		Cs-134	<1.26E-02	0.00E+00	1.26E-02
		Cs-137	<1.00E-02	0.00E+00	1.00E-02
		Be-7	<9.69E-02	0.00E+00	9.69E-02
		K-40	4.28E-01	1.60E-01	1.26E-01
535928	12/14/2020 - 12/21/2020	I-131	<1.63E-02	0.00E+00	1.63E-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	<1.14E-01	0.00E+00	1.14E-01
		K-40	4.08E-01	1.74E-01	1.90E-01
536210	12/21/2020 - 12/28/2020	I-131	<3.49E-02	0.00E+00	3.49E-02
		Cs-134	<1.72E-02	0.00E+00	1.72E-02
		Cs-137	<1.42E-02	0.00E+00	1.42E-02
		Be-7	<1.12E-01	0.00E+00	1.12E-01
		K-40	4.71E-01	1.81E-01	1.86E-01

Sample Point 133 [ INDICATOR - ENE @ 6.23 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514495	12/30/2019 - 1/6/2020	I-131	<1.55E-02	0.00E+00	1.55E-02
		Cs-134	<1.26E-02	0.00E+00	1.26E-02
		Cs-137	<1.25E-02	0.00E+00	1.25E-02
		Be-7	<7.29E-02	0.00E+00	7.29E-02
		K-40	1.97E-01	1.29E-01	1.69E-01



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
514935	1/6/2020 - 1/13/2020	I-131	<1.84E-02	0.00E+00	1.84E-02
		Cs-134	<1.41E-02	0.00E+00	1.41E-02
		Cs-137	<1.41E-02	0.00E+00	1.41E-02
		Be-7	<9.50E-02	0.00E+00	9.50E-02
		K-40	1.60E-01	1.47E-01	2.26E-01
515268	1/13/2020 - 1/20/2020	I-131	<1.62E-02	0.00E+00	1.62E-02
		Cs-134	<1.36E-02	0.00E+00	1.36E-02
		Cs-137	<1.57E-02	0.00E+00	1.57E-02
		Be-7	<6.61E-02	0.00E+00	6.61E-02
		K-40	2.78E-01	1.29E-01	1.15E-01
515505	1/20/2020 - 1/27/2020	I-131	<2.10E-02	0.00E+00	2.10E-02
		Cs-134	<1.14E-02	0.00E+00	1.14E-02
		Cs-137	<1.73E-02	0.00E+00	1.73E-02
		Be-7	<1.29E-01	0.00E+00	1.29E-01
		K-40	7.57E-01	2.36E-01	2.28E-01
515898	1/27/2020 - 2/3/2020	I-131	<1.50E-02	0.00E+00	1.50E-02
		Cs-134	<1.40E-02	0.00E+00	1.40E-02
		Cs-137	<1.50E-02	0.00E+00	1.50E-02
		Be-7	<9.02E-02	0.00E+00	9.02E-02
		K-40	3.64E-01	1.52E-01	1.32E-01
516152	2/3/2020 - 2/10/2020	I-131	<1.88E-02	0.00E+00	1.88E-02
		Cs-134	<1.36E-02	0.00E+00	1.36E-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	4.24E-01	1.72E-01	1.70E-01
516516	2/10/2020 - 2/17/2020	I-131	<1.82E-02	0.00E+00	1.82E-02
		Cs-134	<1.17E-02	0.00E+00	1.17E-02
		Cs-137	<1.40E-02	0.00E+00	1.40E-02
		Be-7	<9.28E-02	0.00E+00	9.28E-02
		K-40	3.92E-01	1.99E-01	2.61E-01
516896	2/17/2020 - 2/24/2020	I-131	<2.17E-02	0.00E+00	2.17E-02
		Cs-134	<1.67E-02	0.00E+00	1.67E-02
		Cs-137	<1.70E-02	0.00E+00	1.70E-02
		Be-7	<1.50E-01	0.00E+00	1.50E-01
		K-40	6.08E-01	1.82E-01	3.43E-02
517421	2/24/2020 - 3/2/2020	I-131	<1.42E-02	0.00E+00	1.42E-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	<1.11E-01	0.00E+00	1.11E-01
		K-40	1.91E-01	1.44E-01	2.06E-01
517684	3/2/2020 - 3/9/2020	I-131	<2.20E-02	0.00E+00	2.20E-02
		Cs-134	<1.16E-02	0.00E+00	1.16E-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	5.80E-01	1.86E-01	1.20E-01
518718	3/9/2020 - 3/16/2020	I-131	<1.65E-02	0.00E+00	1.65E-02
		Cs-134	<1.72E-02	0.00E+00	1.72E-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	2.55E-01	1.53E-01	1.96E-01



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
519323	3/16/2020 - 3/23/2020	I-131	<2.02E-02	0.00E+00	2.02E-02
		Cs-134	<1.99E-02	0.00E+00	1.99E-02
		Cs-137	<1.75E-02	0.00E+00	1.75E-02
		Be-7	<1.45E-01	0.00E+00	1.45E-01
		K-40	4.93E-01	1.97E-01	2.16E-01
519708	3/23/2020 - 3/30/2020	I-131	<1.31E-02	0.00E+00	1.31E-02
		Cs-134	<1.70E-02	0.00E+00	1.70E-02
		Cs-137	<9.07E-03	0.00E+00	9.07E-03
		Be-7	<9.69E-02	0.00E+00	9.69E-02
		K-40	1.61E-01	1.10E-01	1.35E-01
520305	3/30/2020 - 4/6/2020	I-131	<1.70E-02	0.00E+00	1.70E-02
		Cs-134	<1.45E-02	0.00E+00	1.45E-02
		Cs-137	<1.39E-02	0.00E+00	1.39E-02
		Be-7	<7.31E-02	0.00E+00	7.31E-02
		K-40	1.84E-01	1.23E-01	1.58E-01
520520	4/6/2020 - 4/13/2020	I-131	<1.49E-02	0.00E+00	1.49E-02
		Cs-134	<1.95E-02	0.00E+00	1.95E-02
		Cs-137	<1.49E-02	0.00E+00	1.49E-02
		Be-7	<1.46E-01	0.00E+00	1.46E-01
		K-40	<2.87E-01	0.00E+00	2.87E-01
520812	4/13/2020 - 4/20/2020	I-131	<2.25E-02	0.00E+00	2.25E-02
		Cs-134	<1.95E-02	0.00E+00	1.95E-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	3.86E-01	1.84E-01	2.23E-01
521617	4/20/2020 - 4/27/2020	I-131	<1.93E-02	0.00E+00	1.93E-02
		Cs-134	<1.76E-02	0.00E+00	1.76E-02
		Cs-137	<1.52E-02	0.00E+00	1.52E-02
		Be-7	<8.40E-02	0.00E+00	8.40E-02
		K-40	5.09E-01	1.89E-01	1.88E-01
522045	4/27/2020 - 5/4/2020	I-131	<1.37E-02	0.00E+00	1.37E-02
		Cs-134	<1.54E-02	0.00E+00	1.54E-02
		Cs-137	<1.33E-02	0.00E+00	1.33E-02
		Be-7	<1.05E-01	0.00E+00	1.05E-01
		K-40	3.32E-01	1.64E-01	1.88E-01
522354	5/4/2020 - 5/11/2020	I-131	<1.53E-02	0.00E+00	1.53E-02
		Cs-134	<1.38E-02	0.00E+00	1.38E-02
		Cs-137	<1.40E-02	0.00E+00	1.40E-02
		Be-7	<7.85E-02	0.00E+00	7.85E-02
		K-40	2.06E-01	1.32E-01	1.69E-01
522603	5/11/2020 - 5/18/2020	I-131	<1.81E-02	0.00E+00	1.81E-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	<1.07E-01	0.00E+00	1.07E-01
		K-40	6.70E-01	2.03E-01	1.48E-01
523113	5/18/2020 - 5/26/2020	I-131	<1.55E-02	0.00E+00	1.55E-02
		Cs-134	<1.55E-02	0.00E+00	1.55E-02
		Cs-137	<1.23E-02	0.00E+00	1.23E-02
		Be-7	<8.90E-02	0.00E+00	8.90E-02
		K-40	4.33E-01	1.59E-01	1.53E-01





# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
523479	5/26/2020 - 6/1/2020	I-131	<1.84E-02	0.00E+00	1.84E-02
		Cs-134	<1.89E-02	0.00E+00	1.89E-02
		Cs-137	<1.71E-02	0.00E+00	1.71E-02
		Be-7	<1.31E-01	0.00E+00	1.31E-01
		K-40	<3.48E-01	0.00E+00	3.48E-01
523887	6/1/2020 - 6/8/2020	I-131	<1.55E-02	0.00E+00	1.55E-02
		Cs-134	<1.63E-02	0.00E+00	1.63E-02
		Cs-137	<1.16E-02	0.00E+00	1.16E-02
		Be-7	<9.28E-02	0.00E+00	9.28E-02
		K-40	2.81E-01	1.41E-01	1.46E-01
524448	6/8/2020 - 6/15/2020	I-131	<1.95E-02	0.00E+00	1.95E-02
		Cs-134	<1.49E-02	0.00E+00	1.49E-02
		Cs-137	<1.58E-02	0.00E+00	1.58E-02
		Be-7	<9.75E-02	0.00E+00	9.75E-02
		K-40	<2.78E-01	0.00E+00	2.78E-01
524773	6/15/2020 - 6/22/2020	I-131	<2.05E-02	0.00E+00	2.05E-02
		Cs-134	<1.61E-02	0.00E+00	1.61E-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	5.55E-01	2.05E-01	2.19E-01
524998	6/22/2020 - 6/29/2020	I-131	<1.64E-02	0.00E+00	1.64E-02
		Cs-134	<1.67E-02	0.00E+00	1.67E-02
		Cs-137	<1.56E-02	0.00E+00	1.56E-02
		Be-7	<7.75E-02	0.00E+00	7.75E-02
		K-40	4.44E-01	1.94E-01	2.33E-01
525383	6/29/2020 - 7/6/2020	I-131	<1.58E-02	0.00E+00	1.58E-02
		Cs-134	<1.03E-02	0.00E+00	1.03E-02
		Cs-137	<1.56E-02	0.00E+00	1.56E-02
		Be-7	<1.37E-01	0.00E+00	1.37E-01
		K-40	3.60E-01	1.74E-01	2.11E-01
525595	7/6/2020 - 7/13/2020	I-131	<1.92E-02	0.00E+00	1.92E-02
		Cs-134	<1.90E-02	0.00E+00	1.90E-02
		Cs-137	<1.74E-02	0.00E+00	1.74E-02
		Be-7	<1.14E-01	0.00E+00	1.14E-01
		K-40	4.62E-01	1.56E-01	3.38E-02
525958	7/13/2020 - 7/20/2020	I-131	<1.38E-02	0.00E+00	1.38E-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	<1.08E-01	0.00E+00	1.08E-01
		K-40	5.13E-01	1.86E-01	1.77E-01
526282	7/20/2020 - 7/27/2020	I-131	<1.96E-02	0.00E+00	1.96E-02
		Cs-134	<1.73E-02	0.00E+00	1.73E-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	2.79E-01	1.52E-01	1.89E-01
526568	7/27/2020 - 8/3/2020	I-131	<1.33E-02	0.00E+00	1.33E-02
		Cs-134	<1.68E-02	0.00E+00	1.68E-02
		Cs-137	<1.32E-02	0.00E+00	1.32E-02
		Be-7	<7.29E-02	0.00E+00	7.29E-02
		K-40	5.11E-01	1.77E-01	1.39E-01



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
526885	8/3/2020 - 8/10/2020	I-131	<1.81E-02	0.00E+00	1.81E-02
		Cs-134	<2.07E-02	0.00E+00	2.07E-02
		Cs-137	<1.69E-02	0.00E+00	1.69E-02
		Be-7	<1.17E-01	0.00E+00	1.17E-01
		K-40	4.16E-01	1.80E-01	2.04E-01
527374	8/10/2020 - 8/17/2020	I-131	<1.72E-02	0.00E+00	1.72E-02
		Cs-134	<1.62E-02	0.00E+00	1.62E-02
		Cs-137	<1.33E-02	0.00E+00	1.33E-02
		Be-7	<9.77E-02	0.00E+00	9.77E-02
		K-40	2.31E-01	1.27E-01	1.40E-01
527656	8/17/2020 - 8/24/2020	I-131	<1.43E-02	0.00E+00	1.43E-02
		Cs-134	<1.66E-02	0.00E+00	1.66E-02
		Cs-137	<1.38E-02	0.00E+00	1.38E-02
		Be-7	<1.16E-01	0.00E+00	1.16E-01
		K-40	3.39E-01	1.62E-01	1.89E-01
527957	8/24/2020 - 8/31/2020	I-131	<2.01E-02	0.00E+00	2.01E-02
		Cs-134	<1.82E-02	0.00E+00	1.82E-02
		Cs-137	<1.52E-02	0.00E+00	1.52E-02
		Be-7	<1.06E-01	0.00E+00	1.06E-01
		K-40	4.52E-01	1.55E-01	3.40E-02
528704	8/31/2020 - 9/8/2020	I-131	<1.60E-02	0.00E+00	1.60E-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	<1.06E-01	0.00E+00	1.06E-01
		K-40	5.24E-01	1.66E-01	1.22E-01
529043	9/8/2020 - 9/14/2020	I-131	<1.81E-02	0.00E+00	1.81E-02
		Cs-134	<1.95E-02	0.00E+00	1.95E-02
		Cs-137	<1.88E-02	0.00E+00	1.88E-02
		Be-7	<1.19E-01	0.00E+00	1.19E-01
		K-40	7.43E-01	2.42E-01	2.21E-01
530034	9/14/2020 - 9/22/2020	I-131	<1.19E-02	0.00E+00	1.19E-02
		Cs-134	<1.33E-02	0.00E+00	1.33E-02
		Cs-137	<9.54E-03	0.00E+00	9.54E-03
		Be-7	<9.74E-02	0.00E+00	9.74E-02
		K-40	4.20E-01	1.59E-01	1.58E-01
530332	9/22/2020 - 9/28/2020	I-131	<1.76E-02	0.00E+00	1.76E-02
		Cs-134	<2.15E-02	0.00E+00	2.15E-02
		Cs-137	<1.29E-02	0.00E+00	1.29E-02
		Be-7	<1.26E-01	0.00E+00	1.26E-01
		K-40	<3.41E-01	0.00E+00	3.41E-01
530602	9/28/2020 - 10/5/2020	I-131	<1.82E-02	0.00E+00	1.82E-02
		Cs-134	<1.75E-02	0.00E+00	1.75E-02
		Cs-137	<1.38E-02	0.00E+00	1.38E-02
		Be-7	<8.72E-02	0.00E+00	8.72E-02
		K-40	<4.39E-01	0.00E+00	4.39E-01
531127	10/5/2020 - 10/12/2020	I-131	<1.88E-02	0.00E+00	1.88E-02
		Cs-134	<1.86E-02	0.00E+00	1.86E-02
		Cs-137	<1.31E-02	0.00E+00	1.31E-02
		Be-7	<1.32E-01	0.00E+00	1.32E-01
		K-40	5.88E-01	1.76E-01	3.32E-02



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
531715	10/12/2020 - 10/19/2020	I-131	<1.79E-02	0.00E+00	1.79E-02
		Cs-134	<2.01E-02	0.00E+00	2.01E-02
		Cs-137	<1.55E-02	0.00E+00	1.55E-02
		Be-7	<1.10E-01	0.00E+00	1.10E-01
		K-40	5.39E-01	2.08E-01	2.20E-01
532117	10/19/2020 - 10/26/2020	I-131	<1.65E-02	0.00E+00	1.65E-02
		Cs-134	<1.69E-02	0.00E+00	1.69E-02
		Cs-137	<7.14E-03	0.00E+00	7.14E-03
		Be-7	<1.07E-01	0.00E+00	1.07E-01
		K-40	3.49E-01	1.45E-01	3.94E-02
532539	10/26/2020 - 11/2/2020	I-131	<1.35E-02	0.00E+00	1.35E-02
		Cs-134	<1.37E-02	0.00E+00	1.37E-02
		Cs-137	<1.19E-02	0.00E+00	1.19E-02
		Be-7	<9.36E-02	0.00E+00	9.36E-02
		K-40	2.70E-01	1.29E-01	1.19E-01
532854	11/2/2020 - 11/9/2020	I-131	<1.37E-02	0.00E+00	1.37E-02
		Cs-134	<1.45E-02	0.00E+00	1.45E-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	5.35E-01	1.93E-01	1.87E-01
533375	11/9/2020 - 11/16/2020	I-131	<1.45E-02	0.00E+00	1.45E-02
		Cs-134	<1.61E-02	0.00E+00	1.61E-02
		Cs-137	<1.40E-02	0.00E+00	1.40E-02
		Be-7	<1.24E-01	0.00E+00	1.24E-01
		K-40	5.27E-01	2.14E-01	2.54E-01
533838	11/16/2020 - 11/23/2020	I-131	<1.93E-02	0.00E+00	1.93E-02
		Cs-134	<1.44E-02	0.00E+00	1.44E-02
		Cs-137	<1.68E-02	0.00E+00	1.68E-02
		Be-7	<9.17E-02	0.00E+00	9.17E-02
		K-40	5.25E-01	1.97E-01	2.08E-01
534136	11/23/2020 - 11/30/2020	I-131	<2.08E-02	0.00E+00	2.08E-02
		Cs-134	<1.37E-02	0.00E+00	1.37E-02
		Cs-137	<1.68E-02	0.00E+00	1.68E-02
		Be-7	<8.45E-02	0.00E+00	8.45E-02
		K-40	5.65E-01	1.84E-01	1.34E-01
534601	11/30/2020 - 12/7/2020	I-131	<1.43E-02	0.00E+00	1.43E-02
		Cs-134	<1.46E-02	0.00E+00	1.46E-02
		Cs-137	<1.26E-02	0.00E+00	1.26E-02
		Be-7	<1.12E-01	0.00E+00	1.12E-01
		K-40	4.05E-01	2.00E-01	2.59E-01
535368	12/7/2020 - 12/14/2020	I-131	<2.09E-02	0.00E+00	2.09E-02
		Cs-134	<1.94E-02	0.00E+00	1.94E-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	3.48E-01	1.71E-01	2.08E-01
535929	12/14/2020 - 12/21/2020	I-131	<1.60E-02	0.00E+00	1.60E-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	<1.06E-01	0.00E+00	1.06E-01
		K-40	4.04E-01	1.59E-01	1.37E-01



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
536211	12/21/2020 - 12/28/2020	I-131	<2.74E-02	0.00E+00	2.74E-02
		Cs-134	<1.16E-02	0.00E+00	1.16E-02
		Cs-137	<1.67E-02	0.00E+00	1.67E-02
		Be-7	<9.09E-02	0.00E+00	9.09E-02
		K-40	5.04E-01	1.62E-01	3.33E-02

## Sample Point 195 [ INDICATOR - N @ 0.19 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514496	12/30/2019 - 1/6/2020	I-131	<1.62E-02	0.00E+00	1.62E-02
		Cs-134	<1.08E-02	0.00E+00	1.08E-02
		Cs-137	<1.38E-02	0.00E+00	1.38E-02
		Be-7	<1.09E-01	0.00E+00	1.09E-01
		K-40	1.56E-01	1.08E-01	1.32E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514936	1/6/2020 - 1/13/2020	I-131	<1.99E-02	0.00E+00	1.99E-02
		Cs-134	<1.52E-02	0.00E+00	1.52E-02
		Cs-137	<1.95E-02	0.00E+00	1.95E-02
		Be-7	<8.50E-02	0.00E+00	8.50E-02
		K-40	3.61E-01	1.54E-01	1.50E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
515269	1/13/2020 - 1/20/2020	I-131	<1.31E-02	0.00E+00	1.31E-02
		Cs-134	<1.05E-02	0.00E+00	1.05E-02
		Cs-137	<1.27E-02	0.00E+00	1.27E-02
		Be-7	<8.86E-02	0.00E+00	8.86E-02
		K-40	1.31E-01	1.30E-01	2.00E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
515506	1/20/2020 - 1/27/2020	I-131	<1.96E-02	0.00E+00	1.96E-02
		Cs-134	<1.38E-02	0.00E+00	1.38E-02
		Cs-137	<1.59E-02	0.00E+00	1.59E-02
		Be-7	<8.96E-02	0.00E+00	8.96E-02
		K-40	3.38E-01	1.53E-01	1.58E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
515899	1/27/2020 - 2/3/2020	I-131	<1.54E-02	0.00E+00	1.54E-02
		Cs-134	<1.44E-02	0.00E+00	1.44E-02
		Cs-137	<1.06E-02	0.00E+00	1.06E-02
		Be-7	<7.61E-02	0.00E+00	7.61E-02
		K-40	3.61E-01	1.54E-01	1.36E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
516153	2/3/2020 - 2/10/2020	I-131	<1.81E-02	0.00E+00	1.81E-02
		Cs-134	<1.74E-02	0.00E+00	1.74E-02
		Cs-137	<1.67E-02	0.00E+00	1.67E-02
		Be-7	<8.34E-02	0.00E+00	8.34E-02
		K-40	3.73E-01	1.72E-01	2.02E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
516517	2/10/2020 - 2/17/2020	I-131	<1.77E-02	0.00E+00	1.77E-02
		Cs-134	<1.45E-02	0.00E+00	1.45E-02
		Cs-137	<1.38E-02	0.00E+00	1.38E-02
		Be-7	<1.28E-01	0.00E+00	1.28E-01
		K-40	5.01E-01	1.90E-01	1.95E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
516897	2/17/2020 - 2/24/2020	I-131	<1.88E-02	0.00E+00	1.88E-02
		Cs-134	<1.73E-02	0.00E+00	1.73E-02
		Cs-137	<1.26E-02	0.00E+00	1.26E-02
		Be-7	<1.01E-01	0.00E+00	1.01E-01
		K-40	5.43E-01	2.03E-01	2.24E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
517422	2/24/2020 - 3/2/2020	I-131	<1.51E-02	0.00E+00	1.51E-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	<1.06E-01	0.00E+00	1.06E-01
		K-40	<3.11E-01	0.00E+00	3.11E-01



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
517685	3/2/2020 - 3/9/2020	I-131	<1.54E-02	0.00E+00	1.54E-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	<1.03E-01	0.00E+00	1.03E-01
		K-40	<3.42E-01	0.00E+00	3.42E-01
518719	3/9/2020 - 3/16/2020	I-131	<1.65E-02	0.00E+00	1.65E-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	<1.05E-01	0.00E+00	1.05E-01
		K-40	5.10E-01	2.18E-01	2.68E-01
519324	3/16/2020 - 3/23/2020	I-131	<1.98E-02	0.00E+00	1.98E-02
		Cs-134	<1.05E-02	0.00E+00	1.05E-02
		Cs-137	<1.40E-02	0.00E+00	1.40E-02
		Be-7	<6.81E-02	0.00E+00	6.81E-02
		K-40	4.02E-01	1.58E-01	1.34E-01
519709	3/23/2020 - 3/30/2020	I-131	<1.55E-02	0.00E+00	1.55E-02
		Cs-134	<1.64E-02	0.00E+00	1.64E-02
		Cs-137	<1.61E-02	0.00E+00	1.61E-02
		Be-7	<7.68E-02	0.00E+00	7.68E-02
		K-40	2.28E-01	1.12E-01	3.63E-02
520306	3/30/2020 - 4/6/2020	I-131	<1.91E-02	0.00E+00	1.91E-02
		Cs-134	<1.87E-02	0.00E+00	1.87E-02
		Cs-137	<1.55E-02	0.00E+00	1.55E-02
		Be-7	<9.39E-02	0.00E+00	9.39E-02
		K-40	4.12E-01	1.59E-01	1.13E-01
520521	4/6/2020 - 4/13/2020	I-131	<2.40E-02	0.00E+00	2.40E-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	<1.63E-01	0.00E+00	1.63E-01
		K-40	2.94E-01	1.67E-01	2.17E-01
520813	4/13/2020 - 4/20/2020	I-131	<1.89E-02	0.00E+00	1.89E-02
		Cs-134	<1.59E-02	0.00E+00	1.59E-02
		Cs-137	<1.83E-02	0.00E+00	1.83E-02
		Be-7	<1.37E-01	0.00E+00	1.37E-01
		K-40	4.41E-01	2.25E-01	3.06E-01
521618	4/20/2020 - 4/27/2020	I-131	<1.62E-02	0.00E+00	1.62E-02
		Cs-134	<1.96E-02	0.00E+00	1.96E-02
		Cs-137	<1.47E-02	0.00E+00	1.47E-02
		Be-7	<9.33E-02	0.00E+00	9.33E-02
		K-40	4.39E-01	1.67E-01	1.48E-01
522046	4/27/2020 - 5/4/2020	I-131	<1.40E-02	0.00E+00	1.40E-02
		Cs-134	<1.36E-02	0.00E+00	1.36E-02
		Cs-137	<1.18E-02	0.00E+00	1.18E-02
		Be-7	<9.92E-02	0.00E+00	9.92E-02
		K-40	4.03E-01	1.78E-01	2.04E-01
522355	5/4/2020 - 5/11/2020	I-131	<1.38E-02	0.00E+00	1.38E-02
		Cs-134	<1.34E-02	0.00E+00	1.34E-02
		Cs-137	<1.24E-02	0.00E+00	1.24E-02
		Be-7	<6.98E-02	0.00E+00	6.98E-02
		K-40	<2.50E-01	0.00E+00	2.50E-01



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
522604	5/11/2020 - 5/18/2020	I-131	<1.44E-02	0.00E+00	1.44E-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	<9.19E-02	0.00E+00	9.19E-02
		K-40	3.59E-01	1.36E-01	3.36E-02
523114	5/18/2020 - 5/26/2020	I-131	<1.27E-02	0.00E+00	1.27E-02
		Cs-134	<9.21E-03	0.00E+00	9.21E-03
		Cs-137	<1.39E-02	0.00E+00	1.39E-02
		Be-7	<8.38E-02	0.00E+00	8.38E-02
		K-40	3.07E-01	1.58E-01	2.00E-01
523480	5/26/2020 - 6/1/2020	I-131	<1.55E-02	0.00E+00	1.55E-02
		Cs-134	<2.21E-02	0.00E+00	2.21E-02
		Cs-137	<1.85E-02	0.00E+00	1.85E-02
		Be-7	<1.32E-01	0.00E+00	1.32E-01
		K-40	5.95E-01	1.90E-01	3.84E-02
523888	6/1/2020 - 6/8/2020	I-131	<1.38E-02	0.00E+00	1.38E-02
		Cs-134	<1.37E-02	0.00E+00	1.37E-02
		Cs-137	<9.01E-03	0.00E+00	9.01E-03
		Be-7	<8.80E-02	0.00E+00	8.80E-02
		K-40	<1.17E-01	0.00E+00	1.17E-01
524449	6/8/2020 - 6/15/2020	I-131	<1.34E-02	0.00E+00	1.34E-02
		Cs-134	<1.03E-02	0.00E+00	1.03E-02
		Cs-137	<1.16E-02	0.00E+00	1.16E-02
		Be-7	<6.63E-02	0.00E+00	6.63E-02
		K-40	<1.33E-01	0.00E+00	1.33E-01
524774	6/15/2020 - 6/22/2020	I-131	<1.83E-02	0.00E+00	1.83E-02
		Cs-134	<9.12E-03	0.00E+00	9.12E-03
		Cs-137	<1.41E-02	0.00E+00	1.41E-02
		Be-7	<1.25E-01	0.00E+00	1.25E-01
		K-40	3.79E-01	1.94E-01	2.54E-01
524999	6/22/2020 - 6/29/2020	I-131	<1.83E-02	0.00E+00	1.83E-02
		Cs-134	<8.97E-03	0.00E+00	8.97E-03
		Cs-137	<1.57E-02	0.00E+00	1.57E-02
		Be-7	<1.32E-01	0.00E+00	1.32E-01
		K-40	2.47E-01	1.83E-01	2.71E-01
525384	6/29/2020 - 7/6/2020	I-131	<1.76E-02	0.00E+00	1.76E-02
		Cs-134	<1.93E-02	0.00E+00	1.93E-02
		Cs-137	<1.45E-02	0.00E+00	1.45E-02
		Be-7	<1.18E-01	0.00E+00	1.18E-01
		K-40	4.53E-01	2.08E-01	2.63E-01
525596	7/6/2020 - 7/13/2020	I-131	<1.74E-02	0.00E+00	1.74E-02
		Cs-134	<1.74E-02	0.00E+00	1.74E-02
		Cs-137	<1.38E-02	0.00E+00	1.38E-02
		Be-7	<7.35E-02	0.00E+00	7.35E-02
		K-40	1.53E-01	1.24E-01	1.77E-01
525959	7/13/2020 - 7/20/2020	I-131	<1.56E-02	0.00E+00	1.56E-02
		Cs-134	<1.70E-02	0.00E+00	1.70E-02
		Cs-137	<1.52E-02	0.00E+00	1.52E-02
		Be-7	<1.09E-01	0.00E+00	1.09E-01
		K-40	4.52E-01	1.66E-01	1.34E-01



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
526283	7/20/2020 - 7/27/2020	I-131	<1.72E-02	0.00E+00	1.72E-02
		Cs-134	<1.56E-02	0.00E+00	1.56E-02
		Cs-137	<1.35E-02	0.00E+00	1.35E-02
		Be-7	<9.74E-02	0.00E+00	9.74E-02
		K-40	<2.97E-01	0.00E+00	2.97E-01
526569	7/27/2020 - 8/3/2020	I-131	<1.81E-02	0.00E+00	1.81E-02
		Cs-134	<1.03E-02	0.00E+00	1.03E-02
		Cs-137	<1.81E-02	0.00E+00	1.81E-02
		Be-7	<9.29E-02	0.00E+00	9.29E-02
		K-40	3.41E-01	1.94E-01	2.66E-01
526886	8/3/2020 - 8/10/2020	I-131	<1.79E-02	0.00E+00	1.79E-02
		Cs-134	<1.59E-02	0.00E+00	1.59E-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	4.04E-01	1.59E-01	1.41E-01
527375	8/10/2020 - 8/17/2020	I-131	<1.95E-02	0.00E+00	1.95E-02
		Cs-134	<1.43E-02	0.00E+00	1.43E-02
		Cs-137	<1.71E-02	0.00E+00	1.71E-02
		Be-7	<9.51E-02	0.00E+00	9.51E-02
		K-40	3.85E-01	1.74E-01	2.01E-01
527657	8/17/2020 - 8/24/2020	I-131	<1.52E-02	0.00E+00	1.52E-02
		Cs-134	<1.54E-02	0.00E+00	1.54E-02
		Cs-137	<1.33E-02	0.00E+00	1.33E-02
		Be-7	<1.12E-01	0.00E+00	1.12E-01
		K-40	<9.29E-02	0.00E+00	9.29E-02
527958	8/24/2020 - 8/31/2020	I-131	<1.91E-02	0.00E+00	1.91E-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	<1.11E-01	0.00E+00	1.11E-01
		K-40	5.14E-01	1.75E-01	1.35E-01
528705	8/31/2020 - 9/8/2020	I-131	<1.85E-02	0.00E+00	1.85E-02
		Cs-134	<1.31E-02	0.00E+00	1.31E-02
		Cs-137	<1.19E-02	0.00E+00	1.19E-02
		Be-7	<7.99E-02	0.00E+00	7.99E-02
		K-40	4.43E-01	1.84E-01	2.22E-01
529044	9/8/2020 - 9/14/2020	I-131	<2.19E-02	0.00E+00	2.19E-02
		Cs-134	<1.97E-02	0.00E+00	1.97E-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	5.76E-01	2.21E-01	2.29E-01
530035	9/14/2020 - 9/22/2020	I-131	<1.61E-02	0.00E+00	1.61E-02
		Cs-134	<1.34E-02	0.00E+00	1.34E-02
		Cs-137	<1.42E-02	0.00E+00	1.42E-02
		Be-7	<9.48E-02	0.00E+00	9.48E-02
		K-40	5.94E-01	1.86E-01	1.62E-01
530333	9/22/2020 - 9/28/2020	I-131	<1.94E-02	0.00E+00	1.94E-02
		Cs-134	<1.90E-02	0.00E+00	1.90E-02
		Cs-137	<2.26E-02	0.00E+00	2.26E-02
		Be-7	<1.01E-01	0.00E+00	1.01E-01
		K-40	3.20E-01	1.55E-01	1.39E-01



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
530603	9/28/2020 - 10/5/2020	I-131	<1.44E-02	0.00E+00	1.44E-02
		Cs-134	<1.06E-02	0.00E+00	1.06E-02
		Cs-137	<1.04E-02	0.00E+00	1.04E-02
		Be-7	<7.39E-02	0.00E+00	7.39E-02
		K-40	5.62E-01	1.36E-01	1.04E-01
531128	10/5/2020 - 10/12/2020	I-131	<1.80E-02	0.00E+00	1.80E-02
		Cs-134	<1.81E-02	0.00E+00	1.81E-02
		Cs-137	<1.29E-02	0.00E+00	1.29E-02
		Be-7	<9.55E-02	0.00E+00	9.55E-02
		K-40	4.51E-01	1.57E-01	3.49E-02
531716	10/12/2020 - 10/19/2020	I-131	<1.72E-02	0.00E+00	1.72E-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	<1.27E-01	0.00E+00	1.27E-01
		K-40	5.03E-01	2.05E-01	2.40E-01
532118	10/19/2020 - 10/26/2020	I-131	<1.64E-02	0.00E+00	1.64E-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	<9.25E-02	0.00E+00	9.25E-02
		K-40	6.17E-01	1.91E-01	1.34E-01
532540	10/26/2020 - 11/2/2020	I-131	<1.73E-02	0.00E+00	1.73E-02
		Cs-134	<1.90E-02	0.00E+00	1.90E-02
		Cs-137	<1.45E-02	0.00E+00	1.45E-02
		Be-7	<9.66E-02	0.00E+00	9.66E-02
		K-40	4.10E-01	1.77E-01	1.89E-01
532855	11/2/2020 - 11/9/2020	I-131	<1.31E-02	0.00E+00	1.31E-02
		Cs-134	<1.58E-02	0.00E+00	1.58E-02
		Cs-137	<1.21E-02	0.00E+00	1.21E-02
		Be-7	<8.61E-02	0.00E+00	8.61E-02
		K-40	5.27E-01	1.82E-01	1.43E-01
533376	11/9/2020 - 11/16/2020	I-131	<1.88E-02	0.00E+00	1.88E-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	<1.33E-01	0.00E+00	1.33E-01
		K-40	4.68E-01	1.97E-01	2.26E-01
533839	11/16/2020 - 11/23/2020	I-131	<1.67E-02	0.00E+00	1.67E-02
		Cs-134	<1.52E-02	0.00E+00	1.52E-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	6.05E-01	1.88E-01	1.11E-01
534137	11/23/2020 - 11/30/2020	I-131	<1.56E-02	0.00E+00	1.56E-02
		Cs-134	<1.13E-02	0.00E+00	1.13E-02
		Cs-137	<1.69E-02	0.00E+00	1.69E-02
		Be-7	<8.15E-02	0.00E+00	8.15E-02
		K-40	4.77E-01	1.84E-01	1.91E-01
534602	11/30/2020 - 12/7/2020	I-131	<1.86E-02	0.00E+00	1.86E-02
		Cs-134	<1.47E-02	0.00E+00	1.47E-02
		Cs-137	<1.69E-02	0.00E+00	1.69E-02
		Be-7	<1.16E-01	0.00E+00	1.16E-01
		K-40	5.10E-01	1.99E-01	2.02E-01





# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
535369	12/7/2020 - 12/14/2020		I-131	<1.84E-02	0.00E+00	1.84E-02
			Cs-134	<1.71E-02	0.00E+00	1.71E-02
			Cs-137	<1.58E-02	0.00E+00	1.58E-02
			Be-7	<1.12E-01	0.00E+00	1.12E-01
			K-40	4.69E-01	1.80E-01	1.82E-01
535930	12/14/2020 - 12/21/2020		I-131	<1.76E-02	0.00E+00	1.76E-02
			Cs-134	<1.54E-02	0.00E+00	1.54E-02
			Cs-137	<1.51E-02	0.00E+00	1.51E-02
			Be-7	<1.32E-01	0.00E+00	1.32E-01
			K-40	7.55E-01	2.43E-01	2.47E-01
536212	12/21/2020 - 12/28/2020		I-131	<3.55E-02	0.00E+00	3.55E-02
			Cs-134	<1.73E-02	0.00E+00	1.73E-02
			Cs-137	<1.58E-02	0.00E+00	1.58E-02
			Be-7	<9.68E-02	0.00E+00	9.68E-02
			K-40	3.87E-01	1.71E-01	1.88E-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
515274	1/6/2020 - 1/6/2020	MIXEDCROPS	I-131	<9.98E+00	0.00E+00	9.98E+00
			Cs-134	<1.25E+01	0.00E+00	1.25E+01
			Cs-137	<1.06E+01	0.00E+00	1.06E+01
			Be-7	6.02E+01	7.31E+01	1.20E+02
			K-40	4.19E+03	4.96E+02	2.02E+02
516522	2/3/2020 - 2/3/2020	MIXEDCROPS	I-131	<1.01E+01	0.00E+00	1.01E+01
			Cs-134	<1.64E+01	0.00E+00	1.64E+01
			Cs-137	<1.01E+01	0.00E+00	1.01E+01
			Be-7	1.62E+02	8.31E+01	1.21E+02
			K-40	4.63E+03	5.37E+02	2.04E+02
518724	3/2/2020 - 3/2/2020	MIXEDCROPS	I-131	<1.40E+01	0.00E+00	1.40E+01
			Cs-134	<1.16E+01	0.00E+00	1.16E+01
			Cs-137	<9.56E+00	0.00E+00	9.56E+00
			Be-7	1.03E+02	7.12E+01	1.10E+02
			K-40	4.18E+03	4.63E+02	1.37E+02
520818	4/6/2020 - 4/6/2020	MIXEDCROPS	I-131	<1.20E+01	0.00E+00	1.20E+01
			Cs-134	<1.70E+01	0.00E+00	1.70E+01
			Cs-137	<1.35E+01	0.00E+00	1.35E+01
			Be-7	<9.73E+01	0.00E+00	9.73E+01
			K-40	3.89E+03	5.56E+02	2.39E+02
522609	5/4/2020 - 5/4/2020	MIXEDCROPS	I-131	<1.07E+01	0.00E+00	1.07E+01
			Cs-134	<1.31E+01	0.00E+00	1.31E+01
			Cs-137	<1.09E+01	0.00E+00	1.09E+01
			Be-7	2.03E+02	9.95E+01	1.49E+02
			K-40	4.67E+03	5.23E+02	1.59E+02
524454	6/1/2020 - 6/1/2020	MIXEDCROPS	I-131	<1.11E+01	0.00E+00	1.11E+01
			Cs-134	<1.09E+01	0.00E+00	1.09E+01
			Cs-137	<9.23E+00	0.00E+00	9.23E+00
			Be-7	2.34E+02	9.54E+01	1.37E+02
			K-40	4.89E+03	5.40E+02	1.86E+02
525964	7/6/2020 - 7/6/2020	MIXEDCROPS	I-131	<9.66E+00	0.00E+00	9.66E+00
			Cs-134	<9.04E+00	0.00E+00	9.04E+00
			Cs-137	<8.00E+00	0.00E+00	8.00E+00
			Be-7	<7.64E+01	0.00E+00	7.64E+01



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
525964	7/6/2020 - 7/6/2020		K-40	3.03E+03	3.57E+02	1.35E+02
527380	8/3/2020 - 8/3/2020		I-131	<8.77E+00	0.00E+00	8.77E+00
			Cs-134	<1.08E+01	0.00E+00	1.08E+01
			Cs-137	<7.54E+00	0.00E+00	7.54E+00
			Be-7	7.94E+01	6.38E+01	1.01E+02
			K-40	3.92E+03	4.37E+02	1.25E+02
530040	9/8/2020 - 9/8/2020		I-131	<7.75E+00	0.00E+00	7.75E+00
			Cs-134	<1.04E+01	0.00E+00	1.04E+01
			Cs-137	<9.81E+00	0.00E+00	9.81E+00
			Be-7	<8.09E+01	0.00E+00	8.09E+01
			K-40	2.60E+03	3.18E+02	9.07E+01
531721	10/5/2020 - 10/5/2020		I-131	<9.43E+00	0.00E+00	9.43E+00
			Cs-134	<8.94E+00	0.00E+00	8.94E+00
			Cs-137	<9.52E+00	0.00E+00	9.52E+00
			Be-7	4.77E+01	7.07E+01	1.17E+02
			K-40	3.03E+03	3.50E+02	1.27E+02
533381	11/2/2020 - 11/2/2020		I-131	<7.22E+00	0.00E+00	7.22E+00
			Cs-134	<8.79E+00	0.00E+00	8.79E+00
			Cs-137	<6.78E+00	0.00E+00	6.78E+00
			Be-7	1.48E+02	5.51E+01	7.29E+01
			K-40	3.15E+03	3.54E+02	1.08E+02
535935	12/7/2020 - 12/7/2020		I-131	<7.59E+00	0.00E+00	7.59E+00
			Cs-134	<8.28E+00	0.00E+00	8.28E+00
			Cs-137	<8.90E+00	0.00E+00	8.90E+00
			Be-7	1.47E+02	7.51E+01	1.12E+02
			K-40	3.91E+03	4.42E+02	1.53E+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
515718	12/30/2019 - 1/27/2020	Beta	<3.27E+00	0.00E+00	3.27E+00
		Mn-54	<2.14E+00	0.00E+00	2.14E+00
		Co-58	<2.28E+00	0.00E+00	2.28E+00
		Fe-59	<4.42E+00	0.00E+00	4.42E+00
		Co-60	<1.34E+00	0.00E+00	1.34E+00
		Zn-65	<4.02E+00	0.00E+00	4.02E+00
		Zr-95	<4.12E+00	0.00E+00	4.12E+00
		Nb-95	<2.79E+00	0.00E+00	2.79E+00
		I-131	<8.51E+00	0.00E+00	8.51E+00
		Cs-134	<2.46E+00	0.00E+00	2.46E+00
		Cs-137	<2.49E+00	0.00E+00	2.49E+00
		BaLa-140	<3.24E+00	0.00E+00	3.24E+00
		Be-7	<2.22E+01	0.00E+00	2.22E+01
		K-40	7.32E+01	2.49E+01	2.98E+01
517237	1/27/2020 - 2/24/2020	Beta	<3.22E+00	0.00E+00	3.22E+00
		Mn-54	<2.80E+00	0.00E+00	2.80E+00
		Co-58	<2.94E+00	0.00E+00	2.94E+00
		Fe-59	<5.62E+00	0.00E+00	5.62E+00
		Co-60	<2.66E+00	0.00E+00	2.66E+00
		Zn-65	<6.25E+00	0.00E+00	6.25E+00
		Zr-95	<4.91E+00	0.00E+00	4.91E+00
		Nb-95	<3.32E+00	0.00E+00	3.32E+00
		I-131	<1.04E+01	0.00E+00	1.04E+01
		Cs-134	<2.94E+00	0.00E+00	2.94E+00
		Cs-137	<2.98E+00	0.00E+00	2.98E+00
		BaLa-140	<6.87E+00	0.00E+00	6.87E+00



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
517237	1/27/2020 - 2/24/2020	Be-7	<2.27E+01	0.00E+00	2.27E+01
		K-40	7.56E+01	2.70E+01	3.08E+01
519407	2/24/2020 - 3/23/2020	Beta	<3.24E+00	0.00E+00	3.24E+00
		Mn-54	<2.99E+00	0.00E+00	2.99E+00
		Co-58	<3.22E+00	0.00E+00	3.22E+00
		Fe-59	<5.69E+00	0.00E+00	5.69E+00
		Co-60	<2.58E+00	0.00E+00	2.58E+00
		Zn-65	<5.44E+00	0.00E+00	5.44E+00
		Zr-95	<4.89E+00	0.00E+00	4.89E+00
		Nb-95	<4.25E+00	0.00E+00	4.25E+00
		I-131	<1.11E+01	0.00E+00	1.11E+01
		Cs-134	<3.18E+00	0.00E+00	3.18E+00
		Cs-137	<3.07E+00	0.00E+00	3.07E+00
		BaLa-140	<7.60E+00	0.00E+00	7.60E+00
		Be-7	<2.66E+01	0.00E+00	2.66E+01
		K-40	7.81E+01	3.67E+01	5.11E+01
516437	12/30/2019 - 4/20/2020	Nuclide	Activity	2 Sigma Error	MDA
		H3DW	4.46E+02	1.18E+02	1.78E+02
521273	3/23/2020 - 4/20/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	<3.36E+00	0.00E+00	3.36E+00
		Mn-54	<3.66E+00	0.00E+00	3.66E+00
		Co-58	<4.25E+00	0.00E+00	4.25E+00
		Fe-59	<1.01E+01	0.00E+00	1.01E+01
		Co-60	<2.86E+00	0.00E+00	2.86E+00
		Zn-65	<7.99E+00	0.00E+00	7.99E+00
		Zr-95	<7.54E+00	0.00E+00	7.54E+00
		Nb-95	<3.42E+00	0.00E+00	3.42E+00
		I-131	<1.15E+01	0.00E+00	1.15E+01
		Cs-134	<4.65E+00	0.00E+00	4.65E+00
		Cs-137	<3.16E+00	0.00E+00	3.16E+00
		BaLa-140	<7.65E+00	0.00E+00	7.65E+00
		Be-7	<3.38E+01	0.00E+00	3.38E+01
K-40	<6.49E+01	0.00E+00	6.49E+01		
522841	4/20/2020 - 5/18/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	<3.26E+00	0.00E+00	3.26E+00
		Mn-54	<3.14E+00	0.00E+00	3.14E+00
		Co-58	<3.54E+00	0.00E+00	3.54E+00
		Fe-59	<6.96E+00	0.00E+00	6.96E+00
		Co-60	<3.04E+00	0.00E+00	3.04E+00
		Zn-65	<6.55E+00	0.00E+00	6.55E+00
		Zr-95	<6.80E+00	0.00E+00	6.80E+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	<3.79E+00	0.00E+00	3.79E+00
		Cs-137	<3.37E+00	0.00E+00	3.37E+00
		BaLa-140	<5.83E+00	0.00E+00	5.83E+00
		Be-7	<2.36E+01	0.00E+00	2.36E+01
K-40	5.65E+01	3.30E+01	4.72E+01		
524506	5/18/2020 - 6/15/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	<3.24E+00	0.00E+00	3.24E+00
		Mn-54	<3.30E+00	0.00E+00	3.30E+00
		Co-58	<2.88E+00	0.00E+00	2.88E+00
		Fe-59	<6.80E+00	0.00E+00	6.80E+00
		Co-60	<4.27E+00	0.00E+00	4.27E+00
		Zn-65	<8.36E+00	0.00E+00	8.36E+00
		Zr-95	<7.22E+00	0.00E+00	7.22E+00
		Nb-95	<4.43E+00	0.00E+00	4.43E+00
		I-131	<1.16E+01	0.00E+00	1.16E+01
		Cs-134	<3.31E+00	0.00E+00	3.31E+00
		Cs-137	<2.66E+00	0.00E+00	2.66E+00
		BaLa-140	<8.25E+00	0.00E+00	8.25E+00
		Be-7	<2.84E+01	0.00E+00	2.84E+01



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
524506	5/18/2020 - 6/15/2020	K-40	6.70E+01	3.48E+01	4.64E+01
522529	4/20/2020 - 7/13/2020	H3DW	5.32E+02	1.25E+02	1.86E+02
525823	6/15/2020 - 7/13/2020	Beta	<3.23E+00	0.00E+00	3.23E+00
		Mn-54	<3.07E+00	0.00E+00	3.07E+00
		Co-58	<3.63E+00	0.00E+00	3.63E+00
		Fe-59	<5.95E+00	0.00E+00	5.95E+00
		Co-60	<2.57E+00	0.00E+00	2.57E+00
		Zn-65	<6.32E+00	0.00E+00	6.32E+00
		Zr-95	<6.70E+00	0.00E+00	6.70E+00
		Nb-95	<3.78E+00	0.00E+00	3.78E+00
		I-131	<1.19E+01	0.00E+00	1.19E+01
		Cs-134	<3.05E+00	0.00E+00	3.05E+00
		Cs-137	<2.67E+00	0.00E+00	2.67E+00
		BaLa-140	<8.11E+00	0.00E+00	8.11E+00
		Be-7	<2.83E+01	0.00E+00	2.83E+01
		K-40	8.91E+01	3.89E+01	5.20E+01
527091	7/13/2020 - 8/10/2020	Beta	<3.23E+00	0.00E+00	3.23E+00
		Mn-54	<2.01E+00	0.00E+00	2.01E+00
		Co-58	<2.78E+00	0.00E+00	2.78E+00
		Fe-59	<3.22E+00	0.00E+00	3.22E+00
		Co-60	<2.81E+00	0.00E+00	2.81E+00
		Zn-65	<7.34E+00	0.00E+00	7.34E+00
		Zr-95	<6.22E+00	0.00E+00	6.22E+00
		Nb-95	<3.69E+00	0.00E+00	3.69E+00
		I-131	<1.04E+01	0.00E+00	1.04E+01
		Cs-134	<3.64E+00	0.00E+00	3.64E+00
		Cs-137	<3.18E+00	0.00E+00	3.18E+00
		BaLa-140	<5.05E+00	0.00E+00	5.05E+00
		Be-7	<2.62E+01	0.00E+00	2.62E+01
		K-40	8.58E+01	3.62E+01	4.73E+01
528914	8/10/2020 - 9/8/2020	Beta	3.53E+00	4.37E+00	3.21E+00
		Mn-54	<2.97E+00	0.00E+00	2.97E+00
		Co-58	<2.50E+00	0.00E+00	2.50E+00
		Fe-59	<5.02E+00	0.00E+00	5.02E+00
		Co-60	<1.70E+00	0.00E+00	1.70E+00
		Zn-65	<6.04E+00	0.00E+00	6.04E+00
		Zr-95	<5.83E+00	0.00E+00	5.83E+00
		Nb-95	<4.60E+00	0.00E+00	4.60E+00
		I-131	<1.12E+01	0.00E+00	1.12E+01
		Cs-134	<3.54E+00	0.00E+00	3.54E+00
		Cs-137	<3.29E+00	0.00E+00	3.29E+00
		BaLa-140	<7.40E+00	0.00E+00	7.40E+00
		Be-7	<3.13E+01	0.00E+00	3.13E+01
		K-40	8.74E+01	3.30E+01	3.86E+01
527294	7/13/2020 - 10/5/2020	H3DW	4.29E+02	1.27E+02	1.95E+02
530688	9/8/2020 - 10/5/2020	Beta	4.55E+00	4.41E+00	3.22E+00
		Mn-54	<3.37E+00	0.00E+00	3.37E+00
		Co-58	<4.47E+00	0.00E+00	4.47E+00
		Fe-59	<8.73E+00	0.00E+00	8.73E+00
		Co-60	<2.67E+00	0.00E+00	2.67E+00
		Zn-65	<6.43E+00	0.00E+00	6.43E+00
		Zr-95	<7.05E+00	0.00E+00	7.05E+00
		Nb-95	<3.78E+00	0.00E+00	3.78E+00
		I-131	<1.17E+01	0.00E+00	1.17E+01
		Cs-134	<4.15E+00	0.00E+00	4.15E+00
		Cs-137	<3.63E+00	0.00E+00	3.63E+00



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
530688	9/8/2020 - 10/5/2020	BaLa-140	<8.41E+00	0.00E+00	8.41E+00
		Be-7	<3.04E+01	0.00E+00	3.04E+01
		K-40	4.39E+01	3.79E+01	5.87E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
532597	10/5/2020 - 11/2/2020	Beta	<3.23E+00	0.00E+00	3.23E+00
		Mn-54	<3.71E+00	0.00E+00	3.71E+00
		Co-58	<3.26E+00	0.00E+00	3.26E+00
		Fe-59	<6.79E+00	0.00E+00	6.79E+00
		Co-60	<2.96E+00	0.00E+00	2.96E+00
		Zn-65	<8.83E+00	0.00E+00	8.83E+00
		Zr-95	<7.04E+00	0.00E+00	7.04E+00
		Nb-95	<4.28E+00	0.00E+00	4.28E+00
		I-131	<1.18E+01	0.00E+00	1.18E+01
		Cs-134	<4.12E+00	0.00E+00	4.12E+00
		Cs-137	<4.49E+00	0.00E+00	4.49E+00
		BaLa-140	<7.89E+00	0.00E+00	7.89E+00
		Be-7	<3.80E+01	0.00E+00	3.80E+01
		K-40	8.31E+01	3.71E+01	4.44E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
534193	11/2/2020 - 11/30/2020	Beta	<3.24E+00	0.00E+00	3.24E+00
		Mn-54	<3.61E+00	0.00E+00	3.61E+00
		Co-58	<3.26E+00	0.00E+00	3.26E+00
		Fe-59	<7.68E+00	0.00E+00	7.68E+00
		Co-60	<4.19E+00	0.00E+00	4.19E+00
		Zn-65	<6.10E+00	0.00E+00	6.10E+00
		Zr-95	<6.37E+00	0.00E+00	6.37E+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	<3.91E+00	0.00E+00	3.91E+00
		Cs-137	<3.89E+00	0.00E+00	3.89E+00
		BaLa-140	<9.62E+00	0.00E+00	9.62E+00
		Be-7	<2.78E+01	0.00E+00	2.78E+01
		K-40	8.65E+01	3.68E+01	4.59E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
533289	10/5/2020 - 12/28/2020	H3DW	5.41E+02	1.30E+02	1.94E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
536307	11/30/2020 - 12/28/2020	Beta	<3.21E+00	0.00E+00	3.21E+00
		Mn-54	<2.57E+00	0.00E+00	2.57E+00
		Co-58	<3.27E+00	0.00E+00	3.27E+00
		Fe-59	<6.24E+00	0.00E+00	6.24E+00
		Co-60	<3.14E+00	0.00E+00	3.14E+00
		Zn-65	<6.30E+00	0.00E+00	6.30E+00
		Zr-95	<6.86E+00	0.00E+00	6.86E+00
		Nb-95	<3.89E+00	0.00E+00	3.89E+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	<3.23E+00	0.00E+00	3.23E+00
		BaLa-140	<7.99E+00	0.00E+00	7.99E+00
		Be-7	<3.00E+01	0.00E+00	3.00E+01
		K-40	7.43E+01	3.21E+01	3.98E+01

## Sample Point 119 [ INDICATOR - SSW @ 7.4 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
515719	12/30/2019 - 1/27/2020	Beta	<3.27E+00	0.00E+00	3.27E+00
		Mn-54	<3.90E+00	0.00E+00	3.90E+00
		Co-58	<4.09E+00	0.00E+00	4.09E+00
		Fe-59	<6.39E+00	0.00E+00	6.39E+00
		Co-60	<4.04E+00	0.00E+00	4.04E+00
		Zn-65	<7.42E+00	0.00E+00	7.42E+00
		Zr-95	<4.80E+00	0.00E+00	4.80E+00
		Nb-95	<5.36E+00	0.00E+00	5.36E+00
		I-131	<1.04E+01	0.00E+00	1.04E+01
		Cs-134	<4.53E+00	0.00E+00	4.53E+00



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
515719	12/30/2019 - 1/27/2020	Cs-137	<3.70E+00	0.00E+00	3.70E+00
		BaLa-140	<8.75E+00	0.00E+00	8.75E+00
		Be-7	<3.18E+01	0.00E+00	3.18E+01
		K-40	6.61E+01	3.83E+01	5.37E+01
517238	1/27/2020 - 2/24/2020	Beta	<3.22E+00	0.00E+00	3.22E+00
		Mn-54	<3.98E+00	0.00E+00	3.98E+00
		Co-58	<5.06E+00	0.00E+00	5.06E+00
		Fe-59	<8.68E+00	0.00E+00	8.68E+00
		Co-60	<4.71E+00	0.00E+00	4.71E+00
		Zn-65	<9.77E+00	0.00E+00	9.77E+00
		Zr-95	<8.62E+00	0.00E+00	8.62E+00
		Nb-95	<4.71E+00	0.00E+00	4.71E+00
		I-131	<8.98E+00	0.00E+00	8.98E+00
		Cs-134	<3.65E+00	0.00E+00	3.65E+00
		Cs-137	<3.19E+00	0.00E+00	3.19E+00
		BaLa-140	<1.00E+01	0.00E+00	1.00E+01
		Be-7	<3.95E+01	0.00E+00	3.95E+01
		K-40	<6.85E+01	0.00E+00	6.85E+01
519408	2/24/2020 - 3/23/2020	Beta	<3.24E+00	0.00E+00	3.24E+00
		Mn-54	<2.76E+00	0.00E+00	2.76E+00
		Co-58	<2.85E+00	0.00E+00	2.85E+00
		Fe-59	<6.17E+00	0.00E+00	6.17E+00
		Co-60	<2.56E+00	0.00E+00	2.56E+00
		Zn-65	<6.01E+00	0.00E+00	6.01E+00
		Zr-95	<4.60E+00	0.00E+00	4.60E+00
		Nb-95	<3.82E+00	0.00E+00	3.82E+00
		I-131	<1.19E+01	0.00E+00	1.19E+01
		Cs-134	<2.95E+00	0.00E+00	2.95E+00
		Cs-137	<2.68E+00	0.00E+00	2.68E+00
		BaLa-140	<8.29E+00	0.00E+00	8.29E+00
		Be-7	<2.39E+01	0.00E+00	2.39E+01
		K-40	<4.64E+01	0.00E+00	4.64E+01
516438	12/30/2019 - 4/20/2020	H3DW	2.30E+02	1.11E+02	1.78E+02
521274	3/23/2020 - 4/20/2020	Beta	<3.36E+00	0.00E+00	3.36E+00
		Mn-54	<3.06E+00	0.00E+00	3.06E+00
		Co-58	<3.76E+00	0.00E+00	3.76E+00
		Fe-59	<8.03E+00	0.00E+00	8.03E+00
		Co-60	<3.39E+00	0.00E+00	3.39E+00
		Zn-65	<6.92E+00	0.00E+00	6.92E+00
		Zr-95	<6.02E+00	0.00E+00	6.02E+00
		Nb-95	<4.92E+00	0.00E+00	4.92E+00
		I-131	<1.16E+01	0.00E+00	1.16E+01
		Cs-134	<4.00E+00	0.00E+00	4.00E+00
		Cs-137	<2.98E+00	0.00E+00	2.98E+00
		BaLa-140	<7.99E+00	0.00E+00	7.99E+00
		Be-7	<2.89E+01	0.00E+00	2.89E+01
		K-40	3.25E+01	2.84E+01	4.32E+01
522842	4/20/2020 - 5/18/2020	Beta	<3.26E+00	0.00E+00	3.26E+00
		Mn-54	<3.43E+00	0.00E+00	3.43E+00
		Co-58	<3.59E+00	0.00E+00	3.59E+00
		Fe-59	<1.02E+01	0.00E+00	1.02E+01
		Co-60	<4.07E+00	0.00E+00	4.07E+00
		Zn-65	<7.49E+00	0.00E+00	7.49E+00
		Zr-95	<5.56E+00	0.00E+00	5.56E+00
		Nb-95	<5.69E+00	0.00E+00	5.69E+00
		I-131	<1.18E+01	0.00E+00	1.18E+01
		Cs-134	<4.52E+00	0.00E+00	4.52E+00
		Cs-137	<3.96E+00	0.00E+00	3.96E+00



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
522842	4/20/2020 - 5/18/2020	BaLa-140	<8.31E+00	0.00E+00	8.31E+00
		Be-7	<3.39E+01	0.00E+00	3.39E+01
		K-40	9.66E+01	3.75E+01	3.33E+01
524507	5/18/2020 - 6/15/2020	Beta	<3.24E+00	0.00E+00	3.24E+00
		Mn-54	<2.47E+00	0.00E+00	2.47E+00
		Co-58	<3.35E+00	0.00E+00	3.35E+00
		Fe-59	<5.56E+00	0.00E+00	5.56E+00
		Co-60	<2.32E+00	0.00E+00	2.32E+00
		Zn-65	<6.24E+00	0.00E+00	6.24E+00
		Zr-95	<5.50E+00	0.00E+00	5.50E+00
		Nb-95	<3.84E+00	0.00E+00	3.84E+00
		I-131	<1.11E+01	0.00E+00	1.11E+01
		Cs-134	<3.09E+00	0.00E+00	3.09E+00
		Cs-137	<2.70E+00	0.00E+00	2.70E+00
		BaLa-140	<6.86E+00	0.00E+00	6.86E+00
		Be-7	<2.43E+01	0.00E+00	2.43E+01
		K-40	5.36E+01	2.94E+01	4.18E+01
522530	4/20/2020 - 7/13/2020	H3DW	3.34E+02	1.20E+02	1.87E+02
525824	6/15/2020 - 7/13/2020	Beta	<3.23E+00	0.00E+00	3.23E+00
		Mn-54	<3.33E+00	0.00E+00	3.33E+00
		Co-58	<3.92E+00	0.00E+00	3.92E+00
		Fe-59	<6.69E+00	0.00E+00	6.69E+00
		Co-60	<3.95E+00	0.00E+00	3.95E+00
		Zn-65	<6.97E+00	0.00E+00	6.97E+00
		Zr-95	<8.05E+00	0.00E+00	8.05E+00
		Nb-95	<3.83E+00	0.00E+00	3.83E+00
		I-131	<1.14E+01	0.00E+00	1.14E+01
		Cs-134	<4.26E+00	0.00E+00	4.26E+00
		Cs-137	<3.23E+00	0.00E+00	3.23E+00
		BaLa-140	<8.55E+00	0.00E+00	8.55E+00
		Be-7	<2.48E+01	0.00E+00	2.48E+01
		K-40	1.01E+02	3.50E+01	3.24E+01
527092	7/13/2020 - 8/10/2020	Beta	<3.23E+00	0.00E+00	3.23E+00
		Mn-54	<3.01E+00	0.00E+00	3.01E+00
		Co-58	<2.65E+00	0.00E+00	2.65E+00
		Fe-59	<7.02E+00	0.00E+00	7.02E+00
		Co-60	<3.34E+00	0.00E+00	3.34E+00
		Zn-65	<6.38E+00	0.00E+00	6.38E+00
		Zr-95	<5.42E+00	0.00E+00	5.42E+00
		Nb-95	<3.51E+00	0.00E+00	3.51E+00
		I-131	<1.19E+01	0.00E+00	1.19E+01
		Cs-134	<3.67E+00	0.00E+00	3.67E+00
		Cs-137	<2.99E+00	0.00E+00	2.99E+00
		BaLa-140	<6.42E+00	0.00E+00	6.42E+00
		Be-7	<2.90E+01	0.00E+00	2.90E+01
		K-40	6.29E+01	3.53E+01	5.05E+01
528915	8/10/2020 - 9/8/2020	Beta	5.56E+00	4.41E+00	3.21E+00
		Mn-54	<2.85E+00	0.00E+00	2.85E+00
		Co-58	<2.57E+00	0.00E+00	2.57E+00
		Fe-59	<5.40E+00	0.00E+00	5.40E+00
		Co-60	<2.54E+00	0.00E+00	2.54E+00
		Zn-65	<5.37E+00	0.00E+00	5.37E+00
		Zr-95	<5.60E+00	0.00E+00	5.60E+00
		Nb-95	<4.63E+00	0.00E+00	4.63E+00
		I-131	<1.14E+01	0.00E+00	1.14E+01
		Cs-134	<3.55E+00	0.00E+00	3.55E+00
		Cs-137	<3.40E+00	0.00E+00	3.40E+00
		BaLa-140	<6.94E+00	0.00E+00	6.94E+00



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
528915	8/10/2020 - 9/8/2020	Be-7	<2.72E+01	0.00E+00	2.72E+01
		K-40	7.84E+01	3.15E+01	3.62E+01
527295	7/13/2020 - 10/5/2020	H3DW	3.06E+02	1.23E+02	1.96E+02
530689	9/8/2020 - 10/5/2020	Beta	3.94E+00	4.39E+00	3.22E+00
		Mn-54	<3.38E+00	0.00E+00	3.38E+00
		Co-58	<3.72E+00	0.00E+00	3.72E+00
		Fe-59	<9.22E+00	0.00E+00	9.22E+00
		Co-60	<3.91E+00	0.00E+00	3.91E+00
		Zn-65	<7.76E+00	0.00E+00	7.76E+00
		Zr-95	<7.64E+00	0.00E+00	7.64E+00
		Nb-95	<6.01E+00	0.00E+00	6.01E+00
		I-131	<1.18E+01	0.00E+00	1.18E+01
		Cs-134	<4.16E+00	0.00E+00	4.16E+00
		Cs-137	<3.47E+00	0.00E+00	3.47E+00
		BaLa-140	<5.69E+00	0.00E+00	5.69E+00
		Be-7	<3.24E+01	0.00E+00	3.24E+01
		K-40	6.85E+01	3.67E+01	4.52E+01
532598	10/5/2020 - 11/2/2020	Beta	<3.23E+00	0.00E+00	3.23E+00
		Mn-54	<4.07E+00	0.00E+00	4.07E+00
		Co-58	<3.81E+00	0.00E+00	3.81E+00
		Fe-59	<8.36E+00	0.00E+00	8.36E+00
		Co-60	<3.51E+00	0.00E+00	3.51E+00
		Zn-65	<6.45E+00	0.00E+00	6.45E+00
		Zr-95	<9.01E+00	0.00E+00	9.01E+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	<3.55E+00	0.00E+00	3.55E+00
		Cs-137	<3.56E+00	0.00E+00	3.56E+00
		BaLa-140	<2.37E+00	0.00E+00	2.37E+00
		Be-7	<2.85E+01	0.00E+00	2.85E+01
		K-40	<7.25E+01	0.00E+00	7.25E+01
534194	11/2/2020 - 11/30/2020	Beta	<3.24E+00	0.00E+00	3.24E+00
		Mn-54	<3.32E+00	0.00E+00	3.32E+00
		Co-58	<3.36E+00	0.00E+00	3.36E+00
		Fe-59	<7.93E+00	0.00E+00	7.93E+00
		Co-60	<5.36E+00	0.00E+00	5.36E+00
		Zn-65	<1.03E+01	0.00E+00	1.03E+01
		Zr-95	<8.26E+00	0.00E+00	8.26E+00
		Nb-95	<5.87E+00	0.00E+00	5.87E+00
		I-131	<1.17E+01	0.00E+00	1.17E+01
		Cs-134	<3.37E+00	0.00E+00	3.37E+00
		Cs-137	<3.47E+00	0.00E+00	3.47E+00
		BaLa-140	<1.08E+01	0.00E+00	1.08E+01
		Be-7	<3.83E+01	0.00E+00	3.83E+01
		K-40	<8.54E+01	0.00E+00	8.54E+01
533290	10/5/2020 - 12/28/2020	H3DW	2.63E+02	1.21E+02	1.94E+02
536308	11/30/2020 - 12/28/2020	Beta	<3.21E+00	0.00E+00	3.21E+00
		Mn-54	<2.30E+00	0.00E+00	2.30E+00
		Co-58	<2.44E+00	0.00E+00	2.44E+00
		Fe-59	<5.48E+00	0.00E+00	5.48E+00
		Co-60	<4.95E-01	0.00E+00	4.95E-01
		Zn-65	<4.77E+00	0.00E+00	4.77E+00
		Zr-95	<6.57E+00	0.00E+00	6.57E+00
		Nb-95	<3.60E+00	0.00E+00	3.60E+00
		I-131	<1.02E+01	0.00E+00	1.02E+01
		Cs-134	<2.98E+00	0.00E+00	2.98E+00





# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
536308	11/30/2020 - 12/28/2020	Cs-137	<2.23E+00	0.00E+00	2.23E+00
		BaLa-140	<5.59E+00	0.00E+00	5.59E+00
		Be-7	<2.44E+01	0.00E+00	2.44E+01
		K-40	3.02E+01	1.98E+01	2.63E+01

Sample Point 132 [ INDICATOR - SSE @ 11.1 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
517220	12/30/2019 - 1/27/2020	Beta	<3.27E+00	0.00E+00	3.27E+00
		Mn-54	<3.37E+00	0.00E+00	3.37E+00
		Co-58	<3.40E+00	0.00E+00	3.40E+00
		Fe-59	<7.14E+00	0.00E+00	7.14E+00
		Co-60	<2.78E+00	0.00E+00	2.78E+00
		Zn-65	<5.71E+00	0.00E+00	5.71E+00
		Zr-95	<7.15E+00	0.00E+00	7.15E+00
		Nb-95	<4.66E+00	0.00E+00	4.66E+00
		I-131	<1.17E+01	0.00E+00	1.17E+01
		Cs-134	<3.74E+00	0.00E+00	3.74E+00
		Cs-137	<4.12E+00	0.00E+00	4.12E+00
		BaLa-140	<9.12E+00	0.00E+00	9.12E+00
		Be-7	<3.22E+01	0.00E+00	3.22E+01
		K-40	<8.04E+01	0.00E+00	8.04E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
517239	1/27/2020 - 2/24/2020	Beta	<3.22E+00	0.00E+00	3.22E+00
		Mn-54	<2.48E+00	0.00E+00	2.48E+00
		Co-58	<2.20E+00	0.00E+00	2.20E+00
		Fe-59	<6.52E+00	0.00E+00	6.52E+00
		Co-60	<3.16E+00	0.00E+00	3.16E+00
		Zn-65	<6.07E+00	0.00E+00	6.07E+00
		Zr-95	<6.50E+00	0.00E+00	6.50E+00
		Nb-95	<4.04E+00	0.00E+00	4.04E+00
		I-131	<1.10E+01	0.00E+00	1.10E+01
		Cs-134	<3.11E+00	0.00E+00	3.11E+00
		Cs-137	<2.86E+00	0.00E+00	2.86E+00
		BaLa-140	<8.10E+00	0.00E+00	8.10E+00
		Be-7	<2.84E+01	0.00E+00	2.84E+01
		K-40	1.09E+02	3.18E+01	2.71E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
519409	2/24/2020 - 3/23/2020	Beta	3.44E+00	4.41E+00	3.24E+00
		Mn-54	<3.08E+00	0.00E+00	3.08E+00
		Co-58	<3.74E+00	0.00E+00	3.74E+00
		Fe-59	<7.62E+00	0.00E+00	7.62E+00
		Co-60	<2.66E+00	0.00E+00	2.66E+00
		Zn-65	<7.78E+00	0.00E+00	7.78E+00
		Zr-95	<6.97E+00	0.00E+00	6.97E+00
		Nb-95	<3.36E+00	0.00E+00	3.36E+00
		I-131	<1.07E+01	0.00E+00	1.07E+01
		Cs-134	<2.96E+00	0.00E+00	2.96E+00
		Cs-137	<2.23E+00	0.00E+00	2.23E+00
		BaLa-140	<5.34E+00	0.00E+00	5.34E+00
		Be-7	<2.19E+01	0.00E+00	2.19E+01
		K-40	<1.87E+01	0.00E+00	1.87E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
516439	12/30/2019 - 4/20/2020	H3DW	3.15E+02	1.14E+02	1.78E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
521275	3/23/2020 - 4/20/2020	Beta	<3.36E+00	0.00E+00	3.36E+00
		Mn-54	<2.21E+00	0.00E+00	2.21E+00
		Co-58	<2.92E+00	0.00E+00	2.92E+00
		Fe-59	<6.70E+00	0.00E+00	6.70E+00
		Co-60	<3.23E+00	0.00E+00	3.23E+00
		Zn-65	<5.43E+00	0.00E+00	5.43E+00
		Zr-95	<4.37E+00	0.00E+00	4.37E+00
		Nb-95	<3.30E+00	0.00E+00	3.30E+00
		I-131	<1.05E+01	0.00E+00	1.05E+01



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
521275	3/23/2020 - 4/20/2020	Cs-134	<3.38E+00	0.00E+00	3.38E+00
		Cs-137	<2.35E+00	0.00E+00	2.35E+00
		BaLa-140	<6.31E+00	0.00E+00	6.31E+00
		Be-7	<2.46E+01	0.00E+00	2.46E+01
		K-40	2.99E+01	2.16E+01	3.07E+01
522843	4/20/2020 - 5/18/2020	Beta	<3.26E+00	0.00E+00	3.26E+00
		Mn-54	<3.53E+00	0.00E+00	3.53E+00
		Co-58	<3.90E+00	0.00E+00	3.90E+00
		Fe-59	<1.04E+01	0.00E+00	1.04E+01
		Co-60	<3.59E+00	0.00E+00	3.59E+00
		Zn-65	<8.66E+00	0.00E+00	8.66E+00
		Zr-95	<6.43E+00	0.00E+00	6.43E+00
		Nb-95	<5.37E+00	0.00E+00	5.37E+00
		I-131	<1.11E+01	0.00E+00	1.11E+01
		Cs-134	<4.17E+00	0.00E+00	4.17E+00
		Cs-137	<4.41E+00	0.00E+00	4.41E+00
		BaLa-140	<9.56E+00	0.00E+00	9.56E+00
		Be-7	<4.25E+01	0.00E+00	4.25E+01
		K-40	<5.51E+01	0.00E+00	5.51E+01
524508	5/18/2020 - 6/15/2020	Beta	<3.24E+00	0.00E+00	3.24E+00
		Mn-54	<3.21E+00	0.00E+00	3.21E+00
		Co-58	<3.08E+00	0.00E+00	3.08E+00
		Fe-59	<8.83E+00	0.00E+00	8.83E+00
		Co-60	<4.09E+00	0.00E+00	4.09E+00
		Zn-65	<8.82E+00	0.00E+00	8.82E+00
		Zr-95	<7.32E+00	0.00E+00	7.32E+00
		Nb-95	<5.31E+00	0.00E+00	5.31E+00
		I-131	<1.20E+01	0.00E+00	1.20E+01
		Cs-134	<3.98E+00	0.00E+00	3.98E+00
		Cs-137	<3.81E+00	0.00E+00	3.81E+00
		BaLa-140	<1.09E+01	0.00E+00	1.09E+01
		Be-7	<3.18E+01	0.00E+00	3.18E+01
		K-40	9.22E+01	3.89E+01	4.58E+01
522531	4/20/2020 - 7/13/2020	H3DW	2.67E+02	1.17E+02	1.86E+02
525825	6/15/2020 - 7/13/2020	Beta	<3.23E+00	0.00E+00	3.23E+00
		Mn-54	<3.70E+00	0.00E+00	3.70E+00
		Co-58	<3.43E+00	0.00E+00	3.43E+00
		Fe-59	<7.02E+00	0.00E+00	7.02E+00
		Co-60	<3.79E+00	0.00E+00	3.79E+00
		Zn-65	<6.97E+00	0.00E+00	6.97E+00
		Zr-95	<6.08E+00	0.00E+00	6.08E+00
		Nb-95	<4.14E+00	0.00E+00	4.14E+00
		I-131	<1.20E+01	0.00E+00	1.20E+01
		Cs-134	<4.44E+00	0.00E+00	4.44E+00
		Cs-137	<4.06E+00	0.00E+00	4.06E+00
		BaLa-140	<6.86E+00	0.00E+00	6.86E+00
		Be-7	<3.02E+01	0.00E+00	3.02E+01
		K-40	1.07E+02	3.78E+01	3.71E+01
527093	7/13/2020 - 8/10/2020	Beta	<3.23E+00	0.00E+00	3.23E+00
		Mn-54	<3.49E+00	0.00E+00	3.49E+00
		Co-58	<4.25E+00	0.00E+00	4.25E+00
		Fe-59	<7.68E+00	0.00E+00	7.68E+00
		Co-60	<3.25E+00	0.00E+00	3.25E+00
		Zn-65	<6.84E+00	0.00E+00	6.84E+00
		Zr-95	<8.15E+00	0.00E+00	8.15E+00
		Nb-95	<4.45E+00	0.00E+00	4.45E+00
		I-131	<1.20E+01	0.00E+00	1.20E+01
		Cs-134	<3.43E+00	0.00E+00	3.43E+00



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
527093	7/13/2020 - 8/10/2020	Cs-137	<5.01E+00	0.00E+00	5.01E+00
		BaLa-140	<7.10E+00	0.00E+00	7.10E+00
		Be-7	<2.40E+01	0.00E+00	2.40E+01
		K-40	6.04E+01	3.36E+01	4.41E+01
528916	8/10/2020 - 9/8/2020	Beta	4.94E+00	4.40E+00	3.21E+00
		Mn-54	<3.11E+00	0.00E+00	3.11E+00
		Co-58	<3.11E+00	0.00E+00	3.11E+00
		Fe-59	<6.92E+00	0.00E+00	6.92E+00
		Co-60	<2.71E+00	0.00E+00	2.71E+00
		Zn-65	<5.27E+00	0.00E+00	5.27E+00
		Zr-95	<5.19E+00	0.00E+00	5.19E+00
		Nb-95	<4.21E+00	0.00E+00	4.21E+00
		I-131	<1.08E+01	0.00E+00	1.08E+01
		Cs-134	<2.83E+00	0.00E+00	2.83E+00
		Cs-137	<2.95E+00	0.00E+00	2.95E+00
		BaLa-140	<5.32E+00	0.00E+00	5.32E+00
		Be-7	<2.80E+01	0.00E+00	2.80E+01
		K-40	5.48E+01	3.34E+01	4.85E+01
527296	7/13/2020 - 10/5/2020	H3DW	2.10E+02	1.20E+02	1.96E+02
530690	9/8/2020 - 10/5/2020	Beta	3.76E+00	4.39E+00	3.22E+00
		Mn-54	<3.48E+00	0.00E+00	3.48E+00
		Co-58	<2.70E+00	0.00E+00	2.70E+00
		Fe-59	<6.35E+00	0.00E+00	6.35E+00
		Co-60	<3.07E+00	0.00E+00	3.07E+00
		Zn-65	<6.67E+00	0.00E+00	6.67E+00
		Zr-95	<5.30E+00	0.00E+00	5.30E+00
		Nb-95	<3.61E+00	0.00E+00	3.61E+00
		I-131	<1.12E+01	0.00E+00	1.12E+01
		Cs-134	<4.62E+00	0.00E+00	4.62E+00
		Cs-137	<2.99E+00	0.00E+00	2.99E+00
		BaLa-140	<4.14E+00	0.00E+00	4.14E+00
		Be-7	<3.33E+01	0.00E+00	3.33E+01
		K-40	7.86E+01	3.53E+01	4.37E+01
532599	10/5/2020 - 11/2/2020	Beta	<3.23E+00	0.00E+00	3.23E+00
		Mn-54	<4.30E+00	0.00E+00	4.30E+00
		Co-58	<3.52E+00	0.00E+00	3.52E+00
		Fe-59	<5.74E+00	0.00E+00	5.74E+00
		Co-60	<3.20E+00	0.00E+00	3.20E+00
		Zn-65	<5.40E+00	0.00E+00	5.40E+00
		Zr-95	<6.51E+00	0.00E+00	6.51E+00
		Nb-95	<4.68E+00	0.00E+00	4.68E+00
		I-131	<1.19E+01	0.00E+00	1.19E+01
		Cs-134	<3.69E+00	0.00E+00	3.69E+00
		Cs-137	<3.58E+00	0.00E+00	3.58E+00
		BaLa-140	<7.02E+00	0.00E+00	7.02E+00
		Be-7	<3.03E+01	0.00E+00	3.03E+01
		K-40	9.51E+01	3.87E+01	4.41E+01
534195	11/2/2020 - 11/30/2020	Beta	<3.24E+00	0.00E+00	3.24E+00
		Mn-54	<3.26E+00	0.00E+00	3.26E+00
		Co-58	<3.60E+00	0.00E+00	3.60E+00
		Fe-59	<5.74E+00	0.00E+00	5.74E+00
		Co-60	<3.35E+00	0.00E+00	3.35E+00
		Zn-65	<6.84E+00	0.00E+00	6.84E+00
		Zr-95	<5.46E+00	0.00E+00	5.46E+00
		Nb-95	<3.92E+00	0.00E+00	3.92E+00
		I-131	<1.07E+01	0.00E+00	1.07E+01
		Cs-134	<3.62E+00	0.00E+00	3.62E+00
		Cs-137	<2.79E+00	0.00E+00	2.79E+00



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
534195	11/2/2020 - 11/30/2020	BaLa-140	<5.90E+00	0.00E+00	5.90E+00
		Be-7	<2.79E+01	0.00E+00	2.79E+01
		K-40	5.90E+01	3.68E+01	5.44E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
533291	10/5/2020 - 12/28/2020	H3DW	2.75E+02	1.22E+02	1.94E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
536309	11/30/2020 - 12/28/2020	Beta	<3.21E+00	0.00E+00	3.21E+00
		Mn-54	<3.10E+00	0.00E+00	3.10E+00
		Co-58	<3.00E+00	0.00E+00	3.00E+00
		Fe-59	<5.30E+00	0.00E+00	5.30E+00
		Co-60	<3.03E+00	0.00E+00	3.03E+00
		Zn-65	<6.41E+00	0.00E+00	6.41E+00
		Zr-95	<5.18E+00	0.00E+00	5.18E+00
		Nb-95	<4.13E+00	0.00E+00	4.13E+00
		I-131	<1.19E+01	0.00E+00	1.19E+01
		Cs-134	<3.29E+00	0.00E+00	3.29E+00
		Cs-137	<2.81E+00	0.00E+00	2.81E+00
		BaLa-140	<7.52E+00	0.00E+00	7.52E+00
		Be-7	<2.16E+01	0.00E+00	2.16E+01
		K-40	1.07E+02	3.16E+01	2.90E+01

Sample Point 136 [ CONTROL - NNE @ 12.7 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
515721	12/30/2019 - 1/27/2020	Beta	<3.27E+00	0.00E+00	3.27E+00
		Mn-54	<4.16E+00	0.00E+00	4.16E+00
		Co-58	<3.32E+00	0.00E+00	3.32E+00
		Fe-59	<1.00E+01	0.00E+00	1.00E+01
		Co-60	<3.30E+00	0.00E+00	3.30E+00
		Zn-65	<8.95E+00	0.00E+00	8.95E+00
		Zr-95	<6.73E+00	0.00E+00	6.73E+00
		Nb-95	<4.92E+00	0.00E+00	4.92E+00
		I-131	<1.17E+01	0.00E+00	1.17E+01
		Cs-134	<3.33E+00	0.00E+00	3.33E+00
		Cs-137	<4.03E+00	0.00E+00	4.03E+00
		BaLa-140	<1.15E+01	0.00E+00	1.15E+01
		Be-7	<3.33E+01	0.00E+00	3.33E+01
		K-40	<5.72E+01	0.00E+00	5.72E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
517240	1/27/2020 - 2/24/2020	Beta	<3.22E+00	0.00E+00	3.22E+00
		Mn-54	<3.97E+00	0.00E+00	3.97E+00
		Co-58	<4.41E+00	0.00E+00	4.41E+00
		Fe-59	<7.81E+00	0.00E+00	7.81E+00
		Co-60	<4.38E+00	0.00E+00	4.38E+00
		Zn-65	<7.27E+00	0.00E+00	7.27E+00
		Zr-95	<6.17E+00	0.00E+00	6.17E+00
		Nb-95	<5.53E+00	0.00E+00	5.53E+00
		I-131	<1.18E+01	0.00E+00	1.18E+01
		Cs-134	<4.26E+00	0.00E+00	4.26E+00
		Cs-137	<3.19E+00	0.00E+00	3.19E+00
		BaLa-140	<7.86E+00	0.00E+00	7.86E+00
		Be-7	<3.21E+01	0.00E+00	3.21E+01
		K-40	1.01E+02	3.62E+01	3.04E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
519410	2/24/2020 - 3/23/2020	Beta	3.59E+00	4.41E+00	3.24E+00
		Mn-54	<2.82E+00	0.00E+00	2.82E+00
		Co-58	<2.88E+00	0.00E+00	2.88E+00
		Fe-59	<6.87E+00	0.00E+00	6.87E+00
		Co-60	<3.46E+00	0.00E+00	3.46E+00
		Zn-65	<7.98E+00	0.00E+00	7.98E+00
		Zr-95	<6.38E+00	0.00E+00	6.38E+00
		Nb-95	<4.89E+00	0.00E+00	4.89E+00
		I-131	<1.19E+01	0.00E+00	1.19E+01
		Cs-134	<3.37E+00	0.00E+00	3.37E+00



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
519410	2/24/2020 - 3/23/2020	Cs-137	<4.32E+00	0.00E+00	4.32E+00
		BaLa-140	<9.74E+00	0.00E+00	9.74E+00
		Be-7	<3.06E+01	0.00E+00	3.06E+01
		K-40	3.58E+01	3.24E+01	4.93E+01
		H3DW	<1.09E+02	0.00E+00	1.77E+02
516440	12/30/2019 - 4/20/2020	H3DW	<1.09E+02	0.00E+00	1.77E+02
521276	3/23/2020 - 4/20/2020	Beta	<3.36E+00	0.00E+00	3.36E+00
		Mn-54	<3.31E+00	0.00E+00	3.31E+00
		Co-58	<3.69E+00	0.00E+00	3.69E+00
		Fe-59	<6.20E+00	0.00E+00	6.20E+00
		Co-60	<4.73E+00	0.00E+00	4.73E+00
		Zn-65	<8.74E+00	0.00E+00	8.74E+00
		Zr-95	<8.33E+00	0.00E+00	8.33E+00
		Nb-95	<5.29E+00	0.00E+00	5.29E+00
		I-131	<1.11E+01	0.00E+00	1.11E+01
		Cs-134	<5.28E+00	0.00E+00	5.28E+00
		Cs-137	<2.64E+00	0.00E+00	2.64E+00
		BaLa-140	<8.78E+00	0.00E+00	8.78E+00
		Be-7	<4.12E+01	0.00E+00	4.12E+01
		K-40	<2.44E+01	0.00E+00	2.44E+01
		522844	4/20/2020 - 5/18/2020	Beta	<3.26E+00
Mn-54	<3.51E+00			0.00E+00	3.51E+00
Co-58	<3.45E+00			0.00E+00	3.45E+00
Fe-59	<8.12E+00			0.00E+00	8.12E+00
Co-60	<3.86E+00			0.00E+00	3.86E+00
Zn-65	<9.84E+00			0.00E+00	9.84E+00
Zr-95	<7.23E+00			0.00E+00	7.23E+00
Nb-95	<4.75E+00			0.00E+00	4.75E+00
I-131	<1.12E+01			0.00E+00	1.12E+01
Cs-134	<2.96E+00			0.00E+00	2.96E+00
Cs-137	<2.32E+00			0.00E+00	2.32E+00
BaLa-140	<8.41E+00			0.00E+00	8.41E+00
Be-7	<3.24E+01			0.00E+00	3.24E+01
K-40	<3.82E+01			0.00E+00	3.82E+01
524509	5/18/2020 - 6/15/2020			Beta	<3.24E+00
		Mn-54	<2.87E+00	0.00E+00	2.87E+00
		Co-58	<3.56E+00	0.00E+00	3.56E+00
		Fe-59	<6.89E+00	0.00E+00	6.89E+00
		Co-60	<1.61E+00	0.00E+00	1.61E+00
		Zn-65	<6.07E+00	0.00E+00	6.07E+00
		Zr-95	<4.88E+00	0.00E+00	4.88E+00
		Nb-95	<4.27E+00	0.00E+00	4.27E+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	<3.67E+00	0.00E+00	3.67E+00
		BaLa-140	<6.60E+00	0.00E+00	6.60E+00
		Be-7	<2.75E+01	0.00E+00	2.75E+01
		K-40	5.94E+01	2.96E+01	3.61E+01
		522532	4/20/2020 - 7/13/2020	H3DW	<-2.4E+00
525826	6/15/2020 - 7/13/2020	Beta	<3.23E+00	0.00E+00	3.23E+00
		Mn-54	<2.65E+00	0.00E+00	2.65E+00
		Co-58	<3.19E+00	0.00E+00	3.19E+00
		Fe-59	<6.70E+00	0.00E+00	6.70E+00
		Co-60	<3.19E+00	0.00E+00	3.19E+00
		Zn-65	<4.86E+00	0.00E+00	4.86E+00
		Zr-95	<5.65E+00	0.00E+00	5.65E+00
		Nb-95	<3.82E+00	0.00E+00	3.82E+00



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
525826	6/15/2020 - 7/13/2020	I-131	<1.11E+01	0.00E+00	1.11E+01
		Cs-134	<3.03E+00	0.00E+00	3.03E+00
		Cs-137	<2.95E+00	0.00E+00	2.95E+00
		BaLa-140	<8.51E+00	0.00E+00	8.51E+00
		Be-7	<2.51E+01	0.00E+00	2.51E+01
		K-40	6.50E+01	3.16E+01	4.24E+01
527094	7/13/2020 - 8/10/2020	Beta	<3.23E+00	0.00E+00	3.23E+00
		Mn-54	<2.97E+00	0.00E+00	2.97E+00
		Co-58	<3.02E+00	0.00E+00	3.02E+00
		Fe-59	<7.75E+00	0.00E+00	7.75E+00
		Co-60	<4.12E+00	0.00E+00	4.12E+00
		Zn-65	<6.05E+00	0.00E+00	6.05E+00
		Zr-95	<5.09E+00	0.00E+00	5.09E+00
		Nb-95	<4.18E+00	0.00E+00	4.18E+00
		I-131	<1.19E+01	0.00E+00	1.19E+01
		Cs-134	<4.47E+00	0.00E+00	4.47E+00
		Cs-137	<3.40E+00	0.00E+00	3.40E+00
		BaLa-140	<6.96E+00	0.00E+00	6.96E+00
		Be-7	<3.81E+01	0.00E+00	3.81E+01
		K-40	6.28E+01	3.67E+01	5.18E+01
		528917	8/10/2020 - 9/8/2020	Beta	4.81E+00
Mn-54	<4.91E+00			0.00E+00	4.91E+00
Co-58	<4.39E+00			0.00E+00	4.39E+00
Fe-59	<7.54E+00			0.00E+00	7.54E+00
Co-60	<3.15E+00			0.00E+00	3.15E+00
Zn-65	<7.59E+00			0.00E+00	7.59E+00
Zr-95	<5.62E+00			0.00E+00	5.62E+00
Nb-95	<5.61E+00			0.00E+00	5.61E+00
I-131	<1.11E+01			0.00E+00	1.11E+01
Cs-134	<3.18E+00			0.00E+00	3.18E+00
Cs-137	<4.63E+00			0.00E+00	4.63E+00
BaLa-140	<1.19E+01			0.00E+00	1.19E+01
Be-7	<3.80E+01			0.00E+00	3.80E+01
K-40	1.04E+02			4.79E+01	6.06E+01
527297	7/13/2020 - 10/5/2020			H3DW	<-5.3E+01
530691	9/8/2020 - 10/5/2020	Beta	4.36E+00	4.40E+00	3.22E+00
		Mn-54	<2.75E+00	0.00E+00	2.75E+00
		Co-58	<2.92E+00	0.00E+00	2.92E+00
		Fe-59	<5.49E+00	0.00E+00	5.49E+00
		Co-60	<3.14E+00	0.00E+00	3.14E+00
		Zn-65	<6.53E+00	0.00E+00	6.53E+00
		Zr-95	<6.89E+00	0.00E+00	6.89E+00
		Nb-95	<4.31E+00	0.00E+00	4.31E+00
		I-131	<1.06E+01	0.00E+00	1.06E+01
		Cs-134	<3.16E+00	0.00E+00	3.16E+00
		Cs-137	<3.57E+00	0.00E+00	3.57E+00
		BaLa-140	<7.30E+00	0.00E+00	7.30E+00
		Be-7	<2.84E+01	0.00E+00	2.84E+01
		K-40	9.12E+01	3.65E+01	4.54E+01
		532600	10/5/2020 - 11/2/2020	Beta	<3.23E+00
Mn-54	<3.48E+00			0.00E+00	3.48E+00
Co-58	<3.07E+00			0.00E+00	3.07E+00
Fe-59	<7.63E+00			0.00E+00	7.63E+00
Co-60	<2.64E+00			0.00E+00	2.64E+00
Zn-65	<6.38E+00			0.00E+00	6.38E+00
Zr-95	<8.88E+00			0.00E+00	8.88E+00
Nb-95	<3.80E+00			0.00E+00	3.80E+00
I-131	<1.10E+01			0.00E+00	1.10E+01



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
532600	10/5/2020 - 11/2/2020	Cs-134	<3.86E+00	0.00E+00	3.86E+00
		Cs-137	<2.85E+00	0.00E+00	2.85E+00
		BaLa-140	<7.04E+00	0.00E+00	7.04E+00
		Be-7	<2.98E+01	0.00E+00	2.98E+01
		K-40	3.16E+01	3.02E+01	4.70E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
534196	11/2/2020 - 11/30/2020	Beta	<3.24E+00	0.00E+00	3.24E+00
		Mn-54	<2.97E+00	0.00E+00	2.97E+00
		Co-58	<3.87E+00	0.00E+00	3.87E+00
		Fe-59	<7.17E+00	0.00E+00	7.17E+00
		Co-60	<3.94E+00	0.00E+00	3.94E+00
		Zn-65	<8.58E+00	0.00E+00	8.58E+00
		Zr-95	<6.86E+00	0.00E+00	6.86E+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	<3.89E+00	0.00E+00	3.89E+00
		Cs-137	<1.90E+00	0.00E+00	1.90E+00
		BaLa-140	<7.96E+00	0.00E+00	7.96E+00
		Be-7	<2.72E+01	0.00E+00	2.72E+01
		K-40	3.71E+01	2.79E+01	3.88E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
533292	10/5/2020 - 12/28/2020	H3DW	<8.53E+01	0.00E+00	1.94E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
536310	11/30/2020 - 12/28/2020	Beta	<3.21E+00	0.00E+00	3.21E+00
		Mn-54	<2.81E+00	0.00E+00	2.81E+00
		Co-58	<2.03E+00	0.00E+00	2.03E+00
		Fe-59	<5.47E+00	0.00E+00	5.47E+00
		Co-60	<1.93E+00	0.00E+00	1.93E+00
		Zn-65	<4.93E+00	0.00E+00	4.93E+00
		Zr-95	<4.19E+00	0.00E+00	4.19E+00
		Nb-95	<3.04E+00	0.00E+00	3.04E+00
		I-131	<1.05E+01	0.00E+00	1.05E+01
		Cs-134	<2.89E+00	0.00E+00	2.89E+00
		Cs-137	<2.21E+00	0.00E+00	2.21E+00
		BaLa-140	<5.46E+00	0.00E+00	5.46E+00
		Be-7	<2.50E+01	0.00E+00	2.50E+01
		K-40	8.53E+01	3.08E+01	3.91E+01

## Sample Point 194 [ INDICATOR - NNW @ 6.73 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
515722	12/30/2019 - 1/27/2020	Beta	<3.27E+00	0.00E+00	3.27E+00
		Mn-54	<3.17E+00	0.00E+00	3.17E+00
		Co-58	<4.50E+00	0.00E+00	4.50E+00
		Fe-59	<7.03E+00	0.00E+00	7.03E+00
		Co-60	<2.21E+00	0.00E+00	2.21E+00
		Zn-65	<7.23E+00	0.00E+00	7.23E+00
		Zr-95	<8.57E+00	0.00E+00	8.57E+00
		Nb-95	<5.20E+00	0.00E+00	5.20E+00
		I-131	<1.18E+01	0.00E+00	1.18E+01
		Cs-134	<5.17E+00	0.00E+00	5.17E+00
		Cs-137	<3.47E+00	0.00E+00	3.47E+00
		BaLa-140	<9.52E+00	0.00E+00	9.52E+00
		Be-7	<4.29E+01	0.00E+00	4.29E+01
		K-40	7.49E+01	4.24E+01	5.69E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
517241	1/27/2020 - 2/24/2020	Beta	<3.22E+00	0.00E+00	3.22E+00
		Mn-54	<2.25E+00	0.00E+00	2.25E+00
		Co-58	<2.83E+00	0.00E+00	2.83E+00
		Fe-59	<7.19E+00	0.00E+00	7.19E+00
		Co-60	<3.16E+00	0.00E+00	3.16E+00
		Zn-65	<5.29E+00	0.00E+00	5.29E+00
		Zr-95	<5.01E+00	0.00E+00	5.01E+00
		Nb-95	<3.96E+00	0.00E+00	3.96E+00



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
517241	1/27/2020 - 2/24/2020	I-131	<1.18E+01	0.00E+00	1.18E+01
		Cs-134	<2.92E+00	0.00E+00	2.92E+00
		Cs-137	<2.87E+00	0.00E+00	2.87E+00
		BaLa-140	<8.74E+00	0.00E+00	8.74E+00
		Be-7	<2.54E+01	0.00E+00	2.54E+01
		K-40	<4.75E+01	0.00E+00	4.75E+01
519411	2/24/2020 - 3/23/2020	Beta	<3.24E+00	0.00E+00	3.24E+00
		Mn-54	<2.45E+00	0.00E+00	2.45E+00
		Co-58	<2.61E+00	0.00E+00	2.61E+00
		Fe-59	<5.28E+00	0.00E+00	5.28E+00
		Co-60	<1.89E+00	0.00E+00	1.89E+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	<3.54E+00	0.00E+00	3.54E+00
		I-131	<1.06E+01	0.00E+00	1.06E+01
		Cs-134	<2.28E+00	0.00E+00	2.28E+00
		Cs-137	<2.69E+00	0.00E+00	2.69E+00
		BaLa-140	<6.70E+00	0.00E+00	6.70E+00
		Be-7	<2.31E+01	0.00E+00	2.31E+01
		K-40	8.23E+01	5.28E+01	3.00E+01
		516441	12/30/2019 - 4/20/2020	H3DW	<7.41E+01
521277	3/23/2020 - 4/20/2020	Beta	<3.36E+00	0.00E+00	3.36E+00
		Mn-54	<4.36E+00	0.00E+00	4.36E+00
		Co-58	<5.28E+00	0.00E+00	5.28E+00
		Fe-59	<6.19E+00	0.00E+00	6.19E+00
		Co-60	<4.09E+00	0.00E+00	4.09E+00
		Zn-65	<8.48E+00	0.00E+00	8.48E+00
		Zr-95	<7.12E+00	0.00E+00	7.12E+00
		Nb-95	<4.92E+00	0.00E+00	4.92E+00
		I-131	<1.16E+01	0.00E+00	1.16E+01
		Cs-134	<4.18E+00	0.00E+00	4.18E+00
		Cs-137	<3.80E+00	0.00E+00	3.80E+00
		BaLa-140	<8.77E+00	0.00E+00	8.77E+00
		Be-7	<2.69E+01	0.00E+00	2.69E+01
		K-40	2.04E+01	2.88E+01	4.79E+01
		522845	4/20/2020 - 5/18/2020	Beta	<3.26E+00
Mn-54	<2.48E+00			0.00E+00	2.48E+00
Co-58	<4.91E+00			0.00E+00	4.91E+00
Fe-59	<9.15E+00			0.00E+00	9.15E+00
Co-60	<4.30E+00			0.00E+00	4.30E+00
Zn-65	<7.90E+00			0.00E+00	7.90E+00
Zr-95	<8.27E+00			0.00E+00	8.27E+00
Nb-95	<3.53E+00			0.00E+00	3.53E+00
I-131	<1.16E+01			0.00E+00	1.16E+01
Cs-134	<4.45E+00			0.00E+00	4.45E+00
Cs-137	<3.89E+00			0.00E+00	3.89E+00
BaLa-140	<8.78E+00			0.00E+00	8.78E+00
Be-7	<3.74E+01			0.00E+00	3.74E+01
K-40	<5.92E+01			0.00E+00	5.92E+01
524510	5/18/2020 - 6/15/2020			Beta	<3.24E+00
		Mn-54	<2.73E+00	0.00E+00	2.73E+00
		Co-58	<3.41E+00	0.00E+00	3.41E+00
		Fe-59	<5.99E+00	0.00E+00	5.99E+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	<6.95E+00	0.00E+00	6.95E+00
		Nb-95	<4.71E+00	0.00E+00	4.71E+00
		I-131	<1.08E+01	0.00E+00	1.08E+01





# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
524510	5/18/2020 - 6/15/2020	Cs-134	<3.78E+00	0.00E+00	3.78E+00
		Cs-137	<2.84E+00	0.00E+00	2.84E+00
		BaLa-140	<7.22E+00	0.00E+00	7.22E+00
		Be-7	<2.65E+01	0.00E+00	2.65E+01
		K-40	8.83E+01	4.11E+01	5.63E+01
522533	4/20/2020 - 7/13/2020	H3DW	<4.07E+01	0.00E+00	1.86E+02
525827	6/15/2020 - 7/13/2020	Beta	<3.23E+00	0.00E+00	3.23E+00
		Mn-54	<2.98E+00	0.00E+00	2.98E+00
		Co-58	<2.86E+00	0.00E+00	2.86E+00
		Fe-59	<6.16E+00	0.00E+00	6.16E+00
		Co-60	<2.56E+00	0.00E+00	2.56E+00
		Zn-65	<1.30E+01	0.00E+00	1.30E+01
		Zr-95	<6.07E+00	0.00E+00	6.07E+00
		Nb-95	<4.86E+00	0.00E+00	4.86E+00
		I-131	<1.07E+01	0.00E+00	1.07E+01
		Cs-134	<2.72E+00	0.00E+00	2.72E+00
		Cs-137	<3.39E+00	0.00E+00	3.39E+00
		BaLa-140	<8.33E+00	0.00E+00	8.33E+00
		Be-7	<2.58E+01	0.00E+00	2.58E+01
		K-40	2.38E+01	2.27E+01	3.55E+01
527095	7/13/2020 - 8/10/2020	Beta	<3.23E+00	0.00E+00	3.23E+00
		Mn-54	<3.00E+00	0.00E+00	3.00E+00
		Co-58	<3.31E+00	0.00E+00	3.31E+00
		Fe-59	<7.58E+00	0.00E+00	7.58E+00
		Co-60	<3.88E+00	0.00E+00	3.88E+00
		Zn-65	<7.57E+00	0.00E+00	7.57E+00
		Zr-95	<6.35E+00	0.00E+00	6.35E+00
		Nb-95	<4.69E+00	0.00E+00	4.69E+00
		I-131	<9.73E+00	0.00E+00	9.73E+00
		Cs-134	<3.23E+00	0.00E+00	3.23E+00
		Cs-137	<3.23E+00	0.00E+00	3.23E+00
		BaLa-140	<7.64E+00	0.00E+00	7.64E+00
		Be-7	<2.68E+01	0.00E+00	2.68E+01
		K-40	6.27E+01	3.61E+01	5.17E+01
528919	8/10/2020 - 9/8/2020	Beta	5.56E+00	4.41E+00	3.21E+00
		Mn-54	<3.64E+00	0.00E+00	3.64E+00
		Co-58	<4.03E+00	0.00E+00	4.03E+00
		Fe-59	<8.15E+00	0.00E+00	8.15E+00
		Co-60	<5.01E+00	0.00E+00	5.01E+00
		Zn-65	<7.99E+00	0.00E+00	7.99E+00
		Zr-95	<6.65E+00	0.00E+00	6.65E+00
		Nb-95	<3.85E+00	0.00E+00	3.85E+00
		I-131	<1.20E+01	0.00E+00	1.20E+01
		Cs-134	<4.17E+00	0.00E+00	4.17E+00
		Cs-137	<3.87E+00	0.00E+00	3.87E+00
		BaLa-140	<1.01E+01	0.00E+00	1.01E+01
		Be-7	<3.99E+01	0.00E+00	3.99E+01
		K-40	<7.56E+01	0.00E+00	7.56E+01
527298	7/13/2020 - 10/5/2020	H3DW	<-5.0E+01	0.00E+00	1.96E+02
530692	9/8/2020 - 10/5/2020	Beta	3.36E+00	4.38E+00	3.22E+00
		Mn-54	<3.55E+00	0.00E+00	3.55E+00
		Co-58	<4.39E+00	0.00E+00	4.39E+00
		Fe-59	<6.99E+00	0.00E+00	6.99E+00
		Co-60	<3.11E+00	0.00E+00	3.11E+00
		Zr-95	<7.36E+00	0.00E+00	7.36E+00



**MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
530692	9/8/2020 - 10/5/2020	Nb-95	<4.86E+00	0.00E+00	4.86E+00
		I-131	<9.54E+00	0.00E+00	9.54E+00
		Cs-134	<4.67E+00	0.00E+00	4.67E+00
		Cs-137	<3.89E+00	0.00E+00	3.89E+00
		BaLa-140	<1.12E+01	0.00E+00	1.12E+01
		Be-7	<3.24E+01	0.00E+00	3.24E+01
		K-40	<6.68E+01	0.00E+00	6.68E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
532601	10/5/2020 - 11/2/2020	Beta	<3.23E+00	0.00E+00	3.23E+00
		Mn-54	<2.81E+00	0.00E+00	2.81E+00
		Co-58	<3.49E+00	0.00E+00	3.49E+00
		Fe-59	<6.85E+00	0.00E+00	6.85E+00
		Co-60	<3.51E+00	0.00E+00	3.51E+00
		Zn-65	<6.45E+00	0.00E+00	6.45E+00
		Zr-95	<8.09E+00	0.00E+00	8.09E+00
		Nb-95	<5.37E+00	0.00E+00	5.37E+00
		I-131	<1.18E+01	0.00E+00	1.18E+01
		Cs-134	<4.46E+00	0.00E+00	4.46E+00
		Cs-137	<4.24E+00	0.00E+00	4.24E+00
		BaLa-140	<9.31E+00	0.00E+00	9.31E+00
		Be-7	<3.55E+01	0.00E+00	3.55E+01
		K-40	8.49E+01	4.42E+01	5.96E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
534197	11/2/2020 - 11/30/2020	Beta	<3.24E+00	0.00E+00	3.24E+00
		Mn-54	<3.09E+00	0.00E+00	3.09E+00
		Co-58	<3.24E+00	0.00E+00	3.24E+00
		Fe-59	<6.11E+00	0.00E+00	6.11E+00
		Co-60	<3.14E+00	0.00E+00	3.14E+00
		Zn-65	<6.23E+00	0.00E+00	6.23E+00
		Zr-95	<4.57E+00	0.00E+00	4.57E+00
		Nb-95	<4.36E+00	0.00E+00	4.36E+00
		I-131	<1.13E+01	0.00E+00	1.13E+01
		Cs-134	<3.26E+00	0.00E+00	3.26E+00
		Cs-137	<2.78E+00	0.00E+00	2.78E+00
		BaLa-140	<6.23E+00	0.00E+00	6.23E+00
		Be-7	<2.70E+01	0.00E+00	2.70E+01
		K-40	8.17E+01	3.20E+01	3.77E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
533293	10/5/2020 - 12/28/2020	H3DW	<-8.5E+01	0.00E+00	1.94E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
536311	11/30/2020 - 12/28/2020	Beta	<3.21E+00	0.00E+00	3.21E+00
		Mn-54	<3.47E+00	0.00E+00	3.47E+00
		Co-58	<2.94E+00	0.00E+00	2.94E+00
		Fe-59	<5.52E+00	0.00E+00	5.52E+00
		Co-60	<5.75E-01	0.00E+00	5.75E-01
		Zn-65	<7.10E+00	0.00E+00	7.10E+00
		Zr-95	<6.10E+00	0.00E+00	6.10E+00
		Nb-95	<4.88E+00	0.00E+00	4.88E+00
		I-131	<1.17E+01	0.00E+00	1.17E+01
		Cs-134	<4.04E+00	0.00E+00	4.04E+00
		Cs-137	<3.61E+00	0.00E+00	3.61E+00
		BaLa-140	<8.97E+00	0.00E+00	8.97E+00
		Be-7	<3.17E+01	0.00E+00	3.17E+01
		K-40	5.73E+01	4.04E+01	6.12E+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
520664	3/31/2020 - 3/31/2020		Mn-54	<5.59E+01	0.00E+00	5.59E+01
			Co-58	<6.39E+01	0.00E+00	6.39E+01
			Fe-59	<8.16E+01	0.00E+00	8.16E+01
			Co-60	<8.29E+01	0.00E+00	8.29E+01
			Zn-65	<1.40E+02	0.00E+00	1.40E+02



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
520664	3/31/2020 - 3/31/2020	FREESWIM	Nb-95	<7.05E+01	0.00E+00	7.05E+01
			I-131	<8.95E+01	0.00E+00	8.95E+01
			Cs-134	<8.65E+01	0.00E+00	8.65E+01
			Cs-137	<6.06E+01	0.00E+00	6.06E+01
			Be-7	<3.33E+02	0.00E+00	3.33E+02
			K-40	4.64E+03	1.25E+03	1.24E+03
			Ag-110M	<4.62E+01	0.00E+00	4.62E+01
			Sb-122	<2.85E+02	0.00E+00	2.85E+02
			Sb-125	<1.34E+02	0.00E+00	1.34E+02
			520665	3/31/2020 - 3/31/2020	FREESWIM	Mn-54
Co-58	<5.54E+01	0.00E+00				5.54E+01
Fe-59	<1.27E+02	0.00E+00				1.27E+02
Co-60	<6.92E+01	0.00E+00				6.92E+01
Zn-65	<1.23E+02	0.00E+00				1.23E+02
Nb-95	<5.15E+01	0.00E+00				5.15E+01
I-131	<7.26E+01	0.00E+00				7.26E+01
Cs-134	<5.53E+01	0.00E+00				5.53E+01
Cs-137	<6.68E+01	0.00E+00				6.68E+01
Be-7	<4.18E+02	0.00E+00				4.18E+02
K-40	3.82E+03	1.15E+03				1.12E+03
Ag-110M	<6.55E+01	0.00E+00				6.55E+01
Sb-122	<3.97E+02	0.00E+00				3.97E+02
Sb-125	<1.34E+02	0.00E+00				1.34E+02
520666	3/31/2020 - 4/1/2020	BOTMFEDER	Mn-54	<4.91E+01	0.00E+00	4.91E+01
			Co-58	<3.94E+01	0.00E+00	3.94E+01
			Fe-59	<7.76E+01	0.00E+00	7.76E+01
			Co-60	<4.99E+01	0.00E+00	4.99E+01
			Zn-65	<8.17E+01	0.00E+00	8.17E+01
			Nb-95	<5.05E+01	0.00E+00	5.05E+01
			I-131	<6.80E+01	0.00E+00	6.80E+01
			Cs-134	<5.80E+01	0.00E+00	5.80E+01
			Cs-137	<4.49E+01	0.00E+00	4.49E+01
			Be-7	<3.29E+02	0.00E+00	3.29E+02
			K-40	4.46E+03	9.09E+02	8.22E+02
			Ag-110M	<4.63E+01	0.00E+00	4.63E+01
			Sb-122	<2.66E+02	0.00E+00	2.66E+02
			Sb-125	<1.11E+02	0.00E+00	1.11E+02
531568	10/28/2020 - 10/28/2020	FREESWIM	Mn-54	<4.87E+01	0.00E+00	4.87E+01
			Co-58	<5.28E+01	0.00E+00	5.28E+01
			Fe-59	<1.09E+02	0.00E+00	1.09E+02
			Co-60	<5.65E+01	0.00E+00	5.65E+01
			Zn-65	<9.48E+01	0.00E+00	9.48E+01
			Nb-95	<5.66E+01	0.00E+00	5.66E+01
			I-131	<9.11E+01	0.00E+00	9.11E+01
			Cs-134	<4.51E+01	0.00E+00	4.51E+01
			Cs-137	<4.91E+01	0.00E+00	4.91E+01
			Be-7	<4.39E+02	0.00E+00	4.39E+02
			K-40	4.36E+03	9.51E+02	6.86E+02
			Ag-110M	<5.17E+01	0.00E+00	5.17E+01
			Sb-122	<4.80E+02	0.00E+00	4.80E+02
			Sb-125	<1.15E+02	0.00E+00	1.15E+02
531570	10/28/2020 - 10/28/2020	BOTMFEDER	Mn-54	<4.32E+01	0.00E+00	4.32E+01
			Co-58	<4.95E+01	0.00E+00	4.95E+01
			Fe-59	<9.26E+01	0.00E+00	9.26E+01
			Co-60	<4.06E+01	0.00E+00	4.06E+01
			Zn-65	<8.13E+01	0.00E+00	8.13E+01
			Nb-95	<3.53E+01	0.00E+00	3.53E+01
			I-131	<5.89E+01	0.00E+00	5.89E+01
			Cs-134	<4.56E+01	0.00E+00	4.56E+01
			Cs-137	<3.72E+01	0.00E+00	3.72E+01



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 129 [ INDICATOR - ENE @ 0.51 miles ]

Sample ID:	Sample Dates:	BOTMFEEDER	Nuclide	Activity	2 Sigma Error	MDA
531570	10/28/2020 - 10/28/2020		Be-7	<2.96E+02	0.00E+00	2.96E+02
			K-40	3.41E+03	8.11E+02	5.46E+02
			Ag-110M	<2.87E+01	0.00E+00	2.87E+01
			Sb-122	<3.24E+02	0.00E+00	3.24E+02
			Sb-125	<7.76E+01	0.00E+00	7.76E+01

Sample ID:	Sample Dates:	FREESWIM	Nuclide	Activity	2 Sigma Error	MDA
531569	10/28/2020 - 11/2/2020		Mn-54	<5.38E+01	0.00E+00	5.38E+01
			Co-58	<4.90E+01	0.00E+00	4.90E+01
			Fe-59	<1.04E+02	0.00E+00	1.04E+02
			Co-60	<1.29E+01	0.00E+00	1.29E+01
			Zn-65	<1.11E+02	0.00E+00	1.11E+02
			Nb-95	<6.11E+01	0.00E+00	6.11E+01
			I-131	<7.10E+01	0.00E+00	7.10E+01
			Cs-134	<6.03E+01	0.00E+00	6.03E+01
			Cs-137	<6.45E+01	0.00E+00	6.45E+01
			Be-7	<5.02E+02	0.00E+00	5.02E+02
			K-40	5.06E+03	1.10E+03	6.21E+02
			Ag-110M	<4.73E+01	0.00E+00	4.73E+01
			Sb-122	<2.28E+02	0.00E+00	2.28E+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
520667	3/31/2020 - 3/31/2020		Mn-54	<7.46E+01	0.00E+00	7.46E+01
			Co-58	<8.97E+01	0.00E+00	8.97E+01
			Fe-59	<1.68E+02	0.00E+00	1.68E+02
			Co-60	<6.77E+01	0.00E+00	6.77E+01
			Zn-65	<1.68E+02	0.00E+00	1.68E+02
			Nb-95	<8.79E+01	0.00E+00	8.79E+01
			I-131	<9.79E+01	0.00E+00	9.79E+01
			Cs-134	<1.04E+02	0.00E+00	1.04E+02
			Cs-137	<7.92E+01	0.00E+00	7.92E+01
			Be-7	<5.30E+02	0.00E+00	5.30E+02
			K-40	5.19E+03	1.38E+03	1.24E+03
			Ag-110M	<8.61E+01	0.00E+00	8.61E+01
			Sb-122	<4.58E+02	0.00E+00	4.58E+02
			Sb-125	<1.74E+02	0.00E+00	1.74E+02

Sample ID:	Sample Dates:	FREESWIM	Nuclide	Activity	2 Sigma Error	MDA
520668	3/31/2020 - 3/31/2020		Mn-54	<6.29E+01	0.00E+00	6.29E+01
			Co-58	<6.93E+01	0.00E+00	6.93E+01
			Fe-59	<1.14E+02	0.00E+00	1.14E+02
			Co-60	<6.66E+01	0.00E+00	6.66E+01
			Zn-65	<1.56E+02	0.00E+00	1.56E+02
			Nb-95	<7.87E+01	0.00E+00	7.87E+01
			I-131	<1.02E+02	0.00E+00	1.02E+02
			Cs-134	<5.99E+01	0.00E+00	5.99E+01
			Cs-137	<6.11E+01	0.00E+00	6.11E+01
			Be-7	<5.27E+02	0.00E+00	5.27E+02
			K-40	3.47E+03	1.12E+03	1.11E+03
			Ag-110M	<4.70E+01	0.00E+00	4.70E+01
			Sb-122	<4.80E+02	0.00E+00	4.80E+02
			Sb-125	<1.70E+02	0.00E+00	1.70E+02

Sample ID:	Sample Dates:	BOTMFEEDER	Nuclide	Activity	2 Sigma Error	MDA
520669	3/31/2020 - 3/31/2020		Mn-54	<7.45E+01	0.00E+00	7.45E+01
			Co-58	<7.72E+01	0.00E+00	7.72E+01
			Fe-59	<1.65E+02	0.00E+00	1.65E+02
			Co-60	<9.69E+01	0.00E+00	9.69E+01
			Zn-65	<1.73E+02	0.00E+00	1.73E+02
			Nb-95	<9.33E+01	0.00E+00	9.33E+01
			I-131	<1.27E+02	0.00E+00	1.27E+02
			Cs-134	<1.03E+02	0.00E+00	1.03E+02
			Cs-137	<9.68E+01	0.00E+00	9.68E+01
			Be-7	<5.10E+02	0.00E+00	5.10E+02
			K-40	3.88E+03	1.28E+03	1.24E+03



**MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)**

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

Sample Point 137 [ CONTROL - N @ 12 miles ]

Sample ID:	520669	Sample Dates:	3/31/2020 - 3/31/2020	BOTMFEDER	Nuclide	Activity	2 Sigma Error	MDA
					Ag-110M	<5.00E+01	0.00E+00	5.00E+01
					Sb-122	<5.25E+02	0.00E+00	5.25E+02
					Sb-125	<1.91E+02	0.00E+00	1.91E+02

Sample ID:	531571	Sample Dates:	11/3/2020 - 11/3/2020	FREESWIM	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<6.17E+01	0.00E+00	6.17E+01
					Co-58	<3.90E+01	0.00E+00	3.90E+01
					Fe-59	<7.16E+01	0.00E+00	7.16E+01
					Co-60	<3.90E+01	0.00E+00	3.90E+01
					Zn-65	<9.71E+01	0.00E+00	9.71E+01
					Nb-95	<4.35E+01	0.00E+00	4.35E+01
					I-131	<5.19E+01	0.00E+00	5.19E+01
					Cs-134	<5.58E+01	0.00E+00	5.58E+01
					Cs-137	<5.70E+01	0.00E+00	5.70E+01
					Be-7	<3.64E+02	0.00E+00	3.64E+02
					K-40	4.14E+03	9.93E+02	8.14E+02
					Ag-110M	<4.73E+01	0.00E+00	4.73E+01
					Sb-122	<8.70E+01	0.00E+00	8.70E+01
					Sb-125	<1.31E+02	0.00E+00	1.31E+02

Sample ID:	531572	Sample Dates:	11/3/2020 - 11/3/2020	FREESWIM	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<4.22E+01	0.00E+00	4.22E+01
					Co-58	<3.87E+01	0.00E+00	3.87E+01
					Fe-59	<1.01E+02	0.00E+00	1.01E+02
					Co-60	<4.86E+01	0.00E+00	4.86E+01
					Zn-65	<1.13E+02	0.00E+00	1.13E+02
					Nb-95	<4.42E+01	0.00E+00	4.42E+01
					I-131	<4.78E+01	0.00E+00	4.78E+01
					Cs-134	<4.76E+01	0.00E+00	4.76E+01
					Cs-137	<4.46E+01	0.00E+00	4.46E+01
					Be-7	<4.30E+02	0.00E+00	4.30E+02
					K-40	3.66E+03	9.62E+02	8.25E+02
					Ag-110M	<4.24E+01	0.00E+00	4.24E+01
					Sb-122	<8.06E+01	0.00E+00	8.06E+01
					Sb-125	<1.04E+02	0.00E+00	1.04E+02

Sample ID:	531573	Sample Dates:	11/3/2020 - 11/3/2020	BOTMFEDER	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<4.97E+01	0.00E+00	4.97E+01
					Co-58	<4.97E+01	0.00E+00	4.97E+01
					Fe-59	<9.89E+01	0.00E+00	9.89E+01
					Co-60	<6.24E+01	0.00E+00	6.24E+01
					Zn-65	<1.10E+02	0.00E+00	1.10E+02
					Nb-95	<5.08E+01	0.00E+00	5.08E+01
					I-131	<7.29E+01	0.00E+00	7.29E+01
					Cs-134	<4.97E+01	0.00E+00	4.97E+01
					Cs-137	<5.37E+01	0.00E+00	5.37E+01
					Be-7	<4.89E+02	0.00E+00	4.89E+02
					K-40	5.17E+03	1.07E+03	4.79E+02
					Ag-110M	<4.78E+01	0.00E+00	4.78E+01
					Sb-122	<1.05E+02	0.00E+00	1.05E+02
					Sb-125	<1.22E+02	0.00E+00	1.22E+02

Media Type: SEDIMENT\_SHORE Concentration (Activity): pCi/kg

Sample Point 129 [ INDICATOR - ENE @ 0.51 miles ]

Sample ID:	518726	Sample Dates:	4/14/2020 - 4/14/2020		Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<4.08E+01	0.00E+00	4.08E+01
					Co-58	<5.90E+01	0.00E+00	5.90E+01
					Fe-59	<1.52E+02	0.00E+00	1.52E+02
					Co-60	<4.86E+01	0.00E+00	4.86E+01
					Zn-65	<8.84E+01	0.00E+00	8.84E+01
					Zr-95	<1.04E+02	0.00E+00	1.04E+02
					Nb-95	<8.09E+01	0.00E+00	8.09E+01
					I-131	<1.20E+02	0.00E+00	1.20E+02
					Cs-134	<5.92E+01	0.00E+00	5.92E+01
					Cs-137	<5.11E+01	0.00E+00	5.11E+01
					Be-7	<5.89E+02	0.00E+00	5.89E+02
					K-40	1.47E+03	6.63E+02	7.09E+02



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
518726	4/14/2020 - 4/14/2020	Co-57	<3.23E+01	0.00E+00	3.23E+01
		Mo-99	<1.63E+04	0.00E+00	1.63E+04
		Ag-110M	<3.60E+01	0.00E+00	3.60E+01
		Sb-122	<2.59E+03	0.00E+00	2.59E+03
		Sb-125	<1.22E+02	0.00E+00	1.22E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
530041	10/15/2020 - 10/15/2020	Mn-54	<3.05E+01	0.00E+00	3.05E+01
		Co-58	<3.81E+01	0.00E+00	3.81E+01
		Fe-59	<7.82E+01	0.00E+00	7.82E+01
		Co-60	<1.24E+01	0.00E+00	1.24E+01
		Zn-65	<1.24E+02	0.00E+00	1.24E+02
		Zr-95	<8.15E+01	0.00E+00	8.15E+01
		Nb-95	<4.99E+01	0.00E+00	4.99E+01
		I-131	<9.67E+01	0.00E+00	9.67E+01
		Cs-134	<5.15E+01	0.00E+00	5.15E+01
		Cs-137	<3.80E+01	0.00E+00	3.80E+01
		Be-7	<4.32E+02	0.00E+00	4.32E+02
		K-40	1.39E+03	6.31E+02	7.23E+02
		Co-57	<3.37E+01	0.00E+00	3.37E+01
		Mo-99	<5.87E+03	0.00E+00	5.87E+03
		Ag-110M	<3.79E+01	0.00E+00	3.79E+01
		Sb-122	<1.07E+03	0.00E+00	1.07E+03
		Sb-125	<1.35E+02	0.00E+00	1.35E+02

Sample Point 130 [ INDICATOR - SW @ 0.52 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
518727	4/14/2020 - 4/14/2020	Mn-54	<6.92E+01	0.00E+00	6.92E+01
		Co-58	<5.21E+01	0.00E+00	5.21E+01
		Fe-59	<1.40E+02	0.00E+00	1.40E+02
		Co-60	<5.60E+01	0.00E+00	5.60E+01
		Zn-65	<2.31E+02	0.00E+00	2.31E+02
		Zr-95	<1.21E+02	0.00E+00	1.21E+02
		Nb-95	<1.01E+02	0.00E+00	1.01E+02
		I-131	<1.97E+02	0.00E+00	1.97E+02
		Cs-134	<8.58E+01	0.00E+00	8.58E+01
		Cs-137	<5.48E+01	0.00E+00	5.48E+01
		Be-7	<5.74E+02	0.00E+00	5.74E+02
		K-40	1.45E+04	1.79E+03	9.16E+02
		Co-57	<5.42E+01	0.00E+00	5.42E+01
		Mo-99	<2.56E+04	0.00E+00	2.56E+04
		Ag-110M	<4.92E+01	0.00E+00	4.92E+01
		Sb-122	<3.71E+03	0.00E+00	3.71E+03
		Sb-125	<1.37E+02	0.00E+00	1.37E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
530042	10/15/2020 - 10/15/2020	Mn-54	<7.94E+01	0.00E+00	7.94E+01
		Co-58	<6.99E+01	0.00E+00	6.99E+01
		Fe-59	<1.86E+02	0.00E+00	1.86E+02
		Co-60	<8.21E+01	0.00E+00	8.21E+01
		Zn-65	<1.63E+02	0.00E+00	1.63E+02
		Zr-95	<1.33E+02	0.00E+00	1.33E+02
		Nb-95	<8.96E+01	0.00E+00	8.96E+01
		I-131	<1.39E+02	0.00E+00	1.39E+02
		Cs-134	<9.74E+01	0.00E+00	9.74E+01
		Cs-137	<7.65E+01	0.00E+00	7.65E+01
		Be-7	<6.89E+02	0.00E+00	6.89E+02
		K-40	1.60E+04	2.25E+03	6.34E+02
		Co-57	<4.92E+01	0.00E+00	4.92E+01
		Mo-99	<9.32E+03	0.00E+00	9.32E+03
		Ag-110M	<6.40E+01	0.00E+00	6.40E+01
		Sb-122	<1.70E+03	0.00E+00	1.70E+03
		Sb-125	<1.58E+02	0.00E+00	1.58E+02



**MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)**

Media Type: SEDIMENT\_SHORE Concentration (Activity): pCi/kg

Sample Point 137 [ CONTROL - N @ 12 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
518728	4/6/2020 - 4/6/2020	Mn-54	<4.86E+01	0.00E+00	4.86E+01
		Co-58	<7.31E+01	0.00E+00	7.31E+01
		Fe-59	<1.71E+02	0.00E+00	1.71E+02
		Co-60	<6.99E+01	0.00E+00	6.99E+01
		Zn-65	<1.36E+02	0.00E+00	1.36E+02
		Zr-95	<1.16E+02	0.00E+00	1.16E+02
		Nb-95	<8.10E+01	0.00E+00	8.10E+01
		I-131	<2.88E+02	0.00E+00	2.88E+02
		Cs-134	<6.68E+01	0.00E+00	6.68E+01
		Cs-137	<5.32E+01	0.00E+00	5.32E+01
		Be-7	<6.02E+02	0.00E+00	6.02E+02
		K-40	1.68E+04	2.20E+03	5.04E+02
		Co-57	<4.17E+01	0.00E+00	4.17E+01
		Mo-99	<7.50E+04	0.00E+00	7.50E+04
		Ag-110M	<3.76E+01	0.00E+00	3.76E+01
		Sb-122	<1.73E+04	0.00E+00	1.73E+04
		Sb-125	<1.09E+02	0.00E+00	1.09E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
530043	10/12/2020 - 10/12/2020	Mn-54	<6.81E+01	0.00E+00	6.81E+01
		Co-58	<6.11E+01	0.00E+00	6.11E+01
		Fe-59	<1.76E+02	0.00E+00	1.76E+02
		Co-60	<6.35E+01	0.00E+00	6.35E+01
		Zn-65	<9.47E+01	0.00E+00	9.47E+01
		Zr-95	<1.28E+02	0.00E+00	1.28E+02
		Nb-95	<8.05E+01	0.00E+00	8.05E+01
		I-131	<1.89E+02	0.00E+00	1.89E+02
		Cs-134	<6.44E+01	0.00E+00	6.44E+01
		Cs-137	<6.05E+01	0.00E+00	6.05E+01
		Be-7	<5.42E+02	0.00E+00	5.42E+02
		K-40	2.34E+04	2.87E+03	5.60E+02
		Co-57	<3.94E+01	0.00E+00	3.94E+01
		Mo-99	<2.13E+04	0.00E+00	2.13E+04
		Ag-110M	<5.14E+01	0.00E+00	5.14E+01
		Sb-122	<3.35E+03	0.00E+00	3.35E+03
		Sb-125	<1.34E+02	0.00E+00	1.34E+02

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
515724	12/30/2019 - 1/27/2020	Mn-54	<2.68E+00	0.00E+00	2.68E+00
		Co-58	<4.10E+00	0.00E+00	4.10E+00
		Fe-59	<7.01E+00	0.00E+00	7.01E+00
		Co-60	<3.92E+00	0.00E+00	3.92E+00
		Zn-65	<5.91E+00	0.00E+00	5.91E+00
		Zr-95	<9.03E+00	0.00E+00	9.03E+00
		Nb-95	<5.16E+00	0.00E+00	5.16E+00
		I-131	<1.20E+01	0.00E+00	1.20E+01
		Cs-134	<2.66E+00	0.00E+00	2.66E+00
		Cs-137	<3.25E+00	0.00E+00	3.25E+00
		BaLa-140	<8.55E+00	0.00E+00	8.55E+00
		Be-7	<3.58E+01	0.00E+00	3.58E+01
		K-40	5.82E+01	3.20E+01	3.72E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
517243	1/27/2020 - 2/24/2020	Mn-54	<2.66E+00	0.00E+00	2.66E+00
		Co-58	<3.58E+00	0.00E+00	3.58E+00
		Fe-59	<5.10E+00	0.00E+00	5.10E+00
		Co-60	<3.41E+00	0.00E+00	3.41E+00
		Zn-65	<6.29E+00	0.00E+00	6.29E+00
		Zr-95	<5.27E+00	0.00E+00	5.27E+00
		Nb-95	<4.04E+00	0.00E+00	4.04E+00
		I-131	<1.10E+01	0.00E+00	1.10E+01
		Cs-134	<2.95E+00	0.00E+00	2.95E+00
		Cs-137	<2.87E+00	0.00E+00	2.87E+00
		BaLa-140	<7.79E+00	0.00E+00	7.79E+00



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
517243	1/27/2020 - 2/24/2020	Be-7	<2.90E+01	0.00E+00	2.90E+01
		K-40	1.04E+02	3.80E+01	4.47E+01
519413	2/24/2020 - 3/23/2020	Mn-54	<3.34E+00	0.00E+00	3.34E+00
		Co-58	<3.23E+00	0.00E+00	3.23E+00
		Fe-59	<7.14E+00	0.00E+00	7.14E+00
		Co-60	<3.45E+00	0.00E+00	3.45E+00
		Zn-65	<7.12E+00	0.00E+00	7.12E+00
		Zr-95	<5.53E+00	0.00E+00	5.53E+00
		Nb-95	<4.29E+00	0.00E+00	4.29E+00
		I-131	<1.15E+01	0.00E+00	1.15E+01
		Cs-134	<3.11E+00	0.00E+00	3.11E+00
		Cs-137	<3.88E+00	0.00E+00	3.88E+00
		BaLa-140	<5.17E+00	0.00E+00	5.17E+00
		Be-7	<2.99E+01	0.00E+00	2.99E+01
		K-40	<6.31E+01	0.00E+00	6.31E+01
516442	12/30/2019 - 4/20/2020	H3SW	6.08E+02	1.24E+02	1.78E+02
521279	3/23/2020 - 4/20/2020	Mn-54	<3.28E+00	0.00E+00	3.28E+00
		Co-58	<3.03E+00	0.00E+00	3.03E+00
		Fe-59	<7.78E+00	0.00E+00	7.78E+00
		Co-60	<3.27E+00	0.00E+00	3.27E+00
		Zn-65	<4.53E+00	0.00E+00	4.53E+00
		Zr-95	<4.52E+00	0.00E+00	4.52E+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	<3.42E+00	0.00E+00	3.42E+00
		Cs-137	<3.12E+00	0.00E+00	3.12E+00
		BaLa-140	<8.56E+00	0.00E+00	8.56E+00
		Be-7	<2.35E+01	0.00E+00	2.35E+01
		K-40	7.08E+01	3.29E+01	4.38E+01
522847	4/20/2020 - 5/18/2020	Mn-54	<4.44E+00	0.00E+00	4.44E+00
		Co-58	<4.45E+00	0.00E+00	4.45E+00
		Fe-59	<1.05E+01	0.00E+00	1.05E+01
		Co-60	<2.64E+00	0.00E+00	2.64E+00
		Zn-65	<8.31E+00	0.00E+00	8.31E+00
		Zr-95	<8.17E+00	0.00E+00	8.17E+00
		Nb-95	<4.59E+00	0.00E+00	4.59E+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	<5.10E+00	0.00E+00	5.10E+00
		BaLa-140	<9.89E+00	0.00E+00	9.89E+00
		Be-7	<3.79E+01	0.00E+00	3.79E+01
		K-40	8.53E+01	3.89E+01	4.48E+01
524512	5/18/2020 - 6/15/2020	Mn-54	<2.99E+00	0.00E+00	2.99E+00
		Co-58	<2.96E+00	0.00E+00	2.96E+00
		Fe-59	<7.71E+00	0.00E+00	7.71E+00
		Co-60	<2.57E+00	0.00E+00	2.57E+00
		Zn-65	<5.34E+00	0.00E+00	5.34E+00
		Zr-95	<6.04E+00	0.00E+00	6.04E+00
		Nb-95	<3.74E+00	0.00E+00	3.74E+00
		I-131	<1.16E+01	0.00E+00	1.16E+01
		Cs-134	<2.95E+00	0.00E+00	2.95E+00
		Cs-137	<3.17E+00	0.00E+00	3.17E+00
		BaLa-140	<7.64E+00	0.00E+00	7.64E+00
		Be-7	<3.26E+01	0.00E+00	3.26E+01
		K-40	8.41E+01	3.07E+01	3.31E+01
522534	4/20/2020 - 7/13/2020	H3SW	7.26E+02	1.32E+02	1.87E+02





# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
525829	6/15/2020 - 7/13/2020	Mn-54	<3.52E+00	0.00E+00	3.52E+00
		Co-58	<3.71E+00	0.00E+00	3.71E+00
		Fe-59	<6.20E+00	0.00E+00	6.20E+00
		Co-60	<2.99E+00	0.00E+00	2.99E+00
		Zn-65	<5.83E+00	0.00E+00	5.83E+00
		Zr-95	<5.71E+00	0.00E+00	5.71E+00
		Nb-95	<4.14E+00	0.00E+00	4.14E+00
		I-131	<1.10E+01	0.00E+00	1.10E+01
		Cs-134	<3.13E+00	0.00E+00	3.13E+00
		Cs-137	<2.53E+00	0.00E+00	2.53E+00
		BaLa-140	<6.42E+00	0.00E+00	6.42E+00
		Be-7	<3.25E+01	0.00E+00	3.25E+01
		K-40	7.97E+01	3.38E+01	4.13E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
527097	7/13/2020 - 8/10/2020	Mn-54	<3.31E+00	0.00E+00	3.31E+00
		Co-58	<3.87E+00	0.00E+00	3.87E+00
		Fe-59	<6.93E+00	0.00E+00	6.93E+00
		Co-60	<3.36E+00	0.00E+00	3.36E+00
		Zn-65	<7.10E+00	0.00E+00	7.10E+00
		Zr-95	<7.03E+00	0.00E+00	7.03E+00
		Nb-95	<4.83E+00	0.00E+00	4.83E+00
		I-131	<1.16E+01	0.00E+00	1.16E+01
		Cs-134	<3.46E+00	0.00E+00	3.46E+00
		Cs-137	<3.40E+00	0.00E+00	3.40E+00
		BaLa-140	<7.39E+00	0.00E+00	7.39E+00
		Be-7	<3.25E+01	0.00E+00	3.25E+01
		K-40	7.71E+01	3.25E+01	3.75E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
528921	8/10/2020 - 9/8/2020	Mn-54	<3.84E+00	0.00E+00	3.84E+00
		Co-58	<3.48E+00	0.00E+00	3.48E+00
		Fe-59	<7.30E+00	0.00E+00	7.30E+00
		Co-60	<3.71E+00	0.00E+00	3.71E+00
		Zn-65	<7.72E+00	0.00E+00	7.72E+00
		Zr-95	<6.99E+00	0.00E+00	6.99E+00
		Nb-95	<4.87E+00	0.00E+00	4.87E+00
		I-131	<1.19E+01	0.00E+00	1.19E+01
		Cs-134	<3.73E+00	0.00E+00	3.73E+00
		Cs-137	<2.70E+00	0.00E+00	2.70E+00
		BaLa-140	<7.31E+00	0.00E+00	7.31E+00
		Be-7	<3.30E+01	0.00E+00	3.30E+01
		K-40	8.13E+01	3.33E+01	3.70E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
527299	7/13/2020 - 10/5/2020	H3SW	4.59E+02	1.28E+02	1.96E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
530694	9/8/2020 - 10/5/2020	Mn-54	<3.32E+00	0.00E+00	3.32E+00
		Co-58	<3.29E+00	0.00E+00	3.29E+00
		Fe-59	<1.01E+01	0.00E+00	1.01E+01
		Co-60	<2.86E+00	0.00E+00	2.86E+00
		Zn-65	<6.90E+00	0.00E+00	6.90E+00
		Zr-95	<6.77E+00	0.00E+00	6.77E+00
		Nb-95	<3.66E+00	0.00E+00	3.66E+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	<3.07E+00	0.00E+00	3.07E+00
		BaLa-140	<5.10E+00	0.00E+00	5.10E+00
		Be-7	<3.54E+01	0.00E+00	3.54E+01
		K-40	8.07E+01	3.87E+01	4.78E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
532603	10/5/2020 - 11/2/2020	Mn-54	<2.55E+00	0.00E+00	2.55E+00
		Co-58	<3.16E+00	0.00E+00	3.16E+00
		Fe-59	<4.48E+00	0.00E+00	4.48E+00
		Co-60	<2.77E+00	0.00E+00	2.77E+00
		Zn-65	<6.26E+00	0.00E+00	6.26E+00



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
532603	10/5/2020 - 11/2/2020	Zr-95	<5.46E+00	0.00E+00	5.46E+00
		Nb-95	<3.71E+00	0.00E+00	3.71E+00
		I-131	<1.15E+01	0.00E+00	1.15E+01
		Cs-134	<3.18E+00	0.00E+00	3.18E+00
		Cs-137	<4.04E+00	0.00E+00	4.04E+00
		BaLa-140	<7.00E+00	0.00E+00	7.00E+00
		Be-7	<2.96E+01	0.00E+00	2.96E+01
		K-40	7.13E+01	3.32E+01	4.42E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
534199	11/2/2020 - 11/30/2020	Mn-54	<3.05E+00	0.00E+00	3.05E+00
		Co-58	<3.95E+00	0.00E+00	3.95E+00
		Fe-59	<5.74E+00	0.00E+00	5.74E+00
		Co-60	<3.37E+00	0.00E+00	3.37E+00
		Zn-65	<6.87E+00	0.00E+00	6.87E+00
		Zr-95	<7.01E+00	0.00E+00	7.01E+00
		Nb-95	<4.41E+00	0.00E+00	4.41E+00
		I-131	<1.14E+01	0.00E+00	1.14E+01
		Cs-134	<3.25E+00	0.00E+00	3.25E+00
		Cs-137	<3.48E+00	0.00E+00	3.48E+00
		BaLa-140	<6.43E+00	0.00E+00	6.43E+00
		Be-7	<3.00E+01	0.00E+00	3.00E+01
		K-40	6.24E+01	3.42E+01	4.60E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
533294	10/5/2020 - 12/28/2020	H3SW	5.12E+02	1.29E+02	1.94E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
536313	11/30/2020 - 12/28/2020	Mn-54	<3.21E+00	0.00E+00	3.21E+00
		Co-58	<2.64E+00	0.00E+00	2.64E+00
		Fe-59	<6.29E+00	0.00E+00	6.29E+00
		Co-60	<2.62E+00	0.00E+00	2.62E+00
		Zn-65	<5.84E+00	0.00E+00	5.84E+00
		Zr-95	<4.11E+00	0.00E+00	4.11E+00
		Nb-95	<2.61E+00	0.00E+00	2.61E+00
		I-131	<1.16E+01	0.00E+00	1.16E+01
		Cs-134	<3.26E+00	0.00E+00	3.26E+00
		Cs-137	<2.78E+00	0.00E+00	2.78E+00
		BaLa-140	<8.53E+00	0.00E+00	8.53E+00
		Be-7	<2.47E+01	0.00E+00	2.47E+01
		K-40	8.65E+01	3.37E+01	4.12E+01

Sample Point 131 [ INDICATOR - WNW @ 0.64 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
515725	12/30/2019 - 1/27/2020	Mn-54	<3.76E+00	0.00E+00	3.76E+00
		Co-58	<2.57E+00	0.00E+00	2.57E+00
		Fe-59	<7.88E+00	0.00E+00	7.88E+00
		Co-60	<3.10E+00	0.00E+00	3.10E+00
		Zn-65	<8.06E+00	0.00E+00	8.06E+00
		Zr-95	<6.44E+00	0.00E+00	6.44E+00
		Nb-95	<4.92E+00	0.00E+00	4.92E+00
		I-131	<1.13E+01	0.00E+00	1.13E+01
		Cs-134	<4.84E+00	0.00E+00	4.84E+00
		Cs-137	<3.65E+00	0.00E+00	3.65E+00
		BaLa-140	<6.63E+00	0.00E+00	6.63E+00
		Be-7	<3.53E+01	0.00E+00	3.53E+01
		K-40	3.86E+01	3.66E+01	5.62E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
517244	1/27/2020 - 2/24/2020	Mn-54	<2.60E+00	0.00E+00	2.60E+00
		Co-58	<3.41E+00	0.00E+00	3.41E+00
		Fe-59	<6.34E+00	0.00E+00	6.34E+00
		Co-60	<2.87E+00	0.00E+00	2.87E+00
		Zn-65	<6.40E+00	0.00E+00	6.40E+00
		Zr-95	<7.64E+00	0.00E+00	7.64E+00
		Nb-95	<3.52E+00	0.00E+00	3.52E+00
		I-131	<1.18E+01	0.00E+00	1.18E+01



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
517244	1/27/2020 - 2/24/2020	Cs-134	<3.30E+00	0.00E+00	3.30E+00
		Cs-137	<3.55E+00	0.00E+00	3.55E+00
		BaLa-140	<7.62E+00	0.00E+00	7.62E+00
		Be-7	<2.61E+01	0.00E+00	2.61E+01
		K-40	1.06E+02	3.82E+01	4.52E+01
519414	2/24/2020 - 3/23/2020	Mn-54	<2.96E+00	0.00E+00	2.96E+00
		Co-58	<3.19E+00	0.00E+00	3.19E+00
		Fe-59	<6.77E+00	0.00E+00	6.77E+00
		Co-60	<3.24E+00	0.00E+00	3.24E+00
		Zn-65	<7.02E+00	0.00E+00	7.02E+00
		Zr-95	<7.56E+00	0.00E+00	7.56E+00
		Nb-95	<3.36E+00	0.00E+00	3.36E+00
		I-131	<1.18E+01	0.00E+00	1.18E+01
		Cs-134	<3.57E+00	0.00E+00	3.57E+00
		Cs-137	<3.56E+00	0.00E+00	3.56E+00
		BaLa-140	<7.23E+00	0.00E+00	7.23E+00
		Be-7	<2.70E+01	0.00E+00	2.70E+01
		K-40	8.35E+01	3.22E+01	3.61E+01
516443	12/30/2019 - 4/20/2020	H3SW	2.82E+02	1.12E+02	1.76E+02
521280	3/23/2020 - 4/20/2020	Mn-54	<4.17E+00	0.00E+00	4.17E+00
		Co-58	<5.02E+00	0.00E+00	5.02E+00
		Fe-59	<1.09E+01	0.00E+00	1.09E+01
		Co-60	<4.37E+00	0.00E+00	4.37E+00
		Zn-65	<6.99E+00	0.00E+00	6.99E+00
		Zr-95	<6.44E+00	0.00E+00	6.44E+00
		Nb-95	<5.15E+00	0.00E+00	5.15E+00
		I-131	<1.17E+01	0.00E+00	1.17E+01
		Cs-134	<3.34E+00	0.00E+00	3.34E+00
		Cs-137	<4.24E+00	0.00E+00	4.24E+00
		BaLa-140	<8.31E+00	0.00E+00	8.31E+00
		Be-7	<3.66E+01	0.00E+00	3.66E+01
		K-40	<4.66E+01	0.00E+00	4.66E+01
522848	4/20/2020 - 5/18/2020	Mn-54	<2.62E+00	0.00E+00	2.62E+00
		Co-58	<3.14E+00	0.00E+00	3.14E+00
		Fe-59	<4.34E+00	0.00E+00	4.34E+00
		Co-60	<2.68E+00	0.00E+00	2.68E+00
		Zn-65	<4.38E+00	0.00E+00	4.38E+00
		Zr-95	<5.14E+00	0.00E+00	5.14E+00
		Nb-95	<3.91E+00	0.00E+00	3.91E+00
		I-131	<9.47E+00	0.00E+00	9.47E+00
		Cs-134	<2.83E+00	0.00E+00	2.83E+00
		Cs-137	<3.47E+00	0.00E+00	3.47E+00
		BaLa-140	<5.97E+00	0.00E+00	5.97E+00
		Be-7	<2.37E+01	0.00E+00	2.37E+01
		K-40	6.86E+01	2.87E+01	3.48E+01
524513	5/18/2020 - 6/15/2020	Mn-54	<4.02E+00	0.00E+00	4.02E+00
		Co-58	<3.73E+00	0.00E+00	3.73E+00
		Fe-59	<7.44E+00	0.00E+00	7.44E+00
		Co-60	<3.37E+00	0.00E+00	3.37E+00
		Zn-65	<7.33E+00	0.00E+00	7.33E+00
		Zr-95	<6.13E+00	0.00E+00	6.13E+00
		Nb-95	<4.46E+00	0.00E+00	4.46E+00
		I-131	<1.14E+01	0.00E+00	1.14E+01
		Cs-134	<4.12E+00	0.00E+00	4.12E+00
		Cs-137	<3.51E+00	0.00E+00	3.51E+00
		BaLa-140	<9.08E+00	0.00E+00	9.08E+00
		Be-7	<3.37E+01	0.00E+00	3.37E+01
		K-40	9.42E+01	3.91E+01	4.63E+01



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
522535	4/20/2020 - 7/13/2020	H3SW	1.90E+02	1.14E+02	1.85E+02
525830	6/15/2020 - 7/13/2020	Mn-54	<3.70E+00	0.00E+00	3.70E+00
		Co-58	<4.37E+00	0.00E+00	4.37E+00
		Fe-59	<8.95E+00	0.00E+00	8.95E+00
		Co-60	<3.44E+00	0.00E+00	3.44E+00
		Zn-65	<7.65E+00	0.00E+00	7.65E+00
		Zr-95	<7.99E+00	0.00E+00	7.99E+00
		Nb-95	<4.57E+00	0.00E+00	4.57E+00
		I-131	<1.19E+01	0.00E+00	1.19E+01
		Cs-134	<3.80E+00	0.00E+00	3.80E+00
		Cs-137	<4.29E+00	0.00E+00	4.29E+00
		BaLa-140	<9.27E+00	0.00E+00	9.27E+00
		Be-7	<3.98E+01	0.00E+00	3.98E+01
		K-40	4.93E+01	3.21E+01	4.40E+01
527098	7/13/2020 - 8/10/2020	Mn-54	<3.68E+00	0.00E+00	3.68E+00
		Co-58	<2.76E+00	0.00E+00	2.76E+00
		Fe-59	<5.90E+00	0.00E+00	5.90E+00
		Co-60	<3.18E+00	0.00E+00	3.18E+00
		Zn-65	<6.15E+00	0.00E+00	6.15E+00
		Zr-95	<6.59E+00	0.00E+00	6.59E+00
		Nb-95	<4.71E+00	0.00E+00	4.71E+00
		I-131	<1.15E+01	0.00E+00	1.15E+01
		Cs-134	<4.00E+00	0.00E+00	4.00E+00
		Cs-137	<3.49E+00	0.00E+00	3.49E+00
		BaLa-140	<8.05E+00	0.00E+00	8.05E+00
		Be-7	<3.22E+01	0.00E+00	3.22E+01
		K-40	8.86E+01	3.68E+01	4.58E+01
528922	8/10/2020 - 9/8/2020	Mn-54	<1.97E+00	0.00E+00	1.97E+00
		Co-58	<3.04E+00	0.00E+00	3.04E+00
		Fe-59	<6.07E+00	0.00E+00	6.07E+00
		Co-60	<2.85E+00	0.00E+00	2.85E+00
		Zn-65	<6.38E+00	0.00E+00	6.38E+00
		Zr-95	<6.30E+00	0.00E+00	6.30E+00
		Nb-95	<4.59E+00	0.00E+00	4.59E+00
		I-131	<1.20E+01	0.00E+00	1.20E+01
		Cs-134	<3.88E+00	0.00E+00	3.88E+00
		Cs-137	<4.21E+00	0.00E+00	4.21E+00
		BaLa-140	<8.43E+00	0.00E+00	8.43E+00
		Be-7	<2.40E+01	0.00E+00	2.40E+01
		K-40	9.21E+01	3.47E+01	3.71E+01
527300	7/13/2020 - 10/5/2020	H3SW	<1.30E+02	0.00E+00	1.96E+02
530695	9/8/2020 - 10/5/2020	Mn-54	<2.30E+00	0.00E+00	2.30E+00
		Co-58	<3.43E+00	0.00E+00	3.43E+00
		Fe-59	<6.89E+00	0.00E+00	6.89E+00
		Co-60	<2.47E+00	0.00E+00	2.47E+00
		Zn-65	<5.63E+00	0.00E+00	5.63E+00
		Zr-95	<6.35E+00	0.00E+00	6.35E+00
		Nb-95	<3.55E+00	0.00E+00	3.55E+00
		I-131	<1.13E+01	0.00E+00	1.13E+01
		Cs-134	<3.53E+00	0.00E+00	3.53E+00
		Cs-137	<2.81E+00	0.00E+00	2.81E+00
		BaLa-140	<8.36E+00	0.00E+00	8.36E+00
		Be-7	<2.68E+01	0.00E+00	2.68E+01
		K-40	7.58E+01	2.87E+01	3.14E+01
532604	10/5/2020 - 11/2/2020	Mn-54	<3.03E+00	0.00E+00	3.03E+00
		Co-58	<2.90E+00	0.00E+00	2.90E+00



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
532604	10/5/2020 - 11/2/2020	Fe-59	<5.15E+00	0.00E+00	5.15E+00
		Co-60	<3.16E+00	0.00E+00	3.16E+00
		Zn-65	<6.42E+00	0.00E+00	6.42E+00
		Zr-95	<6.47E+00	0.00E+00	6.47E+00
		Nb-95	<3.97E+00	0.00E+00	3.97E+00
		I-131	<1.19E+01	0.00E+00	1.19E+01
		Cs-134	<3.66E+00	0.00E+00	3.66E+00
		Cs-137	<3.51E+00	0.00E+00	3.51E+00
		BaLa-140	<5.80E+00	0.00E+00	5.80E+00
		Be-7	<2.79E+01	0.00E+00	2.79E+01
		K-40	3.59E+01	3.09E+01	4.79E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
534200	11/2/2020 - 11/30/2020	Mn-54	<3.53E+00	0.00E+00	3.53E+00
		Co-58	<3.41E+00	0.00E+00	3.41E+00
		Fe-59	<7.04E+00	0.00E+00	7.04E+00
		Co-60	<3.18E+00	0.00E+00	3.18E+00
		Zn-65	<5.46E+00	0.00E+00	5.46E+00
		Zr-95	<8.35E+00	0.00E+00	8.35E+00
		Nb-95	<3.96E+00	0.00E+00	3.96E+00
		I-131	<1.14E+01	0.00E+00	1.14E+01
		Cs-134	<3.68E+00	0.00E+00	3.68E+00
		Cs-137	<2.88E+00	0.00E+00	2.88E+00
		BaLa-140	<9.59E+00	0.00E+00	9.59E+00
		Be-7	<2.47E+01	0.00E+00	2.47E+01
		K-40	8.62E+01	4.25E+01	5.80E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
533295	10/5/2020 - 12/28/2020	H3SW	2.61E+02	1.20E+02	1.93E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
536314	11/30/2020 - 12/28/2020	Mn-54	<3.04E+00	0.00E+00	3.04E+00
		Co-58	<4.91E+00	0.00E+00	4.91E+00
		Fe-59	<9.42E+00	0.00E+00	9.42E+00
		Co-60	<4.39E+00	0.00E+00	4.39E+00
		Zn-65	<6.67E+00	0.00E+00	6.67E+00
		Zr-95	<7.51E+00	0.00E+00	7.51E+00
		Nb-95	<5.04E+00	0.00E+00	5.04E+00
		I-131	<1.17E+01	0.00E+00	1.17E+01
		Cs-134	<4.67E+00	0.00E+00	4.67E+00
		Cs-137	<3.69E+00	0.00E+00	3.69E+00
		BaLa-140	<6.97E+00	0.00E+00	6.97E+00
		Be-7	<2.61E+01	0.00E+00	2.61E+01
		K-40	<6.25E+01	0.00E+00	6.25E+01

## Sample Point 135 [ CONTROL - N @ 11.9 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
515726	12/30/2019 - 1/27/2020	Mn-54	<4.04E+00	0.00E+00	4.04E+00
		Co-58	<4.02E+00	0.00E+00	4.02E+00
		Fe-59	<8.30E+00	0.00E+00	8.30E+00
		Co-60	<4.02E+00	0.00E+00	4.02E+00
		Zn-65	<6.95E+00	0.00E+00	6.95E+00
		Zr-95	<4.72E+00	0.00E+00	4.72E+00
		Nb-95	<3.48E+00	0.00E+00	3.48E+00
		I-131	<1.16E+01	0.00E+00	1.16E+01
		Cs-134	<2.68E+00	0.00E+00	2.68E+00
		Cs-137	<2.75E+00	0.00E+00	2.75E+00
		BaLa-140	<9.99E+00	0.00E+00	9.99E+00
		Be-7	<2.71E+01	0.00E+00	2.71E+01
		K-40	<5.17E+01	0.00E+00	5.17E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
517245	1/27/2020 - 2/24/2020	Mn-54	<2.96E+00	0.00E+00	2.96E+00
		Co-58	<3.57E+00	0.00E+00	3.57E+00
		Fe-59	<6.30E+00	0.00E+00	6.30E+00
		Co-60	<3.02E+00	0.00E+00	3.02E+00
		Zn-65	<7.69E+00	0.00E+00	7.69E+00



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
517245	1/27/2020 - 2/24/2020	Zr-95	<6.34E+00	0.00E+00	6.34E+00
		Nb-95	<3.60E+00	0.00E+00	3.60E+00
		I-131	<1.13E+01	0.00E+00	1.13E+01
		Cs-134	<2.52E+00	0.00E+00	2.52E+00
		Cs-137	<3.04E+00	0.00E+00	3.04E+00
		BaLa-140	<6.42E+00	0.00E+00	6.42E+00
		Be-7	<2.65E+01	0.00E+00	2.65E+01
		K-40	5.07E+01	3.07E+01	4.36E+01
519415	2/24/2020 - 3/23/2020	Mn-54	<2.80E+00	0.00E+00	2.80E+00
		Co-58	<3.62E+00	0.00E+00	3.62E+00
		Fe-59	<5.54E+00	0.00E+00	5.54E+00
		Co-60	<3.14E+00	0.00E+00	3.14E+00
		Zn-65	<7.34E+00	0.00E+00	7.34E+00
		Zr-95	<6.75E+00	0.00E+00	6.75E+00
		Nb-95	<4.08E+00	0.00E+00	4.08E+00
		I-131	<1.17E+01	0.00E+00	1.17E+01
		Cs-134	<3.70E+00	0.00E+00	3.70E+00
		Cs-137	<3.24E+00	0.00E+00	3.24E+00
		BaLa-140	<8.36E+00	0.00E+00	8.36E+00
		Be-7	<2.81E+01	0.00E+00	2.81E+01
		K-40	2.53E+01	3.25E+01	5.35E+01
516444	12/30/2019 - 4/20/2020	H3SW	<5.57E+01	0.00E+00	1.78E+02
521281	3/23/2020 - 4/20/2020	Mn-54	<2.97E+00	0.00E+00	2.97E+00
		Co-58	<2.66E+00	0.00E+00	2.66E+00
		Fe-59	<6.12E+00	0.00E+00	6.12E+00
		Co-60	<2.97E+00	0.00E+00	2.97E+00
		Zn-65	<5.68E+00	0.00E+00	5.68E+00
		Zr-95	<5.87E+00	0.00E+00	5.87E+00
		Nb-95	<4.20E+00	0.00E+00	4.20E+00
		I-131	<1.05E+01	0.00E+00	1.05E+01
		Cs-134	<2.89E+00	0.00E+00	2.89E+00
		Cs-137	<3.10E+00	0.00E+00	3.10E+00
		BaLa-140	<5.84E+00	0.00E+00	5.84E+00
		Be-7	<2.68E+01	0.00E+00	2.68E+01
		K-40	1.04E+02	3.33E+01	3.68E+01
522849	4/20/2020 - 5/18/2020	Mn-54	<3.07E+00	0.00E+00	3.07E+00
		Co-58	<2.60E+00	0.00E+00	2.60E+00
		Fe-59	<5.44E+00	0.00E+00	5.44E+00
		Co-60	<2.65E+00	0.00E+00	2.65E+00
		Zn-65	<5.98E+00	0.00E+00	5.98E+00
		Zr-95	<4.44E+00	0.00E+00	4.44E+00
		Nb-95	<3.46E+00	0.00E+00	3.46E+00
		I-131	<7.94E+00	0.00E+00	7.94E+00
		Cs-134	<2.88E+00	0.00E+00	2.88E+00
		Cs-137	<2.73E+00	0.00E+00	2.73E+00
		BaLa-140	<4.78E+00	0.00E+00	4.78E+00
		Be-7	<2.28E+01	0.00E+00	2.28E+01
		K-40	<4.86E+01	0.00E+00	4.86E+01
		524514	5/18/2020 - 6/15/2020	Mn-54	<2.89E+00
Co-58	<2.83E+00			0.00E+00	2.83E+00
Fe-59	<6.96E+00			0.00E+00	6.96E+00
Co-60	<2.71E+00			0.00E+00	2.71E+00
Zn-65	<3.58E+00			0.00E+00	3.58E+00
Zr-95	<4.66E+00			0.00E+00	4.66E+00
Nb-95	<3.19E+00			0.00E+00	3.19E+00
I-131	<1.05E+01			0.00E+00	1.05E+01
Cs-134	<2.93E+00			0.00E+00	2.93E+00
Cs-137	<2.29E+00			0.00E+00	2.29E+00



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
524514	5/18/2020 - 6/15/2020	BaLa-140	<6.57E+00	0.00E+00	6.57E+00
		Be-7	<2.32E+01	0.00E+00	2.32E+01
		K-40	1.23E+01	2.37E+01	4.06E+01
522536	4/20/2020 - 7/13/2020	H3SW	<-2.6E+01	0.00E+00	1.86E+02
525831	6/15/2020 - 7/13/2020	Mn-54	<4.20E+00	0.00E+00	4.20E+00
		Co-58	<4.18E+00	0.00E+00	4.18E+00
		Fe-59	<9.26E+00	0.00E+00	9.26E+00
		Co-60	<4.39E+00	0.00E+00	4.39E+00
		Zn-65	<1.35E+01	0.00E+00	1.35E+01
		Zr-95	<7.42E+00	0.00E+00	7.42E+00
		Nb-95	<5.64E+00	0.00E+00	5.64E+00
		I-131	<1.16E+01	0.00E+00	1.16E+01
		Cs-134	<4.21E+00	0.00E+00	4.21E+00
		Cs-137	<4.09E+00	0.00E+00	4.09E+00
		BaLa-140	<1.17E+01	0.00E+00	1.17E+01
		Be-7	<3.82E+01	0.00E+00	3.82E+01
		K-40	<4.98E+01	0.00E+00	4.98E+01
527099	7/13/2020 - 8/10/2020	Mn-54	<3.56E+00	0.00E+00	3.56E+00
		Co-58	<3.93E+00	0.00E+00	3.93E+00
		Fe-59	<7.00E+00	0.00E+00	7.00E+00
		Co-60	<3.71E+00	0.00E+00	3.71E+00
		Zn-65	<6.59E+00	0.00E+00	6.59E+00
		Zr-95	<6.00E+00	0.00E+00	6.00E+00
		Nb-95	<4.46E+00	0.00E+00	4.46E+00
		I-131	<1.16E+01	0.00E+00	1.16E+01
		Cs-134	<3.41E+00	0.00E+00	3.41E+00
		Cs-137	<3.30E+00	0.00E+00	3.30E+00
		BaLa-140	<8.31E+00	0.00E+00	8.31E+00
		Be-7	<2.50E+01	0.00E+00	2.50E+01
		K-40	4.88E+01	3.64E+01	5.54E+01
528923	8/10/2020 - 8/8/2020	Mn-54	<2.71E+00	0.00E+00	2.71E+00
		Co-58	<3.18E+00	0.00E+00	3.18E+00
		Fe-59	<5.62E+00	0.00E+00	5.62E+00
		Co-60	<3.06E+00	0.00E+00	3.06E+00
		Zn-65	<5.87E+00	0.00E+00	5.87E+00
		Zr-95	<6.17E+00	0.00E+00	6.17E+00
		Nb-95	<3.68E+00	0.00E+00	3.68E+00
		I-131	<1.16E+01	0.00E+00	1.16E+01
		Cs-134	<3.08E+00	0.00E+00	3.08E+00
		Cs-137	<2.89E+00	0.00E+00	2.89E+00
		BaLa-140	<4.51E+00	0.00E+00	4.51E+00
		Be-7	<3.04E+01	0.00E+00	3.04E+01
		K-40	8.24E+01	3.43E+01	4.42E+01
527301	7/13/2020 - 10/5/2020	H3SW	<-3.6E+01	0.00E+00	1.96E+02
530696	9/8/2020 - 10/5/2020	Mn-54	<3.52E+00	0.00E+00	3.52E+00
		Co-58	<3.88E+00	0.00E+00	3.88E+00
		Fe-59	<8.57E+00	0.00E+00	8.57E+00
		Co-60	<2.90E+00	0.00E+00	2.90E+00
		Zn-65	<8.63E+00	0.00E+00	8.63E+00
		Zr-95	<4.94E+00	0.00E+00	4.94E+00
		Nb-95	<5.60E+00	0.00E+00	5.60E+00
		I-131	<1.19E+01	0.00E+00	1.19E+01
		Cs-134	<4.73E+00	0.00E+00	4.73E+00
		Cs-137	<3.00E+00	0.00E+00	3.00E+00
		BaLa-140	<8.75E+00	0.00E+00	8.75E+00
		Be-7	<3.42E+01	0.00E+00	3.42E+01



**MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
530696	9/8/2020 - 10/5/2020	K-40	<6.59E+01	0.00E+00	6.59E+01
532605	10/5/2020 - 11/2/2020	Mn-54	<3.43E+00	0.00E+00	3.43E+00
		Co-58	<3.57E+00	0.00E+00	3.57E+00
		Fe-59	<9.47E+00	0.00E+00	9.47E+00
		Co-60	<3.11E+00	0.00E+00	3.11E+00
		Zn-65	<5.73E+00	0.00E+00	5.73E+00
		Zr-95	<7.80E+00	0.00E+00	7.80E+00
		Nb-95	<4.47E+00	0.00E+00	4.47E+00
		I-131	<1.15E+01	0.00E+00	1.15E+01
		Cs-134	<4.02E+00	0.00E+00	4.02E+00
		Cs-137	<3.34E+00	0.00E+00	3.34E+00
		BaLa-140	<1.03E+01	0.00E+00	1.03E+01
		Be-7	<3.70E+01	0.00E+00	3.70E+01
		K-40	1.09E+02	3.78E+01	3.91E+01
534201	11/2/2020 - 11/30/2020	Mn-54	<2.87E+00	0.00E+00	2.87E+00
		Co-58	<2.74E+00	0.00E+00	2.74E+00
		Fe-59	<5.02E+00	0.00E+00	5.02E+00
		Co-60	<2.64E+00	0.00E+00	2.64E+00
		Zn-65	<5.35E+00	0.00E+00	5.35E+00
		Zr-95	<5.38E+00	0.00E+00	5.38E+00
		Nb-95	<3.75E+00	0.00E+00	3.75E+00
		I-131	<9.80E+00	0.00E+00	9.80E+00
		Cs-134	<2.92E+00	0.00E+00	2.92E+00
		Cs-137	<2.40E+00	0.00E+00	2.40E+00
		BaLa-140	<6.47E+00	0.00E+00	6.47E+00
		Be-7	<2.68E+01	0.00E+00	2.68E+01
		K-40	6.84E+01	2.92E+01	3.84E+01
533296	10/5/2020 - 12/28/2020	H3SW	<-3.9E+01	0.00E+00	1.94E+02
536315	11/30/2020 - 12/28/2020	Mn-54	<3.29E+00	0.00E+00	3.29E+00
		Co-58	<4.56E+00	0.00E+00	4.56E+00
		Fe-59	<6.87E+00	0.00E+00	6.87E+00
		Co-60	<4.80E+00	0.00E+00	4.80E+00
		Zn-65	<8.49E+00	0.00E+00	8.49E+00
		Zr-95	<4.20E+00	0.00E+00	4.20E+00
		Nb-95	<4.82E+00	0.00E+00	4.82E+00
		I-131	<1.18E+01	0.00E+00	1.18E+01
		Cs-134	<3.48E+00	0.00E+00	3.48E+00
		Cs-137	<4.08E+00	0.00E+00	4.08E+00
		BaLa-140	<1.05E+01	0.00E+00	1.05E+01
		Be-7	<3.47E+01	0.00E+00	3.47E+01
		K-40	<5.59E+01	0.00E+00	5.59E+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
518488	12/11/2019 - 3/11/2020	mR/Std Qtr	20.27
524225	3/11/2020 - 6/10/2020	mR/Std Qtr	16.02
529366	6/10/2020 - 9/15/2020	mR/Std Qtr	14.96
535532	9/15/2020 - 12/15/2020	mR/Std Qtr	16.66

Sample Point 144 [ INDICATOR - NNE @ 0.46 miles ]

TLD RING TLD\_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
518489	12/11/2019 - 3/11/2020	mR/Std Qtr	17.11





# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 144 [ INDICATOR - NNE @ 0.46 miles ]

TLD RING TLD\_INNER

Sample ID:	524226	Sample Dates:	3/11/2020 - 6/10/2020	Nuclide	Activity
				mR/Std Qtr	16.13
Sample ID:	529367	Sample Dates:	6/10/2020 - 9/16/2020	Nuclide	Activity
				mR/Std Qtr	12.78
Sample ID:	535533	Sample Dates:	9/16/2020 - 12/14/2020	Nuclide	Activity
				mR/Std Qtr	13.08

Sample Point 145 [ INDICATOR - NE @ 0.47 miles ]

TLD RING TLD\_INNER

Sample ID:	518490	Sample Dates:	12/11/2019 - 3/11/2020	Nuclide	Activity
				mR/Std Qtr	21.23
Sample ID:	524227	Sample Dates:	3/11/2020 - 6/10/2020	Nuclide	Activity
				mR/Std Qtr	14.93
Sample ID:	529368	Sample Dates:	6/10/2020 - 9/16/2020	Nuclide	Activity
				mR/Std Qtr	13.11
Sample ID:	535534	Sample Dates:	9/16/2020 - 12/14/2020	Nuclide	Activity
				mR/Std Qtr	16.48

Sample Point 146 [ INDICATOR - ENE @ 0.42 miles ]

TLD RING TLD\_INNER

Sample ID:	518491	Sample Dates:	12/11/2019 - 3/11/2020	Nuclide	Activity
				mR/Std Qtr	16.14
Sample ID:	524228	Sample Dates:	3/11/2020 - 6/10/2020	Nuclide	Activity
				mR/Std Qtr	15.87
Sample ID:	529369	Sample Dates:	6/10/2020 - 9/16/2020	Nuclide	Activity
				mR/Std Qtr	13.28
Sample ID:	535535	Sample Dates:	9/16/2020 - 12/14/2020	Nuclide	Activity
				mR/Std Qtr	15.32

Sample Point 147 [ INDICATOR - E @ 0.44 miles ]

TLD RING TLD\_INNER

Sample ID:	518492	Sample Dates:	12/11/2019 - 3/11/2020	Nuclide	Activity
				mR/Std Qtr	16.00
Sample ID:	524229	Sample Dates:	3/11/2020 - 6/10/2020	Nuclide	Activity
				mR/Std Qtr	15.12
Sample ID:	529370	Sample Dates:	6/10/2020 - 9/16/2020	Nuclide	Activity
				mR/Std Qtr	13.16
Sample ID:	535536	Sample Dates:	9/16/2020 - 12/14/2020	Nuclide	Activity
				mR/Std Qtr	13.42

Sample Point 148 [ INDICATOR - ESE @ 0.46 miles ]

TLD RING TLD\_INNER

Sample ID:	518493	Sample Dates:	12/11/2019 - 3/11/2020	Nuclide	Activity
				mR/Std Qtr	15.22
Sample ID:	524230	Sample Dates:	3/11/2020 - 6/10/2020	Nuclide	Activity
				mR/Std Qtr	13.26
Sample ID:	529371	Sample Dates:	6/10/2020 - 9/16/2020	Nuclide	Activity
				mR/Std Qtr	12.29
Sample ID:	535537	Sample Dates:	9/16/2020 - 12/14/2020	Nuclide	Activity
				mR/Std Qtr	11.09

Sample Point 149 [ INDICATOR - SE @ 0.5 miles ]

TLD RING TLD\_INNER

Sample ID:	518494	Sample Dates:	12/11/2019 - 3/11/2020	Nuclide	Activity
				mR/Std Qtr	13.62
Sample ID:	524231	Sample Dates:	3/11/2020 - 6/10/2020	Nuclide	Activity
				mR/Std Qtr	12.16
Sample ID:	529372	Sample Dates:	6/10/2020 - 9/16/2020	Nuclide	Activity
				mR/Std Qtr	11.40



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 149 [ INDICATOR - SE @ 0.5 miles ]

TLD RING TLD\_INNER

Sample ID:	535538	Sample Dates:	9/16/2020 - 12/14/2020	Nuclide	Activity
				mR/Std Qtr	11.45

Sample Point 151 [ INDICATOR - S @ 0.37 miles ]

TLD RING TLD\_INNER

Sample ID:	518495	Sample Dates:	12/11/2019 - 3/11/2020	Nuclide	Activity
				mR/Std Qtr	17.87
Sample ID:	524232	Sample Dates:	3/11/2020 - 6/10/2020	Nuclide	Activity
				mR/Std Qtr	15.67
Sample ID:	529373	Sample Dates:	6/10/2020 - 9/16/2020	Nuclide	Activity
				mR/Std Qtr	13.02
Sample ID:	535539	Sample Dates:	9/16/2020 - 12/14/2020	Nuclide	Activity
				mR/Std Qtr	14.57

Sample Point 152 [ INDICATOR - SSW @ 0.44 miles ]

TLD RING TLD\_INNER

Sample ID:	518496	Sample Dates:	12/11/2019 - 3/11/2020	Nuclide	Activity
				mR/Std Qtr	16.15
Sample ID:	524233	Sample Dates:	3/11/2020 - 6/10/2020	Nuclide	Activity
				mR/Std Qtr	14.18
Sample ID:	529374	Sample Dates:	6/10/2020 - 9/16/2020	Nuclide	Activity
				mR/Std Qtr	13.24

Sample Point 153 [ INDICATOR - SW @ 0.47 miles ]

TLD RING TLD\_INNER

Sample ID:	518497	Sample Dates:	12/11/2019 - 3/11/2020	Nuclide	Activity
				mR/Std Qtr	22.16
Sample ID:	524234	Sample Dates:	3/11/2020 - 6/10/2020	Nuclide	Activity
				mR/Std Qtr	18.32
Sample ID:	529375	Sample Dates:	6/10/2020 - 9/16/2020	Nuclide	Activity
				mR/Std Qtr	17.20
Sample ID:	535541	Sample Dates:	9/16/2020 - 12/14/2020	Nuclide	Activity
				mR/Std Qtr	18.05

Sample Point 154 [ INDICATOR - W @ 0.45 miles ]

TLD RING TLD\_INNER

Sample ID:	518498	Sample Dates:	12/11/2019 - 3/11/2020	Nuclide	Activity
				mR/Std Qtr	21.68
Sample ID:	524235	Sample Dates:	3/11/2020 - 6/10/2020	Nuclide	Activity
				mR/Std Qtr	18.49
Sample ID:	529376	Sample Dates:	6/10/2020 - 9/15/2020	Nuclide	Activity
				mR/Std Qtr	14.81
Sample ID:	535542	Sample Dates:	9/15/2020 - 12/15/2020	Nuclide	Activity
				mR/Std Qtr	16.25

Sample Point 156 [ INDICATOR - WNW @ 0.44 miles ]

TLD RING TLD\_INNER

Sample ID:	518499	Sample Dates:	12/11/2019 - 3/11/2020	Nuclide	Activity
				mR/Std Qtr	21.82
Sample ID:	524236	Sample Dates:	3/11/2020 - 6/10/2020	Nuclide	Activity
				mR/Std Qtr	17.99
Sample ID:	529377	Sample Dates:	6/10/2020 - 9/15/2020	Nuclide	Activity
				mR/Std Qtr	15.52
Sample ID:	535543	Sample Dates:	9/15/2020 - 12/15/2020	Nuclide	Activity
				mR/Std Qtr	15.31

Sample Point 157 [ INDICATOR - N @ 4.69 miles ]

TLD RING TLD\_OUTER

Sample ID:	518500	Sample Dates:	12/11/2019 - 3/11/2020	Nuclide	Activity
				mR/Std Qtr	18.71
Sample ID:	524237	Sample Dates:	3/11/2020 - 6/10/2020	Nuclide	Activity
				mR/Std Qtr	16.66



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 157 [ INDICATOR - N @ 4.69 miles ]

TLD RING TLD\_OUTER

Sample ID:	529378	Sample Dates:	6/10/2020 - 9/16/2020	Nuclide	Activity
				mR/Std Qtr	12.99
Sample ID:	535544	Sample Dates:	9/16/2020 - 12/15/2020	Nuclide	Activity
				mR/Std Qtr	15.77

Sample Point 158 [ INDICATOR - NNE @ 4.33 miles ]

TLD RING TLD\_OUTER

Sample ID:	518501	Sample Dates:	12/11/2019 - 3/11/2020	Nuclide	Activity
				mR/Std Qtr	18.16
Sample ID:	524238	Sample Dates:	3/11/2020 - 6/10/2020	Nuclide	Activity
				mR/Std Qtr	16.02
Sample ID:	529379	Sample Dates:	6/10/2020 - 9/16/2020	Nuclide	Activity
				mR/Std Qtr	11.91
Sample ID:	535545	Sample Dates:	9/16/2020 - 12/15/2020	Nuclide	Activity
				mR/Std Qtr	14.93

Sample Point 159 [ INDICATOR - NE @ 4.77 miles ]

TLD RING TLD\_OUTER

Sample ID:	518502	Sample Dates:	12/11/2019 - 3/11/2020	Nuclide	Activity
				mR/Std Qtr	18.57
Sample ID:	524239	Sample Dates:	3/11/2020 - 6/10/2020	Nuclide	Activity
				mR/Std Qtr	18.43
Sample ID:	529380	Sample Dates:	6/10/2020 - 9/16/2020	Nuclide	Activity
				mR/Std Qtr	15.06
Sample ID:	535546	Sample Dates:	9/16/2020 - 12/15/2020	Nuclide	Activity
				mR/Std Qtr	16.31

Sample Point 160 [ INDICATOR - ENE @ 4.89 miles ]

TLD RING TLD\_OUTER

Sample ID:	518503	Sample Dates:	12/11/2019 - 3/11/2020	Nuclide	Activity
				mR/Std Qtr	15.74
Sample ID:	524240	Sample Dates:	3/11/2020 - 6/10/2020	Nuclide	Activity
				mR/Std Qtr	15.52
Sample ID:	529381	Sample Dates:	6/10/2020 - 9/16/2020	Nuclide	Activity
				mR/Std Qtr	12.85
Sample ID:	535547	Sample Dates:	9/16/2020 - 12/15/2020	Nuclide	Activity
				mR/Std Qtr	15.25

Sample Point 161 [ INDICATOR - E @ 4.7 miles ]

TLD RING TLD\_OUTER

Sample ID:	518504	Sample Dates:	12/11/2019 - 3/11/2020	Nuclide	Activity
				mR/Std Qtr	17.76
Sample ID:	524241	Sample Dates:	3/11/2020 - 6/10/2020	Nuclide	Activity
				mR/Std Qtr	14.36
Sample ID:	529382	Sample Dates:	6/10/2020 - 9/16/2020	Nuclide	Activity
				mR/Std Qtr	12.28
Sample ID:	535548	Sample Dates:	9/16/2020 - 12/15/2020	Nuclide	Activity
				mR/Std Qtr	15.72

Sample Point 162 [ INDICATOR - ESE @ 4.53 miles ]

TLD RING TLD\_OUTER

Sample ID:	518505	Sample Dates:	12/11/2019 - 3/11/2020	Nuclide	Activity
				mR/Std Qtr	13.70
Sample ID:	524242	Sample Dates:	3/11/2020 - 6/10/2020	Nuclide	Activity
				mR/Std Qtr	12.61
Sample ID:	529383	Sample Dates:	6/10/2020 - 9/16/2020	Nuclide	Activity
				mR/Std Qtr	10.72
Sample ID:	535549	Sample Dates:	9/16/2020 - 12/15/2020	Nuclide	Activity
				mR/Std Qtr	11.09



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 163 [ INDICATOR - SE @ 4.94 miles ]

TLD RING TLD\_OUTER

Sample ID: 518506	Sample Dates: 12/11/2019 - 3/11/2020	Nuclide mR/Std Qtr	Activity 13.24
Sample ID: 524243	Sample Dates: 3/11/2020 - 6/10/2020	Nuclide mR/Std Qtr	Activity 11.58
Sample ID: 529384	Sample Dates: 6/10/2020 - 9/16/2020	Nuclide mR/Std Qtr	Activity 10.66
Sample ID: 535550	Sample Dates: 9/16/2020 - 12/15/2020	Nuclide mR/Std Qtr	Activity 10.92

Sample Point 164 [ INDICATOR - SSE @ 4.64 miles ]

TLD RING TLD\_OUTER

Sample ID: 518507	Sample Dates: 12/11/2019 - 3/11/2020	Nuclide mR/Std Qtr	Activity 11.77
Sample ID: 524244	Sample Dates: 3/11/2020 - 6/10/2020	Nuclide mR/Std Qtr	Activity 10.83
Sample ID: 529385	Sample Dates: 6/10/2020 - 9/16/2020	Nuclide mR/Std Qtr	Activity 9.75
Sample ID: 535551	Sample Dates: 9/16/2020 - 12/15/2020	Nuclide mR/Std Qtr	Activity 11.48

Sample Point 165 [ INDICATOR - S @ 4.57 miles ]

TLD RING TLD\_OUTER

Sample ID: 518508	Sample Dates: 12/11/2019 - 3/11/2020	Nuclide mR/Std Qtr	Activity 22.66
Sample ID: 524245	Sample Dates: 3/11/2020 - 6/10/2020	Nuclide mR/Std Qtr	Activity 18.97
Sample ID: 529386	Sample Dates: 6/10/2020 - 9/16/2020	Nuclide mR/Std Qtr	Activity 16.91
Sample ID: 535552	Sample Dates: 9/16/2020 - 12/15/2020	Nuclide mR/Std Qtr	Activity 20.73

Sample Point 166 [ INDICATOR - SSW @ 4.44 miles ]

TLD RING TLD\_OUTER

Sample ID: 518509	Sample Dates: 12/11/2019 - 3/11/2020	Nuclide mR/Std Qtr	Activity 19.33
Sample ID: 524246	Sample Dates: 3/11/2020 - 6/10/2020	Nuclide mR/Std Qtr	Activity 17.71
Sample ID: 529387	Sample Dates: 6/10/2020 - 9/16/2020	Nuclide mR/Std Qtr	Activity 16.10
Sample ID: 535553	Sample Dates: 9/16/2020 - 12/15/2020	Nuclide mR/Std Qtr	Activity 17.88

Sample Point 167 [ INDICATOR - SW @ 4.87 miles ]

TLD RING TLD\_OUTER

Sample ID: 518510	Sample Dates: 12/11/2019 - 3/11/2020	Nuclide mR/Std Qtr	Activity 22.07
Sample ID: 524247	Sample Dates: 3/11/2020 - 6/10/2020	Nuclide mR/Std Qtr	Activity 20.17
Sample ID: 529388	Sample Dates: 6/10/2020 - 9/14/2020	Nuclide mR/Std Qtr	Activity 17.33
Sample ID: 535554	Sample Dates: 9/14/2020 - 12/15/2020	Nuclide mR/Std Qtr	Activity 18.90

Sample Point 168 [ INDICATOR - WSW @ 4.6 miles ]

TLD RING TLD\_OUTER

Sample ID: 518511	Sample Dates: 12/11/2019 - 3/11/2020	Nuclide mR/Std Qtr	Activity 19.63
Sample ID: 524248	Sample Dates: 3/11/2020 - 6/10/2020	Nuclide mR/Std Qtr	Activity 17.54



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 168 [ INDICATOR - WSW @ 4.6 miles ]

TLD RING TLD\_OUTER

Sample ID: 529389	Sample Dates: 6/10/2020 - 9/14/2020	Nuclide mR/Std Qtr	Activity 16.16
Sample ID: 535555	Sample Dates: 9/14/2020 - 12/15/2020	Nuclide mR/Std Qtr	Activity 16.96

Sample Point 169 [ INDICATOR - W @ 4.03 miles ]

TLD RING TLD\_OUTER

Sample ID: 518512	Sample Dates: 12/11/2019 - 3/11/2020	Nuclide mR/Std Qtr	Activity 15.14
Sample ID: 524249	Sample Dates: 3/11/2020 - 6/10/2020	Nuclide mR/Std Qtr	Activity 14.41
Sample ID: 529390	Sample Dates: 6/10/2020 - 9/14/2020	Nuclide mR/Std Qtr	Activity 13.27
Sample ID: 535556	Sample Dates: 9/14/2020 - 12/15/2020	Nuclide mR/Std Qtr	Activity 13.28

Sample Point 170 [ INDICATOR - WNW @ 4.32 miles ]

TLD RING TLD\_OUTER

Sample ID: 518513	Sample Dates: 12/11/2019 - 3/11/2020	Nuclide mR/Std Qtr	Activity 30.22
Sample ID: 524250	Sample Dates: 3/11/2020 - 6/10/2020	Nuclide mR/Std Qtr	Activity 24.98
Sample ID: 529391	Sample Dates: 6/10/2020 - 9/14/2020	Nuclide mR/Std Qtr	Activity 22.62
Sample ID: 535557	Sample Dates: 9/14/2020 - 12/15/2020	Nuclide mR/Std Qtr	Activity 22.12

Sample Point 171 [ INDICATOR - NW @ 3.95 miles ]

TLD RING TLD\_OUTER

Sample ID: 518514	Sample Dates: 12/11/2019 - 3/11/2020	Nuclide mR/Std Qtr	Activity 24.66
Sample ID: 524251	Sample Dates: 3/11/2020 - 6/10/2020	Nuclide mR/Std Qtr	Activity 20.68
Sample ID: 529392	Sample Dates: 6/10/2020 - 9/16/2020	Nuclide mR/Std Qtr	Activity 17.97
Sample ID: 535558	Sample Dates: 9/16/2020 - 12/15/2020	Nuclide mR/Std Qtr	Activity 18.80

Sample Point 172 [ INDICATOR - NNW @ 4.69 miles ]

TLD RING TLD\_OUTER

Sample ID: 518515	Sample Dates: 12/11/2019 - 3/11/2020	Nuclide mR/Std Qtr	Activity 17.60
Sample ID: 524252	Sample Dates: 3/11/2020 - 6/10/2020	Nuclide mR/Std Qtr	Activity 15.84
Sample ID: 529393	Sample Dates: 6/10/2020 - 9/16/2020	Nuclide mR/Std Qtr	Activity 13.60
Sample ID: 535559	Sample Dates: 9/16/2020 - 12/15/2020	Nuclide mR/Std Qtr	Activity 15.29

Sample Point 173 [ INDICATOR - NNW @ 8.39 miles ]

TLD RING TLD\_SPEC

Sample ID: 518516	Sample Dates: 12/11/2019 - 3/11/2020	Nuclide mR/Std Qtr	Activity 28.31
Sample ID: 524253	Sample Dates: 3/11/2020 - 6/10/2020	Nuclide mR/Std Qtr	Activity 22.82
Sample ID: 529394	Sample Dates: 6/10/2020 - 9/16/2020	Nuclide mR/Std Qtr	Activity 22.06
Sample ID: 535560	Sample Dates: 9/16/2020 - 12/15/2020	Nuclide mR/Std Qtr	Activity 22.28



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 174 [ INDICATOR - WNW @ 8.85 miles ]

TLD RING TLD\_SPEC

Sample ID: 518517	Sample Dates: 12/11/2019 - 3/11/2020	Nuclide mR/Std Qtr	Activity 27.68
Sample ID: 524254	Sample Dates: 3/11/2020 - 6/10/2020	Nuclide mR/Std Qtr	Activity 25.23
Sample ID: 529395	Sample Dates: 6/10/2020 - 9/14/2020	Nuclide mR/Std Qtr	Activity 21.07
Sample ID: 535561	Sample Dates: 9/14/2020 - 12/15/2020	Nuclide mR/Std Qtr	Activity 23.00

Sample Point 175 [ CONTROL - WNW @ 15.5 miles ]

TLD RING TLD\_CTRL

Sample ID: 518518	Sample Dates: 12/11/2019 - 3/11/2020	Nuclide mR/Std Qtr	Activity 26.41
Sample ID: 524255	Sample Dates: 3/11/2020 - 6/10/2020	Nuclide mR/Std Qtr	Activity 22.55
Sample ID: 529396	Sample Dates: 6/10/2020 - 9/14/2020	Nuclide mR/Std Qtr	Activity 20.00
Sample ID: 535562	Sample Dates: 9/14/2020 - 12/15/2020	Nuclide mR/Std Qtr	Activity 21.19

Sample Point 177 [ INDICATOR - S @ 8.77 miles ]

TLD RING TLD\_SPEC

Sample ID: 518519	Sample Dates: 12/11/2019 - 3/11/2020	Nuclide mR/Std Qtr	Activity 15.56
Sample ID: 524256	Sample Dates: 3/11/2020 - 6/10/2020	Nuclide mR/Std Qtr	Activity 14.04
Sample ID: 529397	Sample Dates: 6/10/2020 - 9/14/2020	Nuclide mR/Std Qtr	Activity 12.32
Sample ID: 535563	Sample Dates: 9/14/2020 - 12/15/2020	Nuclide mR/Std Qtr	Activity 11.85

Sample Point 178 [ INDICATOR - SE @ 9.36 miles ]

TLD RING TLD\_SPEC

Sample ID: 518520	Sample Dates: 12/11/2019 - 3/11/2020	Nuclide mR/Std Qtr	Activity 20.14
Sample ID: 524257	Sample Dates: 3/11/2020 - 6/10/2020	Nuclide mR/Std Qtr	Activity 15.37
Sample ID: 529398	Sample Dates: 6/10/2020 - 9/16/2020	Nuclide mR/Std Qtr	Activity 13.69
Sample ID: 535564	Sample Dates: 9/16/2020 - 12/15/2020	Nuclide mR/Std Qtr	Activity 13.07

Sample Point 180 [ INDICATOR - NNE @ 12.7 miles ]

TLD RING TLD\_SPEC

Sample ID: 518521	Sample Dates: 12/11/2019 - 3/11/2020	Nuclide mR/Std Qtr	Activity 25.81
Sample ID: 524258	Sample Dates: 3/11/2020 - 6/10/2020	Nuclide mR/Std Qtr	Activity 26.56
Sample ID: 529399	Sample Dates: 6/10/2020 - 9/16/2020	Nuclide mR/Std Qtr	Activity 22.60
Sample ID: 535565	Sample Dates: 9/16/2020 - 12/15/2020	Nuclide mR/Std Qtr	Activity 23.96

Sample Point 181 [ INDICATOR - NE @ 7.02 miles ]

TLD RING TLD\_SPEC

Sample ID: 518522	Sample Dates: 12/11/2019 - 3/11/2020	Nuclide mR/Std Qtr	Activity 18.16
Sample ID: 524259	Sample Dates: 3/11/2020 - 6/10/2020	Nuclide mR/Std Qtr	Activity 17.12



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 181 [ INDICATOR - NE @ 7.02 miles ]

TLD RING TLD\_SPEC

Sample ID:	529400	Sample Dates:	6/10/2020 - 9/16/2020	Nuclide	Activity
				mR/Std Qtr	14.5
Sample ID:	535566	Sample Dates:	9/16/2020 - 12/15/2020	Nuclide	Activity
				mR/Std Qtr	15.92

Sample Point 182 [ INDICATOR - ENE @ 6.23 miles ]

TLD RING TLD\_SPEC

Sample ID:	518523	Sample Dates:	12/11/2019 - 3/11/2020	Nuclide	Activity
				mR/Std Qtr	20.35
Sample ID:	524260	Sample Dates:	3/11/2020 - 6/10/2020	Nuclide	Activity
				mR/Std Qtr	19.08
Sample ID:	529401	Sample Dates:	6/10/2020 - 9/16/2020	Nuclide	Activity
				mR/Std Qtr	16.2
Sample ID:	535567	Sample Dates:	9/16/2020 - 12/15/2020	Nuclide	Activity
				mR/Std Qtr	17.92

Sample Point 186 [ INDICATOR - NNW @ 0.24 miles ]

TLD RING TLD\_SPEC

Sample ID:	518524	Sample Dates:	12/11/2019 - 3/11/2020	Nuclide	Activity
				mR/Std Qtr	17.25
Sample ID:	524261	Sample Dates:	3/11/2020 - 6/10/2020	Nuclide	Activity
				mR/Std Qtr	17.57
Sample ID:	529402	Sample Dates:	6/10/2020 - 9/15/2020	Nuclide	Activity
				mR/Std Qtr	14.57
Sample ID:	535568	Sample Dates:	9/15/2020 - 12/15/2020	Nuclide	Activity
				mR/Std Qtr	15.94

Sample Point 187 [ INDICATOR - N @ 0.19 miles ]

TLD RING TLD\_SPEC

Sample ID:	518525	Sample Dates:	12/11/2019 - 3/11/2020	Nuclide	Activity
				mR/Std Qtr	21.12
Sample ID:	524262	Sample Dates:	3/11/2020 - 6/10/2020	Nuclide	Activity
				mR/Std Qtr	16.78
Sample ID:	529403	Sample Dates:	6/10/2020 - 9/16/2020	Nuclide	Activity
				mR/Std Qtr	15.23
Sample ID:	535569	Sample Dates:	9/16/2020 - 12/14/2020	Nuclide	Activity
				mR/Std Qtr	15.07

Sample Point 189 [ INDICATOR - SSE @ 0.43 miles ]

TLD RING TLD\_INNER

Sample ID:	518526	Sample Dates:	12/11/2019 - 3/11/2020	Nuclide	Activity
				mR/Std Qtr	15.06
Sample ID:	524263	Sample Dates:	3/11/2020 - 6/10/2020	Nuclide	Activity
				mR/Std Qtr	15.05
Sample ID:	529404	Sample Dates:	6/10/2020 - 9/16/2020	Nuclide	Activity
				mR/Std Qtr	13.67
Sample ID:	535570	Sample Dates:	9/16/2020 - 12/14/2020	Nuclide	Activity
				mR/Std Qtr	15.74

Sample Point 190 [ INDICATOR - WSW @ 0.37 miles ]

TLD RING TLD\_INNER

Sample ID:	518527	Sample Dates:	12/11/2019 - 3/11/2020	Nuclide	Activity
				mR/Std Qtr	20.43
Sample ID:	524264	Sample Dates:	3/11/2020 - 6/10/2020	Nuclide	Activity
				mR/Std Qtr	18.29
Sample ID:	529405	Sample Dates:	6/10/2020 - 9/16/2020	Nuclide	Activity
				mR/Std Qtr	18.09
Sample ID:	535571	Sample Dates:	9/16/2020 - 12/14/2020	Nuclide	Activity
				mR/Std Qtr	18.93



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
518528	12/11/2019 - 3/11/2020	mR/Std Qtr	19.42
524265	3/11/2020 - 6/10/2020	mR/Std Qtr	16.52
529406	6/10/2020 - 9/16/2020	mR/Std Qtr	14.20
535572	9/16/2020 - 12/15/2020	mR/Std Qtr	16.89

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
515270	1/6/2020 - 1/6/2020	MIXEDBLV	Mn-54	<2.71E+01	0.00E+00	2.71E+01
			Co-58	<2.54E+01	0.00E+00	2.54E+01
			Fe-59	<4.42E+01	0.00E+00	4.42E+01
			Co-60	<2.16E+01	0.00E+00	2.16E+01
			Zn-65	<5.46E+01	0.00E+00	5.46E+01
			Zr-95	<3.88E+01	0.00E+00	3.88E+01
			Nb-95	<2.84E+01	0.00E+00	2.84E+01
			I-131	<2.23E+01	0.00E+00	2.23E+01
			Cs-134	<2.91E+01	0.00E+00	2.91E+01
			Cs-137	<1.64E+01	0.00E+00	1.64E+01
			BaLa-140	<2.38E+01	0.00E+00	2.38E+01
			Be-7	2.43E+03	3.58E+02	2.95E+02
			K-40	3.99E+03	5.97E+02	3.34E+02
			516518	2/3/2020 - 2/3/2020	MIXEDBLV	Mn-54
Co-58	<2.34E+01	0.00E+00				2.34E+01
Fe-59	<4.72E+01	0.00E+00				4.72E+01
Co-60	<2.39E+01	0.00E+00				2.39E+01
Zn-65	<7.35E+01	0.00E+00				7.35E+01
Zr-95	<3.45E+01	0.00E+00				3.45E+01
Nb-95	<2.22E+01	0.00E+00				2.22E+01
I-131	<2.17E+01	0.00E+00				2.17E+01
Cs-134	<2.77E+01	0.00E+00				2.77E+01
Cs-137	<2.21E+01	0.00E+00				2.21E+01
BaLa-140	<2.31E+01	0.00E+00				2.31E+01
Be-7	7.88E+02	2.14E+02				2.46E+02
K-40	5.15E+03	7.41E+02				4.10E+02
518720	3/2/2020 - 3/2/2020	MIXEDBLV				Mn-54
			Co-58	<2.79E+01	0.00E+00	2.79E+01
			Fe-59	<6.75E+01	0.00E+00	6.75E+01
			Co-60	<3.58E+01	0.00E+00	3.58E+01
			Zn-65	<6.35E+01	0.00E+00	6.35E+01
			Zr-95	<6.11E+01	0.00E+00	6.11E+01
			Nb-95	<3.28E+01	0.00E+00	3.28E+01
			I-131	<4.80E+01	0.00E+00	4.80E+01
			Cs-134	<3.92E+01	0.00E+00	3.92E+01
			Cs-137	<2.82E+01	0.00E+00	2.82E+01
			BaLa-140	<5.20E+01	0.00E+00	5.20E+01
			Be-7	2.14E+03	4.38E+02	4.78E+02
			K-40	4.34E+03	7.39E+02	5.26E+02
			520814	4/6/2020 - 4/6/2020	MIXEDBLV	Mn-54
Co-58	<1.34E+01	0.00E+00				1.34E+01
Fe-59	<2.42E+01	0.00E+00				2.42E+01
Co-60	<1.47E+01	0.00E+00				1.47E+01
Zn-65	<2.61E+01	0.00E+00				2.61E+01
Zr-95	<2.18E+01	0.00E+00				2.18E+01
Nb-95	<1.36E+01	0.00E+00				1.36E+01
I-131	<1.22E+01	0.00E+00				1.22E+01
Cs-134	<1.36E+01	0.00E+00				1.36E+01





# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
520814	4/6/2020 - 4/6/2020	MIXEDBLV	Cs-137	<1.29E+01	0.00E+00	1.29E+01
			BaLa-140	<1.36E+01	0.00E+00	1.36E+01
			Be-7	4.06E+02	1.18E+02	1.56E+02
			K-40	4.50E+03	5.09E+02	2.15E+02
522605	5/4/2020 - 5/4/2020	MIXEDBLV	Mn-54	<1.47E+01	0.00E+00	1.47E+01
			Co-58	<1.38E+01	0.00E+00	1.38E+01
			Fe-59	<2.50E+01	0.00E+00	2.50E+01
			Co-60	<1.54E+01	0.00E+00	1.54E+01
			Zn-65	<3.15E+01	0.00E+00	3.15E+01
			Zr-95	<2.35E+01	0.00E+00	2.35E+01
			Nb-95	<1.43E+01	0.00E+00	1.43E+01
			I-131	<1.25E+01	0.00E+00	1.25E+01
			Cs-134	<1.88E+01	0.00E+00	1.88E+01
			Cs-137	<1.35E+01	0.00E+00	1.35E+01
			BaLa-140	<1.58E+01	0.00E+00	1.58E+01
			Be-7	9.30E+02	1.60E+02	1.67E+02
			K-40	4.76E+03	5.22E+02	2.55E+02
			524450	6/1/2020 - 6/1/2020	MIXEDBLV	Mn-54
Co-58	<3.90E+01	0.00E+00				3.90E+01
Fe-59	<6.28E+01	0.00E+00				6.28E+01
Co-60	<3.95E+01	0.00E+00				3.95E+01
Zn-65	<7.39E+01	0.00E+00				7.39E+01
Zr-95	<5.87E+01	0.00E+00				5.87E+01
Nb-95	<3.85E+01	0.00E+00				3.85E+01
I-131	<2.76E+01	0.00E+00				2.76E+01
Cs-134	<4.22E+01	0.00E+00				4.22E+01
Cs-137	<4.46E+01	0.00E+00				4.46E+01
BaLa-140	<3.76E+01	0.00E+00				3.76E+01
Be-7	1.92E+03	4.13E+02				4.62E+02
K-40	5.31E+03	8.47E+02				4.99E+02
525960	7/6/2020 - 7/6/2020	MIXEDBLV				Mn-54
			Co-58	<1.18E+01	0.00E+00	1.18E+01
			Fe-59	<2.43E+01	0.00E+00	2.43E+01
			Co-60	<1.15E+01	0.00E+00	1.15E+01
			Zn-65	<2.62E+01	0.00E+00	2.62E+01
			Zr-95	<1.35E+01	0.00E+00	1.35E+01
			Nb-95	<1.19E+01	0.00E+00	1.19E+01
			I-131	<1.09E+01	0.00E+00	1.09E+01
			Cs-134	<1.40E+01	0.00E+00	1.40E+01
			Cs-137	<1.02E+01	0.00E+00	1.02E+01
			BaLa-140	<1.17E+01	0.00E+00	1.17E+01
			Be-7	6.23E+02	1.16E+02	1.13E+02
			K-40	5.63E+03	5.92E+02	1.47E+02
			527376	8/3/2020 - 8/3/2020	MIXEDBLV	Mn-54
Co-58	<1.22E+01	0.00E+00				1.22E+01
Fe-59	<2.63E+01	0.00E+00				2.63E+01
Co-60	<1.22E+01	0.00E+00				1.22E+01
Zn-65	<2.50E+01	0.00E+00				2.50E+01
Zr-95	<2.03E+01	0.00E+00				2.03E+01
Nb-95	<1.22E+01	0.00E+00				1.22E+01
I-131	<9.85E+00	0.00E+00				9.85E+00
Cs-134	<1.37E+01	0.00E+00				1.37E+01
Cs-137	<1.27E+01	0.00E+00				1.27E+01
BaLa-140	<1.26E+01	0.00E+00				1.26E+01
Be-7	5.74E+02	1.16E+02				1.28E+02
K-40	6.07E+03	6.17E+02				1.62E+02
530036	9/8/2020 - 9/8/2020	MIXEDBLV				Mn-54
			Co-58	<1.52E+01	0.00E+00	1.52E+01



**MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
530036	9/8/2020 - 9/8/2020	MIXEDBLV	Fe-59	<2.28E+01	0.00E+00	2.28E+01
			Co-60	<1.35E+01	0.00E+00	1.35E+01
			Zn-65	<2.95E+01	0.00E+00	2.95E+01
			Zr-95	<2.54E+01	0.00E+00	2.54E+01
			Nb-95	<1.45E+01	0.00E+00	1.45E+01
			I-131	<1.39E+01	0.00E+00	1.39E+01
			Cs-134	<2.00E+01	0.00E+00	2.00E+01
			Cs-137	<1.71E+01	0.00E+00	1.71E+01
			BaLa-140	<1.63E+01	0.00E+00	1.63E+01
			Be-7	1.31E+03	2.05E+02	1.89E+02
			K-40	2.80E+03	3.85E+02	1.99E+02

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
531717	10/5/2020 - 10/5/2020	MIXEDBLV	Mn-54	<1.49E+01	0.00E+00	1.49E+01
			Co-58	<1.42E+01	0.00E+00	1.42E+01
			Fe-59	<2.82E+01	0.00E+00	2.82E+01
			Co-60	<1.54E+01	0.00E+00	1.54E+01
			Zn-65	<3.02E+01	0.00E+00	3.02E+01
			Zr-95	<3.06E+01	0.00E+00	3.06E+01
			Nb-95	<1.55E+01	0.00E+00	1.55E+01
			I-131	<2.22E+01	0.00E+00	2.22E+01
			Cs-134	<1.85E+01	0.00E+00	1.85E+01
			Cs-137	<1.32E+01	0.00E+00	1.32E+01
			BaLa-140	<1.76E+01	0.00E+00	1.76E+01
			Be-7	1.50E+03	2.25E+02	1.99E+02
			K-40	3.19E+03	4.24E+02	2.19E+02

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
533377	11/2/2020 - 11/2/2020	MIXEDBLV	Mn-54	<1.73E+01	0.00E+00	1.73E+01
			Co-58	<1.59E+01	0.00E+00	1.59E+01
			Fe-59	<3.53E+01	0.00E+00	3.53E+01
			Co-60	<1.93E+01	0.00E+00	1.93E+01
			Zn-65	<4.37E+01	0.00E+00	4.37E+01
			Zr-95	<2.91E+01	0.00E+00	2.91E+01
			Nb-95	<1.86E+01	0.00E+00	1.86E+01
			I-131	<1.65E+01	0.00E+00	1.65E+01
			Cs-134	<1.94E+01	0.00E+00	1.94E+01
			Cs-137	<1.91E+01	0.00E+00	1.91E+01
			BaLa-140	<1.48E+01	0.00E+00	1.48E+01
			Be-7	1.74E+03	2.56E+02	1.77E+02
			K-40	4.20E+03	5.65E+02	2.90E+02

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
535931	12/7/2020 - 12/7/2020	MIXEDBLV	Mn-54	<1.58E+01	0.00E+00	1.58E+01
			Co-58	<1.33E+01	0.00E+00	1.33E+01
			Fe-59	<2.87E+01	0.00E+00	2.87E+01
			Co-60	<1.56E+01	0.00E+00	1.56E+01
			Zn-65	<2.99E+01	0.00E+00	2.99E+01
			Zr-95	<2.58E+01	0.00E+00	2.58E+01
			Nb-95	<1.33E+01	0.00E+00	1.33E+01
			I-131	<1.07E+01	0.00E+00	1.07E+01
			Cs-134	<2.85E+01	0.00E+00	2.85E+01
			Cs-137	<1.25E+01	0.00E+00	1.25E+01
			BaLa-140	<1.47E+01	0.00E+00	1.47E+01
			Be-7	1.10E+03	1.87E+02	1.74E+02
			K-40	4.93E+03	5.76E+02	2.07E+02

Sample Point 120 [ INDICATOR - NNE @ 0.46 miles ]

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
515271	1/6/2020 - 1/6/2020	MIXEDBLV	Mn-54	<2.28E+01	0.00E+00	2.28E+01
			Co-58	<3.14E+01	0.00E+00	3.14E+01
			Fe-59	<4.13E+01	0.00E+00	4.13E+01
			Co-60	<2.74E+01	0.00E+00	2.74E+01
			Zn-65	<4.19E+01	0.00E+00	4.19E+01
			Zr-95	<4.23E+01	0.00E+00	4.23E+01
			Nb-95	<3.05E+01	0.00E+00	3.05E+01
			I-131	<2.38E+01	0.00E+00	2.38E+01



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
515271	1/6/2020 - 1/6/2020	MIXEDBLV	Cs-134	<3.19E+01	0.00E+00	3.19E+01
			Cs-137	<3.05E+01	0.00E+00	3.05E+01
			BaLa-140	<2.65E+01	0.00E+00	2.65E+01
			Be-7	9.38E+02	2.55E+02	3.20E+02
			K-40	4.66E+03	7.03E+02	4.82E+02
516519	2/3/2020 - 2/3/2020	MIXEDBLV	Mn-54	<2.28E+01	0.00E+00	2.28E+01
			Co-58	<2.13E+01	0.00E+00	2.13E+01
			Fe-59	<3.72E+01	0.00E+00	3.72E+01
			Co-60	<2.36E+01	0.00E+00	2.36E+01
			Zn-65	<4.75E+01	0.00E+00	4.75E+01
			Zr-95	<3.40E+01	0.00E+00	3.40E+01
			Nb-95	<2.22E+01	0.00E+00	2.22E+01
			I-131	<2.20E+01	0.00E+00	2.20E+01
			Cs-134	<2.35E+01	0.00E+00	2.35E+01
			Cs-137	<1.98E+01	0.00E+00	1.98E+01
			BaLa-140	<1.97E+01	0.00E+00	1.97E+01
			Be-7	1.24E+03	1.42E+02	1.84E+02
			K-40	4.47E+03	6.26E+02	3.84E+02
518721	3/2/2020 - 3/2/2020	MIXEDBLV	Mn-54	<1.82E+01	0.00E+00	1.82E+01
			Co-58	<1.54E+01	0.00E+00	1.54E+01
			Fe-59	<3.78E+01	0.00E+00	3.78E+01
			Co-60	<1.34E+01	0.00E+00	1.34E+01
			Zn-65	<3.11E+01	0.00E+00	3.11E+01
			Zr-95	<3.35E+01	0.00E+00	3.35E+01
			Nb-95	<1.70E+01	0.00E+00	1.70E+01
			I-131	<2.93E+01	0.00E+00	2.93E+01
			Cs-134	<2.19E+01	0.00E+00	2.19E+01
			Cs-137	<1.72E+01	0.00E+00	1.72E+01
			BaLa-140	<2.39E+01	0.00E+00	2.39E+01
			Be-7	8.36E+02	1.94E+02	2.41E+02
			K-40	5.14E+03	5.91E+02	2.20E+02
520815	4/6/2020 - 4/6/2020	MIXEDBLV	Mn-54	<2.35E+01	0.00E+00	2.35E+01
			Co-58	<1.93E+01	0.00E+00	1.93E+01
			Fe-59	<3.50E+01	0.00E+00	3.50E+01
			Co-60	<2.47E+01	0.00E+00	2.47E+01
			Zn-65	<5.47E+01	0.00E+00	5.47E+01
			Zr-95	<4.02E+01	0.00E+00	4.02E+01
			Nb-95	<2.15E+01	0.00E+00	2.15E+01
			I-131	<2.06E+01	0.00E+00	2.06E+01
			Cs-134	<2.42E+01	0.00E+00	2.42E+01
			Cs-137	<2.89E+01	0.00E+00	2.89E+01
			BaLa-140	<2.23E+01	0.00E+00	2.23E+01
			Be-7	3.82E+02	1.82E+02	2.54E+02
			K-40	3.43E+03	6.10E+02	3.42E+02
522606	5/4/2020 - 5/4/2020	MIXEDBLV	Mn-54	<1.91E+01	0.00E+00	1.91E+01
			Co-58	<1.78E+01	0.00E+00	1.78E+01
			Fe-59	<3.79E+01	0.00E+00	3.79E+01
			Co-60	<2.08E+01	0.00E+00	2.08E+01
			Zn-65	<4.07E+01	0.00E+00	4.07E+01
			Zr-95	<2.19E+01	0.00E+00	2.19E+01
			Nb-95	<1.88E+01	0.00E+00	1.88E+01
			I-131	<1.56E+01	0.00E+00	1.56E+01
			Cs-134	<2.18E+01	0.00E+00	2.18E+01
			Cs-137	<1.82E+01	0.00E+00	1.82E+01
			BaLa-140	<1.63E+01	0.00E+00	1.63E+01
			Be-7	3.86E+02	1.43E+02	1.96E+02
			K-40	3.88E+03	5.22E+02	1.85E+02
524451	6/1/2020 - 6/1/2020	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
			Mn-54	<3.33E+01	0.00E+00	3.33E+01



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
524451	6/1/2020 - 6/1/2020	MIXEDBLV	Co-58	<2.69E+01	0.00E+00	2.69E+01
			Fe-59	<3.97E+01	0.00E+00	3.97E+01
			Co-60	<3.30E+01	0.00E+00	3.30E+01
			Zn-65	<6.00E+01	0.00E+00	6.00E+01
			Zr-95	<4.36E+01	0.00E+00	4.36E+01
			Nb-95	<2.41E+01	0.00E+00	2.41E+01
			I-131	<2.49E+01	0.00E+00	2.49E+01
			Cs-134	<3.16E+01	0.00E+00	3.17E+01
			Cs-137	<2.73E+01	0.00E+00	2.73E+01
			BaLa-140	<3.43E+01	0.00E+00	3.43E+01
			Be-7	9.24E+02	2.71E+02	3.36E+02
			K-40	2.46E+03	5.09E+02	2.97E+02
			525961	7/6/2020 - 7/6/2020	MIXEDBLV	Mn-54
Co-58	<1.51E+01	0.00E+00				1.51E+01
Fe-59	<3.38E+01	0.00E+00				3.38E+01
Co-60	<2.38E+01	0.00E+00				2.38E+01
Zn-65	<3.90E+01	0.00E+00				3.90E+01
Zr-95	<3.27E+01	0.00E+00				3.27E+01
Nb-95	<1.94E+01	0.00E+00				1.94E+01
I-131	<1.64E+01	0.00E+00				1.64E+01
Cs-134	<2.53E+01	0.00E+00				2.53E+01
Cs-137	<1.92E+01	0.00E+00				1.92E+01
BaLa-140	<1.69E+01	0.00E+00				1.69E+01
Be-7	1.48E+03	2.38E+02				1.99E+02
K-40	3.73E+03	4.95E+02				1.79E+02
527377	8/3/2020 - 8/3/2020	MIXEDBLV	Mn-54	<1.75E+01	0.00E+00	1.75E+01
			Co-58	<1.78E+01	0.00E+00	1.78E+01
			Fe-59	<2.89E+01	0.00E+00	2.89E+01
			Co-60	<2.06E+01	0.00E+00	2.06E+01
			Zn-65	<3.83E+01	0.00E+00	3.83E+01
			Zr-95	<2.83E+01	0.00E+00	2.83E+01
			Nb-95	<1.83E+01	0.00E+00	1.83E+01
			I-131	<1.52E+01	0.00E+00	1.52E+01
			Cs-134	<2.16E+01	0.00E+00	2.16E+01
			Cs-137	<1.83E+01	0.00E+00	1.83E+01
			BaLa-140	<1.99E+01	0.00E+00	1.99E+01
			Be-7	1.46E+03	2.30E+02	1.74E+02
			K-40	3.29E+03	4.85E+02	2.89E+02
530037	9/8/2020 - 9/8/2020	MIXEDBLV	Mn-54	<1.81E+01	0.00E+00	1.81E+01
			Co-58	<1.73E+01	0.00E+00	1.73E+01
			Fe-59	<3.64E+01	0.00E+00	3.64E+01
			Co-60	<1.69E+01	0.00E+00	1.69E+01
			Zn-65	<3.95E+01	0.00E+00	3.95E+01
			Zr-95	<2.92E+01	0.00E+00	2.92E+01
			Nb-95	<2.07E+01	0.00E+00	2.07E+01
			I-131	<2.04E+01	0.00E+00	2.04E+01
			Cs-134	<3.06E+01	0.00E+00	3.06E+01
			Cs-137	<2.24E+01	0.00E+00	2.24E+01
			BaLa-140	<1.59E+01	0.00E+00	1.59E+01
			Be-7	2.32E+03	3.26E+02	2.39E+02
			K-40	3.37E+03	5.09E+02	3.32E+02
531718	10/5/2020 - 10/5/2020	MIXEDBLV	Mn-54	<1.39E+01	0.00E+00	1.39E+01
			Co-58	<1.30E+01	0.00E+00	1.30E+01
			Fe-59	<3.44E+01	0.00E+00	3.44E+01
			Co-60	<1.02E+01	0.00E+00	1.02E+01
			Zn-65	<3.45E+01	0.00E+00	3.45E+01
			Zr-95	<2.27E+01	0.00E+00	2.27E+01
			Nb-95	<1.85E+01	0.00E+00	1.85E+01
			I-131	<2.31E+01	0.00E+00	2.31E+01
			Cs-134	<1.93E+01	0.00E+00	1.93E+01



**MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
531718	10/5/2020 - 10/5/2020		Cs-137	<1.39E+01	0.00E+00	1.39E+01
			BaLa-140	<1.94E+01	0.00E+00	1.94E+01
			Be-7	2.09E+03	2.70E+02	1.65E+02
			K-40	4.53E+03	5.60E+02	2.72E+02

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
533378	11/2/2020 - 11/2/2020		Mn-54	<1.99E+01	0.00E+00	1.99E+01
			Co-58	<1.38E+01	0.00E+00	1.38E+01
			Fe-59	<3.35E+01	0.00E+00	3.35E+01
			Co-60	<1.88E+01	0.00E+00	1.88E+01
			Zn-65	<3.40E+01	0.00E+00	3.40E+01
			Zr-95	<3.05E+01	0.00E+00	3.05E+01
			Nb-95	<1.62E+01	0.00E+00	1.62E+01
			I-131	<1.86E+01	0.00E+00	1.86E+01
			Cs-134	<2.23E+01	0.00E+00	2.23E+01
			Cs-137	<1.76E+01	0.00E+00	1.76E+01
			BaLa-140	<1.65E+01	0.00E+00	1.65E+01
			Be-7	2.64E+03	3.49E+02	2.49E+02
			K-40	4.15E+03	5.72E+02	3.13E+02

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
535932	12/7/2020 - 12/7/2020		Mn-54	<2.34E+01	0.00E+00	2.34E+01
			Co-58	<2.36E+01	0.00E+00	2.36E+01
			Fe-59	<5.26E+01	0.00E+00	5.26E+01
			Co-60	<1.29E+01	0.00E+00	1.29E+01
			Zn-65	<5.15E+01	0.00E+00	5.15E+01
			Zr-95	<4.82E+01	0.00E+00	4.82E+01
			Nb-95	<2.32E+01	0.00E+00	2.32E+01
			I-131	<2.17E+01	0.00E+00	2.17E+01
			Cs-134	<2.63E+01	0.00E+00	2.63E+01
			Cs-137	<2.77E+01	0.00E+00	2.77E+01
			BaLa-140	<2.13E+01	0.00E+00	2.13E+01
			Be-7	7.24E+02	1.93E+02	2.23E+02
			K-40	5.13E+03	7.16E+02	4.30E+02

**Sample Point 125 [ INDICATOR - SW @ 0.38 miles ]**

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
515272	1/6/2020 - 1/6/2020		Mn-54	<2.64E+01	0.00E+00	2.64E+01
			Co-58	<2.63E+01	0.00E+00	2.63E+01
			Fe-59	<5.21E+01	0.00E+00	5.21E+01
			Co-60	<3.32E+01	0.00E+00	3.32E+01
			Zn-65	<5.79E+01	0.00E+00	5.79E+01
			Zr-95	<5.33E+01	0.00E+00	5.33E+01
			Nb-95	<2.85E+01	0.00E+00	2.85E+01
			I-131	<2.33E+01	0.00E+00	2.33E+01
			Cs-134	<3.05E+01	0.00E+00	3.05E+01
			Cs-137	<2.85E+01	0.00E+00	2.85E+01
			BaLa-140	<3.06E+01	0.00E+00	3.06E+01
			Be-7	7.35E+02	2.75E+02	3.81E+02
			K-40	4.31E+03	6.79E+02	2.47E+02

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
516520	2/3/2020 - 2/3/2020		Mn-54	<2.29E+01	0.00E+00	2.29E+01
			Co-58	<2.03E+01	0.00E+00	2.03E+01
			Fe-59	<3.13E+01	0.00E+00	3.13E+01
			Co-60	<2.64E+01	0.00E+00	2.64E+01
			Zn-65	<4.61E+01	0.00E+00	4.61E+01
			Zr-95	<3.40E+01	0.00E+00	3.40E+01
			Nb-95	<2.22E+01	0.00E+00	2.22E+01
			I-131	<2.34E+01	0.00E+00	2.34E+01
			Cs-134	<2.69E+01	0.00E+00	2.69E+01
			Cs-137	<1.83E+01	0.00E+00	1.83E+01
			BaLa-140	<2.90E+01	0.00E+00	2.90E+01
			Be-7	1.17E+03	2.44E+02	2.41E+02
			K-40	3.23E+03	5.77E+02	4.61E+02



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
518722	3/2/2020 - 3/2/2020	MIXEDBLV	Mn-54	<2.00E+01	0.00E+00	2.00E+01
			Co-58	<2.33E+01	0.00E+00	2.33E+01
			Fe-59	<4.35E+01	0.00E+00	4.35E+01
			Co-60	<2.77E+01	0.00E+00	2.77E+01
			Zn-65	<5.55E+01	0.00E+00	5.55E+01
			Zr-95	<3.73E+01	0.00E+00	3.73E+01
			Nb-95	<2.50E+01	0.00E+00	2.50E+01
			I-131	<3.51E+01	0.00E+00	3.51E+01
			Cs-134	<2.44E+01	0.00E+00	2.44E+01
			Cs-137	<2.27E+01	0.00E+00	2.27E+01
			BaLa-140	<3.11E+01	0.00E+00	3.11E+01
			Be-7	9.66E+02	2.24E+02	2.31E+02
			K-40	3.74E+03	5.78E+02	2.96E+02
			520816	4/6/2020 - 4/6/2020	MIXEDBLV	Mn-54
Co-58	<1.20E+01	0.00E+00				1.20E+01
Fe-59	<3.11E+01	0.00E+00				3.11E+01
Co-60	<1.76E+01	0.00E+00				1.76E+01
Zn-65	<5.24E+01	0.00E+00				5.24E+01
Zr-95	<3.47E+01	0.00E+00				3.47E+01
Nb-95	<1.77E+01	0.00E+00				1.77E+01
I-131	<1.55E+01	0.00E+00				1.55E+01
Cs-134	<1.89E+01	0.00E+00				1.89E+01
Cs-137	<1.75E+01	0.00E+00				1.75E+01
BaLa-140	<2.22E+01	0.00E+00				2.22E+01
Be-7	2.87E+02	1.48E+02				2.14E+02
K-40	3.38E+03	5.15E+02				2.05E+02
522607	5/4/2020 - 5/4/2020	MIXEDBLV				Mn-54
			Co-58	<2.72E+01	0.00E+00	2.72E+01
			Fe-59	<4.41E+01	0.00E+00	4.41E+01
			Co-60	<3.40E+01	0.00E+00	3.40E+01
			Zn-65	<5.55E+01	0.00E+00	5.55E+01
			Zr-95	<3.75E+01	0.00E+00	3.75E+01
			Nb-95	<2.62E+01	0.00E+00	2.62E+01
			I-131	<2.40E+01	0.00E+00	2.40E+01
			Cs-134	<3.40E+01	0.00E+00	3.40E+01
			Cs-137	<2.45E+01	0.00E+00	2.45E+01
			BaLa-140	<2.50E+01	0.00E+00	2.50E+01
			Be-7	5.64E+02	1.98E+02	2.57E+02
			K-40	5.13E+03	7.36E+02	3.04E+02
			524452	6/1/2020 - 6/1/2020	MIXEDBLV	Mn-54
Co-58	<2.13E+01	0.00E+00				2.13E+01
Fe-59	<4.30E+01	0.00E+00				4.30E+01
Co-60	<2.68E+01	0.00E+00				2.68E+01
Zn-65	<6.44E+01	0.00E+00				6.44E+01
Zr-95	<3.80E+01	0.00E+00				3.80E+01
Nb-95	<2.61E+01	0.00E+00				2.61E+01
I-131	<1.98E+01	0.00E+00				1.98E+01
Cs-134	<2.80E+01	0.00E+00				2.80E+01
Cs-137	<2.70E+01	0.00E+00				2.70E+01
BaLa-140	<1.45E+01	0.00E+00				1.45E+01
Be-7	1.21E+03	2.50E+02				2.38E+02
K-40	3.41E+03	5.52E+02				2.05E+02
525962	7/6/2020 - 7/6/2020	MIXEDBLV				Mn-54
			Co-58	<1.27E+01	0.00E+00	1.27E+01
			Fe-59	<2.97E+01	0.00E+00	2.97E+01
			Co-60	<1.74E+01	0.00E+00	1.74E+01
			Zn-65	<2.73E+01	0.00E+00	2.73E+01
			Zr-95	<2.42E+01	0.00E+00	2.42E+01
			Nb-95	<1.27E+01	0.00E+00	1.27E+01
			I-131	<1.43E+01	0.00E+00	1.43E+01



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
525962	7/6/2020 - 7/6/2020	MIXEDBLV	Cs-134	<1.72E+01	0.00E+00	1.72E+01
			Cs-137	<1.52E+01	0.00E+00	1.52E+01
			BaLa-140	<1.55E+01	0.00E+00	1.55E+01
			Be-7	1.27E+03	2.00E+02	1.80E+02
			K-40	5.10E+03	5.70E+02	1.01E+02
527378	8/3/2020 - 8/3/2020	MIXEDBLV	Mn-54	<1.73E+01	0.00E+00	1.73E+01
			Co-58	<1.70E+01	0.00E+00	1.70E+01
			Fe-59	<2.89E+01	0.00E+00	2.89E+01
			Co-60	<1.90E+01	0.00E+00	1.90E+01
			Zn-65	<3.31E+01	0.00E+00	3.31E+01
			Zr-95	<2.65E+01	0.00E+00	2.65E+01
			Nb-95	<1.51E+01	0.00E+00	1.51E+01
			I-131	<1.35E+01	0.00E+00	1.35E+01
			Cs-134	<1.99E+01	0.00E+00	1.99E+01
			Cs-137	<1.77E+01	0.00E+00	1.77E+01
			BaLa-140	<1.28E+01	0.00E+00	1.28E+01
			Be-7	1.26E+03	2.10E+02	1.99E+02
			K-40	4.99E+03	5.87E+02	1.83E+02
530038	9/8/2020 - 9/8/2020	MIXEDBLV	Mn-54	<1.85E+01	0.00E+00	1.85E+01
			Co-58	<1.20E+01	0.00E+00	1.20E+01
			Fe-59	<2.65E+01	0.00E+00	2.65E+01
			Co-60	<1.69E+01	0.00E+00	1.69E+01
			Zn-65	<2.96E+01	0.00E+00	2.96E+01
			Zr-95	<2.56E+01	0.00E+00	2.56E+01
			Nb-95	<1.43E+01	0.00E+00	1.43E+01
			I-131	<1.41E+01	0.00E+00	1.41E+01
			Cs-134	<1.67E+01	0.00E+00	1.67E+01
			Cs-137	<1.24E+01	0.00E+00	1.24E+01
			BaLa-140	<1.28E+01	0.00E+00	1.28E+01
			Be-7	1.22E+03	2.03E+02	1.83E+02
			K-40	3.17E+03	4.37E+02	1.71E+02
531719	10/5/2020 - 10/5/2020	MIXEDBLV	Mn-54	<1.84E+01	0.00E+00	1.84E+01
			Co-58	<1.58E+01	0.00E+00	1.58E+01
			Fe-59	<2.83E+01	0.00E+00	2.83E+01
			Co-60	<1.98E+01	0.00E+00	1.98E+01
			Zn-65	<4.09E+01	0.00E+00	4.09E+01
			Zr-95	<3.38E+01	0.00E+00	3.38E+01
			Nb-95	<2.02E+01	0.00E+00	2.02E+01
			I-131	<2.90E+01	0.00E+00	2.90E+01
			Cs-134	<2.16E+01	0.00E+00	2.16E+01
			Cs-137	<2.08E+01	0.00E+00	2.08E+01
			BaLa-140	<2.58E+01	0.00E+00	2.58E+01
			Be-7	1.58E+03	2.69E+02	2.53E+02
			K-40	3.93E+03	5.24E+02	1.95E+02
533379	11/2/2020 - 11/2/2020	MIXEDBLV	Mn-54	<1.36E+01	0.00E+00	1.36E+01
			Co-58	<1.63E+01	0.00E+00	1.63E+01
			Fe-59	<3.40E+01	0.00E+00	3.40E+01
			Co-60	<1.54E+01	0.00E+00	1.54E+01
			Zn-65	<3.82E+01	0.00E+00	3.82E+01
			Zr-95	<2.75E+01	0.00E+00	2.75E+01
			Nb-95	<1.93E+01	0.00E+00	1.93E+01
			I-131	<1.44E+01	0.00E+00	1.44E+01
			Cs-134	<2.03E+01	0.00E+00	2.03E+01
			Cs-137	<1.56E+01	0.00E+00	1.56E+01
			BaLa-140	<1.96E+01	0.00E+00	1.96E+01
			Be-7	2.50E+03	3.28E+02	1.96E+02
			K-40	3.17E+03	4.62E+02	1.97E+02
535933	12/7/2020 - 12/7/2020	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
			Mn-54	<2.12E+01	0.00E+00	2.12E+01



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
535933	12/7/2020 - 12/7/2020		Co-58	<2.21E+01	0.00E+00	2.21E+01
			Fe-59	<3.33E+01	0.00E+00	3.33E+01
			Co-60	<1.88E+01	0.00E+00	1.88E+01
			Zn-65	<4.28E+01	0.00E+00	4.28E+01
			Zr-95	<3.57E+01	0.00E+00	3.57E+01
			Nb-95	<1.79E+01	0.00E+00	1.79E+01
			I-131	<2.06E+01	0.00E+00	2.06E+01
			Cs-134	<2.21E+01	0.00E+00	2.21E+01
			Cs-137	<2.02E+01	0.00E+00	2.02E+01
			BaLa-140	<1.62E+01	0.00E+00	1.62E+01
			Be-7	1.87E+03	3.01E+02	2.68E+02
			K-40	3.54E+03	5.21E+02	2.84E+02

## Sample Point 193 [ INDICATOR - N @ 0.19 miles ]

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
515273	1/6/2020 - 1/6/2020		Mn-54	<3.45E+01	0.00E+00	3.45E+01
			Co-58	<2.79E+01	0.00E+00	2.79E+01
			Fe-59	<7.09E+01	0.00E+00	7.09E+01
			Co-60	<4.08E+01	0.00E+00	4.08E+01
			Zn-65	<8.07E+01	0.00E+00	8.07E+01
			Zr-95	<4.07E+01	0.00E+00	4.07E+01
			Nb-95	<2.46E+01	0.00E+00	2.46E+01
			I-131	<3.10E+01	0.00E+00	3.10E+01
			Cs-134	<3.94E+01	0.00E+00	3.94E+01
			Cs-137	<2.55E+01	0.00E+00	2.55E+01
			BaLa-140	<4.18E+01	0.00E+00	4.18E+01
			Be-7	2.29E+03	4.05E+02	3.77E+02
			K-40	3.65E+03	6.72E+02	4.94E+02

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
516521	2/3/2020 - 2/3/2020		Mn-54	<2.42E+01	0.00E+00	2.42E+01
			Co-58	<2.21E+01	0.00E+00	2.21E+01
			Fe-59	<4.12E+01	0.00E+00	4.12E+01
			Co-60	<2.88E+01	0.00E+00	2.88E+01
			Zn-65	<5.42E+01	0.00E+00	5.42E+01
			Zr-95	<4.31E+01	0.00E+00	4.31E+01
			Nb-95	<2.66E+01	0.00E+00	2.66E+01
			I-131	<2.89E+01	0.00E+00	2.89E+01
			Cs-134	<2.57E+01	0.00E+00	2.57E+01
			Cs-137	<2.59E+01	0.00E+00	2.59E+01
			BaLa-140	<2.94E+01	0.00E+00	2.94E+01
			Be-7	1.73E+03	3.28E+02	3.24E+02
			K-40	3.40E+03	6.10E+02	4.85E+02

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
518723	3/2/2020 - 3/2/2020		Mn-54	<2.66E+01	0.00E+00	2.66E+01
			Co-58	<2.26E+01	0.00E+00	2.26E+01
			Fe-59	<4.48E+01	0.00E+00	4.48E+01
			Co-60	<2.35E+01	0.00E+00	2.35E+01
			Zn-65	<6.10E+01	0.00E+00	6.10E+01
			Zr-95	<4.58E+01	0.00E+00	4.58E+01
			Nb-95	<3.30E+01	0.00E+00	3.30E+01
			I-131	<3.32E+01	0.00E+00	3.32E+01
			Cs-134	<3.16E+01	0.00E+00	3.16E+01
			Cs-137	<2.72E+01	0.00E+00	2.72E+01
			BaLa-140	<3.54E+01	0.00E+00	3.54E+01
			Be-7	1.65E+03	3.31E+02	3.39E+02
			K-40	3.71E+03	6.07E+02	3.42E+02

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
520817	4/6/2020 - 4/6/2020		Mn-54	<1.69E+01	0.00E+00	1.69E+01
			Co-58	<1.39E+01	0.00E+00	1.39E+01
			Fe-59	<3.73E+01	0.00E+00	3.73E+01
			Co-60	<2.10E+01	0.00E+00	2.10E+01
			Zn-65	<3.65E+01	0.00E+00	3.65E+01
			Zr-95	<2.96E+01	0.00E+00	2.96E+01
			Nb-95	<1.55E+01	0.00E+00	1.55E+01





# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
520817	4/6/2020 - 4/6/2020	MIXEDBLV	I-131	<1.47E+01	0.00E+00	1.47E+01
			Cs-134	<2.04E+01	0.00E+00	2.04E+01
			Cs-137	<1.76E+01	0.00E+00	1.76E+01
			BaLa-140	<1.99E+01	0.00E+00	1.99E+01
			Be-7	4.90E+02	1.54E+02	2.03E+02
			K-40	6.79E+03	7.72E+02	3.17E+02
522608	5/4/2020 - 5/4/2020	MIXEDBLV	Mn-54	<1.65E+01	0.00E+00	1.65E+01
			Co-58	<1.60E+01	0.00E+00	1.60E+01
			Fe-59	<3.63E+01	0.00E+00	3.63E+01
			Co-60	<1.83E+01	0.00E+00	1.83E+01
			Zn-65	<4.33E+01	0.00E+00	4.33E+01
			Zr-95	<3.05E+01	0.00E+00	3.05E+01
			Nb-95	<1.66E+01	0.00E+00	1.66E+01
			I-131	<1.27E+01	0.00E+00	1.27E+01
			Cs-134	<1.47E+01	0.00E+00	1.47E+01
			Cs-137	<1.50E+01	0.00E+00	1.50E+01
			BaLa-140	<1.15E+01	0.00E+00	1.15E+01
			Be-7	7.61E+02	1.64E+02	1.73E+02
			K-40	6.04E+03	6.94E+02	2.00E+02
			524453	6/1/2020 - 6/1/2020	MIXEDBLV	Mn-54
Co-58	<1.60E+01	0.00E+00				1.60E+01
Fe-59	<4.21E+01	0.00E+00				4.21E+01
Co-60	<2.07E+01	0.00E+00				2.07E+01
Zn-65	<4.98E+01	0.00E+00				4.98E+01
Zr-95	<4.26E+01	0.00E+00				4.26E+01
Nb-95	<2.29E+01	0.00E+00				2.29E+01
I-131	<2.01E+01	0.00E+00				2.01E+01
Cs-134	<2.67E+01	0.00E+00				2.67E+01
Cs-137	<2.84E+01	0.00E+00				2.84E+01
BaLa-140	<5.26E+00	0.00E+00				5.26E+00
Be-7	1.75E+03	3.23E+02				3.16E+02
K-40	5.72E+03	7.82E+02				3.65E+02
525963	7/6/2020 - 7/6/2020	MIXEDBLV				Mn-54
			Co-58	<1.90E+01	0.00E+00	1.90E+01
			Fe-59	<3.05E+01	0.00E+00	3.05E+01
			Co-60	<1.99E+01	0.00E+00	1.99E+01
			Zn-65	<3.61E+01	0.00E+00	3.61E+01
			Zr-95	<2.66E+01	0.00E+00	2.66E+01
			Nb-95	<1.59E+01	0.00E+00	1.59E+01
			I-131	<1.61E+01	0.00E+00	1.61E+01
			Cs-134	<1.99E+01	0.00E+00	1.99E+01
			Cs-137	<1.83E+01	0.00E+00	1.83E+01
			BaLa-140	<1.67E+01	0.00E+00	1.67E+01
			Be-7	1.60E+03	2.51E+02	1.94E+02
			K-40	6.33E+03	7.40E+02	1.95E+02
			527379	8/3/2020 - 8/3/2020	MIXEDBLV	Mn-54
Co-58	<1.34E+01	0.00E+00				1.34E+01
Fe-59	<2.81E+01	0.00E+00				2.81E+01
Co-60	<1.41E+01	0.00E+00				1.41E+01
Zn-65	<3.13E+01	0.00E+00				3.13E+01
Zr-95	<2.54E+01	0.00E+00				2.54E+01
Nb-95	<1.35E+01	0.00E+00				1.35E+01
I-131	<1.35E+01	0.00E+00				1.35E+01
Cs-134	<1.45E+01	0.00E+00				1.45E+01
Cs-137	<1.25E+01	0.00E+00				1.25E+01
BaLa-140	<1.12E+01	0.00E+00				1.12E+01
Be-7	1.28E+03	1.92E+02				1.44E+02
K-40	5.06E+03	5.87E+02				2.62E+02



# MCGUIRE Radiological Environmental Monitoring Analysis Report - 2020 (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
530039	9/8/2020 - 9/8/2020	MIXEDBLV	Mn-54	<1.31E+01	0.00E+00	1.31E+01
			Co-58	<1.33E+01	0.00E+00	1.33E+01
			Fe-59	<2.74E+01	0.00E+00	2.74E+01
			Co-60	<1.48E+01	0.00E+00	1.48E+01
			Zn-65	<3.23E+01	0.00E+00	3.23E+01
			Zr-95	<2.36E+01	0.00E+00	2.36E+01
			Nb-95	<1.54E+01	0.00E+00	1.54E+01
			I-131	<1.35E+01	0.00E+00	1.35E+01
			Cs-134	<1.76E+01	0.00E+00	1.76E+01
			Cs-137	<1.50E+01	0.00E+00	1.50E+01
			BaLa-140	<1.35E+01	0.00E+00	1.35E+01
			Be-7	1.40E+03	2.10E+02	1.59E+02
			K-40	4.81E+03	5.72E+02	2.28E+02
			531720	10/5/2020 - 10/5/2020	MIXEDBLV	Mn-54
Co-58	<1.83E+01	0.00E+00				1.83E+01
Fe-59	<4.21E+01	0.00E+00				4.21E+01
Co-60	<1.96E+01	0.00E+00				1.96E+01
Zn-65	<4.79E+01	0.00E+00				4.79E+01
Zr-95	<3.61E+01	0.00E+00				3.61E+01
Nb-95	<2.44E+01	0.00E+00				2.44E+01
I-131	<2.73E+01	0.00E+00				2.73E+01
Cs-134	<2.19E+01	0.00E+00				2.19E+01
Cs-137	<1.96E+01	0.00E+00				1.96E+01
BaLa-140	<2.94E+01	0.00E+00				2.94E+01
Be-7	2.33E+03	3.36E+02				2.43E+02
K-40	4.56E+03	6.00E+02				2.72E+02
533380	11/2/2020 - 11/2/2020	MIXEDBLV				Mn-54
			Co-58	<1.48E+01	0.00E+00	1.48E+01
			Fe-59	<3.25E+01	0.00E+00	3.25E+01
			Co-60	<2.37E+01	0.00E+00	2.37E+01
			Zn-65	<4.79E+01	0.00E+00	4.79E+01
			Zr-95	<3.25E+01	0.00E+00	3.25E+01
			Nb-95	<1.81E+01	0.00E+00	1.81E+01
			I-131	<1.89E+01	0.00E+00	1.89E+01
			Cs-134	<2.05E+01	0.00E+00	2.05E+01
			Cs-137	<1.81E+01	0.00E+00	1.81E+01
			BaLa-140	<1.49E+01	0.00E+00	1.49E+01
			Be-7	2.05E+03	2.92E+02	2.09E+02
			K-40	5.01E+03	6.28E+02	2.41E+02
			535934	12/7/2020 - 12/7/2020	MIXEDBLV	Mn-54
Co-58	<2.20E+01	0.00E+00				2.20E+01
Fe-59	<4.09E+01	0.00E+00				4.09E+01
Co-60	<2.29E+01	0.00E+00				2.29E+01
Zn-65	<5.38E+01	0.00E+00				5.38E+01
Zr-95	<3.56E+01	0.00E+00				3.56E+01
Nb-95	<2.20E+01	0.00E+00				2.20E+01
I-131	<1.91E+01	0.00E+00				1.91E+01
Cs-134	<2.49E+01	0.00E+00				2.49E+01
Cs-137	<2.32E+01	0.00E+00				2.32E+01
BaLa-140	<1.56E+01	0.00E+00				1.56E+01
Be-7	2.13E+03	3.30E+02				2.78E+02
K-40	5.22E+03	6.94E+02				3.27E+02



**APPENDIX F**

**ERRATA TO  
PREVIOUS REPORTS**

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# APPENDIX F

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## ERRATA TO THE 2020 AREOR

### **McGuire AREOR: 2019**

McGuire Section 2.2 incorrectly stated to reference Section 5 for the quality assurance data summary but should have referenced Section 4.

Enclosure 5  
RA-21-0050

**ENCLOSURE 5: [ONS Annual Radiological Environmental Operating Report](#)**



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# **ANNUAL RADIOLOGICAL ENVIRONMENTAL OPERATING REPORT**

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**DUKE ENERGY CORPORATION  
OCONEE NUCLEAR STATION  
Units 1, 2, and 3**

**2020**



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**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
BLV	Broadleaf Vegetation
C	Control
CM	Community
CR	Condition Report (analogous to Nuclear Condition Report (NCR))
EZA	Eckert & Ziegler Analytics
FI	Fish
FP	Food Product
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
M	Monthly
MAPEP	Department of Energy Mixed Analyte Performance Evaluation Program
MDA	Minimum Detectable Activity
mrem	millirem
mR	milliroentgen
mR/Std Qtr	milliroentgen per standard quarter
MWe	Megawatt (electrical)
NCR	Nuclear Condition Report (analogous to Condition Report (CR))
NIST	National Institute of Standards and Technology
NRC	Nuclear Regulatory Commission
ODCM	Off-Site Dose Calculation Manual
OR	Outer Ring - TLDs
pCi/kg	picocurie per kilogram
pCi/l	picocurie per liter
pCi/m <sup>3</sup>	picocurie per cubic meter
PI	Power Interrupt
Q	Quarterly
REMP	Radiological Environmental Monitoring Program
SA	Semiannually
SB	Site Boundary
SS	Sediment – Shoreline
SI	Special Interest - TLDs
SW	Surface Water
TECH SPECS	Technical Specifications
TLD	Thermoluminescent Dosimeter
UFSAR	Updated Final Safety Analysis Report
W	Weekly

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# 1.0 EXECUTIVE SUMMARY

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This Annual Radiological Environmental Operating Report describes the Oconee Nuclear Station Radiological Environmental Monitoring Program (REMP), and the program results for the calendar year 2020.

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, except for two low-level Iodine-131 milk samples. One-thousand forty-nine samples were analyzed comprising 1,088 test results in order to compile data for the 2020 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 2020 for station related radionuclides were 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 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 and drinking water samples revealed tritium concentrations that are well within the applicable regulatory limits. The radiological environmental data for 2020 indicates that radioactivity concentrations were not higher than expected and all positively identified measurements attributable to ONS operations in 2020 were within limits as specified in the ONS ODCM, thus presenting no significant impact on the environment or public safety.

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## 2.0 INTRODUCTION

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### 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.

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.

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

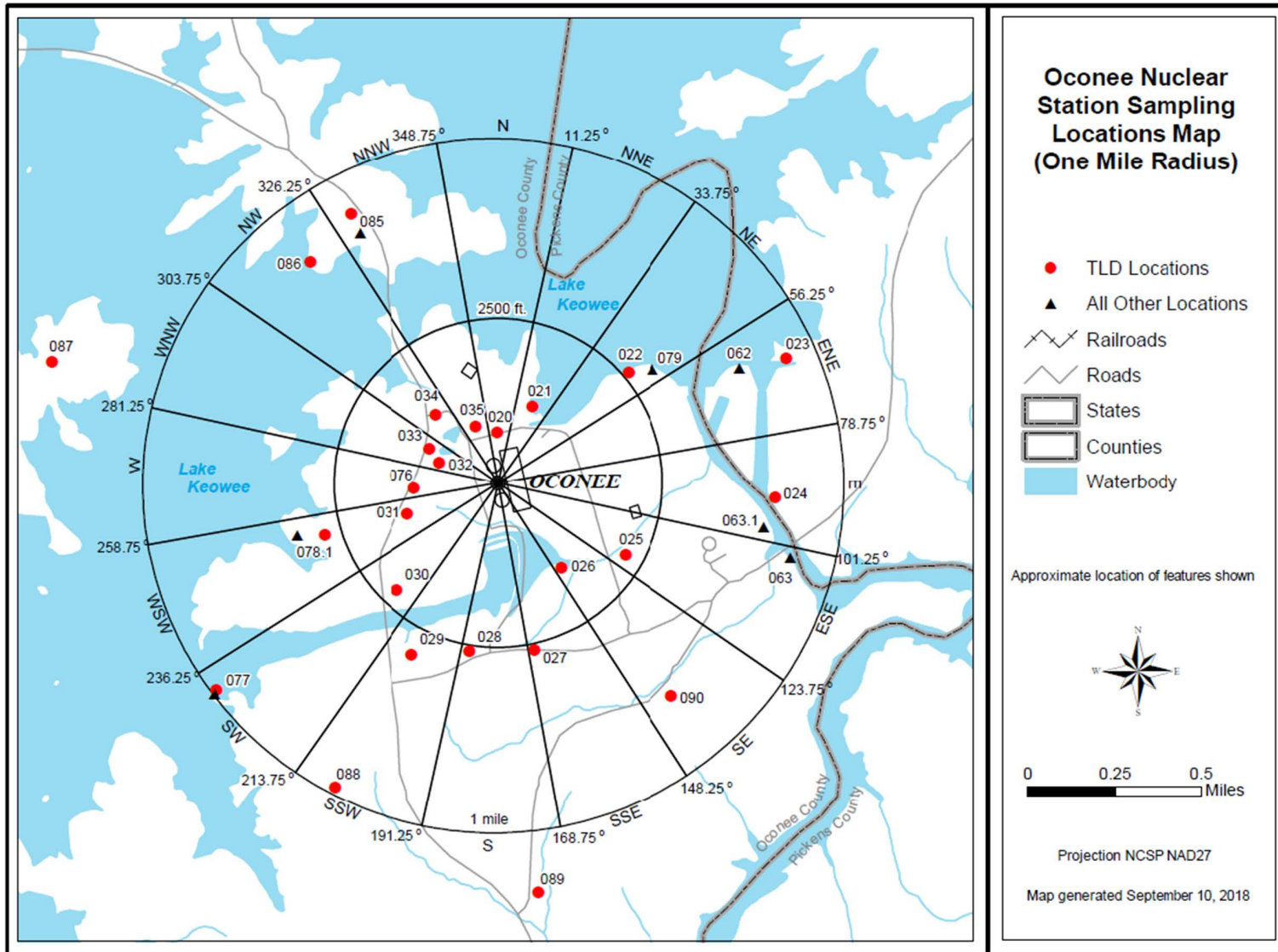
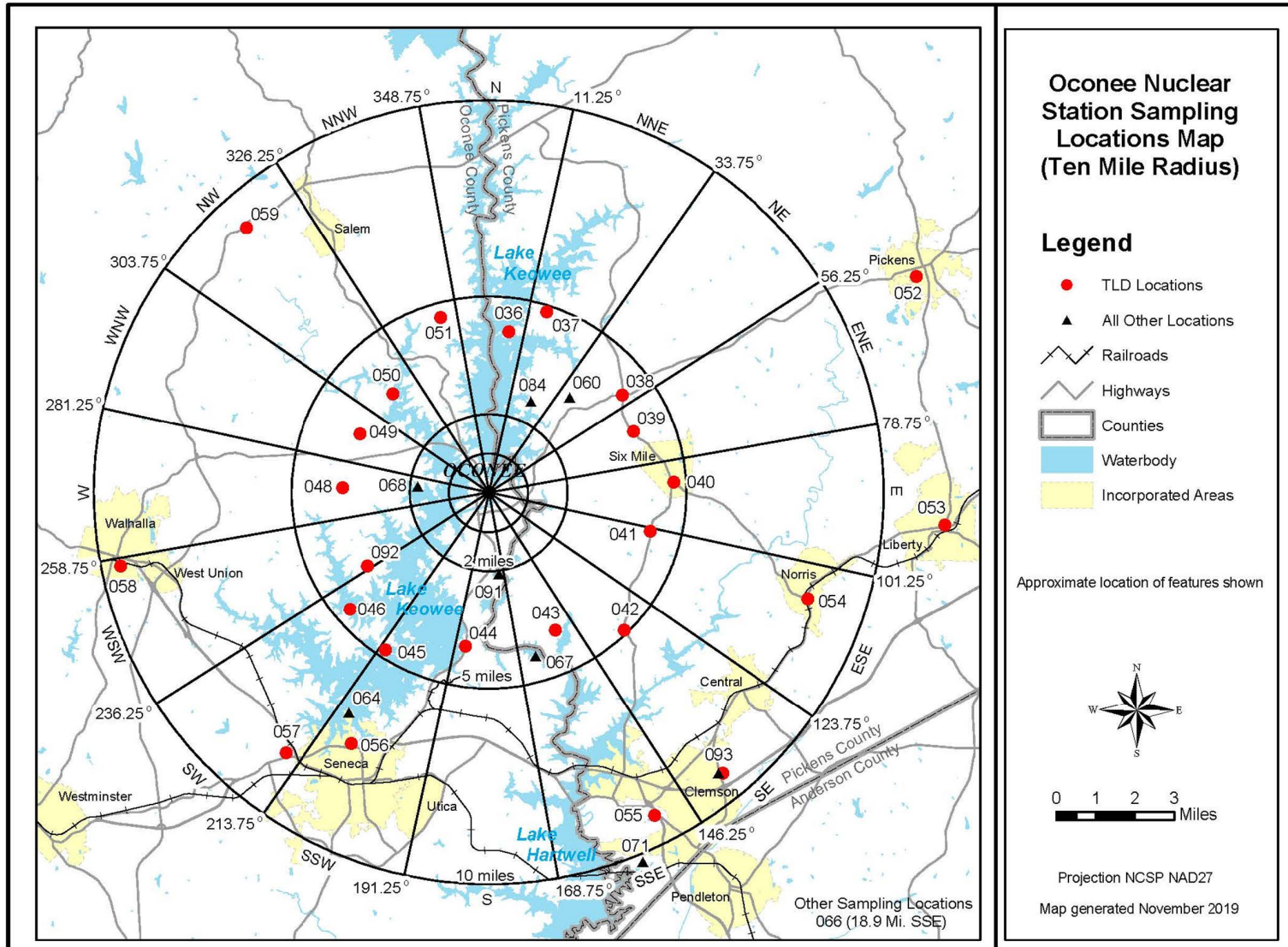


Figure 2.1-2





**TABLE 2.1-A**

**OCONEE RADIOLOGICAL MONITORING PROGRAM  
SAMPLING LOCATIONS<sup>(a)</sup>**

Table 2.1-A Codes			
BW	BiWeekly	Q	Quarterly
C	Control	SA	Semiannually
CM	Community	SB	Site Boundary
I	Indicator	SM	Semimonthly
M	Monthly	W	Weekly

Site #	Measure Type	Location Description*	Air Rad. & Particulate	Surface Water	Drinking Water	Shoreline Sediment	Fish	Milk <sup>(b)</sup>	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,SB						M,SB
078.1	I	Recreation Site (0.53 mi WSW)	W,SB						
079	I	Keowee Dam (0.56 mi NE)	W,SB						M, SB
084	I	Sue Craig Road (2.58 mi NNE)	W						M
085	I	Lake Services / Building B9125 (0.88 mi NNW)	W,CM						
091	I	Holder's Landing Road (2.09 miles S)				SA			
093	C	Clemson Operations Center (9.33 mi SE)	W						M

(a) Sample locations are identified in the ODCM.

(b) Samples from milking animals in three locations within 5 km distance having the highest dose potential. If there are none, then one sample from milking animals in each of the three areas between 5 to 8 km distant where doses are calculated to be greater than 1 mrem per year. One sample from milking animals at a control location, as for example 15-30 km distant and in the least prevalent wind direction.

\* 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 Numbers prior to 1984

**TABLE 2.1-B**

**OCONEE RADIOLOGICAL MONITORING PROGRAM  
SAMPLING LOCATIONS (TLD SITES)<sup>(a)</sup>**

Table 2.1-B Codes			
C	Control	OR	Outer Ring
IR	Inner Ring	SI	Special Interest

Site #	Measure Type	Location*	Distance (miles)	Sector	Site #	Measure Type	Location*	Distance (miles)	Sector
020	IR	Site Boundary	0.16	N	044	OR	HWY 130 at Little River Dam	3.96	S
021	IR	Site Boundary	0.25	NNE	045	OR	Terminus of HWY 588 at Crooked Creek	4.78	SSW
022	IR	Site Boundary	0.53	NE	046	OR	HWY 188 at Crooked Creek	4.61	SW
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	085	IR	Lake Services Bldg 9125 shared with air monitoring location	0.88	NNW
037	OR	Keowee Church, HWY 327	4.85	NNE	086	IR	Lake Keowee Service Rd at Boat Landing	0.83	NW
038	OR	Convenience Mart, JCT HWY 183 & 133	4.24	NE	087	IR	End of Waterfall Rd	1.33	WNW
039	OR	HWY 133, 1 mile East of JCT HWY 183 & 133	4.02	ENE	088	IR	Doug Hollow Rd / Transmission Tower	1.00	SSW
040	OR	Microwave Tower, Six Mile	4.74	E	089	IR	Intersection Hwy 130 & Keowee River Rd	1.19	S
041	OR	JCT HWY 101 & 133	4.25	ESE	090	IR	Crescent Resources, Keowee River Rd at Beaver Dam	0.79	SE
042	OR	Lawrence Chapel Church, HWY 133	4.93	SE	092	OR	Hilton Circle stop sign HWY 188	3.62	WSW
043	OR	HWY 291 at Issaqueena Park	4.09	SSE	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.

a) Sample locations are identified in the ODCM.

**TABLE 2.2-A**

**REPORTING LEVELS FOR RADIOACTIVITY  
CONCENTRATIONS IN ENVIRONMENTAL SAMPLES**

Analysis	Water (pCi/liter)	Air Particulates or Gases (pCi/m <sup>3</sup> )	Fish (pCi/kg-wet)	Milk (pCi/liter)	Broadleaf Vegetation (pCi/kg-wet)
H-3	20,000 <sup>(a)</sup>	---	---	---	---
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 <sup>(b)</sup>	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	---	---	---	(b)	---
	Quarterly Composite	X	---	---	---	---
Direct Radiation	Quarterly	---	---	---	---	X
Surface Water	Monthly <sup>(c)</sup>	X	---	---	---	---
	Quarterly Composite <sup>(c)</sup>	---	X	---	---	---
Drinking Water	Monthly <sup>(c)</sup>	X	---	(a)	X	---
	Quarterly Composite <sup>(c)</sup>	---	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.  
 (b) Airborne particulate sample filters shall be analyzed for gross beta radioactivity 24 hours or more after sampling to allow radon and thoron daughter decay. If gross beta activity in air particulate samples is greater than 10 times the yearly mean of control samples, gamma isotopic analysis shall be performed on the individual samples.  
 (c) Composite samples shall be collected by collecting an aliquot at intervals not exceeding 2 hours.

**TABLE 2.2-C**

**MAXIMUM VALUES FOR THE *A PRIORI* LOWER LIMITS OF DETECTION<sup>(a)</sup>**

Analysis <sup>(c)</sup>	Water (pCi/liter)	Air Particulates or Gases (pCi/m <sup>3</sup> )	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 <sup>(b)</sup>	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 is defined in Section 2.3.2.

(b) LLD for gamma isotopic analysis for I-131 in drinking water samples. Low level I-131 analysis on drinking water will not be routinely performed because the calculated dose from I-131 in drinking water at all locations is less than 1 mrem per year. Low level I-131 analyses will be performed if abnormal releases occur which could reasonably result in > 1 pCi/liter of I-131 in drinking water. For low level analyses of I-131 an LLD of 1 pCi/liter will be achieved.

(c) Other peaks which are measurable and identifiable, together with the radionuclides in Table 2.2-C, shall be identified and reported.

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## 3.0 INTERPRETATION OF RESULTS

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Review of 2020 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 2020 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 change in the analysis methods or changes in the reporting of the results. Summary tables containing 2020 information required by Technical Specification Administrative Control 5.6.2 are located in Appendix B. REMP results for 2020 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 2020.

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 2020 due to ONS operation was 1.71% 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 2020 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 2020 indicates that radioactivity concentrations were not higher than expected and all positively identified measurements attributable to ONS operations in 2020 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 2020. Similarly,

there was no significant increase in ambient background radiation levels in the surrounding areas. The 2020 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**

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. In 2020, 312 continuously composited radioiodine and particulate samples were collected and 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 2020. 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 2020 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/m<sup>3</sup>.

There were Gross Beta results for Control Location 093 that were out of trend during the collection periods from 3/23/2020-4/20/2020. The air sampler used during this collection timeframe was replaced and upon investigation there was debris found in the rotameter of the original air sampler. This debris limited the air flow through sampling head which did not allow for the normal collection of particulate on the filters. Due to this issue, the sampling heads are being cleaned during sampling kit preparation and dust caps are being placed on the quick disconnect end of the sampling heads to prevent debris from entering the sampling head before installation on the air sampler (NCR# 02327523).

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 <sup>3</sup> )	Control Location (pCi/m <sup>3</sup> )
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 <sup>(1)</sup>	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) (1996-2020)**

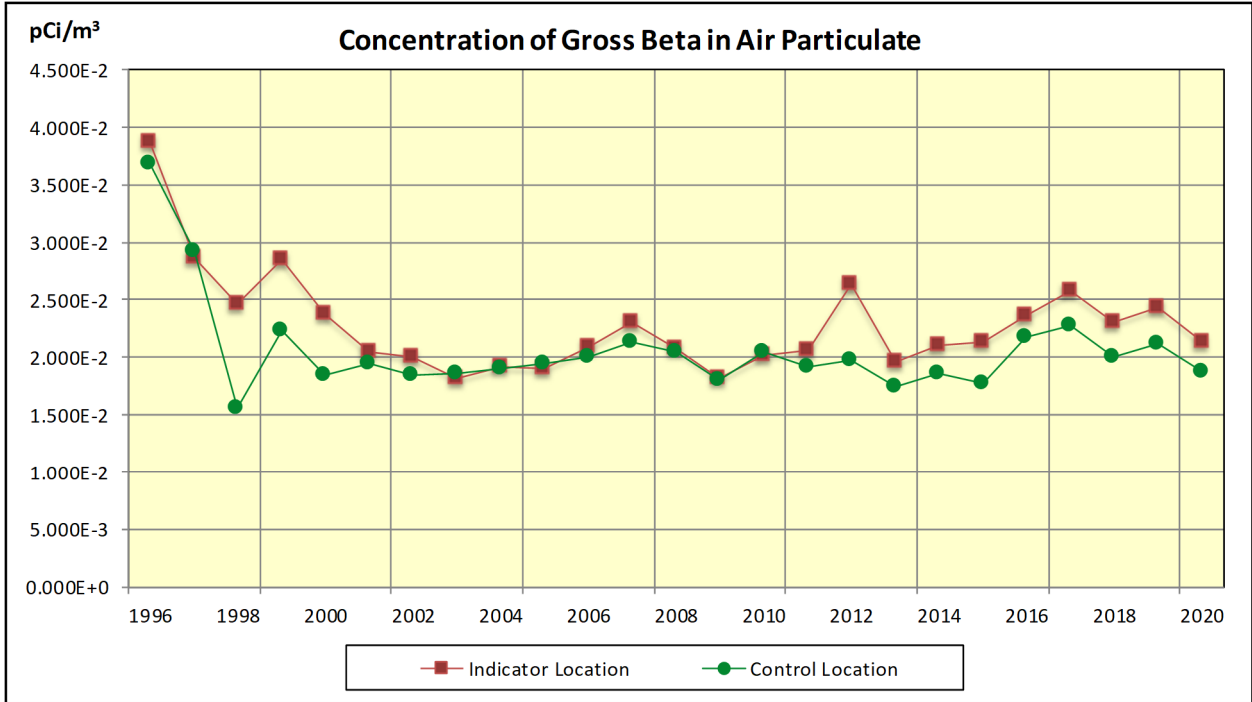
<b>Year</b>	<b>Indicator Location (pCi/m<sup>3</sup>)</b>	<b>Control Location (pCi/m<sup>3</sup>)</b>
1996	0.00E0	0.00E0
1997	0.00E0	0.00E0
1998	0.00E0	0.00E0
1999	0.00E0	0.00E0
2000	0.00E0	0.00E0
2001	0.00E0	0.00E0
2002	0.00E0	0.00E0
2003	0.00E0	0.00E0
2004	0.00E0	0.00E0
2005	0.00E0	0.00E0
2006	0.00E0	0.00E0
2007	0.00E0	0.00E0
2008	0.00E0	0.00E0
2009	0.00E0	0.00E0
2010	0.00E0	0.00E0
2011 <sup>(1)</sup>	5.05E-2	4.13E-2
2012	0.00E0	0.00E0
2013	0.00E0	0.00E0
2014 <sup>(2)</sup>	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
2020	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
2020	2.14E-2	1.87E-2

## 3.2 DRINKING WATER

Gross beta analysis and gamma spectroscopy were performed on 39 monthly drinking water samples that were composited using water samplers that collected an aliquot every two hours. 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 2020. The highest indicator location had an average concentration of 3.85 pCi/liter in 2020, and the control location had a concentration of 3.86 pCi/liter. The gross beta mean indicator activity and mean control activity increased in 2019 due to an analytical method change affecting analytical sensitivities (NCR # 02303031). The difference between the mean indicator and the mean control activities for 2020 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 2020 gross beta levels in drinking water are lower than preoperational concentrations.

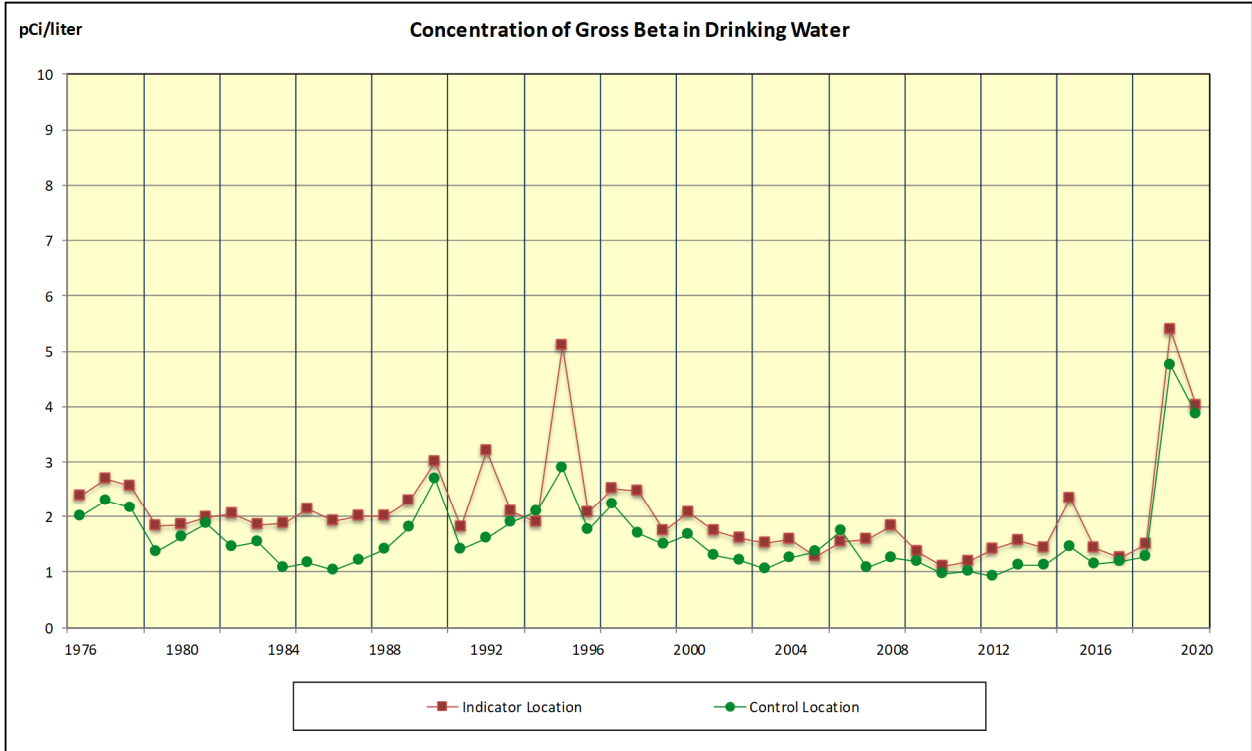
Tritium was detected in four of the twelve composite samples during 2020. The 2020 mean indicator location 066 concentration was 289 pCi/liter, which is 1.45% of the 20,000 pCi/l Tritium reporting level. Table 3.2-A, Table 3.2-B and Figure 3.2-2 show the highest indicator and control location annual 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 2020. 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 2020; therefore, low-level iodine analysis is not required.

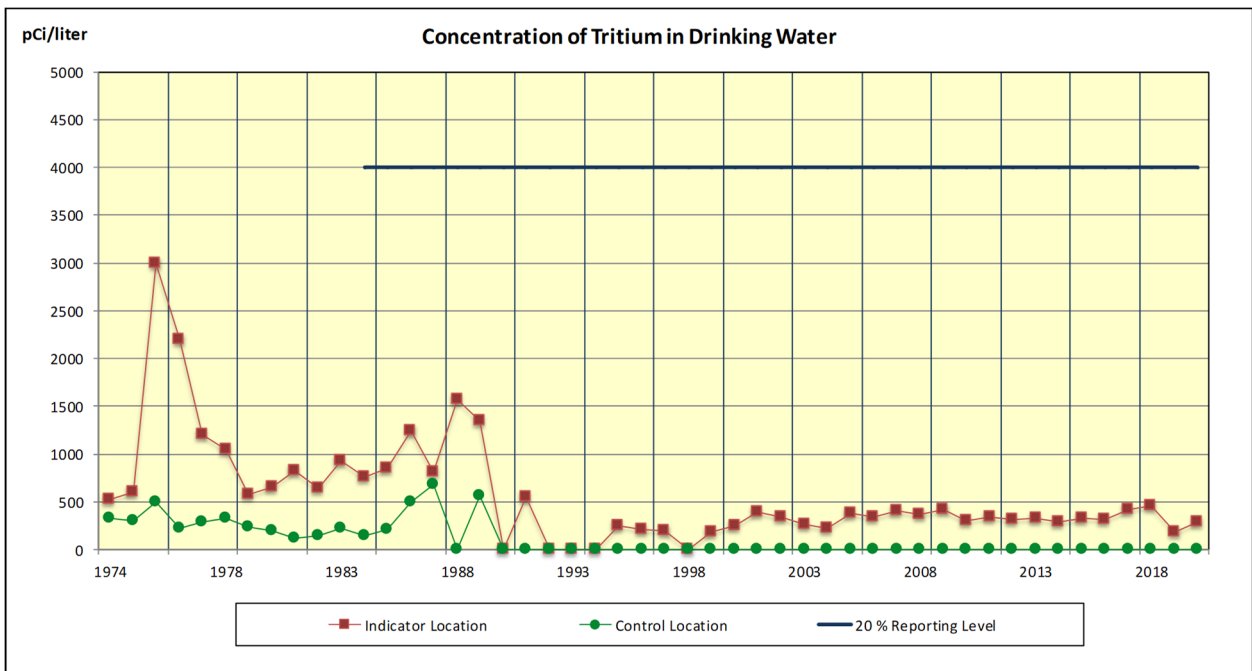
K-40 observed in drinking water samples is a naturally occurring radionuclide.

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 (1996-2020)**

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 <sup>(1)</sup>	5.38	4.75	192	0.00
2020	4.02	3.86	289	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 that were composited using water samplers that collected an aliquot every two hours. 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.

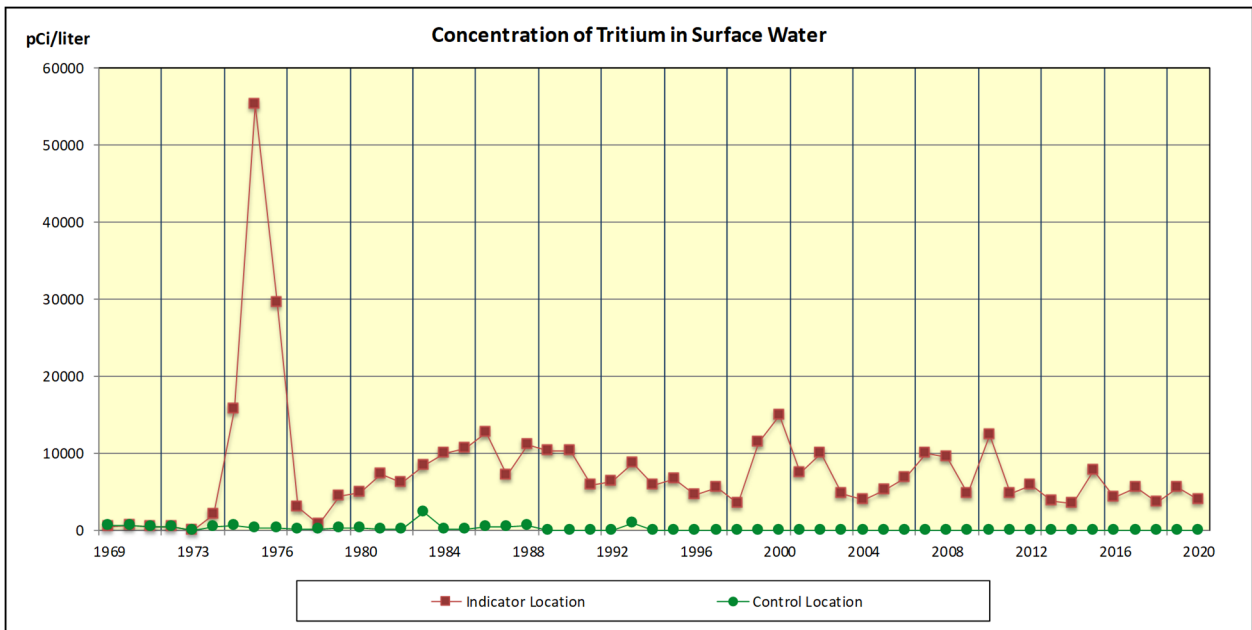
Tritium was detected in the four indicator location samples. The 2020 average concentration was 3,970 pCi/liter. The individual samples ranged from 2,530 to 5,390 pCi/liter. For comparison purposes, the 2019 mean concentration was 5,560 pCi/liter. Tritium was not detected in any control surface water 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 2020.

Gamma spectroscopy analysis did not detect any station related gamma activity during 2020. 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 2020 did not reveal any increasing trends.

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

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 <sup>(1)</sup>	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 (1996-2020)**

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 <sup>(1)</sup>	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
2020	0.00E0	0.00E0	0.00E0	0.00E0	3.97E3

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

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. Gamma spectroscopy analyses were performed on 26 milk samples collected biweekly from the control location in 2020, and low level iodine analyses were performed on 25 of those samples. No indicator dairies were sampled during 2020 and none were identified by the 2020 land use census.

There were no gamma emitting radionuclides due to ONS plant operations identified in milk samples in 2020. 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 2020. 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.

Milk samples collected 6/22/2020 clabbered during shipment prior to analysis and could not be analyzed for low level I-131 (NCR# 02337398). Milk samples collected 9/28/2020 did not meet low level I-131 detection limit due to a shipping delay (NCR# 02356991). Additional information is included in Appendix D.

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 <sup>(1)</sup>	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 <sup>(1)</sup>	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 <sup>(2)</sup>	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
2020	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

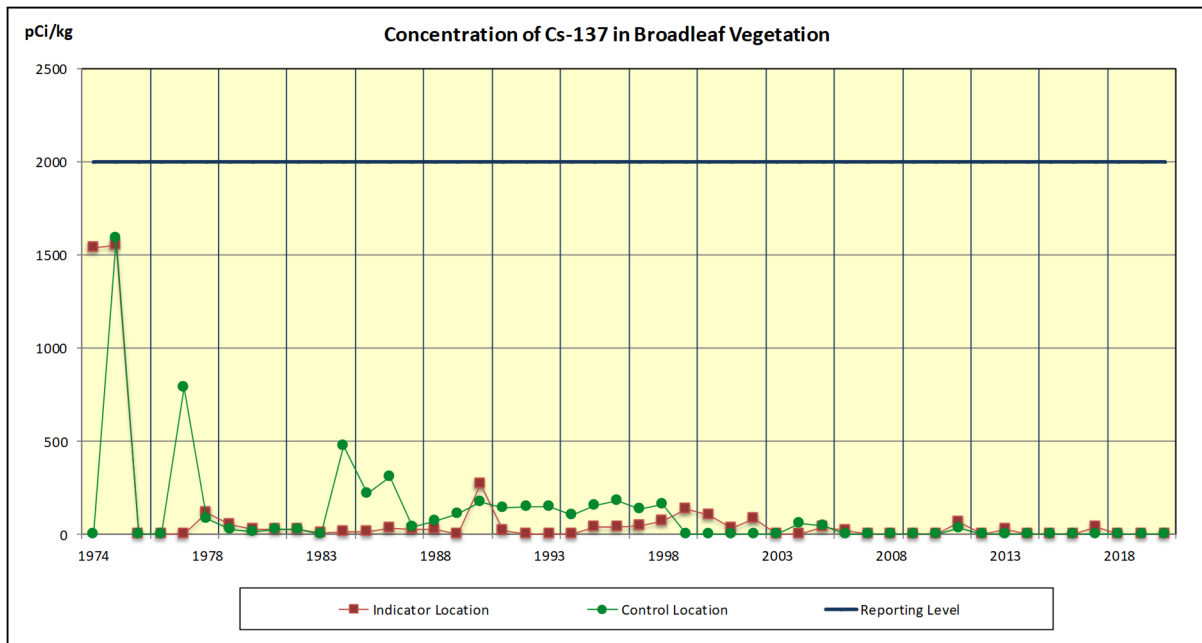
Monthly samples were collected and a gamma analysis was performed on each of the 48 samples during 2020. Three indicator locations and one control location were sampled. There were no gamma emitting radionuclides due to ONS plant operations identified in vegetation samples in 2020.

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 <sup>†</sup>
1985	1.62E1	2.20E2
1986	3.28E1	3.12E2
1987 <sup>(1)</sup>	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 <sup>††</sup>
1999	1.34E2	0.00E0 <sup>†††</sup>
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 <sup>††††</sup>	3.35E1 <sup>††††</sup>
2012	0.00E0	0.00E0
2013	2.57E1	0.00E0
2014 <sup>(2)</sup>	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
2020	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 2020, gamma spectroscopy was performed on the edible portions of 12 semiannual 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 2020.

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-A lists the highest indicator location annual means for radionuclides detected from the Preoperational period through 2014. Table 3.6-B list the highest indicator location annual means for radionuclides detected from 2015-2020. 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

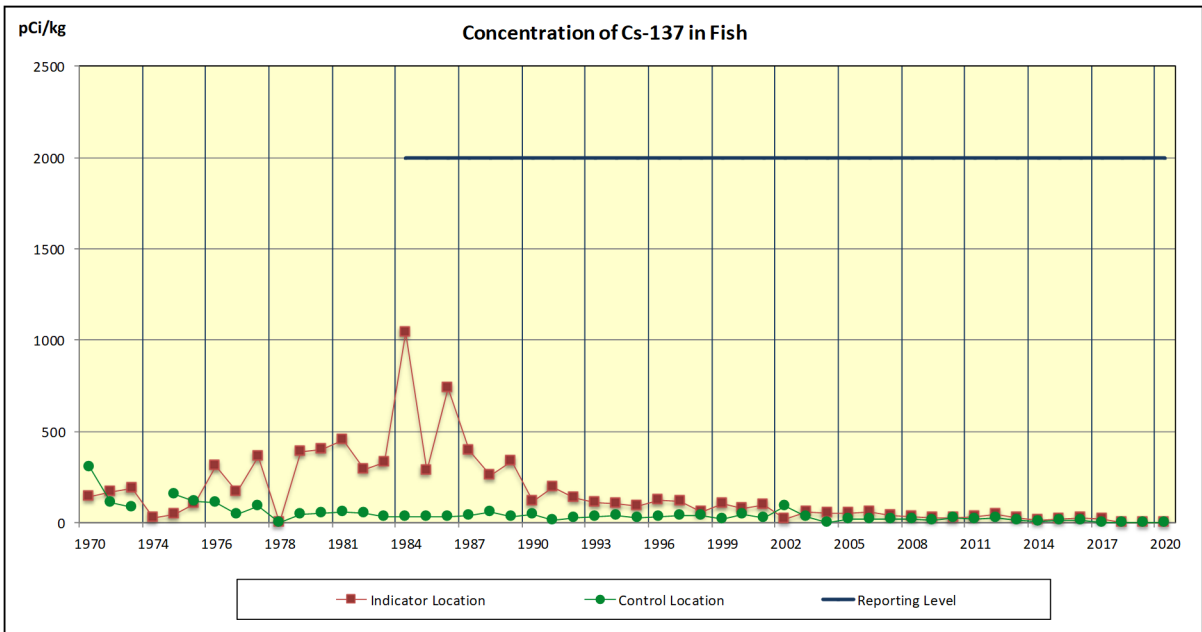
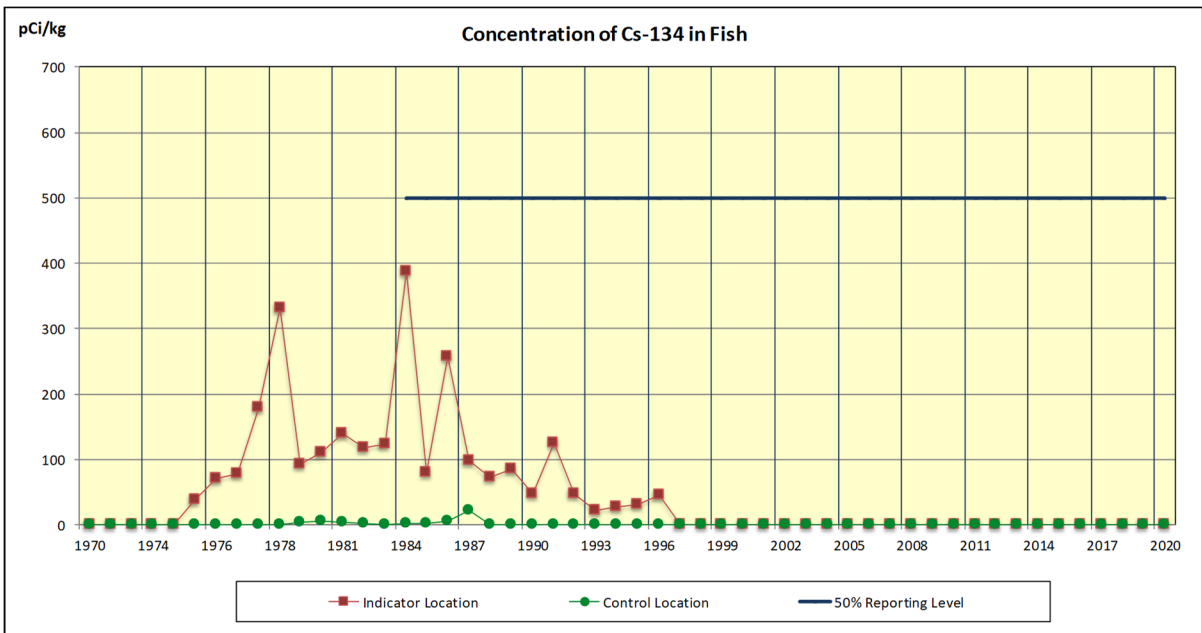


Figure 3.6-2



*Current reporting levels implemented 1984*



**Table 3.6-A Mean Concentrations of Radionuclides in Fish (Preop-2014)**

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 <sup>(1)</sup>	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 <sup>(2)</sup>	0.00E0	0.00E0	0.00E0	1.40E1

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.

**Table 3.6-B Mean Concentrations of Radionuclides in Fish (2015-2020)**

<b>Year</b>	<b>Co-58 (pCi/kg)</b>	<b>Co-60 (pCi/kg)</b>	<b>Cs-134 (pCi/kg)</b>	<b>Cs-137 (pCi/kg)</b>
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
2020	0.00E0	0.00E0	0.00E0	0.00E0

0.00 indicates no detectable measurements

### 3.7 SHORELINE SEDIMENT

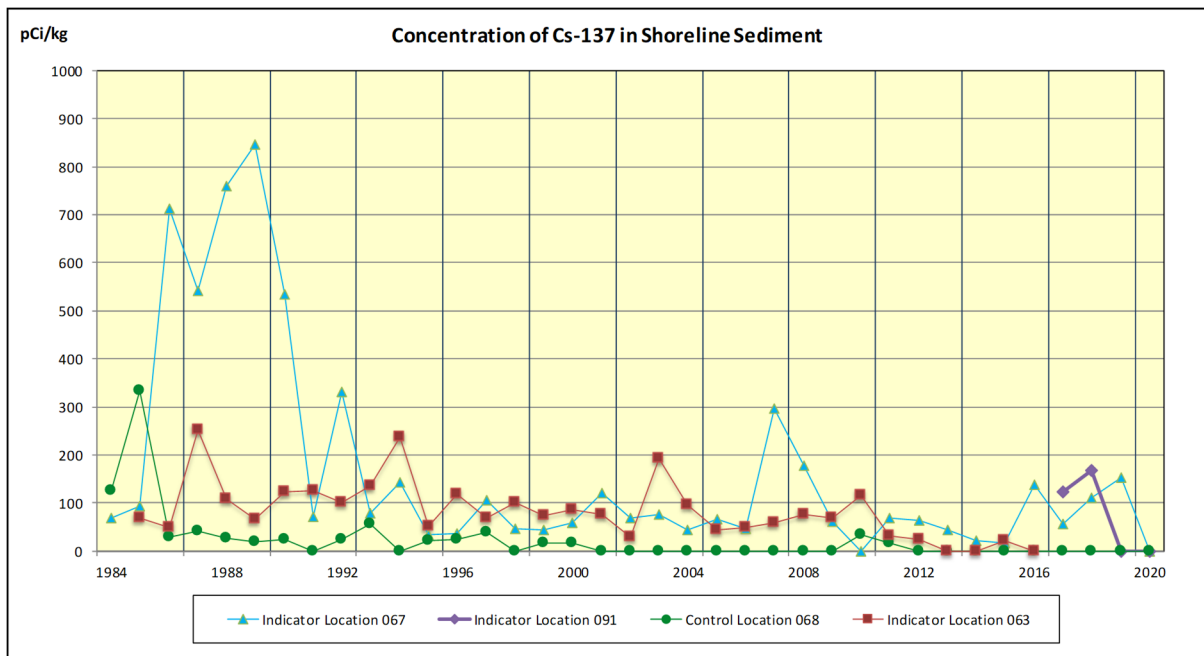
Gamma spectroscopy was performed on six semiannual sediment samples following the drying and removal of rocks and clams. Two downstream indicator locations and one control location were sampled. Four samples were taken from indicator locations and two from the control location.

No activity was detected in the indicator or control location samples in 2020. 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 observed in shoreline samples is a naturally occurring radionuclide.

**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 <sup>(1)</sup>	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 <sup>(2)</sup>	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
2020	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.

## **3.8 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.

Thermoluminescent dosimeters (TLD) were placed and collected quarterly at the fifty locations indicated in Section 2 Table 2.1-B. There are 25 TLD locations, one or more in each meteorological sector, designated as "inner ring" and 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. There were 16 TLD locations, one in each meteorological sector, 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. The remaining TLDs were placed in special interest areas such as population centers, residential areas, schools, and control locations within a 7 to 13 mile radius from station center. 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.

A gamma exposure rate was determined for each TLD. In 2020, 199 total TLDs were analyzed quarterly, 191 at indicator locations and 8 at control locations. TLDs are collected and analyzed quarterly. Transit and laboratory background dose are 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 114 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. 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 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 quarter 2020 TLD from location 093 (Control, Clemson Operations Center) result of 31.7 mR/Std Qtr exceeded the location’s acceptance range due to there not being sufficient historical data at this location. This was a new location in 2019 and data was being gathered to calculate an average exposure. The investigation did not identify any other issues with this TLD.

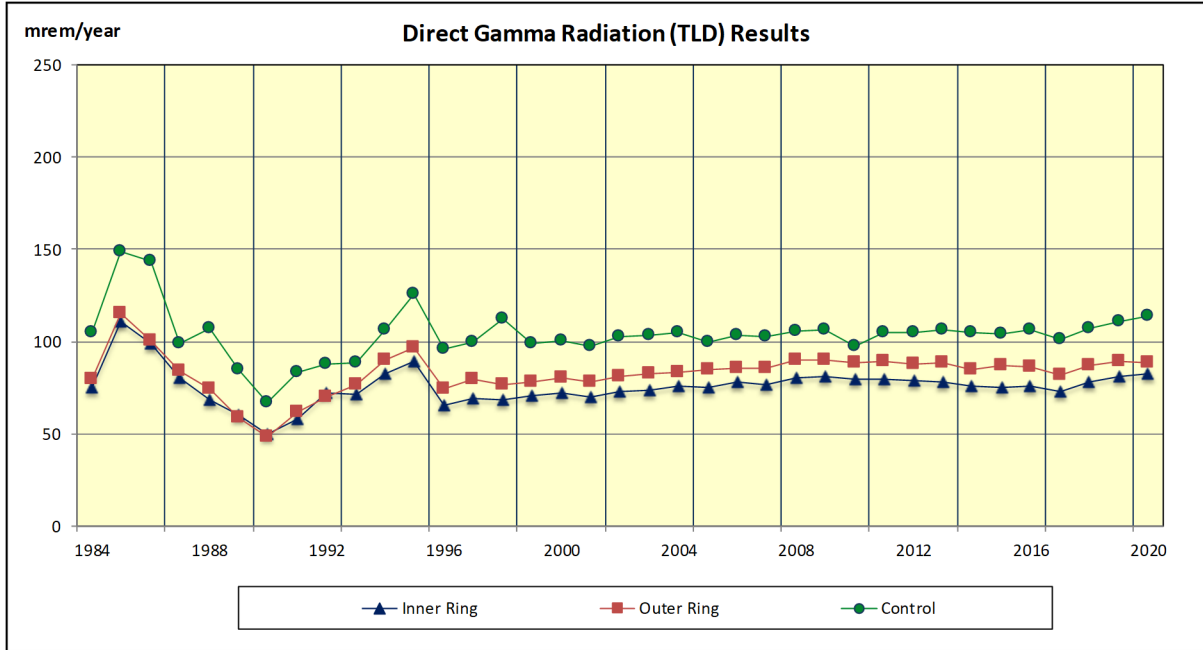
A TLD intercomparison program is conducted as part of the quality assurance program. Results of this program are included in section 4.7.

### **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 482 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<sup>(1)</sup>**

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
2020	8.25E1	8.84E1	1.14E2

(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 (5/18 – 5/19/2020) as required by SLC 16.11.6. The nearest Residence and milk-giving animal (cow, goat, etc.), where milk is used for human consumption, were identified within a distance of 8 kilometers (5.0 miles) from the station and in each of the sixteen meteorological sectors.

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.

The fleet Land Use Census Procedure AD-CP-ALL-0014 (Revision 4), Land Use Census Evaluation, was revised in 2020 to standardize the approach for the evaluation of the land use census dose calculations (NCR# 02343171).

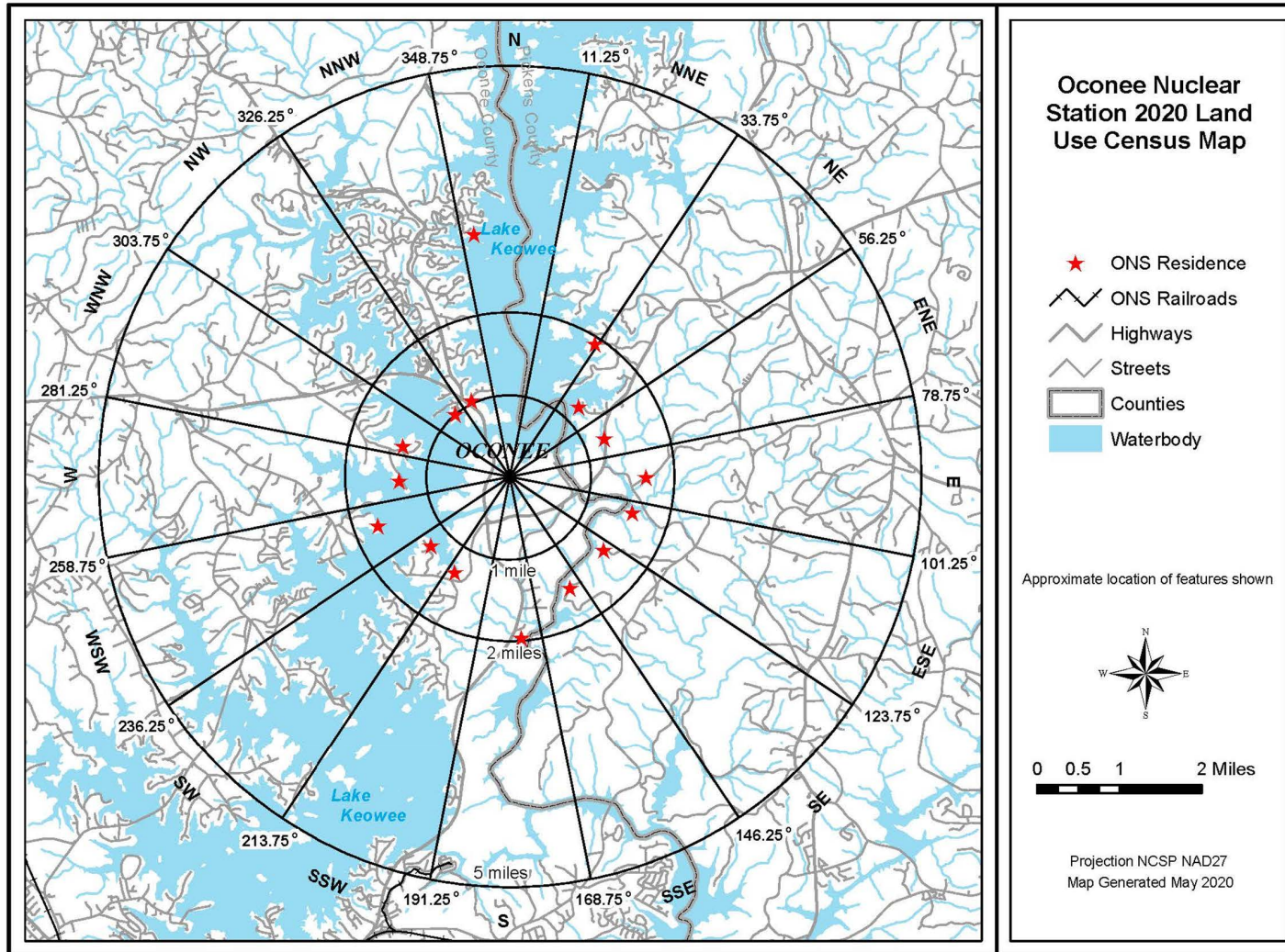
**Table 3.9 Oconee 2020 Land Use Census Results**

**Nearest Pathways (Miles)**

SECTOR	RESIDENCE		MILK ANIMAL	
	2019	2020	2019	2020
North	2.98	2.98	---	---
North-Northeast	1.84	1.84	---	---
Northeast	1.20	1.20	---	---
East-Northeast	1.24	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	1.49	1.35*	---	---
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



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# 4.0 QUALITY ASSURANCE

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## 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. During 2020, 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 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, gross beta analyses in drinking water samples, and low-level I-131 in milk samples.

## **4.5 DUKE ENERGY INTERLABORATORY COMPARISON PROGRAM**

In 2020 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 2020. 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, mixed gamma in soil, 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 2020 is documented in Table 4.0-A.

Interlaboratory cross check samples from EZA were received and analyzed in two of the four quarters of 2020. Table 4.0-A lists the performance for specific samples. Fifty-one nuclide results were reported to EZA of which forty-nine (96 %) 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**

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 using the NIST-traceable Hopewell and submits them for analysis of the unknown estimated delivered exposure. A summary of the 2020 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 2020. A summary of the GEL quality

assurance program results for the sample media types sent to GEL during 2020 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

#### 2020 Cross Check Results for EnRad Laboratories

Interlaboratory cross check samples from EZA were received and analyzed in two of the four quarters of 2020. 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. Fifty-one nuclide results were reported to EZA of which forty-nine (96 %) 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	E13185	Cs-137	2	pCi	225	238	0.95	Agreement
I-131 in Charcoal Cartridge	E13183	I-131	2	pCi	95.8	91.5	1.05	Agreement
Gamma in Soil	E13184	Ce-141	2	pCi/g	0.199	0.206	0.97	Agreement
		Co-58	2	pCi/g	0.168	0.178	0.94	Agreement
		Co-60	2	pCi/g	0.309	0.347	0.89	Agreement
		Cr-51	2	pCi/g	0.371	0.455	0.82	Agreement
		Cs-134	2	pCi/g	0.226	0.260	0.87	Agreement
		Cs-137	2	pCi/g	0.230	0.257	0.90	Agreement
		Fe-59	2	pCi/g	0.174	0.179	0.97	Agreement
		Mn-54	2	pCi/g	0.238	0.238	1.00	Agreement
		Zn-65	2	pCi/g	0.416	0.399	1.04	Agreement
Gamma in Simulated Vegetation	E13187	Ce-141	2	pCi/g	0.228	0.184	1.24	Agreement
		Co-58	2	pCi/g	0.172	0.159	1.08	Agreement
		Co-60	2	pCi/g	0.312	0.309	1.01	Agreement
		Cr-51	2	pCi/g	0.530	0.405	1.31	Non-Agreement <sup>(1)</sup>
		Cs-134	2	pCi/g	0.239	0.231	1.03	Agreement
		Cs-137	2	pCi/g	0.181	0.164	1.10	Agreement
		Fe-59	2	pCi/g	0.204	0.160	1.28	Non-Agreement <sup>(1)</sup>
		Mn-54	2	pCi/g	0.239	0.212	1.13	Agreement
		Zn-65	2	pCi/g	0.379	0.355	1.07	Agreement

(1) NCR # 02340178

## TABLE 4.0-A (Cont.)

Sample	Sample ID	Nuclide	Quarter	Units	EnRad Value	EZA Value	EnRad/EZA Ratio	Evaluation
Gamma in Simulated Vegetation	E13190	Ce-141	3	pCi/g	0.202	0.204	0.99	Agreement
		Co-58	3	pCi/g	0.213	0.244	0.87	Agreement
		Co-60	3	pCi/g	0.491	0.516	0.95	Agreement
		Cr-51	3	pCi/g	0.424	0.506	0.84	Agreement
		Cs-134	3	pCi/g	0.240	0.272	0.88	Agreement
		Cs-137	3	pCi/g	0.325	0.340	0.95	Agreement
		Fe-59	3	pCi/g	0.270	0.273	0.99	Agreement
		Mn-54	3	pCi/g	0.249	0.245	1.02	Agreement
		Zn-65	3	pCi/g	0.383	0.367	1.04	Agreement
Gamma in Composite Filter	E13188	Ce-141	3	pCi	109	107	1.02	Agreement
		Co-58	3	pCi	130	128	1.01	Agreement
		Co-60	3	pCi	278	271	1.03	Agreement
		Cr-51	3	pCi	247	266	0.93	Agreement
		Cs-134	3	pCi	136	143	0.95	Agreement
		Cs-137	3	pCi	187	179	1.05	Agreement
		Fe-59	3	pCi	152	143	1.06	Agreement
		Mn-54	3	pCi	136	129	1.06	Agreement
		Zn-65	3	pCi	215	193	1.12	Agreement
Gamma in Water	E13189	Ce-141	3	pCi/L	167	160	1.04	Agreement
		Co-58	3	pCi/L	202	191	1.06	Agreement
		Co-60	3	pCi/L	437	404	1.08	Agreement
		Cr-51	3	pCi/L	407	397	1.03	Agreement
		Cs-134	3	pCi/L	215	213	1.01	Agreement
		Cs-137	3	pCi/L	280	267	1.05	Agreement
		Fe-59	3	pCi/L	237	214	1.11	Agreement
		I-131	3	pCi/L	104	95.3	1.09	Agreement
		Mn-54	3	pCi/L	211	192	1.10	Agreement
Zn-65	3	pCi/L	322	288	1.12	Agreement		
Milk LLI-131	E13192	I-131	2	pCi/L	96.8	88.8	1.09	Agreement
Gross Beta in Water	E13191	Cs-137	2	pCi/L	244	240	1.02	Agreement
Tritium in Water	E13193	H-3	3	pCi/L	11900	12000	0.99	Agreement



# TABLE 4.0-B

## 2020 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 2020						2nd Quarter 2020						
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	
100007	59.67	60.97	-2.13	<+/-15%	Pass	102290	59.52	60.59	-1.77	<+/-15%	Pass	
100245	58.87	60.97	-3.44	<+/-15%	Pass	102359	59.12	60.59	-2.43	<+/-15%	Pass	
102059	60.34	60.97	-1.03	<+/-15%	Pass	103194	61.95	60.59	2.24	<+/-15%	Pass	
103098	64.18	60.97	5.26	<+/-15%	Pass	102029	60.76	60.59	0.28	<+/-15%	Pass	
103212	63.01	60.97	3.35	<+/-15%	Pass	102336	61.57	60.59	1.62	<+/-15%	Pass	
100074	60.02	60.97	-1.56	<+/-15%	Pass	103742	62.41	60.59	3.00	<+/-15%	Pass	
103148	62.83	60.97	3.05	<+/-15%	Pass	103721	63.00	60.59	3.98	<+/-15%	Pass	
102407	62.04	60.97	1.75	<+/-15%	Pass	102738	62.59	60.59	3.30	<+/-15%	Pass	
103615	62.69	60.97	2.82	<+/-15%	Pass	100007	58.49	60.59	-3.47	<+/-15%	Pass	
103087	64.32	60.97	5.49	<+/-15%	Pass	102931	61.99	60.59	2.31	<+/-15%	Pass	
Average Bias (B)			1.36				Average Bias (B)			0.91		
Standard Deviation (S)			3.18				Standard Deviation (S)			2.62		
Measure Performance  B +S			4.54	<15%	Pass	Measure Performance  B +S			3.52	<15%	Pass	
3rd Quarter 2020						4th Quarter 2020						
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	
103734	20.89	19.59	6.64	<+/-15%	Pass	103679	42.06	40.15	4.76	<+/-15%	Pass	
103438	21.02	19.59	7.30	<+/-15%	Pass	102783	38.82	40.15	-3.31	<+/-15%	Pass	
102970	18.88	19.59	-3.62	<+/-15%	Pass	103438	43.01	40.15	7.12	<+/-15%	Pass	
102770	20.78	19.59	6.07	<+/-15%	Pass	103734	42.84	40.15	6.70	<+/-15%	Pass	
103602	20.53	19.59	4.80	<+/-15%	Pass	100461	42.34	40.15	5.45	<+/-15%	Pass	
102741	21.03	19.59	7.35	<+/-15%	Pass	103029	42.84	40.15	6.70	<+/-15%	Pass	
102058	19.47	19.59	-0.61	<+/-15%	Pass	100180	38.59	40.15	-3.89	<+/-15%	Pass	
103029	21.06	19.59	7.50	<+/-15%	Pass	103557	43.52	40.15	8.39	<+/-15%	Pass	
103679	20.75	19.59	5.92	<+/-15%	Pass	103199	41.99	40.15	4.58	<+/-15%	Pass	
103557	21.00	19.59	7.20	<+/-15%	Pass	100154	39.71	40.15	-1.10	<+/-15%	Pass	
Average Bias (B)			4.85				Average Bias (B)			3.54		
Standard Deviation (S)			3.83				Standard Deviation (S)			4.55		
Measure Performance  B +S			8.69	<15%	Pass	Measure Performance  B +S			8.09	<15%	Pass	

# TABLE 4.0-C

## 2020 GEL Laboratories, LLC QA Results

Interlaboratory cross check samples from Eckert & Ziegler Analytics (EZA) were received and analyzed by GEL during 2020. 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
I-131 in Milk with EZA	E13173	I-131	2	pCi/L	83.1	81.5	1.02	Agreement
	E13177	I-131	3	pCi/L	94.9	95.0	1.00	Agreement
	E13181	I-131	4	pCi/L	94.4	91.9	1.08	Agreement

**APPENDIX A**

**ENVIRONMENTAL SAMPLING**  
**&**  
**ANALYSIS PROCEDURES**

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# APPENDIX A

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## 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 provides a description of the specific analyses performed on samples collected in the field. Changes to the sampling procedures and analyses procedures are also discussed in the section.

### I. CHANGE OF SAMPLING PROCEDURES

CY NISP-201, Revision 0 - Chemistry Quality Assurance Program Section 7C-Quality Controls for Sampling was implemented during 2020 for the sampling of Drinking Water and Surface Water. The method of sampling was not a substantial change due to the action of thrice rinsing the sampling containers was the only method change implemented.

### 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**

There were no fundamental changes to analysis procedure methods, but procedures were revised to increase quality control measurements to comply with CY NISP-201, Revision 0 - Chemistry Quality Assurance Program Section 7.

**APPENDIX B**

**RADIOLOGICAL  
ENVIRONMENTAL MONITORING  
PROGRAM**

**SUMMARY OF RESULTS**

**2020**

**OCONEE NUCLEAR STATION  
RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM DATA SUMMARY**

Oconee Nuclear Station  
Oconee County, South Carolina

Docket Numbers 50-269, 270, 287  
Calendar Year 2020

Medium or Pathway Sampled or Measured (Unit of Measurement)	Type and Total No. of Measurements Performed	Lower Limit of Detection (LLD) <sup>(1)</sup>	All Indicator Locations <sup>(2) (3)</sup> Mean Range	Location w/Highest Annual Mean		Control Locations Mean Range <sup>(2) (3)</sup>	No. of Non-Routine Report Meas.
				Name, Distance, and Direction	Mean Range <sup>(2) (3)</sup>		
Air Particulate (pCi/m <sup>3</sup> )	Gross Beta 312 <sup>(4)</sup>	See Table 2.2-C	2.06E-02 (260/260) 8.48E-03 – 4.57E-02	085 (0.88 mi NNW)	2.14E-02 (52/52) 1.20E-02 – 4.44E-02	081 (9.33 mi SE) 1.87E-02 (52/52) 4.92E-03 – 4.38E-02	0
	Gamma 24 <sup>(4)</sup>	See Table 2.2-C	All less than LLD	-----	-----	All less than LLD	0
Air Radioiodine (pCi/m <sup>3</sup> )	Gamma 312 <sup>(4)</sup>	See Table 2.2-C	All less than LLD	-----	-----	All less than LLD	0
Drinking Water (pCi/l)	Gross Beta 39 <sup>(4)</sup>	4	3.85E+00 (4/26) 3.31E+00 – 5.43E+00	066 (18.9 mi SSE)	4.02E+00 (3/13) 3.31E+00 – 5.43E+00	064 (6.67 mi SSW) 3.86E+00 (1/13) 3.86E+00 – 3.86E+00	0
	Gamma 39 <sup>(4)</sup>	See Table 2.2-C	All less than LLD	-----	-----	All less than LLD	0
	Tritium 12 <sup>(4)(6)</sup>	2000	2.89E+02 (4/8) 2.23E+02 – 3.41E+02	066 (18.9 mi SSE)	2.89E+02 (4/4) 2.23E+02 – 3.41E+02	All less than LLD	0
Surface Water (pCi/l)	Gamma 26 <sup>(4)</sup>	See Table 2.2-C	All less than LLD	-----	-----	All less than LLD	0
	Tritium 8 <sup>(4)(6)</sup>	2000	3.97E+03 (4/4) 2.53E+03 – 5.39E+03	063.1 (0.79 mi E)	3.97E+03 (4/4) 2.53E+03 – 5.39E+03	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 25 <sup>(4)</sup>	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 2020

Medium or Pathway Sampled or Measured (Unit of Measurement)	Type and Total No. of Measurements Performed	Lower Limit of Detection (LLD) <sup>(1)</sup>	All Indicator Locations <sup>(2) (3)</sup> Mean Range	Location w/Highest Annual Mean		Control Locations Mean Range <sup>(2) (3)</sup>	No. of Non-Routine Report Meas.
				Name, Distance, and Direction	Mean Range <sup>(2) (3)</sup>		
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	See Table 2.2-C	All less than LLD	-----	-----	All less than LLD	0
TLD (mR per quarter) <sup>(5)</sup>	TLD Readout 199 <sup>(4)</sup>	-----	2.25E+01 (191/191) 1.37E+01 – 3.45E+01	024 (0.81 mi E)	3.01E+01 (4/4) 2.76E+01 – 3.45E+01	058 (9.39 mi WSW) 093 (9.34 mi SE) 3.00E+01 (8/8) 2.47E+01 – 3.59E+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 ( $n * 0.95$  ergs/g-Roentgen) <sup>1</sup>.
6. Quarterly tritium composites determined using quarter days (92 days +/- 25% (23 days)).

<sup>1</sup> Cember, H. (2009). Introduction to Health Physics, 4<sup>th</sup> 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 99.61% availability in 2020.

Location	Scheduled Collection Dates	Code	Description & Action to Prevent Recurrence	Corrective Action
078.1	1/13-1/20/2020	PI	8.15 hours downtime, power interruption.	NCR # 02311782
093	3/2-3/9/2020	OT	43.90 hours downtime, air sampler malfunction.	NCR # 02320601
093	4/6-4/13/2020	PO	5.38 hours downtime, power outage.	NCR # 02325147
085	4/13-4/20/2020	PO	27.75 hours downtime, power outage.	NCR # 02326789
077	10/26-11/2/2020	PI	57.56 hours downtime, power interruption.	NCR # 02356168
078.1	10/26-11/2/2020	PI	57.49 hours downtime, power interruption.	NCR # 02356170

#### 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 97.20% availability in 2020.

Location	Scheduled Collection Dates	Code	Description & Action to Prevent Recurrence	Corrective Action
063.1	1/27-2/24/2020	IW	506.32 hours downtime due to flood damage.	NCR # 02315103 NCR # 02317936
063.1	4/20-5/18/2020	PS	Submersible pump was out of service. Grab sample was collected in addition to the water in the composite sampler.	NCR # 02331636
063.1	5/18-6/15/2020	PS	673.35 hours downtime due to submersible pump out of service. Daily grab samples were collected during collection period. Sampling site improvements were performed to minimize future issues.	NCR # 02336269

## **C.2 UNAVAILABLE ANALYSES**

### **Direct Gamma Radiation (TLD)**

Location	Scheduled Collection Dates	Code	Description & Action to Prevent Recurrence	Corrective Action
089	3/10-6/9/2020	VN	Alpha and Bravo TLDs were missing due to vandalism.	NCR # 02334557

**APPENDIX D**

**ANALYTICAL DEVIATIONS**

# APPENDIX D

## OCONEE 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

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 collection indicated tampering/vandalism with one of the two co-located TLDs. The Bravo TLD 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
089	12/10/2019-3/10/2020	VN	Alpha TLD was missing due to vandalism.	NCR # 02320613

Oconee REMP milk collections indicated incurred sample loss and the other missed a detection limit. One milk sample was clabbered upon receipt due to shipping delay and could not be analyzed for Low Level I-131. The shipping method was changed to prevent recurrence. The other did not meet the Low Level I-131 detection limit due to a lab processing error. The Laboratory Information Management System scheduler was changed to prevent recurrence.

#### Milk

Location	Scheduled Collection Dates	Code	Description & Action to Prevent Recurrence	Corrective Action
071	6/22/2020	SL	Sample loss due to clabbered milk and low level I-131 analysis was not possible.	NCR# 02337398
071	9/28/2020	AD	Low Level I-131 analysis did not meet detection limit.	NCR # 02356991

**APPENDIX E**

**RADIOLOGICAL  
ENVIRONMENTAL MONITORING  
PROGRAM RESULTS**

**2020**

This appendix includes sample analysis report summaries and supportive data generated from each sample medium for 2020

# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (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
514498	12/30/2019 - 1/6/2020	Beta	1.66E-02	2.93E-03	3.38E-03
514937	1/6/2020 - 1/13/2020	Beta	1.83E-02	3.04E-03	3.37E-03
515276	1/13/2020 - 1/20/2020	Beta	2.07E-02	2.79E-03	2.91E-03
515507	1/20/2020 - 1/27/2020	Beta	2.20E-02	3.19E-03	3.38E-03
515901	1/27/2020 - 2/3/2020	Beta	1.90E-02	3.03E-03	3.36E-03
516154	2/3/2020 - 2/10/2020	Beta	1.56E-02	2.79E-03	3.10E-03
516524	2/10/2020 - 2/17/2020	Beta	1.71E-02	2.99E-03	3.43E-03
516898	2/17/2020 - 2/24/2020	Beta	2.20E-02	2.75E-03	2.63E-03
517424	2/24/2020 - 3/2/2020	Beta	1.63E-02	2.92E-03	3.38E-03
517686	3/2/2020 - 3/9/2020	Beta	1.91E-02	3.02E-03	3.30E-03
518731	3/9/2020 - 3/16/2020	Beta	1.90E-02	3.07E-03	3.44E-03
519325	3/16/2020 - 3/23/2020	Beta	1.90E-02	2.90E-03	2.99E-03
519711	3/23/2020 - 3/30/2020	Beta	1.73E-02	2.56E-03	2.68E-03
520313	12/30/2019 - 3/30/2020	Cs-134	<1.49E-03	0.00E+00	1.49E-03
		Cs-137	<1.47E-03	0.00E+00	1.47E-03
		Be-7	1.19E-01	3.78E-02	4.07E-02
		K-40	<2.97E-02	0.00E+00	2.97E-02
520307	3/30/2020 - 4/6/2020	Beta	2.15E-02	2.79E-03	2.80E-03
520523	4/6/2020 - 4/13/2020	Beta	2.27E-02	3.24E-03	3.47E-03
520819	4/13/2020 - 4/20/2020	Beta	2.36E-02	2.81E-03	2.55E-03
521620	4/20/2020 - 4/27/2020	Beta	1.44E-02	2.81E-03	3.33E-03
522047	4/27/2020 - 5/4/2020	Beta	2.02E-02	2.93E-03	2.93E-03
522357	5/4/2020 - 5/11/2020	Beta	1.93E-02	2.68E-03	2.73E-03
522610	5/11/2020 - 5/18/2020	Beta	2.11E-02	2.82E-03	2.92E-03
523116	5/18/2020 - 5/26/2020	Beta	1.15E-02	2.38E-03	2.94E-03
523481	5/26/2020 - 6/1/2020	Beta	1.75E-02	3.18E-03	3.60E-03
523890	6/1/2020 - 6/8/2020	Beta	2.13E-02	3.28E-03	3.64E-03





# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (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
524455	6/8/2020 - 6/15/2020	Beta	1.68E-02	2.82E-03	3.09E-03
524776	6/15/2020 - 6/22/2020	Beta	1.44E-02	2.74E-03	3.19E-03
525000	6/22/2020 - 6/29/2020	Beta	1.64E-02	3.00E-03	3.60E-03
525392	3/30/2020 - 6/29/2020	Cs-134	<1.59E-03	0.00E+00	1.59E-03
		Cs-137	<1.71E-03	0.00E+00	1.71E-03
		Be-7	1.64E-01	3.87E-02	2.83E-02
		K-40	<3.66E-02	0.00E+00	3.66E-02
525386	6/29/2020 - 7/6/2020	Beta	2.79E-02	3.04E-03	2.74E-03
525597	7/6/2020 - 7/13/2020	Beta	1.67E-02	2.62E-03	2.92E-03
525966	7/13/2020 - 7/20/2020	Beta	3.64E-02	3.40E-03	2.79E-03
526284	7/20/2020 - 7/27/2020	Beta	1.71E-02	2.69E-03	3.05E-03
526571	7/27/2020 - 8/3/2020	Beta	1.89E-02	2.59E-03	2.55E-03
526887	8/3/2020 - 8/10/2020	Beta	2.61E-02	3.40E-03	3.36E-03
527382	8/10/2020 - 8/17/2020	Beta	2.40E-02	2.96E-03	2.98E-03
527658	8/17/2020 - 8/24/2020	Beta	2.44E-02	3.29E-03	3.25E-03
527960	8/24/2020 - 8/31/2020	Beta	1.65E-02	2.52E-03	2.68E-03
528706	8/31/2020 - 9/8/2020	Beta	2.39E-02	3.11E-03	3.31E-03
529046	9/8/2020 - 9/14/2020	Beta	1.32E-02	2.63E-03	3.15E-03
530046	9/14/2020 - 9/21/2020	Beta	2.06E-02	3.04E-03	3.06E-03
530335	9/21/2020 - 9/28/2020	Beta	2.03E-02	3.13E-03	3.49E-03
531136	6/29/2020 - 9/28/2020	Cs-134	<1.46E-03	0.00E+00	1.46E-03
		Cs-137	<1.46E-03	0.00E+00	1.46E-03
		Be-7	1.08E-01	3.24E-02	3.47E-02
		K-40	<2.97E-02	0.00E+00	2.97E-02
530604	9/28/2020 - 10/5/2020	Beta	2.06E-02	2.96E-03	2.94E-03
531130	10/5/2020 - 10/12/2020	Beta	3.31E-02	3.62E-03	3.11E-03
531722	10/12/2020 - 10/19/2020	Beta	2.38E-02	3.27E-03	3.38E-03
532120	10/19/2020 - 10/26/2020	Beta	1.92E-02	3.02E-03	3.31E-03
532541	10/26/2020 - 11/2/2020	Beta	2.04E-02	4.06E-03	4.73E-03



# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (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
532857	11/2/2020 - 11/9/2020	Beta	2.26E-02	3.06E-03	2.85E-03
533382	11/9/2020 - 11/16/2020	Beta	1.53E-02	2.93E-03	3.57E-03
533841	11/16/2020 - 11/23/2020	Beta	1.93E-02	2.88E-03	2.91E-03
534138	11/23/2020 - 11/30/2020	Beta	3.24E-02	3.52E-03	2.98E-03
534604	11/30/2020 - 12/7/2020	Beta	2.32E-02	3.24E-03	3.32E-03
535370	12/7/2020 - 12/14/2020	Beta	3.90E-02	3.91E-03	3.27E-03
535937	12/14/2020 - 12/21/2020	Beta	2.53E-02	3.18E-03	2.93E-03
536213	12/21/2020 - 12/28/2020	Beta	1.89E-02	3.34E-03	4.07E-03
536795	9/28/2020 - 12/28/2020	Cs-134	<1.94E-03	0.00E+00	1.94E-03
		Cs-137	<1.48E-03	0.00E+00	1.48E-03
		Be-7	1.40E-01	3.66E-02	3.50E-02
		K-40	<3.76E-02	0.00E+00	3.76E-02

## Sample Point 078.1 [ INDICATOR - WSW @ 0.53 miles ]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
514499	12/30/2019 - 1/6/2020	Beta	1.65E-02	2.92E-03	3.38E-03
514938	1/6/2020 - 1/13/2020	Beta	1.67E-02	2.95E-03	3.37E-03
515277	1/13/2020 - 1/20/2020	Beta	2.11E-02	2.91E-03	3.06E-03
515508	1/20/2020 - 1/27/2020	Beta	2.35E-02	3.26E-03	3.38E-03
515902	1/27/2020 - 2/3/2020	Beta	1.76E-02	2.96E-03	3.36E-03
516155	2/3/2020 - 2/10/2020	Beta	1.76E-02	2.89E-03	3.10E-03
516525	2/10/2020 - 2/17/2020	Beta	1.72E-02	3.00E-03	3.43E-03
516899	2/17/2020 - 2/24/2020	Beta	2.15E-02	2.74E-03	2.63E-03
517425	2/24/2020 - 3/2/2020	Beta	1.74E-02	2.98E-03	3.38E-03
517687	3/2/2020 - 3/9/2020	Beta	2.02E-02	3.07E-03	3.30E-03
518732	3/9/2020 - 3/16/2020	Beta	1.73E-02	2.99E-03	3.45E-03
519326	3/16/2020 - 3/23/2020	Beta	1.98E-02	2.94E-03	2.99E-03
519712	3/23/2020 - 3/30/2020	Beta	1.34E-02	2.36E-03	2.68E-03
520314	12/30/2019 - 3/30/2020	Cs-134	<1.64E-03	0.00E+00	1.64E-03
		Cs-137	<1.66E-03	0.00E+00	1.66E-03
		Be-7	1.51E-01	4.03E-02	3.73E-02



# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (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
520314	12/30/2019 - 3/30/2020	K-40	3.27E-02	1.72E-02	1.82E-02
520308	3/30/2020 - 4/6/2020	Beta	2.23E-02	2.83E-03	2.80E-03
520524	4/6/2020 - 4/13/2020	Beta	2.05E-02	3.13E-03	3.47E-03
520820	4/13/2020 - 4/20/2020	Beta	2.27E-02	2.77E-03	2.55E-03
521621	4/20/2020 - 4/27/2020	Beta	1.23E-02	2.69E-03	3.33E-03
522048	4/27/2020 - 5/4/2020	Beta	2.01E-02	2.93E-03	2.92E-03
522358	5/4/2020 - 5/11/2020	Beta	2.09E-02	2.75E-03	2.74E-03
522611	5/11/2020 - 5/18/2020	Beta	2.07E-02	2.80E-03	2.92E-03
523117	5/18/2020 - 5/26/2020	Beta	1.24E-02	2.44E-03	2.94E-03
523482	5/26/2020 - 6/1/2020	Beta	1.54E-02	3.07E-03	3.60E-03
523891	6/1/2020 - 6/8/2020	Beta	2.16E-02	3.30E-03	3.64E-03
524456	6/8/2020 - 6/15/2020	Beta	1.54E-02	2.80E-03	3.17E-03
524777	6/15/2020 - 6/22/2020	Beta	1.50E-02	2.72E-03	3.11E-03
525001	6/22/2020 - 6/29/2020	Beta	1.53E-02	2.94E-03	3.60E-03
525393	3/30/2020 - 6/29/2020	Cs-134	<1.27E-03	0.00E+00	1.27E-03
		Cs-137	<1.58E-03	0.00E+00	1.58E-03
		Be-7	1.37E-01	3.71E-02	3.69E-02
		K-40	<2.97E-02	0.00E+00	2.97E-02
525387	6/29/2020 - 7/6/2020	Beta	2.69E-02	3.00E-03	2.74E-03
525598	7/6/2020 - 7/13/2020	Beta	1.91E-02	2.73E-03	2.92E-03
525967	7/13/2020 - 7/20/2020	Beta	3.73E-02	3.42E-03	2.78E-03
526285	7/20/2020 - 7/27/2020	Beta	1.79E-02	2.72E-03	3.05E-03
526572	7/27/2020 - 8/3/2020	Beta	1.73E-02	2.51E-03	2.55E-03
526888	8/3/2020 - 8/10/2020	Beta	2.59E-02	3.39E-03	3.36E-03
527383	8/10/2020 - 8/17/2020	Beta	2.02E-02	2.80E-03	2.98E-03
527659	8/17/2020 - 8/24/2020	Beta	2.37E-02	3.25E-03	3.25E-03
527961	8/24/2020 - 8/31/2020	Beta	1.51E-02	2.45E-03	2.68E-03



# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 078.1 [ INDICATOR - WSW @ 0.53 miles ]

Sample ID: 528707	Sample Dates: 8/31/2020 - 9/8/2020	Nuclide Beta	Activity 2.13E-02	2 Sigma Error 3.00E-03	MDA 3.31E-03
Sample ID: 529047	Sample Dates: 9/8/2020 - 9/14/2020	Nuclide Beta	Activity 1.40E-02	2 Sigma Error 2.68E-03	MDA 3.15E-03
Sample ID: 530047	Sample Dates: 9/14/2020 - 9/21/2020	Nuclide Beta	Activity 2.39E-02	2 Sigma Error 3.20E-03	MDA 3.06E-03
Sample ID: 530336	Sample Dates: 9/21/2020 - 9/28/2020	Nuclide Beta	Activity 2.29E-02	2 Sigma Error 3.26E-03	MDA 3.49E-03
Sample ID: 531137	Sample Dates: 6/29/2020 - 9/28/2020	Nuclide Cs-134 Cs-137 Be-7 K-40	Activity <1.75E-03 <1.65E-03 1.55E-01 2.24E-02	2 Sigma Error 0.00E+00 0.00E+00 3.51E-02 1.41E-02	MDA 1.75E-03 1.65E-03 2.65E-02 1.59E-02
Sample ID: 530605	Sample Dates: 9/28/2020 - 10/5/2020	Nuclide Beta	Activity 1.91E-02	2 Sigma Error 2.89E-03	MDA 2.94E-03
Sample ID: 531131	Sample Dates: 10/5/2020 - 10/12/2020	Nuclide Beta	Activity 3.45E-02	2 Sigma Error 3.69E-03	MDA 3.11E-03
Sample ID: 531723	Sample Dates: 10/12/2020 - 10/19/2020	Nuclide Beta	Activity 2.27E-02	2 Sigma Error 3.21E-03	MDA 3.36E-03
Sample ID: 532121	Sample Dates: 10/19/2020 - 10/26/2020	Nuclide Beta	Activity 2.02E-02	2 Sigma Error 3.08E-03	MDA 3.32E-03
Sample ID: 532542	Sample Dates: 10/26/2020 - 11/2/2020	Nuclide Beta	Activity 1.66E-02	2 Sigma Error 3.82E-03	MDA 4.72E-03
Sample ID: 532858	Sample Dates: 11/2/2020 - 11/9/2020	Nuclide Beta	Activity 2.97E-02	2 Sigma Error 3.40E-03	MDA 2.85E-03
Sample ID: 533383	Sample Dates: 11/9/2020 - 11/16/2020	Nuclide Beta	Activity 1.73E-02	2 Sigma Error 3.02E-03	MDA 3.56E-03
Sample ID: 533842	Sample Dates: 11/16/2020 - 11/23/2020	Nuclide Beta	Activity 2.12E-02	2 Sigma Error 2.99E-03	MDA 2.93E-03
Sample ID: 534139	Sample Dates: 11/23/2020 - 11/30/2020	Nuclide Beta	Activity 3.28E-02	2 Sigma Error 3.54E-03	MDA 2.98E-03
Sample ID: 534605	Sample Dates: 11/30/2020 - 12/7/2020	Nuclide Beta	Activity 2.48E-02	2 Sigma Error 3.31E-03	MDA 3.32E-03
Sample ID: 535371	Sample Dates: 12/7/2020 - 12/14/2020	Nuclide Beta	Activity 4.57E-02	2 Sigma Error 4.17E-03	MDA 3.27E-03
Sample ID: 535938	Sample Dates: 12/14/2020 - 12/21/2020	Nuclide Beta	Activity 2.67E-02	2 Sigma Error 3.25E-03	MDA 2.93E-03
Sample ID: 536214	Sample Dates: 12/21/2020 - 12/28/2020	Nuclide Beta	Activity 2.22E-02	2 Sigma Error 3.49E-03	MDA 4.08E-03
Sample ID: 536796	Sample Dates: 9/28/2020 - 12/28/2020	Nuclide Cs-134 Cs-137 Be-7 K-40	Activity <1.48E-03 <2.05E-03 1.63E-01 4.52E-02	2 Sigma Error 0.00E+00 0.00E+00 4.37E-02 1.94E-02	MDA 1.48E-03 2.05E-03 4.84E-02 1.67E-02

## Sample Point 079 [ INDICATOR - NE @ 0.56 miles ]

Sample ID: 514500	Sample Dates: 12/30/2019 - 1/6/2020	Nuclide Beta	Activity 1.65E-02	2 Sigma Error 2.93E-03	MDA 3.39E-03
Sample ID: 514939	Sample Dates: 1/6/2020 - 1/13/2020	Nuclide Beta	Activity 1.85E-02	2 Sigma Error 3.04E-03	MDA 3.37E-03
Sample ID: 515278	Sample Dates: 1/13/2020 - 1/20/2020	Nuclide Beta	Activity 1.94E-02	2 Sigma Error 2.73E-03	MDA 2.91E-03

# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (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
515509	1/20/2020 - 1/27/2020	Beta	2.19E-02	3.18E-03	3.38E-03
515903	1/27/2020 - 2/3/2020	Beta	1.70E-02	2.92E-03	3.36E-03
516156	2/3/2020 - 2/10/2020	Beta	1.77E-02	2.90E-03	3.10E-03
516526	2/10/2020 - 2/17/2020	Beta	1.54E-02	2.91E-03	3.43E-03
516900	2/17/2020 - 2/24/2020	Beta	2.24E-02	2.77E-03	2.62E-03
517426	2/24/2020 - 3/2/2020	Beta	1.58E-02	2.90E-03	3.38E-03
517688	3/2/2020 - 3/9/2020	Beta	1.75E-02	2.92E-03	3.30E-03
518733	3/9/2020 - 3/16/2020	Beta	1.82E-02	3.03E-03	3.46E-03
519327	3/16/2020 - 3/23/2020	Beta	1.69E-02	2.79E-03	2.98E-03
519713	3/23/2020 - 3/30/2020	Beta	1.64E-02	2.51E-03	2.69E-03
520315	12/30/2019 - 3/30/2020	Cs-134	<1.65E-03	0.00E+00	1.65E-03
		Cs-137	<1.34E-03	0.00E+00	1.34E-03
		Be-7	1.50E-01	3.74E-02	2.52E-02
		K-40	1.40E-02	1.29E-02	1.86E-02
520309	3/30/2020 - 4/6/2020	Beta	2.29E-02	2.86E-03	2.79E-03
520525	4/6/2020 - 4/13/2020	Beta	2.21E-02	3.20E-03	3.46E-03
520821	4/13/2020 - 4/20/2020	Beta	2.45E-02	2.85E-03	2.56E-03
521622	4/20/2020 - 4/27/2020	Beta	1.29E-02	2.73E-03	3.34E-03
522049	4/27/2020 - 5/4/2020	Beta	1.88E-02	2.86E-03	2.92E-03
522359	5/4/2020 - 5/11/2020	Beta	1.79E-02	2.61E-03	2.74E-03
522612	5/11/2020 - 5/18/2020	Beta	2.26E-02	2.88E-03	2.92E-03
523118	5/18/2020 - 5/26/2020	Beta	1.07E-02	2.33E-03	2.93E-03
523483	5/26/2020 - 6/1/2020	Beta	1.90E-02	3.27E-03	3.62E-03
523892	6/1/2020 - 6/8/2020	Beta	2.45E-02	3.39E-03	3.58E-03
524457	6/8/2020 - 6/15/2020	Beta	1.70E-02	2.85E-03	3.11E-03
524778	6/15/2020 - 6/22/2020	Beta	1.66E-02	2.87E-03	3.22E-03
525002	6/22/2020 - 6/29/2020	Beta	1.74E-02	3.06E-03	3.61E-03



# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (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
525394	3/30/2020 - 6/29/2020	Cs-134	<1.61E-03	0.00E+00	1.61E-03
		Cs-137	<1.55E-03	0.00E+00	1.55E-03
		Be-7	1.52E-01	3.66E-02	3.01E-02
		K-40	2.33E-02	1.36E-02	1.27E-02
525388	6/29/2020 - 7/6/2020	Beta	2.68E-02	2.99E-03	2.73E-03
525599	7/6/2020 - 7/13/2020	Beta	1.85E-02	2.69E-03	2.91E-03
525968	7/13/2020 - 7/20/2020	Beta	3.35E-02	3.29E-03	2.79E-03
526286	7/20/2020 - 7/27/2020	Beta	2.10E-02	2.86E-03	3.05E-03
526573	7/27/2020 - 8/3/2020	Beta	1.80E-02	2.54E-03	2.54E-03
526889	8/3/2020 - 8/10/2020	Beta	2.71E-02	3.44E-03	3.36E-03
527384	8/10/2020 - 8/17/2020	Beta	2.04E-02	2.81E-03	2.99E-03
527660	8/17/2020 - 8/24/2020	Beta	2.45E-02	3.29E-03	3.25E-03
527962	8/24/2020 - 8/31/2020	Beta	1.55E-02	2.47E-03	2.67E-03
528708	8/31/2020 - 9/8/2020	Beta	2.71E-02	3.24E-03	3.30E-03
529048	9/8/2020 - 9/14/2020	Beta	1.64E-02	2.82E-03	3.17E-03
530048	9/14/2020 - 9/21/2020	Beta	2.53E-02	3.27E-03	3.07E-03
530337	9/21/2020 - 9/28/2020	Beta	1.92E-02	3.07E-03	3.48E-03
531138	6/29/2020 - 9/28/2020	Cs-134	<1.44E-03	0.00E+00	1.44E-03
		Cs-137	<1.02E-03	0.00E+00	1.02E-03
		Be-7	1.35E-01	3.69E-02	3.91E-02
		K-40	3.29E-02	1.81E-02	2.12E-02
530606	9/28/2020 - 10/5/2020	Beta	2.36E-02	3.10E-03	2.93E-03
531132	10/5/2020 - 10/12/2020	Beta	3.60E-02	3.76E-03	3.12E-03
531724	10/12/2020 - 10/19/2020	Beta	2.37E-02	3.26E-03	3.36E-03
532122	10/19/2020 - 10/26/2020	Beta	1.80E-02	2.97E-03	3.32E-03
532543	10/26/2020 - 11/2/2020	Beta	1.79E-02	2.88E-03	3.07E-03
532859	11/2/2020 - 11/9/2020	Beta	3.05E-02	3.44E-03	2.87E-03
533384	11/9/2020 - 11/16/2020	Beta	1.66E-02	2.99E-03	3.55E-03
533843	11/16/2020 - 11/23/2020	Beta	2.47E-02	3.16E-03	2.93E-03



## OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (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
534140	11/23/2020 - 11/30/2020	Beta	3.28E-02	3.54E-03	2.97E-03
534606	11/30/2020 - 12/7/2020	Beta	2.34E-02	3.26E-03	3.33E-03
535372	12/7/2020 - 12/14/2020	Beta	4.23E-02	4.03E-03	3.25E-03
535939	12/14/2020 - 12/21/2020	Beta	2.45E-02	3.16E-03	2.95E-03
536215	12/21/2020 - 12/28/2020	Beta	1.89E-02	3.32E-03	4.06E-03
536797	9/28/2020 - 12/28/2020	Cs-134	<1.76E-03	0.00E+00	1.76E-03
		Cs-137	<1.32E-03	0.00E+00	1.32E-03
		Be-7	1.52E-01	3.78E-02	3.53E-02
		K-40	2.73E-02	1.97E-02	2.78E-02

Sample Point 084 [ INDICATOR - NNE @ 2.58 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514501	12/30/2019 - 1/6/2020	Beta	1.37E-02	2.78E-03	3.38E-03
514940	1/6/2020 - 1/13/2020	Beta	1.29E-02	2.75E-03	3.37E-03
515279	1/13/2020 - 1/20/2020	Beta	1.28E-02	2.42E-03	2.91E-03
515510	1/20/2020 - 1/27/2020	Beta	1.43E-02	2.80E-03	3.38E-03
515904	1/27/2020 - 2/3/2020	Beta	1.54E-02	2.84E-03	3.36E-03
516157	2/3/2020 - 2/10/2020	Beta	1.34E-02	2.66E-03	3.10E-03
516527	2/10/2020 - 2/17/2020	Beta	1.20E-02	2.72E-03	3.43E-03
516901	2/17/2020 - 2/24/2020	Beta	1.61E-02	2.48E-03	2.63E-03
517427	2/24/2020 - 3/2/2020	Beta	1.33E-02	2.75E-03	3.37E-03
517689	3/2/2020 - 3/9/2020	Beta	1.61E-02	2.85E-03	3.30E-03
518734	3/9/2020 - 3/16/2020	Beta	1.51E-02	2.87E-03	3.45E-03
519328	3/16/2020 - 3/23/2020	Beta	1.70E-02	2.79E-03	2.99E-03
519714	3/23/2020 - 3/30/2020	Beta	1.30E-02	2.34E-03	2.68E-03
520317	12/30/2019 - 3/30/2020	Cs-134	<1.47E-03	0.00E+00	1.47E-03
		Cs-137	<1.33E-03	0.00E+00	1.33E-03
		Be-7	1.08E-01	3.63E-02	4.03E-02
		K-40	<2.92E-02	0.00E+00	2.92E-02
520310	3/30/2020 - 4/6/2020	Beta	1.93E-02	2.69E-03	2.80E-03
520526	4/6/2020 - 4/13/2020	Beta	1.89E-02	3.07E-03	3.48E-03



# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (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
520822	4/13/2020 - 4/20/2020	Beta	1.76E-02	2.54E-03	2.55E-03
521623	4/20/2020 - 4/27/2020	Beta	9.65E-03	2.52E-03	3.32E-03
522050	4/27/2020 - 5/4/2020	Beta	1.87E-02	2.86E-03	2.93E-03
522360	5/4/2020 - 5/11/2020	Beta	1.45E-02	2.44E-03	2.73E-03
522613	5/11/2020 - 5/18/2020	Beta	1.81E-02	2.68E-03	2.92E-03
523119	5/18/2020 - 5/26/2020	Beta	8.48E-03	2.21E-03	2.94E-03
523484	5/26/2020 - 6/1/2020	Beta	1.49E-02	3.03E-03	3.60E-03
523893	6/1/2020 - 6/8/2020	Beta	1.91E-02	3.18E-03	3.65E-03
524458	6/8/2020 - 6/15/2020	Beta	1.65E-02	2.81E-03	3.09E-03
524779	6/15/2020 - 6/22/2020	Beta	1.37E-02	2.69E-03	3.19E-03
525003	6/22/2020 - 6/29/2020	Beta	1.61E-02	2.99E-03	3.60E-03
525395	3/30/2020 - 6/29/2020	Cs-134	<1.44E-03	0.00E+00	1.44E-03
		Cs-137	<1.53E-03	0.00E+00	1.53E-03
		Be-7	1.18E-01	3.52E-02	3.79E-02
		K-40	<3.01E-02	0.00E+00	3.01E-02
525389	6/29/2020 - 7/6/2020	Beta	2.31E-02	2.85E-03	2.74E-03
525600	7/6/2020 - 7/13/2020	Beta	1.57E-02	2.56E-03	2.91E-03
525969	7/13/2020 - 7/20/2020	Beta	3.35E-02	3.28E-03	2.79E-03
526287	7/20/2020 - 7/27/2020	Beta	1.90E-02	2.77E-03	3.05E-03
526574	7/27/2020 - 8/3/2020	Beta	1.75E-02	2.52E-03	2.55E-03
526890	8/3/2020 - 8/10/2020	Beta	2.35E-02	3.27E-03	3.36E-03
527385	8/10/2020 - 8/17/2020	Beta	1.97E-02	2.78E-03	2.98E-03
527661	8/17/2020 - 8/24/2020	Beta	1.95E-02	3.04E-03	3.25E-03
527963	8/24/2020 - 8/31/2020	Beta	1.37E-02	2.39E-03	2.68E-03
528709	8/31/2020 - 9/8/2020	Beta	2.52E-02	3.17E-03	3.31E-03
529049	9/8/2020 - 9/14/2020	Beta	1.41E-02	2.68E-03	3.14E-03
530049	9/14/2020 - 9/21/2020	Beta	2.20E-02	3.11E-03	3.06E-03





# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (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
530338	9/21/2020 - 9/28/2020	Beta	1.83E-02	3.04E-03	3.49E-03
531139	6/29/2020 - 9/28/2020	Nuclide	Activity	2 Sigma Error	MDA
		Cs-134	<1.48E-03	0.00E+00	1.48E-03
		Cs-137	<1.06E-03	0.00E+00	1.06E-03
		Be-7	1.08E-01	3.22E-02	3.33E-02
		K-40	1.96E-02	1.35E-02	1.59E-02
530607	9/28/2020 - 10/5/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	2.18E-02	3.02E-03	2.94E-03
531133	10/5/2020 - 10/12/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	3.50E-02	3.71E-03	3.11E-03
531725	10/12/2020 - 10/19/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	2.10E-02	3.14E-03	3.37E-03
532123	10/19/2020 - 10/26/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	1.57E-02	2.84E-03	3.31E-03
532544	10/26/2020 - 11/2/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	1.88E-02	2.95E-03	3.08E-03
532860	11/2/2020 - 11/9/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	2.53E-02	3.19E-03	2.85E-03
533385	11/9/2020 - 11/16/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	1.61E-02	2.97E-03	3.57E-03
533844	11/16/2020 - 11/23/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	1.88E-02	2.86E-03	2.91E-03
534141	11/23/2020 - 11/30/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	3.24E-02	3.53E-03	2.98E-03
534607	11/30/2020 - 12/7/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	2.36E-02	3.26E-03	3.32E-03
535373	12/7/2020 - 12/14/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	4.52E-02	4.15E-03	3.27E-03
535940	12/14/2020 - 12/21/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	2.57E-02	3.20E-03	2.93E-03
536216	12/21/2020 - 12/28/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	1.62E-02	3.22E-03	4.07E-03
536798	9/28/2020 - 12/28/2020	Nuclide	Activity	2 Sigma Error	MDA
		Cs-134	<2.02E-03	0.00E+00	2.02E-03
		Cs-137	<1.32E-03	0.00E+00	1.32E-03
		Be-7	1.83E-01	4.05E-02	3.34E-02
		K-40	1.31E-02	1.38E-02	2.11E-02

## Sample Point 085 [ INDICATOR - NNW @ 0.88 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514502	12/30/2019 - 1/6/2020	Beta	1.49E-02	2.84E-03	3.38E-03
514941	1/6/2020 - 1/13/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	1.48E-02	2.85E-03	3.37E-03
515280	1/13/2020 - 1/20/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	1.80E-02	2.67E-03	2.91E-03
515511	1/20/2020 - 1/27/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	2.23E-02	3.20E-03	3.38E-03
515905	1/27/2020 - 2/3/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	1.89E-02	3.02E-03	3.36E-03
516158	2/3/2020 - 2/10/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	1.52E-02	2.76E-03	3.10E-03



# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (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
516528	2/10/2020 - 2/17/2020	Beta	1.81E-02	3.05E-03	3.43E-03
516902	2/17/2020 - 2/24/2020	Beta	2.29E-02	2.79E-03	2.63E-03
517428	2/24/2020 - 3/2/2020	Beta	1.68E-02	2.94E-03	3.38E-03
517690	3/2/2020 - 3/9/2020	Beta	1.93E-02	3.02E-03	3.30E-03
518735	3/9/2020 - 3/16/2020	Beta	2.03E-02	3.13E-03	3.45E-03
519329	3/16/2020 - 3/23/2020	Beta	1.82E-02	2.86E-03	2.99E-03
519715	3/23/2020 - 3/30/2020	Beta	1.77E-02	2.58E-03	2.68E-03
520318	12/30/2019 - 3/30/2020	Cs-134	<1.68E-03	0.00E+00	1.68E-03
		Cs-137	<1.06E-03	0.00E+00	1.06E-03
		Be-7	1.04E-01	3.87E-02	4.70E-02
		K-40	<1.59E-02	0.00E+00	1.59E-02
520311	3/30/2020 - 4/6/2020	Beta	2.43E-02	2.91E-03	2.80E-03
520527	4/6/2020 - 4/13/2020	Beta	2.56E-02	3.37E-03	3.47E-03
520823	4/13/2020 - 4/20/2020	Beta	2.56E-02	3.26E-03	3.06E-03
521624	4/20/2020 - 4/27/2020	Beta	1.22E-02	2.68E-03	3.33E-03
522051	4/27/2020 - 5/4/2020	Beta	2.26E-02	3.05E-03	2.92E-03
522361	5/4/2020 - 5/11/2020	Beta	2.01E-02	2.72E-03	2.74E-03
522614	5/11/2020 - 5/18/2020	Beta	2.02E-02	2.77E-03	2.92E-03
523120	5/18/2020 - 5/26/2020	Beta	1.20E-02	2.41E-03	2.93E-03
523485	5/26/2020 - 6/1/2020	Beta	2.05E-02	3.34E-03	3.61E-03
523894	6/1/2020 - 6/8/2020	Beta	2.30E-02	3.35E-03	3.63E-03
524459	6/8/2020 - 6/15/2020	Beta	1.62E-02	2.81E-03	3.11E-03
524780	6/15/2020 - 6/22/2020	Beta	1.69E-02	2.86E-03	3.18E-03
525004	6/22/2020 - 6/29/2020	Beta	1.37E-02	2.86E-03	3.60E-03
525396	3/30/2020 - 6/29/2020	Cs-134	<1.01E-03	0.00E+00	1.01E-03
		Cs-137	<1.59E-03	0.00E+00	1.59E-03
		Be-7	1.37E-01	3.87E-02	4.13E-02
		K-40	1.25E-02	1.26E-02	1.87E-02
525390	6/29/2020 - 7/6/2020	Beta	2.54E-02	2.94E-03	2.74E-03



# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (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
525601	7/6/2020 - 7/13/2020	Beta	1.82E-02	2.69E-03	2.92E-03
525970	7/13/2020 - 7/20/2020	Beta	3.56E-02	3.36E-03	2.78E-03
526288	7/20/2020 - 7/27/2020	Beta	1.94E-02	2.79E-03	3.06E-03
526575	7/27/2020 - 8/3/2020	Beta	1.80E-02	2.55E-03	2.55E-03
526891	8/3/2020 - 8/10/2020	Beta	2.96E-02	3.54E-03	3.36E-03
527386	8/10/2020 - 8/17/2020	Beta	2.08E-02	2.83E-03	2.98E-03
527662	8/17/2020 - 8/24/2020	Beta	2.51E-02	3.31E-03	3.25E-03
527964	8/24/2020 - 8/31/2020	Beta	1.61E-02	2.50E-03	2.68E-03
528710	8/31/2020 - 9/8/2020	Beta	2.57E-02	3.19E-03	3.31E-03
529050	9/8/2020 - 9/14/2020	Beta	1.54E-02	2.75E-03	3.14E-03
530050	9/14/2020 - 9/21/2020	Beta	2.42E-02	3.21E-03	3.07E-03
530339	9/21/2020 - 9/28/2020	Beta	2.03E-02	3.13E-03	3.49E-03
531140	6/29/2020 - 9/28/2020	Cs-134	<1.92E-03	0.00E+00	1.92E-03
		Cs-137	<1.12E-03	0.00E+00	1.12E-03
		Be-7	1.75E-01	4.33E-02	4.36E-02
		K-40	<3.17E-02	0.00E+00	3.17E-02
530608	9/28/2020 - 10/5/2020	Beta	2.23E-02	3.04E-03	2.94E-03
531134	10/5/2020 - 10/12/2020	Beta	3.24E-02	3.60E-03	3.12E-03
531726	10/12/2020 - 10/19/2020	Beta	2.63E-02	3.37E-03	3.36E-03
532124	10/19/2020 - 10/26/2020	Beta	1.75E-02	2.94E-03	3.32E-03
532545	10/26/2020 - 11/2/2020	Beta	1.52E-02	2.74E-03	3.08E-03
532861	11/2/2020 - 11/9/2020	Beta	2.73E-02	3.30E-03	2.86E-03
533386	11/9/2020 - 11/16/2020	Beta	1.51E-02	2.91E-03	3.55E-03
533845	11/16/2020 - 11/23/2020	Beta	2.26E-02	3.06E-03	2.93E-03
534142	11/23/2020 - 11/30/2020	Beta	3.23E-02	3.53E-03	2.98E-03
534608	11/30/2020 - 12/7/2020	Beta	2.60E-02	3.37E-03	3.32E-03
535374	12/7/2020 - 12/14/2020	Beta	4.44E-02	4.11E-03	3.27E-03



# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (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
535941	12/14/2020 - 12/21/2020	Beta	2.71E-02	3.27E-03	2.93E-03
536217	12/21/2020 - 12/28/2020	Beta	1.95E-02	3.37E-03	4.07E-03
536799	9/28/2020 - 12/28/2020	Cs-134	<1.25E-03	0.00E+00	1.25E-03
		Cs-137	<1.75E-03	0.00E+00	1.75E-03
		Be-7	1.65E-01	3.76E-02	2.91E-02
		K-40	<3.56E-02	0.00E+00	3.56E-02

## Sample Point 093 [ CONTROL - SE @ 9.34 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514503	12/30/2019 - 1/6/2020	Beta	1.39E-02	2.79E-03	3.38E-03
514942	1/6/2020 - 1/13/2020	Beta	1.63E-02	2.92E-03	3.35E-03
515281	1/13/2020 - 1/20/2020	Beta	1.83E-02	2.69E-03	2.92E-03
515512	1/20/2020 - 1/27/2020	Beta	2.17E-02	3.17E-03	3.38E-03
515906	1/27/2020 - 2/3/2020	Beta	1.85E-02	3.00E-03	3.35E-03
516159	2/3/2020 - 2/10/2020	Beta	1.40E-02	2.70E-03	3.10E-03
516529	2/10/2020 - 2/17/2020	Beta	1.71E-02	2.99E-03	3.42E-03
516903	2/17/2020 - 2/24/2020	Beta	2.17E-02	2.75E-03	2.64E-03
517429	2/24/2020 - 3/2/2020	Beta	1.63E-02	2.91E-03	3.37E-03
517691	3/2/2020 - 3/7/2020	Beta	1.76E-02	3.64E-03	4.46E-03
518736	3/9/2020 - 3/16/2020	Beta	2.14E-02	3.18E-03	3.45E-03
519330	3/16/2020 - 3/23/2020	Beta	5.06E-03	2.07E-03	2.99E-03
519716	3/23/2020 - 3/30/2020	Beta	7.12E-03	2.00E-03	2.67E-03
522081	12/30/2019 - 3/30/2020	Cs-134	<1.41E-03	0.00E+00	1.41E-03
		Cs-137	<1.48E-03	0.00E+00	1.48E-03
		Be-7	1.37E-01	3.65E-02	2.16E-02
		K-40	<2.79E-02	0.00E+00	2.79E-02
520312	3/30/2020 - 4/6/2020	Beta	5.70E-03	1.98E-03	2.81E-03
520528	4/6/2020 - 4/13/2020	Beta	4.92E-03	2.36E-03	3.60E-03
520824	4/13/2020 - 4/20/2020	Beta	6.92E-03	1.96E-03	2.60E-03
521625	4/20/2020 - 4/27/2020	Beta	1.37E-02	2.74E-03	3.28E-03
522052	4/27/2020 - 5/4/2020	Beta	2.21E-02	3.05E-03	2.95E-03



# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 093 [ CONTROL - SE @ 9.34 miles ]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
522362	5/4/2020 - 5/11/2020	Beta	1.71E-02	2.56E-03	2.72E-03
522615	5/11/2020 - 5/18/2020	Beta	1.91E-02	2.74E-03	2.93E-03
523121	5/18/2020 - 5/26/2020	Beta	8.84E-03	2.23E-03	2.93E-03
523486	5/26/2020 - 6/1/2020	Beta	1.25E-02	2.90E-03	3.61E-03
523895	6/1/2020 - 6/8/2020	Beta	2.18E-02	3.30E-03	3.64E-03
524460	6/8/2020 - 6/15/2020	Beta	1.77E-02	2.88E-03	3.09E-03
524781	6/15/2020 - 6/22/2020	Beta	1.44E-02	2.73E-03	3.18E-03
525005	6/22/2020 - 6/29/2020	Beta	1.43E-02	2.90E-03	3.61E-03
525397	3/30/2020 - 6/29/2020	Cs-134	<1.29E-03	0.00E+00	1.29E-03
		Cs-137	<1.61E-03	0.00E+00	1.61E-03
		Be-7	1.12E-01	3.42E-02	3.60E-02
		K-40	<1.59E-02	0.00E+00	1.59E-02
525391	6/29/2020 - 7/6/2020	Beta	2.14E-02	2.77E-03	2.75E-03
525602	7/6/2020 - 7/13/2020	Beta	1.48E-02	2.52E-03	2.91E-03
525971	7/13/2020 - 7/20/2020	Beta	3.56E-02	3.36E-03	2.78E-03
526289	7/20/2020 - 7/27/2020	Beta	1.64E-02	2.66E-03	3.07E-03
526576	7/27/2020 - 8/3/2020	Beta	1.93E-02	2.60E-03	2.55E-03
526892	8/3/2020 - 8/10/2020	Beta	2.60E-02	3.40E-03	3.38E-03
527387	8/10/2020 - 8/17/2020	Beta	1.97E-02	2.77E-03	2.96E-03
527663	8/17/2020 - 8/24/2020	Beta	1.92E-02	3.03E-03	3.26E-03
527965	8/24/2020 - 8/31/2020	Beta	1.47E-02	2.43E-03	2.68E-03
528711	8/31/2020 - 9/8/2020	Beta	2.27E-02	3.07E-03	3.32E-03
529051	9/8/2020 - 9/14/2020	Beta	1.88E-02	2.93E-03	3.13E-03
530051	9/14/2020 - 9/21/2020	Beta	1.98E-02	3.01E-03	3.07E-03
530340	9/21/2020 - 9/28/2020	Beta	2.52E-02	3.37E-03	3.48E-03
531141	6/29/2020 - 9/28/2020	Cs-134	<1.46E-03	0.00E+00	1.46E-03
		Cs-137	<1.22E-03	0.00E+00	1.22E-03
		Be-7	1.38E-01	3.47E-02	3.17E-02
		K-40	3.74E-02	1.62E-02	4.61E-03



## OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 093 [ CONTROL - SE @ 9.34 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
530609	9/28/2020 - 10/5/2020	Beta	1.99E-02	2.94E-03	2.97E-03
531135	10/5/2020 - 10/12/2020	Beta	3.31E-02	3.61E-03	3.08E-03
531727	10/12/2020 - 10/19/2020	Beta	2.12E-02	3.15E-03	3.37E-03
532125	10/19/2020 - 10/26/2020	Beta	1.74E-02	2.94E-03	3.31E-03
532546	10/26/2020 - 11/2/2020	Beta	1.63E-02	2.82E-03	3.09E-03
532862	11/2/2020 - 11/9/2020	Beta	2.46E-02	3.16E-03	2.84E-03
533387	11/9/2020 - 11/16/2020	Beta	1.60E-02	2.96E-03	3.56E-03
533846	11/16/2020 - 11/23/2020	Beta	1.94E-02	2.89E-03	2.92E-03
534143	11/23/2020 - 11/30/2020	Beta	3.42E-02	3.60E-03	2.99E-03
534609	11/30/2020 - 12/7/2020	Beta	2.40E-02	3.28E-03	3.32E-03
535375	12/7/2020 - 12/14/2020	Beta	4.38E-02	4.10E-03	3.27E-03
535942	12/14/2020 - 12/21/2020	Beta	2.42E-02	3.13E-03	2.92E-03
536218	12/21/2020 - 12/28/2020	Beta	1.97E-02	3.38E-03	4.08E-03
536800	9/28/2020 - 12/28/2020	Cs-134	<1.91E-03	0.00E+00	1.91E-03
		Cs-137	<1.57E-03	0.00E+00	1.57E-03
		Be-7	1.16E-01	3.24E-02	2.99E-02
		K-40	1.62E-02	1.32E-02	1.77E-02

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
514511	12/30/2019 - 1/6/2020	I-131	<2.56E-02	0.00E+00	2.56E-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	<1.45E-01	0.00E+00	1.45E-01
		K-40	5.42E-01	1.96E-01	1.90E-01
514943	1/6/2020 - 1/13/2020	I-131	<2.21E-02	0.00E+00	2.21E-02
		Cs-134	<1.78E-02	0.00E+00	1.78E-02
		Cs-137	<1.89E-02	0.00E+00	1.89E-02
		Be-7	<1.39E-01	0.00E+00	1.39E-01
		K-40	4.81E-01	2.02E-01	2.33E-01
515282	1/13/2020 - 1/20/2020	I-131	<2.22E-02	0.00E+00	2.22E-02
		Cs-134	<1.68E-02	0.00E+00	1.68E-02
		Cs-137	<1.99E-02	0.00E+00	1.99E-02
		Be-7	<1.44E-01	0.00E+00	1.44E-01
		K-40	4.13E-01	1.83E-01	2.09E-01
515513	1/20/2020 - 1/27/2020	I-131	<1.52E-02	0.00E+00	1.52E-02
		Cs-134	<1.55E-02	0.00E+00	1.55E-02
		Cs-137	<1.55E-02	0.00E+00	1.55E-02

# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (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
515513	1/20/2020 - 1/27/2020	Be-7	<9.90E-02	0.00E+00	9.90E-02
		K-40	5.00E-01	2.22E-01	2.76E-01
515907	1/27/2020 - 2/3/2020	I-131	<1.19E-02	0.00E+00	1.19E-02
		Cs-134	<1.02E-02	0.00E+00	1.02E-02
		Cs-137	<7.63E-03	0.00E+00	7.63E-03
		Be-7	<6.59E-02	0.00E+00	6.59E-02
		K-40	3.51E-01	1.49E-01	1.41E-01
516160	2/3/2020 - 2/10/2020	I-131	<1.80E-02	0.00E+00	1.80E-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	<9.81E-02	0.00E+00	9.81E-02
		K-40	<3.53E-01	0.00E+00	3.53E-01
516530	2/10/2020 - 2/17/2020	I-131	<1.58E-02	0.00E+00	1.58E-02
		Cs-134	<1.26E-02	0.00E+00	1.26E-02
		Cs-137	<9.99E-03	0.00E+00	9.99E-03
		Be-7	<7.84E-02	0.00E+00	7.84E-02
		K-40	<2.84E-01	0.00E+00	2.84E-01
516904	2/17/2020 - 2/24/2020	I-131	<2.04E-02	0.00E+00	2.04E-02
		Cs-134	<1.43E-02	0.00E+00	1.43E-02
		Cs-137	<9.89E-03	0.00E+00	9.89E-03
		Be-7	<1.10E-01	0.00E+00	1.10E-01
		K-40	4.11E-01	1.86E-01	2.23E-01
517430	2/24/2020 - 3/2/2020	I-131	<1.27E-02	0.00E+00	1.27E-02
		Cs-134	<1.74E-02	0.00E+00	1.74E-02
		Cs-137	<1.72E-02	0.00E+00	1.72E-02
		Be-7	<9.25E-02	0.00E+00	9.25E-02
		K-40	4.66E-01	1.91E-01	2.14E-01
517692	3/2/2020 - 3/9/2020	I-131	<2.23E-02	0.00E+00	2.23E-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	<1.19E-01	0.00E+00	1.19E-01
		K-40	<3.51E-01	0.00E+00	3.51E-01
518737	3/9/2020 - 3/16/2020	I-131	<2.22E-02	0.00E+00	2.22E-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	<1.59E-01	0.00E+00	1.59E-01
		K-40	5.49E-01	2.32E-01	2.88E-01
519331	3/16/2020 - 3/23/2020	I-131	<1.98E-02	0.00E+00	1.98E-02
		Cs-134	<1.76E-02	0.00E+00	1.76E-02
		Cs-137	<1.95E-02	0.00E+00	1.95E-02
		Be-7	<1.49E-01	0.00E+00	1.49E-01
		K-40	5.13E-01	1.89E-01	1.81E-01
519717	3/23/2020 - 3/30/2020	I-131	<2.19E-02	0.00E+00	2.19E-02
		Cs-134	<1.84E-02	0.00E+00	1.84E-02
		Cs-137	<1.39E-02	0.00E+00	1.39E-02
		Be-7	<1.35E-01	0.00E+00	1.35E-01
		K-40	5.03E-01	1.90E-01	1.86E-01
520320	3/30/2020 - 4/6/2020	I-131	<2.19E-02	0.00E+00	2.19E-02
		Cs-134	<1.37E-02	0.00E+00	1.37E-02
		Cs-137	<1.56E-02	0.00E+00	1.56E-02



# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (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
520320	3/30/2020 - 4/6/2020	Be-7	<1.36E-01	0.00E+00	1.36E-01
		K-40	4.13E-01	1.94E-01	2.39E-01
520529	4/6/2020 - 4/13/2020	I-131	<2.06E-02	0.00E+00	2.06E-02
		Cs-134	<1.60E-02	0.00E+00	1.60E-02
		Cs-137	<1.55E-02	0.00E+00	1.55E-02
		Be-7	<1.25E-01	0.00E+00	1.25E-01
		K-40	5.16E-01	1.96E-01	2.04E-01
520825	4/13/2020 - 4/20/2020	I-131	<3.98E-02	0.00E+00	3.98E-02
		Cs-134	<1.38E-02	0.00E+00	1.38E-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	4.82E-01	1.96E-01	2.15E-01
521626	4/20/2020 - 4/27/2020	I-131	<2.30E-02	0.00E+00	2.30E-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	<1.53E-01	0.00E+00	1.53E-01
		K-40	5.03E-01	2.06E-01	2.35E-01
522053	4/27/2020 - 5/4/2020	I-131	<2.35E-02	0.00E+00	2.35E-02
		Cs-134	<1.27E-02	0.00E+00	1.27E-02
		Cs-137	<1.46E-02	0.00E+00	1.46E-02
		Be-7	<1.17E-01	0.00E+00	1.17E-01
		K-40	2.47E-01	1.21E-01	1.05E-01
522363	5/4/2020 - 5/11/2020	I-131	<1.72E-02	0.00E+00	1.72E-02
		Cs-134	<1.61E-02	0.00E+00	1.61E-02
		Cs-137	<1.46E-02	0.00E+00	1.46E-02
		Be-7	<9.85E-02	0.00E+00	9.85E-02
		K-40	4.51E-01	1.80E-01	1.84E-01
522616	5/11/2020 - 5/18/2020	I-131	<3.28E-02	0.00E+00	3.28E-02
		Cs-134	<1.60E-02	0.00E+00	1.60E-02
		Cs-137	<1.55E-02	0.00E+00	1.55E-02
		Be-7	<1.00E-01	0.00E+00	1.00E-01
		K-40	4.58E-01	1.92E-01	2.23E-01
523122	5/18/2020 - 5/26/2020	I-131	<1.65E-02	0.00E+00	1.65E-02
		Cs-134	<1.27E-02	0.00E+00	1.27E-02
		Cs-137	<1.22E-02	0.00E+00	1.22E-02
		Be-7	<9.02E-02	0.00E+00	9.02E-02
		K-40	5.25E-01	1.86E-01	1.96E-01
523487	5/26/2020 - 6/1/2020	I-131	<2.35E-02	0.00E+00	2.35E-02
		Cs-134	<1.88E-02	0.00E+00	1.88E-02
		Cs-137	<1.90E-02	0.00E+00	1.90E-02
		Be-7	<1.34E-01	0.00E+00	1.34E-01
		K-40	6.56E-01	2.12E-01	1.46E-01
523896	6/1/2020 - 6/8/2020	I-131	<1.93E-02	0.00E+00	1.93E-02
		Cs-134	<1.38E-02	0.00E+00	1.38E-02
		Cs-137	<9.06E-03	0.00E+00	9.06E-03
		Be-7	<9.55E-02	0.00E+00	9.55E-02
		K-40	<3.39E-01	0.00E+00	3.39E-01
524461	6/8/2020 - 6/15/2020	I-131	<1.61E-02	0.00E+00	1.61E-02
		Cs-134	<1.85E-02	0.00E+00	1.85E-02
		Cs-137	<1.70E-02	0.00E+00	1.70E-02





# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (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
524461	6/8/2020 - 6/15/2020	Be-7	<8.80E-02	0.00E+00	8.80E-02
		K-40	5.39E-01	2.05E-01	2.28E-01
524782	6/15/2020 - 6/22/2020	I-131	<1.70E-02	0.00E+00	1.70E-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	<9.20E-02	0.00E+00	9.20E-02
		K-40	1.88E-01	1.42E-01	2.02E-01
525006	6/22/2020 - 6/29/2020	I-131	<1.79E-02	0.00E+00	1.79E-02
		Cs-134	<2.06E-02	0.00E+00	2.06E-02
		Cs-137	<1.26E-02	0.00E+00	1.26E-02
		Be-7	<1.23E-01	0.00E+00	1.23E-01
		K-40	4.95E-01	2.13E-01	2.63E-01
525398	6/29/2020 - 7/6/2020	I-131	<3.17E-02	0.00E+00	3.17E-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	<1.00E-01	0.00E+00	1.00E-01
		K-40	5.70E-01	1.74E-01	3.36E-02
525603	7/6/2020 - 7/13/2020	I-131	<1.85E-02	0.00E+00	1.85E-02
		Cs-134	<1.76E-02	0.00E+00	1.76E-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	5.10E-01	1.79E-01	1.50E-01
525972	7/13/2020 - 7/20/2020	I-131	<5.30E-02	0.00E+00	5.30E-02
		Cs-134	<1.33E-02	0.00E+00	1.33E-02
		Cs-137	<1.25E-02	0.00E+00	1.25E-02
		Be-7	<9.66E-02	0.00E+00	9.66E-02
		K-40	5.85E-01	2.01E-01	2.56E-01
526290	7/20/2020 - 7/27/2020	I-131	<1.47E-02	0.00E+00	1.47E-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	<1.16E-01	0.00E+00	1.16E-01
		K-40	4.10E-01	1.90E-01	2.35E-01
526577	7/27/2020 - 8/3/2020	I-131	<1.75E-02	0.00E+00	1.75E-02
		Cs-134	<1.52E-02	0.00E+00	1.52E-02
		Cs-137	<1.56E-02	0.00E+00	1.56E-02
		Be-7	<9.48E-02	0.00E+00	9.48E-02
		K-40	3.33E-01	1.51E-01	1.56E-01
526893	8/3/2020 - 8/10/2020	I-131	<1.96E-02	0.00E+00	1.96E-02
		Cs-134	<1.59E-02	0.00E+00	1.59E-02
		Cs-137	<1.24E-02	0.00E+00	1.24E-02
		Be-7	<8.79E-02	0.00E+00	8.79E-02
		K-40	5.27E-01	1.66E-01	3.32E-02
527388	8/10/2020 - 8/17/2020	I-131	<1.70E-02	0.00E+00	1.70E-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	<1.08E-01	0.00E+00	1.08E-01
		K-40	5.14E-01	2.20E-01	2.74E-01
527664	8/17/2020 - 8/24/2020	I-131	<1.51E-02	0.00E+00	1.51E-02
		Cs-134	<1.62E-02	0.00E+00	1.62E-02
		Cs-137	<1.45E-02	0.00E+00	1.45E-02



# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (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
527664	8/17/2020 - 8/24/2020	Be-7	<9.24E-02	0.00E+00	9.24E-02
		K-40	6.22E-01	1.98E-01	1.59E-01
527966	8/24/2020 - 8/31/2020	I-131	<1.44E-02	0.00E+00	1.44E-02
		Cs-134	<1.71E-02	0.00E+00	1.71E-02
		Cs-137	<1.54E-02	0.00E+00	1.54E-02
		Be-7	<1.26E-01	0.00E+00	1.26E-01
		K-40	3.77E-01	1.69E-01	1.79E-01
528712	8/31/2020 - 9/8/2020	I-131	<1.80E-02	0.00E+00	1.80E-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	<1.01E-01	0.00E+00	1.01E-01
		K-40	4.79E-01	1.76E-01	1.85E-01
529052	9/8/2020 - 9/14/2020	I-131	<2.22E-02	0.00E+00	2.22E-02
		Cs-134	<1.68E-02	0.00E+00	1.68E-02
		Cs-137	<1.54E-02	0.00E+00	1.54E-02
		Be-7	<1.25E-01	0.00E+00	1.25E-01
		K-40	9.33E-01	2.82E-01	2.74E-01
530052	9/14/2020 - 9/21/2020	I-131	<1.60E-02	0.00E+00	1.60E-02
		Cs-134	<9.07E-03	0.00E+00	9.07E-03
		Cs-137	<6.20E-03	0.00E+00	6.20E-03
		Be-7	<6.78E-02	0.00E+00	6.78E-02
		K-40	2.93E-01	1.37E-01	1.29E-01
530341	9/21/2020 - 9/28/2020	I-131	<1.54E-02	0.00E+00	1.54E-02
		Cs-134	<1.37E-02	0.00E+00	1.37E-02
		Cs-137	<1.00E-02	0.00E+00	1.00E-02
		Be-7	<1.02E-01	0.00E+00	1.02E-01
		K-40	3.86E-01	1.58E-01	1.45E-01
530610	9/28/2020 - 10/5/2020	I-131	<1.70E-02	0.00E+00	1.70E-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	<1.14E-01	0.00E+00	1.14E-01
		K-40	3.76E-01	1.69E-01	1.91E-01
531142	10/5/2020 - 10/12/2020	I-131	<1.78E-02	0.00E+00	1.78E-02
		Cs-134	<1.89E-02	0.00E+00	1.89E-02
		Cs-137	<1.32E-02	0.00E+00	1.32E-02
		Be-7	<1.00E-01	0.00E+00	1.00E-01
		K-40	3.21E-01	1.73E-01	2.24E-01
531728	10/12/2020 - 10/19/2020	I-131	<2.15E-02	0.00E+00	2.15E-02
		Cs-134	<1.76E-02	0.00E+00	1.76E-02
		Cs-137	<1.40E-02	0.00E+00	1.40E-02
		Be-7	<1.18E-01	0.00E+00	1.18E-01
		K-40	6.86E-01	1.93E-01	3.38E-02
532126	10/19/2020 - 10/26/2020	I-131	<1.67E-02	0.00E+00	1.67E-02
		Cs-134	<1.25E-02	0.00E+00	1.25E-02
		Cs-137	<1.31E-02	0.00E+00	1.31E-02
		Be-7	<1.04E-01	0.00E+00	1.04E-01
		K-40	4.64E-01	2.30E-01	3.14E-01
532547	10/26/2020 - 11/2/2020	I-131	<3.13E-02	0.00E+00	3.13E-02
		Cs-134	<2.09E-02	0.00E+00	2.09E-02
		Cs-137	<2.23E-02	0.00E+00	2.23E-02



# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (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
532547	10/26/2020 - 11/2/2020	Be-7	<1.30E-01	0.00E+00	1.30E-01
		K-40	6.67E-01	2.61E-01	2.45E-01
532863	11/2/2020 - 11/9/2020	I-131	<2.30E-02	0.00E+00	2.30E-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	<1.05E-01	0.00E+00	1.05E-01
		K-40	5.01E-01	2.12E-01	2.54E-01
533388	11/9/2020 - 11/16/2020	I-131	<1.95E-02	0.00E+00	1.95E-02
		Cs-134	<1.24E-02	0.00E+00	1.24E-02
		Cs-137	<2.13E-02	0.00E+00	2.13E-02
		Be-7	<1.38E-01	0.00E+00	1.38E-01
		K-40	4.71E-01	1.78E-01	1.54E-01
533847	11/16/2020 - 11/23/2020	I-131	<1.74E-02	0.00E+00	1.74E-02
		Cs-134	<2.16E-02	0.00E+00	2.16E-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	5.78E-01	1.98E-01	1.85E-01
534144	11/23/2020 - 11/30/2020	I-131	<2.03E-02	0.00E+00	2.03E-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	<9.83E-02	0.00E+00	9.83E-02
		K-40	5.74E-01	2.18E-01	2.43E-01
534610	11/30/2020 - 12/7/2020	I-131	<1.76E-02	0.00E+00	1.76E-02
		Cs-134	<1.15E-02	0.00E+00	1.15E-02
		Cs-137	<1.24E-02	0.00E+00	1.24E-02
		Be-7	<1.05E-01	0.00E+00	1.05E-01
		K-40	5.10E-01	1.85E-01	1.76E-01
535376	12/7/2020 - 12/14/2020	I-131	<2.08E-02	0.00E+00	2.08E-02
		Cs-134	<2.06E-02	0.00E+00	2.06E-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	4.03E-01	2.08E-01	2.78E-01
535943	12/14/2020 - 12/21/2020	I-131	<3.71E-02	0.00E+00	3.71E-02
		Cs-134	<1.53E-02	0.00E+00	1.53E-02
		Cs-137	<1.65E-02	0.00E+00	1.65E-02
		Be-7	<1.49E-01	0.00E+00	1.49E-01
		K-40	4.92E-01	2.34E-01	3.12E-01
536219	12/21/2020 - 12/28/2020	I-131	<3.04E-02	0.00E+00	3.04E-02
		Cs-134	<1.82E-02	0.00E+00	1.82E-02
		Cs-137	<1.42E-02	0.00E+00	1.42E-02
		Be-7	<1.18E-01	0.00E+00	1.18E-01
		K-40	5.23E-01	2.17E-01	2.53E-01

## Sample Point 078.1 [ INDICATOR - WSW @ 0.53 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514512	12/30/2019 - 1/6/2020	I-131	<1.54E-02	0.00E+00	1.54E-02
		Cs-134	<1.93E-02	0.00E+00	1.93E-02
		Cs-137	<1.71E-02	0.00E+00	1.71E-02
		Be-7	<9.78E-02	0.00E+00	9.78E-02
		K-40	6.02E-01	1.78E-01	3.33E-02
514944	1/6/2020 - 1/13/2020	I-131	<1.74E-02	0.00E+00	1.74E-02



# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (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
514944	1/6/2020 - 1/13/2020	Cs-134	<1.84E-02	0.00E+00	1.84E-02
		Cs-137	<1.80E-02	0.00E+00	1.80E-02
		Be-7	<9.85E-02	0.00E+00	9.85E-02
		K-40	5.07E-01	1.84E-01	1.72E-01
515283	1/13/2020 - 1/20/2020	I-131	<1.71E-02	0.00E+00	1.71E-02
		Cs-134	<1.84E-02	0.00E+00	1.84E-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	5.54E-01	2.10E-01	2.26E-01
515514	1/20/2020 - 1/27/2020	I-131	<1.60E-02	0.00E+00	1.60E-02
		Cs-134	<1.09E-02	0.00E+00	1.09E-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	5.14E-01	1.42E-01	1.36E-01
515908	1/27/2020 - 2/3/2020	I-131	<1.72E-02	0.00E+00	1.72E-02
		Cs-134	<1.16E-02	0.00E+00	1.16E-02
		Cs-137	<1.25E-02	0.00E+00	1.25E-02
		Be-7	<1.01E-01	0.00E+00	1.01E-01
		K-40	3.94E-01	1.76E-01	2.01E-01
516161	2/3/2020 - 2/10/2020	I-131	<1.56E-02	0.00E+00	1.56E-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	<9.63E-02	0.00E+00	9.63E-02
		K-40	2.70E-01	1.51E-01	1.91E-01
516531	2/10/2020 - 2/17/2020	I-131	<1.56E-02	0.00E+00	1.56E-02
		Cs-134	<1.28E-02	0.00E+00	1.28E-02
		Cs-137	<9.09E-03	0.00E+00	9.09E-03
		Be-7	<1.03E-01	0.00E+00	1.03E-01
		K-40	<1.36E-01	0.00E+00	1.36E-01
516905	2/17/2020 - 2/24/2020	I-131	<2.00E-02	0.00E+00	2.00E-02
		Cs-134	<1.53E-02	0.00E+00	1.53E-02
		Cs-137	<1.09E-02	0.00E+00	1.09E-02
		Be-7	<1.23E-01	0.00E+00	1.23E-01
		K-40	3.56E-01	1.69E-01	1.97E-01
517431	2/24/2020 - 3/2/2020	I-131	<2.23E-02	0.00E+00	2.23E-02
		Cs-134	<1.68E-02	0.00E+00	1.68E-02
		Cs-137	<1.56E-02	0.00E+00	1.56E-02
		Be-7	<1.22E-01	0.00E+00	1.22E-01
		K-40	4.24E-01	1.87E-01	2.17E-01
517693	3/2/2020 - 3/9/2020	I-131	<2.61E-02	0.00E+00	2.61E-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	<1.59E-01	0.00E+00	1.59E-01
		K-40	2.84E-01	1.94E-01	2.83E-01
518738	3/9/2020 - 3/16/2020	I-131	<1.91E-02	0.00E+00	1.91E-02
		Cs-134	<1.45E-02	0.00E+00	1.45E-02
		Cs-137	<2.00E-02	0.00E+00	2.00E-02
		Be-7	<1.18E-01	0.00E+00	1.18E-01
		K-40	<3.64E-01	0.00E+00	3.64E-01
519332	3/16/2020 - 3/23/2020	Nuclide	Activity	2 Sigma Error	MDA
		I-131	<2.20E-02	0.00E+00	2.20E-02

# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (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
519332	3/16/2020 - 3/23/2020	Cs-134	<1.62E-02	0.00E+00	1.62E-02
		Cs-137	<1.77E-02	0.00E+00	1.77E-02
		Be-7	<1.51E-01	0.00E+00	1.51E-01
		K-40	3.81E-01	1.86E-01	2.30E-01
519718	3/23/2020 - 3/30/2020	I-131	<2.07E-02	0.00E+00	2.07E-02
		Cs-134	<1.53E-02	0.00E+00	1.53E-02
		Cs-137	<1.52E-02	0.00E+00	1.52E-02
		Be-7	<1.14E-01	0.00E+00	1.14E-01
		K-40	3.55E-01	1.61E-01	1.74E-01
520321	3/30/2020 - 4/6/2020	I-131	<1.98E-02	0.00E+00	1.98E-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	<8.49E-02	0.00E+00	8.49E-02
		K-40	4.00E-01	1.77E-01	2.01E-01
520530	4/6/2020 - 4/13/2020	I-131	<1.76E-02	0.00E+00	1.76E-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	<9.23E-02	0.00E+00	9.23E-02
		K-40	3.46E-01	1.89E-01	2.53E-01
520826	4/13/2020 - 4/20/2020	I-131	<3.09E-02	0.00E+00	3.09E-02
		Cs-134	<1.97E-02	0.00E+00	1.97E-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	3.80E-01	1.92E-01	2.49E-01
521627	4/20/2020 - 4/27/2020	I-131	<1.63E-02	0.00E+00	1.63E-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	5.35E-02	6.79E-02	1.11E-01
		K-40	3.44E-01	1.98E-01	2.73E-01
522054	4/27/2020 - 5/4/2020	I-131	<2.35E-02	0.00E+00	2.35E-02
		Cs-134	<1.45E-02	0.00E+00	1.45E-02
		Cs-137	<9.46E-03	0.00E+00	9.46E-03
		Be-7	<1.10E-01	0.00E+00	1.10E-01
		K-40	3.48E-01	1.50E-01	1.31E-01
522364	5/4/2020 - 5/11/2020	I-131	<1.67E-02	0.00E+00	1.67E-02
		Cs-134	<1.45E-02	0.00E+00	1.45E-02
		Cs-137	<1.51E-02	0.00E+00	1.51E-02
		Be-7	<9.68E-02	0.00E+00	9.68E-02
		K-40	2.33E-01	1.47E-01	1.97E-01
522617	5/11/2020 - 5/18/2020	I-131	<3.13E-02	0.00E+00	3.13E-02
		Cs-134	<1.75E-02	0.00E+00	1.75E-02
		Cs-137	<1.17E-02	0.00E+00	1.17E-02
		Be-7	<1.10E-01	0.00E+00	1.10E-01
		K-40	3.09E-01	1.38E-01	1.26E-01
523123	5/18/2020 - 5/26/2020	I-131	<1.91E-02	0.00E+00	1.91E-02
		Cs-134	<1.34E-02	0.00E+00	1.34E-02
		Cs-137	<1.09E-02	0.00E+00	1.09E-02
		Be-7	<9.86E-02	0.00E+00	9.86E-02
		K-40	2.22E-01	1.46E-01	2.05E-01
523488	5/26/2020 - 6/1/2020	Nuclide	Activity	2 Sigma Error	MDA
		I-131	<2.26E-02	0.00E+00	2.26E-02



# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (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
523488	5/26/2020 - 6/1/2020	Cs-134	<2.12E-02	0.00E+00	2.12E-02
		Cs-137	<1.83E-02	0.00E+00	1.83E-02
		Be-7	<1.31E-01	0.00E+00	1.31E-01
		K-40	5.38E-01	1.99E-01	1.69E-01
523897	6/1/2020 - 6/8/2020	I-131	<2.35E-02	0.00E+00	2.35E-02
		Cs-134	<1.76E-02	0.00E+00	1.76E-02
		Cs-137	<1.68E-02	0.00E+00	1.68E-02
		Be-7	<1.04E-01	0.00E+00	1.04E-01
		K-40	5.26E-01	1.75E-01	1.21E-01
524462	6/8/2020 - 6/15/2020	I-131	<1.76E-02	0.00E+00	1.76E-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	<8.23E-02	0.00E+00	8.23E-02
		K-40	3.09E-01	1.69E-01	2.19E-01
524783	6/15/2020 - 6/22/2020	I-131	<2.02E-02	0.00E+00	2.02E-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	<8.38E-02	0.00E+00	8.38E-02
		K-40	<3.85E-01	0.00E+00	3.85E-01
525007	6/22/2020 - 6/29/2020	I-131	<1.56E-02	0.00E+00	1.56E-02
		Cs-134	<1.36E-02	0.00E+00	1.36E-02
		Cs-137	<1.09E-02	0.00E+00	1.09E-02
		Be-7	<1.02E-01	0.00E+00	1.02E-01
		K-40	3.53E-01	1.83E-01	2.35E-01
525399	6/29/2020 - 7/6/2020	I-131	<2.21E-02	0.00E+00	2.21E-02
		Cs-134	<9.46E-03	0.00E+00	9.46E-03
		Cs-137	<1.02E-02	0.00E+00	1.02E-02
		Be-7	<9.13E-02	0.00E+00	9.13E-02
		K-40	4.84E-01	1.44E-01	1.57E-01
525604	7/6/2020 - 7/13/2020	I-131	<2.04E-02	0.00E+00	2.04E-02
		Cs-134	<1.62E-02	0.00E+00	1.62E-02
		Cs-137	<1.39E-02	0.00E+00	1.39E-02
		Be-7	<1.03E-01	0.00E+00	1.03E-01
		K-40	4.91E-01	1.84E-01	1.79E-01
525973	7/13/2020 - 7/20/2020	I-131	<5.27E-02	0.00E+00	5.27E-02
		Cs-134	<1.14E-02	0.00E+00	1.14E-02
		Cs-137	<1.07E-02	0.00E+00	1.07E-02
		Be-7	<9.31E-02	0.00E+00	9.31E-02
		K-40	4.34E-01	1.42E-01	1.45E-01
526291	7/20/2020 - 7/27/2020	I-131	<1.90E-02	0.00E+00	1.90E-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	<1.13E-01	0.00E+00	1.13E-01
		K-40	<2.88E-01	0.00E+00	2.88E-01
526578	7/27/2020 - 8/3/2020	I-131	<1.79E-02	0.00E+00	1.79E-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	<1.07E-01	0.00E+00	1.07E-01
		K-40	2.96E-01	1.33E-01	1.13E-01
526894	8/3/2020 - 8/10/2020	Nuclide	Activity	2 Sigma Error	MDA
		I-131	<2.03E-02	0.00E+00	2.03E-02



# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (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
526894	8/3/2020 - 8/10/2020	Cs-134	<1.35E-02	0.00E+00	1.35E-02
		Cs-137	<1.45E-02	0.00E+00	1.45E-02
		Be-7	<9.45E-02	0.00E+00	9.45E-02
		K-40	2.83E-01	1.64E-01	2.17E-01
527389	8/10/2020 - 8/17/2020	I-131	<1.56E-02	0.00E+00	1.56E-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	<7.23E-02	0.00E+00	7.23E-02
		K-40	4.28E-01	1.85E-01	2.13E-01
527665	8/17/2020 - 8/24/2020	I-131	<1.89E-02	0.00E+00	1.89E-02
		Cs-134	<1.35E-02	0.00E+00	1.35E-02
		Cs-137	<1.31E-02	0.00E+00	1.31E-02
		Be-7	<1.00E-01	0.00E+00	1.00E-01
		K-40	3.39E-01	1.78E-01	2.30E-01
527967	8/24/2020 - 8/31/2020	I-131	<1.48E-02	0.00E+00	1.48E-02
		Cs-134	<1.35E-02	0.00E+00	1.35E-02
		Cs-137	<1.37E-02	0.00E+00	1.37E-02
		Be-7	<9.65E-02	0.00E+00	9.65E-02
		K-40	5.15E-01	1.95E-01	2.06E-01
528713	8/31/2020 - 9/8/2020	I-131	<1.62E-02	0.00E+00	1.62E-02
		Cs-134	<1.82E-02	0.00E+00	1.82E-02
		Cs-137	<1.25E-02	0.00E+00	1.25E-02
		Be-7	<9.18E-02	0.00E+00	9.18E-02
		K-40	6.24E-01	1.90E-01	1.68E-01
529053	9/8/2020 - 9/14/2020	I-131	<1.77E-02	0.00E+00	1.77E-02
		Cs-134	<1.55E-02	0.00E+00	1.55E-02
		Cs-137	<2.02E-02	0.00E+00	2.02E-02
		Be-7	<1.04E-01	0.00E+00	1.04E-01
		K-40	4.99E-01	2.09E-01	2.31E-01
530053	9/14/2020 - 9/21/2020	I-131	<1.62E-02	0.00E+00	1.62E-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	<7.26E-02	0.00E+00	7.26E-02
		K-40	5.63E-01	2.12E-01	2.36E-01
530342	9/21/2020 - 9/28/2020	I-131	<1.43E-02	0.00E+00	1.43E-02
		Cs-134	<1.61E-02	0.00E+00	1.61E-02
		Cs-137	<1.26E-02	0.00E+00	1.26E-02
		Be-7	<7.34E-02	0.00E+00	7.34E-02
		K-40	4.60E-01	1.82E-01	1.89E-01
530611	9/28/2020 - 10/5/2020	I-131	<1.97E-02	0.00E+00	1.97E-02
		Cs-134	<1.03E-02	0.00E+00	1.03E-02
		Cs-137	<1.56E-02	0.00E+00	1.56E-02
		Be-7	<1.08E-01	0.00E+00	1.08E-01
		K-40	6.37E-01	1.84E-01	3.32E-02
531143	10/5/2020 - 10/12/2020	I-131	<1.59E-02	0.00E+00	1.59E-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	<8.74E-02	0.00E+00	8.74E-02
		K-40	3.29E-01	1.49E-01	1.55E-01
531729	10/12/2020 - 10/19/2020	Nuclide	Activity	2 Sigma Error	MDA
		I-131	<1.87E-02	0.00E+00	1.87E-02



# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (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
531729	10/12/2020 - 10/19/2020	Cs-134	<1.82E-02	0.00E+00	1.82E-02
		Cs-137	<1.67E-02	0.00E+00	1.67E-02
		Be-7	<1.12E-01	0.00E+00	1.12E-01
		K-40	6.69E-01	2.12E-01	1.88E-01
532127	10/19/2020 - 10/26/2020	I-131	<2.08E-02	0.00E+00	2.08E-02
		Cs-134	<1.27E-02	0.00E+00	1.27E-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	4.34E-01	2.04E-01	2.60E-01
532548	10/26/2020 - 11/2/2020	I-131	<2.70E-02	0.00E+00	2.70E-02
		Cs-134	<1.08E-02	0.00E+00	1.08E-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	1.06E+00	3.43E-01	3.39E-01
532864	11/2/2020 - 11/9/2020	I-131	<1.73E-02	0.00E+00	1.73E-02
		Cs-134	<1.68E-02	0.00E+00	1.68E-02
		Cs-137	<1.33E-02	0.00E+00	1.33E-02
		Be-7	<1.28E-01	0.00E+00	1.28E-01
		K-40	6.23E-01	1.91E-01	1.29E-01
533389	11/9/2020 - 11/16/2020	I-131	<1.68E-02	0.00E+00	1.68E-02
		Cs-134	<1.37E-02	0.00E+00	1.37E-02
		Cs-137	<1.01E-02	0.00E+00	1.01E-02
		Be-7	<8.54E-02	0.00E+00	8.54E-02
		K-40	4.15E-01	1.72E-01	1.78E-01
533848	11/16/2020 - 11/23/2020	I-131	<1.55E-02	0.00E+00	1.55E-02
		Cs-134	<1.62E-02	0.00E+00	1.62E-02
		Cs-137	<9.06E-03	0.00E+00	9.06E-03
		Be-7	<9.39E-02	0.00E+00	9.39E-02
		K-40	4.79E-01	1.82E-01	1.78E-01
534145	11/23/2020 - 11/30/2020	I-131	<2.15E-02	0.00E+00	2.15E-02
		Cs-134	<1.16E-02	0.00E+00	1.16E-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	6.66E-01	1.92E-01	3.47E-02
534611	11/30/2020 - 12/7/2020	I-131	<1.80E-02	0.00E+00	1.80E-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	<1.13E-01	0.00E+00	1.13E-01
		K-40	6.03E-01	1.79E-01	3.34E-02
535377	12/7/2020 - 12/14/2020	I-131	<2.18E-02	0.00E+00	2.18E-02
		Cs-134	<1.52E-02	0.00E+00	1.52E-02
		Cs-137	<1.38E-02	0.00E+00	1.38E-02
		Be-7	<1.13E-01	0.00E+00	1.13E-01
		K-40	5.16E-01	1.77E-01	1.39E-01
535944	12/14/2020 - 12/21/2020	I-131	<3.98E-02	0.00E+00	3.98E-02
		Cs-134	<1.37E-02	0.00E+00	1.37E-02
		Cs-137	<1.39E-02	0.00E+00	1.39E-02
		Be-7	<1.28E-01	0.00E+00	1.28E-01
		K-40	5.69E-01	2.02E-01	2.03E-01
536220	12/21/2020 - 12/28/2020	I-131	<4.37E-02	0.00E+00	4.37E-02





# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (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
536220	12/21/2020 - 12/28/2020	Cs-134	<1.91E-02	0.00E+00	1.91E-02
		Cs-137	<1.45E-02	0.00E+00	1.45E-02
		Be-7	<1.43E-01	0.00E+00	1.43E-01
		K-40	6.33E-01	2.24E-01	2.36E-01

Sample Point 079 [ INDICATOR - NE @ 0.56 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514513	12/30/2019 - 1/6/2020	I-131	<2.40E-02	0.00E+00	2.40E-02
		Cs-134	<1.67E-02	0.00E+00	1.67E-02
		Cs-137	<1.08E-02	0.00E+00	1.08E-02
		Be-7	<1.01E-01	0.00E+00	1.01E-01
		K-40	5.71E-01	2.02E-01	2.03E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514945	1/6/2020 - 1/13/2020	I-131	<2.29E-02	0.00E+00	2.29E-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	<1.47E-01	0.00E+00	1.47E-01
		K-40	4.81E-01	1.99E-01	2.25E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
515284	1/13/2020 - 1/20/2020	I-131	<1.69E-02	0.00E+00	1.69E-02
		Cs-134	<1.93E-02	0.00E+00	1.93E-02
		Cs-137	<1.17E-02	0.00E+00	1.17E-02
		Be-7	<1.14E-01	0.00E+00	1.14E-01
		K-40	4.95E-01	1.73E-01	1.38E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
515515	1/20/2020 - 1/27/2020	I-131	<1.76E-02	0.00E+00	1.76E-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	<1.47E-01	0.00E+00	1.47E-01
		K-40	4.32E-01	1.98E-01	2.46E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
515909	1/27/2020 - 2/3/2020	I-131	<1.41E-02	0.00E+00	1.41E-02
		Cs-134	<9.48E-03	0.00E+00	9.48E-03
		Cs-137	<1.47E-02	0.00E+00	1.47E-02
		Be-7	<1.21E-01	0.00E+00	1.21E-01
		K-40	<3.12E-01	0.00E+00	3.12E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
516162	2/3/2020 - 2/10/2020	I-131	<1.22E-02	0.00E+00	1.22E-02
		Cs-134	<1.27E-02	0.00E+00	1.27E-02
		Cs-137	<1.40E-02	0.00E+00	1.40E-02
		Be-7	<9.35E-02	0.00E+00	9.35E-02
		K-40	4.03E-01	1.46E-01	3.41E-02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
516532	2/10/2020 - 2/17/2020	I-131	<1.89E-02	0.00E+00	1.89E-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	1.54E-02	5.75E-02	1.05E-01
		K-40	2.72E-01	1.36E-01	1.32E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
516906	2/17/2020 - 2/24/2020	I-131	<1.69E-02	0.00E+00	1.69E-02
		Cs-134	<1.43E-02	0.00E+00	1.43E-02
		Cs-137	<8.88E-03	0.00E+00	8.88E-03
		Be-7	<1.10E-01	0.00E+00	1.10E-01
		K-40	<2.54E-01	0.00E+00	2.54E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
517432	2/24/2020 - 3/2/2020	I-131	<2.49E-02	0.00E+00	2.49E-02
		Cs-134	<1.68E-02	0.00E+00	1.68E-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	4.87E-01	1.74E-01	1.35E-01



# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (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
517694	3/2/2020 - 3/9/2020	I-131	<2.23E-02	0.00E+00	2.23E-02
		Cs-134	<1.63E-02	0.00E+00	1.63E-02
		Cs-137	<1.54E-02	0.00E+00	1.54E-02
		Be-7	<1.10E-01	0.00E+00	1.10E-01
		K-40	2.69E-01	1.54E-01	1.93E-01
518739	3/9/2020 - 3/16/2020	I-131	<1.75E-02	0.00E+00	1.75E-02
		Cs-134	<1.60E-02	0.00E+00	1.60E-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	3.43E-01	1.71E-01	2.11E-01
519333	3/16/2020 - 3/23/2020	I-131	<2.11E-02	0.00E+00	2.11E-02
		Cs-134	<1.53E-02	0.00E+00	1.53E-02
		Cs-137	<1.57E-02	0.00E+00	1.57E-02
		Be-7	<1.07E-01	0.00E+00	1.07E-01
		K-40	5.20E-01	1.87E-01	1.76E-01
519719	3/23/2020 - 3/30/2020	I-131	<1.51E-02	0.00E+00	1.51E-02
		Cs-134	<1.04E-02	0.00E+00	1.04E-02
		Cs-137	<1.39E-02	0.00E+00	1.39E-02
		Be-7	<9.27E-02	0.00E+00	9.27E-02
		K-40	1.90E-01	1.30E-01	1.74E-01
520322	3/30/2020 - 4/6/2020	I-131	<1.79E-02	0.00E+00	1.79E-02
		Cs-134	<1.79E-02	0.00E+00	1.79E-02
		Cs-137	<1.54E-02	0.00E+00	1.54E-02
		Be-7	<1.11E-01	0.00E+00	1.11E-01
		K-40	2.32E-01	1.68E-01	2.44E-01
520531	4/6/2020 - 4/13/2020	I-131	<2.10E-02	0.00E+00	2.10E-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	<1.37E-01	0.00E+00	1.37E-01
		K-40	5.51E-01	1.91E-01	1.69E-01
520827	4/13/2020 - 4/20/2020	I-131	<2.17E-02	0.00E+00	2.17E-02
		Cs-134	<1.08E-02	0.00E+00	1.08E-02
		Cs-137	<8.09E-03	0.00E+00	8.09E-03
		Be-7	<9.00E-02	0.00E+00	9.00E-02
		K-40	2.35E-01	1.03E-01	1.21E-01
521628	4/20/2020 - 4/27/2020	I-131	<1.83E-02	0.00E+00	1.83E-02
		Cs-134	<1.16E-02	0.00E+00	1.16E-02
		Cs-137	<1.45E-02	0.00E+00	1.45E-02
		Be-7	<1.05E-01	0.00E+00	1.05E-01
		K-40	4.57E-01	1.93E-01	2.22E-01
522055	4/27/2020 - 5/4/2020	I-131	<2.75E-02	0.00E+00	2.75E-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	<7.25E-02	0.00E+00	7.25E-02
		K-40	2.74E-01	1.33E-01	1.31E-01
522365	5/4/2020 - 5/11/2020	I-131	<1.43E-02	0.00E+00	1.43E-02
		Cs-134	<1.55E-02	0.00E+00	1.55E-02
		Cs-137	<1.02E-02	0.00E+00	1.02E-02
		Be-7	<1.03E-01	0.00E+00	1.03E-01
		K-40	2.07E-01	1.17E-01	1.23E-01



# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (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
522618	5/11/2020 - 5/18/2020	I-131	<2.78E-02	0.00E+00	2.78E-02
		Cs-134	<1.50E-02	0.00E+00	1.50E-02
		Cs-137	<1.52E-02	0.00E+00	1.52E-02
		Be-7	<1.03E-01	0.00E+00	1.03E-01
		K-40	3.59E-01	1.64E-01	1.85E-01
523124	5/18/2020 - 5/26/2020	I-131	<1.74E-02	0.00E+00	1.74E-02
		Cs-134	<1.25E-02	0.00E+00	1.25E-02
		Cs-137	<1.57E-02	0.00E+00	1.57E-02
		Be-7	<5.85E-02	0.00E+00	5.85E-02
		K-40	2.75E-01	1.48E-01	1.91E-01
523489	5/26/2020 - 6/1/2020	I-131	<2.07E-02	0.00E+00	2.07E-02
		Cs-134	<1.59E-02	0.00E+00	1.59E-02
		Cs-137	<1.17E-02	0.00E+00	1.17E-02
		Be-7	<9.92E-02	0.00E+00	9.92E-02
		K-40	3.07E-01	1.64E-01	1.92E-01
523898	6/1/2020 - 6/8/2020	I-131	<1.57E-02	0.00E+00	1.57E-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	<9.38E-02	0.00E+00	9.38E-02
		K-40	<2.53E-01	0.00E+00	2.53E-01
524463	6/8/2020 - 6/15/2020	I-131	<1.63E-02	0.00E+00	1.63E-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	<1.16E-01	0.00E+00	1.16E-01
		K-40	3.82E-01	1.55E-01	1.39E-01
524784	6/15/2020 - 6/22/2020	I-131	<2.52E-02	0.00E+00	2.52E-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	<1.01E-01	0.00E+00	1.01E-01
		K-40	7.41E-01	2.38E-01	2.43E-01
525008	6/22/2020 - 6/29/2020	I-131	<1.79E-02	0.00E+00	1.79E-02
		Cs-134	<1.87E-02	0.00E+00	1.87E-02
		Cs-137	<1.55E-02	0.00E+00	1.55E-02
		Be-7	<8.90E-02	0.00E+00	8.90E-02
		K-40	5.75E-01	1.93E-01	1.47E-01
525400	6/29/2020 - 7/6/2020	I-131	<2.03E-02	0.00E+00	2.03E-02
		Cs-134	<1.17E-02	0.00E+00	1.17E-02
		Cs-137	<1.18E-02	0.00E+00	1.18E-02
		Be-7	<1.01E-01	0.00E+00	1.01E-01
		K-40	2.51E-01	1.47E-01	1.86E-01
525605	7/6/2020 - 7/13/2020	I-131	<1.82E-02	0.00E+00	1.82E-02
		Cs-134	<1.41E-02	0.00E+00	1.41E-02
		Cs-137	<1.28E-02	0.00E+00	1.28E-02
		Be-7	<9.58E-02	0.00E+00	9.58E-02
		K-40	4.25E-01	1.71E-01	1.75E-01
525974	7/13/2020 - 7/20/2020	I-131	<5.01E-02	0.00E+00	5.01E-02
		Cs-134	<1.05E-02	0.00E+00	1.05E-02
		Cs-137	<1.21E-02	0.00E+00	1.21E-02
		Be-7	<1.02E-01	0.00E+00	1.02E-01
		K-40	4.71E-01	1.38E-01	1.22E-01



# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (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
526292	7/20/2020 - 7/27/2020	I-131	<1.59E-02	0.00E+00	1.59E-02
		Cs-134	<1.28E-02	0.00E+00	1.28E-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	<1.65E-01	0.00E+00	1.65E-01
526579	7/27/2020 - 8/3/2020	I-131	<2.12E-02	0.00E+00	2.12E-02
		Cs-134	<1.67E-02	0.00E+00	1.67E-02
		Cs-137	<1.67E-02	0.00E+00	1.67E-02
		Be-7	<1.17E-01	0.00E+00	1.17E-01
		K-40	7.01E-01	2.14E-01	1.81E-01
526895	8/3/2020 - 8/10/2020	I-131	<1.77E-02	0.00E+00	1.77E-02
		Cs-134	<1.56E-02	0.00E+00	1.56E-02
		Cs-137	<1.62E-02	0.00E+00	1.62E-02
		Be-7	<1.24E-01	0.00E+00	1.24E-01
		K-40	3.65E-01	1.46E-01	1.21E-01
527390	8/10/2020 - 8/17/2020	I-131	<1.57E-02	0.00E+00	1.57E-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	<9.42E-02	0.00E+00	9.42E-02
		K-40	4.85E-01	1.70E-01	1.35E-01
527666	8/17/2020 - 8/24/2020	I-131	<1.84E-02	0.00E+00	1.84E-02
		Cs-134	<1.49E-02	0.00E+00	1.49E-02
		Cs-137	<1.73E-02	0.00E+00	1.73E-02
		Be-7	<1.05E-01	0.00E+00	1.05E-01
		K-40	4.35E-01	1.63E-01	1.38E-01
527968	8/24/2020 - 8/31/2020	I-131	<1.89E-02	0.00E+00	1.89E-02
		Cs-134	<1.32E-02	0.00E+00	1.32E-02
		Cs-137	<1.34E-02	0.00E+00	1.34E-02
		Be-7	<9.79E-02	0.00E+00	9.79E-02
		K-40	2.40E-01	1.44E-01	1.86E-01
528714	8/31/2020 - 9/8/2020	I-131	<1.66E-02	0.00E+00	1.66E-02
		Cs-134	<1.54E-02	0.00E+00	1.54E-02
		Cs-137	<1.54E-02	0.00E+00	1.54E-02
		Be-7	<9.56E-02	0.00E+00	9.56E-02
		K-40	4.14E-01	1.42E-01	9.70E-02
529054	9/8/2020 - 9/14/2020	I-131	<2.29E-02	0.00E+00	2.29E-02
		Cs-134	<1.70E-02	0.00E+00	1.70E-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	5.95E-01	2.49E-01	2.98E-01
530054	9/14/2020 - 9/21/2020	I-131	<1.98E-02	0.00E+00	1.98E-02
		Cs-134	<2.26E-02	0.00E+00	2.26E-02
		Cs-137	<1.79E-02	0.00E+00	1.79E-02
		Be-7	2.30E-02	5.63E-02	1.00E-01
		K-40	6.56E-01	1.95E-01	3.63E-02
530343	9/21/2020 - 9/28/2020	I-131	<1.71E-02	0.00E+00	1.71E-02
		Cs-134	<1.70E-02	0.00E+00	1.70E-02
		Cs-137	<1.65E-02	0.00E+00	1.65E-02
		Be-7	<8.80E-02	0.00E+00	8.80E-02
		K-40	3.78E-01	2.02E-01	2.69E-01



# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (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
530612	9/28/2020 - 10/5/2020	I-131	<2.23E-02	0.00E+00	2.23E-02
		Cs-134	<2.05E-02	0.00E+00	2.05E-02
		Cs-137	<1.32E-02	0.00E+00	1.32E-02
		Be-7	<1.26E-01	0.00E+00	1.26E-01
		K-40	7.12E-01	2.26E-01	2.18E-01
531144	10/5/2020 - 10/12/2020	I-131	<1.98E-02	0.00E+00	1.98E-02
		Cs-134	<1.62E-02	0.00E+00	1.62E-02
		Cs-137	<1.10E-02	0.00E+00	1.10E-02
		Be-7	<8.90E-02	0.00E+00	8.90E-02
		K-40	3.95E-01	1.85E-01	2.26E-01
531730	10/12/2020 - 10/19/2020	I-131	<1.92E-02	0.00E+00	1.92E-02
		Cs-134	<1.45E-02	0.00E+00	1.45E-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	4.63E-01	1.77E-01	1.70E-01
532128	10/19/2020 - 10/26/2020	I-131	<1.85E-02	0.00E+00	1.85E-02
		Cs-134	<1.68E-02	0.00E+00	1.68E-02
		Cs-137	<1.09E-02	0.00E+00	1.09E-02
		Be-7	<8.36E-02	0.00E+00	8.36E-02
		K-40	7.09E-01	1.96E-01	3.37E-02
532549	10/26/2020 - 11/2/2020	I-131	<1.22E-02	0.00E+00	1.22E-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	<8.42E-02	0.00E+00	8.42E-02
		K-40	3.41E-01	1.70E-01	2.07E-01
532865	11/2/2020 - 11/9/2020	I-131	<2.05E-02	0.00E+00	2.05E-02
		Cs-134	<1.60E-02	0.00E+00	1.60E-02
		Cs-137	<1.39E-02	0.00E+00	1.39E-02
		Be-7	<1.22E-01	0.00E+00	1.22E-01
		K-40	4.47E-01	1.62E-01	1.23E-01
533390	11/9/2020 - 11/16/2020	I-131	<1.91E-02	0.00E+00	1.91E-02
		Cs-134	<1.86E-02	0.00E+00	1.86E-02
		Cs-137	<1.16E-02	0.00E+00	1.16E-02
		Be-7	<1.19E-01	0.00E+00	1.19E-01
		K-40	7.95E-01	2.07E-01	3.31E-02
533849	11/16/2020 - 11/23/2020	I-131	<1.88E-02	0.00E+00	1.88E-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	<1.23E-01	0.00E+00	1.23E-01
		K-40	4.90E-01	2.16E-01	2.63E-01
534146	11/23/2020 - 11/30/2020	I-131	<2.22E-02	0.00E+00	2.22E-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	<1.44E-01	0.00E+00	1.44E-01
		K-40	7.41E-01	2.12E-01	1.36E-01
534612	11/30/2020 - 12/7/2020	I-131	<2.14E-02	0.00E+00	2.14E-02
		Cs-134	<1.74E-02	0.00E+00	1.74E-02
		Cs-137	<2.05E-02	0.00E+00	2.05E-02
		Be-7	<9.03E-02	0.00E+00	9.03E-02
		K-40	5.96E-01	2.09E-01	2.10E-01



# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (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
535378	12/7/2020 - 12/14/2020	I-131	<1.69E-02	0.00E+00	1.69E-02
		Cs-134	<1.69E-02	0.00E+00	1.69E-02
		Cs-137	<1.10E-02	0.00E+00	1.10E-02
		Be-7	<7.98E-02	0.00E+00	7.98E-02
		K-40	2.94E-01	1.35E-01	1.21E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
535945	12/14/2020 - 12/21/2020	I-131	<3.51E-02	0.00E+00	3.51E-02
		Cs-134	<1.53E-02	0.00E+00	1.53E-02
		Cs-137	<1.55E-02	0.00E+00	1.55E-02
		Be-7	<1.10E-01	0.00E+00	1.10E-01
		K-40	4.75E-01	1.82E-01	1.83E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
536221	12/21/2020 - 12/28/2020	I-131	<3.39E-02	0.00E+00	3.39E-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	<1.31E-01	0.00E+00	1.31E-01
		K-40	7.57E-01	2.15E-01	1.49E-01

Sample Point 084 [ INDICATOR - NNE @ 2.58 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514514	12/30/2019 - 1/6/2020	I-131	<2.25E-02	0.00E+00	2.25E-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	<7.85E-02	0.00E+00	7.85E-02
		K-40	6.31E-01	1.45E-01	1.07E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514946	1/6/2020 - 1/13/2020	I-131	<1.76E-02	0.00E+00	1.76E-02
		Cs-134	<1.47E-02	0.00E+00	1.47E-02
		Cs-137	<1.53E-02	0.00E+00	1.53E-02
		Be-7	<1.17E-01	0.00E+00	1.17E-01
		K-40	4.29E-01	1.84E-01	2.08E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
515285	1/13/2020 - 1/20/2020	I-131	<1.23E-02	0.00E+00	1.23E-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	<6.44E-02	0.00E+00	6.44E-02
		K-40	1.85E-01	1.23E-01	1.61E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
515516	1/20/2020 - 1/27/2020	I-131	<1.84E-02	0.00E+00	1.84E-02
		Cs-134	<1.46E-02	0.00E+00	1.46E-02
		Cs-137	<1.33E-02	0.00E+00	1.33E-02
		Be-7	<1.16E-01	0.00E+00	1.16E-01
		K-40	<4.08E-01	0.00E+00	4.08E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
515910	1/27/2020 - 2/3/2020	I-131	<1.60E-02	0.00E+00	1.60E-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	<1.05E-01	0.00E+00	1.05E-01
		K-40	5.42E-01	1.84E-01	1.49E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
516163	2/3/2020 - 2/10/2020	I-131	<1.83E-02	0.00E+00	1.83E-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	<9.83E-02	0.00E+00	9.83E-02
		K-40	4.33E-01	1.64E-01	1.23E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
516533	2/10/2020 - 2/17/2020	I-131	<2.12E-02	0.00E+00	2.12E-02
		Cs-134	<1.70E-02	0.00E+00	1.70E-02
		Cs-137	<1.96E-02	0.00E+00	1.96E-02
		Be-7	<1.62E-01	0.00E+00	1.62E-01
		K-40	6.91E-01	2.10E-01	1.56E-01



# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (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
516907	2/17/2020 - 2/24/2020	I-131	<2.15E-02	0.00E+00	2.15E-02
		Cs-134	<1.90E-02	0.00E+00	1.90E-02
		Cs-137	<1.33E-02	0.00E+00	1.33E-02
		Be-7	2.88E-02	7.51E-02	1.32E-01
		K-40	1.99E-01	1.10E-01	1.07E-01
517433	2/24/2020 - 3/2/2020	I-131	<1.45E-02	0.00E+00	1.45E-02
		Cs-134	<1.51E-02	0.00E+00	1.51E-02
		Cs-137	<1.24E-02	0.00E+00	1.24E-02
		Be-7	<1.11E-01	0.00E+00	1.11E-01
		K-40	2.96E-01	1.34E-01	1.22E-01
517695	3/2/2020 - 3/9/2020	I-131	<2.02E-02	0.00E+00	2.02E-02
		Cs-134	<1.37E-02	0.00E+00	1.37E-02
		Cs-137	<1.01E-02	0.00E+00	1.01E-02
		Be-7	<7.56E-02	0.00E+00	7.56E-02
		K-40	1.76E-01	1.37E-01	1.96E-01
518740	3/9/2020 - 3/16/2020	I-131	<1.79E-02	0.00E+00	1.79E-02
		Cs-134	<1.46E-02	0.00E+00	1.46E-02
		Cs-137	<1.26E-02	0.00E+00	1.26E-02
		Be-7	<1.03E-01	0.00E+00	1.03E-01
		K-40	1.97E-01	1.31E-01	1.72E-01
519334	3/16/2020 - 3/23/2020	I-131	<2.14E-02	0.00E+00	2.14E-02
		Cs-134	<1.98E-02	0.00E+00	1.98E-02
		Cs-137	<1.76E-02	0.00E+00	1.76E-02
		Be-7	<9.37E-02	0.00E+00	9.37E-02
		K-40	5.05E-01	2.11E-01	2.55E-01
519720	3/23/2020 - 3/30/2020	I-131	<1.88E-02	0.00E+00	1.88E-02
		Cs-134	<1.67E-02	0.00E+00	1.67E-02
		Cs-137	<1.31E-02	0.00E+00	1.31E-02
		Be-7	<9.62E-02	0.00E+00	9.62E-02
		K-40	5.32E-01	1.91E-01	1.86E-01
520323	3/30/2020 - 4/6/2020	I-131	<2.02E-02	0.00E+00	2.02E-02
		Cs-134	<1.15E-02	0.00E+00	1.15E-02
		Cs-137	<1.17E-02	0.00E+00	1.17E-02
		Be-7	<8.54E-02	0.00E+00	8.54E-02
		K-40	3.57E-01	1.44E-01	1.10E-01
520532	4/6/2020 - 4/13/2020	I-131	<1.68E-02	0.00E+00	1.68E-02
		Cs-134	<1.36E-02	0.00E+00	1.36E-02
		Cs-137	<1.32E-02	0.00E+00	1.32E-02
		Be-7	<1.32E-01	0.00E+00	1.32E-01
		K-40	3.59E-01	1.59E-01	1.67E-01
520828	4/13/2020 - 4/20/2020	I-131	<2.89E-02	0.00E+00	2.89E-02
		Cs-134	<8.97E-03	0.00E+00	8.97E-03
		Cs-137	<1.44E-02	0.00E+00	1.44E-02
		Be-7	<1.24E-01	0.00E+00	1.24E-01
		K-40	4.65E-01	1.73E-01	1.55E-01
521629	4/20/2020 - 4/27/2020	I-131	<1.74E-02	0.00E+00	1.74E-02
		Cs-134	<1.75E-02	0.00E+00	1.75E-02
		Cs-137	<1.52E-02	0.00E+00	1.52E-02
		Be-7	<1.10E-01	0.00E+00	1.10E-01
		K-40	3.81E-01	1.51E-01	1.20E-01



# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (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
522056	4/27/2020 - 5/4/2020	I-131	<2.23E-02	0.00E+00	2.23E-02
		Cs-134	<1.60E-02	0.00E+00	1.60E-02
		Cs-137	<1.24E-02	0.00E+00	1.24E-02
		Be-7	<1.08E-01	0.00E+00	1.08E-01
		K-40	1.93E-01	1.34E-01	1.84E-01
522366	5/4/2020 - 5/11/2020	I-131	<1.62E-02	0.00E+00	1.62E-02
		Cs-134	<1.63E-02	0.00E+00	1.63E-02
		Cs-137	<1.67E-02	0.00E+00	1.67E-02
		Be-7	<1.11E-01	0.00E+00	1.11E-01
		K-40	<3.35E-01	0.00E+00	3.35E-01
522619	5/11/2020 - 5/18/2020	I-131	<3.67E-02	0.00E+00	3.67E-02
		Cs-134	<1.60E-02	0.00E+00	1.60E-02
		Cs-137	<1.37E-02	0.00E+00	1.37E-02
		Be-7	<9.64E-02	0.00E+00	9.64E-02
		K-40	6.24E-01	1.93E-01	1.40E-01
523125	5/18/2020 - 5/26/2020	I-131	<1.41E-02	0.00E+00	1.41E-02
		Cs-134	<1.47E-02	0.00E+00	1.47E-02
		Cs-137	<1.37E-02	0.00E+00	1.37E-02
		Be-7	<9.42E-02	0.00E+00	9.42E-02
		K-40	3.84E-01	1.43E-01	1.15E-01
523490	5/26/2020 - 6/1/2020	I-131	<1.81E-02	0.00E+00	1.81E-02
		Cs-134	<1.06E-02	0.00E+00	1.06E-02
		Cs-137	<1.56E-02	0.00E+00	1.56E-02
		Be-7	<9.45E-02	0.00E+00	9.45E-02
		K-40	3.39E-01	1.44E-01	3.99E-02
523899	6/1/2020 - 6/8/2020	I-131	<1.99E-02	0.00E+00	1.99E-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	<9.28E-02	0.00E+00	9.28E-02
		K-40	1.68E-01	1.21E-01	1.61E-01
524464	6/8/2020 - 6/15/2020	I-131	<1.94E-02	0.00E+00	1.94E-02
		Cs-134	<1.41E-02	0.00E+00	1.41E-02
		Cs-137	<1.29E-02	0.00E+00	1.29E-02
		Be-7	<8.70E-02	0.00E+00	8.70E-02
		K-40	<2.70E-01	0.00E+00	2.70E-01
524785	6/15/2020 - 6/22/2020	I-131	<3.13E-02	0.00E+00	3.13E-02
		Cs-134	<1.90E-02	0.00E+00	1.90E-02
		Cs-137	<1.64E-02	0.00E+00	1.64E-02
		Be-7	<1.01E-01	0.00E+00	1.01E-01
		K-40	<3.97E-01	0.00E+00	3.97E-01
525009	6/22/2020 - 6/29/2020	I-131	<1.98E-02	0.00E+00	1.98E-02
		Cs-134	<1.76E-02	0.00E+00	1.76E-02
		Cs-137	<1.46E-02	0.00E+00	1.46E-02
		Be-7	<1.09E-01	0.00E+00	1.09E-01
		K-40	5.58E-01	2.03E-01	2.11E-01
525401	6/29/2020 - 7/6/2020	I-131	<3.13E-02	0.00E+00	3.13E-02
		Cs-134	<1.35E-02	0.00E+00	1.35E-02
		Cs-137	<1.33E-02	0.00E+00	1.33E-02
		Be-7	<1.01E-01	0.00E+00	1.01E-01
		K-40	<3.00E-01	0.00E+00	3.00E-01





# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (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
525606	7/6/2020 - 7/13/2020	I-131	<2.00E-02	0.00E+00	2.00E-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	<1.23E-01	0.00E+00	1.23E-01
		K-40	4.14E-01	1.71E-01	1.77E-01
525975	7/13/2020 - 7/20/2020	I-131	<5.20E-02	0.00E+00	5.20E-02
		Cs-134	<1.36E-02	0.00E+00	1.36E-02
		Cs-137	<1.19E-02	0.00E+00	1.19E-02
		Be-7	<1.05E-01	0.00E+00	1.05E-01
		K-40	2.95E-01	1.27E-01	1.43E-01
526293	7/20/2020 - 7/27/2020	I-131	<1.69E-02	0.00E+00	1.69E-02
		Cs-134	<1.61E-02	0.00E+00	1.61E-02
		Cs-137	<1.51E-02	0.00E+00	1.51E-02
		Be-7	<1.19E-01	0.00E+00	1.19E-01
		K-40	4.84E-01	2.02E-01	2.39E-01
526580	7/27/2020 - 8/3/2020	I-131	<2.37E-02	0.00E+00	2.37E-02
		Cs-134	<1.88E-02	0.00E+00	1.88E-02
		Cs-137	<1.78E-02	0.00E+00	1.78E-02
		Be-7	<1.21E-01	0.00E+00	1.21E-01
		K-40	4.61E-01	1.87E-01	2.03E-01
526896	8/3/2020 - 8/10/2020	I-131	<2.31E-02	0.00E+00	2.31E-02
		Cs-134	<1.52E-02	0.00E+00	1.52E-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	3.61E-01	1.80E-01	2.29E-01
527391	8/10/2020 - 8/17/2020	I-131	<1.62E-02	0.00E+00	1.62E-02
		Cs-134	<1.53E-02	0.00E+00	1.53E-02
		Cs-137	<1.68E-02	0.00E+00	1.68E-02
		Be-7	<9.40E-02	0.00E+00	9.40E-02
		K-40	3.06E-01	1.61E-01	2.00E-01
527667	8/17/2020 - 8/24/2020	I-131	<2.00E-02	0.00E+00	2.00E-02
		Cs-134	<1.75E-02	0.00E+00	1.75E-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	3.30E-01	1.61E-01	1.86E-01
527969	8/24/2020 - 8/31/2020	I-131	<1.32E-02	0.00E+00	1.32E-02
		Cs-134	<1.67E-02	0.00E+00	1.67E-02
		Cs-137	<9.99E-03	0.00E+00	9.99E-03
		Be-7	<1.14E-01	0.00E+00	1.14E-01
		K-40	4.27E-01	1.82E-01	2.05E-01
528715	8/31/2020 - 9/8/2020	I-131	<2.07E-02	0.00E+00	2.07E-02
		Cs-134	<1.46E-02	0.00E+00	1.46E-02
		Cs-137	<1.09E-02	0.00E+00	1.09E-02
		Be-7	<9.40E-02	0.00E+00	9.40E-02
		K-40	3.76E-01	1.65E-01	1.93E-01
529055	9/8/2020 - 9/14/2020	I-131	<1.73E-02	0.00E+00	1.73E-02
		Cs-134	<1.97E-02	0.00E+00	1.97E-02
		Cs-137	<1.91E-02	0.00E+00	1.91E-02
		Be-7	<1.08E-01	0.00E+00	1.08E-01
		K-40	5.99E-01	2.19E-01	2.11E-01



# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (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
530055	9/14/2020 - 9/21/2020	I-131	<1.86E-02	0.00E+00	1.86E-02
		Cs-134	<1.93E-02	0.00E+00	1.93E-02
		Cs-137	<1.81E-02	0.00E+00	1.81E-02
		Be-7	<1.18E-01	0.00E+00	1.18E-01
		K-40	4.02E-01	1.71E-01	1.86E-01
530344	9/21/2020 - 9/28/2020	I-131	<1.96E-02	0.00E+00	1.96E-02
		Cs-134	<1.68E-02	0.00E+00	1.68E-02
		Cs-137	<1.67E-02	0.00E+00	1.67E-02
		Be-7	<1.25E-01	0.00E+00	1.25E-01
		K-40	5.18E-01	1.77E-01	1.37E-01
530613	9/28/2020 - 10/5/2020	I-131	<1.93E-02	0.00E+00	1.93E-02
		Cs-134	<1.61E-02	0.00E+00	1.61E-02
		Cs-137	<1.45E-02	0.00E+00	1.45E-02
		Be-7	<1.11E-01	0.00E+00	1.11E-01
		K-40	5.97E-01	2.19E-01	2.42E-01
531145	10/5/2020 - 10/12/2020	I-131	<1.84E-02	0.00E+00	1.84E-02
		Cs-134	<1.44E-02	0.00E+00	1.44E-02
		Cs-137	<1.38E-02	0.00E+00	1.38E-02
		Be-7	<1.15E-01	0.00E+00	1.15E-01
		K-40	4.80E-01	1.58E-01	3.34E-02
531731	10/12/2020 - 10/19/2020	I-131	<1.85E-02	0.00E+00	1.85E-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	<1.09E-01	0.00E+00	1.09E-01
		K-40	4.96E-01	1.98E-01	2.20E-01
532129	10/19/2020 - 10/26/2020	I-131	<1.97E-02	0.00E+00	1.97E-02
		Cs-134	<1.52E-02	0.00E+00	1.52E-02
		Cs-137	<1.56E-02	0.00E+00	1.56E-02
		Be-7	<1.14E-01	0.00E+00	1.14E-01
		K-40	4.53E-01	1.74E-01	1.66E-01
532550	10/26/2020 - 11/2/2020	I-131	<1.74E-02	0.00E+00	1.74E-02
		Cs-134	<1.79E-02	0.00E+00	1.79E-02
		Cs-137	<1.48E-02	0.00E+00	1.48E-02
		Be-7	<1.03E-01	0.00E+00	1.03E-01
		K-40	5.82E-01	1.89E-01	1.18E-01
532866	11/2/2020 - 11/9/2020	I-131	<1.60E-02	0.00E+00	1.60E-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	<1.02E-01	0.00E+00	1.02E-01
		K-40	4.32E-01	1.72E-01	1.68E-01
533391	11/9/2020 - 11/16/2020	I-131	<1.99E-02	0.00E+00	1.99E-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	<1.08E-01	0.00E+00	1.08E-01
		K-40	6.61E-01	2.12E-01	1.89E-01
533850	11/16/2020 - 11/23/2020	I-131	<1.56E-02	0.00E+00	1.56E-02
		Cs-134	<1.26E-02	0.00E+00	1.26E-02
		Cs-137	<1.32E-02	0.00E+00	1.32E-02
		Be-7	<1.29E-01	0.00E+00	1.29E-01
		K-40	5.05E-01	2.02E-01	2.27E-01



# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (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
534147	11/23/2020 - 11/30/2020	I-131	<2.36E-02	0.00E+00	2.36E-02
		Cs-134	<1.76E-02	0.00E+00	1.76E-02
		Cs-137	<1.90E-02	0.00E+00	1.90E-02
		Be-7	<1.17E-01	0.00E+00	1.17E-01
		K-40	6.27E-01	1.86E-01	3.47E-02
534613	11/30/2020 - 12/7/2020	I-131	<2.06E-02	0.00E+00	2.06E-02
		Cs-134	<1.14E-02	0.00E+00	1.14E-02
		Cs-137	<1.30E-02	0.00E+00	1.30E-02
		Be-7	<1.25E-01	0.00E+00	1.25E-01
		K-40	5.09E-01	1.95E-01	2.11E-01
535379	12/7/2020 - 12/14/2020	I-131	<2.56E-02	0.00E+00	2.56E-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	<1.03E-01	0.00E+00	1.03E-01
		K-40	6.72E-01	2.07E-01	1.58E-01
535946	12/14/2020 - 12/21/2020	I-131	<4.50E-02	0.00E+00	4.50E-02
		Cs-134	<1.26E-02	0.00E+00	1.26E-02
		Cs-137	<7.65E-03	0.00E+00	7.65E-03
		Be-7	<1.30E-01	0.00E+00	1.30E-01
		K-40	5.57E-01	2.04E-01	2.16E-01
536222	12/21/2020 - 12/28/2020	I-131	<3.65E-02	0.00E+00	3.65E-02
		Cs-134	<1.95E-02	0.00E+00	1.95E-02
		Cs-137	<1.25E-02	0.00E+00	1.25E-02
		Be-7	<1.01E-01	0.00E+00	1.01E-01
		K-40	3.95E-01	2.34E-01	3.37E-01

Sample Point 085 [ INDICATOR - NNW @ 0.88 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514515	12/30/2019 - 1/6/2020	I-131	<1.69E-02	0.00E+00	1.69E-02
		Cs-134	<1.79E-02	0.00E+00	1.79E-02
		Cs-137	<1.76E-02	0.00E+00	1.76E-02
		Be-7	<1.06E-01	0.00E+00	1.06E-01
		K-40	3.55E-01	1.77E-01	2.20E-01
514947	1/6/2020 - 1/13/2020	I-131	<1.64E-02	0.00E+00	1.64E-02
		Cs-134	<1.56E-02	0.00E+00	1.56E-02
		Cs-137	<1.42E-02	0.00E+00	1.42E-02
		Be-7	<1.04E-01	0.00E+00	1.04E-01
		K-40	<2.80E-01	0.00E+00	2.80E-01
515286	1/13/2020 - 1/20/2020	I-131	<1.70E-02	0.00E+00	1.70E-02
		Cs-134	<2.10E-02	0.00E+00	2.10E-02
		Cs-137	<1.61E-02	0.00E+00	1.61E-02
		Be-7	7.46E-03	5.62E-02	1.05E-01
		K-40	<3.06E-01	0.00E+00	3.06E-01
515517	1/20/2020 - 1/27/2020	I-131	<1.61E-02	0.00E+00	1.61E-02
		Cs-134	<1.16E-02	0.00E+00	1.16E-02
		Cs-137	<1.52E-02	0.00E+00	1.52E-02
		Be-7	<8.59E-02	0.00E+00	8.59E-02
		K-40	4.89E-01	1.86E-01	1.84E-01
515911	1/27/2020 - 2/3/2020	I-131	<1.49E-02	0.00E+00	1.49E-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	4.44E-01	1.86E-01	2.10E-01



# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (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
516164	2/3/2020 - 2/10/2020	I-131	<2.16E-02	0.00E+00	2.16E-02
		Cs-134	<1.27E-02	0.00E+00	1.27E-02
		Cs-137	<1.72E-02	0.00E+00	1.72E-02
		Be-7	<1.45E-01	0.00E+00	1.45E-01
		K-40	4.33E-01	1.59E-01	1.09E-01
516534	2/10/2020 - 2/17/2020	I-131	<1.76E-02	0.00E+00	1.76E-02
		Cs-134	<1.27E-02	0.00E+00	1.27E-02
		Cs-137	<1.69E-02	0.00E+00	1.69E-02
		Be-7	<9.81E-02	0.00E+00	9.81E-02
		K-40	4.48E-01	1.67E-01	1.40E-01
516908	2/17/2020 - 2/24/2020	I-131	<1.81E-02	0.00E+00	1.81E-02
		Cs-134	<1.11E-02	0.00E+00	1.11E-02
		Cs-137	<1.72E-02	0.00E+00	1.72E-02
		Be-7	<1.21E-01	0.00E+00	1.21E-01
		K-40	<3.20E-01	0.00E+00	3.20E-01
517434	2/24/2020 - 3/2/2020	I-131	<1.95E-02	0.00E+00	1.95E-02
		Cs-134	<1.25E-02	0.00E+00	1.25E-02
		Cs-137	<1.54E-02	0.00E+00	1.54E-02
		Be-7	<9.53E-02	0.00E+00	9.53E-02
		K-40	3.34E-01	1.75E-01	2.26E-01
517696	3/2/2020 - 3/9/2020	I-131	<2.13E-02	0.00E+00	2.13E-02
		Cs-134	<2.04E-02	0.00E+00	2.04E-02
		Cs-137	<1.37E-02	0.00E+00	1.37E-02
		Be-7	<1.27E-01	0.00E+00	1.27E-01
		K-40	4.29E-01	1.93E-01	2.35E-01
518741	3/9/2020 - 3/16/2020	I-131	<1.62E-02	0.00E+00	1.62E-02
		Cs-134	<1.45E-02	0.00E+00	1.45E-02
		Cs-137	<1.67E-02	0.00E+00	1.67E-02
		Be-7	<8.43E-02	0.00E+00	8.43E-02
		K-40	2.89E-01	1.36E-01	1.17E-01
519335	3/16/2020 - 3/23/2020	I-131	<1.74E-02	0.00E+00	1.74E-02
		Cs-134	<1.44E-02	0.00E+00	1.44E-02
		Cs-137	<1.62E-02	0.00E+00	1.62E-02
		Be-7	<8.10E-02	0.00E+00	8.10E-02
		K-40	<3.63E-01	0.00E+00	3.63E-01
519721	3/23/2020 - 3/30/2020	I-131	<1.75E-02	0.00E+00	1.75E-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	<1.10E-01	0.00E+00	1.10E-01
		K-40	2.57E-01	1.28E-01	1.24E-01
520324	3/30/2020 - 4/6/2020	I-131	<2.00E-02	0.00E+00	2.00E-02
		Cs-134	<1.67E-02	0.00E+00	1.67E-02
		Cs-137	<1.17E-02	0.00E+00	1.17E-02
		Be-7	<1.05E-01	0.00E+00	1.05E-01
		K-40	2.05E-01	1.10E-01	1.04E-01
520533	4/6/2020 - 4/13/2020	I-131	<1.50E-02	0.00E+00	1.50E-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	<6.75E-02	0.00E+00	6.75E-02
		K-40	2.03E-01	1.22E-01	1.44E-01



# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (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
520829	4/13/2020 - 4/20/2020	I-131	<5.27E-02	0.00E+00	5.27E-02
		Cs-134	<2.44E-02	0.00E+00	2.44E-02
		Cs-137	<1.75E-02	0.00E+00	1.75E-02
		Be-7	<1.89E-01	0.00E+00	1.89E-01
		K-40	4.22E-01	1.96E-01	2.15E-01
521630	4/20/2020 - 4/27/2020	I-131	<1.69E-02	0.00E+00	1.69E-02
		Cs-134	<1.36E-02	0.00E+00	1.36E-02
		Cs-137	<1.09E-02	0.00E+00	1.09E-02
		Be-7	<9.30E-02	0.00E+00	9.30E-02
		K-40	2.84E-01	1.48E-01	1.75E-01
522057	4/27/2020 - 5/4/2020	I-131	<2.55E-02	0.00E+00	2.55E-02
		Cs-134	<1.83E-02	0.00E+00	1.83E-02
		Cs-137	<1.09E-02	0.00E+00	1.09E-02
		Be-7	<9.05E-02	0.00E+00	9.05E-02
		K-40	<1.16E-01	0.00E+00	1.16E-01
522367	5/4/2020 - 5/11/2020	I-131	<1.45E-02	0.00E+00	1.45E-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	<1.00E-01	0.00E+00	1.00E-01
		K-40	3.61E-01	2.01E-01	2.76E-01
522620	5/11/2020 - 5/18/2020	I-131	<3.87E-02	0.00E+00	3.87E-02
		Cs-134	<1.42E-02	0.00E+00	1.42E-02
		Cs-137	<1.68E-02	0.00E+00	1.68E-02
		Be-7	<1.08E-01	0.00E+00	1.08E-01
		K-40	6.47E-01	1.98E-01	1.49E-01
523126	5/18/2020 - 5/26/2020	I-131	<1.37E-02	0.00E+00	1.37E-02
		Cs-134	<1.52E-02	0.00E+00	1.52E-02
		Cs-137	<1.26E-02	0.00E+00	1.26E-02
		Be-7	<7.79E-02	0.00E+00	7.79E-02
		K-40	<2.41E-01	0.00E+00	2.41E-01
523491	5/26/2020 - 6/1/2020	I-131	<1.70E-02	0.00E+00	1.70E-02
		Cs-134	<1.81E-02	0.00E+00	1.81E-02
		Cs-137	<2.02E-02	0.00E+00	2.02E-02
		Be-7	<1.41E-01	0.00E+00	1.41E-01
		K-40	<3.75E-01	0.00E+00	3.75E-01
523900	6/1/2020 - 6/8/2020	I-131	<2.13E-02	0.00E+00	2.13E-02
		Cs-134	<1.36E-02	0.00E+00	1.36E-02
		Cs-137	<1.49E-02	0.00E+00	1.49E-02
		Be-7	<1.19E-01	0.00E+00	1.19E-01
		K-40	<3.09E-01	0.00E+00	3.09E-01
524465	6/8/2020 - 6/15/2020	I-131	<1.63E-02	0.00E+00	1.63E-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	<9.34E-02	0.00E+00	9.34E-02
		K-40	2.18E-01	1.16E-01	1.13E-01
524786	6/15/2020 - 6/22/2020	I-131	<2.76E-02	0.00E+00	2.76E-02
		Cs-134	<1.84E-02	0.00E+00	1.84E-02
		Cs-137	<1.33E-02	0.00E+00	1.33E-02
		Be-7	<1.08E-01	0.00E+00	1.08E-01
		K-40	4.00E-01	1.80E-01	2.09E-01



# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (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
525010	6/22/2020 - 6/29/2020	I-131	<1.57E-02	0.00E+00	1.57E-02
		Cs-134	<1.53E-02	0.00E+00	1.53E-02
		Cs-137	<1.09E-02	0.00E+00	1.09E-02
		Be-7	<1.13E-01	0.00E+00	1.13E-01
		K-40	3.75E-01	1.79E-01	2.18E-01
525402	6/29/2020 - 7/6/2020	I-131	<2.49E-02	0.00E+00	2.49E-02
		Cs-134	<1.69E-02	0.00E+00	1.69E-02
		Cs-137	<1.17E-02	0.00E+00	1.17E-02
		Be-7	<1.04E-01	0.00E+00	1.04E-01
		K-40	4.35E-01	1.72E-01	1.69E-01
525607	7/6/2020 - 7/13/2020	I-131	<1.92E-02	0.00E+00	1.92E-02
		Cs-134	<1.28E-02	0.00E+00	1.28E-02
		Cs-137	<1.53E-02	0.00E+00	1.53E-02
		Be-7	<1.16E-01	0.00E+00	1.16E-01
		K-40	<1.18E-01	0.00E+00	1.18E-01
525976	7/13/2020 - 7/20/2020	I-131	<5.20E-02	0.00E+00	5.20E-02
		Cs-134	<1.05E-02	0.00E+00	1.05E-02
		Cs-137	<1.38E-02	0.00E+00	1.38E-02
		Be-7	<1.15E-01	0.00E+00	1.15E-01
		K-40	4.65E-01	1.44E-01	1.08E-01
526294	7/20/2020 - 7/27/2020	I-131	<1.80E-02	0.00E+00	1.80E-02
		Cs-134	<1.68E-02	0.00E+00	1.68E-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	4.80E-01	1.67E-01	1.17E-01
526581	7/27/2020 - 8/3/2020	I-131	<2.30E-02	0.00E+00	2.30E-02
		Cs-134	<1.61E-02	0.00E+00	1.61E-02
		Cs-137	<1.25E-02	0.00E+00	1.25E-02
		Be-7	<1.18E-01	0.00E+00	1.18E-01
		K-40	4.74E-01	1.67E-01	1.23E-01
526897	8/3/2020 - 8/10/2020	I-131	<2.13E-02	0.00E+00	2.13E-02
		Cs-134	<1.92E-02	0.00E+00	1.92E-02
		Cs-137	<1.60E-02	0.00E+00	1.60E-02
		Be-7	<1.24E-01	0.00E+00	1.24E-01
		K-40	5.36E-01	2.00E-01	2.14E-01
527392	8/10/2020 - 8/17/2020	I-131	<2.12E-02	0.00E+00	2.12E-02
		Cs-134	<1.26E-02	0.00E+00	1.26E-02
		Cs-137	<1.09E-02	0.00E+00	1.09E-02
		Be-7	<1.04E-01	0.00E+00	1.04E-01
		K-40	5.18E-01	1.86E-01	1.74E-01
527668	8/17/2020 - 8/24/2020	I-131	<1.81E-02	0.00E+00	1.81E-02
		Cs-134	<1.53E-02	0.00E+00	1.53E-02
		Cs-137	<1.25E-02	0.00E+00	1.25E-02
		Be-7	<1.15E-01	0.00E+00	1.15E-01
		K-40	5.70E-01	1.82E-01	1.25E-01
527970	8/24/2020 - 8/31/2020	I-131	<1.87E-02	0.00E+00	1.87E-02
		Cs-134	<1.59E-02	0.00E+00	1.59E-02
		Cs-137	<1.38E-02	0.00E+00	1.38E-02
		Be-7	<9.29E-02	0.00E+00	9.29E-02
		K-40	3.49E-01	1.65E-01	1.93E-01



# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (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
528716	8/31/2020 - 9/8/2020	I-131	<1.43E-02	0.00E+00	1.43E-02
		Cs-134	<1.45E-02	0.00E+00	1.45E-02
		Cs-137	<1.26E-02	0.00E+00	1.26E-02
		Be-7	<9.86E-02	0.00E+00	9.86E-02
		K-40	4.38E-01	1.59E-01	1.51E-01
529056	9/8/2020 - 9/14/2020	I-131	<2.13E-02	0.00E+00	2.13E-02
		Cs-134	<2.27E-02	0.00E+00	2.27E-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	6.21E-01	2.13E-01	1.75E-01
530056	9/14/2020 - 9/21/2020	I-131	<1.45E-02	0.00E+00	1.45E-02
		Cs-134	<1.36E-02	0.00E+00	1.36E-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	5.03E-01	1.75E-01	1.34E-01
530345	9/21/2020 - 9/28/2020	I-131	<1.75E-02	0.00E+00	1.75E-02
		Cs-134	<1.67E-02	0.00E+00	1.67E-02
		Cs-137	<1.17E-02	0.00E+00	1.17E-02
		Be-7	<1.11E-01	0.00E+00	1.11E-01
		K-40	5.47E-01	1.99E-01	2.05E-01
530614	9/28/2020 - 10/5/2020	I-131	<1.23E-02	0.00E+00	1.23E-02
		Cs-134	<1.46E-02	0.00E+00	1.46E-02
		Cs-137	<9.02E-03	0.00E+00	9.02E-03
		Be-7	<8.42E-02	0.00E+00	8.42E-02
		K-40	3.92E-01	1.78E-01	2.06E-01
531146	10/5/2020 - 10/12/2020	I-131	<1.36E-02	0.00E+00	1.36E-02
		Cs-134	<1.63E-02	0.00E+00	1.63E-02
		Cs-137	<1.19E-02	0.00E+00	1.19E-02
		Be-7	<7.39E-02	0.00E+00	7.39E-02
		K-40	<3.05E-01	0.00E+00	3.05E-01
531732	10/12/2020 - 10/19/2020	I-131	<2.08E-02	0.00E+00	2.08E-02
		Cs-134	<1.74E-02	0.00E+00	1.74E-02
		Cs-137	<1.38E-02	0.00E+00	1.38E-02
		Be-7	<1.01E-01	0.00E+00	1.01E-01
		K-40	4.92E-01	1.70E-01	1.29E-01
532130	10/19/2020 - 10/26/2020	I-131	<1.72E-02	0.00E+00	1.72E-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	<8.86E-02	0.00E+00	8.86E-02
		K-40	3.97E-01	1.64E-01	1.64E-01
532551	10/26/2020 - 11/2/2020	I-131	<1.99E-02	0.00E+00	1.99E-02
		Cs-134	<1.61E-02	0.00E+00	1.61E-02
		Cs-137	<1.78E-02	0.00E+00	1.78E-02
		Be-7	<1.20E-01	0.00E+00	1.20E-01
		K-40	4.88E-01	2.14E-01	2.67E-01
532867	11/2/2020 - 11/9/2020	I-131	<1.70E-02	0.00E+00	1.70E-02
		Cs-134	<1.44E-02	0.00E+00	1.44E-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	4.67E-01	1.97E-01	2.32E-01



# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (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
533392	11/9/2020 - 11/16/2020	I-131	<1.99E-02	0.00E+00	1.99E-02
		Cs-134	<1.94E-02	0.00E+00	1.94E-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	5.91E-01	2.09E-01	2.15E-01
533851	11/16/2020 - 11/23/2020	I-131	<2.04E-02	0.00E+00	2.04E-02
		Cs-134	<1.52E-02	0.00E+00	1.52E-02
		Cs-137	<1.24E-02	0.00E+00	1.24E-02
		Be-7	<1.14E-01	0.00E+00	1.14E-01
		K-40	5.77E-01	1.86E-01	1.41E-01
534148	11/23/2020 - 11/30/2020	I-131	<2.40E-02	0.00E+00	2.40E-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	<1.20E-01	0.00E+00	1.20E-01
		K-40	6.22E-01	2.19E-01	2.27E-01
534614	11/30/2020 - 12/7/2020	I-131	<1.58E-02	0.00E+00	1.58E-02
		Cs-134	<1.36E-02	0.00E+00	1.36E-02
		Cs-137	<1.18E-02	0.00E+00	1.18E-02
		Be-7	<8.94E-02	0.00E+00	8.94E-02
		K-40	4.41E-01	1.62E-01	1.25E-01
535380	12/7/2020 - 12/14/2020	I-131	<1.81E-02	0.00E+00	1.81E-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	<9.69E-02	0.00E+00	9.69E-02
		K-40	4.46E-01	1.74E-01	1.71E-01
535947	12/14/2020 - 12/21/2020	I-131	<3.51E-02	0.00E+00	3.51E-02
		Cs-134	<1.47E-02	0.00E+00	1.47E-02
		Cs-137	<1.18E-02	0.00E+00	1.18E-02
		Be-7	<9.84E-02	0.00E+00	9.84E-02
		K-40	3.15E-01	1.46E-01	1.48E-01
536223	12/21/2020 - 12/28/2020	I-131	<3.13E-02	0.00E+00	3.13E-02
		Cs-134	<1.70E-02	0.00E+00	1.70E-02
		Cs-137	<1.64E-02	0.00E+00	1.64E-02
		Be-7	<1.36E-01	0.00E+00	1.36E-01
		K-40	4.67E-01	1.70E-01	1.38E-01
<b>Sample Point 093 [ CONTROL - SE @ 9.34 miles ]</b>					
514516	12/30/2019 - 1/6/2020	I-131	<1.82E-02	0.00E+00	1.82E-02
		Cs-134	<1.24E-02	0.00E+00	1.24E-02
		Cs-137	<1.16E-02	0.00E+00	1.16E-02
		Be-7	<8.82E-02	0.00E+00	8.82E-02
		K-40	2.70E-01	1.47E-01	1.80E-01
514948	1/6/2020 - 1/13/2020	I-131	<2.09E-02	0.00E+00	2.09E-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	<1.35E-01	0.00E+00	1.35E-01
		K-40	6.19E-01	2.07E-01	1.87E-01
515287	1/13/2020 - 1/20/2020	I-131	<1.51E-02	0.00E+00	1.51E-02
		Cs-134	<1.25E-02	0.00E+00	1.25E-02
		Cs-137	<1.71E-02	0.00E+00	1.71E-02
		Be-7	<9.63E-02	0.00E+00	9.63E-02
		K-40	2.41E-01	1.33E-01	1.54E-01





# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 093 [ CONTROL - SE @ 9.34 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
515518	1/20/2020 - 1/27/2020	I-131	<2.05E-02	0.00E+00	2.05E-02
		Cs-134	<1.53E-02	0.00E+00	1.53E-02
		Cs-137	<1.25E-02	0.00E+00	1.25E-02
		Be-7	<9.39E-02	0.00E+00	9.39E-02
		K-40	<2.57E-01	0.00E+00	2.57E-01
515912	1/27/2020 - 2/3/2020	I-131	<1.50E-02	0.00E+00	1.50E-02
		Cs-134	<1.14E-02	0.00E+00	1.14E-02
		Cs-137	<1.23E-02	0.00E+00	1.23E-02
		Be-7	<1.20E-01	0.00E+00	1.20E-01
		K-40	2.98E-01	1.48E-01	1.69E-01
516165	2/3/2020 - 2/10/2020	I-131	<1.80E-02	0.00E+00	1.80E-02
		Cs-134	<1.27E-02	0.00E+00	1.27E-02
		Cs-137	<1.46E-02	0.00E+00	1.46E-02
		Be-7	<9.76E-02	0.00E+00	9.76E-02
		K-40	4.88E-01	2.02E-01	2.36E-01
516535	2/10/2020 - 2/17/2020	I-131	<2.07E-02	0.00E+00	2.07E-02
		Cs-134	<1.53E-02	0.00E+00	1.53E-02
		Cs-137	<1.45E-02	0.00E+00	1.45E-02
		Be-7	<1.04E-01	0.00E+00	1.04E-01
		K-40	3.60E-01	1.74E-01	2.12E-01
516909	2/17/2020 - 2/24/2020	I-131	<2.16E-02	0.00E+00	2.16E-02
		Cs-134	<1.90E-02	0.00E+00	1.90E-02
		Cs-137	<1.46E-02	0.00E+00	1.46E-02
		Be-7	<1.44E-01	0.00E+00	1.44E-01
		K-40	6.05E-01	2.15E-01	2.20E-01
517435	2/24/2020 - 3/2/2020	I-131	<1.86E-02	0.00E+00	1.86E-02
		Cs-134	<1.44E-02	0.00E+00	1.44E-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	3.94E-01	1.88E-01	2.35E-01
517697	3/2/2020 - 3/7/2020	I-131	<3.26E-02	0.00E+00	3.26E-02
		Cs-134	<1.96E-02	0.00E+00	1.96E-02
		Cs-137	<1.96E-02	0.00E+00	1.96E-02
		Be-7	<1.12E-01	0.00E+00	1.12E-01
		K-40	5.74E-01	2.65E-01	3.28E-01
518742	3/9/2020 - 3/16/2020	I-131	<2.76E-02	0.00E+00	2.76E-02
		Cs-134	<1.77E-02	0.00E+00	1.77E-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	4.79E-01	2.13E-01	2.64E-01
519336	3/16/2020 - 3/23/2020	I-131	<1.70E-02	0.00E+00	1.70E-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	<6.81E-02	0.00E+00	6.81E-02
		K-40	2.21E-01	1.25E-01	1.45E-01
519722	3/23/2020 - 3/30/2020	I-131	<1.78E-02	0.00E+00	1.78E-02
		Cs-134	<1.45E-02	0.00E+00	1.45E-02
		Cs-137	<1.16E-02	0.00E+00	1.16E-02
		Be-7	<1.03E-01	0.00E+00	1.03E-01
		K-40	2.15E-01	1.43E-01	1.89E-01



# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 093 [ CONTROL - SE @ 9.34 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
520325	3/30/2020 - 4/6/2020	I-131	<1.75E-02	0.00E+00	1.75E-02
		Cs-134	<9.07E-03	0.00E+00	9.07E-03
		Cs-137	<1.10E-02	0.00E+00	1.10E-02
		Be-7	<9.06E-02	0.00E+00	9.06E-02
		K-40	2.27E-01	1.29E-01	1.48E-01
520534	4/6/2020 - 4/13/2020	I-131	<1.80E-02	0.00E+00	1.80E-02
		Cs-134	<1.67E-02	0.00E+00	1.67E-02
		Cs-137	<1.58E-02	0.00E+00	1.58E-02
		Be-7	<9.21E-02	0.00E+00	9.21E-02
		K-40	2.54E-01	1.79E-01	2.57E-01
520830	4/13/2020 - 4/20/2020	I-131	<3.15E-02	0.00E+00	3.15E-02
		Cs-134	<1.40E-02	0.00E+00	1.40E-02
		Cs-137	<1.35E-02	0.00E+00	1.35E-02
		Be-7	<1.09E-01	0.00E+00	1.09E-01
		K-40	3.96E-01	1.73E-01	1.87E-01
521631	4/20/2020 - 4/27/2020	I-131	<1.61E-02	0.00E+00	1.61E-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	<9.32E-02	0.00E+00	9.32E-02
		K-40	2.44E-01	1.50E-01	1.97E-01
522058	4/27/2020 - 5/4/2020	I-131	<2.62E-02	0.00E+00	2.62E-02
		Cs-134	<1.80E-02	0.00E+00	1.80E-02
		Cs-137	<1.33E-02	0.00E+00	1.33E-02
		Be-7	<1.16E-01	0.00E+00	1.16E-01
		K-40	<2.60E-01	0.00E+00	2.60E-01
522368	5/4/2020 - 5/11/2020	I-131	<1.57E-02	0.00E+00	1.57E-02
		Cs-134	<1.89E-02	0.00E+00	1.89E-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	3.71E-01	1.56E-01	1.54E-01
522621	5/11/2020 - 5/18/2020	I-131	<3.74E-02	0.00E+00	3.74E-02
		Cs-134	<1.69E-02	0.00E+00	1.69E-02
		Cs-137	<8.99E-03	0.00E+00	8.99E-03
		Be-7	<8.81E-02	0.00E+00	8.81E-02
		K-40	3.93E-01	1.53E-01	1.22E-01
523127	5/18/2020 - 5/26/2020	I-131	<1.34E-02	0.00E+00	1.34E-02
		Cs-134	<1.02E-02	0.00E+00	1.02E-02
		Cs-137	<1.33E-02	0.00E+00	1.33E-02
		Be-7	<8.32E-02	0.00E+00	8.32E-02
		K-40	1.32E-01	1.15E-01	1.71E-01
523492	5/26/2020 - 6/1/2020	I-131	<2.50E-02	0.00E+00	2.50E-02
		Cs-134	<1.48E-02	0.00E+00	1.48E-02
		Cs-137	<2.09E-02	0.00E+00	2.09E-02
		Be-7	<1.30E-01	0.00E+00	1.30E-01
		K-40	4.71E-01	2.06E-01	2.31E-01
523901	6/1/2020 - 6/8/2020	I-131	<2.02E-02	0.00E+00	2.02E-02
		Cs-134	<1.47E-02	0.00E+00	1.47E-02
		Cs-137	<1.33E-02	0.00E+00	1.33E-02
		Be-7	<1.19E-01	0.00E+00	1.19E-01
		K-40	<3.09E-01	0.00E+00	3.09E-01



# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 093 [ CONTROL - SE @ 9.34 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
524466	6/8/2020 - 6/15/2020	I-131	<1.58E-02	0.00E+00	1.58E-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	<9.30E-02	0.00E+00	9.30E-02
		K-40	<3.22E-01	0.00E+00	3.22E-01
524787	6/15/2020 - 6/22/2020	I-131	<2.23E-02	0.00E+00	2.23E-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	<1.08E-01	0.00E+00	1.08E-01
		K-40	5.02E-01	1.86E-01	1.84E-01
525011	6/22/2020 - 6/29/2020	I-131	<1.63E-02	0.00E+00	1.63E-02
		Cs-134	<1.38E-02	0.00E+00	1.38E-02
		Cs-137	<1.34E-02	0.00E+00	1.34E-02
		Be-7	<1.07E-01	0.00E+00	1.07E-01
		K-40	3.38E-01	1.69E-01	2.06E-01
525403	6/29/2020 - 7/6/2020	I-131	<3.23E-02	0.00E+00	3.23E-02
		Cs-134	<1.81E-02	0.00E+00	1.81E-02
		Cs-137	<1.31E-02	0.00E+00	1.31E-02
		Be-7	1.16E-02	5.65E-02	1.05E-01
		K-40	<3.21E-01	0.00E+00	3.21E-01
525608	7/6/2020 - 7/13/2020	I-131	<1.60E-02	0.00E+00	1.60E-02
		Cs-134	<1.63E-02	0.00E+00	1.63E-02
		Cs-137	<1.54E-02	0.00E+00	1.54E-02
		Be-7	<1.10E-01	0.00E+00	1.10E-01
		K-40	3.20E-01	1.62E-01	1.89E-01
525977	7/13/2020 - 7/20/2020	I-131	<5.50E-02	0.00E+00	5.50E-02
		Cs-134	<1.50E-02	0.00E+00	1.50E-02
		Cs-137	<1.06E-02	0.00E+00	1.06E-02
		Be-7	<1.23E-01	0.00E+00	1.23E-01
		K-40	1.27E-01	1.19E-01	1.79E-01
526295	7/20/2020 - 7/27/2020	I-131	<2.15E-02	0.00E+00	2.15E-02
		Cs-134	<1.74E-02	0.00E+00	1.74E-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	4.45E-01	1.91E-01	2.22E-01
526582	7/27/2020 - 8/3/2020	I-131	<1.87E-02	0.00E+00	1.87E-02
		Cs-134	<1.60E-02	0.00E+00	1.60E-02
		Cs-137	<9.95E-03	0.00E+00	9.95E-03
		Be-7	<1.13E-01	0.00E+00	1.13E-01
		K-40	3.72E-01	1.63E-01	1.75E-01
526898	8/3/2020 - 8/10/2020	I-131	<2.11E-02	0.00E+00	2.11E-02
		Cs-134	<1.53E-02	0.00E+00	1.53E-02
		Cs-137	<1.57E-02	0.00E+00	1.57E-02
		Be-7	<9.51E-02	0.00E+00	9.51E-02
		K-40	4.26E-01	1.92E-01	2.31E-01
527393	8/10/2020 - 8/17/2020	I-131	<1.65E-02	0.00E+00	1.65E-02
		Cs-134	<1.27E-02	0.00E+00	1.27E-02
		Cs-137	<1.10E-02	0.00E+00	1.10E-02
		Be-7	<7.89E-02	0.00E+00	7.89E-02
		K-40	<9.23E-02	0.00E+00	9.23E-02



# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 093 [ CONTROL - SE @ 9.34 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
527669	8/17/2020 - 8/24/2020	I-131	<2.03E-02	0.00E+00	2.03E-02
		Cs-134	<1.69E-02	0.00E+00	1.69E-02
		Cs-137	<1.64E-02	0.00E+00	1.64E-02
		Be-7	<9.38E-02	0.00E+00	9.38E-02
		K-40	3.84E-01	1.72E-01	1.94E-01
527971	8/24/2020 - 8/31/2020	I-131	<2.06E-02	0.00E+00	2.06E-02
		Cs-134	<1.63E-02	0.00E+00	1.63E-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	4.03E-01	1.60E-01	1.29E-01
528717	8/31/2020 - 9/8/2020	I-131	<2.21E-02	0.00E+00	2.21E-02
		Cs-134	<1.69E-02	0.00E+00	1.69E-02
		Cs-137	<1.29E-02	0.00E+00	1.29E-02
		Be-7	<9.89E-02	0.00E+00	9.89E-02
		K-40	4.89E-01	1.93E-01	2.19E-01
529057	9/8/2020 - 9/14/2020	I-131	<2.19E-02	0.00E+00	2.19E-02
		Cs-134	<2.10E-02	0.00E+00	2.10E-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	4.96E-01	2.30E-01	2.88E-01
530057	9/14/2020 - 9/21/2020	I-131	<1.66E-02	0.00E+00	1.66E-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	<8.45E-02	0.00E+00	8.45E-02
		K-40	5.92E-01	2.36E-01	2.88E-01
530346	9/21/2020 - 9/28/2020	I-131	<2.19E-02	0.00E+00	2.19E-02
		Cs-134	<1.79E-02	0.00E+00	1.79E-02
		Cs-137	<1.37E-02	0.00E+00	1.37E-02
		Be-7	<1.03E-01	0.00E+00	1.03E-01
		K-40	5.22E-01	1.91E-01	1.90E-01
530615	9/28/2020 - 10/5/2020	I-131	<1.70E-02	0.00E+00	1.70E-02
		Cs-134	<1.72E-02	0.00E+00	1.72E-02
		Cs-137	<1.62E-02	0.00E+00	1.62E-02
		Be-7	<1.27E-01	0.00E+00	1.27E-01
		K-40	5.64E-01	1.92E-01	1.47E-01
531147	10/5/2020 - 10/12/2020	I-131	<1.91E-02	0.00E+00	1.91E-02
		Cs-134	<1.53E-02	0.00E+00	1.53E-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	3.86E-01	1.77E-01	2.02E-01
531733	10/12/2020 - 10/19/2020	I-131	<2.05E-02	0.00E+00	2.05E-02
		Cs-134	<1.61E-02	0.00E+00	1.61E-02
		Cs-137	<1.57E-02	0.00E+00	1.57E-02
		Be-7	<8.89E-02	0.00E+00	8.89E-02
		K-40	6.46E-01	2.33E-01	2.64E-01
532131	10/19/2020 - 10/26/2020	I-131	<1.71E-02	0.00E+00	1.71E-02
		Cs-134	<1.37E-02	0.00E+00	1.37E-02
		Cs-137	<1.74E-02	0.00E+00	1.74E-02
		Be-7	<9.88E-02	0.00E+00	9.88E-02
		K-40	3.20E-01	1.44E-01	1.38E-01



# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 093 [ CONTROL - SE @ 9.34 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
532552	10/26/2020 - 11/2/2020	I-131	<1.84E-02	0.00E+00	1.84E-02
		Cs-134	<1.60E-02	0.00E+00	1.60E-02
		Cs-137	<1.32E-02	0.00E+00	1.32E-02
		Be-7	<1.05E-01	0.00E+00	1.05E-01
		K-40	5.24E-01	1.85E-01	1.66E-01
532868	11/2/2020 - 11/9/2020	I-131	<1.82E-02	0.00E+00	1.82E-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	<8.91E-02	0.00E+00	8.91E-02
		K-40	3.66E-01	1.48E-01	1.21E-01
533393	11/9/2020 - 11/16/2020	I-131	<2.21E-02	0.00E+00	2.21E-02
		Cs-134	<1.68E-02	0.00E+00	1.68E-02
		Cs-137	<1.60E-02	0.00E+00	1.60E-02
		Be-7	<1.45E-01	0.00E+00	1.45E-01
		K-40	6.76E-01	2.13E-01	1.81E-01
533852	11/16/2020 - 11/23/2020	I-131	<2.19E-02	0.00E+00	2.19E-02
		Cs-134	<1.60E-02	0.00E+00	1.60E-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	4.46E-01	1.67E-01	1.36E-01
534149	11/23/2020 - 11/30/2020	I-131	<2.04E-02	0.00E+00	2.04E-02
		Cs-134	<1.46E-02	0.00E+00	1.46E-02
		Cs-137	<1.44E-02	0.00E+00	1.44E-02
		Be-7	<1.24E-01	0.00E+00	1.24E-01
		K-40	5.20E-01	1.92E-01	1.85E-01
534615	11/30/2020 - 12/7/2020	I-131	<2.02E-02	0.00E+00	2.02E-02
		Cs-134	<2.05E-02	0.00E+00	2.05E-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	6.20E-01	1.99E-01	1.47E-01
535381	12/7/2020 - 12/14/2020	I-131	<1.82E-02	0.00E+00	1.82E-02
		Cs-134	<1.76E-02	0.00E+00	1.76E-02
		Cs-137	<1.46E-02	0.00E+00	1.46E-02
		Be-7	<9.87E-02	0.00E+00	9.87E-02
		K-40	5.53E-01	2.24E-01	2.70E-01
535948	12/14/2020 - 12/21/2020	I-131	<3.88E-02	0.00E+00	3.88E-02
		Cs-134	<1.35E-02	0.00E+00	1.35E-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	8.73E-01	2.26E-01	3.59E-02
536224	12/21/2020 - 12/28/2020	I-131	<3.70E-02	0.00E+00	3.70E-02
		Cs-134	<1.37E-02	0.00E+00	1.37E-02
		Cs-137	<1.46E-02	0.00E+00	1.46E-02
		Be-7	<1.34E-01	0.00E+00	1.34E-01
		K-40	5.73E-01	2.13E-01	2.33E-01

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
515727	12/30/2019 - 1/27/2020	Beta	<3.31E+00	0.00E+00	3.31E+00
		Mn-54	<3.65E+00	0.00E+00	3.65E+00
		Co-58	<3.25E+00	0.00E+00	3.25E+00



# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (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
515727	12/30/2019 - 1/27/2020	Fe-59	<8.41E+00	0.00E+00	8.41E+00
		Co-60	<4.84E+00	0.00E+00	4.84E+00
		Zn-65	<7.80E+00	0.00E+00	7.80E+00
		Zr-95	<8.01E+00	0.00E+00	8.01E+00
		Nb-95	<5.09E+00	0.00E+00	5.09E+00
		I-131	<1.18E+01	0.00E+00	1.18E+01
		Cs-134	<3.80E+00	0.00E+00	3.80E+00
		Cs-137	<4.11E+00	0.00E+00	4.11E+00
		BaLa-140	<6.69E+00	0.00E+00	6.69E+00
		Be-7	<3.03E+01	0.00E+00	3.03E+01
		K-40	<3.83E+01	0.00E+00	3.83E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
517246	1/27/2020 - 2/24/2020	Beta	<3.25E+00	0.00E+00	3.25E+00
		Mn-54	<2.93E+00	0.00E+00	2.93E+00
		Co-58	<2.46E+00	0.00E+00	2.46E+00
		Fe-59	<5.86E+00	0.00E+00	5.86E+00
		Co-60	<2.11E+00	0.00E+00	2.11E+00
		Zn-65	<5.02E+00	0.00E+00	5.02E+00
		Zr-95	<5.05E+00	0.00E+00	5.05E+00
		Nb-95	<3.39E+00	0.00E+00	3.39E+00
		I-131	<1.15E+01	0.00E+00	1.15E+01
		Cs-134	<3.06E+00	0.00E+00	3.06E+00
		Cs-137	<2.88E+00	0.00E+00	2.88E+00
		BaLa-140	<8.10E+00	0.00E+00	8.10E+00
		Be-7	<2.16E+01	0.00E+00	2.16E+01
		K-40	1.13E+02	3.39E+01	3.69E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
519416	2/24/2020 - 3/23/2020	Beta	3.33E+00	4.47E+00	3.29E+00
		Mn-54	<2.16E+00	0.00E+00	2.16E+00
		Co-58	<2.10E+00	0.00E+00	2.10E+00
		Fe-59	<5.01E+00	0.00E+00	5.01E+00
		Co-60	<2.13E+00	0.00E+00	2.13E+00
		Zn-65	<6.46E+00	0.00E+00	6.46E+00
		Zr-95	<5.15E+00	0.00E+00	5.15E+00
		Nb-95	<3.23E+00	0.00E+00	3.23E+00
		I-131	<1.10E+01	0.00E+00	1.10E+01
		Cs-134	<3.04E+00	0.00E+00	3.04E+00
		Cs-137	<2.79E+00	0.00E+00	2.79E+00
		BaLa-140	<6.35E+00	0.00E+00	6.35E+00
		Be-7	<2.46E+01	0.00E+00	2.46E+01
		K-40	7.29E+01	2.94E+01	3.76E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
516445	12/30/2019 - 4/20/2020	H3DW	<4.8E+01	0.00E+00	1.91E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
521282	3/23/2020 - 4/20/2020	Beta	<3.31E+00	0.00E+00	3.31E+00
		Mn-54	<1.66E+00	0.00E+00	1.66E+00
		Co-58	<2.18E+00	0.00E+00	2.18E+00
		Fe-59	<4.56E+00	0.00E+00	4.56E+00
		Co-60	<1.77E+00	0.00E+00	1.77E+00
		Zn-65	<4.03E+00	0.00E+00	4.03E+00
		Zr-95	<3.53E+00	0.00E+00	3.53E+00
		Nb-95	<2.66E+00	0.00E+00	2.66E+00
		I-131	<1.12E+01	0.00E+00	1.12E+01
		Cs-134	<2.21E+00	0.00E+00	2.21E+00
		Cs-137	<2.04E+00	0.00E+00	2.04E+00
		BaLa-140	<4.40E+00	0.00E+00	4.40E+00
		Be-7	<1.80E+01	0.00E+00	1.80E+01
		K-40	6.67E+01	2.34E+01	3.17E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
522850	4/20/2020 - 5/18/2020	Beta	<3.24E+00	0.00E+00	3.24E+00
		Mn-54	<1.84E+00	0.00E+00	1.84E+00
		Co-58	<1.83E+00	0.00E+00	1.83E+00
		Fe-59	<4.17E+00	0.00E+00	4.17E+00



# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (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
522850	4/20/2020 - 5/18/2020	Co-60	<1.70E+00	0.00E+00	1.70E+00
		Zn-65	<3.66E+00	0.00E+00	3.66E+00
		Zr-95	<3.94E+00	0.00E+00	3.94E+00
		Nb-95	<2.85E+00	0.00E+00	2.85E+00
		I-131	<1.14E+01	0.00E+00	1.14E+01
		Cs-134	<1.93E+00	0.00E+00	1.93E+00
		Cs-137	<1.77E+00	0.00E+00	1.77E+00
		BaLa-140	<5.19E+00	0.00E+00	5.19E+00
		Be-7	<1.72E+01	0.00E+00	1.72E+01
		K-40	8.65E+01	2.30E+01	2.68E+01
		524515	5/18/2020 - 6/15/2020	Beta	<3.24E+00
Mn-54	<3.71E+00			0.00E+00	3.71E+00
Co-58	<3.70E+00			0.00E+00	3.70E+00
Fe-59	<7.87E+00			0.00E+00	7.87E+00
Co-60	<3.84E+00			0.00E+00	3.84E+00
Zn-65	<6.85E+00			0.00E+00	6.85E+00
Zr-95	<5.69E+00			0.00E+00	5.69E+00
Nb-95	<4.45E+00			0.00E+00	4.45E+00
I-131	<1.09E+01			0.00E+00	1.09E+01
Cs-134	<3.69E+00			0.00E+00	3.69E+00
Cs-137	<2.97E+00			0.00E+00	2.97E+00
BaLa-140	<7.24E+00			0.00E+00	7.24E+00
Be-7	<3.30E+01			0.00E+00	3.30E+01
K-40	9.24E+01			4.16E+01	5.63E+01
525832	6/15/2020 - 7/13/2020	Beta	<3.18E+00	0.00E+00	3.18E+00
		Mn-54	<2.05E+00	0.00E+00	2.05E+00
		Co-58	<2.58E+00	0.00E+00	2.58E+00
		Fe-59	<4.08E+00	0.00E+00	4.08E+00
		Co-60	<2.06E+00	0.00E+00	2.06E+00
		Zn-65	<4.21E+00	0.00E+00	4.21E+00
		Zr-95	<3.97E+00	0.00E+00	3.97E+00
		Nb-95	<3.02E+00	0.00E+00	3.02E+00
		I-131	<1.16E+01	0.00E+00	1.16E+01
		Cs-134	<2.28E+00	0.00E+00	2.28E+00
		Cs-137	<2.04E+00	0.00E+00	2.04E+00
		BaLa-140	<5.35E+00	0.00E+00	5.35E+00
		Be-7	<1.92E+01	0.00E+00	1.92E+01
		K-40	6.27E+01	2.28E+01	2.93E+01
526663	4/20/2020 - 7/13/2020	H3DW	<4.3E+01	0.00E+00	1.86E+02
527100	7/13/2020 - 8/10/2020	Beta	<3.26E+00	0.00E+00	3.26E+00
		Mn-54	<3.67E+00	0.00E+00	3.67E+00
		Co-58	<2.79E+00	0.00E+00	2.79E+00
		Fe-59	<6.35E+00	0.00E+00	6.35E+00
		Co-60	<2.89E+00	0.00E+00	2.89E+00
		Zn-65	<6.68E+00	0.00E+00	6.68E+00
		Zr-95	<6.52E+00	0.00E+00	6.52E+00
		Nb-95	<4.14E+00	0.00E+00	4.14E+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	<3.28E+00	0.00E+00	3.28E+00
		BaLa-140	<6.43E+00	0.00E+00	6.43E+00
		Be-7	<3.12E+01	0.00E+00	3.12E+01
		K-40	5.49E+01	3.15E+01	4.40E+01
528925	8/10/2020 - 9/8/2020	Beta	<3.24E+00	0.00E+00	3.24E+00
		Mn-54	<1.57E+00	0.00E+00	1.57E+00
		Co-58	<2.09E+00	0.00E+00	2.09E+00
		Fe-59	<4.52E+00	0.00E+00	4.52E+00
		Co-60	<1.73E+00	0.00E+00	1.73E+00



# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (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
528925	8/10/2020 - 9/8/2020	Zn-65	<3.31E+00	0.00E+00	3.31E+00
		Zr-95	<3.50E+00	0.00E+00	3.50E+00
		Nb-95	<2.33E+00	0.00E+00	2.33E+00
		I-131	<1.05E+01	0.00E+00	1.05E+01
		Cs-134	<2.48E+00	0.00E+00	2.48E+00
		Cs-137	<1.81E+00	0.00E+00	1.81E+00
		BaLa-140	<5.08E+00	0.00E+00	5.08E+00
		Be-7	<1.79E+01	0.00E+00	1.79E+01
		K-40	9.36E+01	2.38E+01	2.82E+01
		530697	9/8/2020 - 10/5/2020	Beta	<3.23E+00
Mn-54	<3.21E+00			0.00E+00	3.21E+00
Co-58	<2.41E+00			0.00E+00	2.41E+00
Fe-59	<5.28E+00			0.00E+00	5.28E+00
Co-60	<3.00E+00			0.00E+00	3.00E+00
Zn-65	<5.70E+00			0.00E+00	5.70E+00
Zr-95	<5.89E+00			0.00E+00	5.89E+00
Nb-95	<3.58E+00			0.00E+00	3.58E+00
I-131	<1.00E+01			0.00E+00	1.00E+01
Cs-134	<2.81E+00			0.00E+00	2.81E+00
Cs-137	<2.70E+00			0.00E+00	2.70E+00
BaLa-140	<5.91E+00			0.00E+00	5.91E+00
Be-7	<2.97E+01			0.00E+00	2.97E+01
K-40	1.04E+02			3.03E+01	2.84E+01
531574	7/13/2020 - 10/5/2020	H3DW	<-1.1E+02	0.00E+00	1.81E+02
532606	10/5/2020 - 11/2/2020	Beta	<3.23E+00	0.00E+00	3.23E+00
		Mn-54	<3.07E+00	0.00E+00	3.07E+00
		Co-58	<3.42E+00	0.00E+00	3.42E+00
		Fe-59	<5.74E+00	0.00E+00	5.74E+00
		Co-60	<2.57E+00	0.00E+00	2.57E+00
		Zn-65	<6.33E+00	0.00E+00	6.33E+00
		Zr-95	<5.76E+00	0.00E+00	5.76E+00
		Nb-95	<5.10E+00	0.00E+00	5.10E+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	<3.57E+00	0.00E+00	3.57E+00
		BaLa-140	<8.11E+00	0.00E+00	8.11E+00
		Be-7	<2.75E+01	0.00E+00	2.75E+01
		K-40	9.20E+01	4.03E+01	5.46E+01
534202	11/2/2020 - 11/30/2020	Beta	<3.24E+00	0.00E+00	3.24E+00
		Mn-54	<2.35E+00	0.00E+00	2.35E+00
		Co-58	<2.00E+00	0.00E+00	2.00E+00
		Fe-59	<5.87E+00	0.00E+00	5.87E+00
		Co-60	<2.14E+00	0.00E+00	2.14E+00
		Zn-65	<4.67E+00	0.00E+00	4.67E+00
		Zr-95	<4.78E+00	0.00E+00	4.78E+00
		Nb-95	<3.70E+00	0.00E+00	3.70E+00
		I-131	<1.08E+01	0.00E+00	1.08E+01
		Cs-134	<3.02E+00	0.00E+00	3.02E+00
		Cs-137	<3.05E+00	0.00E+00	3.05E+00
		BaLa-140	<7.13E+00	0.00E+00	7.13E+00
		Be-7	<2.35E+01	0.00E+00	2.35E+01
		K-40	9.09E+01	3.00E+01	3.27E+01
536316	11/30/2020 - 12/28/2020	Beta	<3.21E+00	0.00E+00	3.21E+00
		Mn-54	<2.62E+00	0.00E+00	2.62E+00
		Co-58	<2.68E+00	0.00E+00	2.68E+00
		Fe-59	<5.23E+00	0.00E+00	5.23E+00
		Co-60	<2.24E+00	0.00E+00	2.24E+00
		Zn-65	<5.22E+00	0.00E+00	5.22E+00





# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (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
536316	11/30/2020 - 12/28/2020	Zr-95	<4.56E+00	0.00E+00	4.56E+00
		Nb-95	<2.92E+00	0.00E+00	2.92E+00
		I-131	<1.02E+01	0.00E+00	1.02E+01
		Cs-134	<2.10E+00	0.00E+00	2.10E+00
		Cs-137	<2.49E+00	0.00E+00	2.49E+00
		BaLa-140	<7.42E+00	0.00E+00	7.42E+00
		Be-7	<2.52E+01	0.00E+00	2.52E+01
		K-40	8.09E+01	2.69E+01	3.06E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
537234	10/5/2020 - 12/28/2020	H3DW	<-5.9E+01	0.00E+00	1.95E+02

Sample Point 064 [ CONTROL - SSW @ 6.67 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
515728	12/30/2019 - 1/27/2020	Beta	<3.31E+00	0.00E+00	3.31E+00
		Mn-54	<2.87E+00	0.00E+00	2.87E+00
		Co-58	<2.64E+00	0.00E+00	2.64E+00
		Fe-59	<8.74E+00	0.00E+00	8.74E+00
		Co-60	<4.04E+00	0.00E+00	4.04E+00
		Zn-65	<5.86E+00	0.00E+00	5.86E+00
		Zr-95	<6.24E+00	0.00E+00	6.24E+00
		Nb-95	<3.97E+00	0.00E+00	3.97E+00
		I-131	<1.17E+01	0.00E+00	1.17E+01
		Cs-134	<3.64E+00	0.00E+00	3.64E+00
		Cs-137	<2.63E+00	0.00E+00	2.63E+00
		BaLa-140	<8.27E+00	0.00E+00	8.27E+00
		Be-7	<2.48E+01	0.00E+00	2.48E+01
		K-40	<5.65E+01	0.00E+00	5.65E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
517247	1/27/2020 - 2/24/2020	Beta	<3.25E+00	0.00E+00	3.25E+00
		Mn-54	<3.18E+00	0.00E+00	3.18E+00
		Co-58	<2.96E+00	0.00E+00	2.96E+00
		Fe-59	<4.66E+00	0.00E+00	4.66E+00
		Co-60	<2.62E+00	0.00E+00	2.62E+00
		Zn-65	<4.87E+00	0.00E+00	4.87E+00
		Zr-95	<5.26E+00	0.00E+00	5.26E+00
		Nb-95	<3.77E+00	0.00E+00	3.77E+00
		I-131	<1.12E+01	0.00E+00	1.12E+01
		Cs-134	<3.21E+00	0.00E+00	3.21E+00
		Cs-137	<2.85E+00	0.00E+00	2.85E+00
		BaLa-140	<6.12E+00	0.00E+00	6.12E+00
		Be-7	<2.71E+01	0.00E+00	2.71E+01
		K-40	7.16E+01	3.19E+01	4.34E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
519417	2/24/2020 - 3/23/2020	Beta	<3.29E+00	0.00E+00	3.29E+00
		Mn-54	<1.50E+00	0.00E+00	1.50E+00
		Co-58	<1.70E+00	0.00E+00	1.70E+00
		Fe-59	<3.63E+00	0.00E+00	3.63E+00
		Co-60	<1.76E+00	0.00E+00	1.76E+00
		Zn-65	<3.30E+00	0.00E+00	3.30E+00
		Zr-95	<2.99E+00	0.00E+00	2.99E+00
		Nb-95	<2.26E+00	0.00E+00	2.26E+00
		I-131	<7.22E+00	0.00E+00	7.22E+00
		Cs-134	<1.89E+00	0.00E+00	1.89E+00
		Cs-137	<1.69E+00	0.00E+00	1.69E+00
		BaLa-140	<4.35E+00	0.00E+00	4.35E+00
		Be-7	<1.29E+01	0.00E+00	1.29E+01
		K-40	5.33E+01	2.25E+01	3.25E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
516446	12/30/2019 - 4/20/2020	H3DW	<-9.4E+01	0.00E+00	1.92E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
521283	3/23/2020 - 4/20/2020	Beta	<3.31E+00	0.00E+00	3.31E+00
		Mn-54	<1.41E+00	0.00E+00	1.41E+00
		Co-58	<1.82E+00	0.00E+00	1.82E+00



# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (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		
521283	3/23/2020 - 4/20/2020	Fe-59	<4.58E+00	0.00E+00	4.58E+00		
		Co-60	<2.04E+00	0.00E+00	2.04E+00		
		Zn-65	<3.40E+00	0.00E+00	3.40E+00		
		Zr-95	<3.55E+00	0.00E+00	3.55E+00		
		Nb-95	<2.67E+00	0.00E+00	2.67E+00		
		I-131	<1.01E+01	0.00E+00	1.01E+01		
		Cs-134	<1.98E+00	0.00E+00	1.98E+00		
		Cs-137	<1.95E+00	0.00E+00	1.95E+00		
		BaLa-140	<5.35E+00	0.00E+00	5.35E+00		
		Be-7	<1.66E+01	0.00E+00	1.66E+01		
		K-40	6.11E+01	1.87E+01	2.25E+01		
		522851	4/20/2020 - 5/18/2020	Beta	<3.24E+00	0.00E+00	3.24E+00
				Mn-54	<1.68E+00	0.00E+00	1.68E+00
Co-58	<2.00E+00			0.00E+00	2.00E+00		
Fe-59	<4.73E+00			0.00E+00	4.73E+00		
Co-60	<2.21E+00			0.00E+00	2.21E+00		
Zn-65	<4.44E+00			0.00E+00	4.44E+00		
Zr-95	<3.57E+00			0.00E+00	3.57E+00		
Nb-95	<2.71E+00			0.00E+00	2.71E+00		
I-131	<8.96E+00			0.00E+00	8.96E+00		
Cs-134	<1.71E+00			0.00E+00	1.71E+00		
Cs-137	<1.70E+00			0.00E+00	1.70E+00		
BaLa-140	<5.36E+00			0.00E+00	5.36E+00		
Be-7	<1.63E+01			0.00E+00	1.63E+01		
K-40	2.39E+01	1.85E+01	2.88E+01				
524516	5/18/2020 - 6/15/2020	Beta	<3.24E+00	0.00E+00	3.24E+00		
		Mn-54	<2.42E+00	0.00E+00	2.42E+00		
		Co-58	<2.76E+00	0.00E+00	2.76E+00		
		Fe-59	<3.77E+00	0.00E+00	3.77E+00		
		Co-60	<2.66E+00	0.00E+00	2.66E+00		
		Zn-65	<4.40E+00	0.00E+00	4.40E+00		
		Zr-95	<5.74E+00	0.00E+00	5.74E+00		
		Nb-95	<3.24E+00	0.00E+00	3.24E+00		
		I-131	<1.05E+01	0.00E+00	1.05E+01		
		Cs-134	<2.44E+00	0.00E+00	2.44E+00		
		Cs-137	<2.73E+00	0.00E+00	2.73E+00		
		BaLa-140	<6.10E+00	0.00E+00	6.10E+00		
		Be-7	<2.23E+01	0.00E+00	2.23E+01		
K-40	8.35E+01	3.18E+01	4.12E+01				
525833	6/15/2020 - 7/13/2020	Beta	3.86E+00	4.34E+00	3.18E+00		
		Mn-54	<2.13E+00	0.00E+00	2.13E+00		
		Co-58	<2.18E+00	0.00E+00	2.18E+00		
		Fe-59	<5.11E+00	0.00E+00	5.11E+00		
		Co-60	<1.79E+00	0.00E+00	1.79E+00		
		Zn-65	<4.09E+00	0.00E+00	4.09E+00		
		Zr-95	<4.34E+00	0.00E+00	4.34E+00		
		Nb-95	<2.80E+00	0.00E+00	2.80E+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	<2.18E+00	0.00E+00	2.18E+00		
		BaLa-140	<4.21E+00	0.00E+00	4.21E+00		
		Be-7	<2.29E+01	0.00E+00	2.29E+01		
K-40	8.53E+01	2.90E+01	3.86E+01				
526664	4/20/2020 - 7/13/2020	Nuclide	Activity	2 Sigma Error	MDA		
		H3DW	<-5.9E+01	0.00E+00	1.85E+02		
527101	7/13/2020 - 8/10/2020	Nuclide	Activity	2 Sigma Error	MDA		
		Beta	<3.26E+00	0.00E+00	3.26E+00		
		Mn-54	<3.49E+00	0.00E+00	3.49E+00		
		Co-58	<3.59E+00	0.00E+00	3.59E+00		
		Fe-59	<7.16E+00	0.00E+00	7.16E+00		



# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (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
527101	7/13/2020 - 8/10/2020	Co-60	<3.11E+00	0.00E+00	3.11E+00
		Zn-65	<6.07E+00	0.00E+00	6.07E+00
		Zr-95	<7.07E+00	0.00E+00	7.07E+00
		Nb-95	<4.78E+00	0.00E+00	4.78E+00
		I-131	<1.17E+01	0.00E+00	1.17E+01
		Cs-134	<3.36E+00	0.00E+00	3.36E+00
		Cs-137	<3.13E+00	0.00E+00	3.13E+00
		BaLa-140	<5.41E+00	0.00E+00	5.41E+00
		Be-7	<2.88E+01	0.00E+00	2.88E+01
		K-40	4.80E+01	3.00E+01	4.20E+01
		528926	8/10/2020 - 9/8/2020	Beta	<3.24E+00
Mn-54	<2.04E+00			0.00E+00	2.04E+00
Co-58	<1.90E+00			0.00E+00	1.90E+00
Fe-59	<4.02E+00			0.00E+00	4.02E+00
Co-60	<1.88E+00			0.00E+00	1.88E+00
Zn-65	<4.13E+00			0.00E+00	4.13E+00
Zr-95	<3.14E+00			0.00E+00	3.14E+00
Nb-95	<2.21E+00			0.00E+00	2.21E+00
I-131	<1.19E+01			0.00E+00	1.19E+01
Cs-134	<1.91E+00			0.00E+00	1.91E+00
Cs-137	<1.79E+00			0.00E+00	1.79E+00
BaLa-140	<4.84E+00			0.00E+00	4.84E+00
Be-7	<1.98E+01			0.00E+00	1.98E+01
K-40	7.83E+01			2.31E+01	2.75E+01
530698	9/8/2020 - 10/5/2020	Beta	<3.23E+00	0.00E+00	3.23E+00
		Mn-54	<3.41E+00	0.00E+00	3.41E+00
		Co-58	<2.52E+00	0.00E+00	2.52E+00
		Fe-59	<5.38E+00	0.00E+00	5.38E+00
		Co-60	<2.88E+00	0.00E+00	2.88E+00
		Zn-65	<6.31E+00	0.00E+00	6.31E+00
		Zr-95	<4.87E+00	0.00E+00	4.87E+00
		Nb-95	<3.71E+00	0.00E+00	3.71E+00
		I-131	<1.12E+01	0.00E+00	1.12E+01
		Cs-134	<2.52E+00	0.00E+00	2.52E+00
		Cs-137	<2.90E+00	0.00E+00	2.90E+00
		BaLa-140	<4.62E+00	0.00E+00	4.62E+00
		Be-7	<2.56E+01	0.00E+00	2.56E+01
		K-40	7.74E+01	3.23E+01	3.98E+01
531575	7/13/2020 - 10/5/2020	H3DW	<-6.8E+01	0.00E+00	1.81E+02
532607	10/5/2020 - 11/2/2020	Beta	<3.23E+00	0.00E+00	3.23E+00
		Mn-54	<2.92E+00	0.00E+00	2.92E+00
		Co-58	<2.93E+00	0.00E+00	2.93E+00
		Fe-59	<7.15E+00	0.00E+00	7.15E+00
		Co-60	<3.16E+00	0.00E+00	3.16E+00
		Zn-65	<6.45E+00	0.00E+00	6.45E+00
		Zr-95	<5.64E+00	0.00E+00	5.64E+00
		Nb-95	<4.14E+00	0.00E+00	4.14E+00
		I-131	<1.18E+01	0.00E+00	1.18E+01
		Cs-134	<2.92E+00	0.00E+00	2.92E+00
		Cs-137	<2.96E+00	0.00E+00	2.96E+00
		BaLa-140	<3.49E+00	0.00E+00	3.49E+00
		Be-7	<2.53E+01	0.00E+00	2.53E+01
		K-40	6.50E+01	3.02E+01	3.95E+01
534203	11/2/2020 - 11/30/2020	Beta	<3.24E+00	0.00E+00	3.24E+00
		Mn-54	<2.39E+00	0.00E+00	2.39E+00
		Co-58	<3.00E+00	0.00E+00	3.00E+00
		Fe-59	<7.12E+00	0.00E+00	7.12E+00
		Co-60	<2.70E+00	0.00E+00	2.70E+00



# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (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
534203	11/2/2020 - 11/30/2020	Zn-65	<5.87E+00	0.00E+00	5.87E+00
		Zr-95	<5.60E+00	0.00E+00	5.60E+00
		Nb-95	<4.43E+00	0.00E+00	4.43E+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	<2.75E+00	0.00E+00	2.75E+00
		BaLa-140	<6.86E+00	0.00E+00	6.86E+00
		Be-7	<2.69E+01	0.00E+00	2.69E+01
		K-40	<5.24E+01	0.00E+00	5.24E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
536317	11/30/2020 - 12/28/2020	Beta	<3.21E+00	0.00E+00	3.21E+00
		Mn-54	<2.20E+00	0.00E+00	2.20E+00
		Co-58	<2.47E+00	0.00E+00	2.47E+00
		Fe-59	<5.07E+00	0.00E+00	5.07E+00
		Co-60	<2.12E+00	0.00E+00	2.12E+00
		Zn-65	<4.81E+00	0.00E+00	4.81E+00
		Zr-95	<3.90E+00	0.00E+00	3.90E+00
		Nb-95	<2.88E+00	0.00E+00	2.88E+00
		I-131	<1.13E+01	0.00E+00	1.13E+01
		Cs-134	<2.43E+00	0.00E+00	2.43E+00
		Cs-137	<1.76E+00	0.00E+00	1.76E+00
		BaLa-140	<7.48E+00	0.00E+00	7.48E+00
		Be-7	<2.47E+01	0.00E+00	2.47E+01
		K-40	8.03E+01	2.93E+01	3.63E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
537235	10/5/2020 - 12/28/2020	H3DW	<7.28E+00	0.00E+00	1.94E+02

Sample Point 066 [ INDICATOR - SSE @ 18.9 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
515729	12/30/2019 - 1/27/2020	Beta	<3.31E+00	0.00E+00	3.31E+00
		Mn-54	<2.40E+00	0.00E+00	2.40E+00
		Co-58	<3.03E+00	0.00E+00	3.03E+00
		Fe-59	<6.13E+00	0.00E+00	6.13E+00
		Co-60	<2.95E+00	0.00E+00	2.95E+00
		Zn-65	<4.70E+00	0.00E+00	4.70E+00
		Zr-95	<4.39E+00	0.00E+00	4.39E+00
		Nb-95	<2.91E+00	0.00E+00	2.91E+00
		I-131	<1.05E+01	0.00E+00	1.05E+01
		Cs-134	<2.84E+00	0.00E+00	2.84E+00
		Cs-137	<2.91E+00	0.00E+00	2.91E+00
		BaLa-140	<6.78E+00	0.00E+00	6.78E+00
		Be-7	<2.30E+01	0.00E+00	2.30E+01
		K-40	<3.38E+01	0.00E+00	3.38E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
517248	1/27/2020 - 2/24/2020	Beta	<3.25E+00	0.00E+00	3.25E+00
		Mn-54	<1.75E+00	0.00E+00	1.75E+00
		Co-58	<2.23E+00	0.00E+00	2.23E+00
		Fe-59	<4.25E+00	0.00E+00	4.25E+00
		Co-60	<1.69E+00	0.00E+00	1.69E+00
		Zn-65	<3.55E+00	0.00E+00	3.55E+00
		Zr-95	<3.81E+00	0.00E+00	3.81E+00
		Nb-95	<2.41E+00	0.00E+00	2.41E+00
		I-131	<1.20E+01	0.00E+00	1.20E+01
		Cs-134	<1.98E+00	0.00E+00	1.98E+00
		Cs-137	<2.16E+00	0.00E+00	2.16E+00
		BaLa-140	<6.67E+00	0.00E+00	6.67E+00
		Be-7	<1.71E+01	0.00E+00	1.71E+01
		K-40	7.95E+01	2.21E+01	2.57E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
519418	2/24/2020 - 3/23/2020	Beta	<3.29E+00	0.00E+00	3.29E+00
		Mn-54	<2.67E+00	0.00E+00	2.67E+00
		Co-58	<3.61E+00	0.00E+00	3.61E+00
		Fe-59	<6.87E+00	0.00E+00	6.87E+00



# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (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
519418	2/24/2020 - 3/23/2020	Co-60	<2.93E+00	0.00E+00	2.93E+00
		Zn-65	<4.34E+00	0.00E+00	4.34E+00
		Zr-95	<3.84E+00	0.00E+00	3.84E+00
		Nb-95	<3.78E+00	0.00E+00	3.78E+00
		I-131	<1.11E+01	0.00E+00	1.11E+01
		Cs-134	<3.17E+00	0.00E+00	3.17E+00
		Cs-137	<2.86E+00	0.00E+00	2.86E+00
		BaLa-140	<5.39E+00	0.00E+00	5.39E+00
		Be-7	<2.35E+01	0.00E+00	2.35E+01
		K-40	4.21E+01	2.69E+01	3.78E+01
		516447	12/30/2019 - 4/20/2020	H3DW	2.95E+02
521284	3/23/2020 - 4/20/2020			Beta	<3.31E+00
		Mn-54	<2.39E+00	0.00E+00	2.39E+00
		Co-58	<2.41E+00	0.00E+00	2.41E+00
		Fe-59	<4.47E+00	0.00E+00	4.47E+00
		Co-60	<1.68E+00	0.00E+00	1.68E+00
		Zn-65	<5.25E+00	0.00E+00	5.25E+00
		Zr-95	<3.52E+00	0.00E+00	3.52E+00
		Nb-95	<2.42E+00	0.00E+00	2.42E+00
		I-131	<1.17E+01	0.00E+00	1.17E+01
		Cs-134	<2.64E+00	0.00E+00	2.64E+00
		Cs-137	<1.95E+00	0.00E+00	1.95E+00
		BaLa-140	<5.29E+00	0.00E+00	5.29E+00
		Be-7	<2.18E+01	0.00E+00	2.18E+01
		K-40	6.08E+01	1.89E+01	1.45E+01
		522852	4/20/2020 - 5/18/2020	Beta	<3.24E+00
Mn-54	<2.20E+00			0.00E+00	2.20E+00
Co-58	<1.97E+00			0.00E+00	1.97E+00
Fe-59	<4.85E+00			0.00E+00	4.85E+00
Co-60	<2.16E+00			0.00E+00	2.16E+00
Zn-65	<5.14E+00			0.00E+00	5.14E+00
Zr-95	<4.17E+00			0.00E+00	4.17E+00
Nb-95	<2.74E+00			0.00E+00	2.74E+00
I-131	<1.19E+01			0.00E+00	1.19E+01
Cs-134	<2.42E+00			0.00E+00	2.42E+00
Cs-137	<2.14E+00			0.00E+00	2.14E+00
BaLa-140	<7.57E+00			0.00E+00	7.57E+00
Be-7	<1.74E+01			0.00E+00	1.74E+01
K-40	1.23E+01			1.83E+01	3.06E+01
524517	5/18/2020 - 6/15/2020			Beta	<3.24E+00
		Mn-54	<3.19E+00	0.00E+00	3.19E+00
		Co-58	<5.07E+00	0.00E+00	5.07E+00
		Fe-59	<8.42E+00	0.00E+00	8.42E+00
		Co-60	<3.60E+00	0.00E+00	3.60E+00
		Zn-65	<5.97E+00	0.00E+00	5.97E+00
		Zr-95	<6.31E+00	0.00E+00	6.31E+00
		Nb-95	<4.95E+00	0.00E+00	4.95E+00
		I-131	<1.14E+01	0.00E+00	1.14E+01
		Cs-134	<4.18E+00	0.00E+00	4.18E+00
		Cs-137	<3.48E+00	0.00E+00	3.48E+00
		BaLa-140	<7.84E+00	0.00E+00	7.84E+00
		Be-7	<2.96E+01	0.00E+00	2.96E+01
		K-40	<2.76E+01	0.00E+00	2.76E+01
		525834	6/15/2020 - 7/13/2020	Beta	5.43E+00
Mn-54	<1.70E+00			0.00E+00	1.70E+00
Co-58	<1.92E+00			0.00E+00	1.92E+00
Fe-59	<4.00E+00			0.00E+00	4.00E+00
Co-60	<1.41E+00			0.00E+00	1.41E+00



# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (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
525834	6/15/2020 - 7/13/2020	Zn-65	<3.59E+00	0.00E+00	3.59E+00
		Zr-95	<4.08E+00	0.00E+00	4.08E+00
		Nb-95	<2.92E+00	0.00E+00	2.92E+00
		I-131	<1.11E+01	0.00E+00	1.11E+01
		Cs-134	<1.94E+00	0.00E+00	1.94E+00
		Cs-137	<1.99E+00	0.00E+00	1.99E+00
		BaLa-140	<4.74E+00	0.00E+00	4.74E+00
		Be-7	<1.79E+01	0.00E+00	1.79E+01
		K-40	9.71E+01	2.38E+01	2.75E+01
		526665	4/20/2020 - 7/13/2020	H3DW	3.41E+02
527102	7/13/2020 - 8/10/2020	Beta	<3.26E+00	0.00E+00	3.26E+00
		Mn-54	<3.02E+00	0.00E+00	3.02E+00
		Co-58	<2.70E+00	0.00E+00	2.70E+00
		Fe-59	<7.97E+00	0.00E+00	7.97E+00
		Co-60	<3.51E+00	0.00E+00	3.51E+00
		Zn-65	<6.23E+00	0.00E+00	6.23E+00
		Zr-95	<5.95E+00	0.00E+00	5.95E+00
		Nb-95	<3.66E+00	0.00E+00	3.66E+00
		I-131	<1.17E+01	0.00E+00	1.17E+01
		Cs-134	<3.44E+00	0.00E+00	3.44E+00
		Cs-137	<3.24E+00	0.00E+00	3.24E+00
		BaLa-140	<8.59E+00	0.00E+00	8.59E+00
		Be-7	<2.96E+01	0.00E+00	2.96E+01
		K-40	9.83E+01	3.65E+01	4.27E+01
528927	8/10/2020 - 9/8/2020	Beta	3.31E+00	4.41E+00	3.24E+00
		Mn-54	<1.93E+00	0.00E+00	1.93E+00
		Co-58	<2.37E+00	0.00E+00	2.37E+00
		Fe-59	<4.49E+00	0.00E+00	4.49E+00
		Co-60	<1.67E+00	0.00E+00	1.67E+00
		Zn-65	<4.25E+00	0.00E+00	4.25E+00
		Zr-95	<3.88E+00	0.00E+00	3.88E+00
		Nb-95	<2.93E+00	0.00E+00	2.93E+00
		I-131	<1.07E+01	0.00E+00	1.07E+01
		Cs-134	<2.10E+00	0.00E+00	2.10E+00
		Cs-137	<1.90E+00	0.00E+00	1.90E+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	9.04E+01	2.18E+01	2.19E+01
530699	9/8/2020 - 10/5/2020	Beta	3.31E+00	4.39E+00	3.23E+00
		Mn-54	<3.81E+00	0.00E+00	3.81E+00
		Co-58	<4.04E+00	0.00E+00	4.04E+00
		Fe-59	<6.93E+00	0.00E+00	6.93E+00
		Co-60	<3.85E+00	0.00E+00	3.85E+00
		Zn-65	<7.08E+00	0.00E+00	7.08E+00
		Zr-95	<7.49E+00	0.00E+00	7.49E+00
		Nb-95	<4.74E+00	0.00E+00	4.74E+00
		I-131	<1.20E+01	0.00E+00	1.20E+01
		Cs-134	<4.05E+00	0.00E+00	4.05E+00
		Cs-137	<4.27E+00	0.00E+00	4.27E+00
		BaLa-140	<7.45E+00	0.00E+00	7.45E+00
		Be-7	<3.83E+01	0.00E+00	3.83E+01
		K-40	1.02E+02	4.55E+01	5.52E+01
531576	7/13/2020 - 10/5/2020	H3DW	2.23E+02	1.13E+02	1.83E+02
532608	10/5/2020 - 11/2/2020	Beta	<3.23E+00	0.00E+00	3.23E+00
		Mn-54	<3.59E+00	0.00E+00	3.59E+00
		Co-58	<3.53E+00	0.00E+00	3.53E+00
		Fe-59	<6.75E+00	0.00E+00	6.75E+00



# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (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
532608	10/5/2020 - 11/2/2020	Co-60	<3.06E+00	0.00E+00	3.06E+00
		Zn-65	<4.04E+00	0.00E+00	4.04E+00
		Zr-95	<5.27E+00	0.00E+00	5.27E+00
		Nb-95	<4.52E+00	0.00E+00	4.52E+00
		I-131	<1.12E+01	0.00E+00	1.12E+01
		Cs-134	<3.19E+00	0.00E+00	3.19E+00
		Cs-137	<3.56E+00	0.00E+00	3.56E+00
		BaLa-140	<5.35E+00	0.00E+00	5.35E+00
		Be-7	<2.57E+01	0.00E+00	2.57E+01
		K-40	3.84E+01	3.52E+01	5.55E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
534204	11/2/2020 - 11/30/2020	Beta	<3.24E+00	0.00E+00	3.24E+00
		Mn-54	<2.55E+00	0.00E+00	2.55E+00
		Co-58	<3.38E+00	0.00E+00	3.38E+00
		Fe-59	<7.80E+00	0.00E+00	7.80E+00
		Co-60	<3.09E+00	0.00E+00	3.09E+00
		Zn-65	<7.67E+00	0.00E+00	7.67E+00
		Zr-95	<5.64E+00	0.00E+00	5.64E+00
		Nb-95	<3.92E+00	0.00E+00	3.92E+00
		I-131	<1.16E+01	0.00E+00	1.16E+01
		Cs-134	<3.90E+00	0.00E+00	3.90E+00
		Cs-137	<3.62E+00	0.00E+00	3.62E+00
		BaLa-140	<7.22E+00	0.00E+00	7.22E+00
		Be-7	<3.21E+01	0.00E+00	3.21E+01
		K-40	6.04E+01	3.33E+01	4.63E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
536318	11/30/2020 - 12/28/2020	Beta	<3.21E+00	0.00E+00	3.21E+00
		Mn-54	<2.91E+00	0.00E+00	2.91E+00
		Co-58	<3.02E+00	0.00E+00	3.02E+00
		Fe-59	<6.89E+00	0.00E+00	6.89E+00
		Co-60	<2.88E+00	0.00E+00	2.88E+00
		Zn-65	<5.34E+00	0.00E+00	5.34E+00
		Zr-95	<5.37E+00	0.00E+00	5.37E+00
		Nb-95	<4.54E+00	0.00E+00	4.54E+00
		I-131	<1.14E+01	0.00E+00	1.14E+01
		Cs-134	<4.11E+00	0.00E+00	4.11E+00
		Cs-137	<2.49E+00	0.00E+00	2.49E+00
		BaLa-140	<8.58E+00	0.00E+00	8.58E+00
		Be-7	<2.47E+01	0.00E+00	2.47E+01
		K-40	<4.97E+01	0.00E+00	4.97E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
537236	10/5/2020 - 12/28/2020	H3DW	2.98E+02	1.22E+02	1.94E+02

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

Sample Point 060 [ CONTROL FISH / INDICATOR - NE @ 3.23 miles ]

Sample ID:	Sample Dates:	Media Type:	Nuclide	Activity	2 Sigma Error	MDA
520587	4/29/2020 - 4/29/2020	FREESWIM	Mn-54	<3.86E+01	0.00E+00	3.86E+01
			Co-58	<4.47E+01	0.00E+00	4.47E+01
			Fe-59	<8.76E+01	0.00E+00	8.76E+01
			Co-60	<4.31E+01	0.00E+00	4.31E+01
			Zn-65	<8.41E+01	0.00E+00	8.41E+01
			Nb-95	<4.16E+01	0.00E+00	4.16E+01
			I-131	<7.10E+01	0.00E+00	7.10E+01
			Cs-134	<3.76E+01	0.00E+00	3.76E+01
			Cs-137	<3.75E+01	0.00E+00	3.75E+01
			Be-7	<2.13E+02	0.00E+00	2.13E+02
			K-40	3.10E+03	7.59E+02	5.35E+02
			Ag-110M	<4.82E+01	0.00E+00	4.82E+01
			Sb-122	<4.03E+02	0.00E+00	4.03E+02
			Sb-125	<8.77E+01	0.00E+00	8.77E+01

Sample ID:	Sample Dates:	Media Type:	Nuclide	Activity	2 Sigma Error	MDA
520588	4/29/2020 - 4/29/2020	BOTMFEEDER	Mn-54	<3.52E+01	0.00E+00	3.52E+01
			Co-58	<3.13E+01	0.00E+00	3.13E+01



# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 060 [ CONTROL FISH / INDICATOR - NE @ 3.23 miles ]

Sample ID:	520588	Sample Dates:	4/29/2020 - 4/29/2020	BOTMFEEDER	Nuclide	Activity	2 Sigma Error	MDA
					Fe-59	<7.91E+01	0.00E+00	7.91E+01
					Co-60	<3.24E+01	0.00E+00	3.24E+01
					Zn-65	<8.79E+01	0.00E+00	8.79E+01
					Nb-95	<4.27E+01	0.00E+00	4.27E+01
					I-131	<6.12E+01	0.00E+00	6.12E+01
					Cs-134	<3.35E+01	0.00E+00	3.35E+01
					Cs-137	<4.88E+01	0.00E+00	4.88E+01
					Be-7	<3.25E+02	0.00E+00	3.25E+02
					K-40	2.95E+03	7.07E+02	3.95E+02
					Ag-110M	<4.28E+01	0.00E+00	4.28E+01
					Sb-122	<3.61E+02	0.00E+00	3.61E+02
					Sb-125	<1.12E+02	0.00E+00	1.12E+02

Sample ID:	531484	Sample Dates:	10/27/2020 - 10/27/2020	BOTMFEEDER	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<4.34E+01	0.00E+00	4.34E+01
					Co-58	<5.27E+01	0.00E+00	5.27E+01
					Fe-59	<7.34E+01	0.00E+00	7.34E+01
					Co-60	<5.52E+01	0.00E+00	5.52E+01
					Zn-65	<9.36E+01	0.00E+00	9.36E+01
					Nb-95	<4.76E+01	0.00E+00	4.76E+01
					I-131	<8.72E+01	0.00E+00	8.72E+01
					Cs-134	<4.63E+01	0.00E+00	4.63E+01
					Cs-137	<4.02E+01	0.00E+00	4.02E+01
					Be-7	<2.77E+02	0.00E+00	2.77E+02
					K-40	3.92E+03	8.72E+02	6.54E+02
					Ag-110M	<4.12E+01	0.00E+00	4.12E+01
					Sb-122	<4.78E+02	0.00E+00	4.78E+02
					Sb-125	<1.12E+02	0.00E+00	1.12E+02

Sample ID:	531485	Sample Dates:	10/27/2020 - 10/27/2020	FREESWIM	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<3.66E+01	0.00E+00	3.66E+01
					Co-58	<3.85E+01	0.00E+00	3.85E+01
					Fe-59	<9.48E+01	0.00E+00	9.48E+01
					Co-60	<3.16E+01	0.00E+00	3.16E+01
					Zn-65	<1.02E+02	0.00E+00	1.02E+02
					Nb-95	<5.21E+01	0.00E+00	5.21E+01
					I-131	<8.15E+01	0.00E+00	8.15E+01
					Cs-134	<3.56E+01	0.00E+00	3.56E+01
					Cs-137	<4.12E+01	0.00E+00	4.12E+01
					Be-7	<2.97E+02	0.00E+00	2.97E+02
					K-40	3.07E+03	8.43E+02	8.88E+02
					Ag-110M	<4.44E+01	0.00E+00	4.44E+01
					Sb-122	<3.61E+02	0.00E+00	3.61E+02
					Sb-125	<7.93E+01	0.00E+00	7.93E+01

## Sample Point 063 [ INDICATOR - ESE @ 0.8 miles ]

Sample ID:	520589	Sample Dates:	4/29/2020 - 4/29/2020	FREESWIM	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<4.14E+01	0.00E+00	4.14E+01
					Co-58	<4.50E+01	0.00E+00	4.50E+01
					Fe-59	<1.01E+02	0.00E+00	1.01E+02
					Co-60	<4.71E+01	0.00E+00	4.71E+01
					Zn-65	<7.81E+01	0.00E+00	7.81E+01
					Nb-95	<3.36E+01	0.00E+00	3.36E+01
					I-131	<6.29E+01	0.00E+00	6.29E+01
					Cs-134	<6.24E+01	0.00E+00	6.24E+01
					Cs-137	<4.34E+01	0.00E+00	4.34E+01
					Be-7	<4.04E+02	0.00E+00	4.04E+02
					K-40	4.28E+03	8.70E+02	5.04E+02
					Ag-110M	<3.64E+01	0.00E+00	3.64E+01
					Sb-122	<3.34E+02	0.00E+00	3.34E+02
					Sb-125	<9.19E+01	0.00E+00	9.19E+01

Sample ID:	520590	Sample Dates:	4/29/2020 - 4/29/2020	BOTMFEEDER	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<4.74E+01	0.00E+00	4.74E+01
					Co-58	<4.03E+01	0.00E+00	4.03E+01
					Fe-59	<7.73E+01	0.00E+00	7.73E+01
					Co-60	<5.41E+01	0.00E+00	5.41E+01





# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 063 [ INDICATOR - ESE @ 0.8 miles ]

Sample ID:	520590	Sample Dates:	4/29/2020 - 4/29/2020	BOTMFEEDER	Nuclide	Activity	2 Sigma Error	MDA
					Zn-65	<7.98E+01	0.00E+00	7.98E+01
					Nb-95	<4.38E+01	0.00E+00	4.38E+01
					I-131	<6.25E+01	0.00E+00	6.25E+01
					Cs-134	<5.30E+01	0.00E+00	5.30E+01
					Cs-137	<4.90E+01	0.00E+00	4.90E+01
					Be-7	<3.50E+02	0.00E+00	3.50E+02
					K-40	3.60E+03	7.94E+02	4.81E+02
					Ag-110M	<5.46E+01	0.00E+00	5.46E+01
					Sb-122	<4.14E+02	0.00E+00	4.14E+02
					Sb-125	<1.07E+02	0.00E+00	1.07E+02

Sample ID:	531486	Sample Dates:	10/26/2020 - 10/26/2020	FREESWIM	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<4.71E+01	0.00E+00	4.71E+01
					Co-58	<3.59E+01	0.00E+00	3.59E+01
					Fe-59	<8.39E+01	0.00E+00	8.39E+01
					Co-60	<5.50E+01	0.00E+00	5.50E+01
					Zn-65	<9.91E+01	0.00E+00	9.91E+01
					Nb-95	<6.90E+01	0.00E+00	6.90E+01
					I-131	<9.37E+01	0.00E+00	9.37E+01
					Cs-134	<4.73E+01	0.00E+00	4.73E+01
					Cs-137	<3.58E+01	0.00E+00	3.58E+01
					Be-7	<3.72E+02	0.00E+00	3.72E+02
					K-40	4.62E+03	9.63E+02	5.56E+02
					Ag-110M	<4.50E+01	0.00E+00	4.50E+01
					Sb-122	<4.28E+02	0.00E+00	4.28E+02
					Sb-125	<1.07E+02	0.00E+00	1.07E+02

Sample ID:	531487	Sample Dates:	10/26/2020 - 10/26/2020	BOTMFEEDER	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<3.55E+01	0.00E+00	3.55E+01
					Co-58	<5.54E+01	0.00E+00	5.54E+01
					Fe-59	<6.02E+01	0.00E+00	6.02E+01
					Co-60	<4.93E+01	0.00E+00	4.93E+01
					Zn-65	<1.16E+02	0.00E+00	1.16E+02
					Nb-95	<6.92E+01	0.00E+00	6.92E+01
					I-131	<9.88E+01	0.00E+00	9.88E+01
					Cs-134	<4.81E+01	0.00E+00	4.81E+01
					Cs-137	<7.82E+01	0.00E+00	7.82E+01
					Be-7	<3.88E+02	0.00E+00	3.88E+02
					K-40	4.43E+03	1.03E+03	6.83E+02
					Ag-110M	<5.05E+01	0.00E+00	5.05E+01
					Sb-122	<6.63E+02	0.00E+00	6.63E+02
					Sb-125	<1.39E+02	0.00E+00	1.39E+02

## Sample Point 067 [ INDICATOR - SSE @ 4.34 miles ]

Sample ID:	520591	Sample Dates:	4/29/2020 - 4/29/2020	FREESWIM	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<4.88E+01	0.00E+00	4.88E+01
					Co-58	<4.74E+01	0.00E+00	4.74E+01
					Fe-59	<6.55E+01	0.00E+00	6.55E+01
					Co-60	<5.29E+01	0.00E+00	5.29E+01
					Zn-65	<1.05E+02	0.00E+00	1.05E+02
					Nb-95	<5.26E+01	0.00E+00	5.26E+01
					I-131	<7.91E+01	0.00E+00	7.91E+01
					Cs-134	<5.27E+01	0.00E+00	5.27E+01
					Cs-137	<6.20E+01	0.00E+00	6.20E+01
					Be-7	<2.60E+02	0.00E+00	2.60E+02
					K-40	3.63E+03	8.25E+02	5.65E+02
					Ag-110M	<4.29E+01	0.00E+00	4.29E+01
					Sb-122	<3.23E+02	0.00E+00	3.23E+02
					Sb-125	<1.10E+02	0.00E+00	1.10E+02

Sample ID:	520592	Sample Dates:	4/29/2020 - 4/29/2020	BOTMFEEDER	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<4.20E+01	0.00E+00	4.20E+01
					Co-58	<2.84E+01	0.00E+00	2.84E+01
					Fe-59	<8.01E+01	0.00E+00	8.01E+01
					Co-60	<3.80E+01	0.00E+00	3.80E+01
					Zn-65	<1.05E+02	0.00E+00	1.05E+02
					Nb-95	<4.09E+01	0.00E+00	4.09E+01



# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (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
520592	4/29/2020 - 4/29/2020		I-131	<7.80E+01	0.00E+00	7.80E+01
			Cs-134	<5.11E+01	0.00E+00	5.11E+01
			Cs-137	<5.50E+01	0.00E+00	5.50E+01
			Be-7	<3.52E+02	0.00E+00	3.52E+02
			K-40	2.92E+03	7.27E+02	5.05E+02
			Ag-110M	<3.52E+01	0.00E+00	3.52E+01
			Sb-122	<2.94E+02	0.00E+00	2.94E+02
			Sb-125	<1.10E+02	0.00E+00	1.11E+02

Sample ID:	Sample Dates:	BOTMFEEDER	Nuclide	Activity	2 Sigma Error	MDA
531488	10/26/2020 - 10/26/2020		Mn-54	<3.68E+01	0.00E+00	3.68E+01
			Co-58	<4.32E+01	0.00E+00	4.32E+01
			Fe-59	<6.52E+01	0.00E+00	6.52E+01
			Co-60	<3.64E+01	0.00E+00	3.64E+01
			Zn-65	<9.15E+01	0.00E+00	9.15E+01
			Nb-95	<4.34E+01	0.00E+00	4.34E+01
			I-131	<6.21E+01	0.00E+00	6.21E+01
			Cs-134	<3.28E+01	0.00E+00	3.28E+01
			Cs-137	<4.45E+01	0.00E+00	4.45E+01
			Be-7	<2.99E+02	0.00E+00	2.99E+02
			K-40	3.66E+03	7.80E+02	3.79E+02
			Ag-110M	<3.04E+01	0.00E+00	3.04E+01
			Sb-122	<4.41E+02	0.00E+00	4.41E+02
			Sb-125	<8.60E+01	0.00E+00	8.60E+01

Sample ID:	Sample Dates:	FREESWIM	Nuclide	Activity	2 Sigma Error	MDA
531489	10/26/2020 - 10/26/2020		Mn-54	<4.43E+01	0.00E+00	4.43E+01
			Co-58	<5.67E+01	0.00E+00	5.67E+01
			Fe-59	<6.80E+01	0.00E+00	6.80E+01
			Co-60	<4.93E+01	0.00E+00	4.93E+01
			Zn-65	<1.11E+02	0.00E+00	1.11E+02
			Nb-95	<4.65E+01	0.00E+00	4.65E+01
			I-131	<1.07E+02	0.00E+00	1.07E+02
			Cs-134	<5.96E+01	0.00E+00	5.96E+01
			Cs-137	<6.24E+01	0.00E+00	6.24E+01
			Be-7	<4.56E+02	0.00E+00	4.56E+02
			K-40	4.08E+03	9.34E+02	6.26E+02
			Ag-110M	<4.33E+01	0.00E+00	4.33E+01
			Sb-122	<6.01E+02	0.00E+00	6.01E+02
			Sb-125	<1.25E+02	0.00E+00	1.25E+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
515292	1/6/2020 - 1/6/2020	LLI-131	<6.46E-01	0.00E+00	6.46E-01
		I-131	<7.89E+00	0.00E+00	7.89E+00
		Cs-134	<8.20E+00	0.00E+00	8.20E+00
		Cs-137	<5.81E+00	0.00E+00	5.81E+00
		BaLa-140	<8.17E+00	0.00E+00	8.17E+00
		Be-7	<5.95E+01	0.00E+00	5.95E+01
		K-40	1.58E+03	2.41E+02	7.81E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
515913	1/20/2020 - 1/20/2020	I-131	<6.94E+00	0.00E+00	6.94E+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	<9.09E+00	0.00E+00	9.09E+00
		Be-7	<6.53E+01	0.00E+00	6.53E+01
		K-40	1.80E+03	2.61E+02	1.80E+01
		LLI-131	<7.60E-01	0.00E+00	7.60E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
516540	2/3/2020 - 2/3/2020	LLI-131	<5.06E-01	0.00E+00	5.06E-01
		I-131	<6.69E+00	0.00E+00	6.69E+00
		Cs-134	<5.97E+00	0.00E+00	5.97E+00
		Cs-137	<6.44E+00	0.00E+00	6.44E+00
		BaLa-140	<2.28E+00	0.00E+00	2.28E+00



# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (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
516540	2/3/2020 - 2/3/2020	Be-7	<4.63E+01	0.00E+00	4.63E+01
		K-40	1.40E+03	2.31E+02	1.17E+02
517436	2/17/2020 - 2/17/2020	LLI-131	<6.34E-01	0.00E+00	6.34E-01
		I-131	<7.32E+00	0.00E+00	7.32E+00
		Cs-134	<8.80E+00	0.00E+00	8.80E+00
		Cs-137	<5.90E+00	0.00E+00	5.90E+00
		BaLa-140	<2.30E+00	0.00E+00	2.30E+00
		Be-7	<3.54E+01	0.00E+00	3.54E+01
		K-40	1.58E+03	2.44E+02	8.10E+01
518747	3/2/2020 - 3/2/2020	LLI-131	<9.97E-01	0.00E+00	9.97E-01
		I-131	<6.46E+00	0.00E+00	6.46E+00
		Cs-134	<9.66E+00	0.00E+00	9.66E+00
		Cs-137	<7.80E+00	0.00E+00	7.80E+00
		BaLa-140	<2.29E+00	0.00E+00	2.29E+00
		Be-7	<5.47E+01	0.00E+00	5.47E+01
		K-40	1.43E+03	2.34E+02	1.19E+02
519725	3/16/2020 - 3/16/2020	LLI-131	<5.65E-01	0.00E+00	5.65E-01
		I-131	<7.53E+00	0.00E+00	7.53E+00
		Cs-134	<7.70E+00	0.00E+00	7.70E+00
		Cs-137	<1.00E+01	0.00E+00	1.00E+01
		BaLa-140	<8.12E+00	0.00E+00	8.12E+00
		Be-7	<3.94E+01	0.00E+00	3.94E+01
		K-40	1.73E+03	2.53E+02	1.78E+01
520535	3/30/2020 - 3/30/2020	LLI-131	<5.80E-01	0.00E+00	5.80E-01
		I-131	<6.55E+00	0.00E+00	6.55E+00
		Cs-134	<8.74E+00	0.00E+00	8.74E+00
		Cs-137	<8.84E+00	0.00E+00	8.84E+00
		BaLa-140	<9.97E+00	0.00E+00	9.97E+00
		Be-7	<5.38E+01	0.00E+00	5.38E+01
		K-40	1.45E+03	2.26E+02	1.78E+01
521632	4/20/2020 - 4/20/2020	LLI-131	<6.35E-01	0.00E+00	6.35E-01
		I-131	<7.67E+00	0.00E+00	7.67E+00
		Cs-134	<9.30E+00	0.00E+00	9.30E+00
		Cs-137	<8.21E+00	0.00E+00	8.21E+00
		BaLa-140	<2.70E+00	0.00E+00	2.70E+00
		Be-7	<5.00E+01	0.00E+00	5.00E+01
		K-40	1.60E+03	2.47E+02	1.92E+01
522369	4/27/2020 - 4/27/2020	LLI-131	<6.16E-01	0.00E+00	6.16E-01
		I-131	<7.47E+00	0.00E+00	7.47E+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	<2.44E+00	0.00E+00	2.44E+00
		Be-7	<4.15E+01	0.00E+00	4.15E+01
		K-40	<1.34E+02	0.00E+00	1.34E+02
523128	5/11/2020 - 5/11/2020	LLI-131	<5.83E-01	0.00E+00	5.83E-01
		I-131	<8.08E+00	0.00E+00	8.08E+00
		Cs-134	<8.29E+00	0.00E+00	8.29E+00
		Cs-137	<5.26E+00	0.00E+00	5.26E+00
		BaLa-140	<2.27E+00	0.00E+00	2.27E+00
		Be-7	<5.88E+01	0.00E+00	5.88E+01
		K-40	1.49E+03	2.39E+02	1.13E+02
523902	5/26/2020 - 5/26/2020	I-131	<7.58E+00	0.00E+00	7.58E+00
		Cs-134	<7.66E+00	0.00E+00	7.66E+00



# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (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
523902	5/26/2020 - 5/26/2020	Cs-137	<8.35E+00	0.00E+00	8.35E+00
		BaLa-140	<8.03E+00	0.00E+00	8.03E+00
		Be-7	<6.49E+01	0.00E+00	6.49E+01
		K-40	1.57E+03	2.44E+02	1.06E+02
		LLI-131	<7.68E-01	0.00E+00	7.68E-01
524788	6/8/2020 - 6/8/2020	I-131	<9.87E+00	0.00E+00	9.87E+00
		Cs-134	<5.88E+00	0.00E+00	5.88E+00
		Cs-137	<8.77E+00	0.00E+00	8.77E+00
		BaLa-140	<1.01E+01	0.00E+00	1.01E+01
		Be-7	<4.70E+01	0.00E+00	4.70E+01
		K-40	1.65E+03	2.45E+02	1.78E+01
525404	6/22/2020 - 6/22/2020	LLI-131	<5.63E-01	0.00E+00	5.63E-01
		I-131	<1.45E+01	0.00E+00	1.45E+01
		Cs-134	<9.55E+00	0.00E+00	9.55E+00
		Cs-137	<8.77E+00	0.00E+00	8.77E+00
		BaLa-140	<3.12E+00	0.00E+00	3.12E+00
		Be-7	<6.35E+01	0.00E+00	6.35E+01
525982	7/6/2020 - 7/6/2020	K-40	1.39E+03	2.31E+02	1.35E+02
		I-131	<7.31E+00	0.00E+00	7.31E+00
		Cs-134	<9.51E+00	0.00E+00	9.51E+00
		Cs-137	<1.00E+01	0.00E+00	1.00E+01
		BaLa-140	<8.18E+00	0.00E+00	8.18E+00
		Be-7	<5.21E+01	0.00E+00	5.21E+01
526583	7/20/2020 - 7/20/2020	K-40	1.34E+03	2.19E+02	8.45E+01
		LLI-131	<8.79E-01	0.00E+00	8.79E-01
		I-131	<7.34E+00	0.00E+00	7.34E+00
		Cs-134	<7.83E+00	0.00E+00	7.83E+00
		Cs-137	<1.02E+01	0.00E+00	1.02E+01
		BaLa-140	<8.30E+00	0.00E+00	8.30E+00
527398	8/3/2020 - 8/3/2020	Be-7	<4.69E+01	0.00E+00	4.69E+01
		K-40	1.37E+03	2.30E+02	1.33E+02
		LLI-131	<6.97E-01	0.00E+00	6.97E-01
		I-131	<7.22E+00	0.00E+00	7.22E+00
		Cs-134	<8.81E+00	0.00E+00	8.81E+00
		Cs-137	<7.38E+00	0.00E+00	7.38E+00
527972	8/17/2020 - 8/17/2020	BaLa-140	<9.52E+00	0.00E+00	9.52E+00
		Be-7	<5.26E+01	0.00E+00	5.26E+01
		K-40	1.42E+03	2.35E+02	1.32E+02
		LLI-131	<6.29E-01	0.00E+00	6.29E-01
		I-131	<6.89E+00	0.00E+00	6.89E+00
		Cs-134	<9.20E+00	0.00E+00	9.20E+00
529058	8/31/2020 - 8/31/2020	Cs-137	<5.87E+00	0.00E+00	5.87E+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	1.40E+03	2.31E+02	1.21E+02
		LLI-131	<8.76E-01	0.00E+00	8.76E-01
		I-131	<7.94E+00	0.00E+00	7.94E+00



# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (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
530347	9/14/2020 - 9/14/2020	I-131	<9.60E+00	0.00E+00	9.60E+00
		Cs-134	<1.19E+01	0.00E+00	1.19E+01
		Cs-137	<7.67E+00	0.00E+00	7.67E+00
		BaLa-140	<7.73E+00	0.00E+00	7.73E+00
		Be-7	<5.40E+01	0.00E+00	5.40E+01
		K-40	1.57E+03	2.41E+02	8.12E+01
		LLI-131	<5.39E-01	0.00E+00	5.39E-01
531148	9/28/2020 - 9/28/2020	I-131	<7.94E+00	0.00E+00	7.94E+00
		Cs-134	<8.19E+00	0.00E+00	8.19E+00
		Cs-137	<7.26E+00	0.00E+00	7.26E+00
		BaLa-140	<9.99E+00	0.00E+00	9.99E+00
		Be-7	<4.86E+01	0.00E+00	4.86E+01
		K-40	1.61E+03	2.44E+02	7.55E+01
		LLI-131	<1.60E+00	0.00E+00	1.60E+00
532132	10/12/2020 - 10/12/2020	I-131	<8.93E+00	0.00E+00	8.93E+00
		Cs-134	<6.55E+00	0.00E+00	6.55E+00
		Cs-137	<6.34E+00	0.00E+00	6.34E+00
		BaLa-140	<6.08E+00	0.00E+00	6.08E+00
		Be-7	<6.09E+01	0.00E+00	6.09E+01
		K-40	1.32E+03	2.16E+02	7.10E+01
		LLI-131	<4.80E-01	0.00E+00	4.80E-01
532869	10/26/2020 - 10/26/2020	I-131	<8.52E+00	0.00E+00	8.52E+00
		Cs-134	<6.56E+00	0.00E+00	6.56E+00
		Cs-137	<7.26E+00	0.00E+00	7.26E+00
		BaLa-140	<8.07E+00	0.00E+00	8.07E+00
		Be-7	<4.29E+01	0.00E+00	4.29E+01
		K-40	1.54E+03	2.42E+02	1.18E+02
		LLI-131	<6.82E-01	0.00E+00	6.82E-01
533853	11/9/2020 - 11/9/2020	I-131	<8.43E+00	0.00E+00	8.43E+00
		Cs-134	<5.87E+00	0.00E+00	5.87E+00
		Cs-137	<8.42E+00	0.00E+00	8.42E+00
		BaLa-140	<6.14E+00	0.00E+00	6.14E+00
		Be-7	<6.10E+01	0.00E+00	6.10E+01
		K-40	1.31E+03	2.18E+02	9.80E+01
		LLI-131	<6.75E-01	0.00E+00	6.75E-01
534616	11/23/2020 - 11/23/2020	I-131	<1.14E+01	0.00E+00	1.14E+01
		Cs-134	<9.94E+00	0.00E+00	9.94E+00
		Cs-137	<7.26E+00	0.00E+00	7.26E+00
		BaLa-140	<3.07E+00	0.00E+00	3.07E+00
		Be-7	<5.54E+01	0.00E+00	5.54E+01
		K-40	1.43E+03	2.28E+02	8.66E+01
		LLI-131	<8.26E-01	0.00E+00	8.26E-01
535953	12/7/2020 - 12/7/2020	I-131	<9.01E+00	0.00E+00	9.01E+00
		Cs-134	<8.24E+00	0.00E+00	8.24E+00
		Cs-137	<6.85E+00	0.00E+00	6.85E+00
		BaLa-140	<6.15E+00	0.00E+00	6.15E+00
		Be-7	<6.32E+01	0.00E+00	6.32E+01
		K-40	1.48E+03	2.33E+02	7.54E+01
		LLI-131	<7.26E-01	0.00E+00	7.26E-01
536328	12/21/2020 - 12/21/2020	I-131	<6.62E+00	0.00E+00	6.62E+00
		Cs-134	<6.54E+00	0.00E+00	6.54E+00
		Cs-137	<6.82E+00	0.00E+00	6.82E+00
		BaLa-140	<5.80E+00	0.00E+00	5.80E+00
		Be-7	<4.19E+01	0.00E+00	4.19E+01
		K-40	1.47E+03	2.31E+02	8.04E+01
		LLI-131	<7.26E-01	0.00E+00	7.26E-01



# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (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
536328	12/21/2020 - 12/21/2020	LLI-131	<6.66E-01	0.00E+00	6.66E-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
518748	4/6/2020 - 4/6/2020	Mn-54	<7.38E+01	0.00E+00	7.38E+01
		Co-58	<8.35E+01	0.00E+00	8.35E+01
		Fe-59	<1.59E+02	0.00E+00	1.59E+02
		Co-60	<5.54E+01	0.00E+00	5.54E+01
		Zn-65	<1.15E+02	0.00E+00	1.15E+02
		Zr-95	<1.49E+02	0.00E+00	1.49E+02
		Nb-95	<1.08E+02	0.00E+00	1.08E+02
		I-131	<4.27E+02	0.00E+00	4.27E+02
		Cs-134	<9.53E+01	0.00E+00	9.53E+01
		Cs-137	<7.37E+01	0.00E+00	7.37E+01
		Be-7	<7.13E+02	0.00E+00	7.13E+02
		K-40	1.49E+04	2.22E+03	1.17E+03
		Co-57	<5.21E+01	0.00E+00	5.21E+01
		Mo-99	<1.70E+05	0.00E+00	1.70E+05
		Ag-110M	<6.32E+01	0.00E+00	6.32E+01
		Sb-122	<3.24E+04	0.00E+00	3.24E+04
		Sb-125	<1.62E+02	0.00E+00	1.62E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
530062	10/12/2020 - 10/12/2020	Mn-54	<9.17E+01	0.00E+00	9.17E+01
		Co-58	<5.07E+01	0.00E+00	5.07E+01
		Fe-59	<1.33E+02	0.00E+00	1.33E+02
		Co-60	<6.24E+01	0.00E+00	6.24E+01
		Zn-65	<1.82E+02	0.00E+00	1.82E+02
		Zr-95	<1.61E+02	0.00E+00	1.61E+02
		Nb-95	<7.08E+01	0.00E+00	7.08E+01
		I-131	<1.38E+02	0.00E+00	1.38E+02
		Cs-134	<1.05E+02	0.00E+00	1.05E+02
		Cs-137	<8.74E+01	0.00E+00	8.74E+01
		Be-7	<6.34E+02	0.00E+00	6.34E+02
		K-40	8.77E+03	1.58E+03	1.07E+03
		Co-57	<6.69E+01	0.00E+00	6.69E+01
		Mo-99	<5.29E+03	0.00E+00	5.29E+03
		Ag-110M	<6.40E+01	0.00E+00	6.40E+01
		Sb-122	<8.30E+02	0.00E+00	8.30E+02
		Sb-125	<1.85E+02	0.00E+00	1.85E+02

Sample Point 068 [ CONTROL - W @ 1.82 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
518749	4/20/2020 - 4/20/2020	Mn-54	<5.03E+01	0.00E+00	5.03E+01
		Co-58	<5.80E+01	0.00E+00	5.80E+01
		Fe-59	<1.46E+02	0.00E+00	1.46E+02
		Co-60	<5.51E+01	0.00E+00	5.51E+01
		Zn-65	<1.02E+02	0.00E+00	1.02E+02
		Zr-95	<8.99E+01	0.00E+00	8.99E+01
		Nb-95	<9.45E+01	0.00E+00	9.45E+01
		I-131	<2.53E+02	0.00E+00	2.53E+02
		Cs-134	<5.18E+01	0.00E+00	5.18E+01
		Cs-137	<4.14E+01	0.00E+00	4.14E+01
		Be-7	<5.21E+02	0.00E+00	5.21E+02
		K-40	6.28E+03	1.23E+03	6.45E+02
		Co-57	<3.56E+01	0.00E+00	3.56E+01
		Mo-99	<7.41E+04	0.00E+00	7.41E+04
		Ag-110M	<4.18E+01	0.00E+00	4.18E+01
		Sb-122	<9.67E+03	0.00E+00	9.67E+03
		Sb-125	<1.07E+02	0.00E+00	1.07E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
530063	10/12/2020 - 10/12/2020	Mn-54	<3.69E+01	0.00E+00	3.69E+01
		Co-58	<4.73E+01	0.00E+00	4.73E+01
		Fe-59	<7.79E+01	0.00E+00	7.79E+01



# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

Media Type: SEDIMENT\_SHORE Concentration (Activity): pCi/kg

Sample Point 068 [ CONTROL - W @ 1.82 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
530063	10/12/2020 - 10/12/2020	Co-60	<5.70E+01	0.00E+00	5.70E+01
		Zn-65	<1.28E+02	0.00E+00	1.28E+02
		Zr-95	<1.10E+02	0.00E+00	1.10E+02
		Nb-95	<6.57E+01	0.00E+00	6.57E+01
		I-131	<9.14E+01	0.00E+00	9.14E+01
		Cs-134	<6.37E+01	0.00E+00	6.37E+01
		Cs-137	<4.98E+01	0.00E+00	4.98E+01
		Be-7	<4.15E+02	0.00E+00	4.15E+02
		K-40	7.03E+03	1.34E+03	7.80E+02
		Co-57	<3.41E+01	0.00E+00	3.41E+01
		Mo-99	<3.20E+03	0.00E+00	3.20E+03
		Ag-110M	<2.80E+01	0.00E+00	2.80E+01
		Sb-122	<4.23E+02	0.00E+00	4.23E+02
		Sb-125	<9.08E+01	0.00E+00	9.08E+01

Sample Point 091 [ INDICATOR - S @ 2.09 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
518750	4/6/2020 - 4/6/2020	Mn-54	<3.53E+01	0.00E+00	3.53E+01
		Co-58	<4.41E+01	0.00E+00	4.41E+01
		Fe-59	<9.92E+01	0.00E+00	9.92E+01
		Co-60	<3.96E+01	0.00E+00	3.96E+01
		Zn-65	<1.02E+02	0.00E+00	1.02E+02
		Zr-95	<6.69E+01	0.00E+00	6.69E+01
		Nb-95	<6.05E+01	0.00E+00	6.05E+01
		I-131	<2.68E+02	0.00E+00	2.68E+02
		Cs-134	<3.77E+01	0.00E+00	3.77E+01
		Cs-137	<3.70E+01	0.00E+00	3.70E+01
		Be-7	<4.04E+02	0.00E+00	4.04E+02
		K-40	1.39E+04	1.62E+03	3.89E+02
		Co-57	<3.25E+01	0.00E+00	3.25E+01
		Mo-99	<1.06E+05	0.00E+00	1.06E+05
		Ag-110M	<3.41E+01	0.00E+00	3.41E+01
		Sb-122	<2.31E+04	0.00E+00	2.31E+04
		Sb-125	<8.30E+01	0.00E+00	8.30E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
530064	10/12/2020 - 10/12/2020	Mn-54	<8.12E+01	0.00E+00	8.12E+01
		Co-58	<8.55E+01	0.00E+00	8.55E+01
		Fe-59	<1.93E+02	0.00E+00	1.93E+02
		Co-60	<7.62E+01	0.00E+00	7.62E+01
		Zn-65	<1.56E+02	0.00E+00	1.56E+02
		Zr-95	<1.34E+02	0.00E+00	1.34E+02
		Nb-95	<7.65E+01	0.00E+00	7.65E+01
		I-131	<1.31E+02	0.00E+00	1.31E+02
		Cs-134	<8.76E+01	0.00E+00	8.76E+01
		Cs-137	<1.07E+02	0.00E+00	1.07E+02
		Be-7	<5.50E+02	0.00E+00	5.50E+02
		K-40	2.41E+04	3.10E+03	9.06E+02
		Co-57	<5.66E+01	0.00E+00	5.66E+01
		Mo-99	<6.30E+03	0.00E+00	6.30E+03
		Ag-110M	<7.38E+01	0.00E+00	7.38E+01
		Sb-122	<9.39E+02	0.00E+00	9.39E+02
		Sb-125	<1.66E+02	0.00E+00	1.66E+02

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
515730	12/30/2019 - 1/27/2020	Mn-54	<2.52E+00	0.00E+00	2.52E+00
		Co-58	<2.81E+00	0.00E+00	2.81E+00
		Fe-59	<4.36E+00	0.00E+00	4.36E+00
		Co-60	<2.94E+00	0.00E+00	2.94E+00
		Zn-65	<5.43E+00	0.00E+00	5.43E+00
		Zr-95	<4.87E+00	0.00E+00	4.87E+00
		Nb-95	<3.45E+00	0.00E+00	3.45E+00
		I-131	<1.05E+01	0.00E+00	1.05E+01



# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (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
515730	12/30/2019 - 1/27/2020	Cs-134	<3.10E+00	0.00E+00	3.10E+00
		Cs-137	<2.76E+00	0.00E+00	2.76E+00
		BaLa-140	<6.19E+00	0.00E+00	6.19E+00
		Be-7	<2.30E+01	0.00E+00	2.30E+01
		K-40	1.00E+02	2.94E+01	2.85E+01
517249	1/27/2020 - 2/24/2020	Mn-54	<2.82E+00	0.00E+00	2.82E+00
		Co-58	<2.96E+00	0.00E+00	2.96E+00
		Fe-59	<6.55E+00	0.00E+00	6.55E+00
		Co-60	<2.00E+00	0.00E+00	2.00E+00
		Zn-65	<6.00E+00	0.00E+00	6.00E+00
		Zr-95	<5.07E+00	0.00E+00	5.07E+00
		Nb-95	<2.69E+00	0.00E+00	2.69E+00
		I-131	<1.05E+01	0.00E+00	1.05E+01
		Cs-134	<2.70E+00	0.00E+00	2.70E+00
		Cs-137	<2.81E+00	0.00E+00	2.81E+00
		BaLa-140	<7.24E+00	0.00E+00	7.24E+00
		Be-7	<2.78E+01	0.00E+00	2.78E+01
		K-40	3.40E+01	2.37E+01	3.36E+01
519419	2/24/2020 - 3/23/2020	Mn-54	<2.52E+00	0.00E+00	2.52E+00
		Co-58	<3.13E+00	0.00E+00	3.13E+00
		Fe-59	<7.11E+00	0.00E+00	7.11E+00
		Co-60	<2.67E+00	0.00E+00	2.67E+00
		Zn-65	<7.16E+00	0.00E+00	7.16E+00
		Zr-95	<6.06E+00	0.00E+00	6.06E+00
		Nb-95	<3.73E+00	0.00E+00	3.73E+00
		I-131	<1.15E+01	0.00E+00	1.15E+01
		Cs-134	<2.95E+00	0.00E+00	2.95E+00
		Cs-137	<2.58E+00	0.00E+00	2.58E+00
		BaLa-140	<7.07E+00	0.00E+00	7.07E+00
		Be-7	<2.32E+01	0.00E+00	2.32E+01
		K-40	4.31E+01	2.39E+01	2.82E+01
516448	12/30/2019 - 4/20/2020	H3SW	<-1.7E+01	0.00E+00	1.93E+02
521285	3/23/2020 - 4/20/2020	Mn-54	<1.85E+00	0.00E+00	1.85E+00
		Co-58	<2.42E+00	0.00E+00	2.42E+00
		Fe-59	<4.12E+00	0.00E+00	4.12E+00
		Co-60	<1.76E+00	0.00E+00	1.76E+00
		Zn-65	<5.23E+00	0.00E+00	5.23E+00
		Zr-95	<4.31E+00	0.00E+00	4.31E+00
		Nb-95	<3.06E+00	0.00E+00	3.06E+00
		I-131	<1.13E+01	0.00E+00	1.13E+01
		Cs-134	<2.35E+00	0.00E+00	2.35E+00
		Cs-137	<1.60E+00	0.00E+00	1.60E+00
		BaLa-140	<7.03E+00	0.00E+00	7.03E+00
		Be-7	<2.10E+01	0.00E+00	2.10E+01
		K-40	<2.35E+01	0.00E+00	2.35E+01
522853	4/20/2020 - 5/18/2020	Mn-54	<1.56E+00	0.00E+00	1.56E+00
		Co-58	<1.86E+00	0.00E+00	1.86E+00
		Fe-59	<3.64E+00	0.00E+00	3.64E+00
		Co-60	<1.74E+00	0.00E+00	1.74E+00
		Zn-65	<3.57E+00	0.00E+00	3.57E+00
		Zr-95	<3.55E+00	0.00E+00	3.55E+00
		Nb-95	<2.60E+00	0.00E+00	2.60E+00
		I-131	<9.68E+00	0.00E+00	9.68E+00
		Cs-134	<1.82E+00	0.00E+00	1.82E+00
		Cs-137	<1.70E+00	0.00E+00	1.70E+00
		BaLa-140	<6.37E+00	0.00E+00	6.37E+00
		Be-7	<1.69E+01	0.00E+00	1.69E+01
		K-40	7.92E+01	2.08E+01	2.44E+01





# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (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
524518	5/18/2020 - 6/15/2020	Mn-54	<3.07E+00	0.00E+00	3.07E+00
		Co-58	<3.41E+00	0.00E+00	3.41E+00
		Fe-59	<4.83E+00	0.00E+00	4.83E+00
		Co-60	<3.20E+00	0.00E+00	3.20E+00
		Zn-65	<5.02E+00	0.00E+00	5.02E+00
		Zr-95	<6.71E+00	0.00E+00	6.71E+00
		Nb-95	<3.69E+00	0.00E+00	3.69E+00
		I-131	<1.11E+01	0.00E+00	1.11E+01
		Cs-134	<2.46E+00	0.00E+00	2.46E+00
		Cs-137	<3.30E+00	0.00E+00	3.30E+00
		BaLa-140	<1.71E+00	0.00E+00	1.71E+00
		Be-7	<2.21E+01	0.00E+00	2.21E+01
		K-40	<5.29E+01	0.00E+00	5.29E+01
		525835	6/15/2020 - 7/13/2020	Mn-54	<1.66E+00
Co-58	<1.87E+00			0.00E+00	1.87E+00
Fe-59	<4.16E+00			0.00E+00	4.16E+00
Co-60	<1.37E+00			0.00E+00	1.37E+00
Zn-65	<3.21E+00			0.00E+00	3.21E+00
Zr-95	<3.56E+00			0.00E+00	3.56E+00
Nb-95	<2.83E+00			0.00E+00	2.83E+00
I-131	<1.19E+01			0.00E+00	1.19E+01
Cs-134	<1.95E+00			0.00E+00	1.95E+00
Cs-137	<1.96E+00			0.00E+00	1.96E+00
BaLa-140	<5.90E+00			0.00E+00	5.90E+00
Be-7	<1.70E+01			0.00E+00	1.70E+01
K-40	8.29E+01			2.20E+01	2.65E+01
526666	4/20/2020 - 7/13/2020			H3SW	<-6.3E+01
527103	7/13/2020 - 8/10/2020	Mn-54	<2.66E+00	0.00E+00	2.66E+00
		Co-58	<2.96E+00	0.00E+00	2.96E+00
		Fe-59	<6.75E+00	0.00E+00	6.75E+00
		Co-60	<1.74E+00	0.00E+00	1.74E+00
		Zn-65	<9.17E+00	0.00E+00	9.17E+00
		Zr-95	<5.95E+00	0.00E+00	5.95E+00
		Nb-95	<4.25E+00	0.00E+00	4.25E+00
		I-131	<1.06E+01	0.00E+00	1.06E+01
		Cs-134	<2.22E+00	0.00E+00	2.22E+00
		Cs-137	<2.93E+00	0.00E+00	2.93E+00
		BaLa-140	<5.61E+00	0.00E+00	5.61E+00
		Be-7	<2.09E+01	0.00E+00	2.09E+01
		K-40	<3.37E+01	0.00E+00	3.37E+01
		528928	8/10/2020 - 9/8/2020	Mn-54	<2.23E+00
Co-58	<3.33E+00			0.00E+00	3.33E+00
Fe-59	<6.31E+00			0.00E+00	6.31E+00
Co-60	<3.32E+00			0.00E+00	3.32E+00
Zn-65	<6.15E+00			0.00E+00	6.15E+00
Zr-95	<5.47E+00			0.00E+00	5.47E+00
Nb-95	<4.09E+00			0.00E+00	4.09E+00
I-131	<1.12E+01			0.00E+00	1.12E+01
Cs-134	<3.12E+00			0.00E+00	3.12E+00
Cs-137	<3.57E+00			0.00E+00	3.57E+00
BaLa-140	<8.22E+00			0.00E+00	8.22E+00
Be-7	<2.75E+01			0.00E+00	2.75E+01
K-40	<5.54E+01			0.00E+00	5.54E+01
530700	9/8/2020 - 10/5/2020			Mn-54	<3.70E+00
		Co-58	<3.49E+00	0.00E+00	3.49E+00
		Fe-59	<4.21E+00	0.00E+00	4.21E+00
		Co-60	<3.46E+00	0.00E+00	3.46E+00
		Zn-65	<6.38E+00	0.00E+00	6.38E+00



# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (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
530700	9/8/2020 - 10/5/2020	Zr-95	<6.42E+00	0.00E+00	6.42E+00
		Nb-95	<3.75E+00	0.00E+00	3.75E+00
		I-131	<1.18E+01	0.00E+00	1.18E+01
		Cs-134	<3.06E+00	0.00E+00	3.06E+00
		Cs-137	<2.68E+00	0.00E+00	2.68E+00
		BaLa-140	<7.52E+00	0.00E+00	7.52E+00
		Be-7	<3.19E+01	0.00E+00	3.19E+01
		K-40	3.19E+01	2.47E+01	3.53E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
531577	7/13/2020 - 10/5/2020	H3SW	<5.67E+01	0.00E+00	1.81E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
532609	10/5/2020 - 11/2/2020	Mn-54	<2.93E+00	0.00E+00	2.93E+00
		Co-58	<2.71E+00	0.00E+00	2.71E+00
		Fe-59	<7.14E+00	0.00E+00	7.14E+00
		Co-60	<2.68E+00	0.00E+00	2.68E+00
		Zn-65	<5.97E+00	0.00E+00	5.97E+00
		Zr-95	<5.49E+00	0.00E+00	5.49E+00
		Nb-95	<3.19E+00	0.00E+00	3.19E+00
		I-131	<1.15E+01	0.00E+00	1.15E+01
		Cs-134	<2.99E+00	0.00E+00	2.99E+00
		Cs-137	<3.26E+00	0.00E+00	3.26E+00
		BaLa-140	<4.68E+00	0.00E+00	4.68E+00
		Be-7	<2.98E+01	0.00E+00	2.98E+01
		K-40	6.83E+01	3.98E+01	5.87E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
534205	11/2/2020 - 11/30/2020	Mn-54	<2.45E+00	0.00E+00	2.45E+00
		Co-58	<3.01E+00	0.00E+00	3.01E+00
		Fe-59	<7.19E+00	0.00E+00	7.19E+00
		Co-60	<2.10E+00	0.00E+00	2.10E+00
		Zn-65	<6.46E+00	0.00E+00	6.46E+00
		Zr-95	<6.18E+00	0.00E+00	6.18E+00
		Nb-95	<3.50E+00	0.00E+00	3.50E+00
		I-131	<1.10E+01	0.00E+00	1.10E+01
		Cs-134	<3.54E+00	0.00E+00	3.54E+00
		Cs-137	<2.96E+00	0.00E+00	2.96E+00
		BaLa-140	<7.31E+00	0.00E+00	7.31E+00
		Be-7	<2.35E+01	0.00E+00	2.35E+01
		K-40	7.98E+01	3.05E+01	3.78E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
536321	11/30/2020 - 12/28/2020	Mn-54	<2.64E+00	0.00E+00	2.64E+00
		Co-58	<3.44E+00	0.00E+00	3.44E+00
		Fe-59	<5.64E+00	0.00E+00	5.64E+00
		Co-60	<2.27E+00	0.00E+00	2.27E+00
		Zn-65	<5.18E+00	0.00E+00	5.18E+00
		Zr-95	<6.22E+00	0.00E+00	6.22E+00
		Nb-95	<3.61E+00	0.00E+00	3.61E+00
		I-131	<1.08E+01	0.00E+00	1.08E+01
		Cs-134	<3.64E+00	0.00E+00	3.64E+00
		Cs-137	<3.06E+00	0.00E+00	3.06E+00
		BaLa-140	<6.71E+00	0.00E+00	6.71E+00
		Be-7	<2.56E+01	0.00E+00	2.56E+01
		K-40	7.76E+01	3.22E+01	4.13E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
537237	10/5/2020 - 12/28/2020	H3SW	<-5.4E+01	0.00E+00	1.95E+02

Sample Point 063.1 [ INDICATOR - E @ 0.79 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
515731	12/30/2019 - 1/27/2020	Mn-54	<3.70E+00	0.00E+00	3.70E+00
		Co-58	<3.96E+00	0.00E+00	3.96E+00
		Fe-59	<8.14E+00	0.00E+00	8.14E+00
		Co-60	<3.58E+00	0.00E+00	3.58E+00
		Zn-65	<7.98E+00	0.00E+00	7.98E+00
		Zr-95	<6.71E+00	0.00E+00	6.71E+00



# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (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
515731	12/30/2019 - 1/27/2020	Nb-95	<3.36E+00	0.00E+00	3.36E+00
		I-131	<1.11E+01	0.00E+00	1.11E+01
		Cs-134	<3.39E+00	0.00E+00	3.39E+00
		Cs-137	<2.37E+00	0.00E+00	2.37E+00
		BaLa-140	<1.16E+01	0.00E+00	1.16E+01
		Be-7	<3.59E+01	0.00E+00	3.59E+01
		K-40	8.56E+01	3.94E+01	4.71E+01
517250	2/8/2020 - 2/24/2020	Mn-54	<3.75E+00	0.00E+00	3.75E+00
		Co-58	<3.22E+00	0.00E+00	3.22E+00
		Fe-59	<5.73E+00	0.00E+00	5.73E+00
		Co-60	<4.39E+00	0.00E+00	4.39E+00
		Zn-65	<1.02E+01	0.00E+00	1.02E+01
		Zr-95	<3.48E+00	0.00E+00	3.48E+00
		Nb-95	<4.31E+00	0.00E+00	4.31E+00
		I-131	<8.55E+00	0.00E+00	8.55E+00
		Cs-134	<3.66E+00	0.00E+00	3.66E+00
		Cs-137	<3.89E+00	0.00E+00	3.89E+00
		BaLa-140	<9.42E+00	0.00E+00	9.42E+00
		Be-7	<2.63E+01	0.00E+00	2.63E+01
		K-40	<2.44E+01	0.00E+00	2.44E+01
519420	2/24/2020 - 3/23/2020	Mn-54	<3.26E+00	0.00E+00	3.26E+00
		Co-58	<3.65E+00	0.00E+00	3.65E+00
		Fe-59	<6.71E+00	0.00E+00	6.71E+00
		Co-60	<2.52E+00	0.00E+00	2.52E+00
		Zn-65	<5.83E+00	0.00E+00	5.83E+00
		Zr-95	<6.29E+00	0.00E+00	6.29E+00
		Nb-95	<4.15E+00	0.00E+00	4.15E+00
		I-131	<1.20E+01	0.00E+00	1.20E+01
		Cs-134	<2.76E+00	0.00E+00	2.76E+00
		Cs-137	<3.15E+00	0.00E+00	3.15E+00
		BaLa-140	<8.78E+00	0.00E+00	8.78E+00
		Be-7	<2.50E+01	0.00E+00	2.50E+01
		K-40	<5.11E+01	0.00E+00	5.11E+01
516449	12/30/2019 - 4/20/2020	H3SW	5.39E+03	2.32E+02	1.92E+02
521286	3/23/2020 - 4/20/2020	Mn-54	<1.67E+00	0.00E+00	1.67E+00
		Co-58	<2.13E+00	0.00E+00	2.13E+00
		Fe-59	<3.56E+00	0.00E+00	3.56E+00
		Co-60	<1.92E+00	0.00E+00	1.92E+00
		Zn-65	<4.29E+00	0.00E+00	4.29E+00
		Zr-95	<4.12E+00	0.00E+00	4.12E+00
		Nb-95	<2.90E+00	0.00E+00	2.90E+00
		I-131	<9.67E+00	0.00E+00	9.67E+00
		Cs-134	<2.20E+00	0.00E+00	2.20E+00
		Cs-137	<1.60E+00	0.00E+00	1.60E+00
		BaLa-140	<5.47E+00	0.00E+00	5.47E+00
		Be-7	<1.98E+01	0.00E+00	1.98E+01
		K-40	<2.93E+01	0.00E+00	2.93E+01
522854	4/20/2020 - 5/18/2020	Mn-54	<2.08E+00	0.00E+00	2.08E+00
		Co-58	<2.00E+00	0.00E+00	2.00E+00
		Fe-59	<4.50E+00	0.00E+00	4.50E+00
		Co-60	<1.86E+00	0.00E+00	1.86E+00
		Zn-65	<4.39E+00	0.00E+00	4.39E+00
		Zr-95	<3.34E+00	0.00E+00	3.34E+00
		Nb-95	<2.77E+00	0.00E+00	2.77E+00
		I-131	<1.19E+01	0.00E+00	1.19E+01
		Cs-134	<1.92E+00	0.00E+00	1.92E+00
		Cs-137	<1.52E+00	0.00E+00	1.52E+00
		BaLa-140	<6.22E+00	0.00E+00	6.22E+00



# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (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
522854	4/20/2020 - 5/18/2020	Be-7	<1.88E+01	0.00E+00	1.88E+01
		K-40	5.14E+01	1.80E+01	2.01E+01
524519	5/18/2020 - 6/15/2020	Mn-54	<1.89E+00	0.00E+00	1.89E+00
		Co-58	<2.03E+00	0.00E+00	2.03E+00
		Fe-59	<4.79E+00	0.00E+00	4.79E+00
		Co-60	<1.84E+00	0.00E+00	1.84E+00
		Zn-65	<3.34E+00	0.00E+00	3.34E+00
		Zr-95	<3.66E+00	0.00E+00	3.66E+00
		Nb-95	<2.69E+00	0.00E+00	2.69E+00
		I-131	<1.16E+01	0.00E+00	1.16E+01
		Cs-134	<2.17E+00	0.00E+00	2.17E+00
		Cs-137	<1.70E+00	0.00E+00	1.70E+00
		BaLa-140	<6.33E+00	0.00E+00	6.33E+00
		Be-7	<1.68E+01	0.00E+00	1.68E+01
		K-40	8.97E+01	2.52E+01	3.21E+01
525836	6/15/2020 - 7/13/2020	Mn-54	<2.37E+00	0.00E+00	2.37E+00
		Co-58	<2.30E+00	0.00E+00	2.30E+00
		Fe-59	<4.94E+00	0.00E+00	4.94E+00
		Co-60	<2.01E+00	0.00E+00	2.01E+00
		Zn-65	<4.08E+00	0.00E+00	4.08E+00
		Zr-95	<3.99E+00	0.00E+00	3.99E+00
		Nb-95	<2.69E+00	0.00E+00	2.69E+00
		I-131	<1.08E+01	0.00E+00	1.08E+01
		Cs-134	<2.19E+00	0.00E+00	2.19E+00
		Cs-137	<1.61E+00	0.00E+00	1.61E+00
		BaLa-140	<5.51E+00	0.00E+00	5.51E+00
		Be-7	<2.18E+01	0.00E+00	2.18E+01
		K-40	9.34E+01	2.51E+01	2.88E+01
526667	4/20/2020 - 7/13/2020	H3SW	2.53E+03	1.77E+02	1.88E+02
527104	7/13/2020 - 8/10/2020	Mn-54	<2.56E+00	0.00E+00	2.56E+00
		Co-58	<2.75E+00	0.00E+00	2.75E+00
		Fe-59	<5.35E+00	0.00E+00	5.35E+00
		Co-60	<2.39E+00	0.00E+00	2.39E+00
		Zn-65	<4.99E+00	0.00E+00	4.99E+00
		Zr-95	<5.53E+00	0.00E+00	5.53E+00
		Nb-95	<3.73E+00	0.00E+00	3.73E+00
		I-131	<1.03E+01	0.00E+00	1.03E+01
		Cs-134	<3.19E+00	0.00E+00	3.19E+00
		Cs-137	<2.57E+00	0.00E+00	2.57E+00
		BaLa-140	<5.60E+00	0.00E+00	5.60E+00
		Be-7	<2.14E+01	0.00E+00	2.14E+01
		K-40	6.51E+01	3.21E+01	4.63E+01
528929	8/10/2020 - 9/8/2020	Mn-54	<2.31E+00	0.00E+00	2.31E+00
		Co-58	<3.15E+00	0.00E+00	3.15E+00
		Fe-59	<6.58E+00	0.00E+00	6.58E+00
		Co-60	<2.72E+00	0.00E+00	2.72E+00
		Zn-65	<5.47E+00	0.00E+00	5.47E+00
		Zr-95	<5.60E+00	0.00E+00	5.60E+00
		Nb-95	<4.17E+00	0.00E+00	4.17E+00
		I-131	<1.07E+01	0.00E+00	1.07E+01
		Cs-134	<3.20E+00	0.00E+00	3.20E+00
		Cs-137	<2.24E+00	0.00E+00	2.24E+00
		BaLa-140	<5.67E+00	0.00E+00	5.67E+00
		Be-7	<2.98E+01	0.00E+00	2.98E+01
		K-40	6.48E+01	3.28E+01	4.57E+01
530701	9/8/2020 - 10/5/2020	Mn-54	<2.96E+00	0.00E+00	2.96E+00
		Co-58	<3.57E+00	0.00E+00	3.57E+00



# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (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
530701	9/8/2020 - 10/5/2020	Fe-59	<5.60E+00	0.00E+00	5.60E+00
		Co-60	<4.29E+00	0.00E+00	4.29E+00
		Zn-65	<7.27E+00	0.00E+00	7.27E+00
		Zr-95	<7.44E+00	0.00E+00	7.44E+00
		Nb-95	<4.29E+00	0.00E+00	4.29E+00
		I-131	<1.13E+01	0.00E+00	1.13E+01
		Cs-134	<3.84E+00	0.00E+00	3.84E+00
		Cs-137	<3.57E+00	0.00E+00	3.57E+00
		BaLa-140	<1.75E+00	0.00E+00	1.75E+00
		Be-7	<2.93E+01	0.00E+00	2.93E+01
		K-40	7.20E+01	4.09E+01	5.75E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
531578	7/13/2020 - 10/5/2020	H3SW	3.67E+03	1.94E+02	1.81E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
532610	10/5/2020 - 11/2/2020	Mn-54	<3.10E+00	0.00E+00	3.10E+00
		Co-58	<1.97E+00	0.00E+00	1.97E+00
		Fe-59	<6.22E+00	0.00E+00	6.22E+00
		Co-60	<2.69E+00	0.00E+00	2.69E+00
		Zn-65	<6.67E+00	0.00E+00	6.67E+00
		Zr-95	<5.02E+00	0.00E+00	5.02E+00
		Nb-95	<3.30E+00	0.00E+00	3.30E+00
		I-131	<1.18E+01	0.00E+00	1.18E+01
		Cs-134	<2.61E+00	0.00E+00	2.61E+00
		Cs-137	<3.01E+00	0.00E+00	3.01E+00
		BaLa-140	<8.03E+00	0.00E+00	8.03E+00
		Be-7	<2.75E+01	0.00E+00	2.75E+01
		K-40	5.51E+01	3.24E+01	4.64E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
534206	11/2/2020 - 11/30/2020	Mn-54	<3.97E+00	0.00E+00	3.97E+00
		Co-58	<3.05E+00	0.00E+00	3.05E+00
		Fe-59	<7.70E+00	0.00E+00	7.70E+00
		Co-60	<3.82E+00	0.00E+00	3.82E+00
		Zn-65	<8.08E+00	0.00E+00	8.08E+00
		Zr-95	<7.03E+00	0.00E+00	7.03E+00
		Nb-95	<4.65E+00	0.00E+00	4.65E+00
		I-131	<1.20E+01	0.00E+00	1.20E+01
		Cs-134	<3.64E+00	0.00E+00	3.64E+00
		Cs-137	<3.64E+00	0.00E+00	3.64E+00
		BaLa-140	<8.58E+00	0.00E+00	8.58E+00
		Be-7	<3.94E+01	0.00E+00	3.94E+01
		K-40	6.56E+01	3.82E+01	5.32E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
536322	11/30/2020 - 12/28/2020	Mn-54	<3.23E+00	0.00E+00	3.23E+00
		Co-58	<2.97E+00	0.00E+00	2.97E+00
		Fe-59	<6.05E+00	0.00E+00	6.05E+00
		Co-60	<2.88E+00	0.00E+00	2.88E+00
		Zn-65	<4.31E+00	0.00E+00	4.31E+00
		Zr-95	<5.43E+00	0.00E+00	5.43E+00
		Nb-95	<4.20E+00	0.00E+00	4.20E+00
		I-131	<1.20E+01	0.00E+00	1.20E+01
		Cs-134	<2.96E+00	0.00E+00	2.96E+00
		Cs-137	<2.64E+00	0.00E+00	2.64E+00
		BaLa-140	<5.29E+00	0.00E+00	5.29E+00
		Be-7	<2.88E+01	0.00E+00	2.88E+01
		K-40	8.81E+01	3.46E+01	4.39E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
537238	10/5/2020 - 12/28/2020	H3SW	4.29E+03	2.14E+02	1.93E+02

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
518542	12/10/2019 - 3/9/2020	mR/Std Qtr	22.37



## OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (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
524279	3/9/2020 - 6/8/2020	mR/Std Qtr	18.95
529420	6/8/2020 - 9/14/2020	mR/Std Qtr	19.40
535586	9/14/2020 - 12/14/2020	mR/Std Qtr	20.78

Sample Point 021 [ INDICATOR - NNE @ 0.25 miles ]

TLD RING TLD\_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
518543	12/10/2019 - 3/9/2020	mR/Std Qtr	18.04
524280	3/9/2020 - 6/8/2020	mR/Std Qtr	13.71
529421	6/8/2020 - 9/14/2020	mR/Std Qtr	15.08
535587	9/14/2020 - 12/14/2020	mR/Std Qtr	15.28

Sample Point 022 [ INDICATOR - NE @ 0.53 miles ]

TLD RING TLD\_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
518544	12/10/2019 - 3/9/2020	mR/Std Qtr	27.61
524281	3/9/2020 - 6/8/2020	mR/Std Qtr	26.61
529422	6/8/2020 - 9/14/2020	mR/Std Qtr	21.78
535588	9/14/2020 - 12/14/2020	mR/Std Qtr	23.00

Sample Point 023 [ INDICATOR - ENE @ 0.93 miles ]

TLD RING TLD\_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
518545	12/10/2019 - 3/9/2020	mR/Std Qtr	27.94
524282	3/9/2020 - 6/8/2020	mR/Std Qtr	24.37
529423	6/8/2020 - 9/15/2020	mR/Std Qtr	23.19
535589	9/15/2020 - 12/14/2020	mR/Std Qtr	23.35

Sample Point 024 [ INDICATOR - E @ 0.81 miles ]

TLD RING TLD\_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
518546	12/10/2019 - 3/10/2020	mR/Std Qtr	34.47
524283	3/10/2020 - 6/9/2020	mR/Std Qtr	28.72
529424	6/9/2020 - 9/15/2020	mR/Std Qtr	27.55
535590	9/15/2020 - 12/15/2020	mR/Std Qtr	29.49

Sample Point 025 [ INDICATOR - ESE @ 0.42 miles ]

TLD RING TLD\_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
518547	12/10/2019 - 3/9/2020	mR/Std Qtr	23.01
524284	3/9/2020 - 6/8/2020	mR/Std Qtr	17.09
529425	6/8/2020 - 9/14/2020	mR/Std Qtr	19.70

# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 025 [ INDICATOR - ESE @ 0.42 miles ]

TLD RING TLD\_INNER

Sample ID: 535591	Sample Dates: 9/14/2020 - 12/14/2020	Nuclide mR/Std Qtr	Activity 20.02
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Sample Point 026 [ INDICATOR - SE @ 0.34 miles ]

TLD RING TLD\_INNER

Sample ID: 518548	Sample Dates: 12/10/2019 - 3/9/2020	Nuclide mR/Std Qtr	Activity 19.31
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Sample ID: 524285	Sample Dates: 3/9/2020 - 6/8/2020	Nuclide mR/Std Qtr	Activity 16.21
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Sample ID: 529426	Sample Dates: 6/8/2020 - 9/14/2020	Nuclide mR/Std Qtr	Activity 18.18
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Sample ID: 535592	Sample Dates: 9/14/2020 - 12/14/2020	Nuclide mR/Std Qtr	Activity 19.26
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Sample Point 027 [ INDICATOR - SSE @ 0.49 miles ]

TLD RING TLD\_INNER

Sample ID: 518549	Sample Dates: 12/10/2019 - 3/9/2020	Nuclide mR/Std Qtr	Activity 23.77
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Sample ID: 524286	Sample Dates: 3/9/2020 - 6/8/2020	Nuclide mR/Std Qtr	Activity 19.07
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Sample ID: 529427	Sample Dates: 6/8/2020 - 9/14/2020	Nuclide mR/Std Qtr	Activity 19.03
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Sample ID: 535593	Sample Dates: 9/14/2020 - 12/14/2020	Nuclide mR/Std Qtr	Activity 17.83
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Sample Point 028 [ INDICATOR - S @ 0.46 miles ]

TLD RING TLD\_INNER

Sample ID: 518550	Sample Dates: 12/10/2019 - 3/9/2020	Nuclide mR/Std Qtr	Activity 21.64
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Sample ID: 524287	Sample Dates: 3/9/2020 - 6/8/2020	Nuclide mR/Std Qtr	Activity 18.37
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Sample ID: 529428	Sample Dates: 6/8/2020 - 9/14/2020	Nuclide mR/Std Qtr	Activity 16.20
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Sample ID: 535594	Sample Dates: 9/14/2020 - 12/14/2020	Nuclide mR/Std Qtr	Activity 15.19
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Sample Point 029 [ INDICATOR - SSW @ 0.56 miles ]

TLD RING TLD\_INNER

Sample ID: 518551	Sample Dates: 12/10/2019 - 3/9/2020	Nuclide mR/Std Qtr	Activity 20.46
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Sample ID: 524288	Sample Dates: 3/9/2020 - 6/8/2020	Nuclide mR/Std Qtr	Activity 16.88
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Sample ID: 529429	Sample Dates: 6/8/2020 - 9/14/2020	Nuclide mR/Std Qtr	Activity 15.06
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Sample ID: 535595	Sample Dates: 9/14/2020 - 12/14/2020	Nuclide mR/Std Qtr	Activity 15.54
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Sample Point 030 [ INDICATOR - SW @ 0.42 miles ]

TLD RING TLD\_INNER

Sample ID: 518552	Sample Dates: 12/10/2019 - 3/9/2020	Nuclide mR/Std Qtr	Activity 23.70
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Sample ID: 524289	Sample Dates: 3/9/2020 - 6/8/2020	Nuclide mR/Std Qtr	Activity 20.55
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Sample ID: 529430	Sample Dates: 6/8/2020 - 9/14/2020	Nuclide mR/Std Qtr	Activity 18.02
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Sample ID: 535596	Sample Dates: 9/14/2020 - 12/14/2020	Nuclide mR/Std Qtr	Activity 18.76
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# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (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
518553	12/10/2019 - 3/9/2020	mR/Std Qtr	19.20
524290	3/9/2020 - 6/8/2020	mR/Std Qtr	18.76
529431	6/8/2020 - 9/14/2020	mR/Std Qtr	17.04
535597	9/14/2020 - 12/14/2020	mR/Std Qtr	16.62

Sample Point 032 [ INDICATOR - WNW @ 0.19 miles ]

TLD RING TLD\_INNER

Sample ID	Sample Dates	Nuclide	Activity
518554	12/10/2019 - 3/9/2020	mR/Std Qtr	24.27
524291	3/9/2020 - 6/8/2020	mR/Std Qtr	21.51
529432	6/8/2020 - 9/14/2020	mR/Std Qtr	19.29
535598	9/14/2020 - 12/14/2020	mR/Std Qtr	21.90

Sample Point 033 [ INDICATOR - WNW @ 0.21 miles ]

TLD RING TLD\_INNER

Sample ID	Sample Dates	Nuclide	Activity
518555	12/10/2019 - 3/9/2020	mR/Std Qtr	20.36
524292	3/9/2020 - 6/8/2020	mR/Std Qtr	19.90
529433	6/8/2020 - 9/14/2020	mR/Std Qtr	18.72
535599	9/14/2020 - 12/14/2020	mR/Std Qtr	19.30

Sample Point 034 [ INDICATOR - NW @ 0.22 miles ]

TLD RING TLD\_INNER

Sample ID	Sample Dates	Nuclide	Activity
518556	12/10/2019 - 3/9/2020	mR/Std Qtr	21.26
524293	3/9/2020 - 6/8/2020	mR/Std Qtr	20.10
529434	6/8/2020 - 9/14/2020	mR/Std Qtr	18.6
535600	9/14/2020 - 12/14/2020	mR/Std Qtr	19.13

Sample Point 035 [ INDICATOR - NNW @ 0.17 miles ]

TLD RING TLD\_INNER

Sample ID	Sample Dates	Nuclide	Activity
518557	12/10/2019 - 3/9/2020	mR/Std Qtr	28.20
524294	3/9/2020 - 6/8/2020	mR/Std Qtr	26.57
529435	6/8/2020 - 9/14/2020	mR/Std Qtr	23.5
535601	9/14/2020 - 12/14/2020	mR/Std Qtr	26.38

Sample Point 036 [ INDICATOR - N @ 4.18 miles ]

TLD RING TLD\_OUTER

Sample ID	Sample Dates	Nuclide	Activity
518558	12/10/2019 - 3/10/2020	mR/Std Qtr	30.30
524295	3/10/2020 - 6/9/2020	mR/Std Qtr	30.18



# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 036 [ INDICATOR - N @ 4.18 miles ]

TLD RING TLD\_OUTER

Sample ID: 529436	Sample Dates: 6/9/2020 - 9/15/2020	Nuclide mR/Std Qtr	Activity 26.31
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Sample ID: 535602	Sample Dates: 9/15/2020 - 12/15/2020	Nuclide mR/Std Qtr	Activity 24.99
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Sample Point 037 [ INDICATOR - NNE @ 4.85 miles ] TLD RING TLD\_OUTER

Sample ID: 518559	Sample Dates: 12/10/2019 - 3/10/2020	Nuclide mR/Std Qtr	Activity 22.35
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Sample ID: 524296	Sample Dates: 3/10/2020 - 6/9/2020	Nuclide mR/Std Qtr	Activity 20.42
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Sample ID: 529437	Sample Dates: 6/9/2020 - 9/15/2020	Nuclide mR/Std Qtr	Activity 19.10
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Sample ID: 535603	Sample Dates: 9/15/2020 - 12/15/2020	Nuclide mR/Std Qtr	Activity 16.76
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Sample Point 038 [ INDICATOR - NE @ 4.24 miles ] TLD RING TLD\_OUTER

Sample ID: 518560	Sample Dates: 12/10/2019 - 3/10/2020	Nuclide mR/Std Qtr	Activity 27.43
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Sample ID: 524297	Sample Dates: 3/10/2020 - 6/8/2020	Nuclide mR/Std Qtr	Activity 22.76
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Sample ID: 529438	Sample Dates: 6/8/2020 - 9/15/2020	Nuclide mR/Std Qtr	Activity 22.04
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Sample ID: 535604	Sample Dates: 9/15/2020 - 12/15/2020	Nuclide mR/Std Qtr	Activity 20.62
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Sample Point 039 [ INDICATOR - ENE @ 4.02 miles ] TLD RING TLD\_OUTER

Sample ID: 518561	Sample Dates: 12/10/2019 - 3/10/2020	Nuclide mR/Std Qtr	Activity 31.36
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Sample ID: 524298	Sample Dates: 3/10/2020 - 6/9/2020	Nuclide mR/Std Qtr	Activity 26.91
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Sample ID: 529439	Sample Dates: 6/9/2020 - 9/15/2020	Nuclide mR/Std Qtr	Activity 24.69
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Sample ID: 535605	Sample Dates: 9/15/2020 - 12/15/2020	Nuclide mR/Std Qtr	Activity 25.69
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Sample Point 040 [ INDICATOR - E @ 4.74 miles ] TLD RING TLD\_OUTER

Sample ID: 518562	Sample Dates: 12/10/2019 - 3/10/2020	Nuclide mR/Std Qtr	Activity 31.24
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Sample ID: 524299	Sample Dates: 3/10/2020 - 6/9/2020	Nuclide mR/Std Qtr	Activity 27.56
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Sample ID: 529440	Sample Dates: 6/9/2020 - 9/15/2020	Nuclide mR/Std Qtr	Activity 26.17
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Sample ID: 535606	Sample Dates: 9/15/2020 - 12/15/2020	Nuclide mR/Std Qtr	Activity 27.66
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Sample Point 041 [ INDICATOR - ESE @ 4.25 miles ] TLD RING TLD\_OUTER

Sample ID: 518563	Sample Dates: 12/10/2019 - 3/10/2020	Nuclide mR/Std Qtr	Activity 21.00
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Sample ID: 524300	Sample Dates: 3/10/2020 - 6/9/2020	Nuclide mR/Std Qtr	Activity 18.02
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Sample ID: 529441	Sample Dates: 6/9/2020 - 9/15/2020	Nuclide mR/Std Qtr	Activity 17.51
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Sample ID: 535607	Sample Dates: 9/15/2020 - 12/15/2020	Nuclide mR/Std Qtr	Activity 21.55
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# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (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
518564	12/10/2019 - 3/10/2020	mR/Std Qtr	29.79
524301	3/10/2020 - 6/9/2020	mR/Std Qtr	28.11
529442	6/9/2020 - 9/15/2020	mR/Std Qtr	25.94
535608	9/15/2020 - 12/15/2020	mR/Std Qtr	26.14

Sample Point 043 [ INDICATOR - SSE @ 4.09 miles ]

TLD RING TLD\_OUTER

Sample ID	Sample Dates	Nuclide	Activity
518565	12/10/2019 - 3/10/2020	mR/Std Qtr	27.59
524302	3/10/2020 - 6/9/2020	mR/Std Qtr	23.10
529443	6/9/2020 - 9/15/2020	mR/Std Qtr	24.46
535609	9/15/2020 - 12/15/2020	mR/Std Qtr	26.71

Sample Point 044 [ INDICATOR - S @ 3.96 miles ]

TLD RING TLD\_OUTER

Sample ID	Sample Dates	Nuclide	Activity
518566	12/10/2019 - 3/10/2020	mR/Std Qtr	21.19
524303	3/10/2020 - 6/9/2020	mR/Std Qtr	19.90
529444	6/9/2020 - 9/15/2020	mR/Std Qtr	19.78
535610	9/15/2020 - 12/15/2020	mR/Std Qtr	19.89

Sample Point 045 [ INDICATOR - SSW @ 4.78 miles ]

TLD RING TLD\_OUTER

Sample ID	Sample Dates	Nuclide	Activity
518567	12/10/2019 - 3/10/2020	mR/Std Qtr	21.96
524304	3/10/2020 - 6/9/2020	mR/Std Qtr	19.44
529445	6/9/2020 - 9/15/2020	mR/Std Qtr	17.43
535611	9/15/2020 - 12/15/2020	mR/Std Qtr	15.64

Sample Point 046 [ INDICATOR - SW @ 4.61 miles ]

TLD RING TLD\_OUTER

Sample ID	Sample Dates	Nuclide	Activity
518568	12/10/2019 - 3/10/2020	mR/Std Qtr	26.94
524305	3/10/2020 - 6/9/2020	mR/Std Qtr	22.64
529446	6/9/2020 - 9/15/2020	mR/Std Qtr	24.02
535612	9/15/2020 - 12/15/2020	mR/Std Qtr	21.13

Sample Point 048 [ INDICATOR - W @ 3.64 miles ]

TLD RING TLD\_OUTER

Sample ID	Sample Dates	Nuclide	Activity
518569	12/10/2019 - 3/10/2020	mR/Std Qtr	30.54
524306	3/10/2020 - 6/9/2020	mR/Std Qtr	24.58



# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 048 [ INDICATOR - W @ 3.64 miles ]

TLD RING TLD\_OUTER

Sample ID	Sample Dates	Nuclide	Activity
529447	6/9/2020 - 9/15/2020	mR/Std Qtr	25.38
535613	9/15/2020 - 12/15/2020	mR/Std Qtr	25.07

Sample Point 049 [ INDICATOR - WNW @ 3.6 miles ]

TLD RING TLD\_OUTER

Sample ID	Sample Dates	Nuclide	Activity
518570	12/10/2019 - 3/10/2020	mR/Std Qtr	26.82
524307	3/10/2020 - 6/8/2020	mR/Std Qtr	21.46
529448	6/8/2020 - 9/15/2020	mR/Std Qtr	21.72
535614	9/15/2020 - 12/15/2020	mR/Std Qtr	23.19

Sample Point 050 [ INDICATOR - NW @ 3.53 miles ]

TLD RING TLD\_OUTER

Sample ID	Sample Dates	Nuclide	Activity
518571	12/10/2019 - 3/10/2020	mR/Std Qtr	21.27
524308	3/10/2020 - 6/8/2020	mR/Std Qtr	17.75
529449	6/8/2020 - 9/15/2020	mR/Std Qtr	18.38
535615	9/15/2020 - 12/15/2020	mR/Std Qtr	16.83

Sample Point 051 [ INDICATOR - NNW @ 4.64 miles ]

TLD RING TLD\_OUTER

Sample ID	Sample Dates	Nuclide	Activity
518572	12/10/2019 - 3/10/2020	mR/Std Qtr	22.45
524309	3/10/2020 - 6/9/2020	mR/Std Qtr	19.86
529450	6/9/2020 - 9/15/2020	mR/Std Qtr	19.11
535616	9/15/2020 - 12/15/2020	mR/Std Qtr	19.18

Sample Point 052 [ INDICATOR - ENE @ 12.4 miles ]

TLD RING TLD\_SPEC

Sample ID	Sample Dates	Nuclide	Activity
518573	12/10/2019 - 3/10/2020	mR/Std Qtr	29.77
524310	3/10/2020 - 6/8/2020	mR/Std Qtr	24.42
529451	6/8/2020 - 9/15/2020	mR/Std Qtr	24.57
535617	9/15/2020 - 12/15/2020	mR/Std Qtr	26.29

Sample Point 053 [ INDICATOR - E @ 11.7 miles ]

TLD RING TLD\_SPEC

Sample ID	Sample Dates	Nuclide	Activity
518574	12/10/2019 - 3/10/2020	mR/Std Qtr	32.01
524311	3/10/2020 - 6/9/2020	mR/Std Qtr	26.30
529452	6/9/2020 - 9/15/2020	mR/Std Qtr	25.57
535618	9/15/2020 - 12/15/2020	mR/Std Qtr	26.66



# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (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
518575	12/10/2019 - 3/10/2020	mR/Std Qtr	23.87
524312	3/10/2020 - 6/9/2020	mR/Std Qtr	21.17
529453	6/9/2020 - 9/15/2020	mR/Std Qtr	19.34
535619	9/15/2020 - 12/15/2020	mR/Std Qtr	19.55

Sample Point 055 [ INDICATOR - SSE @ 9.27 miles ]

TLD RING TLD\_SPEC

Sample ID	Sample Dates	Nuclide	Activity
518576	12/10/2019 - 3/10/2020	mR/Std Qtr	19.22
524313	3/10/2020 - 6/9/2020	mR/Std Qtr	15.59
529454	6/9/2020 - 9/15/2020	mR/Std Qtr	16.02
535620	9/15/2020 - 12/15/2020	mR/Std Qtr	16.22

Sample Point 056 [ INDICATOR - SSW @ 7.3 miles ]

TLD RING TLD\_SPEC

Sample ID	Sample Dates	Nuclide	Activity
518577	12/10/2019 - 3/10/2020	mR/Std Qtr	28.94
524314	3/10/2020 - 6/9/2020	mR/Std Qtr	25.53
529455	6/9/2020 - 9/15/2020	mR/Std Qtr	24.02
535621	9/15/2020 - 12/15/2020	mR/Std Qtr	26.51

Sample Point 057 [ INDICATOR - SW @ 8.42 miles ]

TLD RING TLD\_SPEC

Sample ID	Sample Dates	Nuclide	Activity
518578	12/10/2019 - 3/10/2020	mR/Std Qtr	23.39
524315	3/10/2020 - 6/9/2020	mR/Std Qtr	20.84
529456	6/9/2020 - 9/15/2020	mR/Std Qtr	19.6
535622	9/15/2020 - 12/15/2020	mR/Std Qtr	20.91

Sample Point 058 [ CONTROL - WSW @ 9.39 miles ]

TLD RING TLD\_CTRL

Sample ID	Sample Dates	Nuclide	Activity
518579	12/10/2019 - 3/10/2020	mR/Std Qtr	35.91
524316	3/10/2020 - 6/9/2020	mR/Std Qtr	33.47
529457	6/9/2020 - 9/15/2020	mR/Std Qtr	30.18
535623	9/15/2020 - 12/15/2020	mR/Std Qtr	32.88

Sample Point 059 [ INDICATOR - NW @ 9.2 miles ]

TLD RING TLD\_SPEC

Sample ID	Sample Dates	Nuclide	Activity
518580	12/10/2019 - 3/10/2020	mR/Std Qtr	26.23
524317	3/10/2020 - 6/9/2020	mR/Std Qtr	24.52



# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 059 [ INDICATOR - NW @ 9.2 miles ]

TLD RING TLD\_SPEC

Sample ID: 529458	Sample Dates: 6/9/2020 - 9/15/2020	Nuclide mR/Std Qtr	Activity 22.47
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Sample ID: 535624	Sample Dates: 9/15/2020 - 12/15/2020	Nuclide mR/Std Qtr	Activity 22.35
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Sample Point 076 [ INDICATOR - W @ 0.19 miles ] TLD RING TLD\_INNER

Sample ID: 518581	Sample Dates: 12/10/2019 - 3/9/2020	Nuclide mR/Std Qtr	Activity 30.08
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Sample ID: 524318	Sample Dates: 3/9/2020 - 6/8/2020	Nuclide mR/Std Qtr	Activity 24.10
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Sample ID: 529459	Sample Dates: 6/8/2020 - 9/14/2020	Nuclide mR/Std Qtr	Activity 22.7
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Sample ID: 535625	Sample Dates: 9/14/2020 - 12/14/2020	Nuclide mR/Std Qtr	Activity 26.22
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Sample Point 077 [ INDICATOR - SW @ 1 miles ] TLD RING TLD\_INNER

Sample ID: 518582	Sample Dates: 12/10/2019 - 3/9/2020	Nuclide mR/Std Qtr	Activity 23.51
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Sample ID: 524319	Sample Dates: 3/9/2020 - 6/8/2020	Nuclide mR/Std Qtr	Activity 19.71
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Sample ID: 529460	Sample Dates: 6/8/2020 - 9/14/2020	Nuclide mR/Std Qtr	Activity 18.69
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Sample ID: 535626	Sample Dates: 9/14/2020 - 12/14/2020	Nuclide mR/Std Qtr	Activity 19.80
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Sample Point 078.1 [ INDICATOR - WSW @ 0.53 miles ] TLD RING TLD\_INNER

Sample ID: 518583	Sample Dates: 12/10/2019 - 3/9/2020	Nuclide mR/Std Qtr	Activity 32.20
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Sample ID: 524320	Sample Dates: 3/9/2020 - 6/8/2020	Nuclide mR/Std Qtr	Activity 29.11
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Sample ID: 529461	Sample Dates: 6/8/2020 - 9/14/2020	Nuclide mR/Std Qtr	Activity 27.07
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Sample ID: 535627	Sample Dates: 9/14/2020 - 12/14/2020	Nuclide mR/Std Qtr	Activity 29.17
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Sample Point 085 [ INDICATOR - NNW @ 0.88 miles ] TLD RING TLD\_INNER

Sample ID: 518584	Sample Dates: 12/10/2019 - 3/9/2020	Nuclide mR/Std Qtr	Activity 24.90
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Sample ID: 524321	Sample Dates: 3/9/2020 - 6/8/2020	Nuclide mR/Std Qtr	Activity 22.63
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Sample ID: 529462	Sample Dates: 6/8/2020 - 9/14/2020	Nuclide mR/Std Qtr	Activity 19.76
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Sample ID: 535628	Sample Dates: 9/14/2020 - 12/14/2020	Nuclide mR/Std Qtr	Activity 21.44
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Sample Point 086 [ INDICATOR - NW @ 0.83 miles ] TLD RING TLD\_INNER

Sample ID: 518585	Sample Dates: 12/10/2019 - 3/9/2020	Nuclide mR/Std Qtr	Activity 21.43
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Sample ID: 524322	Sample Dates: 3/9/2020 - 6/8/2020	Nuclide mR/Std Qtr	Activity 19.48
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Sample ID: 529463	Sample Dates: 6/8/2020 - 9/14/2020	Nuclide mR/Std Qtr	Activity 17.99
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Sample ID: 535629	Sample Dates: 9/14/2020 - 12/14/2020	Nuclide mR/Std Qtr	Activity 19.09
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# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 087 [ INDICATOR - WNW @ 1.33 miles ]

TLD RING TLD\_INNER

Sample ID	Sample Dates	Nuclide	Activity
518586	12/10/2019 - 3/10/2020	mR/Std Qtr	21.70
524323	3/10/2020 - 6/8/2020	mR/Std Qtr	19.05
529464	6/8/2020 - 9/14/2020	mR/Std Qtr	17.97
535630	9/14/2020 - 12/14/2020	mR/Std Qtr	19.44

Sample Point 088 [ INDICATOR - SSW @ 1 miles ]

TLD RING TLD\_INNER

Sample ID	Sample Dates	Nuclide	Activity
518587	12/10/2019 - 3/9/2020	mR/Std Qtr	25.53
524324	3/9/2020 - 6/8/2020	mR/Std Qtr	22.73
529465	6/8/2020 - 9/14/2020	mR/Std Qtr	22.10
535631	9/14/2020 - 12/14/2020	mR/Std Qtr	22.82

Sample Point 089 [ INDICATOR - S @ 1.19 miles ]

TLD RING TLD\_INNER

Sample ID	Sample Dates	Nuclide	Activity
518588	12/10/2019 - 3/10/2020	mR/Std Qtr	28.19
529466	6/9/2020 - 9/15/2020	mR/Std Qtr	22.92
535632	9/15/2020 - 12/15/2020	mR/Std Qtr	23.54

Sample Point 090 [ INDICATOR - SE @ 0.79 miles ]

TLD RING TLD\_INNER

Sample ID	Sample Dates	Nuclide	Activity
518589	12/10/2019 - 3/10/2020	mR/Std Qtr	27.42
524326	3/10/2020 - 6/9/2020	mR/Std Qtr	23.58
529467	6/9/2020 - 9/15/2020	mR/Std Qtr	22.87
535633	9/15/2020 - 12/15/2020	mR/Std Qtr	25.97

Sample Point 092 [ INDICATOR - WSW @ 3.62 miles ]

TLD RING TLD\_OUTER

Sample ID	Sample Dates	Nuclide	Activity
518590	12/10/2019 - 3/10/2020	mR/Std Qtr	26.01
524327	3/10/2020 - 6/9/2020	mR/Std Qtr	20.36
529468	6/9/2020 - 9/15/2020	mR/Std Qtr	22.02
535634	9/15/2020 - 12/15/2020	mR/Std Qtr	21.57

Sample Point 093 [ CONTROL - SE @ 9.34 miles ]

TLD RING TLD\_CTRL

Sample ID	Sample Dates	Nuclide	Activity
518591	12/10/2019 - 3/9/2020	mR/Std Qtr	31.72
524328	3/9/2020 - 6/8/2020	mR/Std Qtr	25.60
529469	6/8/2020 - 9/14/2020	mR/Std Qtr	24.66

# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 093 [ CONTROL - SE @ 9.34 miles ]

TLD RING TLD\_CTRL

Sample ID: 535635 Sample Dates: 9/14/2020 - 12/14/2020 Nuclide Activity  
mR/Std Qtr 25.30

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
515288	1/6/2020 - 1/6/2020	MIXEDBLV	Mn-54	<2.63E+01	0.00E+00	2.63E+01
			Co-58	<2.15E+01	0.00E+00	2.15E+01
			Fe-59	<5.99E+01	0.00E+00	5.99E+01
			Co-60	<3.28E+01	0.00E+00	3.28E+01
			Zn-65	<4.98E+01	0.00E+00	4.98E+01
			Zr-95	<4.44E+01	0.00E+00	4.44E+01
			Nb-95	<2.70E+01	0.00E+00	2.70E+01
			I-131	<4.40E+01	0.00E+00	4.40E+01
			Cs-134	<3.19E+01	0.00E+00	3.19E+01
			Cs-137	<2.67E+01	0.00E+00	2.67E+01
			BaLa-140	<4.00E+01	0.00E+00	4.00E+01
			Be-7	2.97E+03	4.46E+02	2.87E+02
			K-40	2.13E+03	4.73E+02	3.54E+02
			516536	2/3/2020 - 2/3/2020	MIXEDBLV	Mn-54
Co-58	<1.62E+01	0.00E+00				1.62E+01
Fe-59	<3.70E+01	0.00E+00				3.70E+01
Co-60	<2.25E+01	0.00E+00				2.25E+01
Zn-65	<4.44E+01	0.00E+00				4.44E+01
Zr-95	<2.81E+01	0.00E+00				2.81E+01
Nb-95	<2.13E+01	0.00E+00				2.13E+01
I-131	<1.89E+01	0.00E+00				1.89E+01
Cs-134	<2.41E+01	0.00E+00				2.41E+01
Cs-137	<1.64E+01	0.00E+00				1.64E+01
BaLa-140	<1.95E+01	0.00E+00				1.95E+01
Be-7	3.06E+03	4.02E+02				2.32E+02
K-40	2.16E+03	4.22E+02				3.31E+02
518743	3/2/2020 - 3/2/2020	MIXEDBLV				Mn-54
			Co-58	<2.76E+01	0.00E+00	2.76E+01
			Fe-59	<4.29E+01	0.00E+00	4.29E+01
			Co-60	<2.32E+01	0.00E+00	2.32E+01
			Zn-65	<7.20E+01	0.00E+00	7.20E+01
			Zr-95	<3.65E+01	0.00E+00	3.65E+01
			Nb-95	<2.76E+01	0.00E+00	2.76E+01
			I-131	<2.33E+01	0.00E+00	2.33E+01
			Cs-134	<3.00E+01	0.00E+00	3.00E+01
			Cs-137	<2.15E+01	0.00E+00	2.15E+01
			BaLa-140	<3.43E+01	0.00E+00	3.43E+01
			Be-7	3.89E+03	5.24E+02	3.04E+02
			K-40	3.47E+03	5.94E+02	5.26E+01
			520831	4/6/2020 - 4/6/2020	MIXEDBLV	Mn-54
Co-58	<1.71E+01	0.00E+00				1.71E+01
Fe-59	<4.04E+01	0.00E+00				4.04E+01
Co-60	<2.19E+01	0.00E+00				2.19E+01
Zn-65	<3.88E+01	0.00E+00				3.88E+01
Zr-95	<3.09E+01	0.00E+00				3.09E+01
Nb-95	<1.98E+01	0.00E+00				1.99E+01
I-131	<2.65E+01	0.00E+00				2.65E+01
Cs-134	<2.00E+01	0.00E+00				2.00E+01
Cs-137	<2.20E+01	0.00E+00				2.20E+01
BaLa-140	<2.39E+01	0.00E+00				2.39E+01
Be-7	3.66E+02	1.70E+02				2.45E+02
K-40	3.92E+03	5.44E+02				1.89E+02
522622	5/4/2020 - 5/4/2020	MIXEDBLV				Mn-54
			Co-58	<2.69E+01	0.00E+00	2.69E+01



# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (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			
522622	5/4/2020 - 5/4/2020	MIXEDBLV	Fe-59	<5.25E+01	0.00E+00	5.25E+01			
			Co-60	<2.57E+01	0.00E+00	2.57E+01			
			Zn-65	<6.25E+01	0.00E+00	6.25E+01			
			Zr-95	<4.45E+01	0.00E+00	4.45E+01			
			Nb-95	<2.83E+01	0.00E+00	2.83E+01			
			I-131	<3.26E+01	0.00E+00	3.26E+01			
			Cs-134	<2.97E+01	0.00E+00	2.97E+01			
			Cs-137	<3.06E+01	0.00E+00	3.06E+01			
			BaLa-140	<2.23E+01	0.00E+00	2.23E+01			
			Be-7	3.97E+02	2.29E+02	3.45E+02			
			K-40	3.49E+03	6.18E+02	4.67E+02			
			524467	6/1/2020 - 6/1/2020	MIXEDBLV	Mn-54	<1.76E+01	0.00E+00	1.76E+01
						Co-58	<1.24E+01	0.00E+00	1.24E+01
Fe-59	<3.13E+01	0.00E+00				3.13E+01			
Co-60	<1.74E+01	0.00E+00				1.74E+01			
Zn-65	<3.79E+01	0.00E+00				3.79E+01			
Zr-95	<2.97E+01	0.00E+00				2.97E+01			
Nb-95	<1.47E+01	0.00E+00				1.47E+01			
I-131	<1.91E+01	0.00E+00				1.91E+01			
Cs-134	<1.88E+01	0.00E+00				1.88E+01			
Cs-137	<1.75E+01	0.00E+00				1.75E+01			
BaLa-140	<1.73E+01	0.00E+00				1.73E+01			
Be-7	1.23E+03	2.07E+02				1.93E+02			
K-40	4.46E+03	5.64E+02				2.64E+02			
525978	7/6/2020 - 7/6/2020	MIXEDBLV	Mn-54	<1.81E+01	0.00E+00	1.81E+01			
			Co-58	<2.11E+01	0.00E+00	2.11E+01			
			Fe-59	<4.02E+01	0.00E+00	4.02E+01			
			Co-60	<3.15E+01	0.00E+00	3.15E+01			
			Zn-65	<3.97E+01	0.00E+00	3.97E+01			
			Zr-95	<4.54E+01	0.00E+00	4.54E+01			
			Nb-95	<2.28E+01	0.00E+00	2.28E+01			
			I-131	<3.81E+01	0.00E+00	3.81E+01			
			Cs-134	<2.35E+01	0.00E+00	2.35E+01			
			Cs-137	<2.56E+01	0.00E+00	2.56E+01			
			BaLa-140	<3.13E+01	0.00E+00	3.13E+01			
			Be-7	1.07E+03	2.59E+02	3.10E+02			
			K-40	6.30E+03	7.79E+02	3.16E+02			
527394	8/3/2020 - 8/3/2020	MIXEDBLV	Mn-54	<1.95E+01	0.00E+00	1.95E+01			
			Co-58	<2.04E+01	0.00E+00	2.04E+01			
			Fe-59	<3.88E+01	0.00E+00	3.88E+01			
			Co-60	<2.30E+01	0.00E+00	2.30E+01			
			Zn-65	<5.42E+01	0.00E+00	5.42E+01			
			Zr-95	<2.83E+01	0.00E+00	2.83E+01			
			Nb-95	<1.80E+01	0.00E+00	1.80E+01			
			I-131	<2.39E+01	0.00E+00	2.39E+01			
			Cs-134	<2.34E+01	0.00E+00	2.34E+01			
			Cs-137	<2.34E+01	0.00E+00	2.34E+01			
			BaLa-140	<2.25E+01	0.00E+00	2.25E+01			
			Be-7	1.69E+03	2.72E+02	2.25E+02			
			K-40	3.77E+03	5.41E+02	1.63E+02			
530058	9/8/2020 - 9/8/2020	MIXEDBLV	Mn-54	<2.34E+01	0.00E+00	2.34E+01			
			Co-58	<2.47E+01	0.00E+00	2.47E+01			
			Fe-59	<4.71E+01	0.00E+00	4.71E+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	<4.81E+01	0.00E+00	4.81E+01			
			Nb-95	<2.95E+01	0.00E+00	2.95E+01			
			I-131	<3.38E+01	0.00E+00	3.38E+01			
			Cs-134	<2.23E+01	0.00E+00	2.23E+01			
			Cs-137	<2.19E+01	0.00E+00	2.19E+01			





# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (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
530058	9/8/2020 - 9/8/2020	MIXEDBLV	BaLa-140	<3.27E+01	0.00E+00	3.27E+01
			Be-7	4.47E+03	5.38E+02	2.90E+02
			K-40	3.74E+03	5.77E+02	2.98E+02
531734	10/5/2020 - 10/5/2020	MIXEDBLV	Mn-54	<2.31E+01	0.00E+00	2.31E+01
			Co-58	<2.69E+01	0.00E+00	2.69E+01
			Fe-59	<4.74E+01	0.00E+00	4.74E+01
			Co-60	<2.55E+01	0.00E+00	2.55E+01
			Zn-65	<4.98E+01	0.00E+00	4.98E+01
			Zr-95	<4.08E+01	0.00E+00	4.08E+01
			Nb-95	<2.38E+01	0.00E+00	2.38E+01
			I-131	<2.51E+01	0.00E+00	2.51E+01
			Cs-134	<3.13E+01	0.00E+00	3.13E+01
			Cs-137	<2.48E+01	0.00E+00	2.48E+01
			BaLa-140	<2.74E+01	0.00E+00	2.74E+01
			Be-7	1.18E+03	2.59E+02	2.89E+02
			K-40	5.67E+03	7.61E+02	3.27E+02
533394	11/2/2020 - 11/2/2020	MIXEDBLV	Mn-54	<1.45E+01	0.00E+00	1.45E+01
			Co-58	<9.46E+00	0.00E+00	9.46E+00
			Fe-59	<2.30E+01	0.00E+00	2.30E+01
			Co-60	<1.55E+01	0.00E+00	1.55E+01
			Zn-65	<3.03E+01	0.00E+00	3.03E+01
			Zr-95	<1.94E+01	0.00E+00	1.94E+01
			Nb-95	<1.25E+01	0.00E+00	1.25E+01
			I-131	<1.26E+01	0.00E+00	1.26E+01
			Cs-134	<1.83E+01	0.00E+00	1.83E+01
			Cs-137	<1.13E+01	0.00E+00	1.13E+01
			BaLa-140	<1.33E+01	0.00E+00	1.33E+01
			Be-7	1.49E+03	2.02E+02	1.31E+02
			K-40	3.53E+03	4.39E+02	1.52E+02
535949	12/7/2020 - 12/7/2020	MIXEDBLV	Mn-54	<3.08E+01	0.00E+00	3.08E+01
			Co-58	<3.08E+01	0.00E+00	3.08E+01
			Fe-59	<5.68E+01	0.00E+00	5.68E+01
			Co-60	<3.73E+01	0.00E+00	3.73E+01
			Zn-65	<5.88E+01	0.00E+00	5.88E+01
			Zr-95	<4.98E+01	0.00E+00	4.98E+01
			Nb-95	<3.05E+01	0.00E+00	3.05E+01
			I-131	<2.88E+01	0.00E+00	2.88E+01
			Cs-134	<3.39E+01	0.00E+00	3.39E+01
			Cs-137	<3.40E+01	0.00E+00	3.40E+01
			BaLa-140	<3.25E+01	0.00E+00	3.25E+01
			Be-7	1.31E+03	3.01E+02	3.29E+02
			K-40	2.68E+03	5.02E+02	2.97E+02

Sample Point 079 [ INDICATOR - NE @ 0.56 miles ]

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
515289	1/6/2020 - 1/6/2020	MIXEDBLV	Mn-54	<1.72E+01	0.00E+00	1.72E+01
			Co-58	<1.96E+01	0.00E+00	1.96E+01
			Fe-59	<4.19E+01	0.00E+00	4.19E+01
			Co-60	<2.02E+01	0.00E+00	2.02E+01
			Zn-65	<3.08E+01	0.00E+00	3.08E+01
			Zr-95	<2.74E+01	0.00E+00	2.74E+01
			Nb-95	<2.13E+01	0.00E+00	2.13E+01
			I-131	<2.84E+01	0.00E+00	2.84E+01
			Cs-134	<2.02E+01	0.00E+00	2.02E+01
			Cs-137	<1.73E+01	0.00E+00	1.73E+01
			BaLa-140	<3.06E+01	0.00E+00	3.06E+01
			Be-7	4.72E+03	5.39E+02	2.48E+02
			K-40	3.50E+03	4.97E+02	3.15E+01
516537	2/3/2020 - 2/3/2020	MIXEDBLV	Mn-54	<1.21E+01	0.00E+00	1.21E+01



# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (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			
516537	2/3/2020 - 2/3/2020	MIXEDBLV	Co-58	<1.04E+01	0.00E+00	1.04E+01			
			Fe-59	<2.44E+01	0.00E+00	2.44E+01			
			Co-60	<1.02E+01	0.00E+00	1.02E+01			
			Zn-65	<2.08E+01	0.00E+00	2.08E+01			
			Zr-95	<1.78E+01	0.00E+00	1.78E+01			
			Nb-95	<1.39E+01	0.00E+00	1.39E+01			
			I-131	<1.61E+01	0.00E+00	1.61E+01			
			Cs-134	<1.16E+01	0.00E+00	1.16E+01			
			Cs-137	<9.63E+00	0.00E+00	9.63E+00			
			BaLa-140	<1.15E+01	0.00E+00	1.15E+01			
			Be-7	1.63E+03	2.16E+02	1.71E+02			
			K-40	2.65E+03	3.36E+02	1.82E+02			
			518744	3/2/2020 - 3/2/2020	MIXEDBLV	Mn-54	<2.97E+01	0.00E+00	2.97E+01
						Co-58	<2.96E+01	0.00E+00	2.96E+01
Fe-59	<4.40E+01	0.00E+00				4.40E+01			
Co-60	<3.55E+01	0.00E+00				3.56E+01			
Zn-65	<8.57E+01	0.00E+00				8.57E+01			
Zr-95	<6.51E+01	0.00E+00				6.51E+01			
Nb-95	<3.52E+01	0.00E+00				3.52E+01			
I-131	<3.54E+01	0.00E+00				3.54E+01			
Cs-134	<3.81E+01	0.00E+00				3.81E+01			
Cs-137	<2.97E+01	0.00E+00				2.97E+01			
BaLa-140	<3.45E+01	0.00E+00				3.45E+01			
Be-7	1.36E+03	3.35E+02				3.84E+02			
K-40	2.84E+03	5.72E+02				3.53E+02			
520832	4/6/2020 - 4/6/2020	MIXEDBLV				Mn-54	<2.66E+01	0.00E+00	2.66E+01
			Co-58	<2.52E+01	0.00E+00	2.52E+01			
			Fe-59	<5.51E+01	0.00E+00	5.51E+01			
			Co-60	<3.07E+01	0.00E+00	3.07E+01			
			Zn-65	<4.28E+01	0.00E+00	4.28E+01			
			Zr-95	<4.39E+01	0.00E+00	4.39E+01			
			Nb-95	<2.69E+01	0.00E+00	2.69E+01			
			I-131	<3.61E+01	0.00E+00	3.61E+01			
			Cs-134	<2.79E+01	0.00E+00	2.79E+01			
			Cs-137	<2.82E+01	0.00E+00	2.82E+01			
			BaLa-140	<3.14E+01	0.00E+00	3.14E+01			
			Be-7	2.98E+03	4.62E+02	3.57E+02			
			K-40	4.49E+03	7.15E+02	4.19E+02			
			522623	5/4/2020 - 5/4/2020	MIXEDBLV	Mn-54	<2.93E+01	0.00E+00	2.93E+01
Co-58	<2.78E+01	0.00E+00				2.78E+01			
Fe-59	<4.48E+01	0.00E+00				4.48E+01			
Co-60	<2.53E+01	0.00E+00				2.53E+01			
Zn-65	<5.33E+01	0.00E+00				5.33E+01			
Zr-95	<4.77E+01	0.00E+00				4.77E+01			
Nb-95	<2.90E+01	0.00E+00				2.90E+01			
I-131	<4.61E+01	0.00E+00				4.61E+01			
Cs-134	<3.18E+01	0.00E+00				3.18E+01			
Cs-137	<2.05E+01	0.00E+00				2.05E+01			
BaLa-140	<3.70E+01	0.00E+00				3.70E+01			
Be-7	1.90E+02	1.75E+02				2.82E+02			
K-40	4.79E+03	6.74E+02				3.82E+02			
524468	6/1/2020 - 6/1/2020	MIXEDBLV				Mn-54	<1.77E+01	0.00E+00	1.77E+01
			Co-58	<1.44E+01	0.00E+00	1.44E+01			
			Fe-59	<4.09E+01	0.00E+00	4.09E+01			
			Co-60	<1.94E+01	0.00E+00	1.94E+01			
			Zn-65	<3.26E+01	0.00E+00	3.26E+01			
			Zr-95	<2.66E+01	0.00E+00	2.66E+01			
			Nb-95	<1.85E+01	0.00E+00	1.85E+01			
			I-131	<1.71E+01	0.00E+00	1.71E+01			
			Cs-134	<2.33E+01	0.00E+00	2.33E+01			



# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (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
524468	6/1/2020 - 6/1/2020	MIXEDBLV	Cs-137	<1.47E+01	0.00E+00	1.47E+01
			BaLa-140	<2.40E+01	0.00E+00	2.40E+01
			Be-7	2.71E+03	3.48E+02	2.13E+02
			K-40	4.96E+03	6.41E+02	3.12E+02
525979	7/6/2020 - 7/6/2020	MIXEDBLV	Mn-54	<2.22E+01	0.00E+00	2.22E+01
			Co-58	<2.22E+01	0.00E+00	2.22E+01
			Fe-59	<5.01E+01	0.00E+00	5.01E+01
			Co-60	<2.35E+01	0.00E+00	2.35E+01
			Zn-65	<5.64E+01	0.00E+00	5.64E+01
			Zr-95	<4.42E+01	0.00E+00	4.42E+01
			Nb-95	<2.39E+01	0.00E+00	2.39E+01
			I-131	<3.86E+01	0.00E+00	3.86E+01
			Cs-134	<2.79E+01	0.00E+00	2.79E+01
			Cs-137	<2.21E+01	0.00E+00	2.21E+01
			BaLa-140	<2.90E+01	0.00E+00	2.90E+01
			Be-7	1.81E+03	3.07E+02	2.83E+02
			K-40	5.19E+03	6.91E+02	3.51E+02
527395	8/3/2020 - 8/3/2020	MIXEDBLV	Mn-54	<1.14E+01	0.00E+00	1.14E+01
			Co-58	<1.15E+01	0.00E+00	1.15E+01
			Fe-59	<2.48E+01	0.00E+00	2.48E+01
			Co-60	<1.04E+01	0.00E+00	1.04E+01
			Zn-65	<2.88E+01	0.00E+00	2.88E+01
			Zr-95	<2.12E+01	0.00E+00	2.12E+01
			Nb-95	<1.18E+01	0.00E+00	1.18E+01
			I-131	<1.28E+01	0.00E+00	1.28E+01
			Cs-134	<1.47E+01	0.00E+00	1.47E+01
			Cs-137	<1.11E+01	0.00E+00	1.11E+01
			BaLa-140	<9.42E+00	0.00E+00	9.42E+00
			Be-7	1.15E+03	1.44E+02	1.06E+02
			K-40	8.78E+03	8.31E+02	1.68E+02
530059	9/8/2020 - 9/8/2020	MIXEDBLV	Mn-54	<1.74E+01	0.00E+00	1.74E+01
			Co-58	<1.42E+01	0.00E+00	1.42E+01
			Fe-59	<3.96E+01	0.00E+00	3.96E+01
			Co-60	<1.84E+01	0.00E+00	1.84E+01
			Zn-65	<3.37E+01	0.00E+00	3.37E+01
			Zr-95	<3.01E+01	0.00E+00	3.01E+01
			Nb-95	<1.99E+01	0.00E+00	1.99E+01
			I-131	<2.40E+01	0.00E+00	2.40E+01
			Cs-134	<1.97E+01	0.00E+00	1.97E+01
			Cs-137	<1.60E+01	0.00E+00	1.60E+01
			BaLa-140	<2.02E+01	0.00E+00	2.02E+01
			Be-7	7.95E+02	1.95E+02	2.38E+02
			K-40	4.35E+03	5.52E+02	2.28E+02
531735	10/5/2020 - 10/5/2020	MIXEDBLV	Mn-54	<1.68E+01	0.00E+00	1.68E+01
			Co-58	<1.30E+01	0.00E+00	1.30E+01
			Fe-59	<2.43E+01	0.00E+00	2.43E+01
			Co-60	<1.50E+01	0.00E+00	1.50E+01
			Zn-65	<3.63E+01	0.00E+00	3.63E+01
			Zr-95	<2.35E+01	0.00E+00	2.35E+01
			Nb-95	<1.36E+01	0.00E+00	1.36E+01
			I-131	<1.46E+01	0.00E+00	1.46E+01
			Cs-134	<1.95E+01	0.00E+00	1.95E+01
			Cs-137	<1.54E+01	0.00E+00	1.54E+01
			BaLa-140	<1.22E+01	0.00E+00	1.22E+01
			Be-7	4.84E+03	5.19E+02	1.80E+02
			K-40	4.79E+03	5.60E+02	2.49E+02
533395	11/2/2020 - 11/2/2020	MIXEDBLV	Mn-54	<1.50E+01	0.00E+00	1.50E+01
			Co-58	<1.22E+01	0.00E+00	1.22E+01



# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 079 [ INDICATOR - NE @ 0.56 miles ]

Sample ID:	533395	Sample Dates:	11/2/2020 - 11/2/2020	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
					Fe-59	<3.21E+01	0.00E+00	3.21E+01
					Co-60	<1.39E+01	0.00E+00	1.39E+01
					Zn-65	<3.11E+01	0.00E+00	3.11E+01
					Zr-95	<2.29E+01	0.00E+00	2.29E+01
					Nb-95	<1.47E+01	0.00E+00	1.47E+01
					I-131	<1.42E+01	0.00E+00	1.42E+01
					Cs-134	<1.80E+01	0.00E+00	1.80E+01
					Cs-137	<1.55E+01	0.00E+00	1.55E+01
					BaLa-140	<1.20E+01	0.00E+00	1.20E+01
					Be-7	1.47E+03	2.14E+02	1.56E+02
					K-40	3.55E+03	4.61E+02	2.02E+02

Sample ID:	535950	Sample Dates:	12/7/2020 - 12/7/2020	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<3.41E+01	0.00E+00	3.41E+01
					Co-58	<2.60E+01	0.00E+00	2.60E+01
					Fe-59	<5.46E+01	0.00E+00	5.46E+01
					Co-60	<3.14E+01	0.00E+00	3.14E+01
					Zn-65	<5.68E+01	0.00E+00	5.68E+01
					Zr-95	<4.94E+01	0.00E+00	4.94E+01
					Nb-95	<2.32E+01	0.00E+00	2.32E+01
					I-131	<3.22E+01	0.00E+00	3.22E+01
					Cs-134	<3.34E+01	0.00E+00	3.34E+01
					Cs-137	<2.94E+01	0.00E+00	2.94E+01
					BaLa-140	<2.78E+01	0.00E+00	2.78E+01
					Be-7	2.50E+03	4.04E+02	3.55E+02
					K-40	4.89E+03	7.35E+02	3.62E+02

Sample Point 084 [ INDICATOR - NNE @ 2.58 miles ]

Sample ID:	515290	Sample Dates:	1/6/2020 - 1/6/2020	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<2.08E+01	0.00E+00	2.08E+01
					Co-58	<1.96E+01	0.00E+00	1.96E+01
					Fe-59	<4.33E+01	0.00E+00	4.33E+01
					Co-60	<2.30E+01	0.00E+00	2.30E+01
					Zn-65	<5.51E+01	0.00E+00	5.51E+01
					Zr-95	<3.22E+01	0.00E+00	3.22E+01
					Nb-95	<2.35E+01	0.00E+00	2.35E+01
					I-131	<2.95E+01	0.00E+00	2.95E+01
					Cs-134	<2.16E+01	0.00E+00	2.16E+01
					Cs-137	<1.91E+01	0.00E+00	1.91E+01
					BaLa-140	<2.06E+01	0.00E+00	2.06E+01
					Be-7	5.57E+03	6.26E+02	2.62E+02
					K-40	3.55E+03	5.23E+02	2.19E+02

Sample ID:	516538	Sample Dates:	2/3/2020 - 2/3/2020	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<1.89E+01	0.00E+00	1.89E+01
					Co-58	<1.63E+01	0.00E+00	1.63E+01
					Fe-59	<4.50E+01	0.00E+00	4.50E+01
					Co-60	<2.16E+01	0.00E+00	2.16E+01
					Zn-65	<4.59E+01	0.00E+00	4.59E+01
					Zr-95	<4.06E+01	0.00E+00	4.06E+01
					Nb-95	<1.95E+01	0.00E+00	1.95E+01
					I-131	<2.20E+01	0.00E+00	2.20E+01
					Cs-134	<2.03E+01	0.00E+00	2.03E+01
					Cs-137	<1.48E+01	0.00E+00	1.48E+01
					BaLa-140	<2.19E+01	0.00E+00	2.19E+01
					Be-7	6.43E+03	6.73E+02	2.79E+02
					K-40	4.37E+03	5.96E+02	3.02E+02

Sample ID:	518745	Sample Dates:	3/2/2020 - 3/2/2020	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<3.56E+01	0.00E+00	3.56E+01
					Co-58	<3.48E+01	0.00E+00	3.48E+01
					Fe-59	<6.13E+01	0.00E+00	6.13E+01
					Co-60	<3.57E+01	0.00E+00	3.57E+01
					Zn-65	<7.30E+01	0.00E+00	7.30E+01
					Zr-95	<6.30E+01	0.00E+00	6.30E+01
					Nb-95	<3.94E+01	0.00E+00	3.94E+01
					I-131	<3.61E+01	0.00E+00	3.61E+01

# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (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
518745	3/2/2020 - 3/2/2020	MIXEDBLV	Cs-134	<3.83E+01	0.00E+00	3.83E+01
			Cs-137	<3.99E+01	0.00E+00	3.99E+01
			BaLa-140	<4.34E+01	0.00E+00	4.34E+01
			Be-7	5.16E+03	6.93E+02	4.56E+02
			K-40	5.35E+03	9.00E+02	7.32E+02
520833	4/6/2020 - 4/6/2020	MIXEDBLV	Mn-54	<1.64E+01	0.00E+00	1.64E+01
			Co-58	<2.02E+01	0.00E+00	2.02E+01
			Fe-59	<4.54E+01	0.00E+00	4.54E+01
			Co-60	<2.35E+01	0.00E+00	2.35E+01
			Zn-65	<4.44E+01	0.00E+00	4.44E+01
			Zr-95	<3.97E+01	0.00E+00	3.97E+01
			Nb-95	<2.35E+01	0.00E+00	2.35E+01
			I-131	<3.38E+01	0.00E+00	3.38E+01
			Cs-134	<2.25E+01	0.00E+00	2.25E+01
			Cs-137	<1.56E+01	0.00E+00	1.56E+01
			BaLa-140	<4.34E+01	0.00E+00	4.34E+01
			Be-7	2.69E+03	4.00E+02	2.63E+02
			K-40	4.25E+03	6.51E+02	2.62E+02
522624	5/4/2020 - 5/4/2020	MIXEDBLV	Mn-54	<2.83E+01	0.00E+00	2.83E+01
			Co-58	<2.82E+01	0.00E+00	2.82E+01
			Fe-59	<6.16E+01	0.00E+00	6.16E+01
			Co-60	<3.17E+01	0.00E+00	3.17E+01
			Zn-65	<5.42E+01	0.00E+00	5.42E+01
			Zr-95	<4.56E+01	0.00E+00	4.56E+01
			Nb-95	<2.90E+01	0.00E+00	2.90E+01
			I-131	<4.13E+01	0.00E+00	4.13E+01
			Cs-134	<2.38E+01	0.00E+00	2.38E+01
			Cs-137	<2.40E+01	0.00E+00	2.40E+01
			BaLa-140	<4.88E+01	0.00E+00	4.88E+01
			Be-7	7.40E+02	2.41E+02	3.09E+02
			K-40	5.28E+03	7.66E+02	4.32E+02
			524469	6/1/2020 - 6/1/2020	MIXEDBLV	Mn-54
Co-58	<2.00E+01	0.00E+00				2.00E+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	<5.42E+01	0.00E+00				5.42E+01
Zr-95	<4.23E+01	0.00E+00				4.23E+01
Nb-95	<2.31E+01	0.00E+00				2.31E+01
I-131	<2.44E+01	0.00E+00				2.44E+01
Cs-134	<2.56E+01	0.00E+00				2.56E+01
Cs-137	<2.42E+01	0.00E+00				2.42E+01
BaLa-140	<2.88E+01	0.00E+00				2.88E+01
Be-7	6.26E+02	2.26E+02				3.15E+02
K-40	4.85E+03	6.50E+02				2.14E+02
525980	7/6/2020 - 7/6/2020	MIXEDBLV				Mn-54
			Co-58	<1.56E+01	0.00E+00	1.56E+01
			Fe-59	<4.41E+01	0.00E+00	4.41E+01
			Co-60	<2.08E+01	0.00E+00	2.08E+01
			Zn-65	<3.45E+01	0.00E+00	3.45E+01
			Zr-95	<3.29E+01	0.00E+00	3.29E+01
			Nb-95	<2.04E+01	0.00E+00	2.04E+01
			I-131	<3.38E+01	0.00E+00	3.38E+01
			Cs-134	<2.08E+01	0.00E+00	2.08E+01
			Cs-137	<1.78E+01	0.00E+00	1.78E+01
			BaLa-140	<2.83E+01	0.00E+00	2.83E+01
			Be-7	8.04E+02	1.79E+02	1.92E+02
			K-40	4.57E+03	5.88E+02	2.49E+02
			527396	8/3/2020 - 8/3/2020	MIXEDBLV	Mn-54



# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (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			
527396	8/3/2020 - 8/3/2020	MIXEDBLV	Co-58	<2.13E+01	0.00E+00	2.13E+01			
			Fe-59	<3.89E+01	0.00E+00	3.89E+01			
			Co-60	<2.30E+01	0.00E+00	2.30E+01			
			Zn-65	<3.74E+01	0.00E+00	3.74E+01			
			Zr-95	<3.56E+01	0.00E+00	3.56E+01			
			Nb-95	<2.01E+01	0.00E+00	2.01E+01			
			I-131	<1.91E+01	0.00E+00	1.91E+01			
			Cs-134	<2.11E+01	0.00E+00	2.11E+01			
			Cs-137	<2.05E+01	0.00E+00	2.05E+01			
			BaLa-140	<3.41E+01	0.00E+00	3.41E+01			
			Be-7	1.14E+03	2.84E+02	3.38E+02			
			K-40	3.48E+03	5.95E+02	4.12E+02			
			530060	9/8/2020 - 9/8/2020	MIXEDBLV	Mn-54	<1.88E+01	0.00E+00	1.88E+01
						Co-58	<1.63E+01	0.00E+00	1.63E+01
Fe-59	<4.06E+01	0.00E+00				4.06E+01			
Co-60	<2.12E+01	0.00E+00				2.12E+01			
Zn-65	<4.58E+01	0.00E+00				4.58E+01			
Zr-95	<3.53E+01	0.00E+00				3.53E+01			
Nb-95	<2.18E+01	0.00E+00				2.18E+01			
I-131	<3.23E+01	0.00E+00				3.23E+01			
Cs-134	<2.27E+01	0.00E+00				2.27E+01			
Cs-137	<1.84E+01	0.00E+00				1.84E+01			
BaLa-140	<2.35E+01	0.00E+00				2.35E+01			
Be-7	2.46E+03	3.36E+02				2.31E+02			
K-40	3.65E+03	5.07E+02				1.79E+02			
531736	10/5/2020 - 10/5/2020	MIXEDBLV				Mn-54	<1.78E+01	0.00E+00	1.78E+01
			Co-58	<1.46E+01	0.00E+00	1.46E+01			
			Fe-59	<2.94E+01	0.00E+00	2.94E+01			
			Co-60	<1.59E+01	0.00E+00	1.59E+01			
			Zn-65	<3.91E+01	0.00E+00	3.91E+01			
			Zr-95	<2.79E+01	0.00E+00	2.79E+01			
			Nb-95	<1.52E+01	0.00E+00	1.52E+01			
			I-131	<1.88E+01	0.00E+00	1.88E+01			
			Cs-134	<2.14E+01	0.00E+00	2.14E+01			
			Cs-137	<1.87E+01	0.00E+00	1.87E+01			
			BaLa-140	<1.99E+01	0.00E+00	1.99E+01			
			Be-7	2.95E+03	3.62E+02	2.08E+02			
			K-40	3.48E+03	4.90E+02	2.48E+02			
			533396	11/2/2020 - 11/2/2020	MIXEDBLV	Mn-54	<1.61E+01	0.00E+00	1.61E+01
Co-58	<1.49E+01	0.00E+00				1.49E+01			
Fe-59	<3.27E+01	0.00E+00				3.27E+01			
Co-60	<1.38E+01	0.00E+00				1.38E+01			
Zn-65	<2.75E+01	0.00E+00				2.75E+01			
Zr-95	<3.12E+01	0.00E+00				3.12E+01			
Nb-95	<1.71E+01	0.00E+00				1.71E+01			
I-131	<2.60E+01	0.00E+00				2.60E+01			
Cs-134	<1.71E+01	0.00E+00				1.71E+01			
Cs-137	<1.45E+01	0.00E+00				1.45E+01			
BaLa-140	<2.41E+01	0.00E+00				2.41E+01			
Be-7	2.57E+03	3.19E+02				1.97E+02			
K-40	2.68E+03	3.70E+02				2.23E+02			
535951	12/7/2020 - 12/7/2020	MIXEDBLV				Mn-54	<3.49E+01	0.00E+00	3.49E+01
			Co-58	<3.48E+01	0.00E+00	3.48E+01			
			Fe-59	<6.66E+01	0.00E+00	6.66E+01			
			Co-60	<3.16E+01	0.00E+00	3.16E+01			
			Zn-65	<7.17E+01	0.00E+00	7.17E+01			
			Zr-95	<5.20E+01	0.00E+00	5.20E+01			
			Nb-95	<3.16E+01	0.00E+00	3.16E+01			
			I-131	<3.85E+01	0.00E+00	3.85E+01			
			Cs-134	<3.48E+01	0.00E+00	3.48E+01			



# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 084 [ INDICATOR - NNE @ 2.58 miles ]

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Sample ID: 535951	Sample Dates: 12/7/2020 - 12/7/2020	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
			Cs-137	<3.59E+01	0.00E+00	3.59E+01
			BaLa-140	<2.08E+01	0.00E+00	2.08E+01
			Be-7	5.72E+03	7.29E+02	4.41E+02
			K-40	4.00E+03	6.94E+02	3.87E+02

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Sample Point 093 [ CONTROL - SE @ 9.34 miles ]

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Sample ID: 515291	Sample Dates: 1/6/2020 - 1/6/2020	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
			Mn-54	<1.98E+01	0.00E+00	1.98E+01
			Co-58	<1.60E+01	0.00E+00	1.60E+01
			Fe-59	<4.10E+01	0.00E+00	4.10E+01
			Co-60	<2.01E+01	0.00E+00	2.01E+01
			Zn-65	<3.93E+01	0.00E+00	3.93E+01
			Zr-95	<3.57E+01	0.00E+00	3.57E+01
			Nb-95	<2.21E+01	0.00E+00	2.21E+01
			I-131	<3.25E+01	0.00E+00	3.25E+01
			Cs-134	<2.64E+01	0.00E+00	2.64E+01
			Cs-137	<2.23E+01	0.00E+00	2.23E+01
			BaLa-140	<3.74E+01	0.00E+00	3.74E+01
			Be-7	2.70E+03	3.88E+02	2.84E+02
			K-40	3.99E+03	5.95E+02	3.59E+02

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Sample ID: 516539	Sample Dates: 2/3/2020 - 2/3/2020	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
			Mn-54	<2.13E+01	0.00E+00	2.13E+01
			Co-58	<2.01E+01	0.00E+00	2.01E+01
			Fe-59	<3.84E+01	0.00E+00	3.84E+01
			Co-60	<2.03E+01	0.00E+00	2.03E+01
			Zn-65	<4.52E+01	0.00E+00	4.52E+01
			Zr-95	<3.33E+01	0.00E+00	3.33E+01
			Nb-95	<1.87E+01	0.00E+00	1.87E+01
			I-131	<1.90E+01	0.00E+00	1.90E+01
			Cs-134	<2.65E+01	0.00E+00	2.65E+01
			Cs-137	<1.99E+01	0.00E+00	1.99E+01
			BaLa-140	<2.47E+01	0.00E+00	2.47E+01
			Be-7	2.42E+03	3.32E+02	2.05E+02
			K-40	4.20E+03	5.90E+02	3.18E+02

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Sample ID: 518746	Sample Dates: 3/2/2020 - 3/2/2020	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
			Mn-54	<3.42E+01	0.00E+00	3.42E+01
			Co-58	<2.73E+01	0.00E+00	2.73E+01
			Fe-59	<6.88E+01	0.00E+00	6.88E+01
			Co-60	<3.16E+01	0.00E+00	3.16E+01
			Zn-65	<6.42E+01	0.00E+00	6.42E+01
			Zr-95	<4.38E+01	0.00E+00	4.38E+01
			Nb-95	<3.10E+01	0.00E+00	3.10E+01
			I-131	<3.72E+01	0.00E+00	3.72E+01
			Cs-134	<4.00E+01	0.00E+00	4.00E+01
			Cs-137	<3.16E+01	0.00E+00	3.16E+01
			BaLa-140	<4.03E+01	0.00E+00	4.03E+01
			Be-7	2.66E+03	4.42E+02	3.62E+02
			K-40	3.76E+03	6.86E+02	4.66E+02

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Sample ID: 520834	Sample Dates: 4/6/2020 - 4/6/2020	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
			Mn-54	<2.32E+01	0.00E+00	2.32E+01
			Co-58	<2.16E+01	0.00E+00	2.16E+01
			Fe-59	<3.85E+01	0.00E+00	3.85E+01
			Co-60	<2.40E+01	0.00E+00	2.40E+01
			Zn-65	<5.14E+01	0.00E+00	5.14E+01
			Zr-95	<3.52E+01	0.00E+00	3.52E+01
			Nb-95	<2.32E+01	0.00E+00	2.32E+01
			I-131	<3.69E+01	0.00E+00	3.69E+01
			Cs-134	<2.40E+01	0.00E+00	2.40E+01
			Cs-137	<1.98E+01	0.00E+00	1.98E+01
			BaLa-140	<2.99E+01	0.00E+00	2.99E+01
			Be-7	2.45E+03	3.67E+02	3.09E+02
			K-40	3.79E+03	5.68E+02	3.78E+02

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# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 093 [ CONTROL - SE @ 9.34 miles ]

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
522625	5/4/2020 - 5/4/2020	MIXEDBLV	Mn-54	<2.19E+01	0.00E+00	2.19E+01
			Co-58	<2.29E+01	0.00E+00	2.29E+01
			Fe-59	<5.55E+01	0.00E+00	5.55E+01
			Co-60	<2.78E+01	0.00E+00	2.78E+01
			Zn-65	<4.75E+01	0.00E+00	4.75E+01
			Zr-95	<4.20E+01	0.00E+00	4.20E+01
			Nb-95	<3.07E+01	0.00E+00	3.07E+01
			I-131	<3.39E+01	0.00E+00	3.39E+01
			Cs-134	<2.23E+01	0.00E+00	2.23E+01
			Cs-137	<2.60E+01	0.00E+00	2.60E+01
			BaLa-140	<3.56E+01	0.00E+00	3.56E+01
			Be-7	9.08E+02	2.43E+02	2.94E+02
			K-40	4.69E+03	6.74E+02	3.57E+02
			524470	6/1/2020 - 6/1/2020	MIXEDBLV	Mn-54
Co-58	<2.19E+01	0.00E+00				2.19E+01
Fe-59	<4.18E+01	0.00E+00				4.18E+01
Co-60	<2.71E+01	0.00E+00				2.71E+01
Zn-65	<5.93E+01	0.00E+00				5.93E+01
Zr-95	<4.43E+01	0.00E+00				4.43E+01
Nb-95	<2.82E+01	0.00E+00				2.82E+01
I-131	<2.87E+01	0.00E+00				2.87E+01
Cs-134	<2.48E+01	0.00E+00				2.48E+01
Cs-137	<2.63E+01	0.00E+00				2.63E+01
BaLa-140	<2.22E+01	0.00E+00				2.22E+01
Be-7	9.34E+02	2.41E+02				2.94E+02
K-40	5.13E+03	6.90E+02				2.28E+02
525981	7/6/2020 - 7/6/2020	MIXEDBLV				Mn-54
			Co-58	<1.82E+01	0.00E+00	1.82E+01
			Fe-59	<3.43E+01	0.00E+00	3.43E+01
			Co-60	<1.96E+01	0.00E+00	1.96E+01
			Zn-65	<4.82E+01	0.00E+00	4.82E+01
			Zr-95	<4.21E+01	0.00E+00	4.21E+01
			Nb-95	<2.20E+01	0.00E+00	2.20E+01
			I-131	<3.66E+01	0.00E+00	3.66E+01
			Cs-134	<2.16E+01	0.00E+00	2.16E+01
			Cs-137	<1.99E+01	0.00E+00	1.99E+01
			BaLa-140	<3.28E+01	0.00E+00	3.28E+01
			Be-7	1.03E+03	2.18E+02	2.27E+02
			K-40	4.81E+03	6.28E+02	3.16E+02
			527397	8/3/2020 - 8/3/2020	MIXEDBLV	Mn-54
Co-58	<2.31E+01	0.00E+00				2.31E+01
Fe-59	<4.18E+01	0.00E+00				4.18E+01
Co-60	<1.54E+01	0.00E+00				1.54E+01
Zn-65	<4.84E+01	0.00E+00				4.84E+01
Zr-95	<3.88E+01	0.00E+00				3.88E+01
Nb-95	<2.46E+01	0.00E+00				2.46E+01
I-131	<2.75E+01	0.00E+00				2.75E+01
Cs-134	<2.33E+01	0.00E+00				2.33E+01
Cs-137	<2.48E+01	0.00E+00				2.48E+01
BaLa-140	<6.29E+00	0.00E+00				6.29E+00
Be-7	9.34E+02	2.33E+02				2.56E+02
K-40	5.22E+03	7.34E+02				2.75E+02
530061	9/8/2020 - 9/8/2020	MIXEDBLV				Mn-54
			Co-58	<1.42E+01	0.00E+00	1.42E+01
			Fe-59	<3.33E+01	0.00E+00	3.33E+01
			Co-60	<1.59E+01	0.00E+00	1.59E+01
			Zn-65	<3.03E+01	0.00E+00	3.03E+01
			Zr-95	<3.24E+01	0.00E+00	3.24E+01
			Nb-95	<1.79E+01	0.00E+00	1.79E+01
			I-131	<2.48E+01	0.00E+00	2.48E+01





# OCONEE Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 093 [ CONTROL - SE @ 9.34 miles ]

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
530061	9/8/2020 - 9/8/2020	MIXEDBLV	Cs-134	<1.77E+01	0.00E+00	1.77E+01
			Cs-137	<1.65E+01	0.00E+00	1.65E+01
			BaLa-140	<2.01E+01	0.00E+00	2.01E+01
			Be-7	9.20E+02	1.81E+02	1.85E+02
			K-40	4.47E+03	5.50E+02	2.36E+02
531737	10/5/2020 - 10/5/2020	MIXEDBLV	Mn-54	<2.38E+01	0.00E+00	2.38E+01
			Co-58	<1.56E+01	0.00E+00	1.56E+01
			Fe-59	<3.81E+01	0.00E+00	3.81E+01
			Co-60	<1.92E+01	0.00E+00	1.92E+01
			Zn-65	<4.37E+01	0.00E+00	4.37E+01
			Zr-95	<3.93E+01	0.00E+00	3.93E+01
			Nb-95	<2.27E+01	0.00E+00	2.27E+01
			I-131	<2.04E+01	0.00E+00	2.04E+01
			Cs-134	<2.29E+01	0.00E+00	2.29E+01
			Cs-137	<2.10E+01	0.00E+00	2.10E+01
			BaLa-140	<1.74E+01	0.00E+00	1.74E+01
			Be-7	1.27E+03	2.47E+02	2.56E+02
			K-40	3.64E+03	5.40E+02	3.15E+02
533397	11/2/2020 - 11/2/2020	MIXEDBLV	Mn-54	<1.53E+01	0.00E+00	1.53E+01
			Co-58	<1.56E+01	0.00E+00	1.56E+01
			Fe-59	<3.10E+01	0.00E+00	3.10E+01
			Co-60	<1.69E+01	0.00E+00	1.69E+01
			Zn-65	<3.87E+01	0.00E+00	3.87E+01
			Zr-95	<2.57E+01	0.00E+00	2.57E+01
			Nb-95	<1.97E+01	0.00E+00	1.97E+01
			I-131	<1.58E+01	0.00E+00	1.58E+01
			Cs-134	<1.80E+01	0.00E+00	1.80E+01
			Cs-137	<1.99E+01	0.00E+00	1.99E+01
			BaLa-140	<2.06E+01	0.00E+00	2.06E+01
			Be-7	7.56E+02	1.63E+02	1.67E+02
			K-40	3.80E+03	5.08E+02	1.96E+02
535952	12/7/2020 - 12/7/2020	MIXEDBLV	Mn-54	<1.90E+01	0.00E+00	1.90E+01
			Co-58	<1.61E+01	0.00E+00	1.61E+01
			Fe-59	<4.31E+01	0.00E+00	4.31E+01
			Co-60	<2.51E+01	0.00E+00	2.51E+01
			Zn-65	<4.92E+01	0.00E+00	4.92E+01
			Zr-95	<3.37E+01	0.00E+00	3.37E+01
			Nb-95	<2.24E+01	0.00E+00	2.24E+01
			I-131	<1.74E+01	0.00E+00	1.74E+01
			Cs-134	<2.40E+01	0.00E+00	2.40E+01
			Cs-137	<2.03E+01	0.00E+00	2.03E+01
			BaLa-140	<2.26E+01	0.00E+00	2.26E+01
			Be-7	1.94E+03	3.10E+02	2.68E+02
			K-40	3.95E+03	5.75E+02	3.08E+02



**APPENDIX F**

**ERRATA TO  
PREVIOUS REPORTS**

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# APPENDIX F

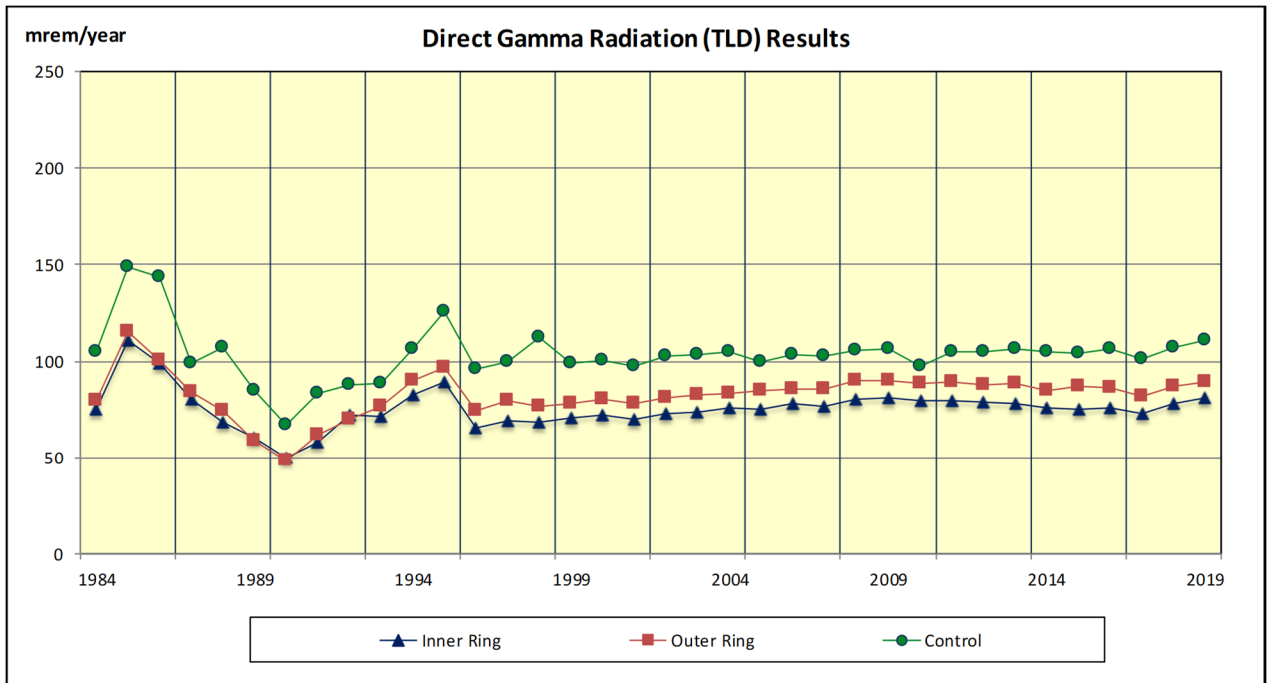
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## ERRATA TO THE 2019 AREOR

### Oconee AREOR: 2019

Figure 3.8 in the 2019 AREOR was missing the TLD Inner Ring, Outer Ring, and Control data points on the graph. The following Figure 3.8 contains all of the correct data points (NCR# 02373343).

**Figure 3.8**



*There is no reporting level for Direct Radiation (TLD)*

Enclosure 6  
RA-21-0050

**ENCLOSURE 6: [RNP Annual Radiological Environmental Operating Report](#)**



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# **ANNUAL RADIOLOGICAL ENVIRONMENTAL OPERATING REPORT**

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**DUKE ENERGY PROGRESS, LLC**

**H. B. ROBINSON STEAM ELECTRIC PLANT  
Unit No. 2**

**2020**



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**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
BLV	Broadleaf Vegetation
C	Control
CM	Community
CR	Condition Report (analogous to Nuclear Condition Report (NCR))
EZA	Eckert & Ziegler Analytics
FI	Fish
FP	Food Product
GEL	General Engineering Laboratories, LLC
GPS	Global Positioning System
GW	Ground Water
I	Indicator
IR	Inner Ring - TLDs
ISFSI	Independent Spent Fuel Storage Installation
HBRSEP or RNP	H. B. Robinson Steam Electric Plant, Unit No. 2
LLD	Lower Limit of Detection
M	Monthly
MAPEP	Department of Energy Mixed Analyte Performance Evaluation Program
MDA	Minimum Detectable Activity
mrem	millirem
mR	milliroentgen
mR/Std Qtr	milliroentgen per standard quarter
MWe	Megawatt (electrical)
NCR	Nuclear Condition Report (analogous to Condition Report (CR))
NIST	National Institute of Standards and Technology
NRC	Nuclear Regulatory Commission
ODCM	Off-Site Dose Calculation Manual
OR	Outer Ring - TLDs
pCi/kg	picocurie per kilogram
pCi/l	picocurie per liter
pCi/m <sup>3</sup>	picocurie per cubic meter
PI	Power Interrupt
Q	Quarterly
REMP	Radiological Environmental Monitoring Program
SA	Semiannually
SB	Site Boundary
SS	Sediment – Shoreline
SI	Special Interest - TLDs
SW	Surface Water
TECH SPECS	Technical Specifications
TLD	Thermoluminescent Dosimeter
UFSAR	Updated Final Safety Analysis Report
W	Weekly



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# 1.0 EXECUTIVE SUMMARY

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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 2020.

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-sixty-six samples were analyzed comprising 1,366 test results in order to compile data for the 2020 HBRSEP Annual Radiological Environmental Operating Report (AREOR). No new sampling locations were added to the HBRSEP REMP as a result of the 2020 land use census.

Concentrations observed in the environment in 2020 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 2020 indicates that radioactivity concentrations were not higher than expected and all positively identified measurements attributable to HBRSEP operations in 2020 were within limits as specified in the HBRSEP ODCM, thus presenting no significant impact on the environment or public safety.

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## 2.0 INTRODUCTION

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### 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 since October 2012. Commercial production was initiated by Unit No. 2 on March 7, 1971.

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.

Figures 2.1-1 and 2.1-2 are one and 10 mile maps, respectively, depicting the Thermoluminescent Dosimeter (TLD) monitoring locations and the sampling locations within a one and ten mile radius of RNP. 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

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),  
 $\chi_i$  = 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)

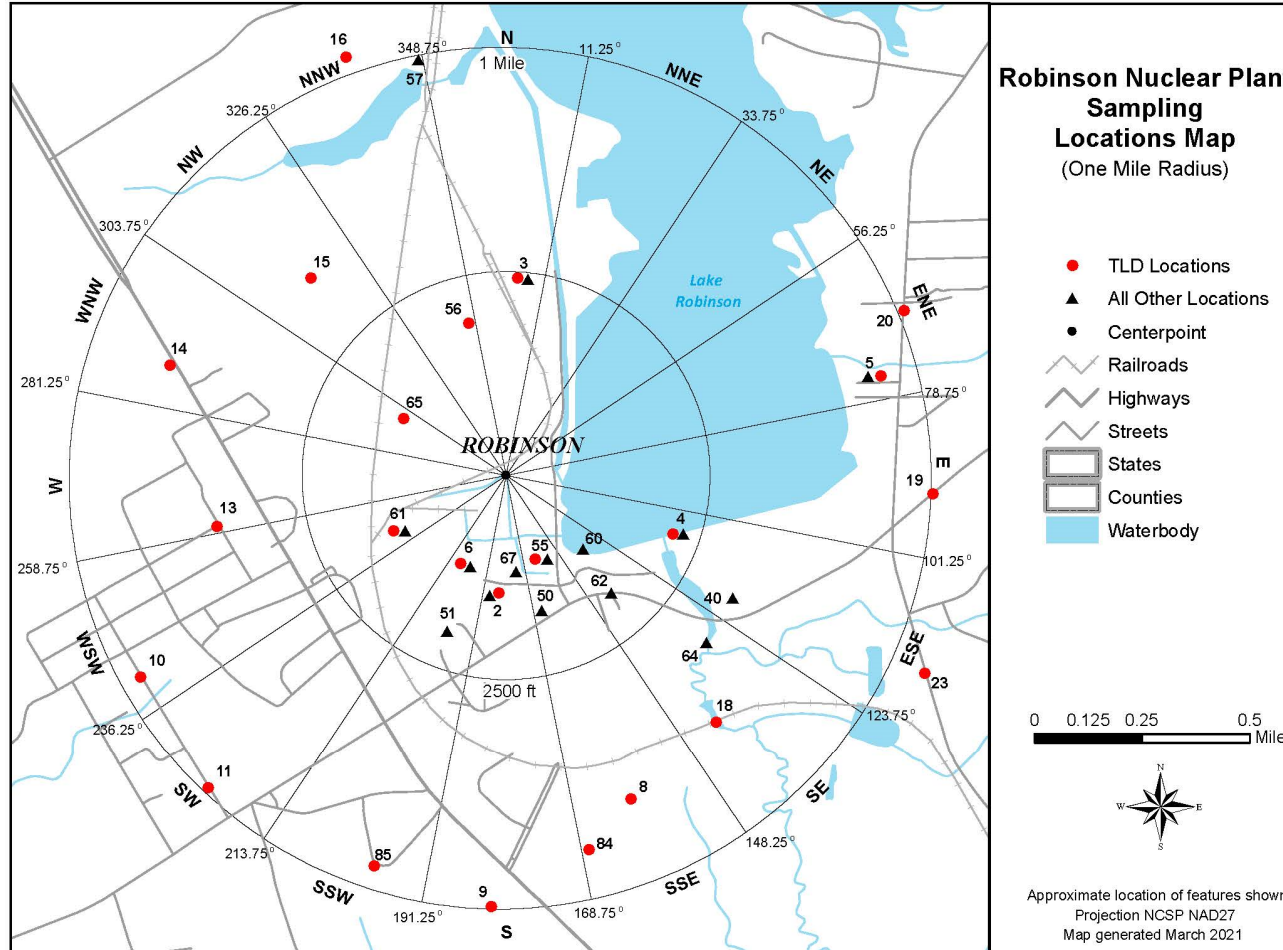
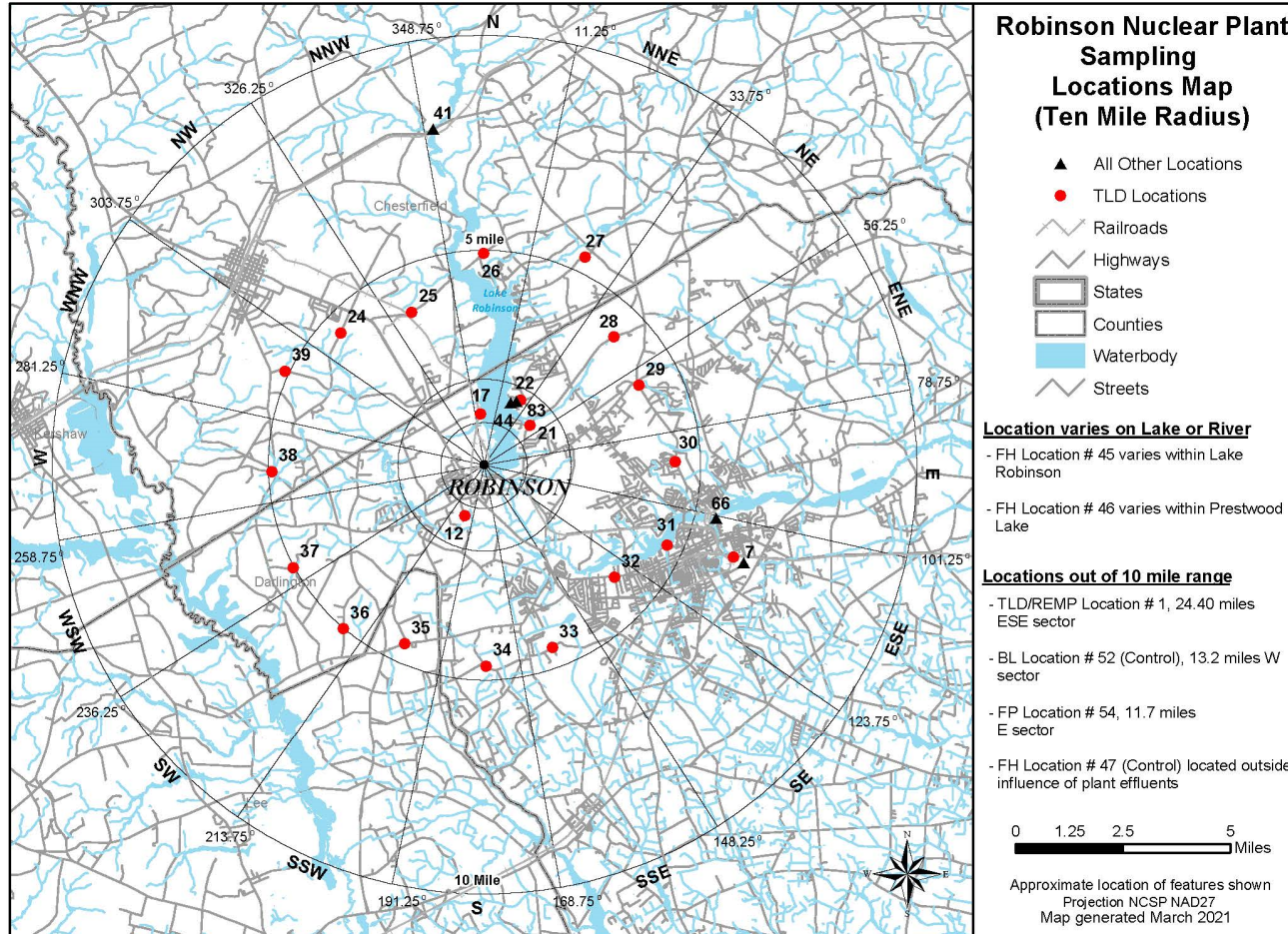


Figure 2.1-2

**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**

Table 2.1-A Codes			
BW	BiWeekly	Q	Quarterly
C	Control	SA	Semiannually
CM	Community	SB	Site Boundary
I	Indicator	SM	Semimonthly
M	Monthly	W	Weekly

Site #	Measure Type*	Location Description**	Air Rad. & Particulate*	Surface Water <sup>(e)*</sup>	Shoreline Sediment*	Food Product <sup>(a)*</sup>	Fish*	Broadleaf Vegetation <sup>(b)*</sup>	Ground Water*
1	C <sup>(d)</sup>	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, SB						
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, CM						
6	I	0.2 miles SSW Information Center	W/Q, SB						
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 <sup>(d)</sup>	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 <sup>(d)</sup>	Control station, any lake not influenced by plant discharge					SA		
50	I	SSE Close to Site Boundary						M, SB	
51	I	SSW Close to Site Boundary						M, SB	
52	C <sup>(d)</sup>	10 miles W near Bethune						M	
54	I	10.1 miles E Auburndale Plantation (if irrigating from Black Creek)				A			
55	I	0.2 miles SSE South of West Settling Pond	W/Q, SB						
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, SB	
64	I	0.6 miles SE Artesian Well							Q
67	I	S Close to Site Boundary						M, SB	
83 <sup>(e)</sup>	I	1.60 miles NNE						M	

(a) During Harvest/Growing Season

(b) When Available

(c) The "upstream sample" shall be taken at a distance beyond significant influence of the discharge. The "downstream" sample shall be taken in an area beyond but near mixing zone.

(d) The purpose of this sample is to obtain background information.

(e) Location will be added to a future ODCM revision.

\* 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)<sup>(a)</sup>**

Table 2.1-B Codes	
C	Control <sup>(b)</sup>
IR	Inner Ring
OR	Outer Ring

Site #	Measure Type	Location*	Distance (miles) <sup>*</sup>	Sector	Site #	Measure Type	Location*	Distance (miles) <sup>*</sup>	Sector
1	C <sup>(b)</sup>	Florence, SC	24.4	ESE	24	OR	Sowell Road (#S-13-711)	4.6	NW
2	IR	Information Center <sup>(c)(d)</sup>	0.2	S	25	OR	Lake Robinson Road (#S-13-346)	4.0	NNW
3	IR	Microwave Tower	0.5	N	26	OR	Lake Robinson Road (#S-13-346)	5.0	N
4	IR	Spillway	0.4	ESE	27	OR	Prospect Church Road (#S-13-763)	5.4	NNE
5	IR	East shore of lake near Johnson's Landing	0.9	ENE	28	OR	New Market Road (#S-13-39)	4.3	NE
6	IR	Information Center <sup>(c)(d)</sup>	0.2	SSW	29	OR	Ruby Road (#S-16-20)	4.0	ENE
7	OR	CP&L Facility on RR Avenue, Hartsville	6.4	ESE	30	OR	Ruby Road (#S-16-20)	4.4	E
8	IR	Transmission right-of-way	0.8	SSE	31	OR	Lakeshore Drive	4.6	ESE
9	IR	Transmission right-of-way	1.0	S	32	OR	Transmission right-of-way	4.0	SE
10	IR	Clyde Church of God	1.0	WSW	33	OR	Bay Road (#S-16-493)	4.5	SSE
11	IR	Old Camden Road	1.0	SW	34	OR	Kellybell Road (#S-16-772)	4.7	S
12	IR	Off of Old Camden Road	1.2	SSW	35	OR	Kelly Bridge Road (#S-31-51)	4.5	SSW
13	IR	Corner of Saluda and Sandpit Roads	0.7	W	36	OR	Kingston Drive	5.0	SW
14	IR	First Baptist Church of Pine Ridge	0.8	WNW	37	OR	Pine Cone Road	5.0	WSW
15	IR	Transmission right-of-way	0.7	NW	38	OR	Union Church Road	4.9	W
16	IR	South side of Darlington Co. I.C. Turbine Plant	1.0	NNW	39	OR	King's Pond Road	5.1	WNW
17	IR	Darlington Co. Plant emergency fire pump	1.2	N	55	IR	South of the West Settling Pond	0.2	SSE
18	IR	Old Black Creek RR trestle	0.7	SE	56	IR	North of the center of the 7P-ISFSI <sup>(c)(d)</sup>	0.4	NNW
19	IR	Old Camden Road (#S-16-23)	1.0	E	61	IR	West Parking lot near RR tracks <sup>(d)</sup>	0.3	WSW
20	IR	New Market Road (#S-16-39)	1.0	ENE	65	IR	Northwest of the 24P-ISFSI <sup>(d)</sup>	0.3	WNW
21	IR	New Market Road (#S-16-39)	1.4	NE	84 <sup>(e)</sup>	IR	Greater Heights Baptist Church	0.9	SSE
22	IR	Shady Rest entrance off of Cloverdale Drive	1.7	NNE	85 <sup>(e)</sup>	IR	Off Hayden Lane	0.9	SSW
23	IR	New Market Road (#S-16-39)	1.0	ESE					

(a) One or more instruments, such as a pressurized ion chamber, for measuring and recording dose rate continuously may be used in place of, or in addition to, integrating, dosimeters. For the purpose of this table, a thermoluminescent dosimeter (TLD) is considered to be one phosphor; two or more phosphors in a packet are considered as two or more dosimeters. Film badges shall not be used as dosimeters for measuring direct radiation.

(b) The purpose of this sample is to obtain background information.

(c) Required for monitoring of the 7P-ISFSI.

(d) Required for monitoring of the 24P-ISFSI.

(e) Location will be added to a future ODCM revision.

\* 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 <sup>3</sup> )	Fish (pCi/kg-wet)	Milk (pCi/liter)	Food Products (pCi/kg-wet)
H-3	20,000 <sup>(a)</sup>				
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 <sup>(b)</sup>	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 <sup>(b)</sup>	Tritium	Low Level I-131	Gross Beta	TLD
Air Radioiodine	Weekly	X				
Air Particulate	Weekly				X <sup>(a)</sup>	
	Quarterly	X				
Direct Radiation	Quarterly					X
Surface Water	Monthly Composite <sup>(c)</sup>	X	X			
Ground Water	Quarterly <sup>(d)</sup>	X	X			
Shoreline Sediment	Semiannually	X				
Fish	Semiannually	X				
Broadleaf Vegetation	Monthly <sup>(f)</sup>	X				
Food Products	Annually <sup>(e)</sup>	X				

- (a) Airborne particulate sample filters shall be analyzed for gross beta radioactivity 24 hours or more after sampling to allow for radon and thoron daughter decay. If gross beta activity in air particulate samples is greater than ten times the yearly mean of control samples, gamma isotopic analysis shall be performed on the individual samples.  
 (b) Gamma isotopic analysis means the identification and quantification of gamma-emitting radionuclides that may be attributable to the effluents from the facility.  
 (c) A composite sample is one which the quantity (aliquot) of liquid sampled is proportional to the quantity of flowing liquid and in which the method of sampling employed results in a specimen that is representative of the liquid flow. In this program composite sample aliquots shall be collected at time intervals that very short (e.g., hourly) relative to the compositing period (e.g., monthly) in order to assure obtaining a representative sample.  
 (d) Ground water samples shall be taken when this source is tapped for drinking or irrigation purposes in areas where the hydraulic gradient or recharge properties are suitable for contamination.  
 (e) If harvest occurs more than once a year, sampling shall be performed during each discrete harvest. If harvest occurs continuously, sampling shall be monthly. Attention shall be paid to including samples of tuberous and root food products.  
 (f) When Available

**TABLE 2.2-C*****A PRIORI LOWER LIMITS OF DETECTION (LLD)<sup>(a)</sup>***

Analysis	Water (pCi/liter)	Airborne (pCi/m <sup>3</sup> )	Fish (pCi/kg-wet)	Milk (pCi/liter)	Food Products (pCi/kg-wet)	Sediment (pCi/kg-dry)
Gross Beta		0.01				
H-3	2000 <sup>(c)</sup>					
Mn-54	15		130			
Fe-59	30		260			
Co-58, 60	15		130			
Zn-65	30		260			
Zr-Nb-95 <sup>(b)</sup>	15					
I-131	1 <sup>(d)</sup>	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 <sup>(b)</sup>	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.

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## 3.0 INTERPRETATION OF RESULTS

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Review of the 2020 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 2020 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 2020 information required by Technical Specifications Administrative Control 5.6.2 are located in Appendix B. REMP results for 2020 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 2020.

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 2020 due to HBRSEP operation was 4,650 pCi/liter which is 15.50% of the reporting level for H-3 in surface water sample collected at location 40.

Review of the 2020 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 2020 indicates that radioactivity concentrations were not higher than expected and all positively identified measurements attributable to HBRSEP operations in 2020 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 2020. Similarly, there was no significant increase in ambient background radiation levels in the surrounding areas. The 2020 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**

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. In 2020, 519 continuously composited radioiodine and particulate samples were collected and analyzed, 467 from nine 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. During the collection period of 3NOV2020-10NOV2020, the filter sample had a gouge in it upon receipt (NCR# 02357459). There was no discernible effect on the analysis results due to the gouge in the filter.

There was no detectable I-131 in air samples in 2020. 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.

There were no detectable gamma emitting radionuclides detected in air particulate samples in 2020 due to HBRSEP operations. No gamma emitting particulate due to HBRSEP operations have been detected in indicator location samples from 1999-2020.

Gross beta analyses indicated  $1.92\text{E-}2$  pCi/m<sup>3</sup> at the location with the highest annual mean and  $1.77\text{E-}2$  pCi/m<sup>3</sup> 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 2020. The two sample locations' results are similar in concentration and have negligible variance. The gross beta activities decreased following the retirement of the coal steam unit in October 2012.

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

Figure 3.1

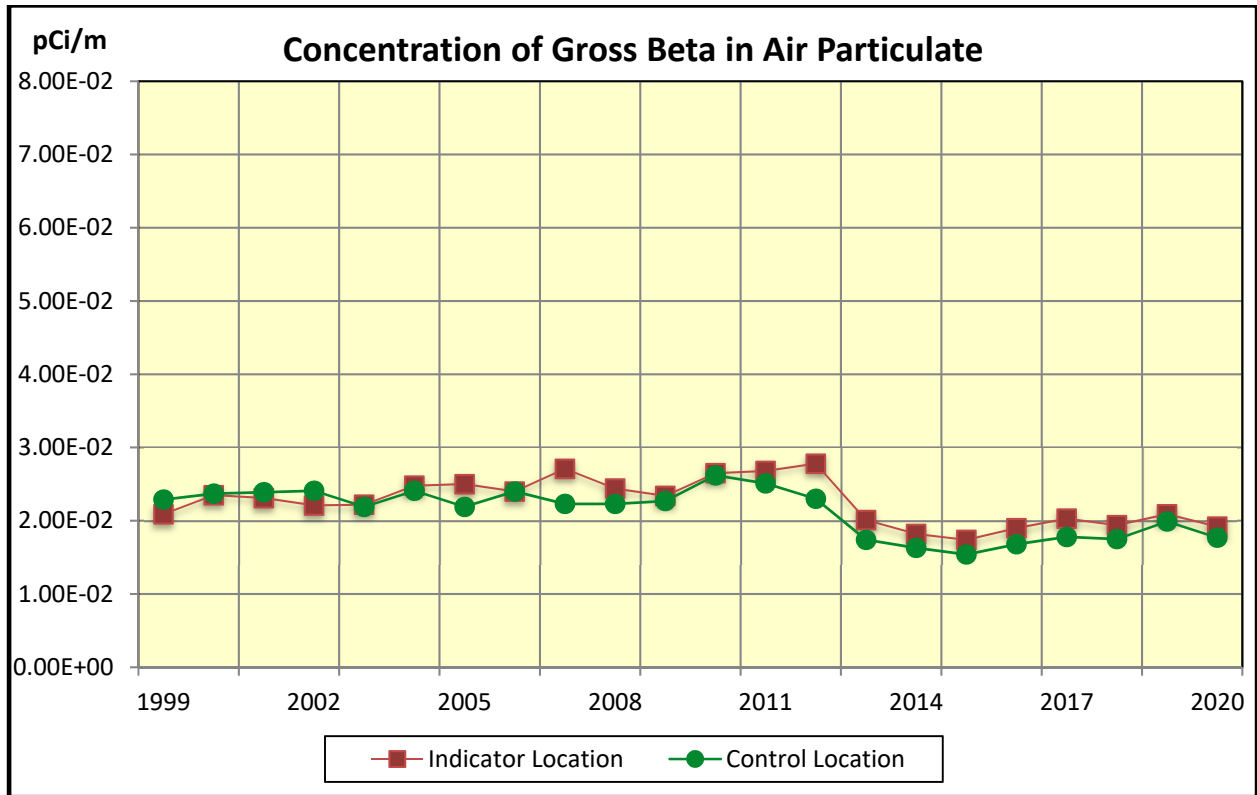


Table 3.1-A Mean Concentration of Gross Beta in Air Particulate

Year	Indicator Location (pCi/m <sup>3</sup> )	Control Location (pCi/m <sup>3</sup> )
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
2020	1.92E-2	1.77E-2

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

Year	Indicator Location (pCi/m <sup>3</sup> )	Control Location (pCi/m <sup>3</sup> )
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 <sup>(1)</sup>	8.23E-2	8.10E-2
2012	0.00E+0	0.00E+0
2013	0.00E+0	0.00E+0
2014 <sup>(2)</sup>	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
2020	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 that were composited using water samplers that collected an aliquot every two hours. One indicator and one control location were sampled. The indicator is downstream of the liquid effluent release point.

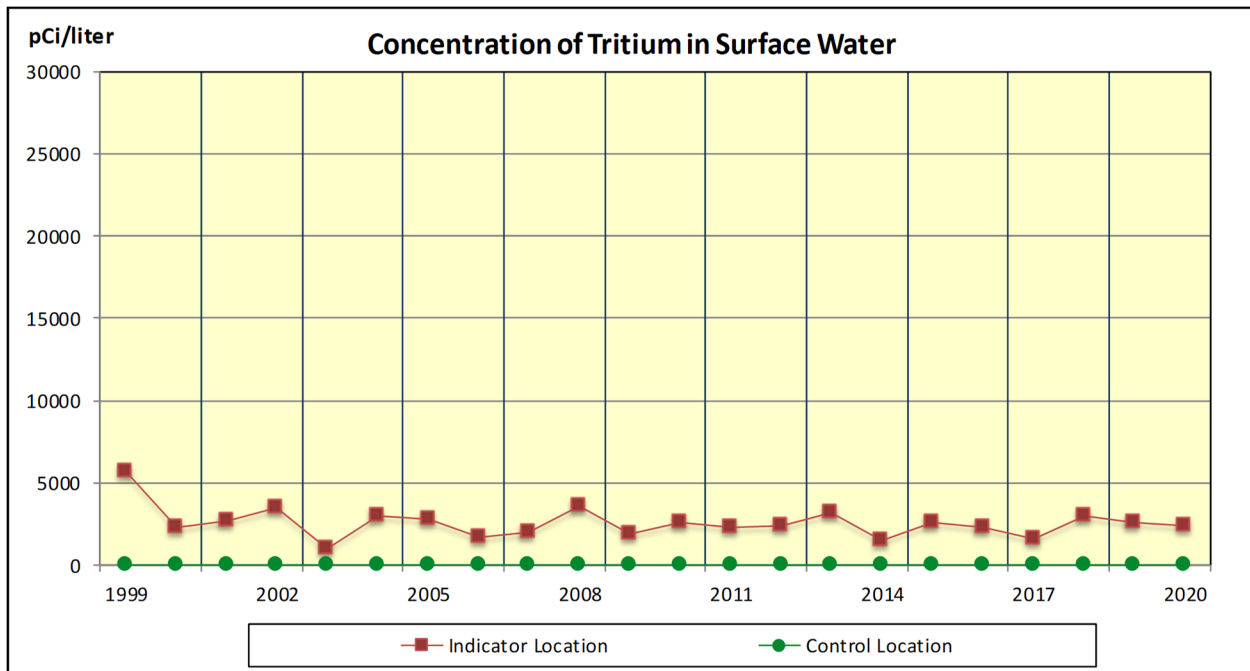
Tritium was detected in the 10 of the 12 indicator samples. The 2020 surface water highest annual mean tritium concentration was 2,430 pCi/liter. The individual samples ranged from 293 to 4,650 pCi/liter. For comparison purposes, the 2019 mean concentration was 2,560 pCi/liter. Tritium was not detected 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 2020. No gamma emitting radionuclides attributable to plant operations have been detected in surface water samples since 1999.

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

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**

<b>Year</b>	<b>Indicator Location (pCi/l)</b>	<b>Control Location (pCi/l)</b>
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
2020	2.43E+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 grab samples collected at one indicator location during 2020. There is no control ground water location.

Tritium analysis did not detect Tritium in any of the indicator samples in 2020.

Gamma spectroscopy analyses did not detect any gamma emitting radionuclides attributable to plant operations during 2020.

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. The 2020 Land use Census did not identify any milk animals within the 5 mile radius of the plant. Broadleaf sampling is conducted and is used to calculate dose to an individual via the vegetation-milk-man pathway.

### **3.5 BROADLEAF VEGETATION**

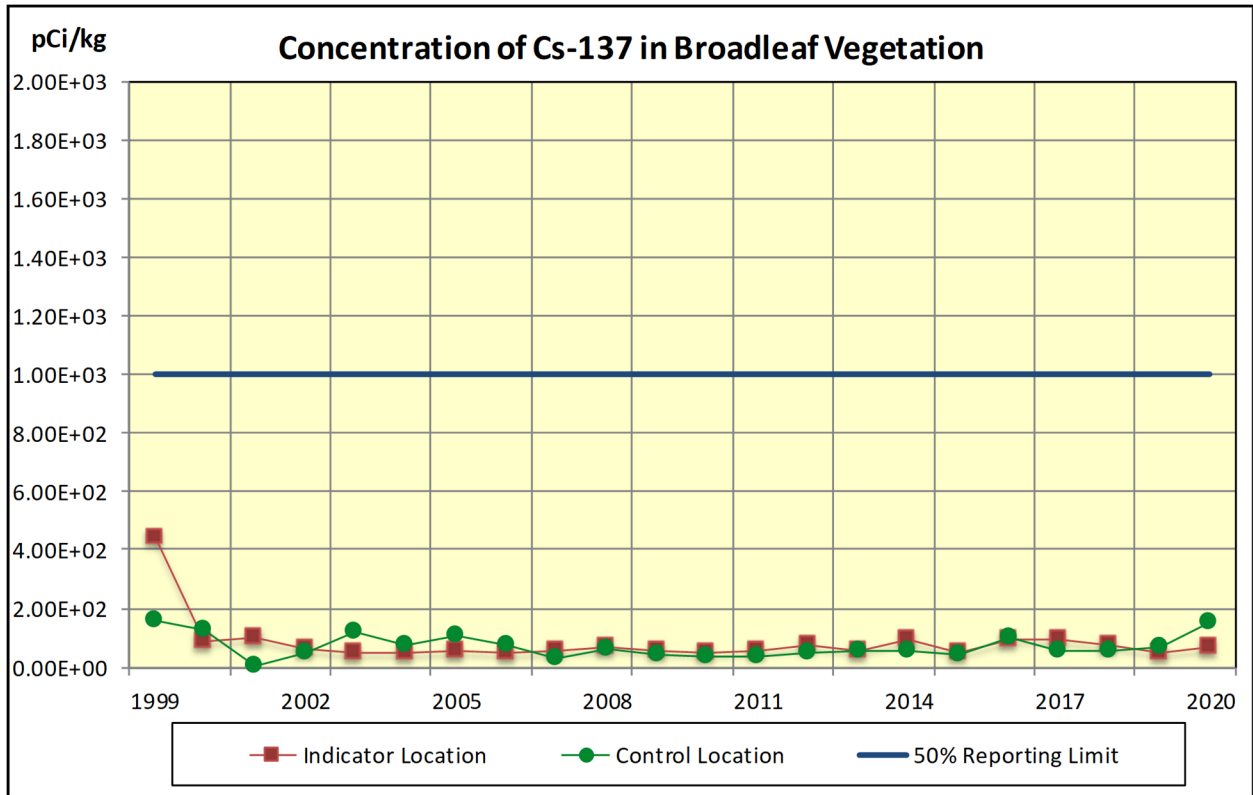
Monthly samples were collected and a gamma spectroscopy was performed on 37 broadleaf vegetation samples during 2020. Five indicator locations and one control location were sampled.

During 2020, 14 of the 31 samples taken from the indicator locations identified Cs-137 activity with the highest annual mean concentration of 53.3 pCi/kg. Cs-137 was detected in 6 of the 6 samples taken from the control location with an annual mean concentration of 150 pCi/kg. There was one sample at location 50 in 2020 that contained Co-58 and Co-60. It was determined that this sample was cross contaminated during collection. A second sample was collected and did not contain any gamma emitting radionuclides due to plant operations (NCR# 02344830).

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 2020 and Table 3.5 lists these values. 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)**

<b>Year</b>	<b>Cs-137 Indicator Location</b>	<b>Cs-137 Control Location</b>
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 <sup>(1)</sup>	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
2020	6.66E+1	1.50E+2

(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 5 food products samples collected during the harvest season of 2020. Two indicator locations were sampled. There were no gamma emitting radionuclides due to RNP plant operations identified in food product samples in 2020.

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

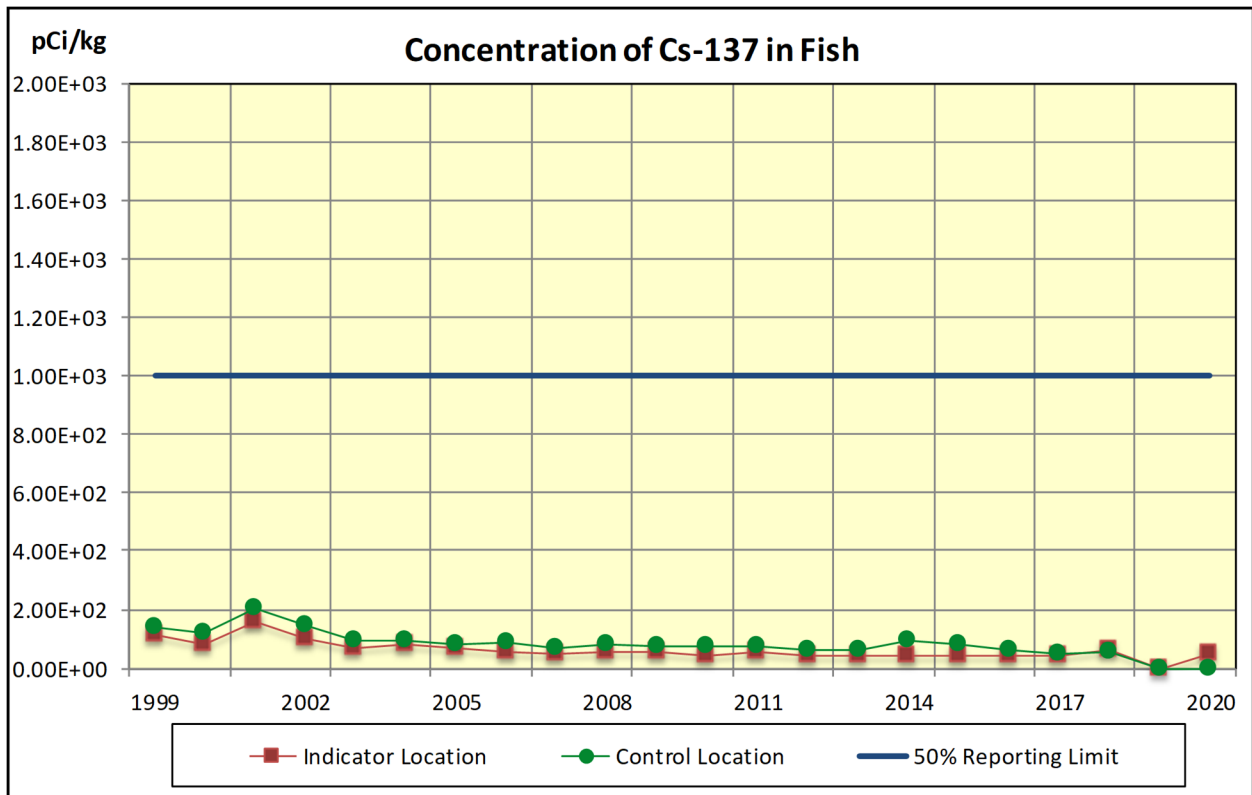
### 3.7 FISH

Gamma spectroscopy was performed on the edible portions of 12 fish samples during 2020. Two indicator locations and one control location were sampled. During 2020, Cs-137 was identified in the 5/18/2020 fish sample. There were no other gamma emitting radionuclides due to RNP plant operations identified in fish samples in 2020.

Figure 3.7 is a graph displaying the high annual means for Cs-137 from 1999 to 2020. Table 3.7 displays the highest annual mean indicator and control location concentrations for Cs-137 in fish from 1999 to 2020.

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

Figure 3.7





**Table 3.7 Mean Concentrations of Radionuclides in Fish (pCi/kg)**

<b>Year</b>	<b>Cs-137 Indicator Location</b>	<b>Cs-137 Control Location</b>
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 <sup>(1)</sup>	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
2020	4.58E+1	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 following the drying and removal of rocks and clams from the one indicator location during 2020. There were no gamma emitting radionuclides due to RNP plant operations identified in the sediment samples in 2020. There is no control shoreline sediment location.

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

## 3.9 DIRECT GAMMA RADIATION

### 3.9.1 ENVIRONMENTAL TLD

Robinson is licensed with an exclusion area boundary and low population distance defined by UFSAR Section 1.2.1 as 1400 ft and 4.5 miles respectively. The exclusion distance is the distance from the reactor to the closest point on the boundary of the exclusion area defined in 10CFR100. The low population distance is the distance from the reactor to the boundary of the low population zone defined in 10CFR100. No permanent public access is permitted within the exclusion area.

Thermoluminescent dosimeters (TLD) were collected quarterly at forty-five locations, and Environmental TLD (Alpha & Bravo) dual placement was implemented for all RNP ODCM TLD locations effective first quarter 2020. There are 27 locations, one or more in each meteorological sector, designated as "inner ring" are placed at distances within one mile from the site and in the general area of the site boundary. 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. There are 17 TLD locations, one or more in each meteorological sector, designated as "outer ring" are placed 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.

A gamma exposure rate was determined for each TLD. In 2020, 176 TLDs were analyzed, 172 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. Figure 3.9 and Table 3.9 show TLD inner ring, outer ring, and control location annual averages in mR/Standard Quarter. Data is provided from 1999. As shown in the graph, historical inner and outer ring averages compare similarly, while control data is somewhat higher since the resurfacing of the parking lot at this location in 2018. Other differences among these locations are attributed to variations in soils, local geology, and are not the result of plant operations.

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 + 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-

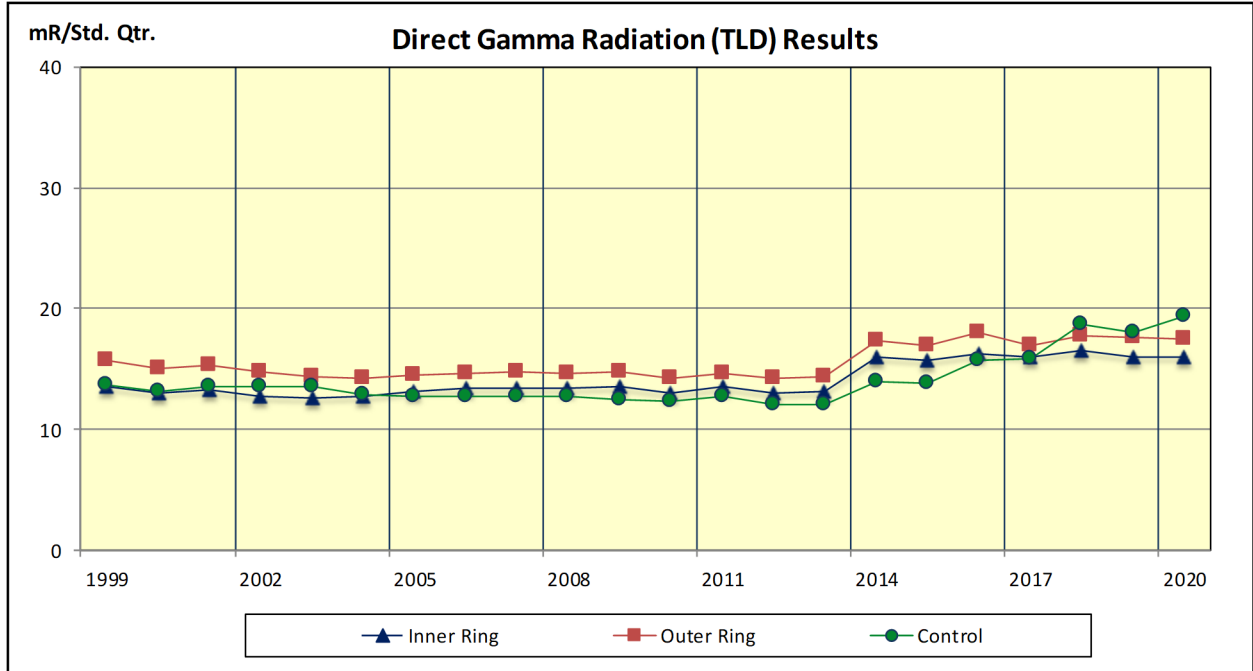
ALL-0030 – Updated Radiological Environmental Monitoring Program TLD Analytical Method, describes the process implemented in late 2018 for the fleet TLD programs. TLD values identified as < Low Range or > High Range are evaluated in consideration of factors including possible TLD damage, sampling deviations, glow curve irregularities, and any known environmental location changes which may affect results. TLD results are found in Appendix E.

The environmental data on external radiation exposure for 2020 was essentially unchanged from 1999-2020, with an average exposure for all of 2020 indicator locations of 16.6 mR per standard quarter. The TLD location with the highest annual mean of 23.4 mR per standard quarter was location 37, which is located 5.00 miles WSW of the plant. Control TLD location 1 had an annual mean of 19.30 mR per std. quarter.

During 2020, TLDs from locations 66, 67, 84, and 85 indicated some results exceeding the location acceptance range but this was due to insufficient data being accrued as these are relatively new locations. The investigation did not yield any other issues with these TLDs.

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**

<b>Year</b>	<b>Inner Ring Average (mR/Std. Qtr.)</b>	<b>Outer Ring Average (mR/Std. Qtr.)</b>	<b>Control Average (mR/Std. Qtr.)</b>
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 <sup>(1)</sup>	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
2020	1.59E+1	1.75E+1	1.93E+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 2020 HBRSEP Annual Land Use Census was conducted during the growing season on 6/17-6/18/2020 to meet the requirements of the HBRSEP ODCM 4.4.1. An Annual Land Use Census was conducted to identify within a distance of 8 kilometers (5.0 miles) from the plant and in each of the 16 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.), and the nearest meat animal (beef, hogs, etc.) 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 2020 census.

Table 3.10 summarizes the HBRSEP 2020 census results. A map indicating identified locations is shown in Figure 3.10. The nearest residence is located in the SSE sector at 0.33 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

The fleet Land Use Census Procedure AD-CP-ALL-0014 (Revision 4), Land Use Census Evaluation, was revised in 2020 to standardize the approach for the evaluation of the Land Use Dose Calculations (NCR# 02343171).

**Table 3.10 HBRSEP Land Use Census Comparison (2019 – 2020)**

Nearest Pathway (Miles)

SECTOR	RESIDENCE		GARDEN		MEAT ANIMAL <sup>(1)</sup>		MILK ANIMAL	
	2019	2020	2019	2020	2019	2020	2019	2020
North	2.83	2.83	---	3.27*	---	---	----	----
North-Northeast	1.53	1.53	2.13	2.13	---	---	----	----
Northeast	1.11	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	3.94	2.94*	3.02	---	----	----
East-Southeast	0.62	0.62	1.28	1.28	---	---	----	----
Southeast	0.38	0.38	3.74	3.63*	---	---	----	----
South-Southeast	0.33	0.33	2.56	2.56	---	---	----	----
South	0.44	0.44	0.74	0.74	---	---	----	----
South-Southwest	0.42	0.42	3.66	3.13*	---	---	----	----
Southwest	0.44	0.44	2.35	2.35	---	---	----	----
West-Southwest	0.46	0.44*	0.86	0.86	---	---	----	----
West	0.56	0.56	0.70	0.70	---	---	----	----
West-Northwest	0.57	0.57	0.81	0.66*	---	---	----	----
Northwest	1.56	1.56	2.58	1.87*	---	---	----	----
North-Northwest	2.00	2.00	2.85	2.85	---	---	----	----

NOTE: Sector and distance determined by Global Positioning System.

\* Represents a change from the previous year.

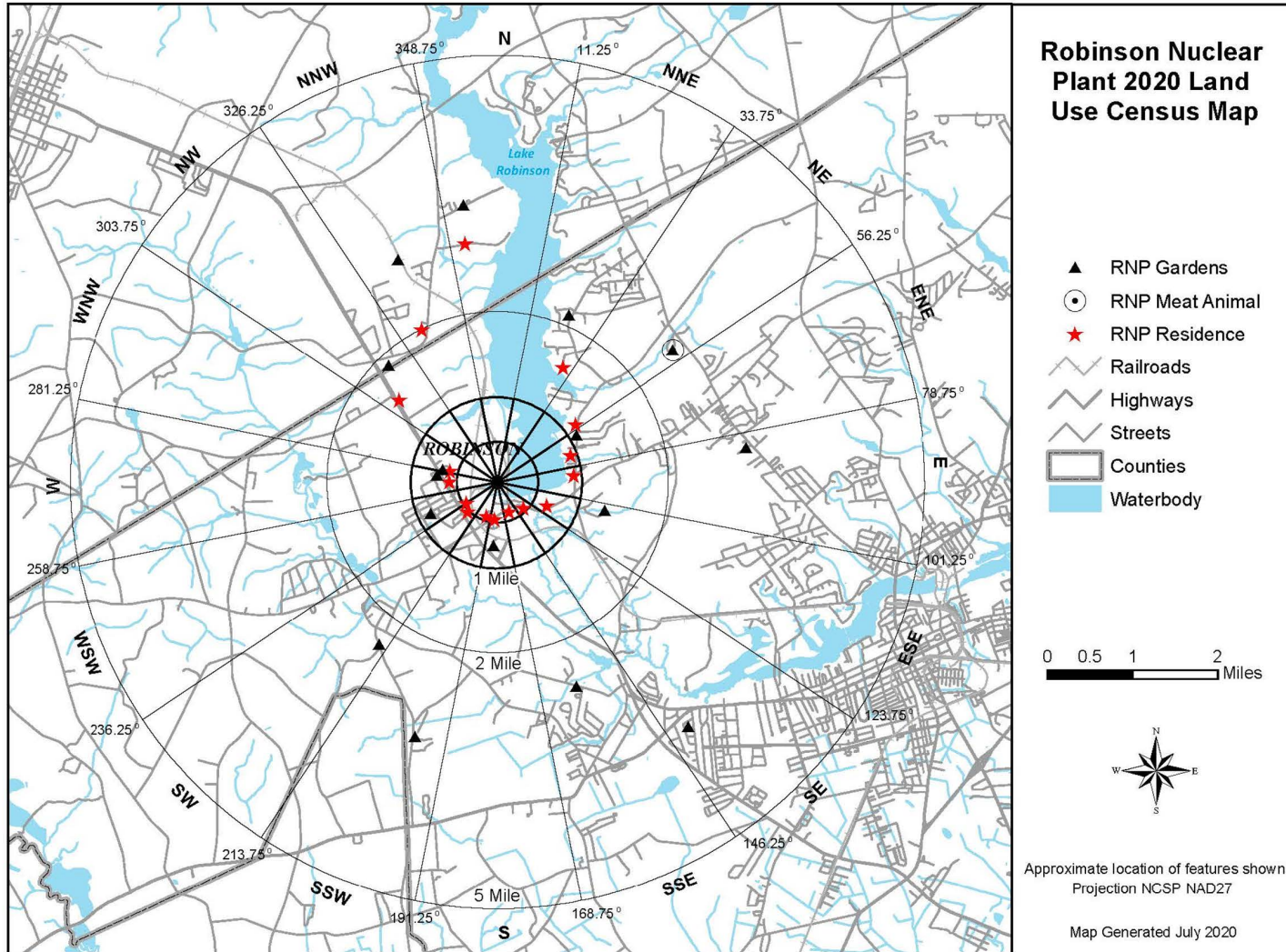
\*\* Represents a change from the previous year – different address, same mileage

“----” indicates no occurrences within the 5 mile radius

(1) Meat animal was only identified at the nearest garden or closer in each sector.



Figure 3.10



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# 4.0 QUALITY ASSURANCE

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## 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 in Huntersville, North Carolina, at Duke Energy's Environmental Center. During 2020, 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 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 2020 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 2020. 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, mixed gamma in soil, 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 2020 is documented in Table 4.0-A.

Interlaboratory cross check samples from EZA were received and analyzed in two of the four quarters of 2020. Table 4.0-A lists the performance for specific samples. Fifty-one nuclide results were reported to EZA of which forty-nine (96 %) 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 surface water, 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**

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 using the NIST-traceable Hopewell and submits them for analysis of the unknown estimated delivered exposure. A summary of the 2020 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 2020. A summary of the GEL quality assurance program results for the sample media types sent to GEL during 2020 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

#### 2020 Cross Check Results for EnRad Laboratories

Interlaboratory cross check samples from EZA were received and analyzed in two of the four quarters of 2020. 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. Fifty-one nuclide results were reported to EZA of which forty-nine (96 %) 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	E13185	Cs-137	2	pCi	225	238	0.95	Agreement
I-131 in Charcoal Cartridge	E13183	I-131	2	pCi	95.8	91.5	1.05	Agreement
Gamma in Soil	E13184	Ce-141	2	pCi/g	0.199	0.206	0.97	Agreement
		Co-58	2	pCi/g	0.168	0.178	0.94	Agreement
		Co-60	2	pCi/g	0.309	0.347	0.89	Agreement
		Cr-51	2	pCi/g	0.371	0.455	0.82	Agreement
		Cs-134	2	pCi/g	0.226	0.260	0.87	Agreement
		Cs-137	2	pCi/g	0.230	0.257	0.90	Agreement
		Fe-59	2	pCi/g	0.174	0.179	0.97	Agreement
		Mn-54	2	pCi/g	0.238	0.238	1.00	Agreement
		Zn-65	2	pCi/g	0.416	0.399	1.04	Agreement
Gamma in Simulated Vegetation	E13187	Ce-141	2	pCi/g	0.228	0.184	1.24	Agreement
		Co-58	2	pCi/g	0.172	0.159	1.08	Agreement
		Co-60	2	pCi/g	0.312	0.309	1.01	Agreement
		Cr-51	2	pCi/g	0.530	0.405	1.31	Non-Agreement <sup>(1)</sup>
		Cs-134	2	pCi/g	0.239	0.231	1.03	Agreement
		Cs-137	2	pCi/g	0.181	0.164	1.10	Agreement
		Fe-59	2	pCi/g	0.204	0.160	1.28	Non-Agreement <sup>(1)</sup>
		Mn-54	2	pCi/g	0.239	0.212	1.13	Agreement
		Zn-65	2	pCi/g	0.379	0.355	1.07	Agreement

(1) NCR # 02340178

## TABLE 4.0-A (Cont.)

Sample	Sample ID	Nuclide	Quarter	Units	EnRad Value	EZA Value	EnRad/EZA Ratio	Evaluation
Gamma in Simulated Vegetation	E13190	Ce-141	3	pCi/g	0.202	0.204	0.99	Agreement
		Co-58	3	pCi/g	0.213	0.244	0.87	Agreement
		Co-60	3	pCi/g	0.491	0.516	0.95	Agreement
		Cr-51	3	pCi/g	0.424	0.506	0.84	Agreement
		Cs-134	3	pCi/g	0.240	0.272	0.88	Agreement
		Cs-137	3	pCi/g	0.325	0.340	0.95	Agreement
		Fe-59	3	pCi/g	0.270	0.273	0.99	Agreement
		Mn-54	3	pCi/g	0.249	0.245	1.02	Agreement
		Zn-65	3	pCi/g	0.383	0.367	1.04	Agreement
Gamma in Composite Filter	E13188	Ce-141	3	pCi	109	107	1.02	Agreement
		Co-58	3	pCi	130	128	1.01	Agreement
		Co-60	3	pCi	278	271	1.03	Agreement
		Cr-51	3	pCi	247	266	0.93	Agreement
		Cs-134	3	pCi	136	143	0.95	Agreement
		Cs-137	3	pCi	187	179	1.05	Agreement
		Fe-59	3	pCi	152	143	1.06	Agreement
		Mn-54	3	pCi	136	129	1.06	Agreement
		Zn-65	3	pCi	215	193	1.12	Agreement
Gamma in Water	E13189	Ce-141	3	pCi/L	167	160	1.04	Agreement
		Co-58	3	pCi/L	202	191	1.06	Agreement
		Co-60	3	pCi/L	437	404	1.08	Agreement
		Cr-51	3	pCi/L	407	397	1.03	Agreement
		Cs-134	3	pCi/L	215	213	1.01	Agreement
		Cs-137	3	pCi/L	280	267	1.05	Agreement
		Fe-59	3	pCi/L	237	214	1.11	Agreement
		I-131	3	pCi/L	104	95.3	1.09	Agreement
		Mn-54	3	pCi/L	211	192	1.10	Agreement
Zn-65	3	pCi/L	322	288	1.12	Agreement		
Milk LLI-131	E13192	I-131	2	pCi/L	96.8	88.8	1.09	Agreement
Gross Beta in Water	E13191	Cs-137	2	pCi/L	244	240	1.02	Agreement
Tritium in Water	E13193	H-3	3	pCi/L	11900	12000	0.99	Agreement

# TABLE 4.0-B

## 2020 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 2020						2nd Quarter 2020						
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	
100007	59.67	60.97	-2.13	<+/-15%	Pass	102290	59.52	60.59	-1.77	<+/-15%	Pass	
100245	58.87	60.97	-3.44	<+/-15%	Pass	102359	59.12	60.59	-2.43	<+/-15%	Pass	
102059	60.34	60.97	-1.03	<+/-15%	Pass	103194	61.95	60.59	2.24	<+/-15%	Pass	
103098	64.18	60.97	5.26	<+/-15%	Pass	102029	60.76	60.59	0.28	<+/-15%	Pass	
103212	63.01	60.97	3.35	<+/-15%	Pass	102336	61.57	60.59	1.62	<+/-15%	Pass	
100074	60.02	60.97	-1.56	<+/-15%	Pass	103742	62.41	60.59	3.00	<+/-15%	Pass	
103148	62.83	60.97	3.05	<+/-15%	Pass	103721	63.00	60.59	3.98	<+/-15%	Pass	
102407	62.04	60.97	1.75	<+/-15%	Pass	102738	62.59	60.59	3.30	<+/-15%	Pass	
103615	62.69	60.97	2.82	<+/-15%	Pass	100007	58.49	60.59	-3.47	<+/-15%	Pass	
103087	64.32	60.97	5.49	<+/-15%	Pass	102931	61.99	60.59	2.31	<+/-15%	Pass	
Average Bias (B)			1.36				Average Bias (B)			0.91		
Standard Deviation (S)			3.18				Standard Deviation (S)			2.62		
Measure Performance  B +S			4.54	<15%	Pass	Measure Performance  B +S			3.52	<15%	Pass	
3rd Quarter 2020						4th Quarter 2020						
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	
103734	20.89	19.59	6.64	<+/-15%	Pass	103679	42.06	40.15	4.76	<+/-15%	Pass	
103438	21.02	19.59	7.30	<+/-15%	Pass	102783	38.82	40.15	-3.31	<+/-15%	Pass	
102970	18.88	19.59	-3.62	<+/-15%	Pass	103438	43.01	40.15	7.12	<+/-15%	Pass	
102770	20.78	19.59	6.07	<+/-15%	Pass	103734	42.84	40.15	6.70	<+/-15%	Pass	
103602	20.53	19.59	4.80	<+/-15%	Pass	100461	42.34	40.15	5.45	<+/-15%	Pass	
102741	21.03	19.59	7.35	<+/-15%	Pass	103029	42.84	40.15	6.70	<+/-15%	Pass	
102058	19.47	19.59	-0.61	<+/-15%	Pass	100180	38.59	40.15	-3.89	<+/-15%	Pass	
103029	21.06	19.59	7.50	<+/-15%	Pass	103557	43.52	40.15	8.39	<+/-15%	Pass	
103679	20.75	19.59	5.92	<+/-15%	Pass	103199	41.99	40.15	4.58	<+/-15%	Pass	
103557	21.00	19.59	7.20	<+/-15%	Pass	100154	39.71	40.15	-1.10	<+/-15%	Pass	
Average Bias (B)			4.85				Average Bias (B)			3.54		
Standard Deviation (S)			3.83				Standard Deviation (S)			4.55		
Measure Performance  B +S			8.69	<15%	Pass	Measure Performance  B +S			8.09	<15%	Pass	

# TABLE 4.0-C

## 2020 GEL Laboratories, LLC QA Results

Interlaboratory cross check samples from Eckert & Ziegler Analytics (EZA) were received and analyzed by GEL during 2020. 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
I-131 in Milk with EZA	E13173	I-131	2	pCi/L	83.1	81.5	1.02	Agreement
	E13177	I-131	3	pCi/L	94.9	95.0	1.00	Agreement
	E13181	I-131	4	pCi/L	94.4	91.9	1.08	Agreement

**APPENDIX A**

**ENVIRONMENTAL SAMPLING**  
**&**  
**ANALYSIS PROCEDURES**



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# APPENDIX A

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## 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 Station Sciences and Environmental Services. Environmental analyses were performed by EnRad Laboratories and Dosimetry and Records.

This appendix provides a description of the specific analyses performed on samples collected in the field. Changes to the sampling procedures and analyses procedures are also discussed in the section.

### I. CHANGE OF SAMPLING PROCEDURES

CY NISP-201 Chemistry Quality Assurance Program Section 7C-Quality Controls for Sampling was implemented during 2020 for the sampling of Drinking Water and Surface Water.

Environmental TLD (Alpha & Bravo) dual placement was implemented for all RNP ODCM TLD locations effective first quarter 2020.

TLD sampling locations 84 and 85 were added to the REMP effective January 16, 2020. TLD location 84 was added to replace TLD locaton 12, and TLD location 85 was added to replace TLD location 8. DRR# 02341415 was created to make these changes to the ODCM. PRR# 02341407 was created to make these changed to the EMP-001 Environmental Sampling Program procedure.

### 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**

There were no fundamental changes to analysis procedure methods, but procedures were revised to increase quality control measurements to comply with CY NISP-201 Chemistry Quality Assurance Program Section 7.

**APPENDIX B**

**RADIOLOGICAL  
ENVIRONMENTAL MONITORING  
PROGRAM**

**SUMMARY OF RESULTS**

**2020**

**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: 2020

Medium or Pathway Sampled or Measured (Unit of Measurement)	Type and Total No. of Measurements Performed	Lower Limit of Detection (LLD) <sup>(1)</sup>	All Indicator Locations <sup>(2) (3)</sup> Mean Range	Location w/Highest Annual Mean		Control Locations Mean Range <sup>(2) (3)</sup>	No. of Non-Routine Report Meas.
				Name, Distance, and Direction	Mean Range <sup>(2) (3)</sup>		
Air Particulate (pCi/m <sup>3</sup> )	Gross Beta 519 <sup>(4)</sup>	See Table 2.2-C	1.81E-02 (467/467) 8.19E-03 – 3.58E-02	6 (0.20 mi SSW)	1.92E-02 (52/52) 1.15E-02 – 3.53E-02	1 (24.4 mi ESE) 1.77E-02 (52/52) 8.27E-03 – 3.46E-02	0
	Gamma 40 <sup>(4)</sup>	See Table 2.2-C	All less than LLD	----	----	All less than LLD	0
Air Radioiodine (pCi/m <sup>3</sup> )	Gamma 519 <sup>(4)</sup>	See Table 2.2-C	All less than LLD	----	----	All less than LLD	0
Surface Water (pCi/l)	Gamma 24 <sup>(4)</sup>	See Table 2.2-C	All less than LLD	----	----	All less than LLD	0
	Tritium 24 <sup>(4)</sup>	2000	2.43E+03 (10/12) 2.93E+02 – 4.65E+03	40 (0.60 mi ESE)	2.43E+03 (10/12) 2.93E+02 – 4.65E+03	All less than LLD	0
Ground Water (pCi/l)	Gamma 4	See Table 2.2-C	All less than LLD	----	----	No Control	0
	Tritium 4	2000	All less than LLD	----	----	No Control	0
Food Products (pCi/l)	Gamma 5	See Table 2.2-C	All less than LLD	----	----	All less than LLD	0

**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: 2020

Medium or Pathway Sampled or Measured (Unit of Measurement)	Type and Total No. of Measurements Performed	Lower Limit of Detection (LLD) <sup>(1)</sup>	All Indicator Locations <sup>(2) (3)</sup> Mean Range	Location w/Highest Annual Mean		Control Locations Mean Range <sup>(2) (3)</sup>	No. of Non-Routine Report Meas.
				Name, Distance, and Direction	Mean Range <sup>(2) (3)</sup>		
Broadleaf Vegetation <sup>(4)</sup> (pCi/kg, wet)	Gamma 37 Co-58 <sup>(6)</sup>	See Table 2.2-C	3.74E+01 (1/31) 3.74E+01 – 3.74E+01	50 (2.6 mi ESE)	3.74E+01 (1/7) 3.74E+01 – 3.74E+01	All less than LLD	0
	Co-60 <sup>(6)</sup>		7.83E+00 (1/31) 7.83E+00 – 7.83E+00	50 (2.6 mi ESE)	7.83E+00 (1/7) 7.83E+00 – 7.83E+00	All less than LLD	
	Cs-137 <sup>(6)</sup>		80	5.33E+01 (14/31) 1.45E+01 – 1.18E+02	51 (0.0 mi SSW)	6.66E+01 (5/6) 1.78E+01 – 1.18E+02	
Fish (pCi/kg, wet)	Gamma 12 Cs-137	See Table 2.2-C  150	4.58E+01 (1/8) 4.58E+01 – 4.58E+01	46 (Lake Prestwood)	4.58E+01 (1/4) 4.58E+01 – 4.58E+01	47 (Lake Prestwood) 3.68E+01 (1/4) 3.68E+01 – 3.68E+01	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) <sup>(5)</sup>	TLD Readout 176 <sup>(4)(7)</sup>	-----	1.66E+01 (172/172) 1.04E+01 – 3.10E+01	37 (5.00 mi WSW)	2.34E+01 (4/4) 1.97E+01 – 3.10E+01	1 (24.4 mi ESE) 1.93E+01 (4/4) 1.68E+01 – 2.40E+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).
6. NCR# 02344830 – BLV samples contaminated during collection.
7. NCR# 02340179 – TLDs 8, 12, 84, and 85. Locations 8 and 12 are located on private property and are being replaced by locations 84 and 85 respectively.

**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 99.69% availability in 2020.

Location	Scheduled Collection Dates	Code	Description & Action to Prevent Recurrence	Corrective Action
5	1/13-1/20/2020	PI	66.76 hours downtime due to power interruption due to electrical issue.	NCR # 02311082
1	2/4-2/11/2020	PI	2.85 hours downtime due to power interruption due to electrical line work.	NCR # 02314599
5	2/4-2/11/2020	PI	3.62 hours downtime due to power interruption due to electrical line work.	NCR # 02314980
5	2/18-2/25/2020	PI	2.70 hours downtime due to power interruption from storm.	NCR # 02316969
5	4/7-4/14/2020	PI	7.10 hours downtime due to power interruption from storm.	NCR # 02325042
55	11/3-11/10/2020	TF	Tear in filter due to undetermined cause.	NCR # 02357459
4	11/24-12/1/2020	PI	0.38 hours downtime due to power outage in area.	NCR # 02359525
61	12/15-12/22/2020	PO	27.92 hours downtime due to work being performed in the area.	NCR # 02362338



## 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 99.60% availability in 2020.

Location	Scheduled Collection Dates	Code	Description & Action to Prevent Recurrence	Corrective Action
41	12/23/2019-1/27/2020	PI	72.00 hours downtime due to power interruption due to electrical issue.	NCR # 02270300

## C.2 UNAVAILABLE ANALYSES

### Air Particulate and Air Radioiodine

Location	Scheduled Collection Dates	Code	Description & Action to Prevent Recurrence	Corrective Action
7	10/6/2020-10/13/2020	OT	168 hours downtime due to no air flow through the pump. Flow was restored by making adjustments to the sampler and to prevent recurrence.	NCR # 02353147

### Broadleaf Vegetation (BLV)

Location	Scheduled Collection Dates	Code	Description & Action to Prevent Recurrence	Corrective Action
All BLV <sup>(1)</sup>	January 2020	SU	Broadleaf Vegetation was seasonally unavailable	NCR # 02361295
All BLV <sup>(1)</sup>	February 2020	SU	Broadleaf Vegetation was seasonally unavailable	NCR # 02361295
All BLV <sup>(1)</sup>	March 2020	SU	Broadleaf Vegetation was seasonally unavailable	NCR # 02361295
All BLV <sup>(1)</sup>	October 2020	SU	Broadleaf Vegetation was seasonally unavailable	NCR # 02358272
All BLV <sup>(1)</sup>	November 2020	SU	Broadleaf Vegetation was seasonally unavailable	NCR # 02358274
All BLV <sup>(1)</sup>	December 2020	SU	Broadleaf Vegetation was seasonally unavailable	NCR # 02361141

(1) All “BLV” represents HBRSEP Broadleaf Vegetation locations 50, 51, 52, 62, 67, and 83.

### Direct Gamma Radiation (TLD)

Location	Scheduled Collection Dates	Code	Description & Action to Prevent Recurrence	Corrective Action
13	1/16-4/16/2020	VN	TLD was missing due to vandalism.	NCR # 02325747
12	4/16-7/15/2020 7/15-10/13/2020 10/13/2020-1/12/2021	OT	TLD was unable to be accessed on 7/15/2020 to be collected due to TLD being located on private property. A new TLD also could not be placed into the field. A new TLD was placed at a new location 85 at 0.9 miles SSW and is scheduled to be the replacement for location 12 in the future.	NCR # 02340179

# **APPENDIX D**

## **ANALYTICAL DEVIATIONS**

No Analytical deviations were incurred for the  
2020 Radiological Environmental Monitoring Program

**APPENDIX E**

**RADIOLOGICAL  
ENVIRONMENTAL MONITORING  
PROGRAM RESULTS**

**2020**

This appendix includes sample analysis report summaries and supportive data generated from each sample medium for 2020

# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
514949	12/31/2019 - 1/6/2020	Beta	1.66E-02	3.13E-03	3.70E-03
515293	1/6/2020 - 1/13/2020	Beta	1.70E-02	2.57E-03	2.77E-03
515519	1/13/2020 - 1/20/2020	Beta	1.63E-02	2.73E-03	2.90E-03
515914	1/20/2020 - 1/27/2020	Beta	2.05E-02	3.01E-03	3.09E-03
516166	1/27/2020 - 2/4/2020	Beta	1.97E-02	2.55E-03	2.58E-03
516541	2/4/2020 - 2/11/2020	Beta	1.75E-02	2.69E-03	2.91E-03
516910	2/11/2020 - 2/18/2020	Beta	1.62E-02	2.80E-03	3.12E-03
517437	2/18/2020 - 2/25/2020	Beta	1.94E-02	3.02E-03	3.34E-03
517698	2/25/2020 - 3/2/2020	Beta	1.40E-02	3.18E-03	3.96E-03
518751	3/2/2020 - 3/10/2020	Beta	1.69E-02	2.39E-03	2.53E-03
519337	3/10/2020 - 3/16/2020	Beta	2.10E-02	3.40E-03	3.75E-03
519726	3/16/2020 - 3/24/2020	Beta	1.46E-02	2.19E-03	2.31E-03
520326	3/24/2020 - 3/31/2020	Beta	1.42E-02	2.51E-03	2.88E-03
520336	12/31/2019 - 3/31/2020	Cs-134	<1.51E-03	0.00E+00	1.51E-03
		Cs-137	<1.37E-03	0.00E+00	1.37E-03
		Be-7	1.20E-01	4.06E-02	4.73E-02
		K-40	<1.26E-02	0.00E+00	1.26E-02
520536	3/31/2020 - 4/7/2020	Beta	1.92E-02	2.66E-03	2.73E-03
520835	4/7/2020 - 4/14/2020	Beta	2.11E-02	3.06E-03	3.08E-03
521633	4/14/2020 - 4/21/2020	Beta	2.35E-02	3.03E-03	2.79E-03
522059	4/21/2020 - 4/28/2020	Beta	1.67E-02	2.51E-03	2.65E-03
522370	4/28/2020 - 5/5/2020	Beta	1.74E-02	2.66E-03	2.89E-03
522626	5/5/2020 - 5/12/2020	Beta	1.66E-02	2.91E-03	3.43E-03
523129	5/12/2020 - 5/19/2020	Beta	1.46E-02	2.83E-03	3.40E-03
523493	5/19/2020 - 5/26/2020	Beta	9.84E-03	2.56E-03	3.38E-03
523903	5/26/2020 - 6/2/2020	Beta	1.17E-02	2.60E-03	3.21E-03
524471	6/2/2020 - 6/8/2020	Beta	1.95E-02	3.03E-03	3.37E-03



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
524789	6/8/2020 - 6/16/2020	Beta	1.50E-02	2.17E-03	2.16E-03
525012	6/16/2020 - 6/23/2020	Beta	1.54E-02	2.48E-03	2.72E-03
525405	6/23/2020 - 6/30/2020	Beta	1.36E-02	2.40E-03	2.76E-03
525415	3/31/2020 - 6/30/2020	Cs-134	<2.07E-03	0.00E+00	2.07E-03
		Cs-137	<1.70E-03	0.00E+00	1.70E-03
		Be-7	1.36E-01	3.54E-02	2.92E-02
		K-40	<3.29E-02	0.00E+00	3.29E-02
525609	6/30/2020 - 7/7/2020	Beta	1.95E-02	3.10E-03	3.39E-03
525983	7/7/2020 - 7/14/2020	Beta	1.45E-02	2.72E-03	3.16E-03
526296	7/14/2020 - 7/20/2020	Beta	2.77E-02	3.80E-03	3.79E-03
526584	7/20/2020 - 7/27/2020	Beta	8.27E-03	2.50E-03	3.48E-03
526899	7/27/2020 - 8/3/2020	Beta	1.83E-02	2.92E-03	2.98E-03
527399	8/3/2020 - 8/11/2020	Beta	1.44E-02	2.21E-03	2.38E-03
527670	8/11/2020 - 8/18/2020	Beta	1.92E-02	2.83E-03	2.76E-03
527973	8/18/2020 - 8/25/2020	Beta	1.33E-02	2.63E-03	3.11E-03
528718	8/25/2020 - 9/1/2020	Beta	1.65E-02	3.00E-03	3.51E-03
529059	9/1/2020 - 9/8/2020	Beta	2.21E-02	2.73E-03	2.59E-03
530065	9/8/2020 - 9/15/2020	Beta	1.12E-02	2.21E-03	2.58E-03
530223	9/15/2020 - 9/22/2020	Beta	1.79E-02	2.67E-03	2.90E-03
530525	9/22/2020 - 9/29/2020	Beta	1.82E-02	2.96E-03	3.23E-03
531149	6/30/2020 - 9/29/2020	Cs-134	<1.61E-03	0.00E+00	1.61E-03
		Cs-137	<1.66E-03	0.00E+00	1.66E-03
		Be-7	9.79E-02	3.15E-02	3.55E-02
		K-40	1.40E-02	1.45E-02	2.22E-02
531019	9/29/2020 - 10/6/2020	Beta	1.84E-02	3.00E-03	3.37E-03
531635	10/6/2020 - 10/13/2020	Beta	2.31E-02	2.81E-03	2.69E-03
532034	10/13/2020 - 10/20/2020	Beta	1.87E-02	2.71E-03	2.89E-03
532466	10/20/2020 - 10/27/2020	Beta	8.74E-03	2.07E-03	2.60E-03
532774	10/27/2020 - 11/3/2020	Beta	1.65E-02	2.53E-03	2.65E-03



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
533297	11/3/2020 - 11/10/2020	Beta	1.62E-02	2.86E-03	3.27E-03
533747	11/10/2020 - 11/17/2020	Beta	1.56E-02	2.39E-03	2.45E-03
534061	11/17/2020 - 11/24/2020	Beta	1.42E-02	2.53E-03	3.03E-03
534521	11/24/2020 - 12/1/2020	Beta	2.76E-02	3.00E-03	2.62E-03
534736	12/1/2020 - 12/8/2020	Beta	2.46E-02	2.88E-03	2.63E-03
535290	12/8/2020 - 12/15/2020	Beta	3.46E-02	3.28E-03	2.70E-03
535845	12/15/2020 - 12/22/2020	Beta	2.14E-02	2.77E-03	2.76E-03
536129	12/22/2020 - 12/29/2020	Beta	2.25E-02	2.84E-03	2.81E-03
536808	9/29/2020 - 12/29/2020	Cs-134	<2.21E-03	0.00E+00	2.21E-03
		Cs-137	<1.59E-03	0.00E+00	1.59E-03
		Be-7	1.67E-01	4.01E-02	3.38E-02
		K-40	<3.17E-02	0.00E+00	3.17E-02

Sample Point 2 [ INDICATOR - S @ 0.2 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514950	12/31/2019 - 1/6/2020	Beta	1.40E-02	3.06E-03	3.81E-03
515294	1/6/2020 - 1/13/2020	Beta	1.63E-02	2.55E-03	2.79E-03
515520	1/13/2020 - 1/20/2020	Beta	1.67E-02	2.75E-03	2.90E-03
515915	1/20/2020 - 1/27/2020	Beta	1.88E-02	2.92E-03	3.10E-03
516167	1/27/2020 - 2/4/2020	Beta	1.75E-02	2.43E-03	2.55E-03
516542	2/4/2020 - 2/11/2020	Beta	1.72E-02	2.58E-03	2.77E-03
516911	2/11/2020 - 2/18/2020	Beta	1.44E-02	2.67E-03	3.07E-03
517438	2/18/2020 - 2/25/2020	Beta	1.66E-02	2.94E-03	3.42E-03
517699	2/25/2020 - 3/2/2020	Beta	1.40E-02	3.14E-03	3.90E-03
518752	3/2/2020 - 3/10/2020	Beta	1.55E-02	2.32E-03	2.52E-03
519338	3/10/2020 - 3/16/2020	Beta	1.69E-02	3.21E-03	3.78E-03
519727	3/16/2020 - 3/24/2020	Beta	1.49E-02	2.25E-03	2.39E-03
520327	3/24/2020 - 3/31/2020	Beta	1.66E-02	2.56E-03	2.77E-03
520337	12/31/2019 - 3/31/2020	Cs-134	<1.79E-03	0.00E+00	1.79E-03
		Cs-137	<1.33E-03	0.00E+00	1.33E-03
		Be-7	1.93E-01	4.21E-02	2.35E-02



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
520337	12/31/2019 - 3/31/2020	K-40	<2.66E-02	0.00E+00	2.66E-02
520537	3/31/2020 - 4/7/2020	Beta	1.83E-02	2.63E-03	2.75E-03
520836	4/7/2020 - 4/14/2020	Beta	2.63E-02	3.32E-03	3.08E-03
521634	4/14/2020 - 4/21/2020	Beta	2.47E-02	3.14E-03	2.86E-03
522060	4/21/2020 - 4/28/2020	Beta	1.60E-02	2.47E-03	2.64E-03
522371	4/28/2020 - 5/5/2020	Beta	2.00E-02	2.75E-03	2.81E-03
522627	5/5/2020 - 5/12/2020	Beta	1.95E-02	3.14E-03	3.56E-03
523130	5/12/2020 - 5/19/2020	Beta	1.65E-02	2.92E-03	3.38E-03
523494	5/19/2020 - 5/26/2020	Beta	1.19E-02	2.69E-03	3.40E-03
523904	5/26/2020 - 6/2/2020	Beta	1.32E-02	2.68E-03	3.20E-03
524472	6/2/2020 - 6/8/2020	Beta	2.07E-02	3.10E-03	3.38E-03
524790	6/8/2020 - 6/16/2020	Beta	1.51E-02	2.18E-03	2.16E-03
525013	6/16/2020 - 6/23/2020	Beta	1.74E-02	2.57E-03	2.71E-03
525406	6/23/2020 - 6/30/2020	Beta	1.43E-02	2.45E-03	2.79E-03
525416	3/31/2020 - 6/30/2020	Cs-134	<1.37E-03	0.00E+00	1.37E-03
		Cs-137	<1.59E-03	0.00E+00	1.59E-03
		Be-7	1.39E-01	3.65E-02	3.19E-02
		K-40	<2.19E-02	0.00E+00	2.19E-02
525610	6/30/2020 - 7/7/2020	Beta	2.15E-02	3.18E-03	3.37E-03
525984	7/7/2020 - 7/14/2020	Beta	1.74E-02	2.88E-03	3.16E-03
526297	7/14/2020 - 7/20/2020	Beta	2.98E-02	3.89E-03	3.80E-03
526585	7/20/2020 - 7/27/2020	Beta	1.04E-02	2.63E-03	3.49E-03
526900	7/27/2020 - 8/3/2020	Beta	1.72E-02	2.74E-03	2.80E-03
527400	8/3/2020 - 8/11/2020	Beta	2.00E-02	2.53E-03	2.50E-03
527671	8/11/2020 - 8/18/2020	Beta	2.29E-02	3.00E-03	2.74E-03
527974	8/18/2020 - 8/25/2020	Beta	1.85E-02	2.93E-03	3.11E-03
528719	8/25/2020 - 9/1/2020	Beta	2.00E-02	3.16E-03	3.47E-03



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
529060	9/1/2020 - 9/8/2020	Beta	2.67E-02	2.96E-03	2.64E-03
530066	9/8/2020 - 9/15/2020	Beta	1.56E-02	2.43E-03	2.56E-03
530224	9/15/2020 - 9/22/2020	Beta	1.86E-02	2.70E-03	2.91E-03
530526	9/22/2020 - 9/29/2020	Beta	1.81E-02	2.96E-03	3.23E-03
531150	6/30/2020 - 9/29/2020	Cs-134	<1.95E-03	0.00E+00	1.95E-03
		Cs-137	<1.23E-03	0.00E+00	1.23E-03
		Be-7	1.27E-01	3.41E-02	3.27E-02
		K-40	<2.57E-02	0.00E+00	2.57E-02
531020	9/29/2020 - 10/6/2020	Beta	2.21E-02	3.17E-03	3.36E-03
531636	10/6/2020 - 10/13/2020	Beta	3.05E-02	3.16E-03	2.74E-03
532035	10/13/2020 - 10/20/2020	Beta	2.56E-02	2.99E-03	2.84E-03
532467	10/20/2020 - 10/27/2020	Beta	1.18E-02	2.25E-03	2.62E-03
532775	10/27/2020 - 11/3/2020	Beta	1.86E-02	2.53E-03	2.50E-03
533298	11/3/2020 - 11/10/2020	Beta	1.85E-02	3.01E-03	3.31E-03
533748	11/10/2020 - 11/17/2020	Beta	1.55E-02	2.39E-03	2.46E-03
534062	11/17/2020 - 11/24/2020	Beta	1.77E-02	2.68E-03	3.00E-03
534522	11/24/2020 - 12/1/2020	Beta	2.46E-02	2.87E-03	2.61E-03
534737	12/1/2020 - 12/8/2020	Beta	2.61E-02	2.97E-03	2.68E-03
535291	12/8/2020 - 12/15/2020	Beta	3.43E-02	3.32E-03	2.77E-03
535846	12/15/2020 - 12/22/2020	Beta	1.93E-02	2.67E-03	2.76E-03
536130	12/22/2020 - 12/29/2020	Beta	2.35E-02	2.90E-03	2.84E-03
536809	9/29/2020 - 12/29/2020	Cs-134	<9.91E-04	0.00E+00	9.91E-04
		Cs-137	<1.33E-03	0.00E+00	1.33E-03
		Be-7	1.42E-01	3.51E-02	2.92E-02
		K-40	2.80E-02	1.51E-02	1.42E-02

Sample Point 3 [ INDICATOR - N @ 0.5 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514951	12/31/2019 - 1/6/2020	Beta	1.47E-02	3.04E-03	3.70E-03
515295	1/6/2020 - 1/13/2020	Beta	1.39E-02	2.48E-03	2.88E-03
515521	1/13/2020 - 1/20/2020	Beta	1.70E-02	2.73E-03	2.85E-03





# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
515916	1/20/2020 - 1/27/2020	Beta	1.85E-02	2.92E-03	3.11E-03
516168	1/27/2020 - 2/4/2020	Beta	1.81E-02	2.46E-03	2.57E-03
516543	2/4/2020 - 2/11/2020	Beta	1.54E-02	2.49E-03	2.77E-03
516912	2/11/2020 - 2/18/2020	Beta	1.72E-02	2.84E-03	3.09E-03
517439	2/18/2020 - 2/25/2020	Beta	1.76E-02	3.03E-03	3.48E-03
517700	2/25/2020 - 3/2/2020	Beta	1.78E-02	3.28E-03	3.80E-03
518753	3/2/2020 - 3/10/2020	Beta	1.44E-02	2.29E-03	2.56E-03
519339	3/10/2020 - 3/16/2020	Beta	2.03E-02	3.38E-03	3.77E-03
519728	3/16/2020 - 3/24/2020	Beta	1.49E-02	2.23E-03	2.36E-03
520328	3/24/2020 - 3/31/2020	Beta	1.53E-02	2.49E-03	2.76E-03
520338	12/31/2019 - 3/31/2020	Nuclide	Activity	2 Sigma Error	MDA
		Cs-134	<1.65E-03	0.00E+00	1.65E-03
		Cs-137	<1.67E-03	0.00E+00	1.67E-03
		Be-7	1.73E-01	4.21E-02	3.39E-02
		K-40	3.36E-02	1.79E-02	2.01E-02
520538	3/31/2020 - 4/7/2020	Beta	1.50E-02	2.45E-03	2.73E-03
520837	4/7/2020 - 4/14/2020	Beta	2.11E-02	3.08E-03	3.09E-03
521635	4/14/2020 - 4/21/2020	Beta	2.26E-02	3.05E-03	2.88E-03
522061	4/21/2020 - 4/28/2020	Beta	1.47E-02	2.41E-03	2.65E-03
522372	4/28/2020 - 5/5/2020	Beta	1.61E-02	2.54E-03	2.80E-03
522628	5/5/2020 - 5/12/2020	Beta	1.70E-02	3.01E-03	3.55E-03
523131	5/12/2020 - 5/19/2020	Beta	1.30E-02	2.75E-03	3.41E-03
523495	5/19/2020 - 5/26/2020	Beta	1.34E-02	2.77E-03	3.38E-03
523905	5/26/2020 - 6/2/2020	Beta	1.60E-02	2.83E-03	3.20E-03
524473	6/2/2020 - 6/8/2020	Beta	2.26E-02	3.17E-03	3.37E-03
524791	6/8/2020 - 6/16/2020	Beta	1.58E-02	2.22E-03	2.17E-03
525014	6/16/2020 - 6/23/2020	Beta	1.95E-02	2.68E-03	2.71E-03
525407	6/23/2020 - 6/30/2020	Beta	1.64E-02	2.54E-03	2.76E-03



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
525417	3/31/2020 - 6/30/2020	Cs-134	<1.64E-03	0.00E+00	1.64E-03
		Cs-137	<1.20E-03	0.00E+00	1.20E-03
		Be-7	1.47E-01	3.68E-02	3.28E-02
		K-40	<3.43E-02	0.00E+00	3.43E-02
525611	6/30/2020 - 7/7/2020	Beta	2.18E-02	3.21E-03	3.39E-03
525985	7/7/2020 - 7/14/2020	Beta	1.90E-02	2.95E-03	3.16E-03
526298	7/14/2020 - 7/20/2020	Beta	3.23E-02	4.00E-03	3.79E-03
526586	7/20/2020 - 7/27/2020	Beta	1.27E-02	2.76E-03	3.49E-03
526901	7/27/2020 - 8/3/2020	Beta	1.90E-02	2.90E-03	2.88E-03
527401	8/3/2020 - 8/11/2020	Beta	1.61E-02	2.32E-03	2.44E-03
527672	8/11/2020 - 8/18/2020	Beta	1.78E-02	2.75E-03	2.76E-03
527975	8/18/2020 - 8/25/2020	Beta	1.96E-02	2.98E-03	3.12E-03
528720	8/25/2020 - 9/1/2020	Beta	1.67E-02	2.96E-03	3.41E-03
529061	9/1/2020 - 9/8/2020	Beta	2.35E-02	2.84E-03	2.66E-03
530067	9/8/2020 - 9/15/2020	Beta	1.39E-02	2.34E-03	2.57E-03
530225	9/15/2020 - 9/22/2020	Beta	1.75E-02	2.65E-03	2.91E-03
530527	9/22/2020 - 9/29/2020	Beta	1.81E-02	2.96E-03	3.23E-03
531151	6/30/2020 - 9/29/2020	Cs-134	<2.45E-03	0.00E+00	2.45E-03
		Cs-137	<1.30E-03	0.00E+00	1.30E-03
		Be-7	1.50E-01	3.56E-02	2.60E-02
		K-40	3.52E-02	1.90E-02	2.10E-02
531021	9/29/2020 - 10/6/2020	Beta	1.87E-02	3.02E-03	3.36E-03
531637	10/6/2020 - 10/13/2020	Beta	2.73E-02	3.01E-03	2.72E-03
532036	10/13/2020 - 10/20/2020	Beta	2.30E-02	2.89E-03	2.86E-03
532468	10/20/2020 - 10/27/2020	Beta	9.84E-03	2.13E-03	2.60E-03
532776	10/27/2020 - 11/3/2020	Beta	1.72E-02	2.47E-03	2.52E-03
533299	11/3/2020 - 11/10/2020	Beta	1.62E-02	2.90E-03	3.35E-03
533749	11/10/2020 - 11/17/2020	Beta	9.16E-03	2.03E-03	2.46E-03
534063	11/17/2020 - 11/24/2020	Beta	1.91E-02	2.75E-03	3.01E-03



## ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
534523	11/24/2020 - 12/1/2020	Beta	2.69E-02	2.98E-03	2.64E-03
534738	12/1/2020 - 12/8/2020	Beta	2.25E-02	2.78E-03	2.63E-03
535292	12/8/2020 - 12/15/2020	Beta	3.44E-02	3.31E-03	2.75E-03
535847	12/15/2020 - 12/22/2020	Beta	1.70E-02	2.57E-03	2.76E-03
536131	12/22/2020 - 12/29/2020	Beta	2.10E-02	2.77E-03	2.80E-03
536810	9/29/2020 - 12/29/2020	Cs-134	<1.28E-03	0.00E+00	1.28E-03
		Cs-137	<1.60E-03	0.00E+00	1.60E-03
		Be-7	1.46E-01	3.75E-02	3.49E-02
		K-40	<2.85E-02	0.00E+00	2.85E-02

Sample Point 4 [ INDICATOR - ESE @ 0.4 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514952	12/31/2019 - 1/6/2020	Beta	1.55E-02	3.14E-03	3.81E-03
515296	1/6/2020 - 1/13/2020	Beta	1.28E-02	2.38E-03	2.80E-03
515522	1/13/2020 - 1/20/2020	Beta	1.59E-02	2.70E-03	2.90E-03
515917	1/20/2020 - 1/27/2020	Beta	2.20E-02	3.08E-03	3.10E-03
516169	1/27/2020 - 2/4/2020	Beta	1.73E-02	2.42E-03	2.56E-03
516544	2/4/2020 - 2/11/2020	Beta	1.44E-02	2.44E-03	2.77E-03
516913	2/11/2020 - 2/18/2020	Beta	1.54E-02	2.73E-03	3.06E-03
517440	2/18/2020 - 2/25/2020	Beta	1.71E-02	2.96E-03	3.42E-03
517701	2/25/2020 - 3/2/2020	Beta	1.54E-02	3.22E-03	3.91E-03
518754	3/2/2020 - 3/10/2020	Beta	1.60E-02	2.34E-03	2.52E-03
519340	3/10/2020 - 3/16/2020	Beta	1.63E-02	3.18E-03	3.78E-03
519729	3/16/2020 - 3/24/2020	Beta	1.47E-02	2.25E-03	2.40E-03
520329	3/24/2020 - 3/31/2020	Beta	1.54E-02	2.50E-03	2.76E-03
520339	12/31/2019 - 3/31/2020	Cs-134	<1.64E-03	0.00E+00	1.64E-03
		Cs-137	<8.13E-04	0.00E+00	8.13E-04
		Be-7	1.42E-01	3.73E-02	3.00E-02
		K-40	<2.66E-02	0.00E+00	2.66E-02
520539	3/31/2020 - 4/7/2020	Beta	1.47E-02	2.46E-03	2.75E-03
520838	4/7/2020 - 4/14/2020	Beta	2.09E-02	3.06E-03	3.08E-03



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
521636	4/14/2020 - 4/21/2020	Beta	2.17E-02	2.98E-03	2.85E-03
522062	4/21/2020 - 4/28/2020	Beta	1.39E-02	2.37E-03	2.66E-03
522373	4/28/2020 - 5/5/2020	Beta	1.58E-02	2.53E-03	2.81E-03
522629	5/5/2020 - 5/12/2020	Beta	1.69E-02	3.01E-03	3.56E-03
523132	5/12/2020 - 5/19/2020	Beta	1.37E-02	2.77E-03	3.38E-03
523496	5/19/2020 - 5/26/2020	Beta	1.23E-02	2.71E-03	3.40E-03
523906	5/26/2020 - 6/2/2020	Beta	1.18E-02	2.59E-03	3.19E-03
524474	6/2/2020 - 6/8/2020	Beta	1.78E-02	2.96E-03	3.39E-03
524792	6/8/2020 - 6/16/2020	Beta	1.41E-02	2.13E-03	2.16E-03
525015	6/16/2020 - 6/23/2020	Beta	1.57E-02	2.49E-03	2.71E-03
525408	6/23/2020 - 6/30/2020	Beta	1.45E-02	2.47E-03	2.79E-03
525418	3/31/2020 - 6/30/2020	Nuclide	Activity	2 Sigma Error	MDA
		Cs-134	<1.25E-03	0.00E+00	1.25E-03
		Cs-137	<1.44E-03	0.00E+00	1.44E-03
		Be-7	1.42E-01	3.58E-02	3.18E-02
		K-40	<3.66E-02	0.00E+00	3.66E-02
525612	6/30/2020 - 7/7/2020	Beta	2.12E-02	3.17E-03	3.37E-03
525986	7/7/2020 - 7/14/2020	Beta	1.33E-02	2.65E-03	3.16E-03
526299	7/14/2020 - 7/20/2020	Beta	3.04E-02	3.92E-03	3.79E-03
526587	7/20/2020 - 7/27/2020	Beta	1.20E-02	2.72E-03	3.49E-03
526902	7/27/2020 - 8/3/2020	Beta	1.79E-02	2.85E-03	2.90E-03
527402	8/3/2020 - 8/11/2020	Beta	1.73E-02	2.37E-03	2.42E-03
527673	8/11/2020 - 8/18/2020	Beta	1.84E-02	2.79E-03	2.74E-03
527976	8/18/2020 - 8/25/2020	Beta	1.71E-02	2.86E-03	3.12E-03
528721	8/25/2020 - 9/1/2020	Beta	1.73E-02	3.02E-03	3.46E-03
529062	9/1/2020 - 9/8/2020	Beta	2.47E-02	2.88E-03	2.63E-03
530068	9/8/2020 - 9/15/2020	Beta	1.38E-02	2.34E-03	2.56E-03
530226	9/15/2020 - 9/22/2020	Beta	1.51E-02	2.53E-03	2.90E-03



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
530528	9/22/2020 - 9/29/2020	Beta	1.66E-02	2.88E-03	3.24E-03
531152	6/30/2020 - 9/29/2020	Nuclide	Activity	2 Sigma Error	MDA
		Cs-134	<1.92E-03	0.00E+00	1.92E-03
		Cs-137	<1.68E-03	0.00E+00	1.68E-03
		Be-7	1.45E-01	3.42E-02	2.68E-02
		K-40	<3.32E-02	0.00E+00	3.32E-02
531022	9/29/2020 - 10/6/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	1.69E-02	2.93E-03	3.36E-03
531638	10/6/2020 - 10/13/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	2.88E-02	3.08E-03	2.73E-03
532037	10/13/2020 - 10/20/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	2.30E-02	2.87E-03	2.85E-03
532469	10/20/2020 - 10/27/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	9.65E-03	2.13E-03	2.62E-03
532777	10/27/2020 - 11/3/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	1.89E-02	2.55E-03	2.50E-03
533300	11/3/2020 - 11/10/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	1.65E-02	2.91E-03	3.32E-03
533750	11/10/2020 - 11/17/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	1.36E-02	2.28E-03	2.45E-03
534064	11/17/2020 - 11/24/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	1.59E-02	2.59E-03	3.00E-03
534524	11/24/2020 - 12/1/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	2.63E-02	2.93E-03	2.61E-03
534739	12/1/2020 - 12/8/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	2.42E-02	2.90E-03	2.69E-03
535293	12/8/2020 - 12/15/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	3.44E-02	3.33E-03	2.78E-03
535848	12/15/2020 - 12/22/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	2.17E-02	2.78E-03	2.76E-03
536132	12/22/2020 - 12/29/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	1.84E-02	2.68E-03	2.85E-03
536811	9/29/2020 - 12/29/2020	Nuclide	Activity	2 Sigma Error	MDA
		Cs-134	<1.77E-03	0.00E+00	1.77E-03
		Cs-137	<1.82E-03	0.00E+00	1.82E-03
		Be-7	1.36E-01	3.88E-02	4.06E-02
		K-40	<2.89E-02	0.00E+00	2.89E-02

Sample Point 5 [ INDICATOR - ENE @ 0.9 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514953	12/31/2019 - 1/6/2020	Beta	1.51E-02	3.06E-03	3.72E-03
515297	1/6/2020 - 1/13/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	1.79E-02	2.68E-03	2.88E-03
515523	1/13/2020 - 1/20/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	2.30E-02	4.14E-03	4.57E-03
515918	1/20/2020 - 1/27/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	1.89E-02	2.96E-03	3.16E-03
516170	1/27/2020 - 2/4/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	1.64E-02	2.38E-03	2.56E-03
516545	2/4/2020 - 2/11/2020	Nuclide	Activity	2 Sigma Error	MDA
		Beta	1.79E-02	2.66E-03	2.83E-03



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
516914	2/11/2020 - 2/18/2020	Beta	1.39E-02	2.66E-03	3.10E-03
517441	2/18/2020 - 2/25/2020	Beta	1.89E-02	3.12E-03	3.52E-03
517702	2/25/2020 - 3/2/2020	Beta	1.52E-02	3.14E-03	3.79E-03
518755	3/2/2020 - 3/10/2020	Beta	1.62E-02	2.37E-03	2.56E-03
519341	3/10/2020 - 3/16/2020	Beta	1.70E-02	3.23E-03	3.81E-03
519730	3/16/2020 - 3/24/2020	Beta	1.60E-02	2.28E-03	2.36E-03
520330	3/24/2020 - 3/31/2020	Beta	1.44E-02	2.43E-03	2.73E-03
520340	12/31/2019 - 3/31/2020	Cs-134	<1.56E-03	0.00E+00	1.56E-03
		Cs-137	<1.27E-03	0.00E+00	1.27E-03
		Be-7	1.49E-01	3.85E-02	2.73E-02
		K-40	1.94E-02	1.18E-02	4.79E-03
520540	3/31/2020 - 4/7/2020	Beta	1.49E-02	2.45E-03	2.73E-03
520839	4/7/2020 - 4/14/2020	Beta	2.52E-02	3.36E-03	3.23E-03
521637	4/14/2020 - 4/21/2020	Beta	2.10E-02	2.98E-03	2.88E-03
522063	4/21/2020 - 4/28/2020	Beta	1.58E-02	2.50E-03	2.70E-03
522374	4/28/2020 - 5/5/2020	Beta	1.85E-02	2.62E-03	2.74E-03
522630	5/5/2020 - 5/12/2020	Beta	1.69E-02	3.03E-03	3.60E-03
523133	5/12/2020 - 5/19/2020	Beta	1.26E-02	2.70E-03	3.37E-03
523497	5/19/2020 - 5/26/2020	Beta	9.33E-03	2.52E-03	3.37E-03
523907	5/26/2020 - 6/2/2020	Beta	1.13E-02	2.58E-03	3.21E-03
524475	6/2/2020 - 6/8/2020	Beta	1.77E-02	2.94E-03	3.37E-03
524793	6/8/2020 - 6/16/2020	Beta	1.43E-02	2.14E-03	2.16E-03
525016	6/16/2020 - 6/23/2020	Beta	1.62E-02	2.52E-03	2.71E-03
525409	6/23/2020 - 6/30/2020	Beta	1.46E-02	2.45E-03	2.77E-03
525419	3/31/2020 - 6/30/2020	Cs-134	<1.75E-03	0.00E+00	1.75E-03
		Cs-137	<1.54E-03	0.00E+00	1.54E-03
		Be-7	1.27E-01	3.55E-02	3.64E-02
		K-40	2.91E-02	1.55E-02	1.53E-02
525613	6/30/2020 - 7/7/2020	Beta	1.89E-02	3.07E-03	3.40E-03



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
525987	7/7/2020 - 7/14/2020	Beta	1.70E-02	2.86E-03	3.18E-03
526300	7/14/2020 - 7/20/2020	Beta	3.08E-02	3.94E-03	3.78E-03
526588	7/20/2020 - 7/27/2020	Beta	1.10E-02	2.67E-03	3.48E-03
526903	7/27/2020 - 8/3/2020	Beta	1.60E-02	2.76E-03	2.92E-03
527403	8/3/2020 - 8/11/2020	Beta	1.87E-02	2.44E-03	2.44E-03
527674	8/11/2020 - 8/18/2020	Beta	1.97E-02	2.84E-03	2.73E-03
527977	8/18/2020 - 8/25/2020	Beta	1.61E-02	2.79E-03	3.12E-03
528722	8/25/2020 - 9/1/2020	Beta	1.81E-02	3.05E-03	3.45E-03
529063	9/1/2020 - 9/8/2020	Beta	2.49E-02	2.89E-03	2.63E-03
530069	9/8/2020 - 9/15/2020	Beta	1.27E-02	2.29E-03	2.58E-03
530227	9/15/2020 - 9/22/2020	Beta	1.59E-02	2.58E-03	2.90E-03
530529	9/22/2020 - 9/29/2020	Beta	1.56E-02	2.82E-03	3.23E-03
531153	6/30/2020 - 9/29/2020	Cs-134	<9.85E-04	0.00E+00	9.85E-04
		Cs-137	<1.55E-03	0.00E+00	1.55E-03
		Be-7	1.38E-01	3.11E-02	1.63E-02
		K-40	<3.26E-02	0.00E+00	3.26E-02
531023	9/29/2020 - 10/6/2020	Beta	1.88E-02	3.02E-03	3.37E-03
531639	10/6/2020 - 10/13/2020	Beta	2.83E-02	2.99E-03	2.64E-03
532038	10/13/2020 - 10/20/2020	Beta	1.98E-02	2.80E-03	2.95E-03
532470	10/20/2020 - 10/27/2020	Beta	8.42E-03	2.04E-03	2.60E-03
532778	10/27/2020 - 11/3/2020	Beta	1.75E-02	2.54E-03	2.59E-03
533301	11/3/2020 - 11/10/2020	Beta	1.70E-02	2.91E-03	3.28E-03
533751	11/10/2020 - 11/17/2020	Beta	1.62E-02	2.42E-03	2.46E-03
534065	11/17/2020 - 11/24/2020	Beta	1.53E-02	2.56E-03	2.99E-03
534525	11/24/2020 - 12/1/2020	Beta	2.63E-02	2.97E-03	2.66E-03
534741	12/1/2020 - 12/8/2020	Beta	2.49E-02	2.89E-03	2.63E-03
535294	12/8/2020 - 12/15/2020	Beta	3.58E-02	3.35E-03	2.74E-03



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
535849	12/15/2020 - 12/22/2020	Beta	1.77E-02	2.60E-03	2.76E-03
536133	12/22/2020 - 12/29/2020	Beta	1.87E-02	2.66E-03	2.81E-03
536812	9/29/2020 - 12/29/2020	Cs-134	<1.76E-03	0.00E+00	1.76E-03
		Cs-137	<1.02E-03	0.00E+00	1.02E-03
		Be-7	1.36E-01	3.48E-02	3.11E-02
		K-40	2.17E-02	1.54E-02	2.01E-02

Sample Point 6 [ INDICATOR - SSW @ 0.2 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514955	12/31/2019 - 1/6/2020	Beta	1.74E-02	3.24E-03	3.81E-03
515299	1/6/2020 - 1/13/2020	Beta	1.66E-02	2.56E-03	2.79E-03
515525	1/13/2020 - 1/20/2020	Beta	2.04E-02	2.94E-03	2.90E-03
515920	1/20/2020 - 1/27/2020	Beta	2.22E-02	3.09E-03	3.10E-03
516172	1/27/2020 - 2/4/2020	Beta	1.85E-02	2.47E-03	2.55E-03
516547	2/4/2020 - 2/11/2020	Beta	2.02E-02	2.72E-03	2.78E-03
516916	2/11/2020 - 2/18/2020	Beta	1.41E-02	2.65E-03	3.07E-03
517443	2/18/2020 - 2/25/2020	Beta	1.99E-02	3.10E-03	3.42E-03
517704	2/25/2020 - 3/2/2020	Beta	1.80E-02	3.36E-03	3.90E-03
518757	3/2/2020 - 3/10/2020	Beta	1.80E-02	2.43E-03	2.52E-03
519343	3/10/2020 - 3/16/2020	Beta	2.00E-02	3.36E-03	3.78E-03
519732	3/16/2020 - 3/24/2020	Beta	1.66E-02	2.33E-03	2.39E-03
520332	3/24/2020 - 3/31/2020	Beta	1.77E-02	2.62E-03	2.77E-03
520342	12/31/2019 - 3/31/2020	Cs-134	<1.81E-03	0.00E+00	1.81E-03
		Cs-137	<1.47E-03	0.00E+00	1.47E-03
		Be-7	1.52E-01	4.06E-02	3.74E-02
		K-40	2.98E-02	1.59E-02	1.56E-02
520542	3/31/2020 - 4/7/2020	Beta	1.95E-02	2.69E-03	2.75E-03
520841	4/7/2020 - 4/14/2020	Beta	2.34E-02	3.18E-03	3.08E-03
521639	4/14/2020 - 4/21/2020	Beta	2.40E-02	3.10E-03	2.86E-03
522065	4/21/2020 - 4/28/2020	Beta	1.76E-02	2.55E-03	2.63E-03
522376	4/28/2020 - 5/5/2020	Beta	1.84E-02	2.67E-03	2.82E-03





# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
522632	5/5/2020 - 5/12/2020	Beta	2.03E-02	3.17E-03	3.57E-03
523135	5/12/2020 - 5/19/2020	Beta	1.55E-02	2.87E-03	3.38E-03
523499	5/19/2020 - 5/26/2020	Beta	1.17E-02	2.68E-03	3.40E-03
523909	5/26/2020 - 6/2/2020	Beta	1.24E-02	2.63E-03	3.20E-03
524477	6/2/2020 - 6/8/2020	Beta	2.17E-02	3.15E-03	3.38E-03
524795	6/8/2020 - 6/16/2020	Beta	1.47E-02	2.16E-03	2.16E-03
525018	6/16/2020 - 6/23/2020	Beta	1.81E-02	2.60E-03	2.71E-03
525411	6/23/2020 - 6/30/2020	Beta	1.78E-02	2.63E-03	2.79E-03
525421	3/31/2020 - 6/30/2020	Cs-134	<1.82E-03	0.00E+00	1.82E-03
		Cs-137	<1.23E-03	0.00E+00	1.23E-03
		Be-7	1.26E-01	3.40E-02	3.04E-02
		K-40	<4.63E-03	0.00E+00	4.63E-03
525615	6/30/2020 - 7/7/2020	Beta	2.25E-02	3.23E-03	3.37E-03
525989	7/7/2020 - 7/14/2020	Beta	1.70E-02	2.86E-03	3.16E-03
526302	7/14/2020 - 7/20/2020	Beta	3.53E-02	4.14E-03	3.80E-03
526590	7/20/2020 - 7/27/2020	Beta	1.43E-02	2.84E-03	3.49E-03
526905	7/27/2020 - 8/3/2020	Beta	1.83E-02	2.81E-03	2.80E-03
527405	8/3/2020 - 8/11/2020	Beta	1.87E-02	2.49E-03	2.50E-03
527676	8/11/2020 - 8/18/2020	Beta	2.02E-02	2.87E-03	2.74E-03
527979	8/18/2020 - 8/25/2020	Beta	1.48E-02	2.72E-03	3.11E-03
528724	8/25/2020 - 9/1/2020	Beta	1.94E-02	3.13E-03	3.47E-03
529065	9/1/2020 - 9/8/2020	Beta	2.76E-02	3.00E-03	2.64E-03
530071	9/8/2020 - 9/15/2020	Beta	1.31E-02	2.30E-03	2.56E-03
530229	9/15/2020 - 9/22/2020	Beta	1.50E-02	2.53E-03	2.91E-03
530531	9/22/2020 - 9/29/2020	Beta	1.93E-02	3.02E-03	3.23E-03
531155	6/30/2020 - 9/29/2020	Cs-134	<3.73E-04	0.00E+00	3.73E-04
		Cs-137	<1.06E-03	0.00E+00	1.06E-03
		Be-7	1.34E-01	3.31E-02	2.59E-02
		K-40	<2.57E-02	0.00E+00	2.57E-02



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
531025	9/29/2020 - 10/6/2020	Beta	1.79E-02	2.97E-03	3.36E-03
531641	10/6/2020 - 10/13/2020	Beta	2.70E-02	3.01E-03	2.74E-03
532040	10/13/2020 - 10/20/2020	Beta	2.23E-02	2.85E-03	2.84E-03
532472	10/20/2020 - 10/27/2020	Beta	1.15E-02	2.24E-03	2.62E-03
532780	10/27/2020 - 11/3/2020	Beta	1.78E-02	2.50E-03	2.50E-03
533303	11/3/2020 - 11/10/2020	Beta	1.52E-02	2.83E-03	3.31E-03
533753	11/10/2020 - 11/17/2020	Beta	1.62E-02	2.43E-03	2.46E-03
534067	11/17/2020 - 11/24/2020	Beta	1.52E-02	2.57E-03	3.00E-03
534527	11/24/2020 - 12/1/2020	Beta	2.43E-02	2.85E-03	2.61E-03
534744	12/1/2020 - 12/8/2020	Beta	2.50E-02	2.93E-03	2.68E-03
535296	12/8/2020 - 12/15/2020	Beta	3.28E-02	3.27E-03	2.77E-03
535851	12/15/2020 - 12/22/2020	Beta	2.23E-02	2.81E-03	2.76E-03
536135	12/22/2020 - 12/29/2020	Beta	1.84E-02	2.67E-03	2.84E-03
536814	9/29/2020 - 12/29/2020	Cs-134	<1.91E-03	0.00E+00	1.91E-03
		Cs-137	<1.46E-03	0.00E+00	1.46E-03
		Be-7	1.30E-01	3.72E-02	4.01E-02
		K-40	1.87E-02	1.46E-02	1.99E-02

Sample Point 7 [ INDICATOR - ESE @ 6.4 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514958	12/31/2019 - 1/6/2020	Beta	1.36E-02	3.01E-03	3.79E-03
515302	1/6/2020 - 1/13/2020	Beta	1.78E-02	2.64E-03	2.80E-03
515528	1/13/2020 - 1/20/2020	Beta	1.84E-02	2.83E-03	2.87E-03
515923	1/20/2020 - 1/27/2020	Beta	1.70E-02	2.85E-03	3.12E-03
516175	1/27/2020 - 2/4/2020	Beta	1.73E-02	2.42E-03	2.56E-03
516550	2/4/2020 - 2/11/2020	Beta	1.52E-02	2.48E-03	2.74E-03
516919	2/11/2020 - 2/18/2020	Beta	1.39E-02	2.71E-03	3.19E-03
517446	2/18/2020 - 2/25/2020	Beta	1.64E-02	2.92E-03	3.41E-03
517707	2/25/2020 - 3/2/2020	Beta	1.53E-02	3.14E-03	3.78E-03



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
518760	3/2/2020 - 3/10/2020	Beta	1.66E-02	2.41E-03	2.59E-03
519346	3/10/2020 - 3/16/2020	Beta	1.92E-02	3.36E-03	3.83E-03
519735	3/16/2020 - 3/24/2020	Beta	1.76E-02	2.35E-03	2.33E-03
520335	3/24/2020 - 3/31/2020	Beta	1.48E-02	2.46E-03	2.75E-03
520345	12/31/2019 - 3/31/2020	Cs-134	<1.27E-03	0.00E+00	1.27E-03
		Cs-137	<2.99E-04	0.00E+00	2.99E-04
		Be-7	1.43E-01	3.85E-02	3.40E-02
		K-40	<2.79E-02	0.00E+00	2.79E-02
520545	3/31/2020 - 4/7/2020	Beta	1.65E-02	2.54E-03	2.74E-03
520844	4/7/2020 - 4/14/2020	Beta	2.27E-02	3.16E-03	3.10E-03
521642	4/14/2020 - 4/21/2020	Beta	2.17E-02	2.99E-03	2.86E-03
522068	4/21/2020 - 4/28/2020	Beta	1.83E-02	2.61E-03	2.67E-03
522379	4/28/2020 - 5/5/2020	Beta	2.03E-02	2.74E-03	2.78E-03
522635	5/5/2020 - 5/12/2020	Beta	1.46E-02	2.91E-03	3.58E-03
523138	5/12/2020 - 5/19/2020	Beta	1.25E-02	2.71E-03	3.39E-03
523502	5/19/2020 - 5/26/2020	Beta	1.17E-02	2.65E-03	3.35E-03
523912	5/26/2020 - 6/2/2020	Beta	1.14E-02	2.60E-03	3.24E-03
524480	6/2/2020 - 6/8/2020	Beta	1.72E-02	2.94E-03	3.39E-03
524798	6/8/2020 - 6/16/2020	Beta	1.51E-02	2.17E-03	2.16E-03
525021	6/16/2020 - 6/23/2020	Beta	1.39E-02	2.39E-03	2.72E-03
525414	6/23/2020 - 6/30/2020	Beta	1.48E-02	2.46E-03	2.76E-03
525424	3/31/2020 - 6/30/2020	Cs-134	<1.60E-03	0.00E+00	1.60E-03
		Cs-137	<1.43E-03	0.00E+00	1.43E-03
		Be-7	1.40E-01	3.48E-02	2.93E-02
		K-40	3.64E-02	1.58E-02	4.49E-03
525618	6/30/2020 - 7/7/2020	Beta	2.20E-02	3.23E-03	3.40E-03
525992	7/7/2020 - 7/14/2020	Beta	1.67E-02	2.84E-03	3.17E-03
526305	7/14/2020 - 7/20/2020	Beta	2.94E-02	3.88E-03	3.80E-03
526593	7/20/2020 - 7/27/2020	Beta	1.01E-02	2.61E-03	3.47E-03



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
526908	7/27/2020 - 8/3/2020	Beta	1.51E-02	2.72E-03	2.95E-03
527408	8/3/2020 - 8/11/2020	Beta	1.08E-02	2.04E-03	2.42E-03
527679	8/11/2020 - 8/18/2020	Beta	1.81E-02	2.76E-03	2.74E-03
527982	8/18/2020 - 8/25/2020	Beta	1.50E-02	2.74E-03	3.12E-03
528727	8/25/2020 - 9/1/2020	Beta	1.88E-02	3.10E-03	3.48E-03
529068	9/1/2020 - 9/8/2020	Beta	2.24E-02	2.75E-03	2.59E-03
530074	9/8/2020 - 9/15/2020	Beta	1.46E-02	2.41E-03	2.60E-03
530232	9/15/2020 - 9/22/2020	Beta	1.84E-02	2.69E-03	2.90E-03
530534	9/22/2020 - 9/29/2020	Beta	2.28E-02	3.21E-03	3.23E-03
531158	6/30/2020 - 9/29/2020	Cs-134	<1.89E-03	0.00E+00	1.89E-03
		Cs-137	<1.44E-03	0.00E+00	1.44E-03
		Be-7	1.51E-01	3.59E-02	3.00E-02
		K-40	<2.79E-02	0.00E+00	2.79E-02
531028	9/29/2020 - 10/6/2020	Beta	2.21E-02	3.19E-03	3.37E-03
532043	10/13/2020 - 10/20/2020	Beta	2.02E-02	2.78E-03	2.89E-03
532475	10/20/2020 - 10/27/2020	Beta	1.47E-02	2.42E-03	2.61E-03
532783	10/27/2020 - 11/3/2020	Beta	1.85E-02	2.60E-03	2.61E-03
533306	11/3/2020 - 11/10/2020	Beta	1.58E-02	2.85E-03	3.28E-03
533756	11/10/2020 - 11/17/2020	Beta	1.62E-02	2.45E-03	2.46E-03
534070	11/17/2020 - 11/24/2020	Beta	1.49E-02	2.56E-03	3.01E-03
534530	11/24/2020 - 12/1/2020	Beta	2.80E-02	3.03E-03	2.63E-03
534747	12/1/2020 - 12/8/2020	Beta	2.33E-02	2.82E-03	2.63E-03
535299	12/8/2020 - 12/15/2020	Beta	3.08E-02	3.15E-03	2.72E-03
535854	12/15/2020 - 12/22/2020	Beta	2.33E-02	2.87E-03	2.76E-03
536138	12/22/2020 - 12/29/2020	Beta	1.98E-02	2.72E-03	2.81E-03
536817	9/29/2020 - 12/29/2020	Cs-134	<1.72E-03	0.00E+00	1.72E-03
		Cs-137	<1.85E-03	0.00E+00	1.85E-03
		Be-7	1.44E-01	3.74E-02	2.97E-02
		K-40	<2.79E-02	0.00E+00	2.79E-02



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
514954	12/31/2019 - 1/6/2020	Beta	1.59E-02	3.17E-03	3.82E-03
515298	1/6/2020 - 1/13/2020	Beta	1.44E-02	2.45E-03	2.79E-03
515524	1/13/2020 - 1/20/2020	Beta	1.94E-02	2.88E-03	2.89E-03
515919	1/20/2020 - 1/27/2020	Beta	2.03E-02	3.00E-03	3.09E-03
516171	1/27/2020 - 2/4/2020	Beta	1.86E-02	2.49E-03	2.58E-03
516546	2/4/2020 - 2/11/2020	Beta	1.73E-02	2.58E-03	2.75E-03
516915	2/11/2020 - 2/18/2020	Beta	1.52E-02	2.72E-03	3.07E-03
517442	2/18/2020 - 2/25/2020	Beta	1.85E-02	3.02E-03	3.41E-03
517703	2/25/2020 - 3/2/2020	Beta	1.56E-02	3.23E-03	3.90E-03
518756	3/2/2020 - 3/10/2020	Beta	1.61E-02	2.35E-03	2.52E-03
519342	3/10/2020 - 3/16/2020	Beta	2.05E-02	3.40E-03	3.79E-03
519731	3/16/2020 - 3/24/2020	Beta	1.47E-02	2.25E-03	2.40E-03
520331	3/24/2020 - 3/31/2020	Beta	1.65E-02	2.54E-03	2.75E-03
520341	12/31/2019 - 3/31/2020	Cs-134	<1.61E-03	0.00E+00	1.61E-03
		Cs-137	<1.71E-03	0.00E+00	1.71E-03
		Be-7	1.93E-01	4.73E-02	4.05E-02
		K-40	<3.43E-02	0.00E+00	3.43E-02
520541	3/31/2020 - 4/7/2020	Beta	1.55E-02	2.49E-03	2.74E-03
520840	4/7/2020 - 4/14/2020	Beta	2.13E-02	3.09E-03	3.11E-03
521638	4/14/2020 - 4/21/2020	Beta	2.42E-02	3.11E-03	2.87E-03
522064	4/21/2020 - 4/28/2020	Beta	1.77E-02	2.56E-03	2.65E-03
522375	4/28/2020 - 5/5/2020	Beta	1.72E-02	2.60E-03	2.79E-03
522631	5/5/2020 - 5/12/2020	Beta	1.78E-02	3.05E-03	3.56E-03
523134	5/12/2020 - 5/19/2020	Beta	1.29E-02	2.68E-03	3.30E-03
523498	5/19/2020 - 5/26/2020	Beta	1.08E-02	2.68E-03	3.49E-03
523908	5/26/2020 - 6/2/2020	Beta	1.19E-02	2.60E-03	3.19E-03
524476	6/2/2020 - 6/8/2020	Beta	1.90E-02	3.02E-03	3.39E-03



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
524794	6/8/2020 - 6/16/2020	Beta	1.42E-02	2.13E-03	2.16E-03
525017	6/16/2020 - 6/23/2020	Beta	1.60E-02	2.50E-03	2.71E-03
525410	6/23/2020 - 6/30/2020	Beta	1.48E-02	2.47E-03	2.77E-03
525420	3/31/2020 - 6/30/2020	Cs-134	<1.63E-03	0.00E+00	1.63E-03
		Cs-137	<1.33E-03	0.00E+00	1.33E-03
		Be-7	1.53E-01	3.80E-02	3.48E-02
		K-40	<2.80E-02	0.00E+00	2.80E-02
525614	6/30/2020 - 7/7/2020	Beta	1.83E-02	3.04E-03	3.39E-03
525988	7/7/2020 - 7/14/2020	Beta	1.75E-02	2.87E-03	3.16E-03
526301	7/14/2020 - 7/20/2020	Beta	2.90E-02	3.85E-03	3.79E-03
526589	7/20/2020 - 7/27/2020	Beta	1.05E-02	2.63E-03	3.50E-03
526904	7/27/2020 - 8/3/2020	Beta	2.01E-02	2.90E-03	2.81E-03
527404	8/3/2020 - 8/11/2020	Beta	1.69E-02	2.39E-03	2.50E-03
527675	8/11/2020 - 8/18/2020	Beta	2.31E-02	3.03E-03	2.77E-03
527978	8/18/2020 - 8/25/2020	Beta	1.60E-02	2.78E-03	3.11E-03
528723	8/25/2020 - 9/1/2020	Beta	1.82E-02	3.05E-03	3.45E-03
529064	9/1/2020 - 9/8/2020	Beta	2.27E-02	2.79E-03	2.63E-03
530070	9/8/2020 - 9/15/2020	Beta	1.53E-02	2.42E-03	2.56E-03
530228	9/15/2020 - 9/22/2020	Beta	1.52E-02	2.55E-03	2.91E-03
530530	9/22/2020 - 9/29/2020	Beta	1.84E-02	2.98E-03	3.23E-03
531154	6/30/2020 - 9/29/2020	Cs-134	<1.61E-03	0.00E+00	1.61E-03
		Cs-137	<1.19E-03	0.00E+00	1.19E-03
		Be-7	1.22E-01	3.32E-02	3.25E-02
		K-40	2.49E-02	1.42E-02	1.35E-02
531024	9/29/2020 - 10/6/2020	Beta	1.66E-02	2.91E-03	3.36E-03
531640	10/6/2020 - 10/13/2020	Beta	2.73E-02	3.02E-03	2.73E-03
532039	10/13/2020 - 10/20/2020	Beta	2.16E-02	2.82E-03	2.85E-03
532471	10/20/2020 - 10/27/2020	Beta	1.21E-02	2.26E-03	2.61E-03
532779	10/27/2020 - 11/3/2020	Beta	2.20E-02	2.69E-03	2.50E-03



## ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
533302	11/3/2020 - 11/10/2020	Beta	1.74E-02	2.96E-03	3.33E-03
533752	11/10/2020 - 11/17/2020	Beta	1.88E-02	2.55E-03	2.45E-03
534066	11/17/2020 - 11/24/2020	Beta	1.90E-02	2.74E-03	3.01E-03
534526	11/24/2020 - 12/1/2020	Beta	2.59E-02	2.92E-03	2.60E-03
534742	12/1/2020 - 12/8/2020	Beta	2.59E-02	2.98E-03	2.69E-03
535295	12/8/2020 - 12/15/2020	Beta	3.49E-02	3.34E-03	2.77E-03
535850	12/15/2020 - 12/22/2020	Beta	2.05E-02	2.73E-03	2.77E-03
536134	12/22/2020 - 12/29/2020	Beta	2.00E-02	2.75E-03	2.84E-03
536813	9/29/2020 - 12/29/2020	Cs-134	<1.26E-03	0.00E+00	1.26E-03
		Cs-137	<1.33E-03	0.00E+00	1.33E-03
		Be-7	1.41E-01	3.83E-02	4.00E-02
		K-40	2.73E-02	1.64E-02	1.94E-02

Sample Point 60 [ INDICATOR - SE @ 0.2 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514956	12/31/2019 - 1/6/2020	Beta	1.71E-02	3.23E-03	3.81E-03
515300	1/6/2020 - 1/13/2020	Beta	1.65E-02	2.56E-03	2.79E-03
515526	1/13/2020 - 1/20/2020	Beta	1.67E-02	2.75E-03	2.90E-03
515921	1/20/2020 - 1/27/2020	Beta	2.17E-02	3.07E-03	3.10E-03
516173	1/27/2020 - 2/4/2020	Beta	2.00E-02	2.54E-03	2.56E-03
516548	2/4/2020 - 2/11/2020	Beta	1.17E-02	2.31E-03	2.77E-03
516917	2/11/2020 - 2/18/2020	Beta	1.19E-02	2.53E-03	3.07E-03
517444	2/18/2020 - 2/25/2020	Beta	1.45E-02	2.83E-03	3.42E-03
517705	2/25/2020 - 3/2/2020	Beta	1.64E-02	3.26E-03	3.89E-03
518758	3/2/2020 - 3/10/2020	Beta	8.19E-03	1.95E-03	2.53E-03
519344	3/10/2020 - 3/16/2020	Beta	1.57E-02	3.14E-03	3.78E-03
519733	3/16/2020 - 3/24/2020	Beta	1.65E-02	2.33E-03	2.40E-03
520333	3/24/2020 - 3/31/2020	Beta	1.51E-02	2.48E-03	2.76E-03
520343	12/31/2019 - 3/31/2020	Cs-134	<1.63E-03	0.00E+00	1.63E-03
		Cs-137	<1.32E-03	0.00E+00	1.32E-03
		Be-7	1.11E-01	3.96E-02	4.81E-02

# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
520343	12/31/2019 - 3/31/2020	K-40	<4.01E-02	0.00E+00	4.01E-02
520543	3/31/2020 - 4/7/2020	Beta	1.47E-02	2.45E-03	2.75E-03
520842	4/7/2020 - 4/14/2020	Beta	1.93E-02	2.98E-03	3.09E-03
521640	4/14/2020 - 4/21/2020	Beta	2.05E-02	2.92E-03	2.85E-03
522066	4/21/2020 - 4/28/2020	Beta	1.46E-02	2.42E-03	2.66E-03
522377	4/28/2020 - 5/5/2020	Beta	1.55E-02	2.52E-03	2.81E-03
522633	5/5/2020 - 5/12/2020	Beta	1.54E-02	2.93E-03	3.55E-03
523136	5/12/2020 - 5/19/2020	Beta	1.29E-02	2.68E-03	3.30E-03
523500	5/19/2020 - 5/26/2020	Beta	1.11E-02	2.70E-03	3.49E-03
523910	5/26/2020 - 6/2/2020	Beta	1.44E-02	2.75E-03	3.19E-03
524478	6/2/2020 - 6/8/2020	Beta	2.04E-02	3.09E-03	3.39E-03
524796	6/8/2020 - 6/16/2020	Beta	1.44E-02	2.14E-03	2.16E-03
525019	6/16/2020 - 6/23/2020	Beta	1.78E-02	2.59E-03	2.71E-03
525412	6/23/2020 - 6/30/2020	Beta	1.89E-02	2.67E-03	2.79E-03
525422	3/31/2020 - 6/30/2020	Cs-134	<1.27E-03	0.00E+00	1.27E-03
		Cs-137	<1.47E-03	0.00E+00	1.47E-03
		Be-7	1.23E-01	3.52E-02	3.63E-02
		K-40	1.83E-02	1.27E-02	1.43E-02
525616	6/30/2020 - 7/7/2020	Beta	2.16E-02	3.19E-03	3.37E-03
525990	7/7/2020 - 7/14/2020	Beta	1.48E-02	2.72E-03	3.14E-03
526303	7/14/2020 - 7/20/2020	Beta	2.92E-02	3.88E-03	3.82E-03
526591	7/20/2020 - 7/27/2020	Beta	1.13E-02	2.68E-03	3.49E-03
526906	7/27/2020 - 8/3/2020	Beta	1.96E-02	2.88E-03	2.81E-03
527406	8/3/2020 - 8/11/2020	Beta	1.71E-02	2.41E-03	2.50E-03
527677	8/11/2020 - 8/18/2020	Beta	1.88E-02	2.80E-03	2.74E-03
527980	8/18/2020 - 8/25/2020	Beta	1.82E-02	2.91E-03	3.12E-03
528725	8/25/2020 - 9/1/2020	Beta	1.88E-02	3.09E-03	3.46E-03





# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
529066	9/1/2020 - 9/8/2020	Beta	2.59E-02	2.93E-03	2.63E-03
530072	9/8/2020 - 9/15/2020	Beta	1.63E-02	2.46E-03	2.56E-03
530230	9/15/2020 - 9/22/2020	Beta	1.89E-02	2.72E-03	2.91E-03
530532	9/22/2020 - 9/29/2020	Beta	1.64E-02	2.87E-03	3.23E-03
531156	6/30/2020 - 9/29/2020	Cs-134	<1.36E-03	0.00E+00	1.36E-03
		Cs-137	<1.71E-03	0.00E+00	1.71E-03
		Be-7	1.51E-01	3.81E-02	3.48E-02
		K-40	3.13E-02	1.87E-02	2.27E-02
531026	9/29/2020 - 10/6/2020	Beta	1.80E-02	2.98E-03	3.35E-03
531642	10/6/2020 - 10/13/2020	Beta	3.03E-02	3.14E-03	2.74E-03
532041	10/13/2020 - 10/20/2020	Beta	2.12E-02	2.79E-03	2.84E-03
532473	10/20/2020 - 10/27/2020	Beta	1.07E-02	2.19E-03	2.62E-03
532781	10/27/2020 - 11/3/2020	Beta	2.04E-02	2.62E-03	2.50E-03
533304	11/3/2020 - 11/10/2020	Beta	1.59E-02	2.88E-03	3.32E-03
533754	11/10/2020 - 11/17/2020	Beta	1.46E-02	2.34E-03	2.45E-03
534068	11/17/2020 - 11/24/2020	Beta	1.67E-02	2.63E-03	3.00E-03
534528	11/24/2020 - 12/1/2020	Beta	2.42E-02	2.85E-03	2.61E-03
534745	12/1/2020 - 12/8/2020	Beta	2.13E-02	2.76E-03	2.68E-03
535297	12/8/2020 - 12/15/2020	Beta	3.27E-02	3.26E-03	2.77E-03
535852	12/15/2020 - 12/22/2020	Beta	1.66E-02	2.55E-03	2.76E-03
536136	12/22/2020 - 12/29/2020	Beta	2.15E-02	2.82E-03	2.85E-03
536815	9/29/2020 - 12/29/2020	Cs-134	<1.45E-03	0.00E+00	1.45E-03
		Cs-137	<1.33E-03	0.00E+00	1.33E-03
		Be-7	1.31E-01	3.45E-02	3.16E-02
		K-40	3.35E-02	1.78E-02	1.97E-02

Sample Point 61 [ INDICATOR - WSW @ 0.3 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514957	12/31/2019 - 1/6/2020	Beta	1.34E-02	3.02E-03	3.81E-03
515301	1/6/2020 - 1/13/2020	Beta	1.36E-02	2.41E-03	2.79E-03
515527	1/13/2020 - 1/20/2020	Beta	1.66E-02	2.75E-03	2.90E-03



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
515922	1/20/2020 - 1/27/2020	Beta	1.58E-02	2.77E-03	3.10E-03
516174	1/27/2020 - 2/4/2020	Beta	1.58E-02	2.35E-03	2.55E-03
516549	2/4/2020 - 2/11/2020	Beta	1.63E-02	2.55E-03	2.78E-03
516918	2/11/2020 - 2/18/2020	Beta	1.51E-02	2.71E-03	3.07E-03
517445	2/18/2020 - 2/25/2020	Beta	1.72E-02	3.00E-03	3.49E-03
517706	2/25/2020 - 3/2/2020	Beta	1.59E-02	3.19E-03	3.81E-03
518759	3/2/2020 - 3/10/2020	Beta	1.19E-02	2.14E-03	2.52E-03
519345	3/10/2020 - 3/16/2020	Beta	1.96E-02	3.42E-03	3.90E-03
519734	3/16/2020 - 3/24/2020	Beta	1.39E-02	2.18E-03	2.36E-03
520334	3/24/2020 - 3/31/2020	Beta	1.47E-02	2.45E-03	2.74E-03
520344	12/31/2019 - 3/31/2020	Cs-134	<1.27E-03	0.00E+00	1.27E-03
		Cs-137	<1.20E-03	0.00E+00	1.20E-03
		Be-7	1.29E-01	3.78E-02	3.72E-02
		K-40	<3.95E-02	0.00E+00	3.95E-02
520544	3/31/2020 - 4/7/2020	Beta	1.75E-02	2.60E-03	2.75E-03
520843	4/7/2020 - 4/14/2020	Beta	2.69E-02	3.35E-03	3.08E-03
521641	4/14/2020 - 4/21/2020	Beta	2.51E-02	3.16E-03	2.86E-03
522067	4/21/2020 - 4/28/2020	Beta	1.54E-02	2.44E-03	2.63E-03
522378	4/28/2020 - 5/5/2020	Beta	1.65E-02	2.58E-03	2.82E-03
522634	5/5/2020 - 5/12/2020	Beta	1.55E-02	2.95E-03	3.57E-03
523137	5/12/2020 - 5/19/2020	Beta	1.17E-02	2.66E-03	3.38E-03
523501	5/19/2020 - 5/26/2020	Beta	1.20E-02	2.69E-03	3.40E-03
523911	5/26/2020 - 6/2/2020	Beta	1.30E-02	2.67E-03	3.20E-03
524479	6/2/2020 - 6/8/2020	Beta	2.13E-02	3.12E-03	3.38E-03
524797	6/8/2020 - 6/16/2020	Beta	1.28E-02	2.06E-03	2.17E-03
525020	6/16/2020 - 6/23/2020	Beta	1.39E-02	2.39E-03	2.71E-03
525413	6/23/2020 - 6/30/2020	Beta	1.47E-02	2.47E-03	2.79E-03



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
525423	3/31/2020 - 6/30/2020	Cs-134	<1.76E-03	0.00E+00	1.76E-03
		Cs-137	<1.32E-03	0.00E+00	1.32E-03
		Be-7	1.74E-01	3.94E-02	3.19E-02
		K-40	<3.84E-02	0.00E+00	3.84E-02
525617	6/30/2020 - 7/7/2020	Beta	2.06E-02	3.14E-03	3.37E-03
525991	7/7/2020 - 7/14/2020	Beta	1.50E-02	2.75E-03	3.16E-03
526304	7/14/2020 - 7/20/2020	Beta	3.00E-02	3.90E-03	3.80E-03
526592	7/20/2020 - 7/27/2020	Beta	1.13E-02	2.68E-03	3.49E-03
526907	7/27/2020 - 8/3/2020	Beta	1.73E-02	2.75E-03	2.80E-03
527407	8/3/2020 - 8/11/2020	Beta	1.61E-02	2.36E-03	2.50E-03
527678	8/11/2020 - 8/18/2020	Beta	1.75E-02	2.73E-03	2.74E-03
527981	8/18/2020 - 8/25/2020	Beta	1.67E-02	2.82E-03	3.11E-03
528726	8/25/2020 - 9/1/2020	Beta	1.53E-02	2.92E-03	3.48E-03
529067	9/1/2020 - 9/8/2020	Beta	2.08E-02	2.71E-03	2.64E-03
530073	9/8/2020 - 9/15/2020	Beta	1.25E-02	2.27E-03	2.56E-03
530231	9/15/2020 - 9/22/2020	Beta	1.69E-02	2.62E-03	2.90E-03
530533	9/22/2020 - 9/29/2020	Beta	1.63E-02	2.86E-03	3.23E-03
531157	6/30/2020 - 9/29/2020	Cs-134	<1.79E-03	0.00E+00	1.79E-03
		Cs-137	<1.34E-03	0.00E+00	1.34E-03
		Be-7	1.30E-01	3.38E-02	3.02E-02
		K-40	<3.21E-02	0.00E+00	3.21E-02
531027	9/29/2020 - 10/6/2020	Beta	1.86E-02	3.01E-03	3.35E-03
531643	10/6/2020 - 10/13/2020	Beta	3.06E-02	3.16E-03	2.74E-03
532042	10/13/2020 - 10/20/2020	Beta	1.90E-02	2.70E-03	2.84E-03
532474	10/20/2020 - 10/27/2020	Beta	9.82E-03	2.14E-03	2.62E-03
532782	10/27/2020 - 11/3/2020	Beta	1.79E-02	2.50E-03	2.50E-03
533305	11/3/2020 - 11/10/2020	Beta	1.71E-02	2.95E-03	3.33E-03
533755	11/10/2020 - 11/17/2020	Beta	1.44E-02	2.32E-03	2.45E-03
534069	11/17/2020 - 11/24/2020	Beta	1.54E-02	2.57E-03	3.00E-03



## ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
534529	11/24/2020 - 12/1/2020	Beta	2.77E-02	3.00E-03	2.61E-03
534746	12/1/2020 - 12/8/2020	Beta	2.29E-02	2.84E-03	2.68E-03
535298	12/8/2020 - 12/15/2020	Beta	2.85E-02	3.10E-03	2.77E-03
535853	12/15/2020 - 12/22/2020	Beta	1.74E-02	2.93E-03	3.31E-03
536137	12/22/2020 - 12/29/2020	Beta	2.04E-02	2.76E-03	2.84E-03
536816	9/29/2020 - 12/29/2020	Cs-134	<1.30E-03	0.00E+00	1.30E-03
		Cs-137	<1.24E-03	0.00E+00	1.24E-03
		Be-7	1.09E-01	3.28E-02	3.30E-02
		K-40	1.17E-02	1.21E-02	1.79E-02

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
514959	12/31/2019 - 1/6/2020	I-131	<2.90E-02	0.00E+00	2.90E-02
		Cs-134	<2.19E-02	0.00E+00	2.19E-02
		Cs-137	<1.63E-02	0.00E+00	1.63E-02
		Be-7	<1.58E-01	0.00E+00	1.58E-01
		K-40	4.38E-01	2.18E-01	2.81E-01
515303	1/6/2020 - 1/13/2020	I-131	<1.44E-02	0.00E+00	1.44E-02
		Cs-134	<1.74E-02	0.00E+00	1.74E-02
		Cs-137	<1.32E-02	0.00E+00	1.32E-02
		Be-7	<1.06E-01	0.00E+00	1.06E-01
		K-40	5.25E-01	1.83E-01	1.60E-01
515529	1/13/2020 - 1/20/2020	I-131	<1.59E-02	0.00E+00	1.59E-02
		Cs-134	<1.38E-02	0.00E+00	1.38E-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	<1.78E-01	0.00E+00	1.78E-01
515924	1/20/2020 - 1/27/2020	I-131	<2.53E-02	0.00E+00	2.53E-02
		Cs-134	<1.74E-02	0.00E+00	1.74E-02
		Cs-137	<1.43E-02	0.00E+00	1.43E-02
		Be-7	<1.36E-01	0.00E+00	1.36E-01
		K-40	5.29E-01	1.94E-01	1.90E-01
516176	1/27/2020 - 2/4/2020	I-131	<1.63E-02	0.00E+00	1.63E-02
		Cs-134	<1.12E-02	0.00E+00	1.12E-02
		Cs-137	<8.88E-03	0.00E+00	8.88E-03
		Be-7	<7.01E-02	0.00E+00	7.01E-02
		K-40	2.75E-01	1.36E-01	1.56E-01
516551	2/4/2020 - 2/11/2020	I-131	<2.02E-02	0.00E+00	2.02E-02
		Cs-134	<1.06E-02	0.00E+00	1.06E-02
		Cs-137	<1.01E-02	0.00E+00	1.01E-02
		Be-7	<7.99E-02	0.00E+00	7.99E-02
		K-40	4.97E-01	1.53E-01	1.73E-01
516920	2/11/2020 - 2/18/2020	I-131	<2.55E-02	0.00E+00	2.55E-02
		Cs-134	<1.69E-02	0.00E+00	1.69E-02
		Cs-137	<1.38E-02	0.00E+00	1.38E-02
		Be-7	<1.39E-01	0.00E+00	1.39E-01

# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
516920	2/11/2020 - 2/18/2020	K-40	5.26E-01	1.69E-01	3.47E-02
517447	2/18/2020 - 2/25/2020	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	<9.61E-02	0.00E+00	9.61E-02
		K-40	<3.61E-01	0.00E+00	3.61E-01
517708	2/25/2020 - 3/2/2020	I-131	<2.18E-02	0.00E+00	2.18E-02
		Cs-134	<1.65E-02	0.00E+00	1.65E-02
		Cs-137	<1.60E-02	0.00E+00	1.60E-02
		Be-7	<1.18E-01	0.00E+00	1.18E-01
		K-40	<4.23E-01	0.00E+00	4.23E-01
518761	3/2/2020 - 3/10/2020	I-131	<1.93E-02	0.00E+00	1.93E-02
		Cs-134	<1.33E-02	0.00E+00	1.33E-02
		Cs-137	<1.31E-02	0.00E+00	1.31E-02
		Be-7	<1.10E-01	0.00E+00	1.10E-01
		K-40	4.01E-01	1.52E-01	1.44E-01
519347	3/10/2020 - 3/16/2020	I-131	<2.51E-02	0.00E+00	2.51E-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	<1.80E-01	0.00E+00	1.80E-01
		K-40	5.74E-01	2.15E-01	2.08E-01
519736	3/16/2020 - 3/24/2020	I-131	<2.39E-02	0.00E+00	2.39E-02
		Cs-134	<1.32E-02	0.00E+00	1.32E-02
		Cs-137	<1.07E-02	0.00E+00	1.07E-02
		Be-7	<9.29E-02	0.00E+00	9.29E-02
		K-40	3.64E-01	1.66E-01	2.04E-01
520346	3/24/2020 - 3/31/2020	I-131	<5.53E-02	0.00E+00	5.53E-02
		Cs-134	<2.18E-02	0.00E+00	2.18E-02
		Cs-137	<1.38E-02	0.00E+00	1.38E-02
		Be-7	<1.65E-01	0.00E+00	1.65E-01
		K-40	4.49E-01	1.63E-01	1.55E-01
520546	3/31/2020 - 4/7/2020	I-131	<3.11E-02	0.00E+00	3.11E-02
		Cs-134	<1.25E-02	0.00E+00	1.25E-02
		Cs-137	<1.43E-02	0.00E+00	1.43E-02
		Be-7	<7.31E-02	0.00E+00	7.31E-02
		K-40	<2.93E-01	0.00E+00	2.93E-01
520845	4/7/2020 - 4/14/2020	I-131	<2.50E-02	0.00E+00	2.50E-02
		Cs-134	<1.76E-02	0.00E+00	1.76E-02
		Cs-137	<1.73E-02	0.00E+00	1.73E-02
		Be-7	<8.40E-02	0.00E+00	8.40E-02
		K-40	5.60E-01	1.82E-01	1.27E-01
521643	4/14/2020 - 4/21/2020	I-131	<2.61E-02	0.00E+00	2.61E-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	<1.20E-01	0.00E+00	1.20E-01
		K-40	4.68E-01	1.70E-01	1.50E-01
522069	4/21/2020 - 4/28/2020	I-131	<2.21E-02	0.00E+00	2.21E-02
		Cs-134	<1.88E-02	0.00E+00	1.88E-02
		Cs-137	<1.50E-02	0.00E+00	1.50E-02



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
522069	4/21/2020 - 4/28/2020	Be-7	<1.71E-01	0.00E+00	1.71E-01
		K-40	5.76E-01	2.25E-01	2.63E-01
522380	4/28/2020 - 5/5/2020	I-131	<2.52E-02	0.00E+00	2.52E-02
		Cs-134	<1.55E-02	0.00E+00	1.55E-02
		Cs-137	<1.40E-02	0.00E+00	1.40E-02
		Be-7	<9.88E-02	0.00E+00	9.88E-02
		K-40	3.53E-01	1.52E-01	1.45E-01
522636	5/5/2020 - 5/12/2020	I-131	<2.54E-02	0.00E+00	2.54E-02
		Cs-134	<1.70E-02	0.00E+00	1.70E-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	3.94E-01	1.59E-01	1.51E-01
523139	5/12/2020 - 5/19/2020	I-131	<2.25E-02	0.00E+00	2.25E-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	<1.33E-01	0.00E+00	1.33E-01
		K-40	1.91E-01	1.56E-01	2.30E-01
523503	5/19/2020 - 5/26/2020	I-131	<2.83E-02	0.00E+00	2.83E-02
		Cs-134	<1.32E-02	0.00E+00	1.32E-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	5.42E-01	1.87E-01	1.70E-01
523913	5/26/2020 - 6/2/2020	I-131	<1.76E-02	0.00E+00	1.76E-02
		Cs-134	<1.21E-02	0.00E+00	1.21E-02
		Cs-137	<9.80E-03	0.00E+00	9.80E-03
		Be-7	<9.23E-02	0.00E+00	9.23E-02
		K-40	6.65E-01	1.63E-01	1.56E-01
524481	6/2/2020 - 6/8/2020	I-131	<2.81E-02	0.00E+00	2.81E-02
		Cs-134	<2.18E-02	0.00E+00	2.18E-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	4.67E-01	1.92E-01	1.91E-01
524799	6/8/2020 - 6/16/2020	I-131	<1.69E-02	0.00E+00	1.69E-02
		Cs-134	<1.43E-02	0.00E+00	1.43E-02
		Cs-137	<1.23E-02	0.00E+00	1.23E-02
		Be-7	<8.36E-02	0.00E+00	8.36E-02
		K-40	3.04E-01	1.46E-01	1.65E-01
525022	6/16/2020 - 6/23/2020	I-131	<2.46E-02	0.00E+00	2.46E-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	<1.16E-01	0.00E+00	1.16E-01
		K-40	6.15E-01	1.94E-01	1.50E-01
525425	6/23/2020 - 6/30/2020	I-131	<1.97E-02	0.00E+00	1.97E-02
		Cs-134	<1.54E-02	0.00E+00	1.54E-02
		Cs-137	<1.17E-02	0.00E+00	1.17E-02
		Be-7	<9.41E-02	0.00E+00	9.41E-02
		K-40	2.89E-01	1.35E-01	1.29E-01
525619	6/30/2020 - 7/7/2020	I-131	<1.86E-02	0.00E+00	1.86E-02
		Cs-134	<2.13E-02	0.00E+00	2.13E-02



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
525619	6/30/2020 - 7/7/2020	Cs-137	<1.40E-02	0.00E+00	1.40E-02
		Be-7	<8.01E-02	0.00E+00	8.01E-02
		K-40	<3.30E-01	0.00E+00	3.30E-01
525993	7/7/2020 - 7/14/2020	I-131	<1.96E-02	0.00E+00	1.96E-02
		Cs-134	<1.66E-02	0.00E+00	1.66E-02
		Cs-137	<1.54E-02	0.00E+00	1.54E-02
		Be-7	<1.11E-01	0.00E+00	1.11E-01
		K-40	3.91E-01	1.65E-01	1.73E-01
526306	7/14/2020 - 7/20/2020	I-131	<2.38E-02	0.00E+00	2.38E-02
		Cs-134	<1.92E-02	0.00E+00	1.92E-02
		Cs-137	<1.91E-02	0.00E+00	1.91E-02
		Be-7	<1.20E-01	0.00E+00	1.20E-01
		K-40	5.18E-01	2.07E-01	2.17E-01
526594	7/20/2020 - 7/27/2020	I-131	<2.14E-02	0.00E+00	2.14E-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	<1.45E-01	0.00E+00	1.45E-01
		K-40	4.81E-01	1.72E-01	1.41E-01
526909	7/27/2020 - 8/3/2020	I-131	<3.68E-02	0.00E+00	3.68E-02
		Cs-134	<1.32E-02	0.00E+00	1.32E-02
		Cs-137	<1.74E-02	0.00E+00	1.74E-02
		Be-7	<9.34E-02	0.00E+00	9.34E-02
		K-40	5.23E-01	1.94E-01	1.91E-01
527409	8/3/2020 - 8/11/2020	I-131	<1.86E-02	0.00E+00	1.86E-02
		Cs-134	<1.25E-02	0.00E+00	1.25E-02
		Cs-137	<1.35E-02	0.00E+00	1.35E-02
		Be-7	<1.01E-01	0.00E+00	1.01E-01
		K-40	4.94E-01	1.88E-01	2.13E-01
527680	8/11/2020 - 8/18/2020	I-131	<2.07E-02	0.00E+00	2.07E-02
		Cs-134	<1.60E-02	0.00E+00	1.60E-02
		Cs-137	<1.82E-02	0.00E+00	1.82E-02
		Be-7	<1.12E-01	0.00E+00	1.12E-01
		K-40	6.43E-01	2.13E-01	2.05E-01
527983	8/18/2020 - 8/25/2020	I-131	<1.94E-02	0.00E+00	1.94E-02
		Cs-134	<1.89E-02	0.00E+00	1.89E-02
		Cs-137	<1.52E-02	0.00E+00	1.52E-02
		Be-7	<8.88E-02	0.00E+00	8.88E-02
		K-40	4.52E-01	1.77E-01	1.77E-01
528728	8/25/2020 - 9/1/2020	I-131	<1.77E-02	0.00E+00	1.77E-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	<1.22E-01	0.00E+00	1.22E-01
		K-40	5.24E-01	1.77E-01	1.23E-01
529069	9/1/2020 - 9/8/2020	I-131	<2.82E-02	0.00E+00	2.82E-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	<1.17E-01	0.00E+00	1.17E-01
		K-40	6.55E-01	2.04E-01	1.71E-01
530075	9/8/2020 - 9/15/2020	I-131	<1.52E-02	0.00E+00	1.52E-02



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
530075	9/8/2020 - 9/15/2020	Cs-134	<1.29E-02	0.00E+00	1.29E-02
		Cs-137	<1.41E-02	0.00E+00	1.41E-02
		Be-7	<9.97E-02	0.00E+00	9.97E-02
		K-40	2.88E-01	1.45E-01	1.59E-01
530233	9/15/2020 - 9/22/2020	I-131	<1.91E-02	0.00E+00	1.91E-02
		Cs-134	<1.45E-02	0.00E+00	1.45E-02
		Cs-137	<1.33E-02	0.00E+00	1.33E-02
		Be-7	<8.87E-02	0.00E+00	8.87E-02
		K-40	3.23E-01	1.65E-01	1.94E-01
530535	9/22/2020 - 9/29/2020	I-131	<1.36E-02	0.00E+00	1.36E-02
		Cs-134	<1.76E-02	0.00E+00	1.76E-02
		Cs-137	<1.26E-02	0.00E+00	1.26E-02
		Be-7	<9.77E-02	0.00E+00	9.77E-02
		K-40	<3.33E-01	0.00E+00	3.33E-01
531029	9/29/2020 - 10/6/2020	I-131	<2.07E-02	0.00E+00	2.07E-02
		Cs-134	<1.35E-02	0.00E+00	1.35E-02
		Cs-137	<1.61E-02	0.00E+00	1.61E-02
		Be-7	<9.29E-02	0.00E+00	9.29E-02
		K-40	3.81E-01	1.57E-01	1.51E-01
531645	10/6/2020 - 10/13/2020	I-131	<2.09E-02	0.00E+00	2.09E-02
		Cs-134	<1.34E-02	0.00E+00	1.34E-02
		Cs-137	<1.37E-02	0.00E+00	1.37E-02
		Be-7	1.99E-02	6.50E-02	1.17E-01
		K-40	7.65E-01	2.29E-01	2.08E-01
532044	10/13/2020 - 10/20/2020	I-131	<1.93E-02	0.00E+00	1.93E-02
		Cs-134	<1.38E-02	0.00E+00	1.38E-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	4.13E-01	1.66E-01	1.59E-01
532476	10/20/2020 - 10/27/2020	I-131	<1.87E-02	0.00E+00	1.87E-02
		Cs-134	<1.36E-02	0.00E+00	1.36E-02
		Cs-137	<1.57E-02	0.00E+00	1.57E-02
		Be-7	<1.20E-01	0.00E+00	1.20E-01
		K-40	5.54E-01	2.12E-01	2.39E-01
532784	10/27/2020 - 11/3/2020	I-131	<2.15E-02	0.00E+00	2.15E-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	<1.08E-01	0.00E+00	1.08E-01
		K-40	6.19E-01	2.13E-01	2.13E-01
533307	11/3/2020 - 11/10/2020	I-131	<2.06E-02	0.00E+00	2.06E-02
		Cs-134	<1.89E-02	0.00E+00	1.89E-02
		Cs-137	<1.64E-02	0.00E+00	1.64E-02
		Be-7	<1.03E-01	0.00E+00	1.03E-01
		K-40	5.04E-01	1.97E-01	2.15E-01
533757	11/10/2020 - 11/17/2020	I-131	<1.99E-02	0.00E+00	1.99E-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	<1.18E-01	0.00E+00	1.18E-01
		K-40	4.00E-01	1.61E-01	1.55E-01





# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
534071	11/17/2020 - 11/24/2020	I-131	<3.16E-02	0.00E+00	3.16E-02
		Cs-134	<1.74E-02	0.00E+00	1.74E-02
		Cs-137	<1.29E-02	0.00E+00	1.29E-02
		Be-7	<1.19E-01	0.00E+00	1.19E-01
		K-40	4.58E-01	2.17E-01	2.82E-01
534531	11/24/2020 - 12/1/2020	I-131	<2.78E-02	0.00E+00	2.78E-02
		Cs-134	<1.37E-02	0.00E+00	1.37E-02
		Cs-137	<1.26E-02	0.00E+00	1.26E-02
		Be-7	<1.04E-01	0.00E+00	1.04E-01
		K-40	6.78E-01	2.23E-01	2.23E-01
534748	12/1/2020 - 12/8/2020	I-131	<2.91E-02	0.00E+00	2.91E-02
		Cs-134	<1.83E-02	0.00E+00	1.83E-02
		Cs-137	<1.18E-02	0.00E+00	1.18E-02
		Be-7	5.72E-02	9.90E-02	1.67E-01
		K-40	4.70E-01	1.70E-01	1.42E-01
535300	12/8/2020 - 12/15/2020	I-131	<1.93E-02	0.00E+00	1.93E-02
		Cs-134	<1.50E-02	0.00E+00	1.50E-02
		Cs-137	<1.49E-02	0.00E+00	1.49E-02
		Be-7	<1.32E-01	0.00E+00	1.32E-01
		K-40	3.13E-01	1.68E-01	2.15E-01
535855	12/15/2020 - 12/22/2020	I-131	<2.93E-02	0.00E+00	2.93E-02
		Cs-134	<1.61E-02	0.00E+00	1.61E-02
		Cs-137	<1.49E-02	0.00E+00	1.49E-02
		Be-7	<1.27E-01	0.00E+00	1.27E-01
		K-40	6.31E-01	1.98E-01	1.48E-01
536139	12/22/2020 - 12/29/2020	I-131	<2.53E-02	0.00E+00	2.53E-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	<9.05E-02	0.00E+00	9.05E-02
		K-40	<2.44E-01	0.00E+00	2.44E-01

Sample Point 2 [ INDICATOR - S @ 0.2 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514960	12/31/2019 - 1/6/2020	I-131	<3.71E-02	0.00E+00	3.71E-02
		Cs-134	<2.20E-02	0.00E+00	2.20E-02
		Cs-137	<2.10E-02	0.00E+00	2.10E-02
		Be-7	<1.56E-01	0.00E+00	1.56E-01
		K-40	6.36E-01	2.39E-01	2.54E-01
515304	1/6/2020 - 1/13/2020	I-131	<2.00E-02	0.00E+00	2.00E-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	<1.07E-01	0.00E+00	1.07E-01
		K-40	4.62E-01	1.66E-01	1.26E-01
515530	1/13/2020 - 1/20/2020	I-131	<1.57E-02	0.00E+00	1.57E-02
		Cs-134	<1.45E-02	0.00E+00	1.45E-02
		Cs-137	<1.16E-02	0.00E+00	1.16E-02
		Be-7	<1.03E-01	0.00E+00	1.03E-01
		K-40	2.80E-01	1.24E-01	3.62E-02
515925	1/20/2020 - 1/27/2020	I-131	<2.02E-02	0.00E+00	2.02E-02
		Cs-134	<1.45E-02	0.00E+00	1.45E-02
		Cs-137	<8.96E-03	0.00E+00	8.96E-03
		Be-7	<6.85E-02	0.00E+00	6.85E-02



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
515925	1/20/2020 - 1/27/2020	K-40	<1.64E-01	0.00E+00	1.64E-01
516177	1/27/2020 - 2/4/2020	I-131	<1.53E-02	0.00E+00	1.53E-02
		Cs-134	<1.78E-02	0.00E+00	1.78E-02
		Cs-137	<1.05E-02	0.00E+00	1.05E-02
		Be-7	<7.51E-02	0.00E+00	7.51E-02
		K-40	3.11E-01	1.46E-01	1.66E-01
516552	2/4/2020 - 2/11/2020	I-131	<1.70E-02	0.00E+00	1.70E-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	<9.75E-02	0.00E+00	9.75E-02
		K-40	4.72E-01	2.13E-01	2.70E-01
516921	2/11/2020 - 2/18/2020	I-131	<2.11E-02	0.00E+00	2.11E-02
		Cs-134	<1.17E-02	0.00E+00	1.17E-02
		Cs-137	<9.81E-03	0.00E+00	9.81E-03
		Be-7	<1.12E-01	0.00E+00	1.12E-01
		K-40	4.98E-01	1.47E-01	1.60E-01
517448	2/18/2020 - 2/25/2020	I-131	<2.42E-02	0.00E+00	2.42E-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	<1.54E-01	0.00E+00	1.54E-01
		K-40	5.03E-01	1.97E-01	2.11E-01
517709	2/25/2020 - 3/2/2020	I-131	<2.35E-02	0.00E+00	2.35E-02
		Cs-134	<2.06E-02	0.00E+00	2.06E-02
		Cs-137	<1.91E-02	0.00E+00	1.91E-02
		Be-7	<1.32E-01	0.00E+00	1.32E-01
		K-40	5.43E-01	2.08E-01	2.02E-01
518762	3/2/2020 - 3/10/2020	I-131	<1.66E-02	0.00E+00	1.66E-02
		Cs-134	<1.52E-02	0.00E+00	1.52E-02
		Cs-137	<1.55E-02	0.00E+00	1.55E-02
		Be-7	<6.54E-02	0.00E+00	6.54E-02
		K-40	<2.99E-01	0.00E+00	2.99E-01
519348	3/10/2020 - 3/16/2020	I-131	<1.66E-02	0.00E+00	1.66E-02
		Cs-134	<2.10E-02	0.00E+00	2.10E-02
		Cs-137	<1.68E-02	0.00E+00	1.68E-02
		Be-7	<1.28E-01	0.00E+00	1.28E-01
		K-40	<3.79E-01	0.00E+00	3.79E-01
519737	3/16/2020 - 3/24/2020	I-131	<2.92E-02	0.00E+00	2.92E-02
		Cs-134	<1.37E-02	0.00E+00	1.37E-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	4.60E-01	1.96E-01	2.41E-01
520347	3/24/2020 - 3/31/2020	I-131	<5.33E-02	0.00E+00	5.33E-02
		Cs-134	<1.66E-02	0.00E+00	1.66E-02
		Cs-137	<1.34E-02	0.00E+00	1.34E-02
		Be-7	<1.17E-01	0.00E+00	1.17E-01
		K-40	2.78E-01	1.56E-01	2.14E-01
520547	3/31/2020 - 4/7/2020	I-131	<2.95E-02	0.00E+00	2.95E-02
		Cs-134	<1.55E-02	0.00E+00	1.55E-02
		Cs-137	<1.18E-02	0.00E+00	1.18E-02



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
520547	3/31/2020 - 4/7/2020	Be-7	<9.88E-02	0.00E+00	9.88E-02
		K-40	1.85E-01	1.54E-01	2.29E-01
520846	4/7/2020 - 4/14/2020	I-131	<2.96E-02	0.00E+00	2.96E-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	<1.25E-01	0.00E+00	1.25E-01
		K-40	<3.32E-01	0.00E+00	3.32E-01
521644	4/14/2020 - 4/21/2020	I-131	<2.96E-02	0.00E+00	2.96E-02
		Cs-134	<1.75E-02	0.00E+00	1.75E-02
		Cs-137	<1.39E-02	0.00E+00	1.39E-02
		Be-7	<1.30E-01	0.00E+00	1.30E-01
		K-40	5.08E-01	1.77E-01	1.47E-01
522070	4/21/2020 - 4/28/2020	I-131	<2.07E-02	0.00E+00	2.07E-02
		Cs-134	<1.98E-02	0.00E+00	1.98E-02
		Cs-137	<1.50E-02	0.00E+00	1.50E-02
		Be-7	<9.31E-02	0.00E+00	9.31E-02
		K-40	4.69E-01	1.66E-01	1.23E-01
522381	4/28/2020 - 5/5/2020	I-131	<2.36E-02	0.00E+00	2.36E-02
		Cs-134	<1.62E-02	0.00E+00	1.62E-02
		Cs-137	<1.40E-02	0.00E+00	1.40E-02
		Be-7	<9.58E-02	0.00E+00	9.58E-02
		K-40	<3.40E-01	0.00E+00	3.40E-01
522637	5/5/2020 - 5/12/2020	I-131	<2.11E-02	0.00E+00	2.11E-02
		Cs-134	<1.82E-02	0.00E+00	1.82E-02
		Cs-137	<1.25E-02	0.00E+00	1.25E-02
		Be-7	<1.32E-01	0.00E+00	1.32E-01
		K-40	5.02E-01	1.90E-01	1.96E-01
523140	5/12/2020 - 5/19/2020	I-131	<2.60E-02	0.00E+00	2.60E-02
		Cs-134	<1.37E-02	0.00E+00	1.37E-02
		Cs-137	<1.17E-02	0.00E+00	1.17E-02
		Be-7	<8.41E-02	0.00E+00	8.41E-02
		K-40	6.03E-01	1.87E-01	1.20E-01
523504	5/19/2020 - 5/26/2020	I-131	<2.15E-02	0.00E+00	2.15E-02
		Cs-134	<1.61E-02	0.00E+00	1.61E-02
		Cs-137	<1.09E-02	0.00E+00	1.09E-02
		Be-7	<9.85E-02	0.00E+00	9.85E-02
		K-40	3.34E-01	2.06E-01	2.94E-01
523914	5/26/2020 - 6/2/2020	I-131	<1.56E-02	0.00E+00	1.56E-02
		Cs-134	<1.27E-02	0.00E+00	1.27E-02
		Cs-137	<1.18E-02	0.00E+00	1.18E-02
		Be-7	<8.99E-02	0.00E+00	8.99E-02
		K-40	<1.88E-01	0.00E+00	1.88E-01
524482	6/2/2020 - 6/8/2020	I-131	<2.33E-02	0.00E+00	2.33E-02
		Cs-134	<2.17E-02	0.00E+00	2.17E-02
		Cs-137	<2.04E-02	0.00E+00	2.04E-02
		Be-7	<1.14E-01	0.00E+00	1.14E-01
		K-40	5.77E-01	2.40E-01	2.86E-01
524800	6/8/2020 - 6/16/2020	I-131	<1.36E-02	0.00E+00	1.36E-02
		Cs-134	<1.12E-02	0.00E+00	1.12E-02



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
524800	6/8/2020 - 6/16/2020	Cs-137	<9.69E-03	0.00E+00	9.69E-03
		Be-7	<8.78E-02	0.00E+00	8.78E-02
		K-40	2.70E-01	1.21E-01	1.08E-01
525023	6/16/2020 - 6/23/2020	I-131	<2.31E-02	0.00E+00	2.31E-02
		Cs-134	<1.89E-02	0.00E+00	1.89E-02
		Cs-137	<1.63E-02	0.00E+00	1.63E-02
		Be-7	<1.00E-01	0.00E+00	1.00E-01
		K-40	3.65E-01	1.87E-01	2.42E-01
525426	6/23/2020 - 6/30/2020	I-131	<3.00E-02	0.00E+00	3.00E-02
		Cs-134	<1.55E-02	0.00E+00	1.55E-02
		Cs-137	<1.54E-02	0.00E+00	1.54E-02
		Be-7	<1.05E-01	0.00E+00	1.05E-01
		K-40	<3.40E-01	0.00E+00	3.40E-01
525620	6/30/2020 - 7/7/2020	I-131	<1.34E-02	0.00E+00	1.34E-02
		Cs-134	<9.03E-03	0.00E+00	9.03E-03
		Cs-137	<1.40E-02	0.00E+00	1.40E-02
		Be-7	<5.28E-02	0.00E+00	5.28E-02
		K-40	<1.51E-01	0.00E+00	1.51E-01
525994	7/7/2020 - 7/14/2020	I-131	<1.58E-02	0.00E+00	1.58E-02
		Cs-134	<1.68E-02	0.00E+00	1.68E-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	4.91E-01	1.85E-01	1.85E-01
526307	7/14/2020 - 7/20/2020	I-131	<2.31E-02	0.00E+00	2.31E-02
		Cs-134	<1.78E-02	0.00E+00	1.78E-02
		Cs-137	<1.53E-02	0.00E+00	1.53E-02
		Be-7	<1.54E-01	0.00E+00	1.54E-01
		K-40	3.76E-01	1.83E-01	2.10E-01
526595	7/20/2020 - 7/27/2020	I-131	<1.81E-02	0.00E+00	1.81E-02
		Cs-134	<1.66E-02	0.00E+00	1.66E-02
		Cs-137	<1.23E-02	0.00E+00	1.23E-02
		Be-7	<9.34E-02	0.00E+00	9.34E-02
		K-40	3.07E-01	1.51E-01	1.74E-01
526910	7/27/2020 - 8/3/2020	I-131	<2.54E-02	0.00E+00	2.54E-02
		Cs-134	<1.50E-02	0.00E+00	1.50E-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	4.34E-01	1.93E-01	2.34E-01
527410	8/3/2020 - 8/11/2020	I-131	<1.92E-02	0.00E+00	1.92E-02
		Cs-134	<1.44E-02	0.00E+00	1.44E-02
		Cs-137	<1.18E-02	0.00E+00	1.18E-02
		Be-7	<1.10E-01	0.00E+00	1.10E-01
		K-40	5.22E-01	1.66E-01	1.17E-01
527681	8/11/2020 - 8/18/2020	I-131	<1.68E-02	0.00E+00	1.68E-02
		Cs-134	<1.43E-02	0.00E+00	1.43E-02
		Cs-137	<1.60E-02	0.00E+00	1.60E-02
		Be-7	<9.51E-02	0.00E+00	9.51E-02
		K-40	3.71E-01	1.89E-01	2.46E-01
527984	8/18/2020 - 8/25/2020	I-131	<1.71E-02	0.00E+00	1.71E-02



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
527984	8/18/2020 - 8/25/2020	Cs-134	<1.69E-02	0.00E+00	1.69E-02
		Cs-137	<1.51E-02	0.00E+00	1.51E-02
		Be-7	<1.11E-01	0.00E+00	1.11E-01
		K-40	4.52E-01	1.64E-01	1.27E-01
528729	8/25/2020 - 9/1/2020	I-131	<1.74E-02	0.00E+00	1.74E-02
		Cs-134	<1.89E-02	0.00E+00	1.89E-02
		Cs-137	<1.69E-02	0.00E+00	1.69E-02
		Be-7	<1.03E-01	0.00E+00	1.03E-01
		K-40	2.89E-01	1.69E-01	2.24E-01
529070	9/1/2020 - 9/8/2020	I-131	<2.55E-02	0.00E+00	2.55E-02
		Cs-134	<1.45E-02	0.00E+00	1.45E-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	5.60E-01	2.01E-01	2.06E-01
530076	9/8/2020 - 9/15/2020	I-131	<1.96E-02	0.00E+00	1.96E-02
		Cs-134	<1.53E-02	0.00E+00	1.53E-02
		Cs-137	<1.63E-02	0.00E+00	1.63E-02
		Be-7	<1.33E-01	0.00E+00	1.33E-01
		K-40	5.09E-01	1.64E-01	3.37E-02
530234	9/15/2020 - 9/22/2020	I-131	<1.79E-02	0.00E+00	1.79E-02
		Cs-134	<2.07E-02	0.00E+00	2.07E-02
		Cs-137	<1.26E-02	0.00E+00	1.26E-02
		Be-7	<1.06E-01	0.00E+00	1.06E-01
		K-40	5.20E-01	1.80E-01	1.48E-01
530536	9/22/2020 - 9/29/2020	I-131	<1.50E-02	0.00E+00	1.50E-02
		Cs-134	<1.78E-02	0.00E+00	1.78E-02
		Cs-137	<1.78E-02	0.00E+00	1.78E-02
		Be-7	<1.15E-01	0.00E+00	1.15E-01
		K-40	5.48E-01	1.86E-01	1.35E-01
531030	9/29/2020 - 10/6/2020	I-131	<2.05E-02	0.00E+00	2.05E-02
		Cs-134	<8.89E-03	0.00E+00	8.89E-03
		Cs-137	<1.50E-02	0.00E+00	1.50E-02
		Be-7	<1.26E-01	0.00E+00	1.26E-01
		K-40	3.30E-01	1.48E-01	1.50E-01
531646	10/6/2020 - 10/13/2020	I-131	<2.86E-02	0.00E+00	2.86E-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	<1.06E-01	0.00E+00	1.06E-01
		K-40	4.41E-01	1.87E-01	2.14E-01
532045	10/13/2020 - 10/20/2020	I-131	<1.96E-02	0.00E+00	1.96E-02
		Cs-134	<1.68E-02	0.00E+00	1.68E-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	3.49E-01	1.69E-01	2.01E-01
532477	10/20/2020 - 10/27/2020	I-131	<2.22E-02	0.00E+00	2.22E-02
		Cs-134	<1.75E-02	0.00E+00	1.75E-02
		Cs-137	<1.17E-02	0.00E+00	1.17E-02
		Be-7	<1.09E-01	0.00E+00	1.09E-01
		K-40	5.93E-01	2.12E-01	2.23E-01



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
532785	10/27/2020 - 11/3/2020	I-131	<1.75E-02	0.00E+00	1.75E-02
		Cs-134	<1.24E-02	0.00E+00	1.24E-02
		Cs-137	<9.80E-03	0.00E+00	9.80E-03
		Be-7	<8.27E-02	0.00E+00	8.27E-02
		K-40	4.71E-01	1.64E-01	1.14E-01
533308	11/3/2020 - 11/10/2020	I-131	<2.42E-02	0.00E+00	2.42E-02
		Cs-134	<1.78E-02	0.00E+00	1.78E-02
		Cs-137	<1.78E-02	0.00E+00	1.78E-02
		Be-7	<1.00E-01	0.00E+00	1.00E-01
		K-40	5.36E-01	1.91E-01	1.70E-01
533758	11/10/2020 - 11/17/2020	I-131	<1.37E-02	0.00E+00	1.37E-02
		Cs-134	<1.55E-02	0.00E+00	1.55E-02
		Cs-137	<1.19E-02	0.00E+00	1.19E-02
		Be-7	<1.02E-01	0.00E+00	1.02E-01
		K-40	5.00E-01	1.80E-01	1.58E-01
534072	11/17/2020 - 11/24/2020	I-131	<2.46E-02	0.00E+00	2.46E-02
		Cs-134	<1.73E-02	0.00E+00	1.73E-02
		Cs-137	<1.43E-02	0.00E+00	1.43E-02
		Be-7	<1.19E-01	0.00E+00	1.19E-01
		K-40	6.03E-01	1.93E-01	1.56E-01
534532	11/24/2020 - 12/1/2020	I-131	<3.05E-02	0.00E+00	3.05E-02
		Cs-134	<1.35E-02	0.00E+00	1.35E-02
		Cs-137	<1.61E-02	0.00E+00	1.61E-02
		Be-7	<1.10E-01	0.00E+00	1.10E-01
		K-40	5.88E-01	1.96E-01	1.74E-01
534749	12/1/2020 - 12/8/2020	I-131	<2.88E-02	0.00E+00	2.88E-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	<1.20E-01	0.00E+00	1.20E-01
		K-40	6.01E-01	2.28E-01	2.64E-01
535301	12/8/2020 - 12/15/2020	I-131	<1.98E-02	0.00E+00	1.98E-02
		Cs-134	<1.17E-02	0.00E+00	1.17E-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	5.77E-01	1.83E-01	1.18E-01
535856	12/15/2020 - 12/22/2020	I-131	<2.73E-02	0.00E+00	2.73E-02
		Cs-134	<1.69E-02	0.00E+00	1.69E-02
		Cs-137	<1.91E-02	0.00E+00	1.91E-02
		Be-7	<1.17E-01	0.00E+00	1.17E-01
		K-40	5.88E-01	2.11E-01	2.24E-01
536140	12/22/2020 - 12/29/2020	I-131	<3.25E-02	0.00E+00	3.25E-02
		Cs-134	<1.47E-02	0.00E+00	1.47E-02
		Cs-137	<2.05E-02	0.00E+00	2.05E-02
		Be-7	<1.54E-01	0.00E+00	1.54E-01
		K-40	3.22E-01	1.70E-01	2.09E-01

Sample Point 3 [ INDICATOR - N @ 0.5 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514961	12/31/2019 - 1/6/2020	I-131	<3.09E-02	0.00E+00	3.09E-02
		Cs-134	<2.12E-02	0.00E+00	2.12E-02
		Cs-137	<1.77E-02	0.00E+00	1.77E-02
		Be-7	<1.12E-01	0.00E+00	1.12E-01



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
514961	12/31/2019 - 1/6/2020	K-40	6.57E-01	2.09E-01	1.44E-01
515305	1/6/2020 - 1/13/2020	I-131	<2.33E-02	0.00E+00	2.33E-02
		Cs-134	<1.66E-02	0.00E+00	1.66E-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	3.77E-01	1.97E-01	2.58E-01
515531	1/13/2020 - 1/20/2020	I-131	<1.73E-02	0.00E+00	1.73E-02
		Cs-134	<1.24E-02	0.00E+00	1.24E-02
		Cs-137	<1.12E-02	0.00E+00	1.12E-02
		Be-7	<1.12E-01	0.00E+00	1.12E-01
		K-40	4.17E-01	1.33E-01	1.46E-01
515926	1/20/2020 - 1/27/2020	I-131	<2.27E-02	0.00E+00	2.27E-02
		Cs-134	<1.86E-02	0.00E+00	1.86E-02
		Cs-137	<1.47E-02	0.00E+00	1.47E-02
		Be-7	<1.00E-01	0.00E+00	1.00E-01
		K-40	<3.32E-01	0.00E+00	3.32E-01
516178	1/27/2020 - 2/4/2020	I-131	<1.55E-02	0.00E+00	1.55E-02
		Cs-134	<1.37E-02	0.00E+00	1.37E-02
		Cs-137	<1.11E-02	0.00E+00	1.11E-02
		Be-7	<9.93E-02	0.00E+00	9.93E-02
		K-40	3.55E-01	1.33E-01	3.21E-02
516553	2/4/2020 - 2/11/2020	I-131	<1.79E-02	0.00E+00	1.79E-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	<1.17E-01	0.00E+00	1.17E-01
		K-40	3.99E-01	1.84E-01	2.23E-01
516922	2/11/2020 - 2/18/2020	I-131	<2.71E-02	0.00E+00	2.71E-02
		Cs-134	<1.35E-02	0.00E+00	1.35E-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	5.10E-01	1.88E-01	1.88E-01
517449	2/18/2020 - 2/25/2020	I-131	<1.85E-02	0.00E+00	1.85E-02
		Cs-134	<1.29E-02	0.00E+00	1.29E-02
		Cs-137	<1.54E-02	0.00E+00	1.54E-02
		Be-7	<1.00E-01	0.00E+00	1.00E-01
		K-40	4.42E-01	1.77E-01	1.79E-01
517710	2/25/2020 - 3/2/2020	I-131	<1.99E-02	0.00E+00	1.99E-02
		Cs-134	<1.57E-02	0.00E+00	1.57E-02
		Cs-137	<1.53E-02	0.00E+00	1.53E-02
		Be-7	<1.32E-01	0.00E+00	1.32E-01
		K-40	7.74E-01	2.36E-01	1.79E-01
518763	3/2/2020 - 3/10/2020	I-131	<1.54E-02	0.00E+00	1.54E-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	<8.28E-02	0.00E+00	8.28E-02
		K-40	<2.32E-01	0.00E+00	2.32E-01
519349	3/10/2020 - 3/16/2020	I-131	<2.31E-02	0.00E+00	2.31E-02
		Cs-134	<2.35E-02	0.00E+00	2.35E-02
		Cs-137	<1.24E-02	0.00E+00	1.24E-02



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
519349	3/10/2020 - 3/16/2020	Be-7	<1.33E-01	0.00E+00	1.33E-01
		K-40	4.51E-01	1.83E-01	1.75E-01
519738	3/16/2020 - 3/24/2020	I-131	<1.87E-02	0.00E+00	1.87E-02
		Cs-134	<1.54E-02	0.00E+00	1.54E-02
		Cs-137	<1.22E-02	0.00E+00	1.22E-02
		Be-7	<9.48E-02	0.00E+00	9.48E-02
		K-40	3.58E-01	1.65E-01	2.01E-01
520348	3/24/2020 - 3/31/2020	I-131	<5.26E-02	0.00E+00	5.26E-02
		Cs-134	<1.33E-02	0.00E+00	1.33E-02
		Cs-137	<1.14E-02	0.00E+00	1.14E-02
		Be-7	<1.27E-01	0.00E+00	1.27E-01
		K-40	5.05E-01	1.37E-01	1.16E-01
520548	3/31/2020 - 4/7/2020	I-131	<2.52E-02	0.00E+00	2.52E-02
		Cs-134	<2.00E-02	0.00E+00	2.00E-02
		Cs-137	<1.65E-02	0.00E+00	1.65E-02
		Be-7	<9.74E-02	0.00E+00	9.74E-02
		K-40	2.69E-01	1.48E-01	1.76E-01
520847	4/7/2020 - 4/14/2020	I-131	<2.59E-02	0.00E+00	2.59E-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	<9.86E-02	0.00E+00	9.86E-02
		K-40	<2.49E-01	0.00E+00	2.49E-01
521645	4/14/2020 - 4/21/2020	I-131	<2.04E-02	0.00E+00	2.04E-02
		Cs-134	<1.45E-02	0.00E+00	1.45E-02
		Cs-137	<1.24E-02	0.00E+00	1.24E-02
		Be-7	<1.12E-01	0.00E+00	1.12E-01
		K-40	4.25E-01	1.29E-01	1.27E-01
522071	4/21/2020 - 4/28/2020	I-131	<2.45E-02	0.00E+00	2.45E-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	<1.24E-01	0.00E+00	1.24E-01
		K-40	4.70E-01	1.85E-01	1.90E-01
522382	4/28/2020 - 5/5/2020	I-131	<2.51E-02	0.00E+00	2.51E-02
		Cs-134	<1.53E-02	0.00E+00	1.53E-02
		Cs-137	<1.32E-02	0.00E+00	1.32E-02
		Be-7	<9.83E-02	0.00E+00	9.83E-02
		K-40	6.94E-02	1.22E-01	2.10E-01
522638	5/5/2020 - 5/12/2020	I-131	<2.69E-02	0.00E+00	2.69E-02
		Cs-134	<1.65E-02	0.00E+00	1.65E-02
		Cs-137	<1.53E-02	0.00E+00	1.53E-02
		Be-7	<1.19E-01	0.00E+00	1.19E-01
		K-40	5.94E-01	2.09E-01	2.18E-01
523141	5/12/2020 - 5/19/2020	I-131	<2.93E-02	0.00E+00	2.93E-02
		Cs-134	<1.29E-02	0.00E+00	1.29E-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	5.25E-01	1.94E-01	1.97E-01
523505	5/19/2020 - 5/26/2020	I-131	<2.71E-02	0.00E+00	2.71E-02
		Cs-134	<1.11E-02	0.00E+00	1.11E-02





# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
523505	5/19/2020 - 5/26/2020	Cs-137	<1.16E-02	0.00E+00	1.16E-02
		Be-7	<1.37E-01	0.00E+00	1.37E-01
		K-40	3.90E-01	1.58E-01	1.30E-01
523915	5/26/2020 - 6/2/2020	I-131	<1.70E-02	0.00E+00	1.70E-02
		Cs-134	<7.53E-03	0.00E+00	7.53E-03
		Cs-137	<1.40E-02	0.00E+00	1.40E-02
		Be-7	<8.41E-02	0.00E+00	8.41E-02
		K-40	<2.98E-01	0.00E+00	2.98E-01
524483	6/2/2020 - 6/8/2020	I-131	<2.19E-02	0.00E+00	2.19E-02
		Cs-134	<1.81E-02	0.00E+00	1.81E-02
		Cs-137	<1.56E-02	0.00E+00	1.56E-02
		Be-7	<1.28E-01	0.00E+00	1.28E-01
		K-40	3.87E-01	1.98E-01	2.50E-01
524801	6/8/2020 - 6/16/2020	I-131	<1.80E-02	0.00E+00	1.80E-02
		Cs-134	<1.42E-02	0.00E+00	1.42E-02
		Cs-137	<1.33E-02	0.00E+00	1.33E-02
		Be-7	<7.59E-02	0.00E+00	7.59E-02
		K-40	3.46E-01	1.46E-01	1.48E-01
525024	6/16/2020 - 6/23/2020	I-131	<1.65E-02	0.00E+00	1.65E-02
		Cs-134	<1.18E-02	0.00E+00	1.18E-02
		Cs-137	<1.41E-02	0.00E+00	1.41E-02
		Be-7	<9.04E-02	0.00E+00	9.04E-02
		K-40	8.85E-02	1.31E-01	2.19E-01
525427	6/23/2020 - 6/30/2020	I-131	<2.93E-02	0.00E+00	2.93E-02
		Cs-134	<1.81E-02	0.00E+00	1.81E-02
		Cs-137	<1.76E-02	0.00E+00	1.76E-02
		Be-7	<1.26E-01	0.00E+00	1.26E-01
		K-40	6.80E-01	2.14E-01	1.93E-01
525621	6/30/2020 - 7/7/2020	I-131	<2.06E-02	0.00E+00	2.06E-02
		Cs-134	<1.17E-02	0.00E+00	1.17E-02
		Cs-137	<1.58E-02	0.00E+00	1.58E-02
		Be-7	<1.03E-01	0.00E+00	1.03E-01
		K-40	<3.53E-01	0.00E+00	3.53E-01
525995	7/7/2020 - 7/14/2020	I-131	<1.81E-02	0.00E+00	1.81E-02
		Cs-134	<1.75E-02	0.00E+00	1.75E-02
		Cs-137	<1.38E-02	0.00E+00	1.38E-02
		Be-7	<9.67E-02	0.00E+00	9.67E-02
		K-40	3.65E-01	1.63E-01	1.76E-01
526308	7/14/2020 - 7/20/2020	I-131	<2.17E-02	0.00E+00	2.17E-02
		Cs-134	<2.05E-02	0.00E+00	2.05E-02
		Cs-137	<1.27E-02	0.00E+00	1.27E-02
		Be-7	<1.24E-01	0.00E+00	1.24E-01
		K-40	4.07E-01	2.16E-01	2.82E-01
526596	7/20/2020 - 7/27/2020	I-131	<2.07E-02	0.00E+00	2.07E-02
		Cs-134	<1.70E-02	0.00E+00	1.70E-02
		Cs-137	<1.57E-02	0.00E+00	1.57E-02
		Be-7	<1.03E-01	0.00E+00	1.03E-01
		K-40	4.56E-01	1.65E-01	1.36E-01
526911	7/27/2020 - 8/3/2020	I-131	<3.00E-02	0.00E+00	3.00E-02



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
526911	7/27/2020 - 8/3/2020	Cs-134	<1.81E-02	0.00E+00	1.81E-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	5.25E-01	1.90E-01	1.85E-01
527411	8/3/2020 - 8/11/2020	I-131	<1.97E-02	0.00E+00	1.97E-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	<9.66E-02	0.00E+00	9.66E-02
		K-40	3.22E-01	1.38E-01	1.43E-01
527682	8/11/2020 - 8/18/2020	I-131	<1.90E-02	0.00E+00	1.90E-02
		Cs-134	<1.42E-02	0.00E+00	1.42E-02
		Cs-137	<1.49E-02	0.00E+00	1.49E-02
		Be-7	<1.03E-01	0.00E+00	1.03E-01
		K-40	2.08E-01	2.02E-01	3.20E-01
527985	8/18/2020 - 8/25/2020	I-131	<2.12E-02	0.00E+00	2.12E-02
		Cs-134	<1.52E-02	0.00E+00	1.52E-02
		Cs-137	<1.72E-02	0.00E+00	1.72E-02
		Be-7	<1.21E-01	0.00E+00	1.21E-01
		K-40	2.86E-01	1.44E-01	1.63E-01
528730	8/25/2020 - 9/1/2020	I-131	<2.10E-02	0.00E+00	2.10E-02
		Cs-134	<1.34E-02	0.00E+00	1.34E-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	4.12E-01	1.80E-01	2.07E-01
529071	9/1/2020 - 9/8/2020	I-131	<2.19E-02	0.00E+00	2.19E-02
		Cs-134	<1.46E-02	0.00E+00	1.46E-02
		Cs-137	<1.26E-02	0.00E+00	1.26E-02
		Be-7	<1.11E-01	0.00E+00	1.11E-01
		K-40	5.26E-01	1.78E-01	1.34E-01
530077	9/8/2020 - 9/15/2020	I-131	<1.82E-02	0.00E+00	1.82E-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	<1.05E-01	0.00E+00	1.05E-01
		K-40	<4.08E-01	0.00E+00	4.08E-01
530235	9/15/2020 - 9/22/2020	I-131	<1.88E-02	0.00E+00	1.88E-02
		Cs-134	<1.69E-02	0.00E+00	1.69E-02
		Cs-137	<1.10E-02	0.00E+00	1.10E-02
		Be-7	<1.04E-01	0.00E+00	1.04E-01
		K-40	6.18E-01	2.16E-01	2.25E-01
530537	9/22/2020 - 9/29/2020	I-131	<2.05E-02	0.00E+00	2.05E-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	<1.07E-01	0.00E+00	1.07E-01
		K-40	4.76E-01	1.98E-01	2.30E-01
531031	9/29/2020 - 10/6/2020	I-131	<1.48E-02	0.00E+00	1.48E-02
		Cs-134	<1.70E-02	0.00E+00	1.70E-02
		Cs-137	<1.01E-02	0.00E+00	1.01E-02
		Be-7	<8.55E-02	0.00E+00	8.55E-02
		K-40	1.26E-01	1.23E-01	1.87E-01



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
531647	10/6/2020 - 10/13/2020	I-131	<3.10E-02	0.00E+00	3.10E-02
		Cs-134	<1.43E-02	0.00E+00	1.43E-02
		Cs-137	<1.37E-02	0.00E+00	1.37E-02
		Be-7	<1.25E-01	0.00E+00	1.25E-01
		K-40	4.04E-01	1.85E-01	2.25E-01
532046	10/13/2020 - 10/20/2020	I-131	<2.31E-02	0.00E+00	2.31E-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	<1.31E-01	0.00E+00	1.31E-01
		K-40	4.55E-01	1.93E-01	2.24E-01
532478	10/20/2020 - 10/27/2020	I-131	<1.92E-02	0.00E+00	1.92E-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	<9.86E-02	0.00E+00	9.86E-02
		K-40	4.32E-01	1.57E-01	1.08E-01
532786	10/27/2020 - 11/3/2020	I-131	<2.09E-02	0.00E+00	2.09E-02
		Cs-134	<1.89E-02	0.00E+00	1.89E-02
		Cs-137	<1.30E-02	0.00E+00	1.30E-02
		Be-7	<1.10E-01	0.00E+00	1.10E-01
		K-40	4.11E-01	1.59E-01	1.20E-01
533309	11/3/2020 - 11/10/2020	I-131	<2.02E-02	0.00E+00	2.02E-02
		Cs-134	<1.71E-02	0.00E+00	1.71E-02
		Cs-137	<1.35E-02	0.00E+00	1.35E-02
		Be-7	<1.04E-01	0.00E+00	1.04E-01
		K-40	5.75E-01	1.83E-01	1.13E-01
533759	11/10/2020 - 11/17/2020	I-131	<1.57E-02	0.00E+00	1.57E-02
		Cs-134	<1.54E-02	0.00E+00	1.54E-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	5.69E-01	1.97E-01	1.69E-01
534073	11/17/2020 - 11/24/2020	I-131	<3.10E-02	0.00E+00	3.10E-02
		Cs-134	<1.33E-02	0.00E+00	1.33E-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	4.21E-01	1.93E-01	2.39E-01
534533	11/24/2020 - 12/1/2020	I-131	<2.26E-02	0.00E+00	2.26E-02
		Cs-134	<1.72E-02	0.00E+00	1.72E-02
		Cs-137	<1.27E-02	0.00E+00	1.27E-02
		Be-7	<9.58E-02	0.00E+00	9.58E-02
		K-40	3.60E-01	1.92E-01	2.55E-01
534750	12/1/2020 - 12/8/2020	I-131	<2.75E-02	0.00E+00	2.75E-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	5.87E-01	2.19E-01	2.41E-01
535302	12/8/2020 - 12/15/2020	I-131	<1.86E-02	0.00E+00	1.86E-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	<9.97E-02	0.00E+00	9.97E-02
		K-40	3.24E-01	1.68E-01	2.08E-01



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
535857	12/15/2020 - 12/22/2020	I-131	<2.50E-02	0.00E+00	2.50E-02
		Cs-134	<1.44E-02	0.00E+00	1.44E-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	6.12E-01	2.17E-01	2.34E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
536141	12/22/2020 - 12/29/2020	I-131	<3.50E-02	0.00E+00	3.50E-02
		Cs-134	<1.99E-02	0.00E+00	1.99E-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	4.13E-01	2.06E-01	2.69E-01

Sample Point 4 [ INDICATOR - ESE @ 0.4 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514962	12/31/2019 - 1/6/2020	I-131	<3.65E-02	0.00E+00	3.65E-02
		Cs-134	<2.20E-02	0.00E+00	2.20E-02
		Cs-137	<1.87E-02	0.00E+00	1.87E-02
		Be-7	<1.73E-01	0.00E+00	1.73E-01
		K-40	7.17E-01	2.46E-01	2.40E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
515306	1/6/2020 - 1/13/2020	I-131	<1.66E-02	0.00E+00	1.66E-02
		Cs-134	<1.64E-02	0.00E+00	1.64E-02
		Cs-137	<1.22E-02	0.00E+00	1.22E-02
		Be-7	<8.66E-02	0.00E+00	8.66E-02
		K-40	3.29E-01	1.40E-01	1.23E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
515532	1/13/2020 - 1/20/2020	I-131	<2.11E-02	0.00E+00	2.11E-02
		Cs-134	<1.75E-02	0.00E+00	1.75E-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	5.30E-01	1.84E-01	1.58E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
515927	1/20/2020 - 1/27/2020	I-131	<2.27E-02	0.00E+00	2.27E-02
		Cs-134	<1.36E-02	0.00E+00	1.36E-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	4.94E-01	1.80E-01	1.59E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
516179	1/27/2020 - 2/4/2020	I-131	<2.31E-02	0.00E+00	2.31E-02
		Cs-134	<1.13E-02	0.00E+00	1.13E-02
		Cs-137	<1.52E-02	0.00E+00	1.52E-02
		Be-7	<1.07E-01	0.00E+00	1.07E-01
		K-40	2.78E-01	1.42E-01	1.69E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
516554	2/4/2020 - 2/11/2020	I-131	<1.91E-02	0.00E+00	1.91E-02
		Cs-134	<1.15E-02	0.00E+00	1.15E-02
		Cs-137	<1.45E-02	0.00E+00	1.45E-02
		Be-7	<8.45E-02	0.00E+00	8.45E-02
		K-40	4.05E-01	1.98E-01	2.55E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
516923	2/11/2020 - 2/18/2020	I-131	<3.11E-02	0.00E+00	3.11E-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	<1.37E-01	0.00E+00	1.37E-01
		K-40	4.36E-01	1.91E-01	2.24E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
517450	2/18/2020 - 2/25/2020	I-131	<2.43E-02	0.00E+00	2.43E-02
		Cs-134	<1.54E-02	0.00E+00	1.54E-02
		Cs-137	<1.67E-02	0.00E+00	1.67E-02
		Be-7	<1.21E-01	0.00E+00	1.21E-01



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
517450	2/18/2020 - 2/25/2020	K-40	4.75E-01	1.85E-01	1.87E-01
517711	2/25/2020 - 3/2/2020	I-131	<1.98E-02	0.00E+00	1.98E-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	<1.05E-01	0.00E+00	1.05E-01
		K-40	3.98E-01	1.69E-01	1.48E-01
518764	3/2/2020 - 3/10/2020	I-131	<1.19E-02	0.00E+00	1.19E-02
		Cs-134	<1.20E-02	0.00E+00	1.20E-02
		Cs-137	<1.16E-02	0.00E+00	1.16E-02
		Be-7	<1.00E-01	0.00E+00	1.00E-01
		K-40	2.45E-01	1.16E-01	1.08E-01
519350	3/10/2020 - 3/16/2020	I-131	<2.20E-02	0.00E+00	2.20E-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	<1.20E-01	0.00E+00	1.20E-01
		K-40	3.17E-01	1.38E-01	3.91E-02
519739	3/16/2020 - 3/24/2020	I-131	<2.01E-02	0.00E+00	2.01E-02
		Cs-134	<1.38E-02	0.00E+00	1.38E-02
		Cs-137	<8.03E-03	0.00E+00	8.03E-03
		Be-7	<8.03E-02	0.00E+00	8.03E-02
		K-40	<8.24E-02	0.00E+00	8.24E-02
520349	3/24/2020 - 3/31/2020	I-131	<5.54E-02	0.00E+00	5.54E-02
		Cs-134	<1.39E-02	0.00E+00	1.39E-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	4.11E-01	1.47E-01	1.47E-01
520549	3/31/2020 - 4/7/2020	I-131	<3.17E-02	0.00E+00	3.17E-02
		Cs-134	<1.89E-02	0.00E+00	1.89E-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	4.63E-01	1.76E-01	1.68E-01
520848	4/7/2020 - 4/14/2020	I-131	<2.87E-02	0.00E+00	2.87E-02
		Cs-134	<1.78E-02	0.00E+00	1.78E-02
		Cs-137	<1.10E-02	0.00E+00	1.10E-02
		Be-7	<9.51E-02	0.00E+00	9.51E-02
		K-40	2.36E-01	1.34E-01	1.59E-01
521646	4/14/2020 - 4/21/2020	I-131	<2.62E-02	0.00E+00	2.62E-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	<1.11E-01	0.00E+00	1.11E-01
		K-40	4.55E-01	1.86E-01	2.06E-01
522072	4/21/2020 - 4/28/2020	I-131	<1.59E-02	0.00E+00	1.59E-02
		Cs-134	<1.68E-02	0.00E+00	1.68E-02
		Cs-137	<1.68E-02	0.00E+00	1.68E-02
		Be-7	<9.40E-02	0.00E+00	9.40E-02
		K-40	5.20E-01	1.66E-01	3.35E-02
522383	4/28/2020 - 5/5/2020	I-131	<2.25E-02	0.00E+00	2.25E-02
		Cs-134	<1.48E-02	0.00E+00	1.48E-02
		Cs-137	<1.27E-02	0.00E+00	1.27E-02



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
522383	4/28/2020 - 5/5/2020	Be-7	<1.09E-01	0.00E+00	1.09E-01
		K-40	<1.52E-01	0.00E+00	1.52E-01
522639	5/5/2020 - 5/12/2020	I-131	<2.59E-02	0.00E+00	2.59E-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	<1.25E-01	0.00E+00	1.25E-01
		K-40	3.51E-01	1.51E-01	1.42E-01
523142	5/12/2020 - 5/19/2020	I-131	<3.22E-02	0.00E+00	3.22E-02
		Cs-134	<1.46E-02	0.00E+00	1.46E-02
		Cs-137	<1.54E-02	0.00E+00	1.54E-02
		Be-7	<1.11E-01	0.00E+00	1.11E-01
		K-40	<3.59E-01	0.00E+00	3.59E-01
523506	5/19/2020 - 5/26/2020	I-131	<2.90E-02	0.00E+00	2.90E-02
		Cs-134	<1.89E-02	0.00E+00	1.89E-02
		Cs-137	<1.74E-02	0.00E+00	1.74E-02
		Be-7	<1.09E-01	0.00E+00	1.09E-01
		K-40	6.86E-01	2.35E-01	2.56E-01
523916	5/26/2020 - 6/2/2020	I-131	<1.85E-02	0.00E+00	1.85E-02
		Cs-134	<1.44E-02	0.00E+00	1.44E-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	6.16E-01	2.09E-01	2.04E-01
524484	6/2/2020 - 6/8/2020	I-131	<2.64E-02	0.00E+00	2.64E-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	<1.30E-01	0.00E+00	1.30E-01
		K-40	3.21E-01	1.56E-01	1.57E-01
524802	6/8/2020 - 6/16/2020	I-131	<1.64E-02	0.00E+00	1.64E-02
		Cs-134	<1.40E-02	0.00E+00	1.40E-02
		Cs-137	<1.26E-02	0.00E+00	1.26E-02
		Be-7	<7.81E-02	0.00E+00	7.81E-02
		K-40	4.26E-01	1.46E-01	1.00E-01
525025	6/16/2020 - 6/23/2020	I-131	<1.86E-02	0.00E+00	1.86E-02
		Cs-134	<1.55E-02	0.00E+00	1.55E-02
		Cs-137	<9.56E-03	0.00E+00	9.56E-03
		Be-7	<1.00E-01	0.00E+00	1.00E-01
		K-40	<3.35E-01	0.00E+00	3.35E-01
525428	6/23/2020 - 6/30/2020	I-131	<2.91E-02	0.00E+00	2.91E-02
		Cs-134	<1.41E-02	0.00E+00	1.41E-02
		Cs-137	<1.57E-02	0.00E+00	1.57E-02
		Be-7	<1.22E-01	0.00E+00	1.22E-01
		K-40	7.27E-01	2.04E-01	1.22E-01
525622	6/30/2020 - 7/7/2020	I-131	<2.25E-02	0.00E+00	2.25E-02
		Cs-134	<1.88E-02	0.00E+00	1.88E-02
		Cs-137	<1.46E-02	0.00E+00	1.46E-02
		Be-7	<8.52E-02	0.00E+00	8.52E-02
		K-40	5.29E-01	2.09E-01	2.40E-01
525996	7/7/2020 - 7/14/2020	I-131	<1.67E-02	0.00E+00	1.67E-02
		Cs-134	<1.32E-02	0.00E+00	1.32E-02



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
525996	7/7/2020 - 7/14/2020	Cs-137	<1.46E-02	0.00E+00	1.46E-02
		Be-7	<9.83E-02	0.00E+00	9.83E-02
		K-40	3.90E-01	1.61E-01	1.61E-01
526309	7/14/2020 - 7/20/2020	I-131	<1.87E-02	0.00E+00	1.87E-02
		Cs-134	<2.21E-02	0.00E+00	2.21E-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	5.88E-01	2.10E-01	1.85E-01
526597	7/20/2020 - 7/27/2020	I-131	<2.10E-02	0.00E+00	2.10E-02
		Cs-134	<1.35E-02	0.00E+00	1.35E-02
		Cs-137	<1.17E-02	0.00E+00	1.17E-02
		Be-7	<9.57E-02	0.00E+00	9.57E-02
		K-40	<2.94E-01	0.00E+00	2.94E-01
526912	7/27/2020 - 8/3/2020	I-131	<2.97E-02	0.00E+00	2.97E-02
		Cs-134	<1.51E-02	0.00E+00	1.51E-02
		Cs-137	<1.36E-02	0.00E+00	1.36E-02
		Be-7	<9.27E-02	0.00E+00	9.27E-02
		K-40	4.79E-01	1.76E-01	1.63E-01
527412	8/3/2020 - 8/11/2020	I-131	<2.17E-02	0.00E+00	2.17E-02
		Cs-134	<1.58E-02	0.00E+00	1.58E-02
		Cs-137	<1.21E-02	0.00E+00	1.21E-02
		Be-7	<9.07E-02	0.00E+00	9.07E-02
		K-40	2.45E-01	1.44E-01	1.91E-01
527683	8/11/2020 - 8/18/2020	I-131	<1.92E-02	0.00E+00	1.92E-02
		Cs-134	<1.54E-02	0.00E+00	1.54E-02
		Cs-137	<1.50E-02	0.00E+00	1.50E-02
		Be-7	<9.25E-02	0.00E+00	9.25E-02
		K-40	5.02E-01	1.99E-01	2.26E-01
527986	8/18/2020 - 8/25/2020	I-131	<1.85E-02	0.00E+00	1.85E-02
		Cs-134	<1.90E-02	0.00E+00	1.90E-02
		Cs-137	<1.53E-02	0.00E+00	1.53E-02
		Be-7	<8.13E-02	0.00E+00	8.13E-02
		K-40	5.02E-01	1.90E-01	1.98E-01
528731	8/25/2020 - 9/1/2020	I-131	<2.05E-02	0.00E+00	2.05E-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	<8.93E-02	0.00E+00	8.93E-02
		K-40	4.78E-01	1.72E-01	1.20E-01
529072	9/1/2020 - 9/8/2020	I-131	<2.77E-02	0.00E+00	2.77E-02
		Cs-134	<1.34E-02	0.00E+00	1.34E-02
		Cs-137	<1.75E-02	0.00E+00	1.75E-02
		Be-7	<1.34E-01	0.00E+00	1.34E-01
		K-40	5.70E-01	2.04E-01	2.13E-01
530078	9/8/2020 - 9/15/2020	I-131	<1.87E-02	0.00E+00	1.87E-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	<1.28E-01	0.00E+00	1.28E-01
		K-40	4.86E-01	1.96E-01	2.21E-01
530236	9/15/2020 - 9/22/2020	I-131	<2.12E-02	0.00E+00	2.12E-02



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
530236	9/15/2020 - 9/22/2020	Cs-134	<2.10E-02	0.00E+00	2.10E-02
		Cs-137	<1.17E-02	0.00E+00	1.17E-02
		Be-7	<9.61E-02	0.00E+00	9.61E-02
		K-40	5.23E-01	2.42E-01	3.24E-01
530538	9/22/2020 - 9/29/2020	I-131	<1.72E-02	0.00E+00	1.72E-02
		Cs-134	<1.98E-02	0.00E+00	1.98E-02
		Cs-137	<1.71E-02	0.00E+00	1.71E-02
		Be-7	<1.11E-01	0.00E+00	1.11E-01
		K-40	3.92E-01	1.78E-01	2.09E-01
531032	9/29/2020 - 10/6/2020	I-131	<1.94E-02	0.00E+00	1.94E-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	<9.86E-02	0.00E+00	9.86E-02
		K-40	<3.75E-01	0.00E+00	3.75E-01
531648	10/6/2020 - 10/13/2020	I-131	<3.22E-02	0.00E+00	3.22E-02
		Cs-134	<1.35E-02	0.00E+00	1.35E-02
		Cs-137	<1.88E-02	0.00E+00	1.88E-02
		Be-7	<1.18E-01	0.00E+00	1.18E-01
		K-40	4.93E-01	1.91E-01	1.90E-01
532047	10/13/2020 - 10/20/2020	I-131	<1.38E-02	0.00E+00	1.38E-02
		Cs-134	<1.05E-02	0.00E+00	1.05E-02
		Cs-137	<1.19E-02	0.00E+00	1.19E-02
		Be-7	<8.46E-02	0.00E+00	8.46E-02
		K-40	3.04E-01	1.56E-01	1.84E-01
532479	10/20/2020 - 10/27/2020	I-131	<1.73E-02	0.00E+00	1.73E-02
		Cs-134	<1.67E-02	0.00E+00	1.67E-02
		Cs-137	<1.38E-02	0.00E+00	1.38E-02
		Be-7	<1.16E-01	0.00E+00	1.16E-01
		K-40	4.26E-01	1.86E-01	2.18E-01
532787	10/27/2020 - 11/3/2020	I-131	<1.52E-02	0.00E+00	1.52E-02
		Cs-134	<1.32E-02	0.00E+00	1.32E-02
		Cs-137	<1.91E-02	0.00E+00	1.91E-02
		Be-7	<9.54E-02	0.00E+00	9.54E-02
		K-40	4.82E-01	1.97E-01	2.27E-01
533310	11/3/2020 - 11/10/2020	I-131	<1.67E-02	0.00E+00	1.67E-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	<1.16E-01	0.00E+00	1.16E-01
		K-40	3.21E-01	1.31E-01	3.48E-02
533760	11/10/2020 - 11/17/2020	I-131	<1.97E-02	0.00E+00	1.97E-02
		Cs-134	<1.60E-02	0.00E+00	1.60E-02
		Cs-137	<1.75E-02	0.00E+00	1.75E-02
		Be-7	<1.27E-01	0.00E+00	1.27E-01
		K-40	6.87E-01	1.95E-01	3.45E-02
534074	11/17/2020 - 11/24/2020	I-131	<3.18E-02	0.00E+00	3.18E-02
		Cs-134	<2.02E-02	0.00E+00	2.02E-02
		Cs-137	<1.36E-02	0.00E+00	1.36E-02
		Be-7	<1.23E-01	0.00E+00	1.23E-01
		K-40	5.33E-01	1.75E-01	1.19E-01





# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
534534	11/24/2020 - 12/1/2020	I-131	<3.25E-02	0.00E+00	3.25E-02
		Cs-134	<1.54E-02	0.00E+00	1.54E-02
		Cs-137	<1.60E-02	0.00E+00	1.60E-02
		Be-7	<1.18E-01	0.00E+00	1.18E-01
		K-40	5.49E-01	2.10E-01	2.24E-01
534751	12/1/2020 - 12/8/2020	I-131	<2.79E-02	0.00E+00	2.79E-02
		Cs-134	<2.12E-02	0.00E+00	2.12E-02
		Cs-137	<1.27E-02	0.00E+00	1.27E-02
		Be-7	<1.20E-01	0.00E+00	1.20E-01
		K-40	4.98E-01	2.00E-01	2.12E-01
535303	12/8/2020 - 12/15/2020	I-131	<2.02E-02	0.00E+00	2.02E-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	<1.29E-01	0.00E+00	1.29E-01
		K-40	5.36E-01	2.05E-01	2.09E-01
535858	12/15/2020 - 12/22/2020	I-131	<2.85E-02	0.00E+00	2.85E-02
		Cs-134	<1.35E-02	0.00E+00	1.35E-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	6.22E-01	2.00E-01	1.74E-01
536142	12/22/2020 - 12/29/2020	I-131	<2.86E-02	0.00E+00	2.86E-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	<1.26E-01	0.00E+00	1.26E-01
		K-40	4.74E-01	1.71E-01	1.41E-01

Sample Point 5 [ INDICATOR - ENE @ 0.9 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514963	12/31/2019 - 1/6/2020	I-131	<3.42E-02	0.00E+00	3.42E-02
		Cs-134	<2.20E-02	0.00E+00	2.20E-02
		Cs-137	<1.50E-02	0.00E+00	1.50E-02
		Be-7	4.24E-02	7.22E-02	1.23E-01
		K-40	6.33E-01	2.05E-01	1.42E-01
515307	1/6/2020 - 1/13/2020	I-131	<2.18E-02	0.00E+00	2.18E-02
		Cs-134	<1.40E-02	0.00E+00	1.40E-02
		Cs-137	<1.50E-02	0.00E+00	1.50E-02
		Be-7	<1.11E-01	0.00E+00	1.11E-01
		K-40	2.22E-01	1.43E-01	1.88E-01
515533	1/13/2020 - 1/20/2020	I-131	<2.05E-02	0.00E+00	2.05E-02
		Cs-134	<1.87E-02	0.00E+00	1.87E-02
		Cs-137	<1.89E-02	0.00E+00	1.89E-02
		Be-7	<1.17E-01	0.00E+00	1.17E-01
		K-40	7.32E-01	2.01E-01	1.76E-01
515928	1/20/2020 - 1/27/2020	I-131	<1.87E-02	0.00E+00	1.87E-02
		Cs-134	<1.70E-02	0.00E+00	1.70E-02
		Cs-137	<1.53E-02	0.00E+00	1.53E-02
		Be-7	<8.67E-02	0.00E+00	8.67E-02
		K-40	<3.94E-01	0.00E+00	3.94E-01
516180	1/27/2020 - 2/4/2020	I-131	<1.85E-02	0.00E+00	1.85E-02
		Cs-134	<1.55E-02	0.00E+00	1.55E-02
		Cs-137	<1.44E-02	0.00E+00	1.44E-02
		Be-7	<9.39E-02	0.00E+00	9.39E-02



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
516180	1/27/2020 - 2/4/2020	K-40	7.22E-01	2.12E-01	1.92E-01
516555	2/4/2020 - 2/11/2020	I-131	<1.80E-02	0.00E+00	1.80E-02
		Cs-134	<1.38E-02	0.00E+00	1.38E-02
		Cs-137	<9.10E-03	0.00E+00	9.10E-03
		Be-7	<8.48E-02	0.00E+00	8.48E-02
		K-40	2.90E-01	1.36E-01	1.31E-01
516924	2/11/2020 - 2/18/2020	I-131	<2.82E-02	0.00E+00	2.82E-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	<8.34E-02	0.00E+00	8.34E-02
		K-40	4.84E-01	1.89E-01	2.00E-01
517451	2/18/2020 - 2/25/2020	I-131	<2.19E-02	0.00E+00	2.19E-02
		Cs-134	<1.18E-02	0.00E+00	1.18E-02
		Cs-137	<1.31E-02	0.00E+00	1.31E-02
		Be-7	<9.98E-02	0.00E+00	9.98E-02
		K-40	6.73E-01	1.64E-01	1.48E-01
517712	2/25/2020 - 3/2/2020	I-131	<1.90E-02	0.00E+00	1.90E-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	<7.03E-02	0.00E+00	7.03E-02
		K-40	2.44E-01	1.31E-01	1.22E-01
518765	3/2/2020 - 3/10/2020	I-131	<1.27E-02	0.00E+00	1.27E-02
		Cs-134	<1.28E-02	0.00E+00	1.28E-02
		Cs-137	<1.24E-02	0.00E+00	1.24E-02
		Be-7	<9.98E-02	0.00E+00	9.98E-02
		K-40	3.52E-01	1.57E-01	1.73E-01
519351	3/10/2020 - 3/16/2020	I-131	<2.04E-02	0.00E+00	2.04E-02
		Cs-134	<1.67E-02	0.00E+00	1.67E-02
		Cs-137	<1.68E-02	0.00E+00	1.68E-02
		Be-7	<1.19E-01	0.00E+00	1.19E-01
		K-40	2.16E-01	1.73E-01	2.55E-01
519740	3/16/2020 - 3/24/2020	I-131	<3.29E-02	0.00E+00	3.29E-02
		Cs-134	<1.02E-02	0.00E+00	1.02E-02
		Cs-137	<1.37E-02	0.00E+00	1.37E-02
		Be-7	<1.38E-01	0.00E+00	1.38E-01
		K-40	5.49E-01	1.81E-01	1.62E-01
520350	3/24/2020 - 3/31/2020	I-131	<5.25E-02	0.00E+00	5.25E-02
		Cs-134	<1.24E-02	0.00E+00	1.24E-02
		Cs-137	<1.19E-02	0.00E+00	1.19E-02
		Be-7	<1.22E-01	0.00E+00	1.22E-01
		K-40	4.40E-01	1.43E-01	1.53E-01
520550	3/31/2020 - 4/7/2020	I-131	<3.05E-02	0.00E+00	3.05E-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	<1.14E-01	0.00E+00	1.14E-01
		K-40	3.53E-01	1.62E-01	1.82E-01
520849	4/7/2020 - 4/14/2020	I-131	<2.81E-02	0.00E+00	2.81E-02
		Cs-134	<1.81E-02	0.00E+00	1.81E-02
		Cs-137	<1.62E-02	0.00E+00	1.62E-02



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
520849	4/7/2020 - 4/14/2020	Be-7	<1.10E-01	0.00E+00	1.10E-01
		K-40	3.39E-01	1.55E-01	1.45E-01
521647	4/14/2020 - 4/21/2020	I-131	<2.57E-02	0.00E+00	2.57E-02
		Cs-134	<1.46E-02	0.00E+00	1.46E-02
		Cs-137	<1.63E-02	0.00E+00	1.63E-02
		Be-7	<1.16E-01	0.00E+00	1.16E-01
		K-40	4.88E-01	1.59E-01	1.22E-01
522073	4/21/2020 - 4/28/2020	I-131	<2.00E-02	0.00E+00	2.00E-02
		Cs-134	<1.70E-02	0.00E+00	1.70E-02
		Cs-137	<1.41E-02	0.00E+00	1.41E-02
		Be-7	<1.28E-01	0.00E+00	1.28E-01
		K-40	3.70E-01	1.72E-01	1.99E-01
522384	4/28/2020 - 5/5/2020	I-131	<2.30E-02	0.00E+00	2.30E-02
		Cs-134	<1.69E-02	0.00E+00	1.69E-02
		Cs-137	<1.58E-02	0.00E+00	1.58E-02
		Be-7	<9.25E-02	0.00E+00	9.25E-02
		K-40	<2.55E-01	0.00E+00	2.55E-01
522640	5/5/2020 - 5/12/2020	I-131	<2.38E-02	0.00E+00	2.38E-02
		Cs-134	<1.47E-02	0.00E+00	1.47E-02
		Cs-137	<1.34E-02	0.00E+00	1.34E-02
		Be-7	<1.08E-01	0.00E+00	1.08E-01
		K-40	<2.87E-01	0.00E+00	2.87E-01
523143	5/12/2020 - 5/19/2020	I-131	<3.32E-02	0.00E+00	3.32E-02
		Cs-134	<1.37E-02	0.00E+00	1.37E-02
		Cs-137	<1.09E-02	0.00E+00	1.09E-02
		Be-7	<1.23E-01	0.00E+00	1.23E-01
		K-40	3.99E-01	1.78E-01	2.06E-01
523507	5/19/2020 - 5/26/2020	I-131	<2.98E-02	0.00E+00	2.98E-02
		Cs-134	<1.32E-02	0.00E+00	1.32E-02
		Cs-137	<1.13E-02	0.00E+00	1.13E-02
		Be-7	<9.93E-02	0.00E+00	9.93E-02
		K-40	3.52E-01	1.67E-01	2.00E-01
523917	5/26/2020 - 6/2/2020	I-131	<1.53E-02	0.00E+00	1.53E-02
		Cs-134	<1.44E-02	0.00E+00	1.44E-02
		Cs-137	<9.94E-03	0.00E+00	9.94E-03
		Be-7	<6.73E-02	0.00E+00	6.73E-02
		K-40	2.09E-01	1.41E-01	1.92E-01
524485	6/2/2020 - 6/8/2020	I-131	<1.68E-02	0.00E+00	1.68E-02
		Cs-134	<1.46E-02	0.00E+00	1.46E-02
		Cs-137	<1.15E-02	0.00E+00	1.15E-02
		Be-7	<1.04E-01	0.00E+00	1.04E-01
		K-40	4.13E-01	1.57E-01	3.86E-02
524803	6/8/2020 - 6/16/2020	I-131	<1.64E-02	0.00E+00	1.64E-02
		Cs-134	<1.38E-02	0.00E+00	1.38E-02
		Cs-137	<1.47E-02	0.00E+00	1.47E-02
		Be-7	<1.08E-01	0.00E+00	1.08E-01
		K-40	1.42E-01	1.22E-01	1.83E-01
525026	6/16/2020 - 6/23/2020	I-131	<2.73E-02	0.00E+00	2.73E-02
		Cs-134	<1.17E-02	0.00E+00	1.17E-02



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
525026	6/16/2020 - 6/23/2020	Cs-137	<1.69E-02	0.00E+00	1.69E-02
		Be-7	<1.13E-01	0.00E+00	1.13E-01
		K-40	4.08E-01	1.75E-01	1.92E-01
525429	6/23/2020 - 6/30/2020	I-131	<2.01E-02	0.00E+00	2.01E-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	<1.30E-01	0.00E+00	1.30E-01
		K-40	5.31E-01	1.80E-01	1.41E-01
525623	6/30/2020 - 7/7/2020	I-131	<2.82E-02	0.00E+00	2.82E-02
		Cs-134	<1.63E-02	0.00E+00	1.63E-02
		Cs-137	<1.59E-02	0.00E+00	1.59E-02
		Be-7	<9.98E-02	0.00E+00	9.98E-02
		K-40	5.04E-01	1.91E-01	1.96E-01
525997	7/7/2020 - 7/14/2020	I-131	<1.65E-02	0.00E+00	1.65E-02
		Cs-134	<1.61E-02	0.00E+00	1.61E-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	<3.49E-01	0.00E+00	3.49E-01
526310	7/14/2020 - 7/20/2020	I-131	<1.86E-02	0.00E+00	1.86E-02
		Cs-134	<1.37E-02	0.00E+00	1.37E-02
		Cs-137	<1.38E-02	0.00E+00	1.38E-02
		Be-7	<1.11E-01	0.00E+00	1.11E-01
		K-40	<1.08E-01	0.00E+00	1.08E-01
526598	7/20/2020 - 7/27/2020	I-131	<2.00E-02	0.00E+00	2.00E-02
		Cs-134	<1.27E-02	0.00E+00	1.27E-02
		Cs-137	<1.33E-02	0.00E+00	1.33E-02
		Be-7	<9.06E-02	0.00E+00	9.06E-02
		K-40	<1.17E-01	0.00E+00	1.17E-01
526913	7/27/2020 - 8/3/2020	I-131	<2.84E-02	0.00E+00	2.84E-02
		Cs-134	<1.56E-02	0.00E+00	1.56E-02
		Cs-137	<1.19E-02	0.00E+00	1.19E-02
		Be-7	<1.28E-01	0.00E+00	1.28E-01
		K-40	2.68E-01	1.64E-01	2.20E-01
527413	8/3/2020 - 8/11/2020	I-131	<1.72E-02	0.00E+00	1.72E-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	<9.93E-02	0.00E+00	9.93E-02
		K-40	4.32E-01	1.91E-01	2.42E-01
527684	8/11/2020 - 8/18/2020	I-131	<1.41E-02	0.00E+00	1.41E-02
		Cs-134	<1.85E-02	0.00E+00	1.85E-02
		Cs-137	<1.70E-02	0.00E+00	1.70E-02
		Be-7	<1.04E-01	0.00E+00	1.04E-01
		K-40	4.39E-01	1.78E-01	1.88E-01
527987	8/18/2020 - 8/25/2020	I-131	<1.66E-02	0.00E+00	1.66E-02
		Cs-134	<1.75E-02	0.00E+00	1.75E-02
		Cs-137	<1.39E-02	0.00E+00	1.39E-02
		Be-7	<1.17E-01	0.00E+00	1.17E-01
		K-40	4.12E-01	1.76E-01	1.92E-01
528732	8/25/2020 - 9/1/2020	I-131	<1.68E-02	0.00E+00	1.68E-02



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
528732	8/25/2020 - 9/1/2020	Cs-134	<1.76E-02	0.00E+00	1.76E-02
		Cs-137	<1.63E-02	0.00E+00	1.63E-02
		Be-7	<1.03E-01	0.00E+00	1.03E-01
		K-40	5.07E-01	2.07E-01	2.43E-01
529073	9/1/2020 - 9/8/2020	I-131	<2.55E-02	0.00E+00	2.55E-02
		Cs-134	<6.89E-03	0.00E+00	6.89E-03
		Cs-137	<1.51E-02	0.00E+00	1.51E-02
		Be-7	<1.03E-01	0.00E+00	1.03E-01
		K-40	5.53E-01	1.88E-01	1.70E-01
530079	9/8/2020 - 9/15/2020	I-131	<1.92E-02	0.00E+00	1.92E-02
		Cs-134	<1.50E-02	0.00E+00	1.50E-02
		Cs-137	<1.42E-02	0.00E+00	1.42E-02
		Be-7	<1.23E-01	0.00E+00	1.23E-01
		K-40	6.79E-01	2.22E-01	2.20E-01
530237	9/15/2020 - 9/22/2020	I-131	<1.95E-02	0.00E+00	1.95E-02
		Cs-134	<1.64E-02	0.00E+00	1.64E-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	4.35E-01	1.94E-01	2.36E-01
530539	9/22/2020 - 9/29/2020	I-131	<1.93E-02	0.00E+00	1.93E-02
		Cs-134	<1.68E-02	0.00E+00	1.68E-02
		Cs-137	<1.32E-02	0.00E+00	1.32E-02
		Be-7	<1.11E-01	0.00E+00	1.11E-01
		K-40	5.96E-01	2.11E-01	2.20E-01
531033	9/29/2020 - 10/6/2020	I-131	<1.30E-02	0.00E+00	1.30E-02
		Cs-134	<1.69E-02	0.00E+00	1.69E-02
		Cs-137	<1.09E-02	0.00E+00	1.09E-02
		Be-7	<1.13E-01	0.00E+00	1.13E-01
		K-40	3.30E-01	1.56E-01	1.74E-01
531649	10/6/2020 - 10/13/2020	I-131	<2.84E-02	0.00E+00	2.84E-02
		Cs-134	<1.56E-02	0.00E+00	1.56E-02
		Cs-137	<1.46E-02	0.00E+00	1.46E-02
		Be-7	<1.12E-01	0.00E+00	1.12E-01
		K-40	5.38E-01	1.66E-01	3.24E-02
532048	10/13/2020 - 10/20/2020	I-131	<1.47E-02	0.00E+00	1.47E-02
		Cs-134	<1.40E-02	0.00E+00	1.40E-02
		Cs-137	<1.73E-02	0.00E+00	1.73E-02
		Be-7	<9.69E-02	0.00E+00	9.69E-02
		K-40	5.33E-01	2.02E-01	1.96E-01
532480	10/20/2020 - 10/27/2020	I-131	<1.57E-02	0.00E+00	1.57E-02
		Cs-134	<1.76E-02	0.00E+00	1.76E-02
		Cs-137	<1.39E-02	0.00E+00	1.39E-02
		Be-7	<9.84E-02	0.00E+00	9.84E-02
		K-40	2.50E-01	1.38E-01	1.63E-01
532788	10/27/2020 - 11/3/2020	I-131	<2.00E-02	0.00E+00	2.00E-02
		Cs-134	<1.67E-02	0.00E+00	1.67E-02
		Cs-137	<1.95E-02	0.00E+00	1.95E-02
		Be-7	<9.29E-02	0.00E+00	9.29E-02
		K-40	4.88E-01	1.95E-01	2.18E-01



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
533311	11/3/2020 - 11/10/2020	I-131	<1.87E-02	0.00E+00	1.87E-02
		Cs-134	<1.90E-02	0.00E+00	1.90E-02
		Cs-137	<1.58E-02	0.00E+00	1.58E-02
		Be-7	<1.21E-01	0.00E+00	1.21E-01
		K-40	5.83E-01	1.92E-01	1.57E-01
533761	11/10/2020 - 11/17/2020	I-131	<1.70E-02	0.00E+00	1.70E-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	<1.22E-01	0.00E+00	1.22E-01
		K-40	5.42E-01	2.02E-01	2.14E-01
534075	11/17/2020 - 11/24/2020	I-131	<2.97E-02	0.00E+00	2.97E-02
		Cs-134	<1.42E-02	0.00E+00	1.42E-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	3.69E-01	1.92E-01	2.48E-01
534535	11/24/2020 - 12/1/2020	I-131	<3.08E-02	0.00E+00	3.08E-02
		Cs-134	<1.39E-02	0.00E+00	1.39E-02
		Cs-137	<1.74E-02	0.00E+00	1.74E-02
		Be-7	<1.40E-01	0.00E+00	1.40E-01
		K-40	4.40E-01	2.04E-01	2.52E-01
534752	12/1/2020 - 12/8/2020	I-131	<2.41E-02	0.00E+00	2.41E-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	<1.09E-01	0.00E+00	1.09E-01
		K-40	3.69E-01	1.73E-01	2.04E-01
535304	12/8/2020 - 12/15/2020	I-131	<2.01E-02	0.00E+00	2.01E-02
		Cs-134	<1.53E-02	0.00E+00	1.53E-02
		Cs-137	<1.57E-02	0.00E+00	1.57E-02
		Be-7	<8.00E-02	0.00E+00	8.00E-02
		K-40	5.20E-01	2.07E-01	2.37E-01
535859	12/15/2020 - 12/22/2020	I-131	<2.37E-02	0.00E+00	2.37E-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	<1.01E-01	0.00E+00	1.01E-01
		K-40	2.38E-01	1.61E-01	2.26E-01
536143	12/22/2020 - 12/29/2020	I-131	<3.04E-02	0.00E+00	3.04E-02
		Cs-134	<1.43E-02	0.00E+00	1.43E-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	4.15E-01	1.74E-01	1.88E-01

Sample Point 6 [ INDICATOR - SSW @ 0.2 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514965	12/31/2019 - 1/6/2020	I-131	<2.27E-02	0.00E+00	2.27E-02
		Cs-134	<2.03E-02	0.00E+00	2.03E-02
		Cs-137	<2.11E-02	0.00E+00	2.11E-02
		Be-7	<1.40E-01	0.00E+00	1.40E-01
		K-40	7.07E-01	2.29E-01	1.93E-01
515309	1/6/2020 - 1/13/2020	I-131	<1.86E-02	0.00E+00	1.86E-02
		Cs-134	<1.55E-02	0.00E+00	1.55E-02
		Cs-137	<1.01E-02	0.00E+00	1.01E-02
		Be-7	<1.15E-01	0.00E+00	1.15E-01



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
515309	1/6/2020 - 1/13/2020	K-40	<9.29E-02	0.00E+00	9.29E-02
515535	1/13/2020 - 1/20/2020	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	<9.75E-02	0.00E+00	9.75E-02
		K-40	2.73E-01	1.51E-01	1.88E-01
515930	1/20/2020 - 1/27/2020	I-131	<1.95E-02	0.00E+00	1.95E-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	<9.97E-02	0.00E+00	9.97E-02
		K-40	<3.23E-01	0.00E+00	3.23E-01
516182	1/27/2020 - 2/4/2020	I-131	<2.12E-02	0.00E+00	2.12E-02
		Cs-134	<1.29E-02	0.00E+00	1.29E-02
		Cs-137	<1.22E-02	0.00E+00	1.22E-02
		Be-7	<1.49E-01	0.00E+00	1.49E-01
		K-40	5.87E-01	1.83E-01	1.42E-01
516557	2/4/2020 - 2/11/2020	I-131	<1.44E-02	0.00E+00	1.44E-02
		Cs-134	<1.54E-02	0.00E+00	1.54E-02
		Cs-137	<1.54E-02	0.00E+00	1.54E-02
		Be-7	<7.10E-02	0.00E+00	7.10E-02
		K-40	3.11E-01	1.57E-01	1.78E-01
516926	2/11/2020 - 2/18/2020	I-131	<1.87E-02	0.00E+00	1.87E-02
		Cs-134	<1.70E-02	0.00E+00	1.70E-02
		Cs-137	<1.63E-02	0.00E+00	1.63E-02
		Be-7	<1.06E-01	0.00E+00	1.06E-01
		K-40	4.95E-01	1.80E-01	1.71E-01
517453	2/18/2020 - 2/25/2020	I-131	<2.80E-02	0.00E+00	2.80E-02
		Cs-134	<1.46E-02	0.00E+00	1.46E-02
		Cs-137	<1.83E-02	0.00E+00	1.83E-02
		Be-7	<1.08E-01	0.00E+00	1.08E-01
		K-40	5.69E-01	1.86E-01	1.44E-01
517714	2/25/2020 - 3/2/2020	I-131	<1.36E-02	0.00E+00	1.36E-02
		Cs-134	<1.35E-02	0.00E+00	1.35E-02
		Cs-137	<1.11E-02	0.00E+00	1.11E-02
		Be-7	<9.14E-02	0.00E+00	9.14E-02
		K-40	6.10E-01	1.48E-01	8.53E-02
518767	3/2/2020 - 3/10/2020	I-131	<1.69E-02	0.00E+00	1.69E-02
		Cs-134	<1.41E-02	0.00E+00	1.41E-02
		Cs-137	<1.51E-02	0.00E+00	1.51E-02
		Be-7	<8.64E-02	0.00E+00	8.64E-02
		K-40	3.47E-01	1.46E-01	1.53E-01
519353	3/10/2020 - 3/16/2020	I-131	<2.35E-02	0.00E+00	2.35E-02
		Cs-134	<1.88E-02	0.00E+00	1.88E-02
		Cs-137	<1.70E-02	0.00E+00	1.70E-02
		Be-7	<1.15E-01	0.00E+00	1.15E-01
		K-40	2.80E-01	1.50E-01	1.56E-01
519742	3/16/2020 - 3/24/2020	I-131	<2.26E-02	0.00E+00	2.26E-02
		Cs-134	<1.65E-02	0.00E+00	1.65E-02
		Cs-137	<1.21E-02	0.00E+00	1.21E-02



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
519742	3/16/2020 - 3/24/2020	Be-7	<8.27E-02	0.00E+00	8.27E-02
		K-40	3.40E-01	1.55E-01	1.81E-01
520352	3/24/2020 - 3/31/2020	I-131	<4.89E-02	0.00E+00	4.89E-02
		Cs-134	<1.11E-02	0.00E+00	1.11E-02
		Cs-137	<1.12E-02	0.00E+00	1.12E-02
		Be-7	<1.10E-01	0.00E+00	1.10E-01
		K-40	4.78E-01	1.17E-01	8.77E-02
520552	3/31/2020 - 4/7/2020	I-131	<3.33E-02	0.00E+00	3.33E-02
		Cs-134	<1.94E-02	0.00E+00	1.94E-02
		Cs-137	<1.38E-02	0.00E+00	1.38E-02
		Be-7	<1.11E-01	0.00E+00	1.11E-01
		K-40	2.17E-01	1.28E-01	1.54E-01
520851	4/7/2020 - 4/14/2020	I-131	<2.35E-02	0.00E+00	2.35E-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	<1.16E-01	0.00E+00	1.16E-01
		K-40	5.97E-01	1.79E-01	3.37E-02
521649	4/14/2020 - 4/21/2020	I-131	<2.44E-02	0.00E+00	2.44E-02
		Cs-134	<1.88E-02	0.00E+00	1.88E-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	4.41E-01	2.12E-01	2.77E-01
522075	4/21/2020 - 4/28/2020	I-131	<2.32E-02	0.00E+00	2.32E-02
		Cs-134	<1.44E-02	0.00E+00	1.44E-02
		Cs-137	<1.70E-02	0.00E+00	1.70E-02
		Be-7	<1.37E-01	0.00E+00	1.37E-01
		K-40	5.96E-01	1.80E-01	3.44E-02
522386	4/28/2020 - 5/5/2020	I-131	<3.11E-02	0.00E+00	3.11E-02
		Cs-134	<1.82E-02	0.00E+00	1.82E-02
		Cs-137	<1.51E-02	0.00E+00	1.51E-02
		Be-7	<1.07E-01	0.00E+00	1.07E-01
		K-40	4.34E-01	1.51E-01	3.36E-02
522642	5/5/2020 - 5/12/2020	I-131	<2.45E-02	0.00E+00	2.45E-02
		Cs-134	<1.73E-02	0.00E+00	1.73E-02
		Cs-137	<1.26E-02	0.00E+00	1.26E-02
		Be-7	<1.15E-01	0.00E+00	1.15E-01
		K-40	<3.16E-01	0.00E+00	3.16E-01
523145	5/12/2020 - 5/19/2020	I-131	<2.51E-02	0.00E+00	2.51E-02
		Cs-134	<1.64E-02	0.00E+00	1.64E-02
		Cs-137	<1.16E-02	0.00E+00	1.16E-02
		Be-7	<1.16E-01	0.00E+00	1.16E-01
		K-40	2.80E-01	1.24E-01	3.61E-02
523509	5/19/2020 - 5/26/2020	I-131	<2.17E-02	0.00E+00	2.17E-02
		Cs-134	<1.81E-02	0.00E+00	1.81E-02
		Cs-137	<1.09E-02	0.00E+00	1.09E-02
		Be-7	<1.23E-01	0.00E+00	1.23E-01
		K-40	4.09E-01	1.55E-01	1.21E-01
523919	5/26/2020 - 6/2/2020	I-131	<1.65E-02	0.00E+00	1.65E-02
		Cs-134	<1.70E-02	0.00E+00	1.70E-02





# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
523919	5/26/2020 - 6/2/2020	Cs-137	<1.39E-02	0.00E+00	1.39E-02
		Be-7	<1.04E-01	0.00E+00	1.04E-01
		K-40	2.25E-01	1.11E-01	3.59E-02
524487	6/2/2020 - 6/8/2020	I-131	<2.30E-02	0.00E+00	2.30E-02
		Cs-134	<1.79E-02	0.00E+00	1.79E-02
		Cs-137	<1.79E-02	0.00E+00	1.79E-02
		Be-7	<1.05E-01	0.00E+00	1.05E-01
		K-40	<3.73E-01	0.00E+00	3.73E-01
524805	6/8/2020 - 6/16/2020	I-131	<1.44E-02	0.00E+00	1.44E-02
		Cs-134	<1.54E-02	0.00E+00	1.54E-02
		Cs-137	<1.27E-02	0.00E+00	1.27E-02
		Be-7	<9.31E-02	0.00E+00	9.31E-02
		K-40	2.17E-01	1.58E-01	2.32E-01
525028	6/16/2020 - 6/23/2020	I-131	<2.24E-02	0.00E+00	2.24E-02
		Cs-134	<1.36E-02	0.00E+00	1.36E-02
		Cs-137	<1.71E-02	0.00E+00	1.71E-02
		Be-7	<1.18E-01	0.00E+00	1.18E-01
		K-40	5.34E-01	2.03E-01	2.22E-01
525431	6/23/2020 - 6/30/2020	I-131	<2.73E-02	0.00E+00	2.73E-02
		Cs-134	<1.81E-02	0.00E+00	1.81E-02
		Cs-137	<1.66E-02	0.00E+00	1.66E-02
		Be-7	<1.18E-01	0.00E+00	1.18E-01
		K-40	5.62E-01	1.85E-01	1.45E-01
525625	6/30/2020 - 7/7/2020	I-131	<2.61E-02	0.00E+00	2.61E-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	<1.09E-01	0.00E+00	1.09E-01
		K-40	<3.20E-01	0.00E+00	3.20E-01
525999	7/7/2020 - 7/14/2020	I-131	<1.96E-02	0.00E+00	1.96E-02
		Cs-134	<1.78E-02	0.00E+00	1.78E-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	2.26E-01	1.11E-01	3.60E-02
526312	7/14/2020 - 7/20/2020	I-131	<2.07E-02	0.00E+00	2.07E-02
		Cs-134	<1.75E-02	0.00E+00	1.75E-02
		Cs-137	<1.79E-02	0.00E+00	1.79E-02
		Be-7	<9.05E-02	0.00E+00	9.05E-02
		K-40	4.48E-01	1.93E-01	2.06E-01
526600	7/20/2020 - 7/27/2020	I-131	<1.94E-02	0.00E+00	1.94E-02
		Cs-134	<1.74E-02	0.00E+00	1.74E-02
		Cs-137	<1.38E-02	0.00E+00	1.38E-02
		Be-7	<1.22E-01	0.00E+00	1.22E-01
		K-40	2.38E-01	1.37E-01	1.66E-01
526915	7/27/2020 - 8/3/2020	I-131	<2.78E-02	0.00E+00	2.78E-02
		Cs-134	<1.42E-02	0.00E+00	1.42E-02
		Cs-137	<1.28E-02	0.00E+00	1.28E-02
		Be-7	<1.09E-01	0.00E+00	1.09E-01
		K-40	4.98E-01	1.98E-01	2.25E-01
527415	8/3/2020 - 8/11/2020	I-131	<2.11E-02	0.00E+00	2.11E-02



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
527415	8/3/2020 - 8/11/2020	Cs-134	<1.14E-02	0.00E+00	1.14E-02
		Cs-137	<1.36E-02	0.00E+00	1.36E-02
		Be-7	<1.02E-01	0.00E+00	1.02E-01
		K-40	6.06E-01	1.89E-01	1.61E-01
527686	8/11/2020 - 8/18/2020	I-131	<1.77E-02	0.00E+00	1.77E-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	<9.27E-02	0.00E+00	9.27E-02
		K-40	2.94E-01	1.46E-01	1.61E-01
527989	8/18/2020 - 8/25/2020	I-131	<1.90E-02	0.00E+00	1.90E-02
		Cs-134	<1.82E-02	0.00E+00	1.82E-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	4.93E-01	1.78E-01	1.56E-01
528734	8/25/2020 - 9/1/2020	I-131	<1.94E-02	0.00E+00	1.94E-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	<1.02E-01	0.00E+00	1.02E-01
		K-40	3.42E-01	1.96E-01	2.71E-01
529075	9/1/2020 - 9/8/2020	I-131	<2.75E-02	0.00E+00	2.75E-02
		Cs-134	<1.45E-02	0.00E+00	1.45E-02
		Cs-137	<1.56E-02	0.00E+00	1.56E-02
		Be-7	<9.96E-02	0.00E+00	9.96E-02
		K-40	5.03E-01	1.82E-01	1.67E-01
530081	9/8/2020 - 9/15/2020	I-131	<2.26E-02	0.00E+00	2.26E-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	<9.02E-02	0.00E+00	9.02E-02
		K-40	4.54E-01	1.75E-01	1.68E-01
530239	9/15/2020 - 9/22/2020	I-131	<2.10E-02	0.00E+00	2.10E-02
		Cs-134	<1.83E-02	0.00E+00	1.83E-02
		Cs-137	<1.18E-02	0.00E+00	1.18E-02
		Be-7	<7.83E-02	0.00E+00	7.83E-02
		K-40	7.41E-01	2.09E-01	1.27E-01
530541	9/22/2020 - 9/29/2020	I-131	<1.95E-02	0.00E+00	1.95E-02
		Cs-134	<1.59E-02	0.00E+00	1.59E-02
		Cs-137	<1.24E-02	0.00E+00	1.24E-02
		Be-7	<1.15E-01	0.00E+00	1.15E-01
		K-40	5.39E-01	1.68E-01	3.32E-02
531035	9/29/2020 - 10/6/2020	I-131	<1.65E-02	0.00E+00	1.65E-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	<1.23E-01	0.00E+00	1.23E-01
		K-40	3.42E-01	1.72E-01	2.15E-01
531651	10/6/2020 - 10/13/2020	I-131	<3.40E-02	0.00E+00	3.40E-02
		Cs-134	<1.03E-02	0.00E+00	1.03E-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	4.79E-01	1.79E-01	1.73E-01



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
532050	10/13/2020 - 10/20/2020	I-131	<1.97E-02	0.00E+00	1.97E-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	5.83E-01	1.98E-01	1.82E-01
532482	10/20/2020 - 10/27/2020	I-131	<3.03E-02	0.00E+00	3.03E-02
		Cs-134	<1.76E-02	0.00E+00	1.76E-02
		Cs-137	<9.01E-03	0.00E+00	9.01E-03
		Be-7	<9.46E-02	0.00E+00	9.46E-02
		K-40	4.22E-01	2.11E-01	2.81E-01
532790	10/27/2020 - 11/3/2020	I-131	<1.94E-02	0.00E+00	1.94E-02
		Cs-134	<1.49E-02	0.00E+00	1.49E-02
		Cs-137	<1.58E-02	0.00E+00	1.58E-02
		Be-7	<9.14E-02	0.00E+00	9.14E-02
		K-40	7.23E-01	1.95E-01	3.27E-02
533313	11/3/2020 - 11/10/2020	I-131	<1.83E-02	0.00E+00	1.83E-02
		Cs-134	<1.18E-02	0.00E+00	1.18E-02
		Cs-137	<1.62E-02	0.00E+00	1.62E-02
		Be-7	<1.26E-01	0.00E+00	1.26E-01
		K-40	5.93E-01	2.19E-01	2.41E-01
533763	11/10/2020 - 11/17/2020	I-131	<2.14E-02	0.00E+00	2.14E-02
		Cs-134	<1.53E-02	0.00E+00	1.53E-02
		Cs-137	<1.71E-02	0.00E+00	1.71E-02
		Be-7	<1.06E-01	0.00E+00	1.06E-01
		K-40	4.74E-01	1.92E-01	2.09E-01
534077	11/17/2020 - 11/24/2020	I-131	<2.79E-02	0.00E+00	2.79E-02
		Cs-134	<1.58E-02	0.00E+00	1.58E-02
		Cs-137	<1.48E-02	0.00E+00	1.48E-02
		Be-7	<1.24E-01	0.00E+00	1.24E-01
		K-40	4.22E-01	1.47E-01	3.27E-02
534537	11/24/2020 - 12/1/2020	I-131	<2.04E-02	0.00E+00	2.04E-02
		Cs-134	<1.55E-02	0.00E+00	1.55E-02
		Cs-137	<1.40E-02	0.00E+00	1.40E-02
		Be-7	<9.93E-02	0.00E+00	9.93E-02
		K-40	3.52E-01	1.52E-01	1.47E-01
534754	12/1/2020 - 12/8/2020	I-131	<2.69E-02	0.00E+00	2.69E-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	<6.57E-02	0.00E+00	6.57E-02
		K-40	6.41E-01	1.97E-01	1.30E-01
535306	12/8/2020 - 12/15/2020	I-131	<1.96E-02	0.00E+00	1.96E-02
		Cs-134	<1.90E-02	0.00E+00	1.90E-02
		Cs-137	<1.11E-02	0.00E+00	1.11E-02
		Be-7	<9.17E-02	0.00E+00	9.17E-02
		K-40	5.24E-01	1.76E-01	1.20E-01
535861	12/15/2020 - 12/22/2020	I-131	<4.08E-02	0.00E+00	4.08E-02
		Cs-134	<1.75E-02	0.00E+00	1.75E-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	4.79E-01	1.87E-01	1.92E-01



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
536145	12/22/2020 - 12/29/2020	I-131	<2.82E-02	0.00E+00	2.82E-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	<1.56E-01	0.00E+00	1.56E-01
		K-40	<3.38E-01	0.00E+00	3.38E-01

Sample Point 7 [ INDICATOR - ESE @ 6.4 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514968	12/31/2019 - 1/6/2020	I-131	<3.80E-02	0.00E+00	3.80E-02
		Cs-134	<1.78E-02	0.00E+00	1.78E-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	8.41E-01	2.74E-01	2.78E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
515312	1/6/2020 - 1/13/2020	I-131	<2.17E-02	0.00E+00	2.17E-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	<1.03E-01	0.00E+00	1.03E-01
		K-40	3.87E-01	1.96E-01	2.56E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
515538	1/13/2020 - 1/20/2020	I-131	<2.32E-02	0.00E+00	2.32E-02
		Cs-134	<1.75E-02	0.00E+00	1.75E-02
		Cs-137	<1.61E-02	0.00E+00	1.61E-02
		Be-7	<1.40E-01	0.00E+00	1.40E-01
		K-40	5.48E-01	1.73E-01	3.45E-02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
515933	1/20/2020 - 1/27/2020	I-131	<2.27E-02	0.00E+00	2.27E-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	<1.43E-01	0.00E+00	1.43E-01
		K-40	4.62E-01	1.70E-01	1.37E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
516185	1/27/2020 - 2/4/2020	I-131	<1.37E-02	0.00E+00	1.37E-02
		Cs-134	<1.20E-02	0.00E+00	1.20E-02
		Cs-137	<1.43E-02	0.00E+00	1.43E-02
		Be-7	<9.75E-02	0.00E+00	9.75E-02
		K-40	5.78E-01	1.82E-01	1.52E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
516560	2/4/2020 - 2/11/2020	I-131	<1.77E-02	0.00E+00	1.77E-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	<8.67E-02	0.00E+00	8.67E-02
		K-40	3.43E-01	1.42E-01	1.21E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
516929	2/11/2020 - 2/18/2020	I-131	<1.39E-02	0.00E+00	1.39E-02
		Cs-134	<1.97E-02	0.00E+00	1.97E-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	2.96E-01	1.37E-01	1.12E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
517456	2/18/2020 - 2/25/2020	I-131	<2.18E-02	0.00E+00	2.18E-02
		Cs-134	<1.67E-02	0.00E+00	1.67E-02
		Cs-137	<1.16E-02	0.00E+00	1.16E-02
		Be-7	<1.02E-01	0.00E+00	1.02E-01
		K-40	<2.39E-01	0.00E+00	2.39E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
517717	2/25/2020 - 3/2/2020	I-131	<2.14E-02	0.00E+00	2.14E-02
		Cs-134	<1.33E-02	0.00E+00	1.33E-02
		Cs-137	<1.67E-02	0.00E+00	1.67E-02
		Be-7	<1.35E-01	0.00E+00	1.35E-01



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
517717	2/25/2020 - 3/2/2020	K-40	3.63E-01	1.81E-01	2.13E-01
518770	3/2/2020 - 3/10/2020	I-131	<1.63E-02	0.00E+00	1.63E-02
		Cs-134	<1.69E-02	0.00E+00	1.69E-02
		Cs-137	<1.58E-02	0.00E+00	1.58E-02
		Be-7	2.14E-02	6.21E-02	1.10E-01
		K-40	4.94E-01	1.66E-01	1.26E-01
519356	3/10/2020 - 3/16/2020	I-131	<1.83E-02	0.00E+00	1.83E-02
		Cs-134	<1.68E-02	0.00E+00	1.68E-02
		Cs-137	<1.36E-02	0.00E+00	1.36E-02
		Be-7	<1.51E-01	0.00E+00	1.51E-01
		K-40	4.22E-01	2.01E-01	2.41E-01
519745	3/16/2020 - 3/24/2020	I-131	<1.59E-02	0.00E+00	1.59E-02
		Cs-134	<9.07E-03	0.00E+00	9.07E-03
		Cs-137	<1.02E-02	0.00E+00	1.02E-02
		Be-7	<8.25E-02	0.00E+00	8.25E-02
		K-40	<1.01E-01	0.00E+00	1.01E-01
520355	3/24/2020 - 3/31/2020	I-131	<5.51E-02	0.00E+00	5.51E-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	<9.53E-02	0.00E+00	9.53E-02
		K-40	3.85E-01	1.26E-01	2.61E-02
520555	3/31/2020 - 4/7/2020	I-131	<5.22E-02	0.00E+00	5.22E-02
		Cs-134	<1.69E-02	0.00E+00	1.69E-02
		Cs-137	<1.85E-02	0.00E+00	1.85E-02
		Be-7	<1.66E-01	0.00E+00	1.66E-01
		K-40	3.94E-01	1.95E-01	2.48E-01
520854	4/7/2020 - 4/14/2020	I-131	<3.47E-02	0.00E+00	3.47E-02
		Cs-134	<1.85E-02	0.00E+00	1.85E-02
		Cs-137	<1.57E-02	0.00E+00	1.57E-02
		Be-7	<1.57E-01	0.00E+00	1.57E-01
		K-40	4.61E-01	1.77E-01	1.66E-01
521652	4/14/2020 - 4/21/2020	I-131	<2.33E-02	0.00E+00	2.33E-02
		Cs-134	<1.54E-02	0.00E+00	1.54E-02
		Cs-137	<1.82E-02	0.00E+00	1.82E-02
		Be-7	<1.04E-01	0.00E+00	1.04E-01
		K-40	3.87E-01	1.78E-01	2.11E-01
522078	4/21/2020 - 4/28/2020	I-131	<2.43E-02	0.00E+00	2.43E-02
		Cs-134	<1.61E-02	0.00E+00	1.61E-02
		Cs-137	<9.97E-03	0.00E+00	9.97E-03
		Be-7	<1.15E-01	0.00E+00	1.15E-01
		K-40	<2.77E-01	0.00E+00	2.77E-01
522389	4/28/2020 - 5/5/2020	I-131	<2.69E-02	0.00E+00	2.69E-02
		Cs-134	<1.44E-02	0.00E+00	1.44E-02
		Cs-137	<1.08E-02	0.00E+00	1.08E-02
		Be-7	<9.29E-02	0.00E+00	9.29E-02
		K-40	<3.00E-01	0.00E+00	3.00E-01
522645	5/5/2020 - 5/12/2020	I-131	<2.89E-02	0.00E+00	2.89E-02
		Cs-134	<1.66E-02	0.00E+00	1.66E-02
		Cs-137	<1.48E-02	0.00E+00	1.48E-02



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
522645	5/5/2020 - 5/12/2020	Be-7	<1.13E-01	0.00E+00	1.13E-01
		K-40	3.34E-01	1.56E-01	1.73E-01
523148	5/12/2020 - 5/19/2020	I-131	<3.14E-02	0.00E+00	3.14E-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	<3.36E-01	0.00E+00	3.36E-01
523512	5/19/2020 - 5/26/2020	I-131	<2.52E-02	0.00E+00	2.52E-02
		Cs-134	<1.93E-02	0.00E+00	1.93E-02
		Cs-137	<1.16E-02	0.00E+00	1.16E-02
		Be-7	<1.21E-01	0.00E+00	1.21E-01
		K-40	4.36E-01	1.81E-01	1.99E-01
523922	5/26/2020 - 6/2/2020	I-131	<1.48E-02	0.00E+00	1.48E-02
		Cs-134	<1.36E-02	0.00E+00	1.36E-02
		Cs-137	<1.32E-02	0.00E+00	1.32E-02
		Be-7	3.73E-02	5.32E-02	8.85E-02
		K-40	<2.33E-01	0.00E+00	2.33E-01
524490	6/2/2020 - 6/8/2020	I-131	<2.32E-02	0.00E+00	2.32E-02
		Cs-134	<2.27E-02	0.00E+00	2.27E-02
		Cs-137	<1.13E-02	0.00E+00	1.13E-02
		Be-7	<9.59E-02	0.00E+00	9.59E-02
		K-40	4.52E-01	1.77E-01	1.50E-01
524808	6/8/2020 - 6/16/2020	I-131	<1.61E-02	0.00E+00	1.61E-02
		Cs-134	<1.41E-02	0.00E+00	1.41E-02
		Cs-137	<1.10E-02	0.00E+00	1.10E-02
		Be-7	<9.73E-02	0.00E+00	9.73E-02
		K-40	4.55E-01	1.68E-01	1.67E-01
525031	6/16/2020 - 6/23/2020	I-131	<2.19E-02	0.00E+00	2.19E-02
		Cs-134	<1.39E-02	0.00E+00	1.39E-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	1.70E-01	1.07E-01	1.19E-01
525434	6/23/2020 - 6/30/2020	I-131	<2.74E-02	0.00E+00	2.74E-02
		Cs-134	<1.97E-02	0.00E+00	1.97E-02
		Cs-137	<1.51E-02	0.00E+00	1.51E-02
		Be-7	<1.02E-01	0.00E+00	1.02E-01
		K-40	5.35E-01	1.67E-01	3.30E-02
525628	6/30/2020 - 7/7/2020	I-131	<1.70E-02	0.00E+00	1.70E-02
		Cs-134	<9.64E-03	0.00E+00	9.64E-03
		Cs-137	<1.55E-02	0.00E+00	1.55E-02
		Be-7	<1.23E-01	0.00E+00	1.23E-01
		K-40	<3.23E-01	0.00E+00	3.23E-01
526002	7/7/2020 - 7/14/2020	I-131	<1.85E-02	0.00E+00	1.85E-02
		Cs-134	<1.88E-02	0.00E+00	1.88E-02
		Cs-137	<1.52E-02	0.00E+00	1.52E-02
		Be-7	<9.84E-02	0.00E+00	9.84E-02
		K-40	3.67E-01	1.61E-01	1.70E-01
526315	7/14/2020 - 7/20/2020	I-131	<1.99E-02	0.00E+00	1.99E-02
		Cs-134	<1.70E-02	0.00E+00	1.70E-02



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
526315	7/14/2020 - 7/20/2020	Cs-137	<2.25E-02	0.00E+00	2.25E-02
		Be-7	<1.16E-01	0.00E+00	1.16E-01
		K-40	4.78E-01	1.91E-01	1.80E-01
526603	7/20/2020 - 7/27/2020	I-131	<1.96E-02	0.00E+00	1.96E-02
		Cs-134	<1.15E-02	0.00E+00	1.15E-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	3.15E-01	1.37E-01	1.16E-01
526918	7/27/2020 - 8/3/2020	I-131	<2.61E-02	0.00E+00	2.61E-02
		Cs-134	<1.40E-02	0.00E+00	1.40E-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	2.51E-01	1.86E-01	2.76E-01
527418	8/3/2020 - 8/11/2020	I-131	<2.00E-02	0.00E+00	2.00E-02
		Cs-134	<1.30E-02	0.00E+00	1.30E-02
		Cs-137	<1.42E-02	0.00E+00	1.42E-02
		Be-7	<8.64E-02	0.00E+00	8.64E-02
		K-40	4.72E-01	1.75E-01	1.86E-01
527689	8/11/2020 - 8/18/2020	I-131	<1.63E-02	0.00E+00	1.63E-02
		Cs-134	<1.78E-02	0.00E+00	1.78E-02
		Cs-137	<1.59E-02	0.00E+00	1.59E-02
		Be-7	<1.09E-01	0.00E+00	1.09E-01
		K-40	4.59E-01	1.78E-01	1.81E-01
527992	8/18/2020 - 8/25/2020	I-131	<1.90E-02	0.00E+00	1.90E-02
		Cs-134	<1.42E-02	0.00E+00	1.42E-02
		Cs-137	<9.76E-03	0.00E+00	9.76E-03
		Be-7	<1.02E-01	0.00E+00	1.02E-01
		K-40	4.25E-01	1.90E-01	2.30E-01
528737	8/25/2020 - 9/1/2020	I-131	<2.10E-02	0.00E+00	2.10E-02
		Cs-134	<1.82E-02	0.00E+00	1.82E-02
		Cs-137	<1.73E-02	0.00E+00	1.73E-02
		Be-7	<1.16E-01	0.00E+00	1.16E-01
		K-40	2.01E-01	1.57E-01	2.31E-01
529078	9/1/2020 - 9/8/2020	I-131	<2.73E-02	0.00E+00	2.73E-02
		Cs-134	<1.13E-02	0.00E+00	1.13E-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	4.68E-01	1.86E-01	2.01E-01
530084	9/8/2020 - 9/15/2020	I-131	<1.98E-02	0.00E+00	1.98E-02
		Cs-134	<1.77E-02	0.00E+00	1.77E-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	5.60E-01	2.04E-01	2.13E-01
530242	9/15/2020 - 9/22/2020	I-131	<1.61E-02	0.00E+00	1.61E-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	<1.18E-01	0.00E+00	1.18E-01
		K-40	4.18E-01	1.90E-01	2.32E-01
530544	9/22/2020 - 9/29/2020	I-131	<1.36E-02	0.00E+00	1.36E-02



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
530544	9/22/2020 - 9/29/2020	Cs-134	<1.54E-02	0.00E+00	1.54E-02
		Cs-137	<1.33E-02	0.00E+00	1.33E-02
		Be-7	<7.35E-02	0.00E+00	7.35E-02
		K-40	3.21E-01	1.38E-01	1.12E-01
531038	9/29/2020 - 10/6/2020	I-131	<2.08E-02	0.00E+00	2.08E-02
		Cs-134	<1.76E-02	0.00E+00	1.76E-02
		Cs-137	<1.25E-02	0.00E+00	1.25E-02
		Be-7	<1.19E-01	0.00E+00	1.19E-01
		K-40	6.00E-01	1.79E-01	3.39E-02
532053	10/13/2020 - 10/20/2020	I-131	<1.64E-02	0.00E+00	1.64E-02
		Cs-134	<1.70E-02	0.00E+00	1.70E-02
		Cs-137	<1.26E-02	0.00E+00	1.26E-02
		Be-7	<9.37E-02	0.00E+00	9.37E-02
		K-40	5.88E-01	2.09E-01	2.14E-01
532485	10/20/2020 - 10/27/2020	I-131	<2.34E-02	0.00E+00	2.34E-02
		Cs-134	<1.87E-02	0.00E+00	1.87E-02
		Cs-137	<1.44E-02	0.00E+00	1.44E-02
		Be-7	<1.14E-01	0.00E+00	1.14E-01
		K-40	4.73E-01	1.63E-01	1.09E-01
532793	10/27/2020 - 11/3/2020	I-131	<1.75E-02	0.00E+00	1.75E-02
		Cs-134	<1.77E-02	0.00E+00	1.77E-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	3.98E-01	1.67E-01	1.69E-01
533316	11/3/2020 - 11/10/2020	I-131	<2.23E-02	0.00E+00	2.23E-02
		Cs-134	<1.27E-02	0.00E+00	1.27E-02
		Cs-137	<1.32E-02	0.00E+00	1.32E-02
		Be-7	<1.17E-01	0.00E+00	1.17E-01
		K-40	5.69E-01	1.87E-01	1.49E-01
533766	11/10/2020 - 11/17/2020	I-131	<2.15E-02	0.00E+00	2.15E-02
		Cs-134	<1.67E-02	0.00E+00	1.67E-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	5.27E-01	1.66E-01	3.32E-02
534080	11/17/2020 - 11/24/2020	I-131	<3.11E-02	0.00E+00	3.11E-02
		Cs-134	<1.60E-02	0.00E+00	1.60E-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	3.62E-01	1.78E-01	2.22E-01
534540	11/24/2020 - 12/1/2020	I-131	<2.55E-02	0.00E+00	2.55E-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	<1.29E-01	0.00E+00	1.29E-01
		K-40	5.33E-01	1.82E-01	1.43E-01
534757	12/1/2020 - 12/8/2020	I-131	<1.89E-02	0.00E+00	1.89E-02
		Cs-134	<1.17E-02	0.00E+00	1.17E-02
		Cs-137	<1.20E-02	0.00E+00	1.20E-02
		Be-7	<8.54E-02	0.00E+00	8.54E-02
		K-40	6.69E-01	1.67E-01	1.69E-01





# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
535309	12/8/2020 - 12/15/2020	I-131	<2.24E-02	0.00E+00	2.24E-02
		Cs-134	<1.92E-02	0.00E+00	1.92E-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	4.74E-01	2.15E-01	2.72E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
535864	12/15/2020 - 12/22/2020	I-131	<2.79E-02	0.00E+00	2.79E-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	<8.15E-02	0.00E+00	8.15E-02
		K-40	7.08E-01	1.56E-01	1.10E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
536148	12/22/2020 - 12/29/2020	I-131	<3.89E-02	0.00E+00	3.89E-02
		Cs-134	<1.45E-02	0.00E+00	1.45E-02
		Cs-137	<1.88E-02	0.00E+00	1.88E-02
		Be-7	<1.42E-01	0.00E+00	1.42E-01
		K-40	5.08E-01	1.77E-01	1.36E-01

Sample Point 55 [ INDICATOR - SSE @ 0.2 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514964	12/31/2019 - 1/6/2020	I-131	<4.01E-02	0.00E+00	4.01E-02
		Cs-134	<1.97E-02	0.00E+00	1.97E-02
		Cs-137	<2.05E-02	0.00E+00	2.05E-02
		Be-7	<1.53E-01	0.00E+00	1.53E-01
		K-40	7.14E-01	2.14E-01	4.03E-02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
515308	1/6/2020 - 1/13/2020	I-131	<1.39E-02	0.00E+00	1.39E-02
		Cs-134	<1.35E-02	0.00E+00	1.35E-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	3.33E-01	1.70E-01	2.13E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
515534	1/13/2020 - 1/20/2020	I-131	<1.89E-02	0.00E+00	1.89E-02
		Cs-134	<1.74E-02	0.00E+00	1.74E-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	3.61E-01	1.63E-01	1.77E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
515929	1/20/2020 - 1/27/2020	I-131	<1.62E-02	0.00E+00	1.62E-02
		Cs-134	<1.67E-02	0.00E+00	1.67E-02
		Cs-137	<1.37E-02	0.00E+00	1.37E-02
		Be-7	<9.75E-02	0.00E+00	9.75E-02
		K-40	4.84E-01	1.79E-01	1.70E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
516181	1/27/2020 - 2/4/2020	I-131	<1.90E-02	0.00E+00	1.90E-02
		Cs-134	<1.44E-02	0.00E+00	1.44E-02
		Cs-137	<1.44E-02	0.00E+00	1.44E-02
		Be-7	<1.48E-01	0.00E+00	1.48E-01
		K-40	6.96E-01	2.04E-01	1.67E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
516556	2/4/2020 - 2/11/2020	I-131	<1.37E-02	0.00E+00	1.37E-02
		Cs-134	<1.27E-02	0.00E+00	1.27E-02
		Cs-137	<1.25E-02	0.00E+00	1.25E-02
		Be-7	<6.71E-02	0.00E+00	6.71E-02
		K-40	2.71E-01	1.41E-01	1.60E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
516925	2/11/2020 - 2/18/2020	I-131	<1.76E-02	0.00E+00	1.76E-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	<1.01E-01	0.00E+00	1.01E-01



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
516925	2/11/2020 - 2/18/2020	K-40	5.94E-01	2.07E-01	2.12E-01
517452	2/18/2020 - 2/25/2020	I-131	<2.83E-02	0.00E+00	2.83E-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	<1.34E-01	0.00E+00	1.34E-01
		K-40	4.20E-01	1.81E-01	1.99E-01
517713	2/25/2020 - 3/2/2020	I-131	<2.17E-02	0.00E+00	2.17E-02
		Cs-134	<1.31E-02	0.00E+00	1.31E-02
		Cs-137	<1.91E-02	0.00E+00	1.91E-02
		Be-7	<1.33E-01	0.00E+00	1.33E-01
		K-40	<4.34E-01	0.00E+00	4.34E-01
518766	3/2/2020 - 3/10/2020	I-131	<1.95E-02	0.00E+00	1.95E-02
		Cs-134	<1.47E-02	0.00E+00	1.47E-02
		Cs-137	<1.26E-02	0.00E+00	1.26E-02
		Be-7	<1.28E-01	0.00E+00	1.28E-01
		K-40	2.87E-01	1.57E-01	2.06E-01
519352	3/10/2020 - 3/16/2020	I-131	<1.13E-02	0.00E+00	1.13E-02
		Cs-134	<1.21E-02	0.00E+00	1.21E-02
		Cs-137	<1.62E-02	0.00E+00	1.62E-02
		Be-7	<1.05E-01	0.00E+00	1.05E-01
		K-40	<1.07E-01	0.00E+00	1.07E-01
519741	3/16/2020 - 3/24/2020	I-131	<2.24E-02	0.00E+00	2.24E-02
		Cs-134	<1.44E-02	0.00E+00	1.44E-02
		Cs-137	<1.40E-02	0.00E+00	1.40E-02
		Be-7	<9.28E-02	0.00E+00	9.28E-02
		K-40	4.71E-01	1.61E-01	1.32E-01
520351	3/24/2020 - 3/31/2020	I-131	<5.22E-02	0.00E+00	5.22E-02
		Cs-134	<1.30E-02	0.00E+00	1.30E-02
		Cs-137	<1.18E-02	0.00E+00	1.18E-02
		Be-7	<1.01E-01	0.00E+00	1.01E-01
		K-40	4.04E-01	1.39E-01	1.39E-01
520551	3/31/2020 - 4/7/2020	I-131	<2.46E-02	0.00E+00	2.46E-02
		Cs-134	<1.26E-02	0.00E+00	1.26E-02
		Cs-137	<1.81E-02	0.00E+00	1.81E-02
		Be-7	<1.46E-01	0.00E+00	1.46E-01
		K-40	3.20E-01	1.49E-01	1.57E-01
520850	4/7/2020 - 4/14/2020	I-131	<3.27E-02	0.00E+00	3.27E-02
		Cs-134	<2.04E-02	0.00E+00	2.04E-02
		Cs-137	<1.93E-02	0.00E+00	1.93E-02
		Be-7	<1.47E-01	0.00E+00	1.47E-01
		K-40	4.49E-01	1.80E-01	1.83E-01
521648	4/14/2020 - 4/21/2020	I-131	<3.36E-02	0.00E+00	3.36E-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	<1.62E-01	0.00E+00	1.62E-01
		K-40	2.22E-01	1.82E-01	2.75E-01
522074	4/21/2020 - 4/28/2020	I-131	<2.21E-02	0.00E+00	2.21E-02
		Cs-134	<1.68E-02	0.00E+00	1.68E-02
		Cs-137	<2.33E-02	0.00E+00	2.33E-02



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
522074	4/21/2020 - 4/28/2020	Be-7	<1.27E-01	0.00E+00	1.27E-01
		K-40	3.22E-01	1.60E-01	1.87E-01
522385	4/28/2020 - 5/5/2020	I-131	<2.64E-02	0.00E+00	2.64E-02
		Cs-134	<1.76E-02	0.00E+00	1.76E-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	4.13E-01	1.80E-01	2.06E-01
522641	5/5/2020 - 5/12/2020	I-131	<2.33E-02	0.00E+00	2.33E-02
		Cs-134	<1.48E-02	0.00E+00	1.48E-02
		Cs-137	<1.19E-02	0.00E+00	1.19E-02
		Be-7	<9.04E-02	0.00E+00	9.04E-02
		K-40	<1.66E-01	0.00E+00	1.66E-01
523144	5/12/2020 - 5/19/2020	I-131	<2.76E-02	0.00E+00	2.76E-02
		Cs-134	<1.63E-02	0.00E+00	1.63E-02
		Cs-137	<1.40E-02	0.00E+00	1.40E-02
		Be-7	<9.66E-02	0.00E+00	9.66E-02
		K-40	4.06E-01	1.56E-01	1.36E-01
523508	5/19/2020 - 5/26/2020	I-131	<2.85E-02	0.00E+00	2.85E-02
		Cs-134	<1.94E-02	0.00E+00	1.94E-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	6.18E-01	1.85E-01	3.49E-02
523918	5/26/2020 - 6/2/2020	I-131	<1.86E-02	0.00E+00	1.86E-02
		Cs-134	<1.16E-02	0.00E+00	1.16E-02
		Cs-137	<1.18E-02	0.00E+00	1.18E-02
		Be-7	<8.50E-02	0.00E+00	8.50E-02
		K-40	2.50E-01	1.13E-01	3.39E-02
524486	6/2/2020 - 6/8/2020	I-131	<2.26E-02	0.00E+00	2.26E-02
		Cs-134	<1.22E-02	0.00E+00	1.22E-02
		Cs-137	<1.63E-02	0.00E+00	1.63E-02
		Be-7	<1.35E-01	0.00E+00	1.35E-01
		K-40	2.69E-01	1.43E-01	1.45E-01
524804	6/8/2020 - 6/16/2020	I-131	<1.67E-02	0.00E+00	1.67E-02
		Cs-134	<1.41E-02	0.00E+00	1.41E-02
		Cs-137	<1.38E-02	0.00E+00	1.38E-02
		Be-7	<1.20E-01	0.00E+00	1.20E-01
		K-40	3.80E-01	1.55E-01	1.62E-01
525027	6/16/2020 - 6/23/2020	I-131	<2.70E-02	0.00E+00	2.70E-02
		Cs-134	<1.90E-02	0.00E+00	1.90E-02
		Cs-137	<1.51E-02	0.00E+00	1.51E-02
		Be-7	<1.03E-01	0.00E+00	1.03E-01
		K-40	4.13E-01	1.60E-01	1.35E-01
525430	6/23/2020 - 6/30/2020	I-131	<3.03E-02	0.00E+00	3.03E-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	<1.04E-01	0.00E+00	1.04E-01
		K-40	4.45E-01	1.67E-01	1.48E-01
525624	6/30/2020 - 7/7/2020	I-131	<2.34E-02	0.00E+00	2.34E-02
		Cs-134	<1.29E-02	0.00E+00	1.29E-02



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
525624	6/30/2020 - 7/7/2020	Cs-137	<1.11E-02	0.00E+00	1.11E-02
		Be-7	<1.25E-01	0.00E+00	1.25E-01
		K-40	<1.90E-01	0.00E+00	1.90E-01
525998	7/7/2020 - 7/14/2020	I-131	<1.46E-02	0.00E+00	1.46E-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	<7.98E-02	0.00E+00	7.98E-02
		K-40	<9.26E-02	0.00E+00	9.26E-02
526311	7/14/2020 - 7/20/2020	I-131	<2.44E-02	0.00E+00	2.44E-02
		Cs-134	<1.88E-02	0.00E+00	1.88E-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	2.80E-01	1.65E-01	2.08E-01
526599	7/20/2020 - 7/27/2020	I-131	<1.72E-02	0.00E+00	1.72E-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	<1.22E-01	0.00E+00	1.22E-01
		K-40	5.83E-01	1.76E-01	3.36E-02
526914	7/27/2020 - 8/3/2020	I-131	<3.31E-02	0.00E+00	3.31E-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	5.90E-02	7.01E-02	1.14E-01
		K-40	5.81E-01	1.94E-01	1.72E-01
527414	8/3/2020 - 8/11/2020	I-131	<1.29E-02	0.00E+00	1.29E-02
		Cs-134	<1.46E-02	0.00E+00	1.46E-02
		Cs-137	<1.07E-02	0.00E+00	1.07E-02
		Be-7	<7.71E-02	0.00E+00	7.71E-02
		K-40	2.22E-01	1.11E-01	1.02E-01
527685	8/11/2020 - 8/18/2020	I-131	<1.80E-02	0.00E+00	1.80E-02
		Cs-134	<1.59E-02	0.00E+00	1.59E-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	4.08E-01	1.65E-01	1.63E-01
527988	8/18/2020 - 8/25/2020	I-131	<1.86E-02	0.00E+00	1.86E-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	<1.04E-01	0.00E+00	1.04E-01
		K-40	3.95E-01	1.54E-01	1.29E-01
528733	8/25/2020 - 9/1/2020	I-131	<2.08E-02	0.00E+00	2.08E-02
		Cs-134	<1.61E-02	0.00E+00	1.61E-02
		Cs-137	<1.39E-02	0.00E+00	1.39E-02
		Be-7	<8.57E-02	0.00E+00	8.57E-02
		K-40	4.59E-01	1.75E-01	1.66E-01
529074	9/1/2020 - 9/8/2020	I-131	<2.84E-02	0.00E+00	2.84E-02
		Cs-134	<1.60E-02	0.00E+00	1.60E-02
		Cs-137	<8.89E-03	0.00E+00	8.89E-03
		Be-7	<1.02E-01	0.00E+00	1.02E-01
		K-40	5.10E-01	2.11E-01	2.54E-01
530080	9/8/2020 - 9/15/2020	I-131	<1.79E-02	0.00E+00	1.79E-02



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
530080	9/8/2020 - 9/15/2020	Cs-134	<1.11E-02	0.00E+00	1.11E-02
		Cs-137	<1.84E-02	0.00E+00	1.84E-02
		Be-7	<7.83E-02	0.00E+00	7.83E-02
		K-40	4.68E-01	1.75E-01	1.44E-01
530238	9/15/2020 - 9/22/2020	I-131	<2.07E-02	0.00E+00	2.07E-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	<9.82E-02	0.00E+00	9.82E-02
		K-40	4.83E-01	1.85E-01	1.87E-01
530540	9/22/2020 - 9/29/2020	I-131	<2.08E-02	0.00E+00	2.08E-02
		Cs-134	<9.89E-03	0.00E+00	9.89E-03
		Cs-137	<1.66E-02	0.00E+00	1.66E-02
		Be-7	<1.26E-01	0.00E+00	1.26E-01
		K-40	5.35E-01	1.94E-01	1.78E-01
531034	9/29/2020 - 10/6/2020	I-131	<2.09E-02	0.00E+00	2.09E-02
		Cs-134	<1.52E-02	0.00E+00	1.52E-02
		Cs-137	<1.89E-02	0.00E+00	1.89E-02
		Be-7	<1.19E-01	0.00E+00	1.19E-01
		K-40	2.91E-01	1.66E-01	2.18E-01
531650	10/6/2020 - 10/13/2020	I-131	<2.80E-02	0.00E+00	2.80E-02
		Cs-134	<1.82E-02	0.00E+00	1.82E-02
		Cs-137	<1.32E-02	0.00E+00	1.32E-02
		Be-7	<1.41E-01	0.00E+00	1.41E-01
		K-40	4.02E-01	1.85E-01	2.22E-01
532049	10/13/2020 - 10/20/2020	I-131	<1.66E-02	0.00E+00	1.66E-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	<9.35E-02	0.00E+00	9.35E-02
		K-40	5.39E-01	2.07E-01	2.30E-01
532481	10/20/2020 - 10/27/2020	I-131	<2.01E-02	0.00E+00	2.01E-02
		Cs-134	<1.86E-02	0.00E+00	1.86E-02
		Cs-137	<1.40E-02	0.00E+00	1.40E-02
		Be-7	<1.04E-01	0.00E+00	1.04E-01
		K-40	6.92E-01	2.11E-01	1.50E-01
532789	10/27/2020 - 11/3/2020	I-131	<1.96E-02	0.00E+00	1.96E-02
		Cs-134	<1.23E-02	0.00E+00	1.23E-02
		Cs-137	<1.58E-02	0.00E+00	1.58E-02
		Be-7	<1.04E-01	0.00E+00	1.04E-01
		K-40	4.45E-01	1.79E-01	1.90E-01
533312	11/3/2020 - 11/10/2020	I-131	<1.76E-02	0.00E+00	1.76E-02
		Cs-134	<1.75E-02	0.00E+00	1.75E-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	4.00E-01	1.75E-01	1.82E-01
533762	11/10/2020 - 11/17/2020	I-131	<1.71E-02	0.00E+00	1.71E-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	<1.13E-01	0.00E+00	1.13E-01
		K-40	4.50E-01	1.68E-01	1.44E-01



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
534076	11/17/2020 - 11/24/2020	I-131	<2.49E-02	0.00E+00	2.49E-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	<9.36E-02	0.00E+00	9.36E-02
		K-40	1.73E-01	1.60E-01	2.47E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
534536	11/24/2020 - 12/1/2020	I-131	<2.81E-02	0.00E+00	2.81E-02
		Cs-134	<1.44E-02	0.00E+00	1.44E-02
		Cs-137	<1.16E-02	0.00E+00	1.16E-02
		Be-7	<1.06E-01	0.00E+00	1.06E-01
		K-40	6.35E-01	2.02E-01	1.73E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
534753	12/1/2020 - 12/8/2020	I-131	<3.13E-02	0.00E+00	3.13E-02
		Cs-134	<1.39E-02	0.00E+00	1.39E-02
		Cs-137	<2.06E-02	0.00E+00	2.06E-02
		Be-7	<1.05E-01	0.00E+00	1.05E-01
		K-40	4.93E-01	2.09E-01	2.51E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
535305	12/8/2020 - 12/15/2020	I-131	<1.73E-02	0.00E+00	1.73E-02
		Cs-134	<1.45E-02	0.00E+00	1.45E-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	5.24E-01	1.96E-01	2.03E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
535860	12/15/2020 - 12/22/2020	I-131	<3.22E-02	0.00E+00	3.22E-02
		Cs-134	<1.79E-02	0.00E+00	1.79E-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	4.82E-01	1.87E-01	1.83E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
536144	12/22/2020 - 12/29/2020	I-131	<4.06E-02	0.00E+00	4.06E-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	<1.27E-01	0.00E+00	1.27E-01
		K-40	3.83E-01	1.64E-01	1.68E-01

## Sample Point 60 [ INDICATOR - SE @ 0.2 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514966	12/31/2019 - 1/6/2020	I-131	<4.60E-02	0.00E+00	4.60E-02
		Cs-134	<2.88E-02	0.00E+00	2.88E-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	7.67E-01	2.59E-01	2.61E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
515310	1/6/2020 - 1/13/2020	I-131	<1.80E-02	0.00E+00	1.80E-02
		Cs-134	<1.29E-02	0.00E+00	1.29E-02
		Cs-137	<1.29E-02	0.00E+00	1.29E-02
		Be-7	<9.71E-02	0.00E+00	9.71E-02
		K-40	4.59E-01	1.33E-01	1.29E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
515536	1/13/2020 - 1/20/2020	I-131	<1.72E-02	0.00E+00	1.72E-02
		Cs-134	<1.17E-02	0.00E+00	1.17E-02
		Cs-137	<1.52E-02	0.00E+00	1.52E-02
		Be-7	<8.02E-02	0.00E+00	8.02E-02
		K-40	<1.65E-01	0.00E+00	1.65E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
515931	1/20/2020 - 1/27/2020	I-131	<1.87E-02	0.00E+00	1.87E-02
		Cs-134	<1.45E-02	0.00E+00	1.45E-02
		Cs-137	<8.97E-03	0.00E+00	8.97E-03
		Be-7	<9.07E-02	0.00E+00	9.07E-02



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
515931	1/20/2020 - 1/27/2020	K-40	3.24E-01	1.49E-01	1.53E-01
516183	1/27/2020 - 2/4/2020	I-131	<1.82E-02	0.00E+00	1.82E-02
		Cs-134	<1.67E-02	0.00E+00	1.67E-02
		Cs-137	<1.39E-02	0.00E+00	1.39E-02
		Be-7	<8.68E-02	0.00E+00	8.68E-02
		K-40	3.99E-01	1.76E-01	2.14E-01
516558	2/4/2020 - 2/11/2020	I-131	<2.28E-02	0.00E+00	2.28E-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	<1.29E-01	0.00E+00	1.29E-01
		K-40	7.17E-01	2.29E-01	2.20E-01
516927	2/11/2020 - 2/18/2020	I-131	<2.02E-02	0.00E+00	2.02E-02
		Cs-134	<1.49E-02	0.00E+00	1.49E-02
		Cs-137	<1.29E-02	0.00E+00	1.29E-02
		Be-7	<1.17E-01	0.00E+00	1.17E-01
		K-40	3.01E-01	1.23E-01	3.27E-02
517454	2/18/2020 - 2/25/2020	I-131	<2.62E-02	0.00E+00	2.62E-02
		Cs-134	<1.44E-02	0.00E+00	1.44E-02
		Cs-137	<1.66E-02	0.00E+00	1.66E-02
		Be-7	<1.02E-01	0.00E+00	1.02E-01
		K-40	3.22E-01	1.75E-01	2.30E-01
517715	2/25/2020 - 3/2/2020	I-131	<2.00E-02	0.00E+00	2.00E-02
		Cs-134	<1.81E-02	0.00E+00	1.81E-02
		Cs-137	<1.57E-02	0.00E+00	1.57E-02
		Be-7	<1.49E-01	0.00E+00	1.49E-01
		K-40	7.58E-01	2.46E-01	2.24E-01
518768	3/2/2020 - 3/10/2020	I-131	<1.95E-02	0.00E+00	1.95E-02
		Cs-134	<1.57E-02	0.00E+00	1.57E-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	3.27E-01	1.29E-01	1.03E-01
519354	3/10/2020 - 3/16/2020	I-131	<2.96E-02	0.00E+00	2.96E-02
		Cs-134	<1.47E-02	0.00E+00	1.47E-02
		Cs-137	<2.15E-02	0.00E+00	2.15E-02
		Be-7	<1.61E-01	0.00E+00	1.61E-01
		K-40	5.94E-01	2.06E-01	1.56E-01
519743	3/16/2020 - 3/24/2020	I-131	<2.93E-02	0.00E+00	2.93E-02
		Cs-134	<1.29E-02	0.00E+00	1.29E-02
		Cs-137	<9.71E-03	0.00E+00	9.71E-03
		Be-7	<1.01E-01	0.00E+00	1.01E-01
		K-40	3.67E-01	1.42E-01	1.20E-01
520353	3/24/2020 - 3/31/2020	I-131	<5.58E-02	0.00E+00	5.58E-02
		Cs-134	<1.30E-02	0.00E+00	1.30E-02
		Cs-137	<1.66E-02	0.00E+00	1.66E-02
		Be-7	<1.44E-01	0.00E+00	1.44E-01
		K-40	4.58E-01	1.70E-01	1.71E-01
520553	3/31/2020 - 4/7/2020	I-131	<2.73E-02	0.00E+00	2.73E-02
		Cs-134	<1.18E-02	0.00E+00	1.18E-02
		Cs-137	<1.40E-02	0.00E+00	1.40E-02



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
520553	3/31/2020 - 4/7/2020	Be-7	<9.88E-02	0.00E+00	9.88E-02
		K-40	2.10E-01	1.28E-01	1.58E-01
520852	4/7/2020 - 4/14/2020	I-131	<3.16E-02	0.00E+00	3.16E-02
		Cs-134	<1.38E-02	0.00E+00	1.38E-02
		Cs-137	<1.82E-02	0.00E+00	1.82E-02
		Be-7	<1.63E-01	0.00E+00	1.63E-01
		K-40	4.12E-01	1.85E-01	2.16E-01
521650	4/14/2020 - 4/21/2020	I-131	<2.77E-02	0.00E+00	2.77E-02
		Cs-134	<2.00E-02	0.00E+00	2.00E-02
		Cs-137	<1.37E-02	0.00E+00	1.37E-02
		Be-7	<1.53E-01	0.00E+00	1.53E-01
		K-40	4.52E-01	1.96E-01	2.30E-01
522076	4/21/2020 - 4/28/2020	I-131	<2.50E-02	0.00E+00	2.50E-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	6.24E-01	1.98E-01	1.51E-01
522387	4/28/2020 - 5/5/2020	I-131	<2.39E-02	0.00E+00	2.39E-02
		Cs-134	<1.91E-02	0.00E+00	1.91E-02
		Cs-137	<1.36E-02	0.00E+00	1.36E-02
		Be-7	<1.04E-01	0.00E+00	1.04E-01
		K-40	3.28E-01	1.66E-01	2.05E-01
522643	5/5/2020 - 5/12/2020	I-131	<2.72E-02	0.00E+00	2.72E-02
		Cs-134	<1.62E-02	0.00E+00	1.62E-02
		Cs-137	<1.63E-02	0.00E+00	1.63E-02
		Be-7	<1.15E-01	0.00E+00	1.15E-01
		K-40	<3.42E-01	0.00E+00	3.42E-01
523146	5/12/2020 - 5/19/2020	I-131	<2.45E-02	0.00E+00	2.45E-02
		Cs-134	<1.33E-02	0.00E+00	1.33E-02
		Cs-137	<7.51E-03	0.00E+00	7.51E-03
		Be-7	<9.36E-02	0.00E+00	9.36E-02
		K-40	2.60E-01	1.58E-01	2.13E-01
523510	5/19/2020 - 5/26/2020	I-131	<2.46E-02	0.00E+00	2.46E-02
		Cs-134	<1.39E-02	0.00E+00	1.39E-02
		Cs-137	<1.19E-02	0.00E+00	1.19E-02
		Be-7	<9.12E-02	0.00E+00	9.12E-02
		K-40	2.88E-01	1.50E-01	1.66E-01
523920	5/26/2020 - 6/2/2020	I-131	<2.24E-02	0.00E+00	2.24E-02
		Cs-134	<1.44E-02	0.00E+00	1.44E-02
		Cs-137	<1.16E-02	0.00E+00	1.16E-02
		Be-7	<8.36E-02	0.00E+00	8.36E-02
		K-40	3.37E-01	1.67E-01	2.02E-01
524488	6/2/2020 - 6/8/2020	I-131	<2.22E-02	0.00E+00	2.22E-02
		Cs-134	<1.79E-02	0.00E+00	1.79E-02
		Cs-137	<1.17E-02	0.00E+00	1.17E-02
		Be-7	<1.19E-01	0.00E+00	1.19E-01
		K-40	<4.22E-01	0.00E+00	4.22E-01
524806	6/8/2020 - 6/16/2020	I-131	<2.05E-02	0.00E+00	2.05E-02
		Cs-134	<1.61E-02	0.00E+00	1.61E-02





# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
524806	6/8/2020 - 6/16/2020	Cs-137	<1.24E-02	0.00E+00	1.24E-02
		Be-7	<9.37E-02	0.00E+00	9.37E-02
		K-40	3.50E-01	1.36E-01	1.16E-01
525029	6/16/2020 - 6/23/2020	I-131	<3.01E-02	0.00E+00	3.01E-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	<1.12E-01	0.00E+00	1.12E-01
		K-40	4.10E-01	1.65E-01	1.64E-01
525432	6/23/2020 - 6/30/2020	I-131	<2.60E-02	0.00E+00	2.60E-02
		Cs-134	<1.27E-02	0.00E+00	1.27E-02
		Cs-137	<1.33E-02	0.00E+00	1.33E-02
		Be-7	<9.55E-02	0.00E+00	9.55E-02
		K-40	8.49E-01	2.51E-01	2.44E-01
525626	6/30/2020 - 7/7/2020	I-131	<3.02E-02	0.00E+00	3.02E-02
		Cs-134	<1.54E-02	0.00E+00	1.54E-02
		Cs-137	<1.18E-02	0.00E+00	1.18E-02
		Be-7	<1.16E-01	0.00E+00	1.16E-01
		K-40	3.19E-01	1.90E-01	2.64E-01
526000	7/7/2020 - 7/14/2020	I-131	<1.53E-02	0.00E+00	1.53E-02
		Cs-134	<1.50E-02	0.00E+00	1.50E-02
		Cs-137	<1.64E-02	0.00E+00	1.64E-02
		Be-7	<9.17E-02	0.00E+00	9.17E-02
		K-40	4.35E-01	1.84E-01	2.10E-01
526313	7/14/2020 - 7/20/2020	I-131	<2.31E-02	0.00E+00	2.31E-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	<1.20E-01	0.00E+00	1.20E-01
		K-40	4.39E-01	2.48E-01	3.47E-01
526601	7/20/2020 - 7/27/2020	I-131	<1.67E-02	0.00E+00	1.67E-02
		Cs-134	<1.46E-02	0.00E+00	1.46E-02
		Cs-137	<1.10E-02	0.00E+00	1.10E-02
		Be-7	<1.00E-01	0.00E+00	1.00E-01
		K-40	2.16E-01	1.20E-01	1.28E-01
526916	7/27/2020 - 8/3/2020	I-131	<2.56E-02	0.00E+00	2.56E-02
		Cs-134	<1.94E-02	0.00E+00	1.94E-02
		Cs-137	<1.21E-02	0.00E+00	1.21E-02
		Be-7	<1.13E-01	0.00E+00	1.13E-01
		K-40	4.27E-01	1.64E-01	1.51E-01
527416	8/3/2020 - 8/11/2020	I-131	<1.59E-02	0.00E+00	1.59E-02
		Cs-134	<1.52E-02	0.00E+00	1.52E-02
		Cs-137	<1.47E-02	0.00E+00	1.47E-02
		Be-7	<9.64E-02	0.00E+00	9.64E-02
		K-40	6.40E-01	1.84E-01	1.14E-01
527687	8/11/2020 - 8/18/2020	I-131	<1.77E-02	0.00E+00	1.77E-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	<1.18E-01	0.00E+00	1.18E-01
		K-40	4.86E-01	1.74E-01	1.49E-01
527990	8/18/2020 - 8/25/2020	I-131	<1.97E-02	0.00E+00	1.97E-02



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
527990	8/18/2020 - 8/25/2020	Cs-134	<1.54E-02	0.00E+00	1.54E-02
		Cs-137	<1.18E-02	0.00E+00	1.18E-02
		Be-7	<8.89E-02	0.00E+00	8.89E-02
		K-40	4.97E-01	1.77E-01	1.48E-01
528735	8/25/2020 - 9/1/2020	I-131	<2.22E-02	0.00E+00	2.22E-02
		Cs-134	<1.64E-02	0.00E+00	1.64E-02
		Cs-137	<1.68E-02	0.00E+00	1.68E-02
		Be-7	<1.17E-01	0.00E+00	1.17E-01
		K-40	4.69E-01	1.89E-01	1.92E-01
529076	9/1/2020 - 9/8/2020	I-131	<2.72E-02	0.00E+00	2.72E-02
		Cs-134	<1.59E-02	0.00E+00	1.59E-02
		Cs-137	<1.30E-02	0.00E+00	1.30E-02
		Be-7	<1.01E-01	0.00E+00	1.01E-01
		K-40	6.00E-01	2.05E-01	2.01E-01
530082	9/8/2020 - 9/15/2020	I-131	<2.28E-02	0.00E+00	2.28E-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	<1.12E-01	0.00E+00	1.12E-01
		K-40	6.21E-01	2.04E-01	1.88E-01
530240	9/15/2020 - 9/22/2020	I-131	<1.98E-02	0.00E+00	1.98E-02
		Cs-134	<1.52E-02	0.00E+00	1.52E-02
		Cs-137	<1.09E-02	0.00E+00	1.09E-02
		Be-7	<1.11E-01	0.00E+00	1.11E-01
		K-40	5.06E-01	2.05E-01	2.37E-01
530542	9/22/2020 - 9/29/2020	I-131	<1.72E-02	0.00E+00	1.72E-02
		Cs-134	<1.59E-02	0.00E+00	1.59E-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	7.16E-01	2.19E-01	1.97E-01
531036	9/29/2020 - 10/6/2020	I-131	<1.68E-02	0.00E+00	1.68E-02
		Cs-134	<1.46E-02	0.00E+00	1.46E-02
		Cs-137	<1.26E-02	0.00E+00	1.26E-02
		Be-7	<9.90E-02	0.00E+00	9.90E-02
		K-40	3.39E-01	1.33E-01	3.41E-02
531652	10/6/2020 - 10/13/2020	I-131	<2.83E-02	0.00E+00	2.83E-02
		Cs-134	<1.62E-02	0.00E+00	1.62E-02
		Cs-137	<1.51E-02	0.00E+00	1.51E-02
		Be-7	<1.38E-01	0.00E+00	1.38E-01
		K-40	5.73E-01	1.75E-01	3.38E-02
532051	10/13/2020 - 10/20/2020	I-131	<1.52E-02	0.00E+00	1.52E-02
		Cs-134	<1.75E-02	0.00E+00	1.75E-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	5.76E-01	2.03E-01	2.03E-01
532483	10/20/2020 - 10/27/2020	I-131	<3.03E-02	0.00E+00	3.03E-02
		Cs-134	<1.46E-02	0.00E+00	1.46E-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	6.25E-01	1.99E-01	1.63E-01



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
532791	10/27/2020 - 11/3/2020	I-131	<1.96E-02	0.00E+00	1.96E-02
		Cs-134	<1.40E-02	0.00E+00	1.40E-02
		Cs-137	<1.40E-02	0.00E+00	1.40E-02
		Be-7	<1.09E-01	0.00E+00	1.09E-01
		K-40	6.19E-01	1.98E-01	1.74E-01
533314	11/3/2020 - 11/10/2020	I-131	<1.62E-02	0.00E+00	1.62E-02
		Cs-134	<1.30E-02	0.00E+00	1.30E-02
		Cs-137	<1.29E-02	0.00E+00	1.29E-02
		Be-7	<9.19E-02	0.00E+00	9.19E-02
		K-40	4.73E-01	1.96E-01	2.22E-01
533764	11/10/2020 - 11/17/2020	I-131	<1.89E-02	0.00E+00	1.89E-02
		Cs-134	<1.45E-02	0.00E+00	1.45E-02
		Cs-137	<1.62E-02	0.00E+00	1.62E-02
		Be-7	<9.81E-02	0.00E+00	9.81E-02
		K-40	4.29E-01	1.67E-01	1.56E-01
534078	11/17/2020 - 11/24/2020	I-131	<2.43E-02	0.00E+00	2.43E-02
		Cs-134	<1.24E-02	0.00E+00	1.24E-02
		Cs-137	<1.74E-02	0.00E+00	1.74E-02
		Be-7	<1.22E-01	0.00E+00	1.22E-01
		K-40	3.77E-01	1.79E-01	2.19E-01
534538	11/24/2020 - 12/1/2020	I-131	<2.95E-02	0.00E+00	2.95E-02
		Cs-134	<1.35E-02	0.00E+00	1.35E-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	<4.13E-01	0.00E+00	4.13E-01
534755	12/1/2020 - 12/8/2020	I-131	<2.86E-02	0.00E+00	2.86E-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	<8.94E-02	0.00E+00	8.94E-02
		K-40	5.76E-01	1.76E-01	3.39E-02
535307	12/8/2020 - 12/15/2020	I-131	<1.92E-02	0.00E+00	1.92E-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	<1.17E-01	0.00E+00	1.17E-01
		K-40	4.65E-01	2.04E-01	2.49E-01
535862	12/15/2020 - 12/22/2020	I-131	<2.74E-02	0.00E+00	2.74E-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	<1.00E-01	0.00E+00	1.00E-01
		K-40	5.32E-01	1.98E-01	2.09E-01
536146	12/22/2020 - 12/29/2020	I-131	<2.20E-02	0.00E+00	2.20E-02
		Cs-134	<1.57E-02	0.00E+00	1.57E-02
		Cs-137	<7.87E-03	0.00E+00	7.87E-03
		Be-7	<1.15E-01	0.00E+00	1.15E-01
		K-40	2.39E-01	1.26E-01	1.32E-01

Sample Point 61 [ INDICATOR - WSW @ 0.3 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514967	12/31/2019 - 1/6/2020	I-131	<3.67E-02	0.00E+00	3.67E-02
		Cs-134	<1.95E-02	0.00E+00	1.95E-02
		Cs-137	<1.75E-02	0.00E+00	1.75E-02
		Be-7	<1.31E-01	0.00E+00	1.31E-01



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
514967	12/31/2019 - 1/6/2020	K-40	7.02E-01	2.21E-01	1.59E-01
515311	1/6/2020 - 1/13/2020	I-131	<1.97E-02	0.00E+00	1.97E-02
		Cs-134	<1.46E-02	0.00E+00	1.46E-02
		Cs-137	<1.73E-02	0.00E+00	1.73E-02
		Be-7	<9.98E-02	0.00E+00	9.98E-02
		K-40	<3.71E-01	0.00E+00	3.71E-01
515537	1/13/2020 - 1/20/2020	I-131	<1.47E-02	0.00E+00	1.47E-02
		Cs-134	<1.54E-02	0.00E+00	1.54E-02
		Cs-137	<1.67E-02	0.00E+00	1.67E-02
		Be-7	<1.12E-01	0.00E+00	1.12E-01
		K-40	4.27E-01	1.55E-01	3.62E-02
515932	1/20/2020 - 1/27/2020	I-131	<1.76E-02	0.00E+00	1.76E-02
		Cs-134	<1.23E-02	0.00E+00	1.23E-02
		Cs-137	<1.59E-02	0.00E+00	1.59E-02
		Be-7	<1.38E-01	0.00E+00	1.38E-01
		K-40	1.91E-01	1.34E-01	1.80E-01
516184	1/27/2020 - 2/4/2020	I-131	<1.49E-02	0.00E+00	1.49E-02
		Cs-134	<1.42E-02	0.00E+00	1.42E-02
		Cs-137	<7.89E-03	0.00E+00	7.89E-03
		Be-7	<8.89E-02	0.00E+00	8.89E-02
		K-40	5.11E-01	1.61E-01	1.01E-01
516559	2/4/2020 - 2/11/2020	I-131	<1.97E-02	0.00E+00	1.97E-02
		Cs-134	<1.26E-02	0.00E+00	1.26E-02
		Cs-137	<1.51E-02	0.00E+00	1.51E-02
		Be-7	<9.41E-02	0.00E+00	9.41E-02
		K-40	4.83E-01	1.68E-01	1.14E-01
516928	2/11/2020 - 2/18/2020	I-131	<1.67E-02	0.00E+00	1.67E-02
		Cs-134	<1.52E-02	0.00E+00	1.52E-02
		Cs-137	<1.24E-02	0.00E+00	1.24E-02
		Be-7	<7.86E-02	0.00E+00	7.86E-02
		K-40	2.70E-01	1.44E-01	1.71E-01
517455	2/18/2020 - 2/25/2020	I-131	<2.99E-02	0.00E+00	2.99E-02
		Cs-134	<2.04E-02	0.00E+00	2.04E-02
		Cs-137	<1.02E-02	0.00E+00	1.02E-02
		Be-7	<1.19E-01	0.00E+00	1.19E-01
		K-40	3.83E-01	1.59E-01	1.50E-01
517716	2/25/2020 - 3/2/2020	I-131	<1.88E-02	0.00E+00	1.88E-02
		Cs-134	<2.16E-02	0.00E+00	2.16E-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	6.23E-01	2.22E-01	2.14E-01
518769	3/2/2020 - 3/10/2020	I-131	<1.85E-02	0.00E+00	1.85E-02
		Cs-134	<1.19E-02	0.00E+00	1.19E-02
		Cs-137	<1.21E-02	0.00E+00	1.21E-02
		Be-7	<1.04E-01	0.00E+00	1.04E-01
		K-40	3.71E-01	1.31E-01	2.96E-02
519355	3/10/2020 - 3/16/2020	I-131	<2.63E-02	0.00E+00	2.63E-02
		Cs-134	<1.73E-02	0.00E+00	1.73E-02
		Cs-137	<1.66E-02	0.00E+00	1.66E-02



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
519355	3/10/2020 - 3/16/2020	Be-7	<1.18E-01	0.00E+00	1.18E-01
		K-40	3.69E-01	2.09E-01	2.79E-01
519744	3/16/2020 - 3/24/2020	I-131	<2.34E-02	0.00E+00	2.34E-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	<9.03E-02	0.00E+00	9.03E-02
		K-40	<1.95E-01	0.00E+00	1.95E-01
520354	3/24/2020 - 3/31/2020	I-131	<5.54E-02	0.00E+00	5.54E-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	<9.39E-02	0.00E+00	9.39E-02
		K-40	4.60E-01	1.63E-01	1.72E-01
520554	3/31/2020 - 4/7/2020	I-131	<2.58E-02	0.00E+00	2.58E-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	<1.23E-01	0.00E+00	1.23E-01
		K-40	1.56E-01	1.56E-01	2.43E-01
520853	4/7/2020 - 4/14/2020	I-131	<2.67E-02	0.00E+00	2.67E-02
		Cs-134	<1.27E-02	0.00E+00	1.27E-02
		Cs-137	<1.46E-02	0.00E+00	1.46E-02
		Be-7	3.55E-02	7.23E-02	1.25E-01
		K-40	5.26E-01	2.12E-01	2.49E-01
521651	4/14/2020 - 4/21/2020	I-131	<2.33E-02	0.00E+00	2.33E-02
		Cs-134	<1.60E-02	0.00E+00	1.60E-02
		Cs-137	<8.89E-03	0.00E+00	8.89E-03
		Be-7	<1.22E-01	0.00E+00	1.22E-01
		K-40	2.20E-01	1.05E-01	3.32E-02
522077	4/21/2020 - 4/28/2020	I-131	<2.48E-02	0.00E+00	2.48E-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	<9.85E-02	0.00E+00	9.85E-02
		K-40	<3.15E-01	0.00E+00	3.15E-01
522388	4/28/2020 - 5/5/2020	I-131	<2.54E-02	0.00E+00	2.54E-02
		Cs-134	<1.47E-02	0.00E+00	1.47E-02
		Cs-137	<1.10E-02	0.00E+00	1.10E-02
		Be-7	<1.14E-01	0.00E+00	1.14E-01
		K-40	4.60E-01	1.86E-01	2.00E-01
522644	5/5/2020 - 5/12/2020	I-131	<2.45E-02	0.00E+00	2.45E-02
		Cs-134	<1.45E-02	0.00E+00	1.45E-02
		Cs-137	<1.67E-02	0.00E+00	1.67E-02
		Be-7	<1.36E-01	0.00E+00	1.36E-01
		K-40	3.43E-01	1.86E-01	2.48E-01
523147	5/12/2020 - 5/19/2020	I-131	<2.29E-02	0.00E+00	2.29E-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	<1.06E-01	0.00E+00	1.06E-01
		K-40	<3.06E-01	0.00E+00	3.06E-01
523511	5/19/2020 - 5/26/2020	I-131	<2.71E-02	0.00E+00	2.71E-02
		Cs-134	<1.37E-02	0.00E+00	1.37E-02



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
523511	5/19/2020 - 5/26/2020	Cs-137	<1.26E-02	0.00E+00	1.26E-02
		Be-7	<1.13E-01	0.00E+00	1.13E-01
		K-40	6.48E-01	2.31E-01	2.59E-01
523921	5/26/2020 - 6/2/2020	I-131	<1.84E-02	0.00E+00	1.84E-02
		Cs-134	<1.48E-02	0.00E+00	1.48E-02
		Cs-137	<1.13E-02	0.00E+00	1.13E-02
		Be-7	<1.02E-01	0.00E+00	1.02E-01
		K-40	5.52E-01	1.80E-01	1.33E-01
524489	6/2/2020 - 6/8/2020	I-131	<2.28E-02	0.00E+00	2.28E-02
		Cs-134	<1.34E-02	0.00E+00	1.34E-02
		Cs-137	<2.04E-02	0.00E+00	2.04E-02
		Be-7	<1.04E-01	0.00E+00	1.04E-01
		K-40	6.57E-01	2.24E-01	2.02E-01
524807	6/8/2020 - 6/16/2020	I-131	<1.84E-02	0.00E+00	1.84E-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	<8.25E-02	0.00E+00	8.25E-02
		K-40	3.47E-01	1.43E-01	1.40E-01
525030	6/16/2020 - 6/23/2020	I-131	<3.07E-02	0.00E+00	3.07E-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	<1.05E-01	0.00E+00	1.05E-01
		K-40	3.26E-01	1.57E-01	1.78E-01
525433	6/23/2020 - 6/30/2020	I-131	<3.09E-02	0.00E+00	3.09E-02
		Cs-134	<1.89E-02	0.00E+00	1.89E-02
		Cs-137	<1.17E-02	0.00E+00	1.17E-02
		Be-7	<1.27E-01	0.00E+00	1.27E-01
		K-40	4.48E-01	1.82E-01	1.95E-01
525627	6/30/2020 - 7/7/2020	I-131	<2.43E-02	0.00E+00	2.43E-02
		Cs-134	<1.05E-02	0.00E+00	1.05E-02
		Cs-137	<1.10E-02	0.00E+00	1.10E-02
		Be-7	<9.97E-02	0.00E+00	9.97E-02
		K-40	<1.17E-01	0.00E+00	1.17E-01
526001	7/7/2020 - 7/14/2020	I-131	<1.96E-02	0.00E+00	1.96E-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	<8.95E-02	0.00E+00	8.95E-02
		K-40	4.32E-01	1.76E-01	1.85E-01
526314	7/14/2020 - 7/20/2020	I-131	<2.25E-02	0.00E+00	2.25E-02
		Cs-134	<2.35E-02	0.00E+00	2.35E-02
		Cs-137	<1.55E-02	0.00E+00	1.55E-02
		Be-7	<1.10E-01	0.00E+00	1.10E-01
		K-40	6.88E-01	2.19E-01	1.56E-01
526602	7/20/2020 - 7/27/2020	I-131	<2.04E-02	0.00E+00	2.04E-02
		Cs-134	<2.11E-02	0.00E+00	2.11E-02
		Cs-137	<1.09E-02	0.00E+00	1.09E-02
		Be-7	<1.15E-01	0.00E+00	1.15E-01
		K-40	4.50E-01	1.82E-01	1.96E-01
526917	7/27/2020 - 8/3/2020	I-131	<3.04E-02	0.00E+00	3.04E-02



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
526917	7/27/2020 - 8/3/2020	Cs-134	<2.06E-02	0.00E+00	2.06E-02
		Cs-137	<1.58E-02	0.00E+00	1.58E-02
		Be-7	<1.20E-01	0.00E+00	1.20E-01
		K-40	3.72E-01	1.53E-01	1.48E-01
527417	8/3/2020 - 8/11/2020	I-131	<1.96E-02	0.00E+00	1.96E-02
		Cs-134	<1.37E-02	0.00E+00	1.37E-02
		Cs-137	<1.40E-02	0.00E+00	1.40E-02
		Be-7	<1.07E-01	0.00E+00	1.07E-01
		K-40	5.31E-01	1.93E-01	2.09E-01
527688	8/11/2020 - 8/18/2020	I-131	<1.44E-02	0.00E+00	1.44E-02
		Cs-134	<1.92E-02	0.00E+00	1.92E-02
		Cs-137	<1.30E-02	0.00E+00	1.30E-02
		Be-7	<9.10E-02	0.00E+00	9.10E-02
		K-40	4.60E-01	1.63E-01	1.18E-01
527991	8/18/2020 - 8/25/2020	I-131	<2.04E-02	0.00E+00	2.04E-02
		Cs-134	<1.52E-02	0.00E+00	1.52E-02
		Cs-137	<1.66E-02	0.00E+00	1.66E-02
		Be-7	<1.01E-01	0.00E+00	1.01E-01
		K-40	3.97E-01	1.74E-01	1.97E-01
528736	8/25/2020 - 9/1/2020	I-131	<2.08E-02	0.00E+00	2.08E-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	<1.13E-01	0.00E+00	1.13E-01
		K-40	4.49E-01	1.81E-01	1.90E-01
529077	9/1/2020 - 9/8/2020	I-131	<3.09E-02	0.00E+00	3.09E-02
		Cs-134	<1.41E-02	0.00E+00	1.41E-02
		Cs-137	<1.77E-02	0.00E+00	1.77E-02
		Be-7	<1.04E-01	0.00E+00	1.04E-01
		K-40	4.99E-01	1.78E-01	1.60E-01
530083	9/8/2020 - 9/15/2020	I-131	<1.54E-02	0.00E+00	1.54E-02
		Cs-134	<1.35E-02	0.00E+00	1.35E-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	4.13E-01	1.74E-01	1.76E-01
530241	9/15/2020 - 9/22/2020	I-131	<1.61E-02	0.00E+00	1.61E-02
		Cs-134	<1.63E-02	0.00E+00	1.63E-02
		Cs-137	<1.19E-02	0.00E+00	1.19E-02
		Be-7	<8.96E-02	0.00E+00	8.96E-02
		K-40	4.02E-01	1.57E-01	1.30E-01
530543	9/22/2020 - 9/29/2020	I-131	<1.90E-02	0.00E+00	1.90E-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	<7.79E-02	0.00E+00	7.79E-02
		K-40	5.27E-01	1.76E-01	1.31E-01
531037	9/29/2020 - 10/6/2020	I-131	<2.20E-02	0.00E+00	2.20E-02
		Cs-134	<1.99E-02	0.00E+00	1.99E-02
		Cs-137	<1.66E-02	0.00E+00	1.66E-02
		Be-7	<7.81E-02	0.00E+00	7.81E-02
		K-40	4.83E-01	1.74E-01	1.28E-01



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
531653	10/6/2020 - 10/13/2020	I-131	<3.14E-02	0.00E+00	3.14E-02
		Cs-134	<1.81E-02	0.00E+00	1.81E-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	7.13E-01	2.31E-01	2.38E-01
532052	10/13/2020 - 10/20/2020	I-131	<1.63E-02	0.00E+00	1.63E-02
		Cs-134	<1.81E-02	0.00E+00	1.81E-02
		Cs-137	<1.39E-02	0.00E+00	1.39E-02
		Be-7	<1.02E-01	0.00E+00	1.02E-01
		K-40	4.47E-01	1.68E-01	1.47E-01
532484	10/20/2020 - 10/27/2020	I-131	<3.01E-02	0.00E+00	3.01E-02
		Cs-134	<1.75E-02	0.00E+00	1.75E-02
		Cs-137	<1.25E-02	0.00E+00	1.25E-02
		Be-7	<1.13E-01	0.00E+00	1.13E-01
		K-40	3.06E-01	1.42E-01	1.39E-01
532792	10/27/2020 - 11/3/2020	I-131	<2.01E-02	0.00E+00	2.01E-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	<1.06E-01	0.00E+00	1.06E-01
		K-40	5.54E-01	1.75E-01	1.10E-01
533315	11/3/2020 - 11/10/2020	I-131	<2.15E-02	0.00E+00	2.15E-02
		Cs-134	<1.72E-02	0.00E+00	1.72E-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	6.53E-01	2.01E-01	1.35E-01
533765	11/10/2020 - 11/17/2020	I-131	<2.07E-02	0.00E+00	2.07E-02
		Cs-134	<2.10E-02	0.00E+00	2.10E-02
		Cs-137	<1.51E-02	0.00E+00	1.51E-02
		Be-7	<8.50E-02	0.00E+00	8.50E-02
		K-40	3.45E-01	1.76E-01	2.22E-01
534079	11/17/2020 - 11/24/2020	I-131	<3.14E-02	0.00E+00	3.14E-02
		Cs-134	<1.73E-02	0.00E+00	1.73E-02
		Cs-137	<1.73E-02	0.00E+00	1.73E-02
		Be-7	<1.33E-01	0.00E+00	1.33E-01
		K-40	5.63E-01	2.05E-01	2.14E-01
534539	11/24/2020 - 12/1/2020	I-131	<2.69E-02	0.00E+00	2.69E-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	<1.06E-01	0.00E+00	1.06E-01
		K-40	4.86E-01	1.93E-01	2.14E-01
534756	12/1/2020 - 12/8/2020	I-131	<2.57E-02	0.00E+00	2.57E-02
		Cs-134	<1.65E-02	0.00E+00	1.65E-02
		Cs-137	<1.55E-02	0.00E+00	1.55E-02
		Be-7	<1.01E-01	0.00E+00	1.01E-01
		K-40	6.45E-01	1.98E-01	1.38E-01
535308	12/8/2020 - 12/15/2020	I-131	<2.24E-02	0.00E+00	2.24E-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	<1.12E-01	0.00E+00	1.12E-01
		K-40	5.64E-01	2.05E-01	2.13E-01





## ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
535863	12/15/2020 - 12/22/2020		I-131	<4.49E-02	0.00E+00	4.49E-02
			Cs-134	<2.02E-02	0.00E+00	2.02E-02
			Cs-137	<1.98E-02	0.00E+00	1.98E-02
			Be-7	<1.36E-01	0.00E+00	1.36E-01
			K-40	7.52E-01	2.43E-01	2.03E-01

Sample ID:	Sample Dates:		Nuclide	Activity	2 Sigma Error	MDA
536147	12/22/2020 - 12/29/2020		I-131	<3.01E-02	0.00E+00	3.01E-02
			Cs-134	<1.65E-02	0.00E+00	1.65E-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	4.40E-01	2.07E-01	2.58E-01

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

Sample Point 49 [ CONTROL - W @ 10 miles ]

Sample ID:	Sample Dates:		Nuclide	Activity	2 Sigma Error	MDA
526789	7/13/2020 - 7/13/2020	MIXEDCROPS	I-131	<2.67E+01	0.00E+00	2.67E+01
			Cs-134	<1.22E+01	0.00E+00	1.22E+01
			Cs-137	<1.06E+01	0.00E+00	1.06E+01
			Be-7	<8.77E+01	0.00E+00	8.77E+01
			K-40	3.10E+03	3.80E+02	1.74E+02

Sample Point 54 [ INDICATOR - E @ 10.1 miles ]

Sample ID:	Sample Dates:		Nuclide	Activity	2 Sigma Error	MDA
526790	7/14/2020 - 7/14/2020	CORN	I-131	<1.13E+01	0.00E+00	1.13E+01
			Cs-134	<9.21E+00	0.00E+00	9.21E+00
			Cs-137	<8.46E+00	0.00E+00	8.46E+00
			Be-7	<5.45E+01	0.00E+00	5.45E+01
			K-40	2.15E+03	2.66E+02	9.05E+01

Sample ID:	Sample Dates:		Nuclide	Activity	2 Sigma Error	MDA
534150	11/3/2020 - 11/3/2020	CORN	I-131	<1.92E+01	0.00E+00	1.92E+01
			Cs-134	<1.11E+01	0.00E+00	1.11E+01
			Cs-137	<1.15E+01	0.00E+00	1.15E+01
			Be-7	<9.77E+01	0.00E+00	9.77E+01
			K-40	3.45E+03	4.14E+02	1.39E+02

Sample ID:	Sample Dates:		Nuclide	Activity	2 Sigma Error	MDA
534151	11/3/2020 - 11/3/2020	BEANS	I-131	<4.60E+01	0.00E+00	4.60E+01
			Cs-134	<3.23E+01	0.00E+00	3.23E+01
			Cs-137	<2.65E+01	0.00E+00	2.65E+01
			Be-7	4.12E+02	1.88E+02	2.56E+02
			K-40	1.18E+04	1.33E+03	4.36E+02

Sample ID:	Sample Dates:		Nuclide	Activity	2 Sigma Error	MDA
534152	11/3/2020 - 11/3/2020	CUCUMBERS	I-131	<1.73E+01	0.00E+00	1.73E+01
			Cs-134	<1.33E+01	0.00E+00	1.33E+01
			Cs-137	<1.08E+01	0.00E+00	1.08E+01
			Be-7	<7.97E+01	0.00E+00	7.97E+01
			K-40	2.23E+03	3.11E+02	1.64E+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
522511	5/20/2020 - 5/20/2020	FREESWIM	Mn-54	<4.28E+01	0.00E+00	4.28E+01
			Co-58	<5.11E+01	0.00E+00	5.11E+01
			Fe-59	<1.14E+02	0.00E+00	1.14E+02
			Co-60	<4.54E+01	0.00E+00	4.54E+01
			Zn-65	<1.01E+02	0.00E+00	1.01E+02
			Nb-95	<3.50E+01	0.00E+00	3.50E+01
			I-131	<8.47E+01	0.00E+00	8.47E+01
			Cs-134	<4.25E+01	0.00E+00	4.25E+01
			Cs-137	<4.56E+01	0.00E+00	4.56E+01
			Be-7	<3.27E+02	0.00E+00	3.27E+02
			K-40	4.03E+03	9.54E+02	8.32E+02

# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 45 [ INDICATOR - @ 0 miles ]

Sample ID:	Sample Dates:	FREESWIM	Nuclide	Activity	2 Sigma Error	MDA
522511	5/20/2020 - 5/20/2020		Ag-110M	<4.92E+01	0.00E+00	4.92E+01
			Sb-122	<3.46E+02	0.00E+00	3.46E+02
			Sb-125	<1.18E+02	0.00E+00	1.18E+02

Sample ID:	Sample Dates:	BOTMFEEDER	Nuclide	Activity	2 Sigma Error	MDA
522510	5/20/2020 - 5/21/2020		Mn-54	<5.63E+01	0.00E+00	5.63E+01
			Co-58	<7.35E+01	0.00E+00	7.35E+01
			Fe-59	<1.44E+02	0.00E+00	1.44E+02
			Co-60	<4.90E+01	0.00E+00	4.90E+01
			Zn-65	<1.01E+02	0.00E+00	1.01E+02
			Nb-95	<7.29E+01	0.00E+00	7.29E+01
			I-131	<8.36E+01	0.00E+00	8.36E+01
			Cs-134	<6.65E+01	0.00E+00	6.65E+01
			Cs-137	<8.17E+01	0.00E+00	8.17E+01
			Be-7	<6.09E+02	0.00E+00	6.09E+02
			K-40	5.13E+03	1.37E+03	1.44E+03
			Ag-110M	<5.23E+01	0.00E+00	5.23E+01
			Sb-122	<5.56E+02	0.00E+00	5.56E+02
			Sb-125	<1.55E+02	0.00E+00	1.55E+02

Sample ID:	Sample Dates:	BOTMFEEDER	Nuclide	Activity	2 Sigma Error	MDA
533266	11/9/2020 - 11/9/2020		Mn-54	<3.75E+01	0.00E+00	3.75E+01
			Co-58	<4.90E+01	0.00E+00	4.90E+01
			Fe-59	<1.12E+02	0.00E+00	1.12E+02
			Co-60	<4.45E+01	0.00E+00	4.45E+01
			Zn-65	<8.90E+01	0.00E+00	8.90E+01
			Nb-95	<6.72E+01	0.00E+00	6.72E+01
			I-131	<3.28E+02	0.00E+00	3.28E+02
			Cs-134	<4.10E+01	0.00E+00	4.10E+01
			Cs-137	<5.26E+01	0.00E+00	5.26E+01
			Be-7	<3.09E+02	0.00E+00	3.09E+02
			K-40	3.20E+03	7.41E+02	4.59E+02
			Ag-110M	<4.72E+01	0.00E+00	4.72E+01
			Sb-122	<2.25E+04	0.00E+00	2.25E+04
			Sb-125	<1.01E+02	0.00E+00	1.01E+02

Sample ID:	Sample Dates:	FREESWIM	Nuclide	Activity	2 Sigma Error	MDA
533267	11/9/2020 - 11/9/2020		Mn-54	<4.71E+01	0.00E+00	4.71E+01
			Co-58	<4.38E+01	0.00E+00	4.38E+01
			Fe-59	<6.51E+01	0.00E+00	6.51E+01
			Co-60	<3.82E+01	0.00E+00	3.82E+01
			Zn-65	<1.15E+02	0.00E+00	1.15E+02
			Nb-95	<5.31E+01	0.00E+00	5.31E+01
			I-131	<2.51E+02	0.00E+00	2.51E+02
			Cs-134	<4.06E+01	0.00E+00	4.06E+01
			Cs-137	<3.99E+01	0.00E+00	3.99E+01
			Be-7	<2.72E+02	0.00E+00	2.72E+02
			K-40	3.62E+03	7.54E+02	3.48E+02
			Ag-110M	<4.43E+01	0.00E+00	4.43E+01
			Sb-122	<1.53E+04	0.00E+00	1.53E+04
			Sb-125	<1.05E+02	0.00E+00	1.05E+02

Sample Point 46 [ INDICATOR - @ 0 miles ]

Sample ID:	Sample Dates:	BOTMFEEDER	Nuclide	Activity	2 Sigma Error	MDA
522512	5/18/2020 - 5/18/2020		Mn-54	<4.68E+01	0.00E+00	4.68E+01
			Co-58	<4.35E+01	0.00E+00	4.35E+01
			Fe-59	<1.08E+02	0.00E+00	1.08E+02
			Co-60	<5.43E+01	0.00E+00	5.43E+01
			Zn-65	<1.08E+02	0.00E+00	1.08E+02
			Nb-95	<5.03E+01	0.00E+00	5.03E+01
			I-131	<8.18E+01	0.00E+00	8.18E+01
			Cs-134	<4.05E+01	0.00E+00	4.05E+01
			Cs-137	<5.59E+01	0.00E+00	5.59E+01
			Be-7	<4.11E+02	0.00E+00	4.11E+02
			K-40	3.34E+03	7.72E+02	4.26E+02
			Ag-110M	<3.20E+01	0.00E+00	3.20E+01



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 46 [ INDICATOR - @ 0 miles ]

Sample ID:	522512	Sample Dates:	5/18/2020 - 5/18/2020	BOTMFEEDER	Nuclide	Activity	2 Sigma Error	MDA
					Sb-122	<6.25E+02	0.00E+00	6.25E+02
					Sb-125	<1.09E+02	0.00E+00	1.09E+02

Sample ID:	522513	Sample Dates:	5/18/2020 - 5/18/2020	FREESWIM	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<3.60E+01	0.00E+00	3.60E+01
					Co-58	<4.24E+01	0.00E+00	4.24E+01
					Fe-59	<8.42E+01	0.00E+00	8.42E+01
					Co-60	<3.59E+01	0.00E+00	3.59E+01
					Zn-65	<9.99E+01	0.00E+00	9.99E+01
					Nb-95	<4.68E+01	0.00E+00	4.68E+01
					I-131	<9.26E+01	0.00E+00	9.26E+01
					Cs-134	<4.23E+01	0.00E+00	4.23E+01
					Cs-137	4.58E+01	3.85E+01	5.94E+01
					Be-7	<2.83E+02	0.00E+00	2.83E+02
					K-40	3.95E+03	8.12E+02	3.78E+02
					Ag-110M	<3.35E+01	0.00E+00	3.35E+01
					Sb-122	<6.04E+02	0.00E+00	6.04E+02
					Sb-125	<7.37E+01	0.00E+00	7.37E+01

Sample ID:	533268	Sample Dates:	11/10/2020 - 11/10/2020	BOTMFEEDER	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<4.10E+01	0.00E+00	4.10E+01
					Co-58	<5.04E+01	0.00E+00	5.04E+01
					Fe-59	<8.23E+01	0.00E+00	8.23E+01
					Co-60	<4.60E+01	0.00E+00	4.60E+01
					Zn-65	<1.23E+02	0.00E+00	1.23E+02
					Nb-95	<5.13E+01	0.00E+00	5.13E+01
					I-131	<2.27E+02	0.00E+00	2.27E+02
					Cs-134	<4.71E+01	0.00E+00	4.71E+01
					Cs-137	<5.45E+01	0.00E+00	5.45E+01
					Be-7	<4.36E+02	0.00E+00	4.36E+02
					K-40	3.28E+03	8.27E+02	7.48E+02
					Ag-110M	<3.99E+01	0.00E+00	3.99E+01
					Sb-122	<1.66E+04	0.00E+00	1.66E+04
					Sb-125	<1.04E+02	0.00E+00	1.04E+02

Sample ID:	533269	Sample Dates:	11/10/2020 - 11/10/2020	FREESWIM	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<3.47E+01	0.00E+00	3.47E+01
					Co-58	<4.29E+01	0.00E+00	4.29E+01
					Fe-59	<8.99E+01	0.00E+00	8.99E+01
					Co-60	<3.78E+01	0.00E+00	3.78E+01
					Zn-65	<1.17E+02	0.00E+00	1.17E+02
					Nb-95	<5.90E+01	0.00E+00	5.90E+01
					I-131	<2.74E+02	0.00E+00	2.74E+02
					Cs-134	<4.41E+01	0.00E+00	4.41E+01
					Cs-137	<5.11E+01	0.00E+00	5.11E+01
					Be-7	<4.14E+02	0.00E+00	4.14E+02
					K-40	3.36E+03	7.84E+02	6.60E+02
					Ag-110M	<3.99E+01	0.00E+00	3.99E+01
					Sb-122	<2.11E+04	0.00E+00	2.11E+04
					Sb-125	<8.42E+01	0.00E+00	8.42E+01

Sample Point 47 [ CONTROL - @ 0 miles ]

Sample ID:	522514	Sample Dates:	5/19/2020 - 5/19/2020	BOTMFEEDER	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<4.91E+01	0.00E+00	4.91E+01
					Co-58	<4.18E+01	0.00E+00	4.18E+01
					Fe-59	<9.75E+01	0.00E+00	9.75E+01
					Co-60	<5.90E+01	0.00E+00	5.90E+01
					Zn-65	<9.94E+01	0.00E+00	9.94E+01
					Nb-95	<4.92E+01	0.00E+00	4.92E+01
					I-131	<8.18E+01	0.00E+00	8.18E+01
					Cs-134	<4.72E+01	0.00E+00	4.72E+01
					Cs-137	<6.14E+01	0.00E+00	6.14E+01
					Be-7	<3.87E+02	0.00E+00	3.87E+02
					K-40	3.26E+03	7.82E+02	3.97E+02
					Ag-110M	<4.33E+01	0.00E+00	4.33E+01
					Sb-122	<4.01E+02	0.00E+00	4.01E+02



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 47 [ CONTROL - @ 0 miles ]

Sample ID:	Sample Dates:	Location:	Nuclide	Activity	2 Sigma Error	MDA
522514	5/19/2020 - 5/19/2020	BOTMFEEDER	Sb-125	<1.05E+02	0.00E+00	1.05E+02
522515	5/19/2020 - 5/19/2020	FREESWIM	Mn-54	<3.08E+01	0.00E+00	3.08E+01
			Co-58	<3.25E+01	0.00E+00	3.25E+01
			Fe-59	<8.22E+01	0.00E+00	8.22E+01
			Co-60	<2.61E+01	0.00E+00	2.61E+01
			Zn-65	<8.38E+01	0.00E+00	8.38E+01
			Nb-95	<4.70E+01	0.00E+00	4.70E+01
			I-131	<7.89E+01	0.00E+00	7.89E+01
			Cs-134	<4.55E+01	0.00E+00	4.55E+01
			Cs-137	<4.14E+01	0.00E+00	4.14E+01
			Be-7	<3.47E+02	0.00E+00	3.47E+02
			K-40	3.25E+03	7.84E+02	5.83E+02
			Ag-110M	<5.19E+01	0.00E+00	5.19E+01
			Sb-122	<3.37E+02	0.00E+00	3.37E+02
			Sb-125	<8.64E+01	0.00E+00	8.64E+01
533270	11/10/2020 - 11/10/2020	BOTMFEEDER	Mn-54	<3.53E+01	0.00E+00	3.53E+01
			Co-58	<4.79E+01	0.00E+00	4.79E+01
			Fe-59	<7.49E+01	0.00E+00	7.49E+01
			Co-60	<3.44E+01	0.00E+00	3.44E+01
			Zn-65	<9.41E+01	0.00E+00	9.41E+01
			Nb-95	<5.51E+01	0.00E+00	5.51E+01
			I-131	<2.58E+02	0.00E+00	2.58E+02
			Cs-134	<4.29E+01	0.00E+00	4.29E+01
			Cs-137	<4.45E+01	0.00E+00	4.45E+01
			Be-7	<2.88E+02	0.00E+00	2.88E+02
			K-40	3.08E+03	7.37E+02	5.82E+02
			Ag-110M	<3.13E+01	0.00E+00	3.13E+01
			Sb-122	<1.65E+04	0.00E+00	1.65E+04
			Sb-125	<8.89E+01	0.00E+00	8.89E+01
533271	11/10/2020 - 11/10/2020	FREESWIM	Mn-54	<3.65E+01	0.00E+00	3.65E+01
			Co-58	<3.73E+01	0.00E+00	3.73E+01
			Fe-59	<1.08E+02	0.00E+00	1.08E+02
			Co-60	<2.41E+01	0.00E+00	2.41E+01
			Zn-65	<8.01E+01	0.00E+00	8.01E+01
			Nb-95	<7.30E+01	0.00E+00	7.30E+01
			I-131	<2.17E+02	0.00E+00	2.17E+02
			Cs-134	<4.44E+01	0.00E+00	4.44E+01
			Cs-137	3.68E+01	4.16E+01	6.75E+01
			Be-7	<3.27E+02	0.00E+00	3.27E+02
			K-40	2.93E+03	7.11E+02	5.24E+02
			Ag-110M	<3.91E+01	0.00E+00	3.91E+01
			Sb-122	<1.59E+04	0.00E+00	1.59E+04
			Sb-125	<7.22E+01	0.00E+00	7.22E+01

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

Sample Point 64 [ INDICATOR - SE @ 0.6 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514720	1/14/2020 - 1/14/2020	Mn-54	<4.87E+00	0.00E+00	4.87E+00
		Co-58	<6.24E+00	0.00E+00	6.24E+00
		Fe-59	<1.10E+01	0.00E+00	1.10E+01
		Co-60	<6.90E+00	0.00E+00	6.90E+00
		Zn-65	<1.22E+01	0.00E+00	1.22E+01
		Zr-95	<1.09E+01	0.00E+00	1.09E+01
		Nb-95	<6.85E+00	0.00E+00	6.85E+00
		I-131	<6.35E+00	0.00E+00	6.35E+00
		Cs-134	<4.91E+00	0.00E+00	4.91E+00
		Cs-137	<6.81E+00	0.00E+00	6.81E+00
		BaLa-140	<9.01E+00	0.00E+00	9.01E+00
		Be-7	<4.81E+01	0.00E+00	4.81E+01
		K-40	<7.80E+01	0.00E+00	7.80E+01



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 64 [ INDICATOR - SE @ 0.6 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514720	1/14/2020 - 1/14/2020	H3GW	<1.13E+01	0.00E+00	1.85E+02
520416	4/7/2020 - 4/7/2020	Mn-54	<5.13E+00	0.00E+00	5.13E+00
		Co-58	<5.11E+00	0.00E+00	5.11E+00
		Fe-59	<1.24E+01	0.00E+00	1.24E+01
		Co-60	<5.42E+00	0.00E+00	5.42E+00
		Zn-65	<1.28E+01	0.00E+00	1.28E+01
		Zr-95	<8.06E+00	0.00E+00	8.06E+00
		Nb-95	<6.17E+00	0.00E+00	6.17E+00
		I-131	<9.62E+00	0.00E+00	9.62E+00
		Cs-134	<7.00E+00	0.00E+00	7.00E+00
		Cs-137	<5.73E+00	0.00E+00	5.73E+00
		BaLa-140	<1.06E+01	0.00E+00	1.06E+01
		Be-7	<4.41E+01	0.00E+00	4.41E+01
		K-40	1.14E+01	4.83E+01	8.74E+01
		H3GW	<-9.7E+01	0.00E+00	1.90E+02
525508	7/28/2020 - 7/28/2020	Mn-54	<6.32E+00	0.00E+00	6.32E+00
		Co-58	<6.68E+00	0.00E+00	6.68E+00
		Fe-59	<1.11E+01	0.00E+00	1.11E+01
		Co-60	<5.50E+00	0.00E+00	5.50E+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	<6.76E+00	0.00E+00	6.76E+00
		I-131	<9.03E+00	0.00E+00	9.03E+00
		Cs-134	<6.68E+00	0.00E+00	6.68E+00
		Cs-137	<6.47E+00	0.00E+00	6.47E+00
		BaLa-140	<9.73E+00	0.00E+00	9.73E+00
		Be-7	<4.61E+01	0.00E+00	4.61E+01
		K-40	1.05E+02	7.26E+01	1.08E+02
		H3GW	<4.06E+01	0.00E+00	1.79E+02
530749	10/20/2020 - 10/20/2020	Mn-54	<6.09E+00	0.00E+00	6.09E+00
		Co-58	<6.49E+00	0.00E+00	6.49E+00
		Fe-59	<1.23E+01	0.00E+00	1.23E+01
		Co-60	<4.97E+00	0.00E+00	4.97E+00
		Zn-65	<1.17E+01	0.00E+00	1.17E+01
		Zr-95	<1.10E+01	0.00E+00	1.10E+01
		Nb-95	<6.26E+00	0.00E+00	6.26E+00
		I-131	<9.87E+00	0.00E+00	9.87E+00
		Cs-134	<6.18E+00	0.00E+00	6.18E+00
		Cs-137	<5.55E+00	0.00E+00	5.55E+00
		BaLa-140	<7.73E+00	0.00E+00	7.73E+00
		Be-7	<3.88E+01	0.00E+00	3.88E+01
		K-40	1.60E+02	7.95E+01	1.09E+02
		H3GW	<7.99E+01	0.00E+00	1.75E+02

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
516450	2/11/2020 - 2/11/2020	Mn-54	<3.70E+01	0.00E+00	3.70E+01
		Co-58	<4.83E+01	0.00E+00	4.83E+01
		Fe-59	<8.96E+01	0.00E+00	8.96E+01
		Co-60	<4.57E+01	0.00E+00	4.57E+01
		Zn-65	<8.33E+01	0.00E+00	8.33E+01
		Zr-95	<8.53E+01	0.00E+00	8.53E+01
		Nb-95	<5.42E+01	0.00E+00	5.42E+01
		I-131	<1.06E+02	0.00E+00	1.06E+02
		Cs-134	<3.67E+01	0.00E+00	3.67E+01
		Cs-137	<4.67E+01	0.00E+00	4.67E+01
		Be-7	<3.71E+02	0.00E+00	3.71E+02
		K-40	<8.76E+02	0.00E+00	8.76E+02
		Co-57	<3.01E+01	0.00E+00	3.01E+01



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
516450	2/11/2020 - 2/11/2020	Mo-99	<1.70E+04	0.00E+00	1.70E+04
		Ag-110M	<4.09E+01	0.00E+00	4.09E+01
		Sb-122	<2.30E+03	0.00E+00	2.30E+03
		Sb-125	<7.51E+01	0.00E+00	7.51E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
527302	8/11/2020 - 8/11/2020	Mn-54	<4.04E+01	0.00E+00	4.04E+01
		Co-58	<3.81E+01	0.00E+00	3.81E+01
		Fe-59	<7.85E+01	0.00E+00	7.85E+01
		Co-60	<4.03E+01	0.00E+00	4.03E+01
		Zn-65	<1.09E+02	0.00E+00	1.09E+02
		Zr-95	<7.26E+01	0.00E+00	7.26E+01
		Nb-95	<5.36E+01	0.00E+00	5.36E+01
		I-131	<5.50E+01	0.00E+00	5.50E+01
		Cs-134	<6.49E+01	0.00E+00	6.49E+01
		Cs-137	<4.23E+01	0.00E+00	4.23E+01
		Be-7	<3.64E+02	0.00E+00	3.64E+02
		K-40	4.19E+02	3.35E+02	4.40E+02
		Co-57	<3.75E+01	0.00E+00	3.75E+01
		Mo-99	<1.12E+03	0.00E+00	1.12E+03
		Ag-110M	<3.25E+01	0.00E+00	3.25E+01
		Sb-122	<1.96E+02	0.00E+00	1.96E+02
		Sb-125	<1.19E+02	0.00E+00	1.19E+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
515343	12/23/2019 - 1/27/2020	Mn-54	<9.41E-01	0.00E+00	9.41E-01
		Co-58	<1.17E+00	0.00E+00	1.17E+00
		Fe-59	<2.27E+00	0.00E+00	2.27E+00
		Co-60	<8.72E-01	0.00E+00	8.72E-01
		Zn-65	<1.85E+00	0.00E+00	1.85E+00
		Zr-95	<2.03E+00	0.00E+00	2.03E+00
		Nb-95	<1.38E+00	0.00E+00	1.38E+00
		I-131	<8.56E+00	0.00E+00	8.56E+00
		Cs-134	<1.06E+00	0.00E+00	1.06E+00
		Cs-137	<1.04E+00	0.00E+00	1.04E+00
		BaLa-140	<3.62E+00	0.00E+00	3.62E+00
		Be-7	<9.26E+00	0.00E+00	9.26E+00
		K-40	7.36E+01	1.32E+01	1.50E+01
		H3SW	1.36E+03	1.43E+02	1.75E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
516805	1/27/2020 - 2/25/2020	Mn-54	<1.96E+00	0.00E+00	1.96E+00
		Co-58	<2.05E+00	0.00E+00	2.05E+00
		Fe-59	<4.59E+00	0.00E+00	4.59E+00
		Co-60	<1.84E+00	0.00E+00	1.84E+00
		Zn-65	<3.45E+00	0.00E+00	3.45E+00
		Zr-95	<4.03E+00	0.00E+00	4.03E+00
		Nb-95	<2.74E+00	0.00E+00	2.74E+00
		I-131	<1.16E+01	0.00E+00	1.16E+01
		Cs-134	<1.93E+00	0.00E+00	1.93E+00
		Cs-137	<2.09E+00	0.00E+00	2.09E+00
		BaLa-140	<5.91E+00	0.00E+00	5.91E+00
		Be-7	<1.84E+01	0.00E+00	1.84E+01
		K-40	7.94E+01	2.36E+01	2.97E+01
		H3SW	7.28E+02	1.26E+02	1.78E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
519241	2/25/2020 - 3/31/2020	Mn-54	<2.15E+00	0.00E+00	2.15E+00
		Co-58	<2.37E+00	0.00E+00	2.37E+00
		Fe-59	<5.45E+00	0.00E+00	5.45E+00
		Co-60	<2.41E+00	0.00E+00	2.41E+00
		Zn-65	<5.20E+00	0.00E+00	5.20E+00
		Zr-95	<3.86E+00	0.00E+00	3.86E+00
		Nb-95	<3.59E+00	0.00E+00	3.59E+00



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
519241	2/25/2020 - 3/31/2020	I-131	<1.19E+01	0.00E+00	1.19E+01
		Cs-134	<2.41E+00	0.00E+00	2.41E+00
		Cs-137	<2.37E+00	0.00E+00	2.37E+00
		BaLa-140	<6.00E+00	0.00E+00	6.00E+00
		Be-7	<1.93E+01	0.00E+00	1.93E+01
		K-40	9.54E+01	2.81E+01	3.36E+01
		H3SW	2.93E+02	1.16E+02	1.83E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
521197	3/31/2020 - 4/28/2020	Mn-54	<2.56E+00	0.00E+00	2.56E+00
		Co-58	<2.71E+00	0.00E+00	2.71E+00
		Fe-59	<7.18E+00	0.00E+00	7.18E+00
		Co-60	<3.03E+00	0.00E+00	3.03E+00
		Zn-65	<4.55E+00	0.00E+00	4.55E+00
		Zr-95	<5.22E+00	0.00E+00	5.22E+00
		Nb-95	<3.42E+00	0.00E+00	3.42E+00
		I-131	<1.20E+01	0.00E+00	1.20E+01
		Cs-134	<2.97E+00	0.00E+00	2.97E+00
		Cs-137	<2.48E+00	0.00E+00	2.48E+00
		BaLa-140	<5.50E+00	0.00E+00	5.50E+00
		Be-7	<2.53E+01	0.00E+00	2.53E+01
		K-40	6.00E+01	2.91E+01	3.92E+01
		H3SW	<1.62E+02	0.00E+00	1.90E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
522916	4/28/2020 - 5/26/2020	Mn-54	<2.04E+00	0.00E+00	2.04E+00
		Co-58	<2.10E+00	0.00E+00	2.10E+00
		Fe-59	<3.66E+00	0.00E+00	3.66E+00
		Co-60	<1.63E+00	0.00E+00	1.63E+00
		Zn-65	<4.06E+00	0.00E+00	4.06E+00
		Zr-95	<3.99E+00	0.00E+00	3.99E+00
		Nb-95	<3.01E+00	0.00E+00	3.01E+00
		I-131	<1.06E+01	0.00E+00	1.06E+01
		Cs-134	<2.15E+00	0.00E+00	2.15E+00
		Cs-137	<2.20E+00	0.00E+00	2.20E+00
		BaLa-140	<5.39E+00	0.00E+00	5.39E+00
		Be-7	<2.05E+01	0.00E+00	2.05E+01
		K-40	1.01E+02	2.46E+01	2.64E+01
		H3SW	<-2.3E+00	0.00E+00	1.90E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
526003	5/26/2020 - 6/30/2020	Mn-54	<1.56E+00	0.00E+00	1.56E+00
		Co-58	<2.11E+00	0.00E+00	2.11E+00
		Fe-59	<4.16E+00	0.00E+00	4.16E+00
		Co-60	<1.21E+00	0.00E+00	1.21E+00
		Zn-65	<3.64E+00	0.00E+00	3.64E+00
		Zr-95	<3.81E+00	0.00E+00	3.81E+00
		Nb-95	<2.66E+00	0.00E+00	2.66E+00
		I-131	<1.43E+01	0.00E+00	1.43E+01
		Cs-134	<1.78E+00	0.00E+00	1.78E+00
		Cs-137	<1.85E+00	0.00E+00	1.85E+00
		BaLa-140	<6.66E+00	0.00E+00	6.66E+00
		Be-7	<1.79E+01	0.00E+00	1.79E+01
		K-40	9.37E+01	2.09E+01	2.25E+01
		H3SW	1.57E+03	1.50E+02	1.83E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
524652	6/30/2020 - 7/27/2020	Mn-54	<2.71E+00	0.00E+00	2.71E+00
		Co-58	<2.59E+00	0.00E+00	2.59E+00
		Fe-59	<3.96E+00	0.00E+00	3.96E+00
		Co-60	<2.54E+00	0.00E+00	2.54E+00
		Zn-65	<5.69E+00	0.00E+00	5.69E+00
		Zr-95	<5.36E+00	0.00E+00	5.36E+00
		Nb-95	<3.83E+00	0.00E+00	3.83E+00
		I-131	<1.01E+01	0.00E+00	1.01E+01
		Cs-134	<2.89E+00	0.00E+00	2.89E+00
		Cs-137	<2.90E+00	0.00E+00	2.90E+00



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
524652	6/30/2020 - 7/27/2020	BaLa-140	<5.64E+00	0.00E+00	5.64E+00
		Be-7	<2.34E+01	0.00E+00	2.34E+01
		K-40	1.03E+02	3.35E+01	4.01E+01
		H3SW	3.98E+03	2.06E+02	1.87E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
527471	7/27/2020 - 8/25/2020	Mn-54	<1.90E+00	0.00E+00	1.90E+00
		Co-58	<2.12E+00	0.00E+00	2.12E+00
		Fe-59	<4.71E+00	0.00E+00	4.71E+00
		Co-60	<1.93E+00	0.00E+00	1.93E+00
		Zn-65	<4.38E+00	0.00E+00	4.38E+00
		Zr-95	<4.76E+00	0.00E+00	4.76E+00
		Nb-95	<2.91E+00	0.00E+00	2.91E+00
		I-131	<1.25E+01	0.00E+00	1.25E+01
		Cs-134	<2.46E+00	0.00E+00	2.46E+00
		Cs-137	<2.19E+00	0.00E+00	2.19E+00
		BaLa-140	<6.64E+00	0.00E+00	6.64E+00
		Be-7	<2.19E+01	0.00E+00	2.19E+01
		K-40	8.22E+01	2.43E+01	2.87E+01
		H3SW	2.02E+03	1.68E+02	1.94E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
529752	8/25/2020 - 9/29/2020	Mn-54	<1.52E+00	0.00E+00	1.52E+00
		Co-58	<1.84E+00	0.00E+00	1.84E+00
		Fe-59	<3.86E+00	0.00E+00	3.86E+00
		Co-60	<1.35E+00	0.00E+00	1.35E+00
		Zn-65	<3.02E+00	0.00E+00	3.02E+00
		Zr-95	<3.26E+00	0.00E+00	3.26E+00
		Nb-95	<2.38E+00	0.00E+00	2.38E+00
		I-131	<1.13E+01	0.00E+00	1.13E+01
		Cs-134	<1.79E+00	0.00E+00	1.79E+00
		Cs-137	<1.54E+00	0.00E+00	1.54E+00
		BaLa-140	<5.29E+00	0.00E+00	5.29E+00
		Be-7	<1.60E+01	0.00E+00	1.60E+01
		K-40	1.09E+02	1.96E+01	1.76E+01
		H3SW	3.44E+03	1.98E+02	1.95E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
531655	9/29/2020 - 10/27/2020	Mn-54	<1.97E+00	0.00E+00	1.97E+00
		Co-58	<2.52E+00	0.00E+00	2.52E+00
		Fe-59	<4.55E+00	0.00E+00	4.55E+00
		Co-60	<2.27E+00	0.00E+00	2.27E+00
		Zn-65	<4.45E+00	0.00E+00	4.45E+00
		Zr-95	<5.21E+00	0.00E+00	5.21E+00
		Nb-95	<3.07E+00	0.00E+00	3.07E+00
		I-131	<1.09E+01	0.00E+00	1.09E+01
		Cs-134	<2.30E+00	0.00E+00	2.30E+00
		Cs-137	<2.26E+00	0.00E+00	2.26E+00
		BaLa-140	<7.73E+00	0.00E+00	7.73E+00
		Be-7	<1.92E+01	0.00E+00	1.92E+01
		K-40	1.08E+02	2.58E+01	2.54E+01
		H3SW	4.65E+03	2.15E+02	1.81E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
533533	10/27/2020 - 11/24/2020	Mn-54	<1.80E+00	0.00E+00	1.80E+00
		Co-58	<1.96E+00	0.00E+00	1.96E+00
		Fe-59	<3.73E+00	0.00E+00	3.73E+00
		Co-60	<1.74E+00	0.00E+00	1.74E+00
		Zn-65	<3.59E+00	0.00E+00	3.59E+00
		Zr-95	<3.86E+00	0.00E+00	3.86E+00
		Nb-95	<2.76E+00	0.00E+00	2.76E+00
		I-131	<1.19E+01	0.00E+00	1.19E+01
		Cs-134	<2.01E+00	0.00E+00	2.01E+00
		Cs-137	<1.89E+00	0.00E+00	1.89E+00
		BaLa-140	<6.95E+00	0.00E+00	6.95E+00
		Be-7	<2.02E+01	0.00E+00	2.02E+01
		K-40	7.32E+01	2.49E+01	3.31E+01





# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
533533	10/27/2020 - 11/24/2020	H3SW	3.78E+03	2.01E+02	1.84E+02
535842	11/24/2020 - 12/29/2020	Mn-54	<1.48E+00	0.00E+00	1.48E+00
		Co-58	<1.83E+00	0.00E+00	1.83E+00
		Fe-59	<3.63E+00	0.00E+00	3.63E+00
		Co-60	<1.28E+00	0.00E+00	1.28E+00
		Zn-65	<2.89E+00	0.00E+00	2.89E+00
		Zr-95	<3.34E+00	0.00E+00	3.34E+00
		Nb-95	<2.19E+00	0.00E+00	2.19E+00
		I-131	<1.14E+01	0.00E+00	1.14E+01
		Cs-134	<1.58E+00	0.00E+00	1.58E+00
		Cs-137	<1.59E+00	0.00E+00	1.59E+00
		BaLa-140	<5.66E+00	0.00E+00	5.66E+00
		Be-7	<1.57E+01	0.00E+00	1.57E+01
		K-40	9.27E+01	1.60E+01	1.71E+01
		H3SW	2.52E+03	1.75E+02	1.90E+02

Sample Point 41 [ CONTROL - N @ 8 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
515344	12/23/2019 - 1/27/2020	Mn-54	<1.98E+00	0.00E+00	1.98E+00
		Co-58	<2.06E+00	0.00E+00	2.06E+00
		Fe-59	<3.48E+00	0.00E+00	3.48E+00
		Co-60	<1.83E+00	0.00E+00	1.83E+00
		Zn-65	<4.14E+00	0.00E+00	4.14E+00
		Zr-95	<3.62E+00	0.00E+00	3.62E+00
		Nb-95	<2.63E+00	0.00E+00	2.63E+00
		I-131	<1.07E+01	0.00E+00	1.07E+01
		Cs-134	<2.25E+00	0.00E+00	2.25E+00
		Cs-137	<2.26E+00	0.00E+00	2.26E+00
		BaLa-140	<6.10E+00	0.00E+00	6.10E+00
		Be-7	<1.97E+01	0.00E+00	1.97E+01
		K-40	7.26E+01	2.32E+01	2.94E+01
		H3SW	<2.60E+01	0.00E+00	1.75E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
516806	1/27/2020 - 2/25/2020	Mn-54	<2.11E+00	0.00E+00	2.11E+00
		Co-58	<2.17E+00	0.00E+00	2.17E+00
		Fe-59	<4.35E+00	0.00E+00	4.35E+00
		Co-60	<2.13E+00	0.00E+00	2.13E+00
		Zn-65	<3.30E+00	0.00E+00	3.30E+00
		Zr-95	<3.87E+00	0.00E+00	3.87E+00
		Nb-95	<2.47E+00	0.00E+00	2.47E+00
		I-131	<1.02E+01	0.00E+00	1.02E+01
		Cs-134	<2.26E+00	0.00E+00	2.26E+00
		Cs-137	<1.62E+00	0.00E+00	1.62E+00
		BaLa-140	<5.19E+00	0.00E+00	5.19E+00
		Be-7	<1.74E+01	0.00E+00	1.74E+01
		K-40	<3.14E+01	0.00E+00	3.14E+01
		H3SW	<2.04E+01	0.00E+00	1.80E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
519242	2/25/2020 - 3/31/2020	Mn-54	<2.01E+00	0.00E+00	2.01E+00
		Co-58	<2.39E+00	0.00E+00	2.39E+00
		Fe-59	<4.14E+00	0.00E+00	4.14E+00
		Co-60	<2.19E+00	0.00E+00	2.19E+00
		Zn-65	<4.24E+00	0.00E+00	4.24E+00
		Zr-95	<3.84E+00	0.00E+00	3.84E+00
		Nb-95	<3.30E+00	0.00E+00	3.30E+00
		I-131	<1.04E+01	0.00E+00	1.04E+01
		Cs-134	<2.19E+00	0.00E+00	2.19E+00
		Cs-137	<1.88E+00	0.00E+00	1.88E+00
		BaLa-140	<7.39E+00	0.00E+00	7.39E+00
		Be-7	<2.09E+01	0.00E+00	2.09E+01
		K-40	4.60E+01	2.01E+01	2.70E+01
		H3SW	<1.89E+01	0.00E+00	1.83E+02



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
521198	3/31/2020 - 4/28/2020	Mn-54	<3.32E+00	0.00E+00	3.32E+00
		Co-58	<2.77E+00	0.00E+00	2.77E+00
		Fe-59	<4.75E+00	0.00E+00	4.75E+00
		Co-60	<3.97E+00	0.00E+00	3.97E+00
		Zn-65	<4.36E+00	0.00E+00	4.36E+00
		Zr-95	<4.93E+00	0.00E+00	4.93E+00
		Nb-95	<3.50E+00	0.00E+00	3.50E+00
		I-131	<1.17E+01	0.00E+00	1.17E+01
		Cs-134	<3.67E+00	0.00E+00	3.67E+00
		Cs-137	<2.25E+00	0.00E+00	2.25E+00
		BaLa-140	<7.72E+00	0.00E+00	7.72E+00
		Be-7	<2.93E+01	0.00E+00	2.93E+01
		K-40	<5.32E+01	0.00E+00	5.32E+01
		H3SW	<1.20E+01	0.00E+00	1.89E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
522917	4/28/2020 - 5/26/2020	Mn-54	<2.24E+00	0.00E+00	2.24E+00
		Co-58	<2.35E+00	0.00E+00	2.35E+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	<4.40E+00	0.00E+00	4.40E+00
		Zr-95	<4.52E+00	0.00E+00	4.52E+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	<2.36E+00	0.00E+00	2.36E+00
		Cs-137	<2.05E+00	0.00E+00	2.05E+00
		BaLa-140	<5.92E+00	0.00E+00	5.92E+00
		Be-7	<2.27E+01	0.00E+00	2.27E+01
		K-40	1.11E+02	2.68E+01	2.59E+01
		H3SW	<-5.5E+01	0.00E+00	1.91E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
526004	5/26/2020 - 6/30/2020	Mn-54	<1.30E+00	0.00E+00	1.30E+00
		Co-58	<1.53E+00	0.00E+00	1.53E+00
		Fe-59	<3.30E+00	0.00E+00	3.30E+00
		Co-60	<1.46E+00	0.00E+00	1.46E+00
		Zn-65	<2.46E+00	0.00E+00	2.46E+00
		Zr-95	<2.69E+00	0.00E+00	2.69E+00
		Nb-95	<2.19E+00	0.00E+00	2.19E+00
		I-131	<1.15E+01	0.00E+00	1.15E+01
		Cs-134	<1.28E+00	0.00E+00	1.28E+00
		Cs-137	<1.43E+00	0.00E+00	1.43E+00
		BaLa-140	<6.14E+00	0.00E+00	6.14E+00
		Be-7	<1.32E+01	0.00E+00	1.32E+01
		K-40	3.28E+01	1.38E+01	1.94E+01
		H3SW	<2.30E+00	0.00E+00	1.84E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
524653	6/30/2020 - 7/27/2020	Mn-54	<2.98E+00	0.00E+00	2.98E+00
		Co-58	<2.86E+00	0.00E+00	2.86E+00
		Fe-59	<5.98E+00	0.00E+00	5.98E+00
		Co-60	<2.48E+00	0.00E+00	2.48E+00
		Zn-65	<5.75E+00	0.00E+00	5.75E+00
		Zr-95	<6.13E+00	0.00E+00	6.13E+00
		Nb-95	<3.82E+00	0.00E+00	3.82E+00
		I-131	<1.19E+01	0.00E+00	1.19E+01
		Cs-134	<3.43E+00	0.00E+00	3.43E+00
		Cs-137	<3.16E+00	0.00E+00	3.16E+00
		BaLa-140	<7.47E+00	0.00E+00	7.47E+00
		Be-7	<2.85E+01	0.00E+00	2.85E+01
		K-40	8.08E+01	3.14E+01	3.81E+01
		H3SW	<4.79E+00	0.00E+00	1.86E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
527472	7/27/2020 - 8/25/2020	Mn-54	<1.47E+00	0.00E+00	1.47E+00
		Co-58	<2.08E+00	0.00E+00	2.08E+00
		Fe-59	<3.63E+00	0.00E+00	3.63E+00



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
527472	7/27/2020 - 8/25/2020	Co-60	<1.57E+00	0.00E+00	1.57E+00
		Zn-65	<3.37E+00	0.00E+00	3.37E+00
		Zr-95	<3.50E+00	0.00E+00	3.50E+00
		Nb-95	<2.39E+00	0.00E+00	2.39E+00
		I-131	<9.78E+00	0.00E+00	9.78E+00
		Cs-134	<1.88E+00	0.00E+00	1.88E+00
		Cs-137	<1.71E+00	0.00E+00	1.71E+00
		BaLa-140	<5.43E+00	0.00E+00	5.43E+00
		Be-7	<1.60E+01	0.00E+00	1.60E+01
		K-40	7.47E+01	1.99E+01	2.39E+01
		H3SW	<-5.8E+01	0.00E+00	1.94E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
529753	8/25/2020 - 9/29/2020	Mn-54	<1.62E+00	0.00E+00	1.62E+00
		Co-58	<1.98E+00	0.00E+00	1.98E+00
		Fe-59	<4.22E+00	0.00E+00	4.22E+00
		Co-60	<1.28E+00	0.00E+00	1.28E+00
		Zn-65	<3.45E+00	0.00E+00	3.45E+00
		Zr-95	<3.30E+00	0.00E+00	3.30E+00
		Nb-95	<2.85E+00	0.00E+00	2.85E+00
		I-131	<1.19E+01	0.00E+00	1.19E+01
		Cs-134	<2.01E+00	0.00E+00	2.01E+00
		Cs-137	<1.87E+00	0.00E+00	1.87E+00
		BaLa-140	<5.60E+00	0.00E+00	5.60E+00
		Be-7	<1.67E+01	0.00E+00	1.67E+01
		K-40	8.50E+01	2.08E+01	2.32E+01
		H3SW	<-6.7E+01	0.00E+00	1.94E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
531656	9/29/2020 - 10/27/2020	Mn-54	<1.76E+00	0.00E+00	1.76E+00
		Co-58	<2.02E+00	0.00E+00	2.02E+00
		Fe-59	<3.91E+00	0.00E+00	3.91E+00
		Co-60	<1.41E+00	0.00E+00	1.41E+00
		Zn-65	<3.97E+00	0.00E+00	3.97E+00
		Zr-95	<3.60E+00	0.00E+00	3.60E+00
		Nb-95	<2.61E+00	0.00E+00	2.61E+00
		I-131	<1.04E+01	0.00E+00	1.04E+01
		Cs-134	<1.87E+00	0.00E+00	1.87E+00
		Cs-137	<1.65E+00	0.00E+00	1.65E+00
		BaLa-140	<5.13E+00	0.00E+00	5.13E+00
		Be-7	<1.82E+01	0.00E+00	1.82E+01
		K-40	1.00E+02	2.32E+01	2.47E+01
		H3SW	<-7.1E+00	0.00E+00	1.80E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
533534	10/27/2020 - 11/24/2020	Mn-54	<1.86E+00	0.00E+00	1.86E+00
		Co-58	<2.27E+00	0.00E+00	2.27E+00
		Fe-59	<3.73E+00	0.00E+00	3.73E+00
		Co-60	<1.74E+00	0.00E+00	1.74E+00
		Zn-65	<4.16E+00	0.00E+00	4.16E+00
		Zr-95	<3.62E+00	0.00E+00	3.62E+00
		Nb-95	<2.67E+00	0.00E+00	2.67E+00
		I-131	<1.13E+01	0.00E+00	1.13E+01
		Cs-134	<2.00E+00	0.00E+00	2.00E+00
		Cs-137	<2.12E+00	0.00E+00	2.12E+00
		BaLa-140	<6.44E+00	0.00E+00	6.44E+00
		Be-7	<1.91E+01	0.00E+00	1.91E+01
		K-40	9.77E+01	2.35E+01	2.54E+01
		H3SW	<5.07E+01	0.00E+00	1.85E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
535843	11/24/2020 - 12/29/2020	Mn-54	<1.19E+00	0.00E+00	1.19E+00
		Co-58	<1.71E+00	0.00E+00	1.71E+00
		Fe-59	<3.28E+00	0.00E+00	3.28E+00
		Co-60	<1.16E+00	0.00E+00	1.16E+00
		Zn-65	<2.65E+00	0.00E+00	2.65E+00
		Zr-95	<3.10E+00	0.00E+00	3.10E+00



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
535843	11/24/2020 - 12/29/2020	Nb-95	<2.02E+00	0.00E+00	2.02E+00
		I-131	<1.04E+01	0.00E+00	1.04E+01
		Cs-134	<1.49E+00	0.00E+00	1.49E+00
		Cs-137	<9.56E-01	0.00E+00	9.56E-01
		BaLa-140	<4.69E+00	0.00E+00	4.69E+00
		Be-7	<1.40E+01	0.00E+00	1.40E+01
		K-40	7.64E+01	1.72E+01	2.00E+01
		H3SW	<-8.3E+01	0.00E+00	1.91E+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
515004	1/16/2020 - 4/16/2020	mR/Std Qtr	24.03
520593	4/16/2020 - 7/15/2020	mR/Std Qtr	16.82
525749	7/15/2020 - 10/13/2020	mR/Std Qtr	17.38
531490	10/13/2020 - 1/12/2021	mR/Std Qtr	19.09

Sample Point 2 [ INDICATOR - S @ 0.2 miles ]

TLD RING TLD\_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
515015	1/16/2020 - 4/16/2020	mR/Std Qtr	20.53
520604	4/16/2020 - 7/15/2020	mR/Std Qtr	14.63
525760	7/15/2020 - 10/13/2020	mR/Std Qtr	14.78
531501	10/13/2020 - 1/12/2021	mR/Std Qtr	15.39

Sample Point 3 [ INDICATOR - N @ 0.5 miles ]

TLD RING TLD\_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
515026	1/16/2020 - 4/16/2020	mR/Std Qtr	20.13
520615	4/16/2020 - 7/15/2020	mR/Std Qtr	13.05
525771	7/15/2020 - 10/13/2020	mR/Std Qtr	15.16
531512	10/13/2020 - 1/12/2021	mR/Std Qtr	14.09

Sample Point 4 [ INDICATOR - ESE @ 0.4 miles ]

TLD RING TLD\_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
515037	1/16/2020 - 4/16/2020	mR/Std Qtr	17.22
520626	4/16/2020 - 7/15/2020	mR/Std Qtr	10.44
525782	7/15/2020 - 10/13/2020	mR/Std Qtr	11.35
531523	10/13/2020 - 1/12/2021	mR/Std Qtr	11.12

Sample Point 5 [ INDICATOR - ENE @ 0.9 miles ]

TLD RING TLD\_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
515038	1/16/2020 - 4/16/2020	mR/Std Qtr	17.12



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 5 [ INDICATOR - ENE @ 0.9 miles ]

TLD RING TLD\_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
520627	4/16/2020 - 7/15/2020	mR/Std Qtr	13.41
525783	7/15/2020 - 10/13/2020	mR/Std Qtr	13.84
531524	10/13/2020 - 1/12/2021	mR/Std Qtr	13.39

Sample Point 6 [ INDICATOR - SSW @ 0.2 miles ]

TLD RING TLD\_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
515041	1/16/2020 - 4/16/2020	mR/Std Qtr	20.49
520630	4/16/2020 - 7/15/2020	mR/Std Qtr	14.73
525786	7/15/2020 - 10/13/2020	mR/Std Qtr	14.72
531527	10/13/2020 - 1/12/2021	mR/Std Qtr	15.03

Sample Point 7 [ INDICATOR - ESE @ 6.4 miles ]

TLD RING TLD\_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
515044	1/16/2020 - 4/16/2020	mR/Std Qtr	19.93
520633	4/16/2020 - 7/15/2020	mR/Std Qtr	14.87
525789	7/15/2020 - 10/13/2020	mR/Std Qtr	12.36
531530	10/13/2020 - 1/12/2021	mR/Std Qtr	16.17

Sample Point 8 [ INDICATOR - SSE @ 0.8 miles ]

TLD RING TLD\_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
515045	1/16/2020 - 4/16/2020	mR/Std Qtr	16.82
520634	4/16/2020 - 7/15/2020	mR/Std Qtr	14.14
525790	7/15/2020 - 10/13/2020	mR/Std Qtr	11.30
531531	10/13/2020 - 1/12/2021	mR/Std Qtr	12.72

Sample Point 9 [ INDICATOR - S @ 1 miles ]

TLD RING TLD\_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
515046	1/16/2020 - 4/16/2020	mR/Std Qtr	17.00
520635	4/16/2020 - 7/15/2020	mR/Std Qtr	12.08
525791	7/15/2020 - 10/13/2020	mR/Std Qtr	11.53
531534	10/13/2020 - 1/12/2021	mR/Std Qtr	12.06

Sample Point 10 [ INDICATOR - WSW @ 1 miles ]

TLD RING TLD\_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
515005	1/16/2020 - 4/16/2020	mR/Std Qtr	18.17
520594	4/16/2020 - 7/15/2020	mR/Std Qtr	13.56
525750	7/15/2020 - 10/13/2020	mR/Std Qtr	13.04

# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 10 [ INDICATOR - WSW @ 1 miles ]

TLD RING TLD\_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
531491	10/13/2020 - 1/12/2021	mR/Std Qtr	13.40

Sample Point 11 [ INDICATOR - SW @ 1 miles ]

TLD RING TLD\_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
515006	1/16/2020 - 4/16/2020	mR/Std Qtr	18.43

Sample ID:	Sample Dates:	Nuclide	Activity
520595	4/16/2020 - 7/15/2020	mR/Std Qtr	11.91

Sample ID:	Sample Dates:	Nuclide	Activity
525751	7/15/2020 - 10/13/2020	mR/Std Qtr	12.28

Sample ID:	Sample Dates:	Nuclide	Activity
531492	10/13/2020 - 1/12/2021	mR/Std Qtr	11.79

Sample Point 12 [ INDICATOR - SSW @ 1.2 miles ]

TLD RING TLD\_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
515007	1/16/2020 - 4/16/2020	mR/Std Qtr	22.62

Sample Point 13 [ INDICATOR - W @ 0.7 miles ]

TLD RING TLD\_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
520597	4/16/2020 - 7/15/2020	mR/Std Qtr	13.74

Sample ID:	Sample Dates:	Nuclide	Activity
525753	7/15/2020 - 10/13/2020	mR/Std Qtr	14.72

Sample ID:	Sample Dates:	Nuclide	Activity
531494	10/13/2020 - 1/12/2021	mR/Std Qtr	14.39

Sample Point 14 [ INDICATOR - WNW @ 0.8 miles ]

TLD RING TLD\_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
515009	1/16/2020 - 4/16/2020	mR/Std Qtr	22.16

Sample ID:	Sample Dates:	Nuclide	Activity
520598	4/16/2020 - 7/15/2020	mR/Std Qtr	16.23

Sample ID:	Sample Dates:	Nuclide	Activity
525754	7/15/2020 - 10/13/2020	mR/Std Qtr	15.32

Sample ID:	Sample Dates:	Nuclide	Activity
531495	10/13/2020 - 1/12/2021	mR/Std Qtr	17.28

Sample Point 15 [ INDICATOR - NW @ 0.7 miles ]

TLD RING TLD\_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
515010	1/16/2020 - 4/16/2020	mR/Std Qtr	19.08

Sample ID:	Sample Dates:	Nuclide	Activity
520599	4/16/2020 - 7/15/2020	mR/Std Qtr	15.30

Sample ID:	Sample Dates:	Nuclide	Activity
525755	7/15/2020 - 10/13/2020	mR/Std Qtr	13.11

Sample ID:	Sample Dates:	Nuclide	Activity
531496	10/13/2020 - 1/12/2021	mR/Std Qtr	13.69

Sample Point 16 [ INDICATOR - NNW @ 1 miles ]

TLD RING TLD\_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
515011	1/16/2020 - 4/16/2020	mR/Std Qtr	20.37

Sample ID:	Sample Dates:	Nuclide	Activity
520600	4/16/2020 - 7/15/2020	mR/Std Qtr	14.56

Sample ID:	Sample Dates:	Nuclide	Activity
525756	7/15/2020 - 10/13/2020	mR/Std Qtr	13.70

Sample ID:	Sample Dates:	Nuclide	Activity
531497	10/13/2020 - 1/12/2021	mR/Std Qtr	15.74

# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 17 [ INDICATOR - N @ 1.2 miles ]

TLD RING TLD\_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
515012	1/16/2020 - 4/16/2020	mR/Std Qtr	22.85
520601	4/16/2020 - 7/15/2020	mR/Std Qtr	17.33
525757	7/15/2020 - 10/13/2020	mR/Std Qtr	15.06
531498	10/13/2020 - 1/12/2021	mR/Std Qtr	17.99

Sample Point 18 [ INDICATOR - SE @ 0.7 miles ]

TLD RING TLD\_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
515013	1/16/2020 - 4/16/2020	mR/Std Qtr	22.90
520602	4/16/2020 - 7/15/2020	mR/Std Qtr	16.04
525758	7/15/2020 - 10/13/2020	mR/Std Qtr	16.28
531499	10/13/2020 - 1/12/2021	mR/Std Qtr	15.57

Sample Point 19 [ INDICATOR - E @ 1 miles ]

TLD RING TLD\_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
515014	1/16/2020 - 4/16/2020	mR/Std Qtr	19.83
520603	4/16/2020 - 7/15/2020	mR/Std Qtr	13.78
525759	7/15/2020 - 10/13/2020	mR/Std Qtr	14.68
531500	10/13/2020 - 1/12/2021	mR/Std Qtr	15.19

Sample Point 20 [ INDICATOR - ENE @ 1 miles ]

TLD RING TLD\_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
515016	1/16/2020 - 4/16/2020	mR/Std Qtr	20.21
520605	4/16/2020 - 7/15/2020	mR/Std Qtr	14.05
525761	7/15/2020 - 10/13/2020	mR/Std Qtr	14.61
531502	10/13/2020 - 1/12/2021	mR/Std Qtr	15.07

Sample Point 21 [ INDICATOR - NE @ 1.4 miles ]

TLD RING TLD\_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
515017	1/16/2020 - 4/16/2020	mR/Std Qtr	19.80
520606	4/16/2020 - 7/15/2020	mR/Std Qtr	14.10
525762	7/15/2020 - 10/13/2020	mR/Std Qtr	13.60
531503	10/13/2020 - 1/12/2021	mR/Std Qtr	14.44

Sample Point 22 [ INDICATOR - NNE @ 1.7 miles ]

TLD RING TLD\_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
515018	1/16/2020 - 4/16/2020	mR/Std Qtr	21.70
520607	4/16/2020 - 7/15/2020	mR/Std Qtr	15.35

# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 22 [ INDICATOR - NNE @ 1.7 miles ]

TLD RING TLD\_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
525763	7/15/2020 - 10/13/2020	mR/Std Qtr	13.96
531504	10/13/2020 - 1/12/2021	mR/Std Qtr	15.79

Sample Point 23 [ INDICATOR - ESE @ 1 miles ]

TLD RING TLD\_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
515019	1/16/2020 - 4/16/2020	mR/Std Qtr	20.65
520608	4/16/2020 - 7/15/2020	mR/Std Qtr	15.65
525764	7/15/2020 - 10/13/2020	mR/Std Qtr	15.77
531505	10/13/2020 - 1/12/2021	mR/Std Qtr	16.07

Sample Point 24 [ INDICATOR - NW @ 4.6 miles ]

TLD RING TLD\_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
515020	1/16/2020 - 4/16/2020	mR/Std Qtr	24.60
520609	4/16/2020 - 7/15/2020	mR/Std Qtr	17.40
525765	7/15/2020 - 10/13/2020	mR/Std Qtr	18.35
531506	10/13/2020 - 1/12/2021	mR/Std Qtr	17.64

Sample Point 25 [ INDICATOR - NNW @ 4 miles ]

TLD RING TLD\_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
515021	1/16/2020 - 4/16/2020	mR/Std Qtr	21.02
520610	4/16/2020 - 7/15/2020	mR/Std Qtr	14.32
525766	7/15/2020 - 10/13/2020	mR/Std Qtr	13.90
531507	10/13/2020 - 1/12/2021	mR/Std Qtr	14.71

Sample Point 26 [ INDICATOR - N @ 5 miles ]

TLD RING TLD\_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
515022	1/16/2020 - 4/16/2020	mR/Std Qtr	20.16
520611	4/16/2020 - 7/15/2020	mR/Std Qtr	13.37
525767	7/15/2020 - 10/13/2020	mR/Std Qtr	13.76
531508	10/13/2020 - 1/12/2021	mR/Std Qtr	13.59

Sample Point 27 [ INDICATOR - NNE @ 5.4 miles ]

TLD RING TLD\_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
515023	1/16/2020 - 4/16/2020	mR/Std Qtr	19.28
520612	4/16/2020 - 7/15/2020	mR/Std Qtr	12.35
525768	7/15/2020 - 10/13/2020	mR/Std Qtr	13.04
531509	10/13/2020 - 1/12/2021	mR/Std Qtr	12.82



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 28 [ INDICATOR - NE @ 4.3 miles ]

TLD RING TLD\_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
515024	1/16/2020 - 4/16/2020	mR/Std Qtr	22.81
520613	4/16/2020 - 7/15/2020	mR/Std Qtr	18.60
525769	7/15/2020 - 10/13/2020	mR/Std Qtr	16.59
531510	10/13/2020 - 1/12/2021	mR/Std Qtr	17.93

Sample Point 29 [ INDICATOR - ENE @ 4 miles ]

TLD RING TLD\_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
515025	1/16/2020 - 4/16/2020	mR/Std Qtr	16.95
520614	4/16/2020 - 7/15/2020	mR/Std Qtr	13.30
525770	7/15/2020 - 10/13/2020	mR/Std Qtr	12.12
531511	10/13/2020 - 1/12/2021	mR/Std Qtr	12.84

Sample Point 30 [ INDICATOR - E @ 4.4 miles ]

TLD RING TLD\_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
515027	1/16/2020 - 4/16/2020	mR/Std Qtr	23.07
520616	4/16/2020 - 7/15/2020	mR/Std Qtr	15.71
525772	7/15/2020 - 10/13/2020	mR/Std Qtr	15.37
531513	10/13/2020 - 1/12/2021	mR/Std Qtr	15.03

Sample Point 31 [ INDICATOR - ESE @ 4.6 miles ]

TLD RING TLD\_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
515028	1/16/2020 - 4/16/2020	mR/Std Qtr	21.52
520617	4/16/2020 - 7/15/2020	mR/Std Qtr	15.86
525773	7/15/2020 - 10/13/2020	mR/Std Qtr	15.34
531514	10/13/2020 - 1/12/2021	mR/Std Qtr	14.98

Sample Point 32 [ INDICATOR - SE @ 4 miles ]

TLD RING TLD\_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
515029	1/16/2020 - 4/16/2020	mR/Std Qtr	22.00
520618	4/16/2020 - 7/15/2020	mR/Std Qtr	15.68
525774	7/15/2020 - 10/13/2020	mR/Std Qtr	16.10
531515	10/13/2020 - 1/12/2021	mR/Std Qtr	15.54

Sample Point 33 [ INDICATOR - SSE @ 4.5 miles ]

TLD RING TLD\_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
515030	1/16/2020 - 4/16/2020	mR/Std Qtr	21.11
520619	4/16/2020 - 7/15/2020	mR/Std Qtr	16.08

# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 33 [ INDICATOR - SSE @ 4.5 miles ]

TLD RING TLD\_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
525775	7/15/2020 - 10/13/2020	mR/Std Qtr	15.37
531516	10/13/2020 - 1/12/2021	mR/Std Qtr	15.83

Sample Point 34 [ INDICATOR - S @ 4.7 miles ]

TLD RING TLD\_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
515031	1/16/2020 - 4/16/2020	mR/Std Qtr	16.68
520620	4/16/2020 - 7/15/2020	mR/Std Qtr	11.10
525776	7/15/2020 - 10/13/2020	mR/Std Qtr	10.48
531517	10/13/2020 - 1/12/2021	mR/Std Qtr	11.25

Sample Point 35 [ INDICATOR - SSW @ 4.5 miles ]

TLD RING TLD\_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
515032	1/16/2020 - 4/16/2020	mR/Std Qtr	28.35
520621	4/16/2020 - 7/15/2020	mR/Std Qtr	20.91
525777	7/15/2020 - 10/13/2020	mR/Std Qtr	20.85
531518	10/13/2020 - 1/12/2021	mR/Std Qtr	21.03

Sample Point 36 [ INDICATOR - SW @ 5 miles ]

TLD RING TLD\_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
515033	1/16/2020 - 4/16/2020	mR/Std Qtr	27.28
520622	4/16/2020 - 7/15/2020	mR/Std Qtr	19.98
525778	7/15/2020 - 10/13/2020	mR/Std Qtr	18.74
531519	10/13/2020 - 1/12/2021	mR/Std Qtr	21.01

Sample Point 37 [ INDICATOR - WSW @ 5 miles ]

TLD RING TLD\_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
515034	1/16/2020 - 4/16/2020	mR/Std Qtr	30.97
520623	4/16/2020 - 7/15/2020	mR/Std Qtr	20.57
525779	7/15/2020 - 10/13/2020	mR/Std Qtr	19.67
531520	10/13/2020 - 1/12/2021	mR/Std Qtr	22.41

Sample Point 38 [ INDICATOR - W @ 4.9 miles ]

TLD RING TLD\_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
515035	1/16/2020 - 4/16/2020	mR/Std Qtr	21.89
520624	4/16/2020 - 7/15/2020	mR/Std Qtr	18.31
525780	7/15/2020 - 10/13/2020	mR/Std Qtr	15.94
531521	10/13/2020 - 1/12/2021	mR/Std Qtr	15.83



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 39 [ INDICATOR - WNW @ 5.1 miles ]

TLD RING TLD\_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
515036	1/16/2020 - 4/16/2020	mR/Std Qtr	21.51
520625	4/16/2020 - 7/15/2020	mR/Std Qtr	16.39
525781	7/15/2020 - 10/13/2020	mR/Std Qtr	14.32
531522	10/13/2020 - 1/12/2021	mR/Std Qtr	16.72

Sample Point 55 [ INDICATOR - SSE @ 0.2 miles ]

TLD RING TLD\_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
515039	1/16/2020 - 4/16/2020	mR/Std Qtr	20.90
520628	4/16/2020 - 7/15/2020	mR/Std Qtr	15.59
525784	7/15/2020 - 10/13/2020	mR/Std Qtr	14.15
531525	10/13/2020 - 1/12/2021	mR/Std Qtr	15.82

Sample Point 56 [ INDICATOR - NNW @ 0.4 miles ]

TLD RING TLD\_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
515040	1/16/2020 - 4/16/2020	mR/Std Qtr	20.35
520629	4/16/2020 - 7/15/2020	mR/Std Qtr	15.55
525785	7/15/2020 - 10/13/2020	mR/Std Qtr	15.17
531526	10/13/2020 - 1/12/2021	mR/Std Qtr	15.55

Sample Point 61 [ INDICATOR - WSW @ 0.3 miles ]

TLD RING TLD\_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
515042	1/16/2020 - 4/16/2020	mR/Std Qtr	27.09
520631	4/16/2020 - 7/15/2020	mR/Std Qtr	18.54
525787	7/15/2020 - 10/13/2020	mR/Std Qtr	17.95
531528	10/13/2020 - 1/12/2021	mR/Std Qtr	19.60

Sample Point 65 [ INDICATOR - WNW @ 0.3 miles ]

TLD RING TLD\_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
515043	1/16/2020 - 4/16/2020	mR/Std Qtr	26.38
520632	4/16/2020 - 7/15/2020	mR/Std Qtr	18.63
525788	7/15/2020 - 10/13/2020	mR/Std Qtr	19.73
531529	10/13/2020 - 1/12/2021	mR/Std Qtr	19.94

Sample Point 84 [ INDICATOR - SSE @ 0.9 miles ]

TLD RING TLD\_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
522506	1/16/2020 - 4/16/2020	mR/Std Qtr	17.43
527116	4/16/2020 - 7/15/2020	mR/Std Qtr	10.94

# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 84 [ INDICATOR - SSE @ 0.9 miles ]

TLD RING TLD\_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
532748	7/15/2020 - 10/13/2020	mR/Std Qtr	11.43

Sample ID:	Sample Dates:	Nuclide	Activity
531532	10/13/2020 - 1/12/2021	mR/Std Qtr	13.41

Sample Point 85 [ INDICATOR - SSW @ 0.9 miles ] TLD RING TLD\_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
522507	1/16/2020 - 4/16/2020	mR/Std Qtr	15.66

Sample ID:	Sample Dates:	Nuclide	Activity
527117	4/16/2020 - 7/15/2020	mR/Std Qtr	11.93

Sample ID:	Sample Dates:	Nuclide	Activity
532749	7/15/2020 - 10/13/2020	mR/Std Qtr	11.81

Sample ID:	Sample Dates:	Nuclide	Activity
531533	10/13/2020 - 1/12/2021	mR/Std Qtr	11.64

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
520733	4/8/2020 - 4/8/2020	MIXEDBLV	Mn-54	<1.49E+01	0.00E+00	1.49E+01
			Co-58	<1.75E+01	0.00E+00	1.75E+01
			Fe-59	<3.44E+01	0.00E+00	3.44E+01
			Co-60	<2.13E+01	0.00E+00	2.13E+01
			Zn-65	<4.34E+01	0.00E+00	4.34E+01
			Zr-95	<3.39E+01	0.00E+00	3.39E+01
			Nb-95	<2.15E+01	0.00E+00	2.15E+01
			I-131	<3.01E+01	0.00E+00	3.01E+01
			Cs-134	<3.17E+01	0.00E+00	3.17E+01
			Cs-137	<2.04E+01	0.00E+00	2.04E+01
			BaLa-140	<2.83E+01	0.00E+00	2.83E+01
			Be-7	<1.97E+02	0.00E+00	1.97E+02
K-40	4.53E+03	5.77E+02	3.28E+02			

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
522910	5/6/2020 - 5/6/2020	MIXEDBLV	Mn-54	<1.58E+01	0.00E+00	1.58E+01
			Co-58	<1.49E+01	0.00E+00	1.49E+01
			Fe-59	<3.15E+01	0.00E+00	3.15E+01
			Co-60	<1.28E+01	0.00E+00	1.28E+01
			Zn-65	<2.72E+01	0.00E+00	2.72E+01
			Zr-95	<2.47E+01	0.00E+00	2.47E+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	<2.00E+01	0.00E+00	2.00E+01
			Cs-137	<1.44E+01	0.00E+00	1.44E+01
			BaLa-140	<1.39E+01	0.00E+00	1.39E+01
			Be-7	7.39E+02	1.56E+02	1.75E+02
K-40	5.65E+03	6.33E+02	2.14E+02			

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
524598	6/8/2020 - 6/8/2020	MIXEDBLV	Mn-54	<1.82E+01	0.00E+00	1.82E+01
			Co-58	<1.63E+01	0.00E+00	1.63E+01
			Fe-59	<3.97E+01	0.00E+00	3.97E+01
			Co-60	<1.90E+01	0.00E+00	1.90E+01
			Zn-65	<4.28E+01	0.00E+00	4.28E+01
			Zr-95	<2.64E+00	1.53E+01	2.77E+01
			Nb-95	<1.70E+01	0.00E+00	1.70E+01
			I-131	<2.02E+01	0.00E+00	2.02E+01
			Cs-134	<2.32E+01	0.00E+00	2.32E+01
			Cs-137	<1.97E+01	0.00E+00	1.97E+01
			BaLa-140	<1.94E+01	0.00E+00	1.94E+01
			Be-7	1.68E+03	2.60E+02	2.18E+02
K-40	5.56E+03	6.56E+02	2.36E+02			

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
525854	7/8/2020 - 7/8/2020	MIXEDBLV	Mn-54	<1.72E+01	0.00E+00	1.72E+01



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
525854	7/8/2020 - 7/8/2020	MIXEDBLV	Co-58	<1.89E+01	0.00E+00	1.89E+01
			Fe-59	<3.33E+01	0.00E+00	3.33E+01
			Co-60	<1.45E+01	0.00E+00	1.45E+01
			Zn-65	<4.45E+01	0.00E+00	4.45E+01
			Zr-95	<3.12E+01	0.00E+00	3.12E+01
			Nb-95	<1.86E+01	0.00E+00	1.86E+01
			I-131	<2.32E+01	0.00E+00	2.32E+01
			Cs-134	<2.19E+01	0.00E+00	2.19E+01
			Cs-137	<1.70E+01	0.00E+00	1.70E+01
			BaLa-140	<2.03E+01	0.00E+00	2.03E+01
			Be-7	1.41E+03	2.20E+02	1.89E+02
			K-40	6.85E+03	7.49E+02	1.71E+02

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
527492	8/3/2020 - 8/3/2020	MIXEDBLV	Mn-54	<1.74E+01	0.00E+00	1.74E+01
			Co-58	3.74E+01	9.89E+00	1.93E+01
			Fe-59	<3.27E+01	0.00E+00	3.27E+01
			Co-60	7.83E+00	9.94E+00	1.63E+01
			Zn-65	<3.32E+01	0.00E+00	3.32E+01
			Zr-95	<3.15E+01	0.00E+00	3.15E+01
			Nb-95	<2.00E+01	0.00E+00	2.00E+01
			I-131	<3.39E+01	0.00E+00	3.39E+01
			Cs-134	<1.83E+01	0.00E+00	1.83E+01
			Cs-137	1.68E+01	2.39E+01	2.28E+01
			BaLa-140	<2.26E+01	0.00E+00	2.26E+01
			Be-7	2.83E+03	3.19E+02	2.63E+02
			K-40	3.81E+03	4.19E+02	2.90E+02

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
518990	8/13/2020 - 8/13/2020	MIXEDBLV	Mn-54	<2.66E+01	0.00E+00	2.66E+01
			Co-58	<2.70E+01	0.00E+00	2.70E+01
			Fe-59	<4.64E+01	0.00E+00	4.64E+01
			Co-60	<2.41E+01	0.00E+00	2.41E+01
			Zn-65	<6.76E+01	0.00E+00	6.76E+01
			Zr-95	<5.49E+01	0.00E+00	5.49E+01
			Nb-95	<3.37E+01	0.00E+00	3.37E+01
			I-131	<3.71E+01	0.00E+00	3.71E+01
			Cs-134	<3.43E+01	0.00E+00	3.43E+01
			Cs-137	5.13E+01	3.33E+01	5.08E+01
			BaLa-140	<3.53E+01	0.00E+00	3.53E+01
			Be-7	4.85E+03	6.18E+02	3.53E+02
			K-40	3.83E+03	6.55E+02	4.43E+02

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
529732	9/8/2020 - 9/8/2020	MIXEDBLV	Mn-54	<2.76E+01	0.00E+00	2.76E+01
			Co-58	<3.08E+01	0.00E+00	3.08E+01
			Fe-59	<5.29E+01	0.00E+00	5.29E+01
			Co-60	<3.08E+01	0.00E+00	3.08E+01
			Zn-65	<4.91E+01	0.00E+00	4.91E+01
			Zr-95	<5.53E+01	0.00E+00	5.53E+01
			Nb-95	<3.08E+01	0.00E+00	3.08E+01
			I-131	<4.78E+01	0.00E+00	4.78E+01
			Cs-134	<3.07E+01	0.00E+00	3.07E+01
			Cs-137	<3.30E+01	0.00E+00	3.30E+01
			BaLa-140	<4.01E+01	0.00E+00	4.01E+01
			Be-7	2.12E+03	3.74E+02	3.75E+02
			K-40	3.26E+03	5.87E+02	4.88E+02

Sample Point 51 [ INDICATOR - SSW @ 0 miles ]

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
520734	4/8/2020 - 4/8/2020	MIXEDBLV	Mn-54	<1.91E+01	0.00E+00	1.91E+01
			Co-58	<2.32E+01	0.00E+00	2.32E+01
			Fe-59	<4.46E+01	0.00E+00	4.46E+01
			Co-60	<2.20E+01	0.00E+00	2.20E+01
			Zn-65	<3.89E+01	0.00E+00	3.89E+01
			Zr-95	<3.99E+01	0.00E+00	3.99E+01



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
520734	4/8/2020 - 4/8/2020	MIXEDBLV	Nb-95	<2.53E+01	0.00E+00	2.53E+01
			I-131	<3.18E+01	0.00E+00	3.18E+01
			Cs-134	<2.21E+01	0.00E+00	2.21E+01
			Cs-137	6.25E+01	2.45E+01	3.39E+01
			BaLa-140	<1.41E+01	0.00E+00	1.41E+01
			Be-7	3.39E+02	1.68E+02	2.50E+02
			K-40	3.89E+03	5.54E+02	3.53E+02
			522911	5/6/2020 - 5/6/2020	MIXEDBLV	Mn-54
Co-58	<1.54E+01	0.00E+00				1.54E+01
Fe-59	<3.26E+01	0.00E+00				3.26E+01
Co-60	<1.52E+01	0.00E+00				1.52E+01
Zn-65	<3.24E+01	0.00E+00				3.24E+01
Zr-95	<2.49E+01	0.00E+00				2.49E+01
Nb-95	<1.63E+01	0.00E+00				1.63E+01
I-131	<2.39E+01	0.00E+00				2.39E+01
Cs-134	<1.67E+01	0.00E+00				1.67E+01
Cs-137	1.18E+02	2.54E+01				2.58E+01
BaLa-140	<1.42E+01	0.00E+00				1.42E+01
Be-7	1.11E+03	2.02E+02				1.94E+02
K-40	3.94E+03	5.09E+02				2.35E+02
524599	6/8/2020 - 6/8/2020	MIXEDBLV	Mn-54	<1.16E+01	0.00E+00	1.16E+01
			Co-58	<1.17E+01	0.00E+00	1.17E+01
			Fe-59	<2.39E+01	0.00E+00	2.39E+01
			Co-60	<1.34E+01	0.00E+00	1.34E+01
			Zn-65	<2.62E+01	0.00E+00	2.62E+01
			Zr-95	<1.39E+01	0.00E+00	1.39E+01
			Nb-95	<1.02E+01	0.00E+00	1.02E+01
			I-131	<1.30E+01	0.00E+00	1.30E+01
			Cs-134	<1.52E+01	0.00E+00	1.52E+01
			Cs-137	1.78E+01	1.26E+01	1.94E+01
			BaLa-140	<1.18E+01	0.00E+00	1.18E+01
			Be-7	1.72E+03	2.29E+02	1.45E+02
			K-40	2.45E+03	3.46E+02	1.09E+02
525855	7/8/2020 - 7/8/2020	MIXEDBLV	Mn-54	<1.56E+01	0.00E+00	1.56E+01
			Co-58	<1.73E+01	0.00E+00	1.73E+01
			Fe-59	<3.55E+01	0.00E+00	3.55E+01
			Co-60	<1.54E+01	0.00E+00	1.54E+01
			Zn-65	<3.86E+01	0.00E+00	3.86E+01
			Zr-95	<2.94E+01	0.00E+00	2.94E+01
			Nb-95	<1.96E+01	0.00E+00	1.96E+01
			I-131	<2.53E+01	0.00E+00	2.53E+01
			Cs-134	<1.96E+01	0.00E+00	1.96E+01
			Cs-137	<2.35E+01	0.00E+00	2.35E+01
			BaLa-140	<2.83E+01	0.00E+00	2.83E+01
			Be-7	1.57E+03	2.59E+02	2.33E+02
			K-40	2.83E+03	4.40E+02	2.99E+02
518991	8/13/2020 - 8/13/2020	MIXEDBLV	Mn-54	<1.82E+01	0.00E+00	1.82E+01
			Co-58	<1.63E+01	0.00E+00	1.63E+01
			Fe-59	<3.75E+01	0.00E+00	3.75E+01
			Co-60	<1.85E+01	0.00E+00	1.85E+01
			Zn-65	<5.19E+01	0.00E+00	5.19E+01
			Zr-95	<3.46E+01	0.00E+00	3.46E+01
			Nb-95	<1.88E+01	0.00E+00	1.88E+01
			I-131	<1.97E+01	0.00E+00	1.97E+01
			Cs-134	<1.73E+01	0.00E+00	1.73E+01
			Cs-137	4.11E+01	1.83E+01	2.45E+01
			BaLa-140	<2.76E+01	0.00E+00	2.76E+01
			Be-7	3.73E+03	4.53E+02	2.22E+02
			K-40	3.22E+03	4.88E+02	2.25E+02



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
529733	9/8/2020 - 9/8/2020		Mn-54	<2.89E+01	0.00E+00	2.89E+01
			Co-58	<2.96E+01	0.00E+00	2.96E+01
			Fe-59	<5.84E+01	0.00E+00	5.84E+01
			Co-60	<2.99E+01	0.00E+00	2.99E+01
			Zn-65	<6.02E+01	0.00E+00	6.02E+01
			Zr-95	<5.26E+01	0.00E+00	5.26E+01
			Nb-95	<3.05E+01	0.00E+00	3.05E+01
			I-131	<4.67E+01	0.00E+00	4.67E+01
			Cs-134	<2.91E+01	0.00E+00	2.91E+01
			Cs-137	9.35E+01	2.97E+01	3.57E+01
			BaLa-140	<4.66E+01	0.00E+00	4.66E+01
			Be-7	2.15E+03	3.87E+02	3.79E+02
			K-40	3.26E+03	5.72E+02	4.17E+02

Sample Point 52 [ CONTROL - W @ 10 miles ]

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
520735	4/8/2020 - 4/8/2020		Mn-54	<1.23E+01	0.00E+00	1.23E+01
			Co-58	<1.38E+01	0.00E+00	1.38E+01
			Fe-59	<3.33E+01	0.00E+00	3.33E+01
			Co-60	<1.49E+01	0.00E+00	1.49E+01
			Zn-65	<3.39E+01	0.00E+00	3.39E+01
			Zr-95	<2.57E+01	0.00E+00	2.57E+01
			Nb-95	<1.41E+01	0.00E+00	1.41E+01
			I-131	<2.35E+01	0.00E+00	2.35E+01
			Cs-134	<1.95E+01	0.00E+00	1.95E+01
			Cs-137	6.66E+01	2.09E+01	2.69E+01
			BaLa-140	<2.11E+01	0.00E+00	2.11E+01
			Be-7	4.17E+02	1.46E+02	2.01E+02
			K-40	3.73E+03	4.83E+02	1.92E+02

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
522912	5/6/2020 - 5/6/2020		Mn-54	<1.31E+01	0.00E+00	1.31E+01
			Co-58	<1.61E+01	0.00E+00	1.61E+01
			Fe-59	<2.12E+01	0.00E+00	2.12E+01
			Co-60	<1.63E+01	0.00E+00	1.63E+01
			Zn-65	<3.20E+01	0.00E+00	3.20E+01
			Zr-95	<2.85E+01	0.00E+00	2.85E+01
			Nb-95	<1.59E+01	0.00E+00	1.59E+01
			I-131	<1.91E+01	0.00E+00	1.91E+01
			Cs-134	<1.75E+01	0.00E+00	1.75E+01
			Cs-137	8.86E+01	2.11E+01	2.27E+01
			BaLa-140	<1.80E+01	0.00E+00	1.80E+01
			Be-7	6.48E+02	1.55E+02	1.78E+02
			K-40	4.12E+03	5.16E+02	1.91E+02

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
524600	6/8/2020 - 6/8/2020		Mn-54	<2.07E+01	0.00E+00	2.07E+01
			Co-58	<2.08E+01	0.00E+00	2.08E+01
			Fe-59	<2.82E+01	0.00E+00	2.82E+01
			Co-60	<1.57E+01	0.00E+00	1.57E+01
			Zn-65	<3.68E+01	0.00E+00	3.68E+01
			Zr-95	<3.08E+01	0.00E+00	3.08E+01
			Nb-95	<1.97E+01	0.00E+00	1.97E+01
			I-131	<2.18E+01	0.00E+00	2.18E+01
			Cs-134	<2.24E+01	0.00E+00	2.24E+01
			Cs-137	1.04E+02	2.50E+01	2.67E+01
			BaLa-140	<2.23E+01	0.00E+00	2.23E+01
			Be-7	1.83E+03	2.85E+02	2.49E+02
			K-40	3.13E+03	4.64E+02	2.20E+02

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
525856	7/8/2020 - 7/8/2020		Mn-54	<1.80E+01	0.00E+00	1.80E+01
			Co-58	<2.28E+01	0.00E+00	2.28E+01
			Fe-59	<4.46E+01	0.00E+00	4.46E+01
			Co-60	<2.09E+01	0.00E+00	2.09E+01
			Zn-65	<4.17E+01	0.00E+00	4.17E+01



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
525856	7/8/2020 - 7/8/2020		Zr-95	<3.23E+01	0.00E+00	3.23E+01
			Nb-95	<2.39E+01	0.00E+00	2.39E+01
			I-131	<3.03E+01	0.00E+00	3.03E+01
			Cs-134	<2.66E+01	0.00E+00	2.66E+01
			Cs-137	3.04E+01	1.84E+01	2.71E+01
			BaLa-140	<2.93E+01	0.00E+00	2.93E+01
			Be-7	1.33E+03	2.82E+02	3.28E+02
			K-40	3.33E+03	5.12E+02	2.91E+02

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
518992	8/13/2020 - 8/13/2020		Mn-54	<2.16E+01	0.00E+00	2.16E+01
			Co-58	<1.66E+01	0.00E+00	1.66E+01
			Fe-59	<3.60E+01	0.00E+00	3.60E+01
			Co-60	<2.78E+01	0.00E+00	2.78E+01
			Zn-65	<4.54E+01	0.00E+00	4.54E+01
			Zr-95	<3.30E+01	0.00E+00	3.30E+01
			Nb-95	<1.79E+01	0.00E+00	1.79E+01
			I-131	<2.65E+01	0.00E+00	2.65E+01
			Cs-134	<2.05E+01	0.00E+00	2.05E+01
			Cs-137	3.96E+02	5.53E+01	2.50E+01
			BaLa-140	<2.31E+01	0.00E+00	2.31E+01
			Be-7	6.80E+03	7.22E+02	2.89E+02
			K-40	3.18E+03	4.93E+02	2.83E+02

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
529734	9/8/2020 - 9/8/2020		Mn-54	<2.98E+01	0.00E+00	2.98E+01
			Co-58	<2.33E+01	0.00E+00	2.33E+01
			Fe-59	<4.51E+01	0.00E+00	4.51E+01
			Co-60	<2.33E+01	0.00E+00	2.33E+01
			Zn-65	<6.54E+01	0.00E+00	6.54E+01
			Zr-95	<4.83E+01	0.00E+00	4.83E+01
			Nb-95	<3.58E+01	0.00E+00	3.58E+01
			I-131	<4.48E+01	0.00E+00	4.48E+01
			Cs-134	<2.91E+01	0.00E+00	2.91E+01
			Cs-137	2.15E+02	4.18E+01	4.12E+01
			BaLa-140	<4.06E+01	0.00E+00	4.06E+01
			Be-7	1.82E+03	3.45E+02	3.78E+02
			K-40	3.38E+03	5.45E+02	3.50E+02

## Sample Point 62 [ INDICATOR - SE @ 0 miles ]

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
520736	4/8/2020 - 4/8/2020		Mn-54	<1.71E+01	0.00E+00	1.71E+01
			Co-58	<1.56E+01	0.00E+00	1.56E+01
			Fe-59	<3.24E+01	0.00E+00	3.24E+01
			Co-60	<1.26E+01	0.00E+00	1.26E+01
			Zn-65	<4.19E+01	0.00E+00	4.19E+01
			Zr-95	<2.82E+01	0.00E+00	2.82E+01
			Nb-95	<1.75E+01	0.00E+00	1.75E+01
			I-131	<2.23E+01	0.00E+00	2.23E+01
			Cs-134	<1.71E+01	0.00E+00	1.71E+01
			Cs-137	3.30E+01	1.59E+01	2.27E+01
			BaLa-140	<2.73E+01	0.00E+00	2.73E+01
			Be-7	2.59E+02	1.47E+02	2.26E+02
			K-40	3.40E+03	4.65E+02	2.55E+02

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
522913	5/6/2020 - 5/6/2020		Mn-54	<1.22E+01	0.00E+00	1.22E+01
			Co-58	<1.15E+01	0.00E+00	1.15E+01
			Fe-59	<2.34E+01	0.00E+00	2.34E+01
			Co-60	<1.08E+01	0.00E+00	1.08E+01
			Zn-65	<2.83E+01	0.00E+00	2.83E+01
			Zr-95	<2.35E+01	0.00E+00	2.35E+01
			Nb-95	<1.17E+01	0.00E+00	1.17E+01
			I-131	<1.60E+01	0.00E+00	1.60E+01
			Cs-134	<1.69E+01	0.00E+00	1.69E+01
			Cs-137	<1.03E+01	0.00E+00	1.03E+01





# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
522913	5/6/2020 - 5/6/2020	MIXEDBLV	BaLa-140	<1.62E+01	0.00E+00	1.62E+01
			Be-7	1.01E+03	1.52E+02	1.44E+02
			K-40	6.32E+03	6.26E+02	1.65E+02
524601	6/8/2020 - 6/8/2020	MIXEDBLV	Mn-54	<1.87E+01	0.00E+00	1.87E+01
			Co-58	<1.87E+01	0.00E+00	1.87E+01
			Fe-59	<3.13E+01	0.00E+00	3.13E+01
			Co-60	<1.79E+01	0.00E+00	1.79E+01
			Zn-65	<3.51E+01	0.00E+00	3.51E+01
			Zr-95	<3.47E+01	0.00E+00	3.47E+01
			Nb-95	<1.87E+01	0.00E+00	1.87E+01
			I-131	<2.25E+01	0.00E+00	2.25E+01
			Cs-134	<2.31E+01	0.00E+00	2.31E+01
			Cs-137	<1.98E+01	0.00E+00	1.98E+01
			BaLa-140	<2.05E+01	0.00E+00	2.05E+01
			Be-7	3.79E+02	1.54E+02	2.19E+02
			K-40	3.69E+03	4.98E+02	2.03E+02
525857	7/8/2020 - 7/8/2020	MIXEDBLV	Mn-54	<1.47E+01	0.00E+00	1.47E+01
			Co-58	<1.79E+01	0.00E+00	1.79E+01
			Fe-59	<2.89E+01	0.00E+00	2.89E+01
			Co-60	<1.37E+01	0.00E+00	1.37E+01
			Zn-65	<3.33E+01	0.00E+00	3.33E+01
			Zr-95	<2.73E+01	0.00E+00	2.73E+01
			Nb-95	<1.78E+01	0.00E+00	1.78E+01
			I-131	<1.94E+01	0.00E+00	1.94E+01
			Cs-134	<1.67E+01	0.00E+00	1.67E+01
			Cs-137	5.68E+01	1.93E+01	2.52E+01
			BaLa-140	<1.86E+01	0.00E+00	1.86E+01
			Be-7	9.26E+02	1.71E+02	1.56E+02
			K-40	2.99E+03	4.17E+02	2.09E+02
518993	8/13/2020 - 8/13/2020	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	<4.14E+01	0.00E+00	4.14E+01
			Co-60	<2.44E+01	0.00E+00	2.44E+01
			Zn-65	<4.90E+01	0.00E+00	4.90E+01
			Zr-95	<4.34E+01	0.00E+00	4.34E+01
			Nb-95	<2.27E+01	0.00E+00	2.27E+01
			I-131	<3.03E+01	0.00E+00	3.03E+01
			Cs-134	<2.74E+01	0.00E+00	2.74E+01
			Cs-137	1.10E+02	3.03E+01	3.62E+01
			BaLa-140	<2.95E+01	0.00E+00	2.95E+01
			Be-7	2.25E+03	3.50E+02	3.10E+02
			K-40	2.66E+03	4.79E+02	3.58E+02
529735	9/8/2020 - 9/8/2020	MIXEDBLV	Mn-54	<2.07E+01	0.00E+00	2.07E+01
			Co-58	<2.20E+01	0.00E+00	2.20E+01
			Fe-59	<3.83E+01	0.00E+00	3.83E+01
			Co-60	<2.38E+01	0.00E+00	2.38E+01
			Zn-65	<3.66E+01	0.00E+00	3.66E+01
			Zr-95	<3.90E+01	0.00E+00	3.90E+01
			Nb-95	<2.31E+01	0.00E+00	2.31E+01
			I-131	<2.92E+01	0.00E+00	2.92E+01
			Cs-134	<2.39E+01	0.00E+00	2.39E+01
			Cs-137	1.45E+01	1.58E+01	2.55E+01
			BaLa-140	<5.90E+00	0.00E+00	5.90E+00
			Be-7	1.23E+03	2.45E+02	2.54E+02
			K-40	3.45E+03	5.04E+02	2.24E+02



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
520737	4/8/2020 - 4/8/2020	MIXEDBLV	Mn-54	<1.39E+01	0.00E+00	1.39E+01
			Co-58	<1.50E+01	0.00E+00	1.50E+01
			Fe-59	<3.16E+01	0.00E+00	3.16E+01
			Co-60	<1.77E+01	0.00E+00	1.77E+01
			Zn-65	<2.95E+01	0.00E+00	2.95E+01
			Zr-95	<2.50E+01	0.00E+00	2.50E+01
			Nb-95	<1.64E+01	0.00E+00	1.64E+01
			I-131	<2.12E+01	0.00E+00	2.12E+01
			Cs-134	<2.00E+01	0.00E+00	2.00E+01
			Cs-137	<1.78E+01	0.00E+00	1.78E+01
			BaLa-140	<2.65E+01	0.00E+00	2.65E+01
			Be-7	2.29E+03	2.98E+02	1.92E+02
			K-40	3.51E+03	4.56E+02	2.04E+02
522914	5/6/2020 - 5/6/2020	MIXEDBLV	Mn-54	<1.44E+01	0.00E+00	1.44E+01
			Co-58	<1.29E+01	0.00E+00	1.29E+01
			Fe-59	<2.52E+01	0.00E+00	2.52E+01
			Co-60	<1.41E+01	0.00E+00	1.41E+01
			Zn-65	<3.56E+01	0.00E+00	3.56E+01
			Zr-95	<2.14E+01	0.00E+00	2.14E+01
			Nb-95	<1.19E+01	0.00E+00	1.19E+01
			I-131	<1.67E+01	0.00E+00	1.67E+01
			Cs-134	<1.59E+01	0.00E+00	1.59E+01
			Cs-137	1.86E+01	1.20E+01	1.81E+01
			BaLa-140	<1.51E+01	0.00E+00	1.51E+01
			Be-7	7.19E+02	1.49E+02	1.61E+02
			K-40	4.30E+03	5.16E+02	1.84E+02
524602	6/8/2020 - 6/8/2020	MIXEDBLV	Mn-54	<1.53E+01	0.00E+00	1.53E+01
			Co-58	<1.50E+01	0.00E+00	1.50E+01
			Fe-59	<2.55E+01	0.00E+00	2.55E+01
			Co-60	<1.60E+01	0.00E+00	1.60E+01
			Zn-65	<3.58E+01	0.00E+00	3.58E+01
			Zr-95	<2.80E+01	0.00E+00	2.80E+01
			Nb-95	<1.39E+01	0.00E+00	1.39E+01
			I-131	<2.48E+01	0.00E+00	2.48E+01
			Cs-134	<1.66E+01	0.00E+00	1.66E+01
			Cs-137	2.72E+01	1.52E+01	2.20E+01
			BaLa-140	<1.88E+01	0.00E+00	1.88E+01
			Be-7	1.54E+03	2.45E+02	2.03E+02
			K-40	2.13E+03	3.73E+02	2.71E+02
525858	7/8/2020 - 7/8/2020	MIXEDBLV	Mn-54	<1.39E+01	0.00E+00	1.39E+01
			Co-58	<1.35E+01	0.00E+00	1.35E+01
			Fe-59	<2.88E+01	0.00E+00	2.88E+01
			Co-60	<1.25E+01	0.00E+00	1.25E+01
			Zn-65	<4.97E+01	0.00E+00	4.97E+01
			Zr-95	<2.08E+01	0.00E+00	2.08E+01
			Nb-95	<1.54E+01	0.00E+00	1.54E+01
			I-131	<2.00E+01	0.00E+00	2.00E+01
			Cs-134	<1.51E+01	0.00E+00	1.51E+01
			Cs-137	8.49E+01	1.94E+01	1.87E+01
			BaLa-140	<1.91E+01	0.00E+00	1.91E+01
			Be-7	2.46E+03	3.15E+02	1.96E+02
			K-40	2.12E+03	3.47E+02	2.36E+02
518994	8/13/2020 - 8/13/2020	MIXEDBLV	Mn-54	<1.83E+01	0.00E+00	1.83E+01
			Co-58	<1.41E+01	0.00E+00	1.41E+01
			Fe-59	<2.90E+01	0.00E+00	2.90E+01
			Co-60	<1.56E+01	0.00E+00	1.56E+01
			Zn-65	<3.86E+01	0.00E+00	3.86E+01
			Zr-95	<3.00E+01	0.00E+00	3.00E+01
			Nb-95	<1.65E+01	0.00E+00	1.65E+01



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (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
518994	8/13/2020 - 8/13/2020		I-131	<2.05E+01	0.00E+00	2.05E+01
			Cs-134	<1.79E+01	0.00E+00	1.79E+01
			Cs-137	<2.17E+01	0.00E+00	2.17E+01
			BaLa-140	<1.81E+01	0.00E+00	1.81E+01
			Be-7	2.20E+03	2.96E+02	2.09E+02
			K-40	4.85E+03	5.71E+02	2.22E+02

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
529736	9/8/2020 - 9/8/2020		Mn-54	<1.66E+01	0.00E+00	1.66E+01
			Co-58	<1.56E+01	0.00E+00	1.56E+01
			Fe-59	<3.33E+01	0.00E+00	3.33E+01
			Co-60	<1.49E+01	0.00E+00	1.49E+01
			Zn-65	<3.01E+01	0.00E+00	3.01E+01
			Zr-95	<2.66E+01	0.00E+00	2.66E+01
			Nb-95	<1.41E+01	0.00E+00	1.41E+01
			I-131	<2.89E+01	0.00E+00	2.89E+01
			Cs-134	<1.50E+01	0.00E+00	1.50E+01
			Cs-137	<1.53E+01	0.00E+00	1.53E+01
			BaLa-140	<1.86E+01	0.00E+00	1.86E+01
			Be-7	1.44E+03	2.35E+02	2.11E+02
			K-40	3.67E+03	4.94E+02	2.19E+02

Sample Point 83 [ INDICATOR - NNE @ 1.6 miles ]

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
520738	4/8/2020 - 4/8/2020		Mn-54	<2.08E+01	0.00E+00	2.08E+01
			Co-58	<2.22E+01	0.00E+00	2.22E+01
			Fe-59	<3.89E+01	0.00E+00	3.89E+01
			Co-60	<2.17E+01	0.00E+00	2.17E+01
			Zn-65	<3.16E+01	0.00E+00	3.16E+01
			Zr-95	<3.78E+01	0.00E+00	3.78E+01
			Nb-95	<2.34E+01	0.00E+00	2.34E+01
			I-131	<2.95E+01	0.00E+00	2.95E+01
			Cs-134	<2.13E+01	0.00E+00	2.13E+01
			Cs-137	<2.40E+01	0.00E+00	2.40E+01
			BaLa-140	<3.77E+01	0.00E+00	3.77E+01
			Be-7	1.52E+03	2.87E+02	2.81E+02
			K-40	3.54E+03	5.40E+02	2.54E+02

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
522915	5/6/2020 - 5/6/2020		Mn-54	<1.39E+01	0.00E+00	1.39E+01
			Co-58	<8.83E+00	0.00E+00	8.83E+00
			Fe-59	<3.03E+01	0.00E+00	3.03E+01
			Co-60	<1.17E+01	0.00E+00	1.17E+01
			Zn-65	<3.33E+01	0.00E+00	3.33E+01
			Zr-95	<2.35E+01	0.00E+00	2.35E+01
			Nb-95	<1.49E+01	0.00E+00	1.49E+01
			I-131	<1.54E+01	0.00E+00	1.54E+01
			Cs-134	<1.23E+01	0.00E+00	1.23E+01
			Cs-137	<9.97E+00	0.00E+00	9.97E+00
			BaLa-140	<1.14E+01	0.00E+00	1.14E+01
			Be-7	8.86E+02	1.68E+02	1.76E+02
			K-40	3.56E+03	4.47E+02	2.07E+02

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
524603	6/8/2020 - 6/8/2020		Mn-54	<1.23E+01	0.00E+00	1.23E+01
			Co-58	<1.39E+01	0.00E+00	1.39E+01
			Fe-59	<2.33E+01	0.00E+00	2.33E+01
			Co-60	<1.19E+01	0.00E+00	1.19E+01
			Zn-65	<2.22E+01	0.00E+00	2.22E+01
			Zr-95	<1.99E+01	0.00E+00	1.99E+01
			Nb-95	<1.20E+01	0.00E+00	1.20E+01
			I-131	<1.83E+01	0.00E+00	1.83E+01
			Cs-134	<1.53E+01	0.00E+00	1.53E+01
			Cs-137	<2.29E+01	0.00E+00	2.29E+01
			BaLa-140	<1.48E+01	0.00E+00	1.48E+01
			Be-7	1.91E+03	2.49E+02	1.45E+02



# ROBINSON Radiological Environmental Monitoring Analysis Report - 2020 (Appendix E)

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

Sample Point 83 [ INDICATOR - NNE @ 1.6 miles ]

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
524603	6/8/2020 - 6/8/2020		K-40	2.79E+03	3.15E+02	1.54E+02
525859	7/8/2020 - 7/8/2020		Mn-54	<1.74E+01	0.00E+00	1.74E+01
			Co-58	<1.48E+01	0.00E+00	1.48E+01
			Fe-59	<2.89E+01	0.00E+00	2.89E+01
			Co-60	<1.84E+01	0.00E+00	1.84E+01
			Zn-65	<2.75E+01	0.00E+00	2.75E+01
			Zr-95	<2.68E+01	0.00E+00	2.68E+01
			Nb-95	<1.55E+01	0.00E+00	1.55E+01
			I-131	<2.13E+01	0.00E+00	2.13E+01
			Cs-134	<2.36E+01	0.00E+00	2.36E+01
			Cs-137	<1.99E+01	0.00E+00	1.99E+01
			BaLa-140	<2.27E+01	0.00E+00	2.27E+01
			Be-7	2.79E+03	3.48E+02	2.18E+02
			K-40	2.98E+03	4.28E+02	2.74E+02
518995	8/13/2020 - 8/13/2020		Mn-54	<1.84E+01	0.00E+00	1.84E+01
			Co-58	<1.83E+01	0.00E+00	1.83E+01
			Fe-59	<4.34E+01	0.00E+00	4.34E+01
			Co-60	<2.26E+01	0.00E+00	2.26E+01
			Zn-65	<3.11E+01	0.00E+00	3.11E+01
			Zr-95	<3.37E+01	0.00E+00	3.37E+01
			Nb-95	<1.71E+01	0.00E+00	1.71E+01
			I-131	<2.44E+01	0.00E+00	2.44E+01
			Cs-134	<2.31E+01	0.00E+00	2.31E+01
			Cs-137	<1.93E+01	0.00E+00	1.93E+01
			BaLa-140	<1.97E+01	0.00E+00	1.97E+01
			Be-7	2.82E+03	3.67E+02	2.36E+02
			K-40	4.14E+03	5.47E+02	2.21E+02
529737	9/8/2020 - 9/8/2020		Mn-54	<2.13E+01	0.00E+00	2.13E+01
			Co-58	<1.58E+01	0.00E+00	1.58E+01
			Fe-59	<4.43E+01	0.00E+00	4.43E+01
			Co-60	<2.17E+01	0.00E+00	2.17E+01
			Zn-65	<5.19E+01	0.00E+00	5.19E+01
			Zr-95	<3.87E+01	0.00E+00	3.87E+01
			Nb-95	<2.24E+01	0.00E+00	2.24E+01
			I-131	<3.68E+01	0.00E+00	3.68E+01
			Cs-134	<2.64E+01	0.00E+00	2.64E+01
			Cs-137	<2.41E+01	0.00E+00	2.41E+01
			BaLa-140	<1.70E+01	0.00E+00	1.70E+01
			Be-7	1.47E+03	2.97E+02	3.33E+02
			K-40	4.59E+03	6.39E+02	3.74E+02



**APPENDIX F**

**ERRATA TO  
PREVIOUS REPORTS**

There are no errata to be appended to the  
2020 H.B. Robinson Steam Electric Plant AREOR.