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Subject: Duke Energy Carolinas, LLC
Oconee Nuclear Station, Units 1, 2 and 3
Docket Nos. 50-269, 50-270 and 50-287
2018 Annual Radiological Environmental Operating Report (AREOR)

Pursuant to Oconee Nuclear Station Technical Specification 5.6.2 and Selected Licensee Commitment 16.11.10, please find the enclosed 2018 Annual Radiological Environmental Operating Report. This report covers operation of Units 1, 2 and 3 during the 2018 calendar year.

Any questions concerning this report may be directed to Samuel Adams, Oconee Regulatory Affairs at 864-873-3348.

Sincerely,

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DUKE ENERGY

ANNUAL RADIOLOGICAL ENVIRONMENTAL OPERATING REPORT

DUKE ENERGY CORPORATION
OCONEE NUCLEAR STATION
Units 1, 2, and 3

2018

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LIST OF FIGURES

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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
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^3	picocurie per cubic meter
PI	Power Interrupt
Q	Quarterly
REMP	Radiological Environmental Monitoring Program
SA	Semiannually
SS	Sediment – Shoreline
SI	Special Interest - TLDs
SW	Surface Water
TECH SPECs	Technical Specifications
TLD	Thermoluminescent Dosimeter
UFSAR	Updated Final Safety Analysis Report
µCi/ml	microcurie per milliliter
W	Weekly

1.0 EXECUTIVE SUMMARY

This Annual Radiological Environmental Operating Report describes the Oconee Nuclear Station Radiological Environmental Monitoring Program (REMP), and the program results for the calendar year 2018.

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 and program changes are also discussed.

Sampling activities were conducted as prescribed by Selected Licensee Commitments (SLC's). Required analyses were performed and detection capabilities were met for all collected samples as required by SLC's. One-thousand twenty-six samples were analyzed comprising 1,091 test results in order to compile data for the 2018 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 2018 for station related radionuclides were within the ranges of concentrations observed in the past. Inspection of data showed that radioactivity concentrations in drinking water, surface water, fish, and shoreline sediment are higher than the activities reported for samples collected at control locations. All positively identified measurements attributable to station operation were within limits as specified in SLC's.

Additionally, environmental radiological monitoring data is consistent with effluents introduced into the environment by plant operations. The total body dose estimated to the maximum exposed member of the public as calculated by environmental sampling data, excluding TLD results, was 4.14E-02 mrem for 2018. Background radiation dose in the United States is approximately 620 mrem per year (approximately half from naturally occurring sources such as radon and half from man-made sources such as medical processes).[1] It is therefore concluded that station operations has had no significant radiological impact on the health and safety of the public or the environment.

[1]NCRP (2009). National Council on Radiation Protection and Measurements. *Ionizing Radiation Exposure of the Population of the United States*, NCRP Report No. 160 (National Council on Radiation Protection and Measurements, Bethesda, Maryland).

2.0 INTRODUCTION

2.1 SITE DESCRIPTION AND SAMPLE LOCATIONS

Oconee Nuclear Station (ONS) is located in Oconee County, South Carolina, approximately 8 miles northeast of Seneca, South Carolina, on the shore of Lake Keowee. This lake was formed by damming the Keowee and Little Rivers in that location. Immediately to the south is the U.S. Government Hartwell Project. The Keowee Hydroelectric Plant near the station joins Lake Keowee and the upper reaches of Lake Hartwell. To the north, the Jocassee Hydroelectric Plant joins Lake Jocassee and Lake Keowee. Jocassee is a pumped storage plant.

ONS consists of three pressurized water reactors. Each unit has an output of 846 megawatts net. Unit 1 license for operation was issued 2/6/1973. Unit 2 license for operation was issued 10/6/1973. Unit 3 license for operation was issued 7/19/1974. An independent spent fuel storage installation is also located at the site.

Figures 2.1-1 and 2.1-2 are maps depicting the Thermoluminescent Dosimeter (TLD) monitoring locations and the sampling locations. The location numbers shown on these maps correspond to those listed in Tables 2.1-A and 2.1-B. Figure 2.1-1 comprises all sample locations within a one mile radius of ONS. Figure 2.1-2 comprises all sample locations within a ten mile radius of ONS.

2.2 SCOPE AND REQUIREMENTS OF THE REMP

A Radiological Environmental Monitoring Program (REMP) has been in effect at Oconee Nuclear Station since 1969, four years prior to operation of Unit 1 in 1973. The preoperational program provides data on the existing environmental radioactivity levels for the site and vicinity which may be used to determine whether increases in environmental levels are attributable to the station. The operational program provides surveillance and backup support of detailed effluent monitoring which is necessary to evaluate the significance, if any, of the contributions to the existing environmental radioactivity levels that result from station operation.

This monitoring program is based on NRC guidance as reflected in the Selected Licensee Commitments Manual, with regard to sample media, sampling locations, sampling frequency, and analytical sensitivity requirements. Indicator and control locations were established for comparison purposes to distinguish radioactivity of station origin from natural or other “man-made” environmental radioactivity. The environmental monitoring program also verifies projected and anticipated radionuclide concentrations in the environment and related exposures from releases of radionuclides from Oconee Nuclear Station. This program satisfies the requirements of Section IV.B.2 of Appendix I to 10CFR50 and 10CFR72.44(d)(2) and provides surveillance of all appropriate critical exposure pathways to man and protects vital interests of the company, public, and state and federal agencies concerned with the environment. Reporting levels for radioactivity found in environmental samples are listed in Table 2.2-A. Table 2.2-B lists the REMP analysis and frequency schedule.

The Annual Land Use Census, required by Selected Licensee Commitments, is performed to ensure that changes in the use of areas at or beyond the site boundary are identified and that modifications to the Radiological Environmental Monitoring Program are made if required by changes in land use. This census satisfies the requirements of Section IV.B.3 of Appendix I to 10CFR50. Results are shown in Table 3.9.

Participation in an interlaboratory comparison program as required by Selected Licensee Commitments provides for independent checks on the precision and accuracy of measurements of radioactive material in REMP sample matrices. Such checks are performed as part of the quality assurance program for environmental monitoring in order to demonstrate that the results are valid for the purposes of Section IV.B.2 of Appendix I to 10CFR50. A summary of the results obtained as part of this comparison program are in Section 5 of this annual report.

2.3 STATISTICAL AND CALCULATIONAL METHODOLOGY

2.3.1 ESTIMATION OF THE MEAN VALUE

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

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

Where:

$\overline{x}$ = estimate of the mean,
i = individual sample,
N = total number of samples with a net activity (or concentration),
χ_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

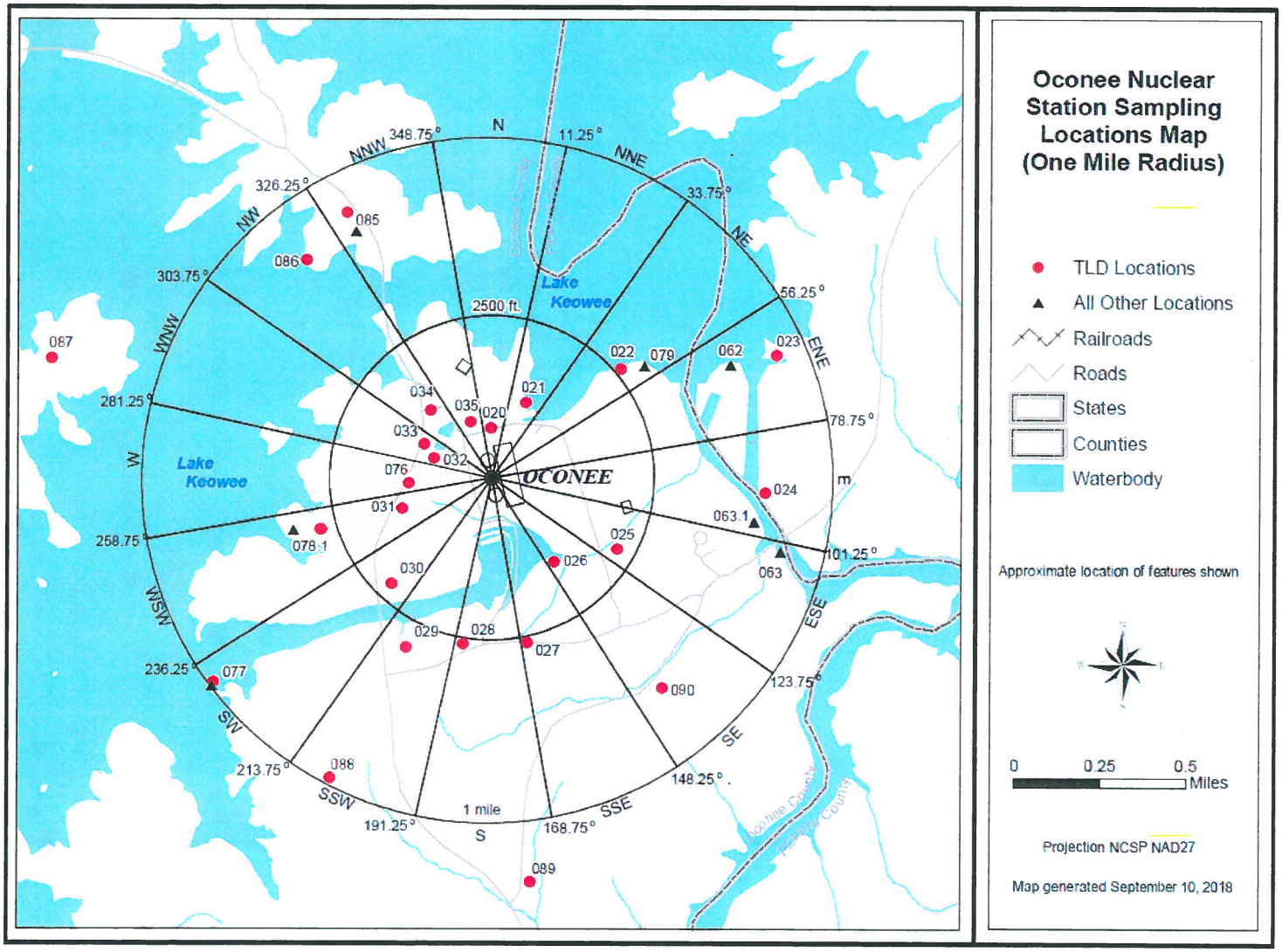

Oconee Nuclear Station Sampling Locations Map (One Mile Radius)
TLD Locations
All Other Locations
Railroads
Roads
States
Counties
Waterbody
Approximate location of features shown
0
0.25
0.5
Miles
Projection NCSP NAD27
Map generated September 10, 2018
OCONEE
Lake Keowee
Lake Keowee
2500 ft.
1 mile
N
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
11.25°
33.75°
56.25°
78.75°
101.25°
123.75°
148.25°
168.75°
191.25°
213.75°
236.25°
258.75°
281.25°
303.75°
326.25°
348.75°
085
086
087
088
089
090
077
078.1
076
031
030
029
028
027
026
025
024
063.1
063
032
033
034
035
020
021
022
079
062
023

Figure 2.1-2

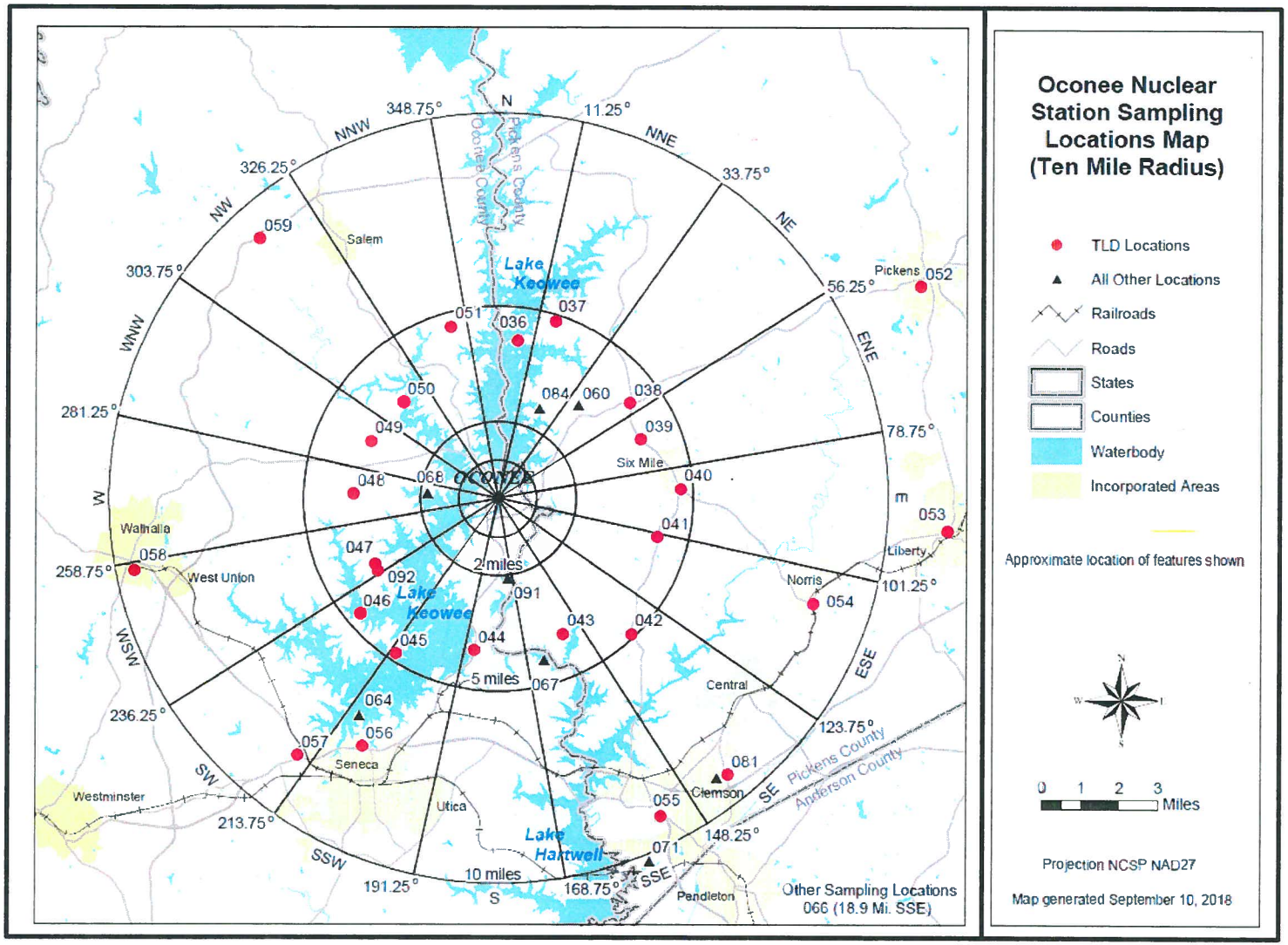

Oconee Nuclear Station Sampling Locations Map (Ten Mile Radius)
TLD Locations
All Other Locations
Railroads
Roads
States
Counties
Waterbody
Incorporated Areas
Approximate location of features shown
0 1 2 3 Miles
Projection NCSP NAD27
Map generated September 10, 2018
Other Sampling Locations
066 (18.9 Mi. SSE)
N
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
348.75°
11.25°
33.75°
56.25°
78.75°
101.25°
123.75°
148.25°
168.75°
191.25°
213.75°
236.25°
258.75°
281.25°
303.75°
326.25°
2 miles
5 miles
10 miles
Lake Keowee
Lake Hartwell
Oconee County
Pickens County
Anderson County
Salem
Six Mile
Pickens
Liberty
Norris
Central
Clemson
Pendleton
Seneca
Utica
Westminster
West Union
Walhalla
059
052
053
054
081
055
071
057
056
064
045
046
092
047
058
048
068
049
050
051
036
037
084
060
038
039
040
041
042
043
044
067
091

TABLE 2.1-A

OCONEE RADIOLOGICAL MONITORING PROGRAM
SAMPLING LOCATIONS

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

Site #	Measure Type	Location Description*	Air Rad. & Particulate	Surface Water	Drinking Water	Shoreline Sediment	Fish	Milk	Broadleaf Vegetation
060	I	Greenville Water Intake Road (3.23 NE)			M				
060	C**	Greenville Water Intake Road (2.28 NE)					SA		
062	C	Lake Keowee Hydro Intake (0.85 mi ENE)		M					
063	I	Lake Hartwell Hwy 183 Bridge (0.80 mi ESE) [000.7]					SA		
063.1	I	Lake Hartwell Hwy 183 (0.79 mi E)		M					
064	C	Seneca Municipal Water Supply (6.67 mi SSW) [004.1]			M				
066	I	Anderson Municipal Water Supply (18.9 mi SSE) [012]			M				
067	I	Lawrence Ramsey Bridge Hwy 27 (4.34 mi SSE) [005.2]				SA	SA		
068	C	High Falls County Park (1.82 mi W)				SA			
071	C	Clemson Dairy (10.2 mi SSE) [006.3]						SM	
077	I	Skimmer Wall (1.00 mi SW)	W						M
078.1	I	Recreation Site (0.53 mi WSW)	W						
079	I	Keowee Dam (0.56 mi NE)	W						M
081	C	Clemson Operations Center (9.33 mi SE)	W						M
084	I	Sue Craig Road (2.58 mi NNE)	W						M
085	I	Lake Services / Building B9125 (0.88 mi NNW)	W						
091	I	Holders Landing Road (2.09 miles S)				SA			

* 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 RADIOLOCICAL MONITORING PROGRAM
SAMPLING LOCATIONS (TLD SITES)

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

Site #	Measure Type	Location*	Distance (miles)	Sector	Site #	Measure Type	Location*	Distance (miles)	Sector
020	IR	Site Boundary	0.16	N	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	047	OR	New Hope Church, HWY 188	3.58	WSW
024	IR	Site Boundary	0.81	E	048	OR	JCT HWY 175 & 188	3.64	W
025	IR	Site Boundary	0.42	ESE	049	OR	JCT HWY 201 & 92	3.60	WNW
026	IR	Site Boundary	0.34	SE	050	OR	Stamp Creek Landing, End of HWY 92	3.53	NW
027	IR	Site Boundary	0.49	SSE	051	OR	HWY 128, 1 mile N OF HWY 130	4.64	NNW
028	IR	Site Boundary	0.46	S	052	SI	DPC Branch Office Site, Pickens	12.4	ENE
029	IR	Site Boundary	0.56	SSW	053	SI	DPC Branch Office Site, Liberty	11.7	E
030	IR	Site Boundary	0.42	SW	054	SI	Post Office - HWY 93 Norris	8.60	ESE
031	IR	Site Boundary	0.27	WSW	055	SI	Clemson Meteorology Plot	9.27	SSE
076	IR	Site Boundary	0.19	W	056	SI	Water Tower - Seneca	7.30	SSW
032	IR	Site Boundary	0.19	WNW	057	SI	Oconee Memorial Hospital	8.42	SW
033	IR	Site Boundary	0.21	WNW	058	C	Branch Rd Substation, Walhalla	9.39	WSW
034	IR	Site Boundary	0.22	NW	059	SI	Tamassee Dar School	9.20	NW
035	IR	Site Boundary	0.17	NNW	077***	IR	Skimmer wall shared with air monitoring station	1.00	SW
036	OR	Mile Creek Landing	4.18	N	078.1***	IR	ONS Recreation Site shared with air monitoring station	0.53	WSW
037	OR	Keowee Church, HWY 327	4.85	NNE	081	C	Clemson Operations Center	9.33	SE
038	OR	Convenience Mart, JCT HWY 183 & 133	4.24	NE	085***	IR	Lake Services Bldg 9125 shared with air monitoring location	0.88	NNW
039	OR	HWY 133, 1 mile East of JCT HWY 183 & 133	4.02	ENE	086***	IR	Lake Keowee Service Rd at Boat Landing	0.83	NW
040	OR	Microwave Tower, Six Mile	4.74	E	087***	IR	End of Waterfall Rd	1.33	WNW
041	OR	JCT HWY 101 & 133	4.25	ESE	088***	IR	Doug Hollow Rd / Transmission Tower	1.00	SSW
042	OR	Lawrence Chapel Church, HWY 133	4.93	SE	089***	IR	Intersection Hwy 130 & Keowee River Rd	1.19	S
043	OR	HWY 291 at Issaqueena Park	4.09	SSE	090***	IR	Crescent Resources, Keowee River Rd at Beaver Dam	0.79	SE
					092**	OR	Hilton Circle stop sign HWY 188	3.62	WSW

* GPS data reflect accuracy to within 2-5 meters. GPS field measurements were taken as close as possible to the item of interest.
** TLD location added to Oconee REMP, ODCM Revision 59 (NCR # 02226974).
*** TLD location changed from Special Interest to Inner Ring (NCR # 02266080).

TABLE 2.2-A

REPORTING LEVELS FOR RADIOACTIVITY CONCENTRATIONS IN ENVIRONMENTAL SAMPLES

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

(a) For drinking water samples only. This is 40CFR Part 141 value.
(b) If low-level I-131 analyses are performed.

TABLE 2.2-B

REMP ANALYSIS FREQUENCY

Sample Medium	Analysis Schedule	Gamma Isotopic	Tritium	Low Level I-131	Gross Beta	TLD
Air Radioiodine	Weekly	X	---	---		---
Air Particulate	Weekly	---	---	---	X	---
	Quarterly Composite	X	---	---	---	---
Direct Radiation	Quarterly	---	---	---	---	X
Surface Water	Monthly	X	---	---	---	---
	Quarterly Composite	---	X	---	---	---
Drinking Water	Monthly	X	---	(a)	X	---
	Quarterly Composite	---	X	---	---	---
Shoreline Sediment	Semiannually	X	---	---	---	---
Milk	Semimonthly	X	---	X	---	---
Fish	Semiannually	X	---	---	---	---
Broadleaf Vegetation	Monthly	X	---	---	---	---

(a) Low level I-131 analysis will be performed if abnormal releases occur which could reasonably result in > 1 pCi/liter of I-131 in drinking water. An LLD of 1 pCi/liter will be required for this analysis.

TABLE 2.2-C

MAXIMUM VALUES FOR THE *A PRIORI* LOWER LIMITS OF DETECTION

Analysis	Water (pCi/liter)	Air Particulates or Gases (pCi/m^3)	Fish (pCi/kg-wet)	Milk (pCi/liter)	Broadleaf Vegetation (pCi/kg-wet)	Sediment (pCi/kg-dry)
Gross Beta	4	0.01	---	---	---	---
H-3	2000	---	---	---	---	---
Mn-54	15	---	130	---	---	---
Fe-59	30	---	260	---	---	---
Co-58, 60	15	---	130	---	---	---
Zn-65	30	---	260	---	---	---
Zr-95	15	---	---	---	---	---
Nb-95	15	---	---	---	---	---
I-131	15[(a)]	0.07	---	1	60	
Cs-134	15	0.05	130	15	60	150
Cs-137	18	0.06	150	18	80	180
Ba-La-140	15	---	---	15	---	---

(a) LLD for low-level I-131 analyses is 1 pCi/liter if performed

3.0 INTERPRETATION OF RESULTS

Review of 2018 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 2018 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 2018 information required by Technical Specification Administrative Control 5.6.2 are located in Appendix B. REMP results for 2018 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 2018.

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 2018 due to ONS operation was 2.3 % 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 2018 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 2018 indicates that radioactivity concentrations were not higher than expected and all positively identified measurements attributable to ONS operations in 2018 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 2018. Similarly,

there was no significant increase in ambient background radiation levels in the surrounding areas. The 2018 land use census data, shown in Section 3.9, indicates that no program changes are required as a result of the census.

3.1 AIRBORNE RADIOIODINE AND PARTICULATES

In 2018, 312 radioiodine and particulate samples were analyzed, 260 from five indicator locations and 52 from the control location. Particulate samples were analyzed weekly for gross beta. A quarterly gamma analysis was performed on the quarterly filter composite (by location). Radioiodine samples received a weekly gamma analysis. Due to a field placement error, there was one air particulate filter analyzed separately from the 2018 first quarter composite to prevent from having more than 13 filters in the composite (NCR # 02179565 and NCR # 02180971).

There was no detectable I-131 in air samples in 2018. 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 2018 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^3.

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

Table 3.1-A Mean Concentration of Air Radioiodine (I-131) (Preoperational-1995)

Year	Indicator Location (pCi/m^3)	Control Location (pCi/m^3)
Preoperational 1969-1972	0.00E0	0.00E0
Feb. 1973 - June 1973	0.00E0	0.00E0
July 1973 - Dec. 1973	0.00E0	0.00E0
Jan. 1974 - June 1974	0.00E0	0.00E0
July 1974 - Dec. 1974	2.60E-2	8.00E-3
Jan. 1975 - June 1975	8.65E-2	3.12E-2
July 1975 - Dec. 1975	1.13E-2	9.52E-3
1976	2.76E-2	2.18E-2
1977	3.60E-2	3.60E-2
1978	2.19E-1	1.15E-1
1979	7.54E-3	4.75E-4
1980	3.07E-3	9.67E-4
1981	6.31E-3	5.39E-4
1982	2.87E-3	8.10E-4
1983	1.48E-3	3.05E-4
1984	8.11E-4	-2.30E-5
1985	7.71E-4	4.54E-4
1986	5.02E-3	7.86E-3
1987(1)	4.29E-3	5.19E-3
1988	0.00E0	0.00E0
1989	4.99E-4	0.00E0
1990	0.00E0	0.00E0
1991	0.00E0	0.00E0
1992	0.00E0	0.00E0
1993	0.00E0	0.00E0
1994	1.03E-2	0.00E0
1995	0.00E0	0.00E0

0.00E0 indicates no detectable measurements
1979 - 1986 mean based on all net activity
(1) 1987 – Gamma spectroscopy system change

Table 3.1-B Mean Concentration of Air Radioiodine (I-131) (1996-2018)

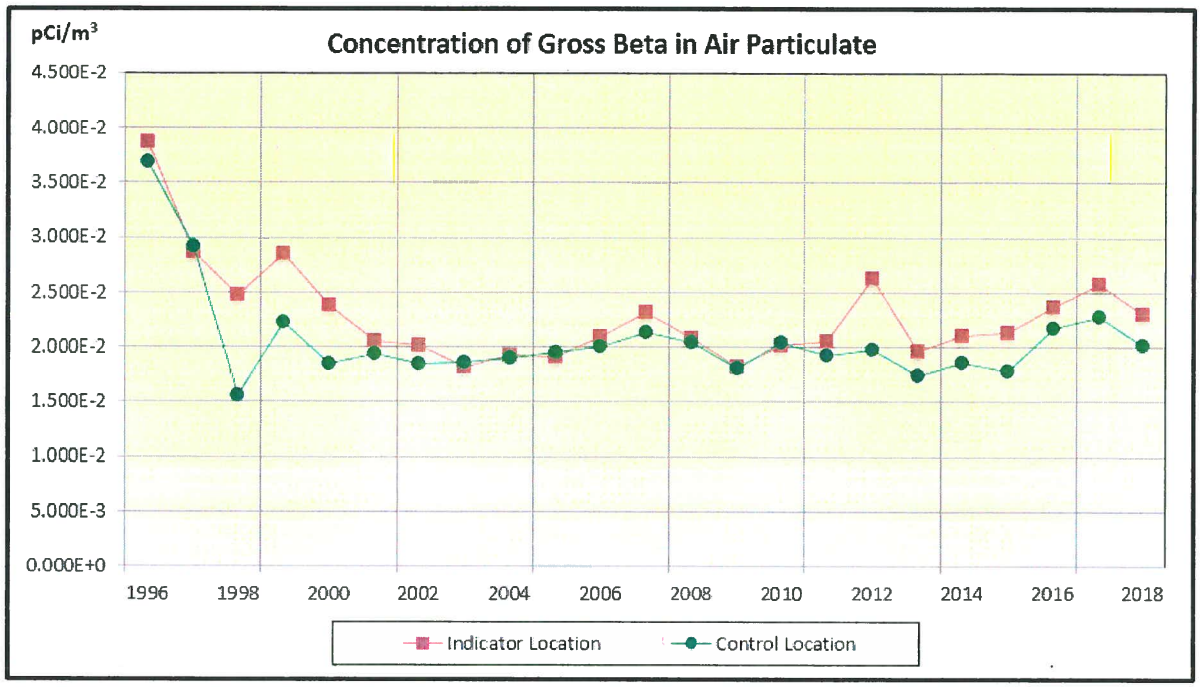
Year	Indicator Location (pCi/m^3)	Control Location (pCi/m^3)
1996	0.00E0	0.00E0
1997	0.00E0	0.00E0
1998	0.00E0	0.00E0
1999	0.00E0	0.00E0
2000	0.00E0	0.00E0
2001	0.00E0	0.00E0
2002	0.00E0	0.00E0
2003	0.00E0	0.00E0
2004	0.00E0	0.00E0
2005	0.00E0	0.00E0
2006	0.00E0	0.00E0
2007	0.00E0	0.00E0
2008	0.00E0	0.00E0
2009	0.00E0	0.00E0
2010	0.00E0	0.00E0
2011[(1)]	5.05E-2	4.13E-2
2012	0.00E0	0.00E0
2013	0.00E0	0.00E0
2014[(2)]	0.00E0	0.00E0
2015	0.00E0	0.00E0
2016	0.00E0	0.00E0
2017	0.00E0	0.00E0
2018	0.00E0	0.00E0

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

3.2 DRINKING WATER

Gross beta analysis and gamma spectroscopy were performed on 39 monthly drinking water samples. These samples were composited to form 12 quarterly composite period samples for Tritium analysis. Two indicator locations and a control location were sampled; however, only one of the indicator locations is downstream of the effluent release point.

Table 3.2-A lists the highest indicator location annual mean and control location annual mean for gross beta results since the preoperational period through 1995. Table 3.2-B lists the highest indicator location annual mean and control location annual mean for gross beta results from 1996 through 2018. The indicator location had an average concentration of 1.50 pCi/liter in 2018, and the control location had a concentration of 1.27 pCi/liter. For comparison purposes, the 2017 indicator mean was 1.25 pCi/liter. Figure 3.2-1 shows the highest indicator and control location annual means for gross beta. The tables show that 2018 gross beta levels in drinking water are lower than preoperational concentrations.

Tritium was detected in four of the twelve composite samples during 2018. The 2018 mean indicator location 066 concentration was 356 pCi/liter, which is 1.78% 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 2018. 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 2018; therefore low-level iodine analysis is not required.

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

Figure 3.2-1

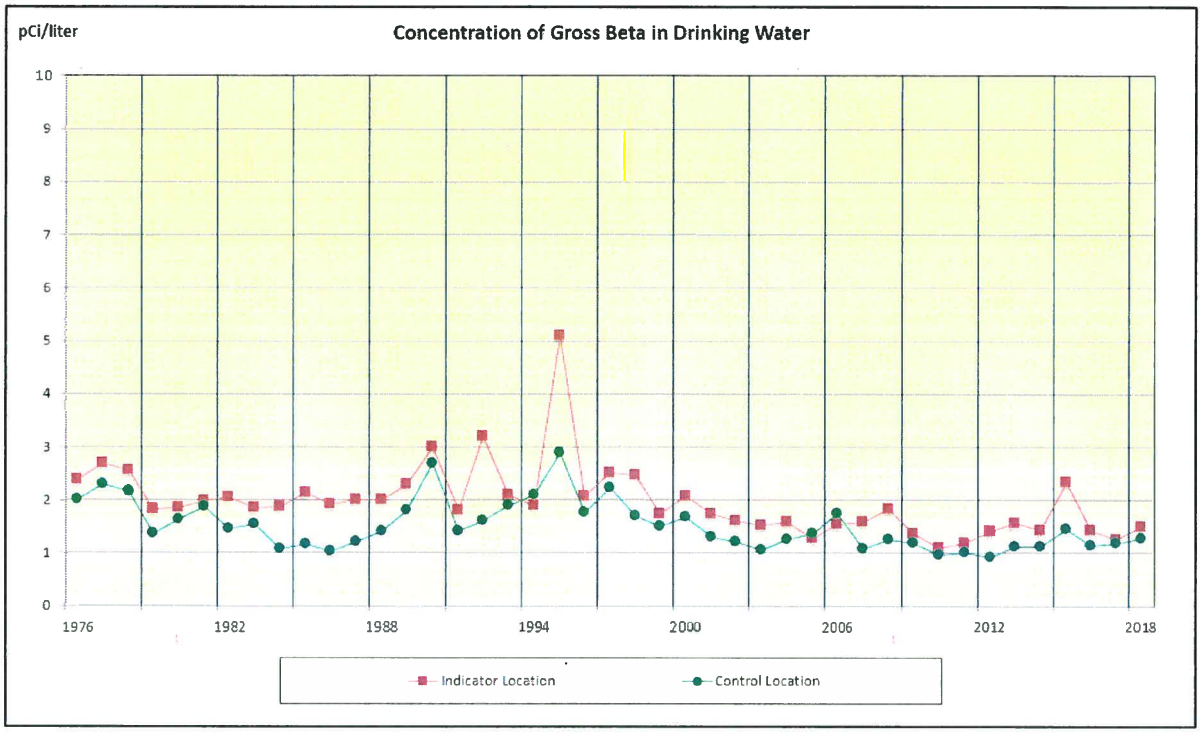
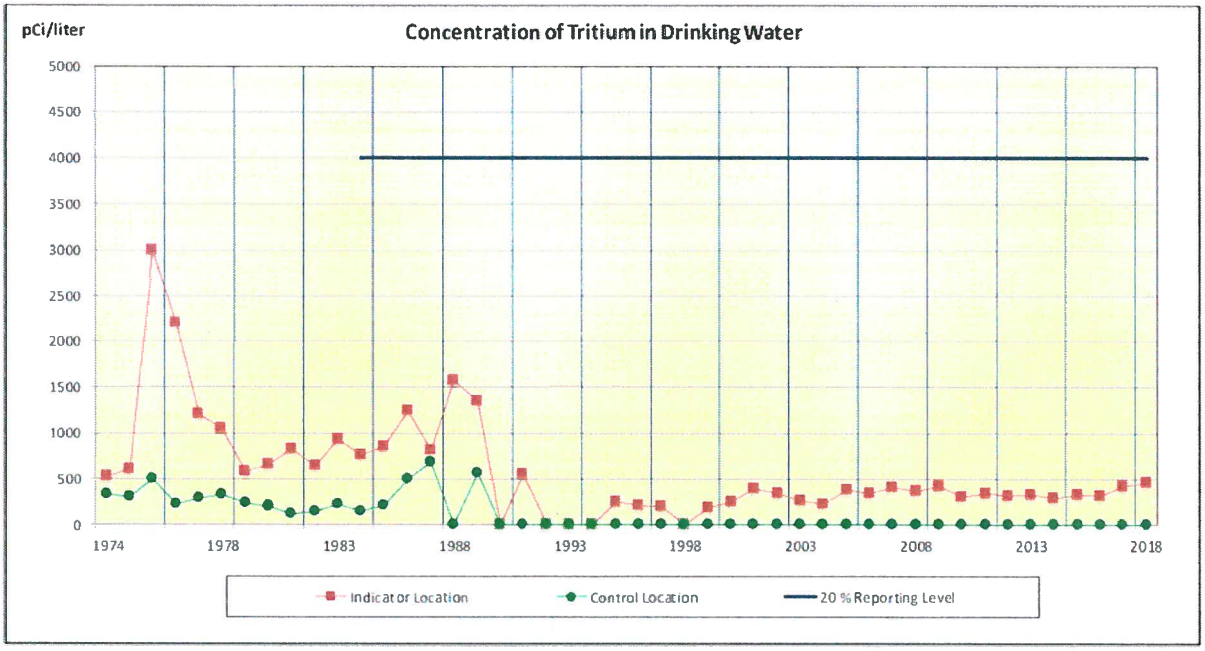


Figure 3.2-2



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 (1996-2018)

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

0.00 indicates no detectable measurements

3.3 SURFACE WATER

Gamma spectroscopy was performed on 26 monthly surface water samples. These samples were composited to form eight quarterly composite period samples for Tritium analysis. One indicator and one control location were sampled. The indicator location is near the liquid effluent release point.

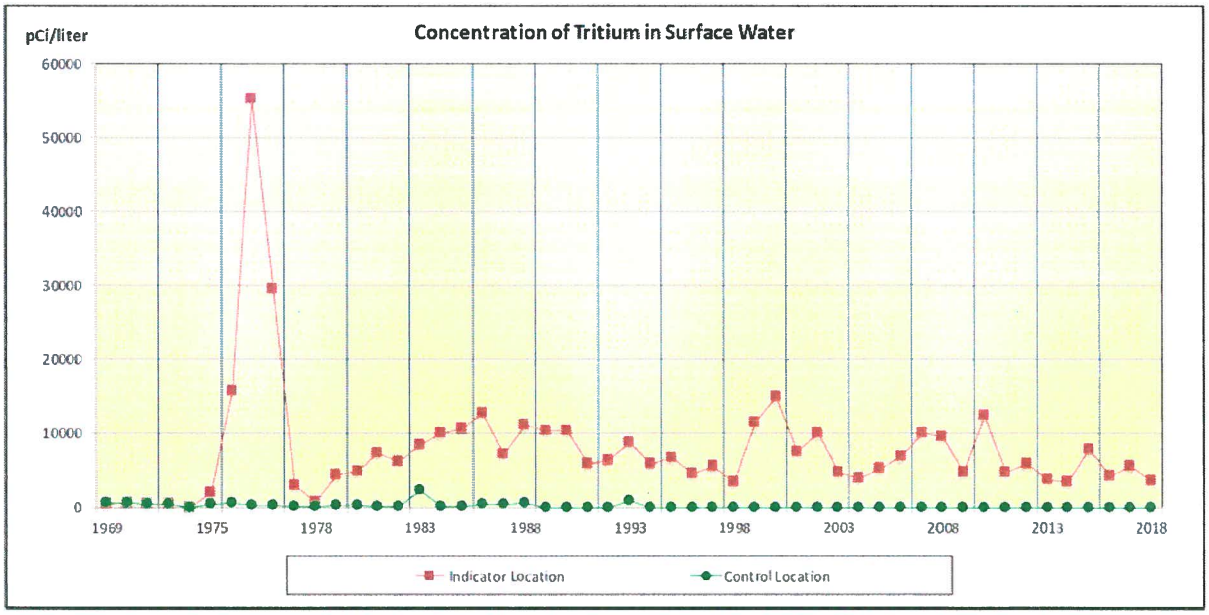
Tritium was detected in the four indicator location samples. The 2018 average concentration was 3,515 pCi/liter. The individual samples ranged from 1,290 to 5,610 pCi/liter. For comparison purposes, the 2017 mean concentration was 5,564 pCi/liter. Tritium was not detected in any control surface water 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 2018.

Gamma spectroscopy analysis did not detect any station related gamma activity during 2018. 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 2018 did not reveal any increasing trends.

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

Figure 3.3



There is no reporting level for Tritium in surface water

Table 3.3-A Mean Concentrations of Radionuclides in Surface Water (1969-1995)

Year	Co-58 (pCi/l)	Co-60 (pCi/l)	Nb-95 (pCi/l)	Cs-137 (pCi/l)	H-3 pCi/l)
Preoperational 1969		Qualitative results reported			4.86E2
Preoperational 1970		Qualitative results reported			5.94E2
Preoperational 1971		Qualitative results reported			4.01E2
Preoperational 1972		Qualitative results reported			3.62E2
1973		Qualitative results reported			0.00E0
1974	0.00E0	1.32E1	0.00E0	1.60E1	1.99E3
Jan. 1975 – June 1975	0.00E0	0.00E0	0.00E0	0.00E0	1.56E4
July 1975 – Dec. 1975	0.00E0	1.34E1	0.00E0	0.00E0	5.52E4
1976	1.08E2	3.30E1	0.00E0	3.50E1	2.95E4
1977	2.60E1	1.80E1	0.00E0	3.10E1	2.90E3
1978	2.96E2	0.00E0	0.00E0	2.22E1	8.00E2
1979	1.33E0	2.60E0	1.78E0	2.82E0	4.37E3
1980	1.56E0	2.30E0	1.22E0	5.40E0	4.93E3
1981	1.10E0	6.10E-1	1.70E0	3.90E0	7.21E3
1982	6.14E-1	1.99E0	2.29E0	4.85E0	6.13E3
1983	6.99E-1	3.02E0	3.91E-1	6.83E-1	8.40E3
1984	9.40E-1	6.30E-1	7.90E-1	4.83E-1	9.90E3
1985	2.15E-1	6.27E-1	4.95E-1	9.90E-1	1.05E4
1986	3.28E0	1.23E0	1.14E0	3.07E-1	1.26E4
1987[1]	5.10E1	3.40E0	4.00E0	0.00E0	7.08E3
1988	6.20E0	5.00E0	2.50E0	3.50E0	1.10E4
1989	5.30E0	3.00E0	0.00E0	3.40E0	1.02E4
1990	1.70E0	1.60E0	0.00E0	0.00E0	1.03E4
1991	5.40E0	0.00E0	0.00E0	0.00E0	5.76E3
1992	2.50E0	0.00E0	0.00E0	0.00E0	6.22E3
1993	0.00E0	0.00E0	0.00E0	0.00E0	8.62E3
1994	0.00E0	0.00E0	0.00E0	0.00E0	5.75E3
1995	0.00E0	0.00E0	0.00E0	0.00E0	6.65E3

0.00E0 indicates no detectable measurements
1979-1986 mean based on all net activity results
(1) 1987 – Gamma spectroscopy system change

Table 3.3-B Mean Concentrations of Radionuclides in Surface Water (1996-2018)

Year	Co-58 (pCi/l)	Co-60 (pCi/l)	Nb-95 (pCi/l)	Cs-137 (pCi/l)	H-3 pCi/l)
1996	0.00E0	0.00E0	0.00E0	0.00E0	4.54E3
1997	0.00E0	0.00E0	0.00E0	0.00E0	5.50E3
1998	0.00E0	0.00E0	0.00E0	0.00E0	3.35E3
1999	2.73E1	0.00E0	0.00E0	0.00E0	1.13E4
2000	0.00E0	0.00E0	0.00E0	0.00E0	1.48E4
2001	0.00E0	0.00E0	0.00E0	0.00E0	7.43E3
2002	0.00E0	0.00E0	0.00E0	0.00E0	1.00E4
2003	0.00E0	0.00E0	0.00E0	0.00E0	4.77E3
2004	0.00E0	0.00E0	0.00E0	0.00E0	3.86E3
2005	0.00E0	0.00E0	0.00E0	0.00E0	5.15E3
2006	0.00E0	0.00E0	0.00E0	0.00E0	6.72E3
2007	0.00E0	0.00E0	0.00E0	0.00E0	9.91E3
2008	0.00E0	0.00E0	0.00E0	0.00E0	9.43E3
2009	0.00E0	0.00E0	0.00E0	0.00E0	4.68E3
2010	0.00E0	0.00E0	0.00E0	0.00E0	1.23E4
2011	0.00E0	0.00E0	0.00E0	0.00E0	4.75E3
2012	0.00E0	0.00E0	0.00E0	0.00E0	5.76E3
2013	0.00E0	0.00E0	0.00E0	0.00E0	3.68E3
2014[(1)]	0.00E0	0.00E0	0.00E0	0.00E0	3.49E3
2015	0.00E0	0.00E0	0.00E0	0.00E0	7.73E3
2016	0.00E0	0.00E0	0.00E0	0.00E0	4.29E3
2017	0.00E0	0.00E0	0.00E0	0.00E0	5.56E3
2018	0.00E0	0.00E0	0.00E0	0.00E0	3.52E3

0.00E0 indicates no detectable measurements

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

3.4 MILK

Gamma spectroscopy and low level iodine analysis was performed on 26 milk samples collected from the control location in 2018. No indicator dairies were sampled during 2018 and none were identified by the 2018 land use census.

The milk animal found at 4.66 miles in the East sector during the 2017 LUC was no longer present during the 2018 LUC, and no longer appears on Figure 3.9.

There were no gamma emitting radionuclides due to ONS plant operations identified in milk samples in 2018. 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 2018. The tables show similar concentrations for both indicator and control locations through 2005, and Cs-137 was not detected in the control location since 1996.

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

Table 3.4-A Mean Concentration of Radionuclides in Milk (Preoperational-1995)

Year	Cs-137 Indicator (pCi/l)	Cs-137 Control (pCi/l)
Preoperational	1.57E1	1.46E1
Feb. 1973 – June 1973	Qualitative results reported	Qualitative results reported
July 1973 – Dec. 1973	5.80E0	Qualitative results reported
Jan. 1974 – June 1974	5.30E0	0.00E0
July 1974 – Dec. 1974	1.11E1	0.00E0
Jan. 1975 – June 1975	1.51E1	9.45E0
July 1975 – Dec. 1975	0.00E0	0.00E0
1976	1.80E1	7.47E0
1977	0.00E0	0.00E0
1978	1.33E1	1.33E1
1979	7.25E0	2.52E0
1980	3.58E0	2.63E0
1981	5.52E0	5.51E0
1982	2.71E0	3.25E0
1983	5.04E0	-4.27E-1
1984	2.30E0	2.58E0
1985	2.38E0	1.31E0
1986	2.92E0	2.97E0
1987(1)	4.90E0	4.90E0
1988	3.90E0	3.20E0
1989	4.70E0	2.90E0
1990	6.40E0	0.00E0
1991	5.00E0	0.00E0
1992	6.60E0	0.00E0
1993	0.00E0	0.00E0
1994	0.00E0	1.80E0
1995	2.30E0	2.00E0

0.00E0 indicates no detectable measurements
1979 - 1986 mean based on all net activity results
(1) 1987 – Gamma spectroscopy system change

Table 3.4-B Mean Concentration of Radionuclides in Milk (1996-2018)

Year	Cs-137 Indicator (pCi/l)	Cs-137 Control (pCi/l)
1996	0.00E0	4.10E0
1997	0.00E0	0.00E0
1998	0.00E0	0.00E0
1999	0.00E0	0.00E0
2000	0.00E0	0.00E0
2001	0.00E0	0.00E0
2002	0.00E0	0.00E0
2003	0.00E0	0.00E0
2004	0.00E0	0.00E0
2005(1)	0.00E0	0.00E0
2006	No Indicator Location	0.00E0
2007	No Indicator Location	0.00E0
2008	No Indicator Location	0.00E0
2009	No Indicator Location	0.00E0
2010	No Indicator Location	0.00E0
2011	No Indicator Location	0.00E0
2012	No Indicator Location	0.00E0
2013	No Indicator Location	0.00E0
2014(2)	No Indicator Location	0.00E0
2015	No Indicator Location	0.00E0
2016	No Indicator Location	0.00E0
2017	No Indicator Location	0.00E0
2018	No Indicator Location	0.00E0

0.00E0 indicates no detectable measurements

(1) The Oconee milk program was updated to align with NUREG-1301 during 2005 (NCR # 01753418). Location 071 was designated as the new control site effective with the 7/12/2005 sampling.

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

3.5 BROADLEAF VEGETATION

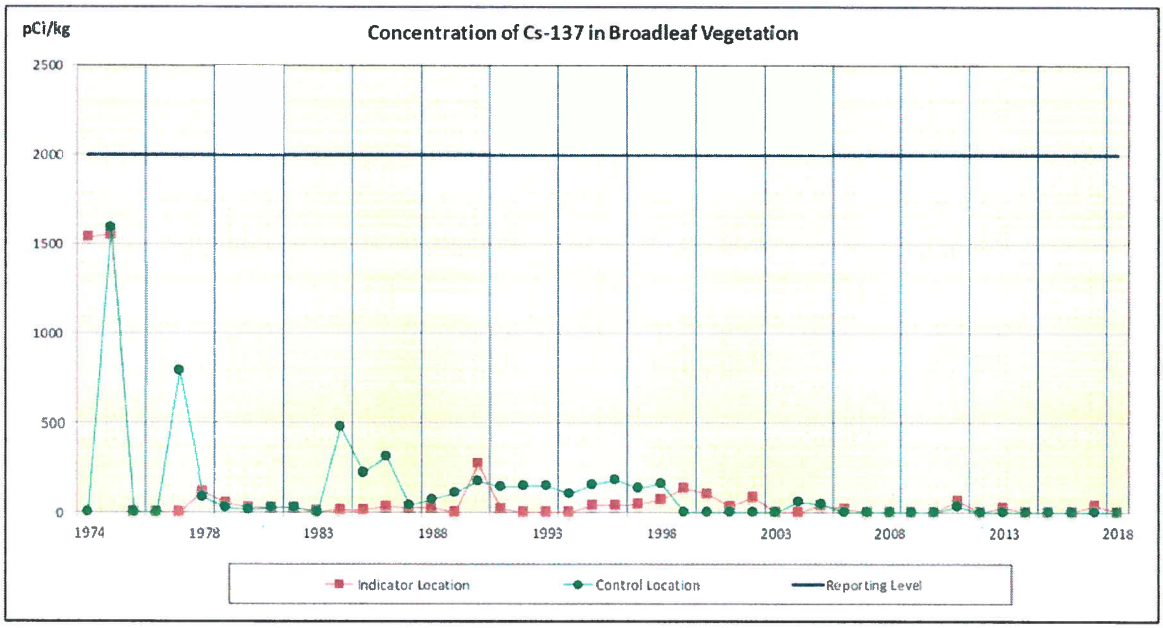
Gamma spectroscopy was performed on 48 broadleaf vegetation samples during 2018. Three indicator locations and one control location were sampled. There were no gamma emitting radionuclides due to ONS plant operations identified in vegetation samples in 2018.

Cs-137 is the only radionuclide, other than naturally occurring, reported in vegetation samples since the change in gamma spectroscopy analysis systems in 1987. Figure 3.5 shows the indicator and control annual means for Cs-137 since the early operational period of the plant. Table 3.5 shows historical concentrations of Cs-137.

It is not unusual for Cs-137 to be present in vegetation. It is a constituent of nuclear weapons test fallout and nuclear plant accidents and has been observed in samples from indicator and control locations since the preoperational period. Table 3.5 lists the highest indicator location annual mean and control location annual mean for Cs-137 since early in the station's operational history. Visual inspection of the tabular data did not reveal any increasing trends.

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

Figure 3.5



2011 concentration affected by Fukushima Daiichi

Table 3.5 Mean Concentration of Radionuclides in Vegetation

Year	Cs-137 Indicator (pCi/kg)	Cs-137 Control (pCi/kg)
July 1974 - Dec. 1974	1.54E3	0.00E0
Jan. 1975 - June 1975	1.55E3	1.59E3
July 1975 - Dec. 1975	0.00E0	0.00E0
1976	0.00E0	0.00E0
1977	0.00E0	7.90E2
1978	1.19E2	8.19E1
1979	5.04E1	2.96E1
1980	2.80E1	1.55E1
1981	2.99E1	2.60E1
1982	2.42E1	2.62E1
1983	7.44E0	5.35E-1
1984	1.37E1	4.74E2†
1985	1.62E1	2.20E2
1986	3.28E1	3.12E2
1987(1)	2.70E1	4.20E1
1988	2.40E1	7.50E1
1989	0.00E0	1.08E2
1990	2.73E2	1.74E2
1991	2.20E1	1.45E2
1992	0.00E0	1.46E2
1993	0.00E0	1.49E2
1994	0.00E0	1.06E2
1995	4.30E1	1.58E2
1996	3.79E1	1.83E2
1997	4.73E1	1.35E2
1998	7.28E1	1.61E2††
1999	1.34E2	0.00E0†††
2000	1.06E2	0.00E0
2001	3.19E1	0.00E0
2002	8.44E1	0.00E0
2003	0.00E0	0.00E0
2004	0.00E0	5.96E1
2005	4.51E1	4.11E1
2006	1.77E1	0.00E0
2007	0.00E0	0.00E0
2008	0.00E0	0.00E0
2009	0.00E0	0.00E0
2010	0.00E0	0.00E0
2011	6.68E1††††	3.35E1††††
2012	0.00E0	0.00E0
2013	2.57E1	0.00E0
2014(2)	0.00E0	0.00E0
2015	0.00E0	0.00E0
2016	0.00E0	0.00E0
2017	3.94E1	0.00E0
2018	0.00E0	0.00E0

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

† 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

(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

In 2018, gamma spectroscopy was performed on 12 fish samples. Two downstream indicator locations and one control location were sampled. There were no gamma emitting radionuclides due to ONS plant operations identified in fish samples in 2018.

Figures 3.6-1 and 3.6-2 are graphs displaying the annual means for Cs-137 and Cs-134. Historically, both are contributors to the calculated dose from liquid effluents from ingestion of fish. Radioactivity concentrations in downstream fish samples are higher than those reported in preoperational fish samples, however, concentrations in fish have decreased over time with decreases in radioactive material releases from the plant.

One factor affecting the trend analysis is a change in sampling locations. In 1984, a second downstream fish location was added. Location 063 is closer to the liquid effluent discharge point and has been the highest mean indicator since it was added.

Table 3.6 lists the highest indicator location annual means since the preoperational period for radionuclides detected in 2018. Also included in the table are radionuclides that have been identified in this media since the change in analysis systems in 1987. Comparison of data to previous years does not indicate any increases in concentrations.

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

Figure 3.6-1

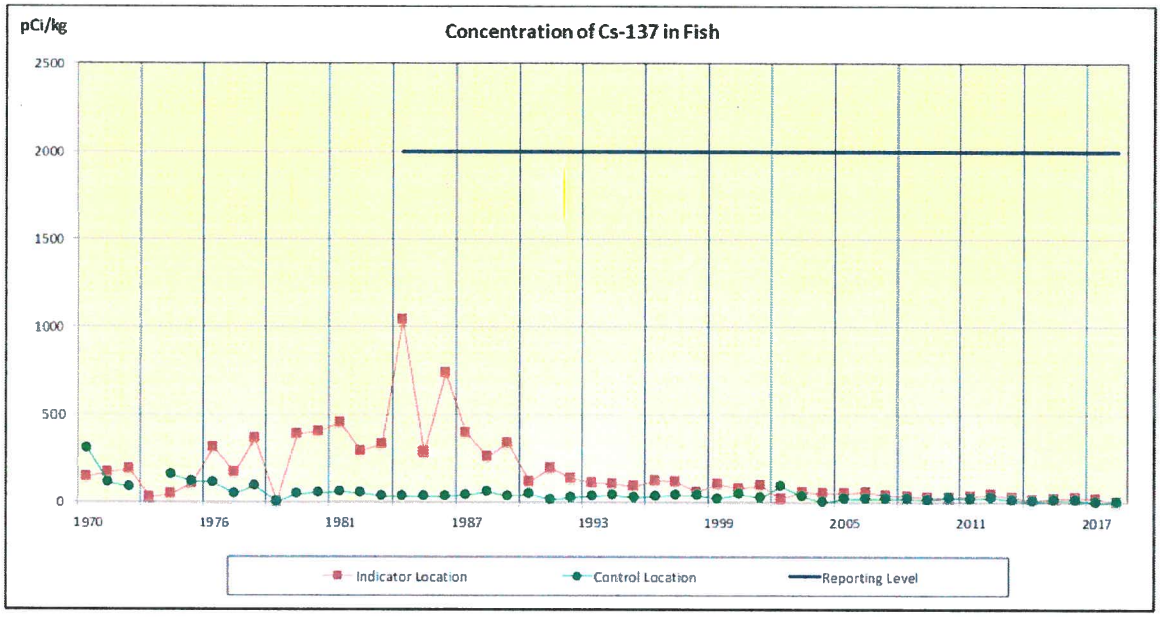
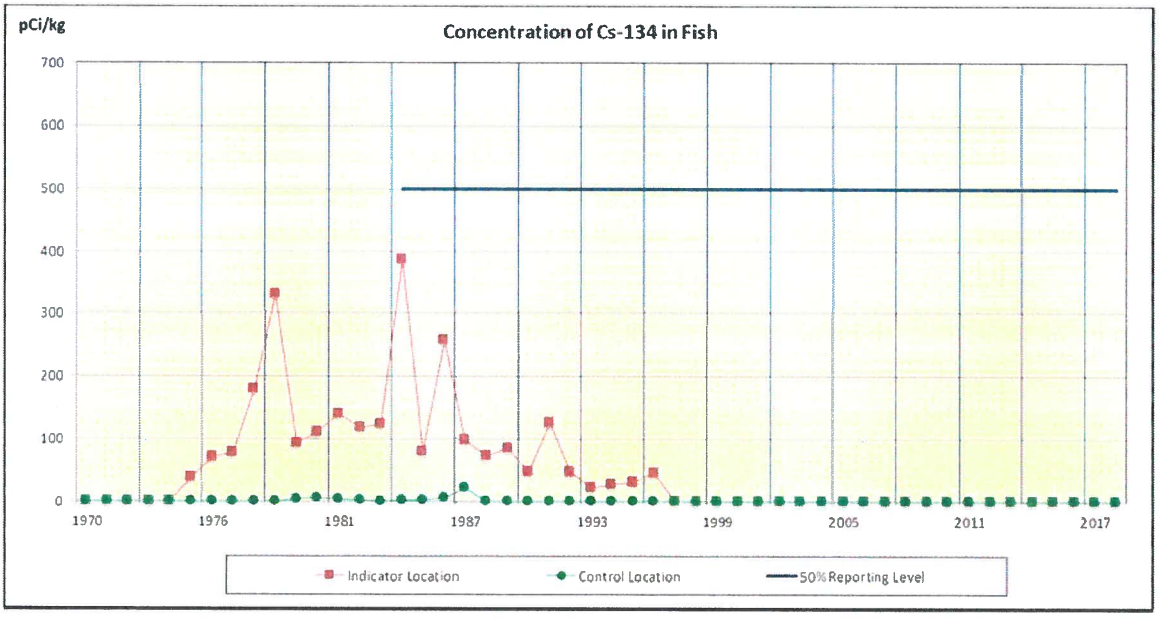


Figure 3.6-2



Current reporting levels implemented 1984

Table 3.6 Mean Concentrations of Radionuclides in Fish

Year	Co-58 (pCi/kg)	Co-60 (pCi/kg)	Cs-134 (pCi/kg)	Cs-137 (pCi/kg)
Preop ending Jan.1971	0.00E0	0.00E0	0.00E0	1.46E2
Preop ending Jan.1973	0.00E0	0.00E0	0.00E0	1.66E2
Feb. 1973 - June 1973	Qualitative results reported-no significant measurements above background			
July 1973 - Dec. 1973	0.00E0	0.00E0	0.00E0	1.89E2
Jan. 1974 - June 1974	0.00E0	0.00E0	0.00E0	2.47E1
July 1974 - Dec. 1974	0.00E0	0.00E0	0.00E0	4.85E1
Jan. 1975 - June 1975	0.00E0	0.00E0	3.81E1	1.05E2
July 1975 - Dec. 1975	8.50E1	0.00E0	7.00E1	3.13E2
1976	5.70E1	1.14E2	7.73E1	1.66E2
1977	0.00E0	0.00E0	1.80E2	3.60E2
1978	3.27E2	0.00E0	3.31E2	0.00E0
1979	1.91E0	1.56E1	9.26E1	3.88E2
1980	1.45E1	1.90E1	1.10E2	3.99E2
1981	2.25E1	1.49E1	1.40E2	4.51E2
1982	9.83E-1	8.03E0	1.17E2	2.94E2
1983	3.35E1	4.53E0	1.24E2	3.32E2
1984	1.21E2	6.23E1	3.87E2	1.04E3
1985	1.62E1	1.10E1	7.93E1	2.85E2
1986	9.56E1	2.59E1	2.57E2	7.36E2
1987[1]	1.63E2	6.30E1	9.80E1	3.93E2
1988	9.60E1	0.00E0	7.20E1	2.60E2
1989	4.30E1	1.50E1	8.60E1	3.36E2
1990	1.50E1	0.00E0	4.80E1	1.19E2
1991	4.59E1	0.00E0	1.25E2	1.94E2
1992	6.10E1	0.00E0	4.80E1	1.36E2
1993	0.00E0	0.00E0	2.10E1	1.10E2
1994	0.00E0	0.00E0	2.80E1	1.05E2
1995	0.00E0	0.00E0	3.10E1	9.20E1
1996	0.00E0	0.00E0	4.49E1	1.25E2
1997	0.00E0	0.00E0	0.00E0	1.18E2
1998	0.00E0	0.00E0	0.00E0	5.79E1
1999	0.00E0	0.00E0	0.00E0	1.04E2
2000	0.00E0	0.00E0	0.00E0	7.54E1
2001	1.72E1	0.00E0	0.00E0	9.92E1
2002	0.00E0	0.00E0	0.00E0	9.37E1
2003	5.02E1	0.00E0	0.00E0	6.04E1
2004	0.00E0	0.00E0	0.00E0	5.29E1
2005	0.00E0	0.00E0	0.00E0	5.14E1
2006	0.00E0	0.00E0	0.00E0	5.58E1
2007	0.00E0	0.00E0	0.00E0	4.10E1
2008	0.00E0	0.00E0	0.00E0	3.13E1
2009	9.01E0	0.00E0	0.00E0	2.68E1
2010	0.00E0	0.00E0	0.00E0	2.69E1
2011	0.00E0	0.00E0	0.00E0	3.53E1
2012	1.23E2	3.61E1	0.00E0	4.32E1
2013	0.00E0	0.00E0	0.00E0	2.44E1
2014[2]	0.00E0	0.00E0	0.00E0	1.40E1
2015	0.00E0	0.00E0	0.00E0	1.94E1
2016	0.00E0	0.00E0	0.00E0	2.74E1
2017	0.00E0	0.00E0	0.00E0	1.73E1
2018	0.00E0	0.00E0	0.00E0	0.00E0

0.00E0 indicates no detectable measurements
1979 - 1986 mean based on all net activity
(1) 1987 – Gamma spectroscopy system change
(2) 2014 Gamma spectroscopy system was replaced 10JUL2014. Gamma spectroscopy system hardware, detector cooling apparatus, software, electronics, nuclide identification libraries, and analytical test matrix components for test matrices were modified (NCR # 0739995). No analytical changes were noted due to the 2014 gamma spectroscopy system change.

3.7 SHORELINE SEDIMENT

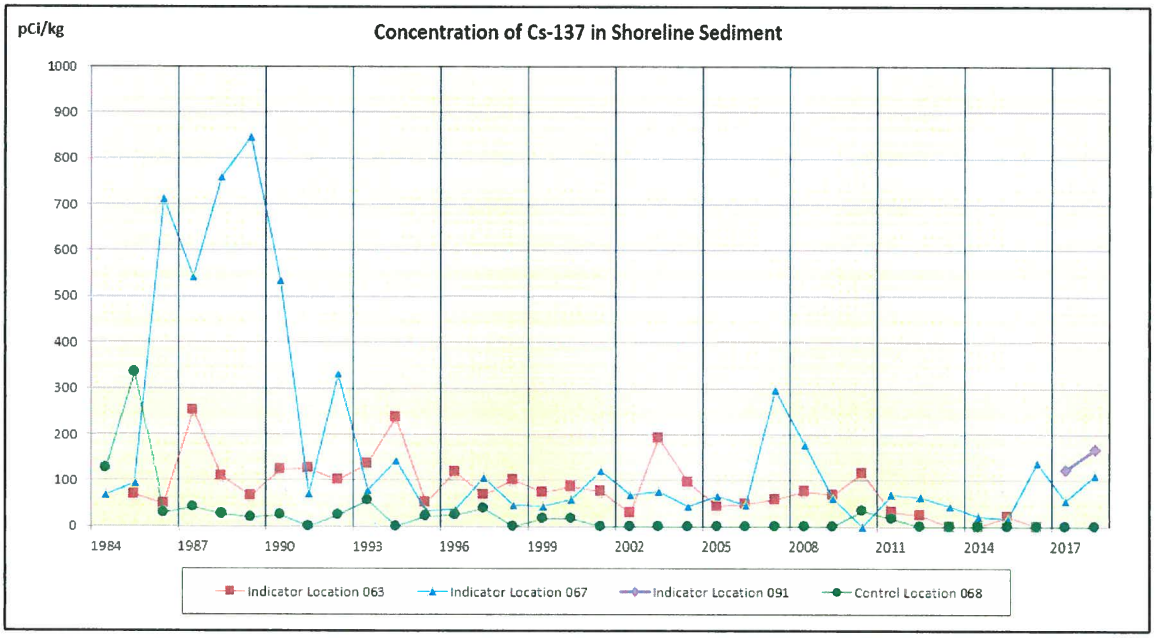
Gamma spectroscopy was performed on six sediment samples. Two downstream indicator locations and one control location were sampled. Four samples were taken from indicator locations and two from the control location.

Cs-137 was identified in three of the four indicator location samples. Cs-137 was not identified in the control location samples. The highest 2018 individual sample Cs-137 concentration was 316 pCi/kg. Table 3.7 lists the highest indicator location annual means since shoreline sediment was initiated in 1984. Included in the table are radionuclides that have been identified in this media since the change in analysis systems in 1987.

Visual inspection of the tabular data did not reveal any trends. Figure 3.7 is a graph of the Cs-137 annual means. Historically, Cs-137 is a contributor to the calculated dose from liquid effluents from shoreline sediment. No trends are apparent.

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

Figure 3.7



There are no reporting levels for shoreline sediment

Table 3.7 Mean Concentrations of Radionuclides in Shoreline Sediment (pCi/kg)

Year	Mn-54	Co-58	Co-60	Zn-65	Cs-134	Cs-137	Ag-110m	Sb-125
1984	1.10E1	1.09E1	1.19E1	0.00E0	7.77E1	5.16E1	0.00E0	0.00E0
1985	9.39E0	1.27E0	4.79E0	0.00E0	7.63E1	9.47E1	0.00E0	0.00E0
1986	2.24E1	1.62E1	2.50E1	0.00E0	1.41E2	7.12E2	0.00E0	0.00E0
1987(1)	5.40E1	4.70E2	5.07E2	0.00E0	1.01E2	6.22E2	3.46E2	0.00E0
1988	3.30E1	1.20E2	1.87E2	6.70E1	6.60E1	7.59E2	1.62E2	3.67E2
1989	2.30E1	1.24E2	1.96E2	0.00E0	5.40E1	8.48E2	5.50E1	1.86E2
1990	3.40E1	8.00E1	2.59E2	0.00E0	4.50E1	5.36E2	1.71E2	9.00E1
1991	3.26E1	5.60E1	8.57E1	0.00E0	6.91E1	1.24E2	1.10E2	1.78E2
1992	8.79E1	1.79E2	1.12E2	0.00E0	5.60E1	3.31E2	1.69E2	2.08E2
1993	8.20E1	8.20E1	6.50E1	0.00E0	3.20E1	1.36E2	5.63E1	1.11E2
1994	5.30E1	7.00E1	1.49E2	0.00E0	6.70E1	2.38E2	1.04E2	1.29E2
1995	1.43E2	3.90E1	2.40E1	0.00E0	1.10E1	5.20E1	0.00E0	0.00E0
1996	0.00E0	5.10E1	0.00E0	0.00E0	1.98E1	1.19E2	0.00E0	0.00E0
1997	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	1.06E2	0.00E0	0.00E0
1998	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	1.01E2	0.00E0	0.00E0
1999	6.96E1	0.00E0	0.00E0	0.00E0	0.00E0	7.38E1	0.00E0	0.00E0
2000	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	8.54E1	0.00E0	0.00E0
2001	0.00E0	2.10E1	0.00E0	0.00E0	0.00E0	1.20E2	0.00E0	0.00E0
2002	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	6.96E1	0.00E0	0.00E0
2003	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	1.93E2	0.00E0	0.00E0
2004	8.54E1	0.00E0	0.00E0	0.00E0	0.00E0	9.56E1	0.00E0	0.00E0
2005	2.00E2	0.00E0	0.00E0	0.00E0	0.00E0	6.53E1	0.00E0	0.00E0
2006	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	5.01E1	0.00E0	0.00E0
2007	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	2.97E2	0.00E0	0.00E0
2008	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	1.78E2	0.00E0	0.00E0
2009	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	6.97E1	0.00E0	0.00E0
2010	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	1.15E2	0.00E0	0.00E0
2011	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	6.83E1	0.00E0	0.00E0
2012	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	6.35E1	0.00E0	0.00E0
2013	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	4.37E1	0.00E0	0.00E0
2014(2)	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	2.11E1	0.00E0	0.00E0
2015	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	2.24E1	0.00E0	0.00E0
2016	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	1.36E2	0.00E0	0.00E0
2017	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	1.22E2	0.00E0	0.00E0
2018	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	1.68E2	0.00E0	0.00E0

0.00E0 indicates no detectable measurements

1984 - 1986 mean based on all net activity

(1) 1987 – Gamma spectroscopy system change

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

3.8 DIRECT GAMMA RADIATION

3.8.1 ENVIRONMENTAL TLD

Oconee is licensed with an exclusion area boundary defined by UFSAR Section 2.1.1.2 as a 1 mile radius from station center. This is the same boundary established for determining radioactive effluent release limits. No permanent public access is permitted within the exclusion area. TLD locations designated as "inner ring" were placed within exclusion area upon inception of the REMP and all are used as indicators. Due to close proximity with Oconee, inner ring TLD locations are not good indicators of radiation exposure to a member of the public, but are good at determining nearby environmental effects due to plant operation. Based on their placement, inner ring TLD locations are expected to occasionally be influenced by normal plant operation. TLD locations designated as "outer ring" are outside the 1 mile exclusion area but within a 5 mile radius of station center. In 2018, it was identified that Locations 077, 078.1, 085, 086, 087, 088, 089, and 090 were changed from a measurement type of Special Interest to Inner Ring for 2017 and 2018 TLD data (NCR# 02266080). All outer ring TLD locations are used as indicators. A subset of TLD locations within a 7 to 13 mile radius from station center are designated as "special interest." The two "control" locations are greater than 9 miles from station center. These locations were chosen to reduce the probability of influence from Oconee operation on data. The control locations are not used as background subtraction in the TLD analysis. Their purpose is to provide a comparison to indicator locations.

In 2018, 200 total TLDs were analyzed, 192 at indicator locations and 8 at control locations. TLDs are collected and analyzed quarterly. Transit and laboratory background dose is determined and subtracted from gross field readings as required by ANSI N545-1975. Based on Appendix B TLD data, the highest annual total dose was 114 mrem at indicator location 024, 0.81 miles E of station center. Figure 3.8 and Table 3.8-A show TLD inner ring, outer ring, and control location annual averages in mrem per year. Data is provided from 1984 when TLD locations were added and arranged in an inner ring and outer ring configuration. Preoperational data is also provided in the table. As shown in the graph, historical inner and outer ring averages compare similarly, while control data is somewhat higher. This is most likely an artifact of the underlying geologic structures at the control locations. Comparing data from the 2018 Oconee Annual Radiological Effluent Release Report (ARERR), dose to a member of the public resulting from gaseous effluent releases at Oconee is a small fraction of measured TLD dose. Therefore, it can be concluded that gaseous effluents from Oconee had negligible impact on measured TLD values.

Starting in 2014, enhanced analytical methods were implemented. Quarterly and annual baseline dose was determined using appropriate statistical methods considering data from 2000 through 2012. Quarterly and annual dose for 2018 was compared to baseline values to determine if an Investigation Level had been exceeded for evaluation of potential dose to a member of the public. No TLD location exceeded the Quarterly or Annual Investigation Level in 2018 due to plant operations,

therefore no evaluation of dose to a member of the public from direct or scattered radiation was performed. Table 3.8-B summarizes the data.

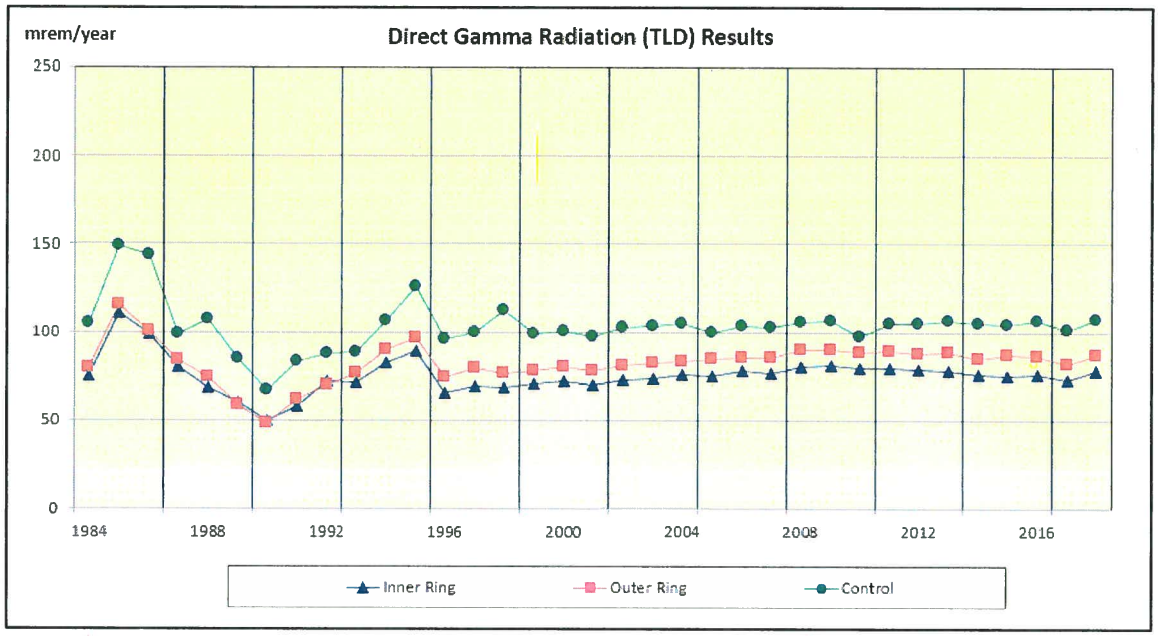
A TLD intercomparison program is conducted as part of the quality assurance program. Results of this program are included in section 5.7.

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 589 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-A Direct Gamma Radiation (TLD) Results[1]

Year	Inner Ring Average (mrem/yr)	Outer Ring Average (mrem/yr)	Control Average (mrem/yr)
Preoperational	1.07E2	1.18E2	1.42E2
1984	7.54E1	7.96E1	1.05E2
1985	1.11E2	1.15E2	1.49E2
1986	9.90E1	1.01E2	1.43E2
1987	8.01E1	8.44E1	9.91E1
1988	6.87E1	7.47E1	1.07E2
1989	6.05E1	5.86E1	8.49E1
1990	4.96E1	4.82E1	6.66E1
1991	5.81E1	6.18E1	8.36E1
1992	7.24E1	6.95E1	8.74E1
1993	7.11E1	7.66E1	8.84E1
1994	8.25E1	9.00E1	1.06E2
1995	8.89E1	9.66E1	1.25E2
1996	6.51E1	7.44E1	9.60E1
1997	6.92E1	7.96E1	9.93E1
1998	6.81E1	7.68E1	1.12E2
1999	7.08E1	7.84E1	9.88E1
2000	7.24E1	8.03E1	1.00E2
2001	6.99E1	7.83E1	9.71E1
2002	7.28E1	8.11E1	1.03E2
2003	7.36E1	8.23E1	1.03E2
2004	7.61E1	8.31E1	1.05E2
2005	7.54E1	8.46E1	9.95E1
2006	7.79E1	8.57E1	1.04E2
2007	7.70E1	8.55E1	1.03E2
2008	8.04E1	9.03E1	1.05E2
2009	8.08E1	8.98E1	1.06E2
2010	7.94E1	8.85E1	9.77E1
2011	7.96E1	8.91E1	1.05E2
2012	7.89E1	8.79E1	1.05E2
2013	7.83E1	8.84E1	1.06E2
2014	7.58E1	8.46E1	1.05E2
2015	7.48E1	8.67E1	1.04E2
2016	7.59E1	8.65E1	1.06E2
2017	7.32E1	8.17E1	1.01E2
2018	7.95E1	8.68E1	1.07E2

(1) In the 2014 AREOR, tabular results were converted from mR/yr to mrem/yr (n * 0.95).

Table 3.8-B Direct Gamma Radiation (TLD) Oconee 2018 Investigation Level

Oconee 2018 MDD_Q: 7	Oconee 2018 MDD_A: 11

	Quarterly (mrem)										Annual(mrem)	
Location	B_Q	M_QQ1	M_QQ2	M_QQ3	M_QQ4	L_QQ1	L_QQ2	L_QQ3	L_QQ4	B_A	M_A*	L_A
20	18.9	21.9	18.3	17.1	19.4	ND	ND	ND	ND	75.7	76.7	ND
21	14.0	15.7	14.5	13.8	16.1	ND	ND	ND	ND	56.9	60.0	ND
22	21.8	24.7	23.4	20.2	23.1	ND	ND	ND	ND	89.7	91.4	ND
23	21.9	23.8	22.6	19.9	20.9	ND	ND	ND	ND	87.8	87.1	ND
24***	27.4	31.0	28.5	26.5	28.0	ND	ND	ND	ND	108.4	114.0	ND
25	17.1	19.3	17.2	15.9	16.7	ND	ND	ND	ND	72.9	69.1	ND
26	16.5	17.6	17.2	16.2	16.2	ND	ND	ND	ND	67.2	67.3	ND
27	19.2	18.8	19.0	17.4	18.3	ND	ND	ND	ND	78.1	73.5	ND
28	17.0	16.2	16.2	16.4	17.8	ND	ND	ND	ND	68.3	66.7	ND
29	15.7	17.6	15.2	14.6	16.8	ND	ND	ND	ND	63.3	64.2	ND
30	17.0	20.2	17.8	17.1	17.5	ND	ND	ND	ND	70.6	72.6	ND
31	16.4	17.6	16.6	15.7	17.5	ND	ND	ND	ND	65.7	67.4	ND
32	22.9	21.5	19.4	17.2	19.9	ND	ND	ND	ND	94.5	77.9	ND
33	19.5	18.1	18.0	15.8	18.5	ND	ND	ND	ND	77.9	70.3	ND
34	21.5	20.6	17.7	17.1	18.7	ND	ND	ND	ND	86.0	74.1	ND
35	22.9	25.2	23.3	21.8	22.9	ND	ND	ND	ND	93.3	93.1	ND
36	26.5	28.1	26.5	23.8	26.0	ND	ND	ND	ND	105.1	104.5	ND
37	20.4	19.9	18.2	15.5	18.1	ND	ND	ND	ND	82.0	71.6	ND
38	21.9	23.4	21.6	19.4	22.0	ND	ND	ND	ND	87.5	86.4	ND
39	24.2	23.8	24.2	22.0	24.7	ND	ND	ND	ND	96.2	94.8	ND
40	23.7	30.1	26.7	23.4	25.7	ND	ND	ND	ND	101.1	105.8	ND
41	17.3	18.2	17.0	16.0	17.0	ND	ND	ND	ND	69.1	68.2	ND
42	25.0	26.7	25.7	24.7	25.4	ND	ND	ND	ND	102.2	102.4	ND
43	23.8	25.4	23.6	21.6	23.8	ND	ND	ND	ND	95.3	94.3	ND
44	18.3	20.7	18.6	18.3	18.6	ND	ND	ND	ND	80.0	76.3	ND
45	17.0	18.1	17.0	16.1	17.5	ND	ND	ND	ND	67.9	68.6	ND
46	21.5	23.7	23.8	22.1	23.2	ND	ND	ND	ND	91.8	92.7	ND
47	22.4	24.1	21.9	21.2	---	ND	ND	ND	ND	91.1	89.7	ND
48	25.3	25.8	25.5	22.2	25.0	ND	ND	ND	ND	101.3	98.5	ND
50	20.7	23.0	21.6	20.4	21.6	ND	ND	ND	ND	82.6	86.5	ND
51	19.0	20.8	17.9	17.6	19.5	ND	ND	ND	ND	76.2	75.7	ND
52	22.9	26.3	25.4	21.2	22.8	ND	ND	ND	ND	94.8	95.7	ND
53	25.1	28.5	23.7	22.8	25.2	ND	ND	ND	ND	102.3	100.1	ND
54	18.5	19.6	18.1	16.9	19.1	ND	ND	ND	ND	76.5	73.7	ND
55	15.5	16.2	15.0	14.3	15.8	ND	ND	ND	ND	65.1	61.3	ND
56	22.8	22.9	23.3	21.5	23.4	ND	ND	ND	ND	91.8	91.0	ND
57	22.4	27.1	24.5	20.1	19.5	ND	ND	ND	ND	93.6	91.2	ND
58	29.3	32.5	31.4	27.2	29.5	ND	ND	ND	ND	119.7	120.7	ND
59	24.1	25.7	23.5	22.3	24.6	ND	ND	ND	ND	98.5	96.0	ND
76	20.8	27.7	25.2	21.4	24.9	ND	ND	ND	ND	89.0	99.2	ND
77**	17.9	20.0	17.2	16.2	18.1	ND	ND	ND	ND	69.6	71.5	ND
78.1**	25.6	28.1	28.9	24.1	25.9	ND	ND	ND	ND	97.8	107.1	ND
81	21.9	26.0	21.8	21.5	23.8	ND	ND	ND	ND	91.1	93.0	ND
85**	18.3	20.1	19.9	18.1	18.9	ND	ND	ND	ND	73.1	77.0	ND
86**	16.3	16.9	17.1	15.7	15.8	ND	ND	ND	ND	63.7	65.5	ND
87**	16.7	18.3	18.1	16.5	17.5	ND	ND	ND	ND	63.9	70.4	ND
88**	20.3	20.9	21.7	19.7	20.7	ND	ND	ND	ND	76.1	82.9	ND
89**	21.6	23.5	23.8	21.4	22.6	ND	ND	ND	ND	82.0	91.3	ND
90**	23.4	25.7	24.3	21.9	23.2	ND	ND	ND	ND	90.7	95.1	ND
92****	---	---	---	---	21.8	---	---	---	---	---	---	---

* Ma determined by normalizing available quarterly data to 4 full quarters

** Test Locations added to ODCM for 2017Q1 (ONS ODCM Revision 58), baseline analysis ongoing (NCR # 02035669)

*** Location 24 re-baseline in progress due to changes in local environment
**** Location 92 was added to the ODCM for 2018Q4 (ONS ODCM Revision 59, baseline analysis ongoing).
‘ --- ‘ indicates no data resulting from missing TLD, erroneous TLD reading, or omitted after investigation [Note]
† Location exceeded investigation level, determined attributable to TLD location changes around/near TLD, not plant operation.

Note: Data may be omitted after investigation considering the following: (1) Other TLD locations’ data from upwind, downwind, and adjacent sectors (2) Review of documentation on location's characteristics, geography, topography, etc. (3) Comparison with other radiological data (i.e. gaseous effluent releases, direct radiation reports, surveys, dose calculations, Area TLDs, etc.).

- MDD_Q = minimum differential dose, quarterly, 3 times 90th percentile s_Q determined from analysis in mrem
- MDD_A = minimum differential dose, annual, 3 times 90th percentile s_A determined from analysis in mrem
- B_Q = Quarterly baseline (mrem)
- M_Q = location’s 91 day standard quarter normalized dose (mrem per standard quarter) averaged between multiple TLDs at each location.
- L_Q = quarterly investigation level dose (mrem)
- B_A = baseline background dose (mrem) (annual)
- M_A = annual monitoring data - Ma determined by normalizing available quarterly data to 4 full quarters
- L_A = annual investigation level dose (mrem)
- ND = not detected

3.9 LAND USE CENSUS

The Land Use Census was conducted during the growing season (5/22 – 5/23/2018) as required by SLC 16.11.6. Table 3.9 summarizes census results. A map indicating identified locations is shown in Figure 3.9. The nearest residence is located in the NNW sector at 1.03 miles, and there were no milk locations identified during the performance of the land use census. No program changes were required based on the results of the census.

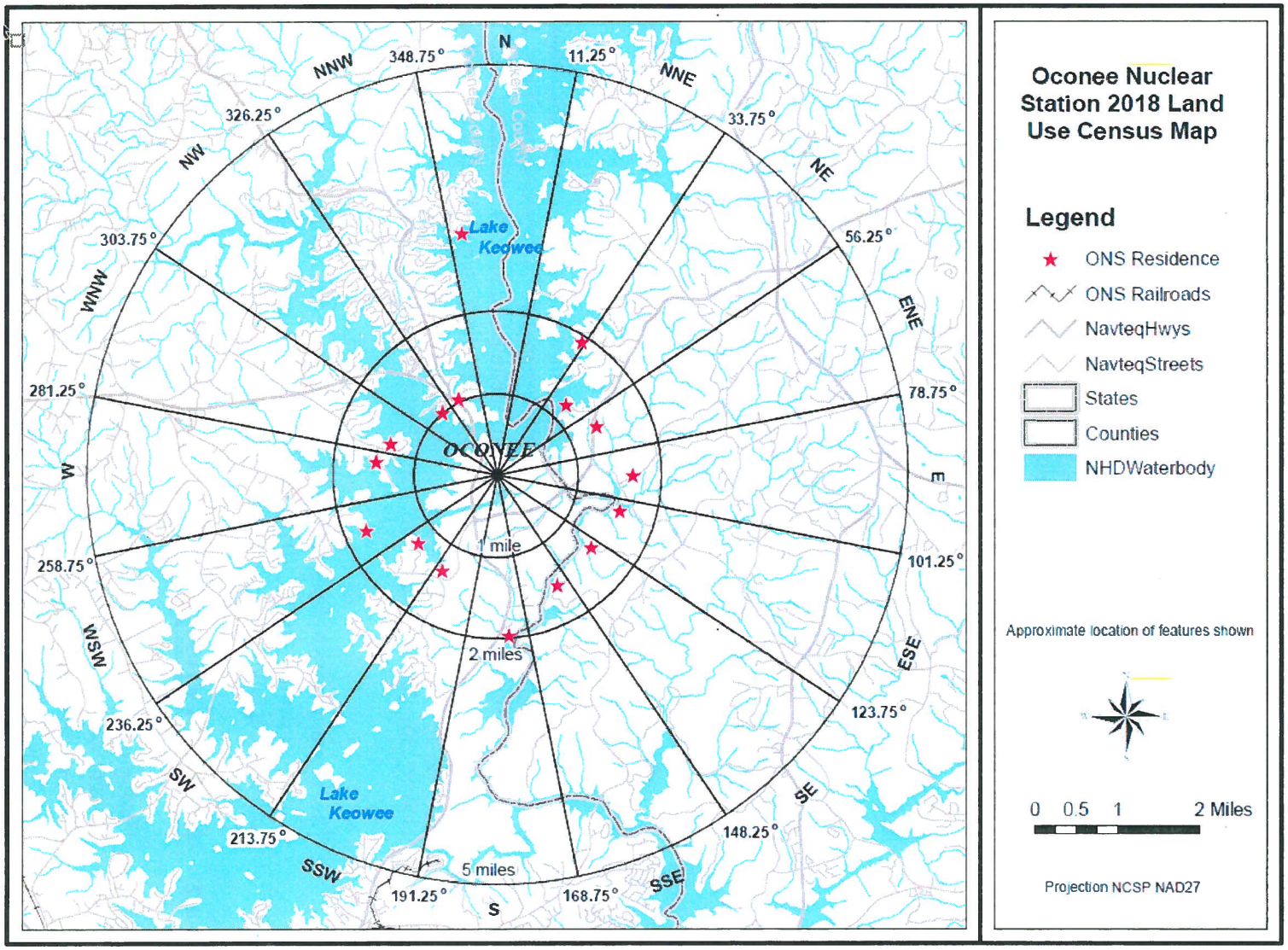
Table 3.9 Oconee 2018 Land Use Census Results*

Nearest Pathways (Miles)

SECTOR	RESIDENCE		MILK ANIMAL	
	2017	2018	2017	2018
North	2.98	2.98	---	---
North-Northeast	1.84	1.84	---	---
Northeast	1.20	1.20	---	---
East-Northeast	1.34	1.34	---	---
East	1.64	1.64	4.66*(1)	---*
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	1.76	1.73*	---	---
West	1.58	1.58	---	---
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
(1) Goat milk used to feed goat kids. Milk not used for human consumption (NCR #02132422).

Figure 3.9


N
NNE
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78.75°
101.25°
123.75°
148.25°
168.75°
191.25°
213.75°
236.25°
258.75°
281.25°
303.75°
326.25°
348.75°
OCONEE
1 mile
2 miles
5 miles
Lake Keowee
Lake Keowee
Oconee Nuclear Station 2018 Land Use Census Map
Legend
ONS Residence
ONS Railroads
NavteqHwys
NavteqStreets
States
Counties
NHDWaterbody
Approximate location of features shown
0 0.5 1 2 Miles
Projection NCSP NAD27

4.0 EVALUATION OF DOSE

4.1 DOSE FROM ENVIRONMENTAL MEASUREMENTS

Annual doses to maximum exposed individuals were estimated based on measured concentrations of radionuclides in 2018 ONS REMP samples. The primary purpose of estimating doses based on sample results is to allow comparison to effluent program dose estimates. Doses based on sample results were conservatively calculated in a manner as equivalent as possible to effluent-based dose estimates.

Doses based on REMP sample results were calculated using the methodology and data presented in NRC Regulatory Guide 1.109. Measured radionuclide concentrations, averaged over the entire year for a specific radionuclide, indicator location, and sample type, were used to calculate REMP-based doses, after subtracting the applicable average background concentration (as measured at the corresponding control location). Regulatory Guide 1.109 consumption rates for the maximum exposed individual were used in the calculations. A dose factor of zero was assumed when the guide listed "NO DATA" as the dose factor for a given radionuclide and organ.

Maximum dose estimates calculated using drinking water, fish, and shoreline sediment results are reported in Table 4.1-A. The individual critical population and pathway dose calculations are contained in Table 4.1-B.

No radionuclides attributable to ONS operations were detected in milk, broadleaf vegetation, airborne radioiodine or airborne particulate samples. Naturally occurring K-40 and Be-7 were detected in some samples but were not included in any REMP-based dose estimates. Dose estimates were not calculated for surface water samples because surface water is not considered a potable drinking water source although surface water tritium concentrations are used in calculating doses from fish. REMP TLD exposure results are discussed in Section 3.8.

The maximum environmental organ dose estimate for any single sample type (excluding TLD results) collected during 2018 was 3.694E-2 mrem to the child, liver, total body, thyroid, kidney, lung, and GI-LLI from the consumption of drinking water.

4.2 ESTIMATED DOSE FROM RELEASES

Throughout the year, dose estimates were calculated based on actual 2018 liquid and gaseous effluent release data. Effluent-based dose estimates were calculated using OpenEMS which employs methodology and data presented in NRC Regulatory Guide 1.109. These doses are shown in Table 4.1-A along with the corresponding REMP-based dose estimates. Summaries of OpenEMS dose calculations are reported in the Annual Radioactive Effluent Release Report.

The effluent-based liquid release doses are summations of the dose contributions of the drinking water, fish, and shoreline pathways. For iodine, particulate, and tritium exposure the effluent-based gaseous release doses are summations of the dose contributors from ground/plane, milk, inhalation and vegetation pathways.

4.3 COMPARISON OF DOSES

The liquid environmental and release data doses given in Table 4.1-A agree reasonably well. The similarity of the doses indicates that the radioactivity levels in the environment do not differ significantly from those expected based on effluent measurements and modeling of the environmental exposure pathways.

There are some differences in how effluent and environmental doses are calculated that affect the comparison. Doses calculated from environmental data are conservative because they are based on a mean that includes only samples with a net positive activity versus a mean that includes all sample results (i.e. zero results are not included in the mean). Also, airborne tritium is not measured in environmental samples but is used to calculate effluent doses.

Additionally, in 2010 Oconee began reporting estimated dose from effluent Carbon 14 (C-14). This change came about with the issuing of Regulatory Guide 1.21, Revision 2, Measuring, Evaluating and Reporting Radioactive Material in Liquid and Gaseous Effluents and Solid Waste. A description of this change is found in the 2010 Annual Radiological Effluent Release Report. C-14 is not easily measured in the environment and therefore, environmental and effluent doses from C-14 cannot be compared directly.

In calculations based on liquid release effluent pathways, fish, drinking water, and shoreline sediment were the predominant dose pathways based on environmental and effluent samples. The maximum total organ dose based on 2018 environmental sample results was 4.14E-02 mrem to the child total body. The maximum total organ dose of 2.07E-1 mrem for liquid effluent-based estimates was to the adult GI-LLI.

The gaseous effluent dose is due to C-14 and tritium in broadleaf vegetation. The maximum total organ dose for gaseous effluent estimates was 3.40E-1 mrem to the child bone, with C-14 being the primary dose contributor. There was no gaseous release pathway media that contained detectable activity.

The doses calculated do not exceed 40CFR190 or 10CFR50 dose commitment limits for members of the public. Doses to members of the public attributable to the operation of ONS are being maintained well within regulatory limits and are described in the Annual Radiological Effluent Release Report (ARERR).

TABLE 4.1-A

OCONEE NUCLEAR STATION
2018 ENVIRONMENTAL AND EFFLUENT DOSE COMPARISON

LIQUID RELEASE PATHWAY

Organ	Environmental or Effluent Data	Critical Age [1]	Critical Pathway [2]	Location	Maximum Dose [3] (mrem)
Skin	Environmental	Teen	Shoreline Sediment	091 (2.09 mi S)	4.41E-04
Skin	Effluent	Teen	N/A	Discharge Pt.	3.94E-04
Bone	Environmental	-	-	-	-
Bone	Effluent	Child	N/A	Discharge Pt.	7.56E-03
Liver	Environmental	Child	Drinking Water	066 (18.9 mi SSE)	4.13E-02
Liver	Effluent	Child	N/A	18.9 mi SSE	1.36E-01
T. Body	Environmental	Child	Drinking Water	066 (18.9 mi SSE)	4.14E-02
T. Body	Effluent	Child	N/A	18.9 mi SSE	1.35E-01
Thyroid	Environmental	Child	Drinking Water	066 (18.9 mi SSE)	4.13E-02
Thyroid	Effluent	Child	N/A	18.9 mi SSE	1.34E-01
Kidney	Environmental	Child	Drinking Water	066 (18.9 mi SSE)	4.13E-02
Kidney	Effluent	Child	N/A	18.9 mi SSE	1.35E-01
Lung	Environmental	Child	Drinking Water	066 (18.9 mi SSE)	4.13E-02
Lung	Effluent	Child	N/A	18.9 mi SSE	1.35E-01
GI-LLI	Environmental	Child	Drinking Water	066 (18.9 mi SSE)	4.13E-02
GI-LLI	Effluent	Child	N/A	18.9 mi SSE	2.07E-01

(1) Critical Age is the highest total dose (all pathways) to an age group.

(2) Critial Pathway is the highest individual dose within the identified Critical Age group. Not available at time of report compilation.

(3) Maximum dose is a summation of the fish, drinking water and shoreline sediment pathways.

GASEOUS RELEASE PATHWAY

IODINE, PARTICULATE, and TRITIUM

Organ	Environmental or Effluent Data	Critical Age [1]	Critical Pathway [2]	Location	Maximum Dose [3] (mrem)
Skin	Environmental	-	-	-	-
Skin	Effluent	Teen	N/A	1.0 mi. NE	1.44E-07
Bone	Environmental	-	-	-	-
Bone	Effluent	Child	N/A	1.0 mi. SW	3.40E-01
Liver	Environmental	-	-	-	-
Liver	Effluent	Child	N/A	1.0 mi. SW	1.19E-01
T. Body	Environmental	-	-	-	-
T. Body	Effluent	Child	N/A	1.0 mi. SW	1.19E-01
Thyroid	Environmental	-	-	-	-
Thyroid	Effluent	Child	N/A	1.0 mi. SW	1.19E-01
Kidney	Environmental	-	-	-	-
Kidney	Effluent	Child	N/A	1.0 mi. SW	1.19E-01
Lung	Environmental	-	-	-	-
Lung	Effluent	Child	N/A	1.0 mi. SW	1.19E-01
GI-LLI	Environmental	-	-	-	-
GI-LLI	Effluent	Child	N/A	1.0 mi. SW	1.19E-01

(1) Critical Age is the highest total dose (all pathways) to an age group.

(2) Critial Pathway is the highest individual dose within the identified Critical Age group. Not available at time of report compilation.

(3) Maximum dose is a summation of the ground/plane, inhalation, milk and vegetation pathways.

TABLE 4.1-B

Maximum Individual Dose for 2018 based on Environmental Measurements (mrem) for Oconee Nuclear Station

Age	Sample Medium	Bone	Liver	T. Body	Thyroid	Kidney	Lung	GI-LLI	Skin
Infant	Airborne	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Drinking Water	0.00E+00	3.62E-02	3.62E-02	3.62E-02	3.62E-02	3.62E-02	3.62E-02	0.00E+00
	Milk	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	TOTAL	0.00E+00	3.62E-02	3.62E-02	3.62E-02	3.62E-02	3.62E-02	3.62E-02	0.00E+00
Child	Airborne	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Drinking Water	0.00E+00	3.69E-02	3.69E-02	3.69E-02	3.69E-02	3.69E-02	3.69E-02	0.00E+00
	Milk	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Broadleaf Vegetation	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Fish	0.00E+00	4.44E-03	4.44E-03	4.44E-03	4.44E-03	4.44E-03	4.44E-03	0.00E+00
	Shoreline Sediment	0.00E+00	0.00E+00	7.90E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.22E-05
	TOTAL	0.00E+00	4.13E-02	4.14E-02	4.13E-02	4.13E-02	4.13E-02	4.13E-02	9.22E-05
Teen	Airborne	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Drinking Water	0.00E+00	1.92E-02	1.92E-02	1.92E-02	1.92E-02	1.92E-02	1.92E-02	0.00E+00
	Milk	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Broadleaf Vegetation	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Fish	0.00E+00	5.37E-03	5.37E-03	5.37E-03	5.37E-03	5.37E-03	5.37E-03	0.00E+00
	Shoreline Sediment	0.00E+00	0.00E+00	3.78E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.41E-04
	TOTAL	0.00E+00	2.46E-02	2.49E-02	2.46E-02	2.46E-02	2.46E-02	2.46E-02	4.41E-04
Adult	Airborne	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Drinking Water	0.00E+00	2.73E-02	2.73E-02	2.73E-02	2.73E-02	2.73E-02	2.73E-02	0.00E+00
	Milk	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Broadleaf Vegetation	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Fish	0.00E+00	6.99E-03	6.99E-03	6.99E-03	6.99E-03	6.99E-03	6.99E-03	0.00E+00
	Shoreline Sediment	0.00E+00	0.00E+00	6.77E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.90E-05
	TOTAL	0.00E+00	3.43E-02	3.44E-02	3.43E-02	3.43E-02	3.43E-02	3.43E-02	7.90E-05

Note: Dose tables are provided for sample media displaying positive nuclide occurrence.

Oconee Nuclear Station
Dose from Drinking Water Pathway for 2018 Data
Maximum Exposed Infant

Infant Dose from Drinking Water Pathway (mrem) = Usage (l) x Dose Factor (mrem/pCi ingested) x Concentration (pCi/l)

Usage (intake in one year) = 330 l

	Ingestion Dose Factor							Highest Annual Net Mean Concentration		Dose (mrem)						
Radionuclide	Bone	Liver	T. Body	Thyroid	Kidney	Lung	GI-LLI	Indicator Location	Water (pCi/l)	Bone	Liver	T. Body	Thyroid	Kidney	Lung	GI-LLI
Mn-54	NO DATA	1.99E-05	4.51E-06	NO DATA	4.41E-06	NO DATA	7.31E-06	ALL	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Co-58	NO DATA	3.60E-06	8.98E-06	NO DATA	NO DATA	NO DATA	8.97E-06	ALL	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fe-59	3.08E-05	5.38E-05	2.12E-05	NO DATA	NO DATA	1.59E-05	2.57E-05	ALL	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Co-60	NO DATA	1.08E-05	2.55E-05	NO DATA	NO DATA	NO DATA	2.57E-05	ALL	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Zn-65	1.84E-05	6.31E-05	2.91E-05	NO DATA	3.06E-05	NO DATA	5.33E-05	ALL	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Nb-95	4.20E-08	1.73E-08	1.00E-08	NO DATA	1.24E-08	NO DATA	1.46E-05	ALL	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Zr-95	2.06E-07	5.02E-08	3.56E-08	NO DATA	5.41E-08	NO DATA	2.50E-05	ALL	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
I-131	3.59E-05	4.23E-05	1.86E-05	1.39E-02	4.94E-05	NO DATA	1.51E-06	ALL	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cs-134	3.77E-04	7.03E-04	7.10E-05	NO DATA	1.81E-04	7.42E-05	1.91E-06	ALL	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cs-137	5.22E-04	6.11E-04	4.33E-05	NO DATA	1.64E-04	6.64E-05	1.91E-06	ALL	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
BaLa-140	1.71E-04	1.71E-07	8.81E-06	NO DATA	4.06E-08	1.05E-07	4.20E-05	ALL	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
H-3	NO DATA	3.08E-07	3.08E-07	3.08E-07	3.08E-07	3.08E-07	3.08E-07	066	356	0.00E+00	3.62E-02	3.62E-02	3.62E-02	3.62E-02	3.62E-02	3.62E-02
						Dose Commitment (mrem) =				0.00E+00	3.62E-02	3.62E-02	3.62E-02	3.62E-02	3.62E-02	3.62E-02

Oconee Nuclear Station
Dose from Drinking Water Pathway for 2018 Data
Maximum Exposed Child

Child Dose from Drinking Water Pathway (mrem) = Usage (l) x Dose Factor (mrem/pCi ingested) x Concentration (pCi/l)

Usage (intake in one year) = 510 l

	Ingestion Dose Factor							Highest Annual Net Mean Concentration		Dose (mrem)						
Radionuclide	Bone	Liver	T. Body	Thyroid	Kidney	Lung	GI-LLI	Indicator Location	Water (pCi/l)	Bone	Liver	T. Body	Thyroid	Kidney	Lung	GI-LLI
Mn-54	NO DATA	1.07E-05	2.85E-06	NO DATA	3.00E-06	NO DATA	8.98E-06	ALL	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Co-58	NO DATA	1.80E-06	5.51E-06	NO DATA	NO DATA	NO DATA	1.05E-05	ALL	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fe-59	1.65E-05	2.67E-05	1.33E-05	NO DATA	NO DATA	7.74E-06	2.78E-05	ALL	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
C0-60	NO DATA	5.29E-06	1.56E-05	NO DATA	NO DATA	NO DATA	2.93E-05	ALL	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Zn-65	1.37E-05	3.65E-05	2.27E-05	NO DATA	2.30E-05	NO DATA	6.41E-06	ALL	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Nb-95	2.25E-08	8.76E-09	6.26E-09	NO DATA	8.23E-09	NO DATA	1.62E-05	ALL	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Zr-95	1.16E-07	2.55E-08	2.27E-08	NO DATA	3.65E-08	NO DATA	2.66E-05	ALL	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
I-131	1.72E-05	1.73E-05	9.83E-06	5.72E-03	2.84E-05	NO DATA	1.54E-06	ALL	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cs-134	2.34E-04	3.84E-04	8.10E-05	NO DATA	1.19E-04	4.27E-05	2.07E-06	ALL	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cs-137	3.27E-04	3.13E-04	4.62E-05	NO DATA	1.02E-04	3.67E-05	1.96E-06	ALL	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
BaLa-140	8.31E-05	7.28E-08	4.85E-06	NO DATA	2.37E-08	4.34E-08	4.21E-05	ALL	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
H-3	NO DATA	2.03E-07	2.03E-07	2.03E-07	2.03E-07	2.03E-07	2.03E-07	066	356	0.00E+00	3.69E-02	3.69E-02	3.69E-02	3.69E-02	3.69E-02	3.69E-02
						Dose Commitment (mrem) =				0.00E+00	3.69E-02	3.69E-02	3.69E-02	3.69E-02	3.69E-02	3.69E-02

Oconee Nuclear Station
Dose from Fish Pathway for 2018 Data
Maximum Exposed Child

Child Dose from Fish Pathway (mrem) = Usage (kg) x Dose Factor (mrem/pCi ingested) x Concentration (pCi/kg)

H-3 Concentration in Fish = Surface Water pCi/l x Bioaccumulation Factor 0.9 pCi/kg per pCi/l = 3520 pCi/l x 0.9 =3168 pCi/kg

Usage (intake in one year) = 6.9 kg

				Ingestion Dose Factor				Highest Annual Net Mean Concentration		Dose (mrem)						
Radionuclide	Bone	Liver	T. Body	Thyroid	Kidney	Lung	GI-LLI	Indicator Location	Fish (pCi/kg)	Bone	Liver	T. Body	Thyroid	Kidney	Lung	GI-LLI
Mn-54	NO DATA	1.07E-05	2.85E-06	NO DATA	3.00E-06	NO DATA	8.98E-06	ALL	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Co-58	NO DATA	1.80E-06	5.51E-06	NO DATA	NO DATA	NO DATA	1.05E-05	ALL	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fe-59	1.65E-05	2.67E-05	1.33E-05	NO DATA	NO DATA	7.74E-06	2.78E-05	ALL	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
C0-60	NO DATA	5.29E-06	1.56E-05	NO DATA	NO DATA	NO DATA	2.93E-05	ALL	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Zn-65	1.37E-05	3.65E-05	2.27E-05	NO DATA	2.30E-05	NO DATA	6.41E-06	ALL	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cs-134	2.34E-04	3.84E-04	8.10E-05	NO DATA	1.19E-04	4.27E-05	2.07E-06	ALL	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cs-137	3.27E-04	3.13E-04	4.62E-05	NO DATA	1.02E-04	3.67E-05	1.96E-06	ALL	0.0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
H-3	NO DATA	2.03E-07	2.03E-07	2.03E-07	2.03E-07	2.03E-07	2.03E-07	063	3168	0.00E+00	4.44E-03	4.44E-03	4.44E-03	4.44E-03	4.44E-03	4.44E-03
						Dose Commitment (mrem) =				0.00E+00	4.44E-03	4.44E-03	4.44E-03	4.44E-03	4.44E-03	4.44E-03

Oconee Nuclear Station
Dose from Shoreline Sediment Pathway for 2018 Data
Maximum Exposed Child

Shoreline Recreation = **14** **hr (in one year)**
Shore Width Factor = **0.2**
Sediment Surface Mass = **40** **kg/m^2**

Child Dose from Shoreline Sediment Pathway (mrem) = Shoreline Recreation (hr) x External Dose Factor (mrem/hr per pCi/m^2) x Shore Width Factor x Sediment Surface Mass (kg/m^2) x Sediment Concentration (pCi/kg)

External Dose Factor Standing on Contaminated Ground			Highest Annual Net Mean Concentration		Dose	
	(mrem/hr per pCi/m^2)		Indicator	Sediment	(mrem)	
Radionuclide	T. Body	Skin	Location	(pCi/kg)	T. Body	Skin
Cs-134	1.20E-08	1.40E-08	ALL	0.00	0.00E+00	0.00E+00
Cs-137	4.20E-09	4.90E-09	091	168	7.90E-05	9.22E-05
		Dose Commitment (mrem) =			7.90E-05	9.22E-05

Oconee Nuclear Station
Dose from Drinking Water Pathway for 2018 Data
Maximum Exposed Teen

Teen Dose from Drinking Water Pathway (mrem) = Usage (l) x Dose Factor (mrem/pCi ingested) x Concentration (pCi/l)

Usage (intake in one year)= 510 l

				Ingestion Dose Factor				Highest Annual Net Mean Concentration		Dose (mrem)						
Radionuclide	Bone	Liver	T. Body	Thyroid	Kidney	Lung	GI-LLI	Indicator Location	Water (pCi/l)	Bone	Liver	T. Body	Thyroid	Kidney	Lung	GI-LLI
Mn-54	NO DATA	5.90E-06	1.17E-06	NO DATA	1.76E-06	NO DATA	1.21E-05	ALL	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Co-58	NO DATA	9.72E-07	2.24E-06	NO DATA	NO DATA	NO DATA	1.34E-05	ALL	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fe-59	5.87E-06	1.37E-05	5.29E-06	NO DATA	NO DATA	4.32E-06	3.24E-05	ALL	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Co-60	NO DATA	2.81E-06	6.33E-06	NO DATA	NO DATA	NO DATA	3.66E-05	ALL	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Zn-65	5.76E-06	2.00E-05	9.33E-06	NO DATA	1.28E-05	NO DATA	8.47E-06	ALL	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Nb-95	8.22E-09	4.56E-09	2.51E-09	NO DATA	4.42E-09	NO DATA	1.95E-05	ALL	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Zr-95	4.12E-08	1.30E-08	8.94E-09	NO DATA	1.91E-08	NO DATA	3.00E-05	ALL	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
I-131	5.85E-06	8.19E-06	4.40E-06	2.39E-03	1.41E-05	NO DATA	1.62E-06	ALL	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cs-134	8.37E-05	1.97E-04	9.14E-05	NO DATA	6.26E-05	2.39E-05	2.45E-06	ALL	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cs-137	1.12E-04	1.49E-04	5.19E-05	NO DATA	5.07E-05	1.97E-05	2.12E-06	ALL	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
BaLa-140	2.84E-05	3.48E-08	1.83E-06	NO DATA	1.18E-08	2.34E-08	4.38E-05	ALL	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
H-3	NO DATA	1.06E-07	1.06E-07	1.06E-07	1.06E-07	1.06E-07	1.06E-07	066	356	0.00E+00	1.92E-02	1.92E-02	1.92E-02	1.92E-02	1.92E-02	1.92E-02
						Dose Commitment (mrem)=				0.00E+00	1.92E-02	1.92E-02	1.92E-02	1.92E-02	1.92E-02	1.92E-02

Oconee Nuclear Station
Dose from Fish Pathway for 2018 Data
Maximum Exposed Teen

Teen Dose from Fish Pathway (mrem) = Usage (kg) x Dose Factor (mrem/pCi ingested) x Concentration (pCi/kg)

H-3 Concentration in Fish = Surface Water pCi/l x Bioaccumulation Factor 0.9 pCi/kg per pCi/l = 3520 pCi/l x 0.9 = 3168 pCi/kg

Usage (intake in one year) = 16 kg

	Ingestion Dose Factor							Highest Annual Net Mean Concentration		Dose (mrem)						
Radionuclide	**Bone**	**Liver**	**T. Body**	**Thyroid**	**Kidney**	**Lung**	**GI-LLI**	**Location**	**(pCi/kg)**	**Bone**	**Liver**	**T. Body**	**Thyroid**	**Kidney**	**Lung**	**GI-LLI**
Mn-54	NO DATA	5.90E-06	1.17E-06	NO DATA	1.76E-06	NO DATA	1.21E-05	ALL	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Co-58	NO DATA	9.72E-07	2.24E-06	NO DATA	NO DATA	NO DATA	1.34E-05	ALL	0.0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fe-59	5.87E-06	1.37E-05	5.29E-06	NO DATA	NO DATA	4.32E-06	3.24E-05	ALL	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Co-60	NO DATA	2.81E-06	6.33E-06	NO DATA	NO DATA	NO DATA	3.66E-05	ALL	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Zn-65	5.76E-06	2.00E-05	9.33E-06	NO DATA	1.28E-05	NO DATA	8.47E-06	ALL	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cs-134	8.37E-05	1.97E-04	9.14E-05	NO DATA	6.26E-05	2.39E-05	2.45E-06	ALL	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cs-137	1.12E-04	1.49E-04	5.19E-05	NO DATA	5.07E-05	1.97E-05	2.12E-06	ALL	0.0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
H-3	NO DATA	1.06E-07	1.06E-07	1.06E-07	1.06E-07	1.06E-07	1.06E-07	063	3168	0.00E+00	5.37E-03	5.37E-03	5.37E-03	5.37E-03	5.37E-03	5.37E-03
						Dose Commitment (mrem) =				0.00E+00	5.37E-03	5.37E-03	5.37E-03	5.37E-03	5.37E-03	5.37E-03

Oconee Nuclear Station
Dose from Shoreline Sediment Pathway for 2018 Data
Maximum Exposed Teen

Shoreline Recreation = **67** **hr (in one year)**
Shore Width Factor = **0.2**
Sediment Surface Mass = **40** **kg/m^2**

Teen Dose from Shoreline Sediment Pathway (mrem) = Shoreline Recreation (hr) x External Dose Factor (mrem/hr per pCi/m^2) x Shore Width Factor x Sediment Surface Mass (kg/m^2) x Sediment Concentration (pCi/kg)

	External Dose Factor Standing on Contaminated Ground ($mrem/hr$ per pCi/m^2)		Highest Annual Net Mean Concentration		Dose ($mrem$)	
Radionuclide	T. Body	Skin	Indicator Location	Sediment (pCi/kg)	T. Body	Skin
Cs-134	1.20E-08	1.40E-08	ALL	0.00	0.00E+00	0.00E+00
Cs-137	4.20E-09	4.90E-09	091	168	3.78E-04	4.41E-04
Dose Commitment (mrem) =					3.78E-04	4.41E-04

Oconee Nuclear Station
Dose from Drinking Water Pathway for 2018 Data
Maximum Exposed Adult

Adult Dose from Drinking Water Pathway (mrem) = Usage (l) x Dose Factor (mrem/pCi ingested) x Concentration (pCi/l)

Usage (intake in one year) = 730 l

	Ingestion Dose Factor							Highest Annual Net Mean Concentration		Dose (mrem)						
Radionuclide	Bone	Liver	T. Body	Thyroid	Kidney	Lung	GI-LLI	Indicator Location	Water (pCi/l)	Bone	Liver	T. Body	Thyroid	Kidney	Lung	GI-LLI
Mn-54	NO DATA	4.57E-06	8.72E-07	NO DATA	1.36E-06	NO DATA	1.40E-05	ALL	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Co-58	NO DATA	7.45E-07	1.67E-06	NO DATA	NO DATA	NO DATA	1.51E-05	ALL	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fe-59	4.34E-06	1.02E-05	3.91E-06	NO DATA	NO DATA	2.85E-06	3.40E-05	ALL	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Co-60	NO DATA	2.14E-06	4.72E-06	NO DATA	NO DATA	NO DATA	4.02E-05	ALL	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Zn-65	4.84E-06	1.54E-05	6.96E-06	NO DATA	1.03E-05	NO DATA	9.70E-06	ALL	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Nb-95	6.22E-09	3.46E-09	1.86E-09	NO DATA	3.42E-09	NO DATA	2.10E-05	ALL	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Zr-95	3.04E-08	9.75E-09	6.60E-09	NO DATA	1.53E-08	NO DATA	3.09E-05	ALL	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
I-131	4.16E-06	5.95E-06	3.41E-06	1.95E-03	1.02E-05	NO DATA	1.57E-06	ALL	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cs-134	6.22E-05	1.48E-04	1.21E-04	NO DATA	4.79E-05	1.59E-05	2.59E-06	ALL	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cs-137	7.97E-05	1.09E-04	7.14E-05	NO DATA	3.70E-05	1.23E-05	2.11E-06	ALL	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
BaLa-140	2.03E-05	2.55E-08	1.33E-06	NO DATA	8.67E-09	1.46E-08	4.18E-05	ALL	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
H-3	NO DATA	1.05E-07	1.05E-07	1.05E-07	1.05E-07	1.05E-07	1.05E-07	066	356	0.00E+00	2.73E-02	2.73E-02	2.73E-02	2.73E-02	2.73E-02	2.73E-02
						Dose Commitment (mrem) =				0.00E+00	2.73E-02	2.73E-02	2.73E-02	2.73E-02	2.73E-02	2.73E-02

Oconee Nuclear Station
Dose from Fish Pathway for 2018 Data
Maximum Exposed Adult

Adult Dose from Fish Pathway (mrem) = Usage (kg) x Dose Factor (mrem/pCi ingested) x Concentration (pCi/kg)

H-3 Concentration in Fish = Surface Water pCi/l x Bioaccumulation Factor 0.9 pCi/kg per pCi/l = 3520 pCi/l x 0.9 = 3168 pCi/kg

Usage (intake in one year) = 21 kg

	Ingestion Dose Factor							Highest Annual Net Mean Concentration		Dose (mrem)						
Radionuclide	**Bone**	**Liver**	**T. Body**	**Thyroid**	**Kidney**	**Lung**	**GI-LLI**	**Location**	**(pCi/kg)**	**Bone**	**Liver**	**T. Body**	**Thyroid**	**Kidney**	**Lung**	**GI-LLI**
Mn-54	NO DATA	4.57E-06	8.72E-07	NO DATA	1.36E-06	NO DATA	1.40E-05	ALL	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Co-58	NO DATA	7.45E-07	1.67E-06	NO DATA	NO DATA	NO DATA	1.51E-05	ALL	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fe-59	4.34E-06	1.02E-05	3.91E-06	NO DATA	NO DATA	2.85E-06	3.40E-05	ALL	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Co-60	NO DATA	2.14E-06	4.72E-06	NO DATA	NO DATA	NO DATA	4.02E-05	ALL	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Zn-65	4.84E-06	1.54E-05	6.96E-06	NO DATA	1.03E-05	NO DATA	9.70E-06	ALL	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cs-134	6.22E-05	1.48E-04	1.21E-04	NO DATA	4.79E-05	1.59E-05	2.59E-06	ALL	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cs-137	7.97E-05	1.09E-04	7.14E-05	NO DATA	3.70E-05	1.23E-05	2.11E-06	ALL	0.0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
H-3	NO DATA	1.05E-07	1.05E-07	1.05E-07	1.05E-07	1.05E-07	1.05E-07	063	3168	0.00E+00	6.99E-03	6.99E-03	6.99E-03	6.99E-03	6.99E-03	6.99E-03
						Dose Commitment (mrem) =				0.00E+00	6.99E-03	6.99E-03	6.99E-03	6.99E-03	6.99E-03	6.99E-03

Oconee Nuclear Station
Dose from Shoreline Sediment Pathway for 2018 Data
Maximum Exposed Adult

Shoreline Recreation = 12 hr (in one year)
Shore Width Factor = 0.2
Sediment Surface Mass = 40 kg/m^2

Adult Dose from Shoreline Sediment Pathway (mrem) = Shoreline Recreation (hr) x External Dose Factor (mrem/hr per pCi/m^2) x Shore Width Factor x Sediment Surface Mass (kg/m^2) x Sediment Concentration (pCi/kg)

External Dose Factor Standing on Contaminated Ground			Highest Annual Net Mean Concentration		Dose (mrem)	
	(mrem/hr per pCi/m^2)		Indicator	Sediment		
Radionuclide	T. Body	Skin	Location	(pCi/kg)	T. Body	Skin
Cs-134	1.20E-08	1.40E-08	ALL	0.00	0.00E+00	0.00E+00
Cs-137	4.20E-09	4.90E-09	091	168	6.77E-05	7.90E-05
Dose Commitment (mrem) =					6.77E-05	7.90E-05

5.0 QUALITY ASSURANCE

5.1 SAMPLE COLLECTION

EnRad Laboratories and the Environmental Service performed the environmental sample collections as specified by approved sample collection procedures.

5.2 SAMPLE ANALYSIS

EnRad Laboratories performed the environmental sample analyses as specified by approved analysis procedures. EnRad Laboratories is located in Huntersville, North Carolina, at Duke Energy's Environmental Center. During 2018, a vendor laboratory, General Engineering Laboratory, LLC (GEL), performed some environmental sample analyses as specified by approved analysis procedures.

5.3 DOSIMETRY ANALYSIS

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

5.4 LABORATORY EQUIPMENT QUALITY ASSURANCE

5.4.1 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.

5.4.2 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.

5.4.3 BATCH PROCESSING

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

5.5 DUKE ENERGY INTERLABORATORY COMPARISON PROGRAM

In 2018 Duke Energy Environmental Laboratory (EnRad) participated in an interlaboratory program to satisfy Radiological Environmental Monitoring Program requirements in Duke Energy nuclear plant Offsite Dose Calculation Manuals and Selected Licensee Commitments Manuals, as applicable.

EnRad Laboratory participated in an interlaboratory program with Eckert & Ziegler Analytics (EZA) in 2018. EZA results were evaluated against the NRC Inspection Manual Procedure 84750 (IP 84750) acceptance criteria stated in EnRad Procedure 515, Cross Check Program Administration. All regulatory requirements continue to be met by the EZA Cross Check Program.

Low-level Iodine-131 analysis of drinking water was not required during 2018 since the dose calculated for the consumption of the water was not greater than 1 mrem per year and there were no abnormal releases exceeding 1 pCi/liter I-131 in 2018 in the ONS program. This dose was calculated monthly during 2018 to ensure that low-level Iodine-131 analysis of drinking water samples was not required.

5.5.1 ECKERT & ZIEGLER ANALYTICS CROSS CHECK PROGRAM

EZA mixed gamma in liquid, mixed gamma in soil, low-level I-131 in liquid, mixed gamma air filter composites, I-131 air cartridges, strontium in water, gross alpha and beta in water, gross alpha and 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 2018 is documented in Table 5.0-A.

Interlaboratory cross check samples from EZA were received and analyzed in three of the four quarters of 2018. Table 5.0-A lists the performance for specific samples. Forty-six nuclide results were reported to EZA of which forty-six (100 %) met the acceptance criteria based on IP 84750.

5.6 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.

5.7 TLD INTERCOMPARISON PROGRAM

5.7.1 NUCLEAR TECHNOLOGY SERVICES INTERCOMPARISON PROGRAM

Radiation Dosimetry and Records participates in a quarterly TLD intercomparison program administered by Nuclear Technology Services, Inc. of Roswell, GA. Nuclear Technology Services irradiates environmental dosimeters quarterly and sends them to the Radiation Dosimetry and Records group for analysis of the

unknown estimated delivered exposure. A summary of the 2018 Nuclear Technology Services Intercomparison Report is documented in Table 5.0-B.

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

5.7.2 INTERNAL CROSS CHECK (DUKE ENERGY)

Radiation Dosimetry and Records participates in a quarterly TLD internal comparison program administered internally by the Dosimetry Lab. The Dosimetry Lab Staff irradiates environmental dosimeters quarterly and submits them for analysis of the unknown estimated delivered exposure. A summary of the 2018 Internal Cross Check (Duke Energy) Program is documented in Table 5.0-B.

5.8 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 2018. A summary of the GEL quality assurance program results for the sample media types sent to GEL during 2018 is documented in Table 5.0-C. Table 5.0-C may not be applicable to all plants or stations.

TABLE 5.0-A

ECKERT & ZIEGLER ANALYTICS

CROSS CHECK PROGRAM

2018 Cross Check Results for EnRad Laboratories

Interlaboratory cross check samples from EZA were received and analyzed in three of the four quarters of 2018. 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 5.0-A lists the performance for specific samples. Forty-six nuclide results were reported to EZA of which forty-six (100 %) met the acceptance criteria based on IP 84750.

Sample	Sample ID	Nuclide	Quarter	Units	EnRad Value	EZA Value	EnRad/EZA Ratio	Evaluation
Beta Filter in Planchet	E12096	Cs-137	1	pCi	212	207	1.02	Agreement
	E12180	Cs-137	2	pCi	202	210	0.96	Agreement
I-131 in Charcoal Cartridge	E12095	I-131	1	pCi	99.2	95.3	1.04	Agreement
	E12246	I-131	3	pCi	82.0	81.6	1.00	Agreement
Gamma in Composite Filter	E12094	Ce-141	1	pCi	83.8	82.0	1.02	Agreement
		Co-58	1	pCi	124	121	1.02	Agreement
		Co-60	1	pCi	197	199	0.99	Agreement
		Cr-51	1	pCi	349	347	1.01	Agreement
		Cs-134	1	pCi	180	191	0.94	Agreement
		Cs-137	1	pCi	192	183	1.05	Agreement
		Fe-59	1	pCi	160	148	1.08	Agreement
		Mn-54	1	pCi	138	140	0.99	Agreement
		Zn-65	1	pCi	283	260	1.09	Agreement
Gamma in Simulated Soil	E12249	Ce-141	3	pCi/g	0.217	0.221	0.98	Agreement
		Co-58	3	pCi/g	0.239	0.248	0.96	Agreement
		Co-60	3	pCi/g	0.317	0.328	0.97	Agreement
		Cr-51	3	pCi/g	0.407	0.457	0.89	Agreement
		Cs-134	3	pCi/g	0.207	0.212	0.98	Agreement
		Cs-137	3	pCi/g	0.311	0.330	0.94	Agreement
		Fe-59	3	pCi/g	0.196	0.206	0.95	Agreement
		Mn-54	3	pCi/g	0.309	0.289	1.07	Agreement
		Zn-65	3	pCi/g	0.362	0.347	1.04	Agreement

TABLE 5.0-A (Cont.)

Sample	Sample ID	Nuclide	Quarter	Units	EnRad Value	EZA Value	EnRad/EZA Ratio	Evaluation
Gamma in Water	E12250	Ce-141	3	pCi/L	146	137	1.07	Agreement
		Co-58	3	pCi/L	164	153	1.07	Agreement
		Co-60	3	pCi/L	215	202	1.06	Agreement
		Cr-51	3	pCi/L	307	282	1.09	Agreement
		Cs-134	3	pCi/L	127	131	0.97	Agreement
		Cs-137	3	pCi/L	169	157	1.07	Agreement
		Fe-59	3	pCi/L	138	127	1.08	Agreement
		I-131	3	pCi/L	64.7	62.5	1.04	Agreement
		Mn-54	3	pCi/L	193	178	1.08	Agreement
		Zn-65	3	pCi/L	240	214	1.12	Agreement
Gamma in Milk	E12097	Ce-141	1	pCi/L	79.4	77.0	1.03	Agreement
		Co-58	1	pCi/L	116	114	1.02	Agreement
		Co-60	1	pCi/L	192	187	1.03	Agreement
		Cr-51	1	pCi/L	335	326	1.03	Agreement
		Cs-134	1	pCi/L	174	180	0.97	Agreement
		Cs-137	1	pCi/L	183	172	1.06	Agreement
		Fe-59	1	pCi/L	151	139	1.09	Agreement
		Mn-54	1	pCi/L	141	131	1.07	Agreement
		Zn-65	1	pCi/L	266	244	1.09	Agreement
LLI-131 in Milk	E12097	I-131	1	pCi/L	101	108	0.93	Agreement
Gross Beta in Water	E12178	Cs-137	2	pCi/L	224	226	0.99	Agreement
	E12248	Cs-137	3	pCi/L	174	199	0.88	Agreement
Tritium in Water	E12179	H-3	2	pCi/L	11300	11000	1.02	Agreement
	E12247	H-3	3	pCi/L	13100	12900	1.02	Agreement

TABLE 5.0-B

2018 ENVIRONMENTAL DOSIMETER

CROSS-CHECK RESULTS

Nuclear Technology Services

Radiation Dosimetry and Records participates in a quarterly TLD intercomparison program administered by Nuclear Technology Services, Inc. of Roswell, GA. Nuclear Techno1ogy Services irradiates environmental dosimeters quarterly and sends them to Radiation Dosimetry and Records group for analysis of the unknown estimated delivered exposure. The individual measurements were evaluated and results falling outside the acceptable ratio criteria had an evaluation performed to identify any recommended remedial actions and to reduce anomalous errors.

1st Quarter 2018

TLD Number	Reported (mR)	Delivered (mR)	Bias (% diff)	Pass/Fail Criteria	Pass/Fail
103109	84.34	76.32	10.51	<+/-15%	Pass
103168	83.20	76.32	9.01	<+/-15%	Pass
102842	79.60	76.32	4.30	<+/-15%	Pass
102197	79.34	76.32	3.96	<+/-15%	Pass
102240	79.98	76.32	4.80	<+/-15%	Pass
		Average Bias (B)	6.51		
		Standard Deviation (S)	3.03		
		Measure Performance |B|+S	9.54	<15%	Pass

2nd Quarter 2018

TLD Number	Reported (mR)	Delivered (mR)	Bias (% diff)	Pass/Fail Criteria	Pass/Fail
100476	57.72	60.80	-5.07	<+/-15%	Pass
101207	59.63	60.80	-1.92	<+/-15%	Pass
100628	58.40	60.80	-3.95	<+/-15%	Pass
100232	54.45	60.80	-10.44	<+/-15%	Pass
103236	58.36	60.80	-4.01	<+/-15%	Pass
		Average Bias (B)	-5.08		
		Standard Deviation (S)	3.21		
		Measure Performance |B|+S	8.29	<15%	Pass

3rd Quarter 2018

TLD Number	Reported (mR)	Delivered (mR)	Bias (% diff)	Pass/Fail Criteria	Pass/Fail
102475	18.69	18.84	-0.80	<+/-15%	Pass
100674	18.66	18.84	-0.96	<+/-15%	Pass
100287	17.66	18.84	-6.96	<+/-15%	Pass
101172	18.23	18.84	-3.24	<+/-15%	Pass
101202	18.48	18.84	-1.91	<+/-15%	Pass
		Average Bias (B)	-2.63		
		Standard Deviation (S)	2.25		
		Measure Performance |B|+S	4.88	<15%	Pass

4th Quarter 2018

TLD Number	Reported (mR)	Delivered (mR)	Bias (% diff)	Pass/Fail Criteria	Pass/Fail
103532	67.52	61.93	9.03	<+/-15%	Pass
102805	67.74	61.93	9.38	<+/-15%	Pass
103209	66.84	61.93	7.93	<+/-15%	Pass
103347	69.03	61.93	11.46	<+/-15%	Pass
103399	67.21	61.93	8.53	<+/-15%	Pass
		Average Bias (B)	9.27		
		Standard Deviation (S)	1.35		
		Measure Performance |B|+S	10.61	<15%	Pass

TABLE 5.0-B (Cont.)

2018 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 2018

TLD Number	Reported (mR)	Delivered (mR)	Bias (% diff)	Pass/Fail Criteria	Pass/Fail
103932	34.28	37.26	-7.99	<+/-15%	Pass
103952	34.50	37.26	-7.40	<+/-15%	Pass
104007	34.95	37.26	-6.19	<+/-15%	Pass
103961	35.30	37.26	-5.26	<+/-15%	Pass
103962	35.10	37.26	-5.79	<+/-15%	Pass
103931	35.54	37.26	-4.61	<+/-15%	Pass
104011	35.22	37.26	-5.47	<+/-15%	Pass
103950	35.48	37.26	-4.77	<+/-15%	Pass
103949	35.37	37.26	-5.07	<+/-15%	Pass
103951	35.75	37.26	-4.05	<+/-15%	Pass
		Average Bias (B)	-5.66		
		Standard Deviation (S)	1.24		
		Measure Performance |B|+S	6.90	<15%	Pass

2nd Quarter 2018

TLD Number	Reported (mR)	Delivered (mR)	Bias (% diff)	Pass/Fail Criteria	Pass/Fail
103049	20.41	18.49	10.38	<+/-15%	Pass
103360	21.06	18.49	13.90	<+/-15%	Pass
100021	18.06	18.49	-2.33	<+/-15%	Pass
102504	20.03	18.49	8.33	<+/-15%	Pass
102466	19.51	18.49	5.52	<+/-15%	Pass
100208	17.93	18.49	-3.03	<+/-15%	Pass
101155	18.66	18.49	0.92	<+/-15%	Pass
101145	17.93	18.49	-3.03	<+/-15%	Pass
101272	18.00	18.49	-2.65	<+/-15%	Pass
100515	17.87	18.49	-3.35	<+/-15%	Pass
		Average Bias (B)	2.47		
		Standard Deviation (S)	6.52		
		Measure Performance |B|+S	8.99	<15%	Pass

3rd Quarter 2018

TLD Number	Reported (mR)	Delivered (mR)	Bias (% diff)	Pass/Fail Criteria	Pass/Fail
102886	44.09	40.0	10.23	<+/-15%	Pass
102730	44.27	40.0	10.68	<+/-15%	Pass
102248	41.02	40.0	2.55	<+/-15%	Pass
102867	42.58	40.0	6.45	<+/-15%	Pass
102464	40.91	40.0	2.27	<+/-15%	Pass
102752	43.09	40.0	7.73	<+/-15%	Pass
102803	43.80	40.0	9.50	<+/-15%	Pass
103531	43.17	40.0	7.93	<+/-15%	Pass
102880	44.04	40.0	10.10	<+/-15%	Pass
102415	42.26	40.0	5.65	<+/-15%	Pass
		Average Bias (B)	7.31		
		Standard Deviation (S)	3.06		
		Measure Performance |B|+S	10.37	<15%	Pass

4th Quarter 2018

TLD Number	Reported (mR)	Delivered (mR)	Bias (% diff)	Pass/Fail Criteria	Pass/Fail
102089	46.94	45.0	4.31	<+/-15%	Pass
102442	45.03	45.0	0.07	<+/-15%	Pass
102336	47.40	45.0	5.33	<+/-15%	Pass
103721	48.89	45.0	8.64	<+/-15%	Pass
102738	48.54	45.0	7.87	<+/-15%	Pass
103194	47.94	45.0	6.53	<+/-15%	Pass
102931	47.59	45.0	5.76	<+/-15%	Pass
103742	49.22	45.0	9.38	<+/-15%	Pass
102029	47.14	45.0	4.76	<+/-15%	Pass
102290	46.10	45.0	2.44	<+/-15%	Pass
		Average Bias (B)	5.51		
		Standard Deviation (S)	2.84		
		Measure Performance |B|+S	8.35	<15%	Pass

TABLE 5.0-C

2018 GEL Laboratories, LLC QA Results

Interlaboratory cross check samples from Eckert & Ziegler Analytics (EZA) and Proficiency Tests from the Department of Energy Mixed Analyte Performance Evaluation Program (MAPEP) were received and analyzed by GEL in all four quarters of 2018 from EZA and in two quarters from MAPEP. Table 5.0-C lists the performance for specific samples. Table 5.0-C may not be applicable to all plants/stations

Sample	Sample ID	Nuclide	Quarter	Units	GEL Value	Known Value	Acceptance Range/Ratio	Evaluation
Hard To Detect in Soil	MAPEP -18- MaS38	Fe-55	2	Bq/kg	67	N/A	False Pos Test	Agreement
		Ni-63	2	Bq/kg	1.05	N/A	False Pos Test	Agreement
		Sr-90	2	Bq/kg	-1.08	N/A	False Pos Test	Agreement
	MAPEP -18- MaS39	Fe-55	4	Bq/kg	434	512	358 - 666	Agreement
		Ni-63	4	Bq/kg	793	765	536 - 995	Agreement
		Sr-90	4	Bq/kg	162	193	135 - 251	Agreement
I-131 in Milk with EZA	E12173	I-131	1	pCi/L	105	108	0.97	Agreement
	E12173	I-131	2	pCi/L	78.9	71.9	1.10	Agreement
	E12242	I-131	3	pCi/L	71.8	58.2	1.23	Agreement
	E12348	I-131	4	pCi/L	95.8	93.3	1.03	Agreement
Gross Beta in Water	E12304[(1)]	Cs-137	4	pCi/L	241	295	0.82	Agreement

(1) One set of December 2018 Gross Beta in water analyses were analyzed at GEL.

APPENDIX A

ENVIRONMENTAL SAMPLING
&
ANALYSIS PROCEDURES

APPENDIX A

ENVIRONMENTAL SAMPLING AND ANALYSIS PROCEDURES

Adherence to established procedures for sampling and analysis of all environmental media at Oconee Nuclear Station is required to ensure compliance with Station Selected Licensee Commitments. Analytical procedures were employed to ensure that Selected Licensee Commitments detection capabilities were achieved.

Environmental sampling and analyses were performed by EnRad Laboratories, Dosimetry and Records, Environmental Services, and General Engineering Laboratories, LLC.

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

I. CHANGE OF SAMPLING PROCEDURES

Location 047 TLD (New Hope Church, Hwy. 188 (3.58 mi. WSW)) was replaced with location 092 TLD (Hilton Circle, Hwy. 188 (3.62 mi. WSW)) due to location 047 being obstructed by bushes and located on private property (NCR # 02226974).

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 3100TR liquid scintillation system. Tritium samples are distilled and batch processed with a laboratory fortified blank, matrix spike, matrix spike duplicate, and blank to verify instrument performance and sample preparation technique are acceptable.

Gross beta analysis is performed by concentrating a designated aliquot of sample precipitate and analyzing by Tennelec XLB Series 5 gas-flow proportional counters. Samples are batch processed with a blank to ensure sample contamination has not occurred.

III. CHANGE OF ANALYSIS PROCEDURES

No analysis procedures were changed in 2018.

IV. SAMPLING AND ANALYSIS PROCEDURES

A.1 AIRBORNE PARTICULATE AND RADIOIODINE

Airborne particulate and radioiodine samples at each of six locations were composited continuously by means of continuous air samplers. Air particulates were collected on a particulate filter and radioiodines were collected in a charcoal cartridge positioned behind the filter in the sampler. The samplers are designed to operate at a constant flow rate (in order to compensate for any filter loading) and are set to sample approximately 2 cubic feet per minute. Filters and cartridges were collected weekly. A separate weekly gamma analysis was performed on each charcoal cartridge. A weekly gross beta analysis was performed on each filter. A quarterly gamma analysis was performed on the quarterly filter composite (by location). The continuous composite samples were collected from the locations listed below.

Location 077 = Skimmer Wall (1.00 mi. SW)
Location 078.1 = Recreation Site (0.53 mi. WSW)
Location 079 = Keowee Dam (0.56 mi. NE)
Location 081 = Clemson Operations Center (9.33 mi. SE)(Control)
Location 084 = Sue Craig Road (2.58 mi. NNE)
Location 085 = Lake Services / Building B9125 (0.88 mi. NNW)

A.2 DRINKING WATER

Monthly composite samplers were operated to collect an aliquot at least every two hours. Gross beta and gamma analysis was performed on the monthly composites. Tritium analysis was performed on the quarterly composites. The composites were collected monthly from the locations listed below.

Location 060 = Greenville Water Intake Rd. (3.23 mi. NE)
Location 064 = Seneca (6.67 mi. SSW)(Control)
Location 066 = Anderson (18.9 mi SSE)

A.3 SURFACE WATER

Monthly composite samplers were operated to collect an aliquot at least every two hours. Gamma analysis was performed on the monthly composites. Tritium analysis was performed on the quarterly composites sample. The composites were collected monthly from the locations listed below.

Location 062 = Lake Keowee Hydro Intake (0.85 mi. ENE)(Control)
Location 063.1 = Lake Hartwell Hwy 183 Bridge (0.79 mi. E)

A.4 MILK

Biweekly grab samples were collected at one location although the Oconee ODCM requires semimonthly samples. Biweekly grab samples are taken to meet the required sample frequency for scheduling purposes. A gamma and low-level Iodine-131 analysis was performed on each sample. The biweekly grab samples were collected from the location listed below.

Location 071 = Clemson Dairy (10.2 mi. SSE)(Control)

A.5 BROADLEAF VEGETATION

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

Location 077 = Skimmer Wall (1.00 mi. SW)
Location 079 = Keowee Dam (0.56 mi. NE)
Location 081 = Clemson Operations Center (9.33 mi. SE)(Control)
Location 084 = Sue Craig Road (2.58 mi. NNE)

A.6 FISH

Semiannual samples were collected and a gamma analysis was performed on the edible portions of each sample. The samples were collected from the locations listed below.

Location 060 = Greenville Water Intake Rd. (2.28 mi. NE)(Control)
Location 063 = Lake Hartwell Hwy 183 Bridge (0.80 mi. ESE)
Location 067 = Lawrence Ramsey Bridge Hwy 27 (4.34 mi. SSE)

A.7 SHORELINE SEDIMENT

Semiannual samples were collected and a gamma analysis was performed on each sample following the drying and removal of rocks and clams. The samples were collected from the locations listed below.

Location 067 = Lawrence Ramsey Bridge Hwy 27 (4.34 mi. SSE)
Location 068 = High Falls County Park (1.82 mi. W)(Control)

Location 091 = Holders Landing Road (2.09 mi. S)

A.8 DIRECT GAMMA RADIATION (TLD)

Thermoluminescent dosimeters (TLD) were collected quarterly at fifty locations. A gamma exposure rate was determined for each TLD. The TLDs were placed as indicated below.

* An inner ring of 25 TLDs, one in each meteorological sector in the general area of the site boundary.

* An outer ring of 16 TLDs, one in each meteorological sector in the 6 to 8 kilometer range.

* The remaining TLDs were placed in special interest areas such as population centers, residential areas, schools, and control locations.

TLD Locations are listed in Table 2.1-B.

A.9 ANNUAL LAND USE CENSUS

An annual Land Use Census was conducted to identify within a distance of 8 kilometers (5.0 miles) from the station, the following locations in each of the sixteen meteorological sectors:

* The Nearest Residence

* The Nearest Milk-giving Animal (cow, goat, etc.) where milk is used for human consumption

The census was conducted during the growing season 5/22 – 5/23/2018. Results are shown in Table 3.9. No changes were made to the sampling procedures during 2018 as a result of the 2018 census.

V. GLOBAL POSITIONING SYSTEM (GPS) ANALYSIS

The Oconee site centerline used for GPS measurements was referenced from the Oconee Nuclear Station Updated Final Safety Analysis Report (UFSAR), section 2.1.1.1, Specification of Location. Waypoint coordinates used for ONS GPS measurements were latitude 34°-47'-38.2"N and longitude 82°-53'-55.4"W. Maps and tables were generated using North American Datum (NAD) 27. Data normally reflect accuracy to within 2 to 5 meters from point of measurement. GPS field measurements were taken as close as possible to the item of interest. Distances for the locations are displayed using three significant figures.

APPENDIX B

RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM

SUMMARY OF RESULTS

2018

OCONEE NUCLEAR STATION
RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM DATA SUMMARY

Oconee Nuclear Station
Oconee County, South Carolina

Docket Numbers 50-269, 270, 287
Calendar Year 2018

Medium or Pathway Sampled or Measured (Unit of Measurement)	Type and Total No. of Measurements Performed	Lower Limit of Detection (LLD)[1]	All Indicator Locations[2][3] Mean Range	Location w/Highest Annual Mean		Control Locations Mean Range[2][3]	No. of Non-Routine Report Meas.
				Name, Distance, and Direction	Mean Range[2][3]		
Air Particulate (pCi/m^3)	Gross Beta 312[4]	See Table 2.2-C	2.09E-02 (260/260) 5.02E-03 – 4.18E-02	077 (1.00 mi SW)	2.30E-02 (52/52) 1.04E-02 – 4.18E-02	081 (9.33 mi SE) 2.01E-02 (52/52) 7.13E-03 – 3.67E-02	0
	Gamma 25[4]	See Table 2.2-C	All less than LLD	-----	-----	All less than LLD	0
Air Radioiodine (pCi/m^3)	Gamma 312[4]	See Table 2.2-C	All less than LLD	-----	-----	All less than LLD	0
Drinking Water (pCi/l)	Gross Beta 39[4]	4	1.49E+00 (17/26) 6.92E-01 – 2.58E+00	060 (3.23 mi NE)	1.50E+00 (6/13) 1.02E+00 – 2.58E+00	064 (6.67 mi SSW) 1.27E+00 (8/13) 6.83E-01 – 2.32E+00	0
	Gamma 39[4]	See Table 2.2-C	All less than LLD	-----	-----	All less than LLD	0
	Tritium 12[4]	2000	3.56E+02 (4/8) 2.47E+02 – 4.57E+02	066 (18.9 mi SSE)	3.56E+02 (4/4) 2.47E+02 – 4.57E+02	All less than LLD	0
Surface Water (pCi/l)	Gamma 26[4]	See Table 2.2-C	All less than LLD	-----	-----	All less than LLD	0
	Tritium 8[4]	2000	3.52E+03 (4/4) 1.29E+03 – 5.61E+03	063.1 (0.79 mi E)	3.52E+03 (4/4) 1.29E+03 – 5.61E+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 26	See Table 2.2-C	No Indicator Location	-----	-----	All less than LLD	0

OCONEE NUCLEAR STATION
RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM DATA SUMMARY

Oconee Nuclear Station
Oconee County, South Carolina

Docket Numbers 50-269, 270, 287
Calendar Year 2018

Medium or Pathway Sampled or Measured (Unit of Measurement)	Type and Total No. of Measurements Performed	Lower Limit of Detection (LLD)[1]	All Indicator Locations[2] [3] Mean Range	Location w/Highest Annual Mean		Control Locations Mean Range[2] [3]	No. of Non-Routine Report Meas.
				Name, Distance, and Direction	Mean Range[2] [3]		
Broadleaf Vegetation (pCi/kg, wet)	Gamma 48	See Table 2.2-C	All less than LLD	-----	-----	All less than LLD	0
Fish (pCi/kg, wet)	Gamma 12	See Table 2.2-C	All less than LLD	-----	-----	All less than LLD	0
Sediments--Shoreline (pCi/kg, dry)	Gamma 6 Cs-137	See Table 2.2-C 180	1.49E+02 (3/4) 1.93E+01 – 3.16E+02	091 (2.09 mi S)	1.68E+02 (2/2) 1.93E+01 – 3.16E+02	All less than LLD	0
TLD (mR per quarter)[5]	TLD Readout 200	-----	2.19E+01 (192/192) 1.45E+01 – 3.26E+01	024 (0.81 mi E)	3.00E+01 (4/4) 2.79E+01 – 3.26E+01	058 (9.39 mi WSW) 081 (9.33 mi SE) 2.81E+01 (8/8) 2.26E+01 – 3.42E+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) [2].

[2] Cember, H. (2009). Introduction to Health Physics, 4th Edition. United States: McGraw-Hill Companies, Inc.

APPENDIX C

SAMPLING DEVIATIONS
&
UNAVAILABLE ANALYSES

APPENDIX C

OCONEE NUCLEAR STATION
SAMPLING DEVIATIONS & UNAVAILABLE ANALYSES

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

C.1 SAMPLING DEVIATIONS

Air Particulate and Air Radioiodine

REMP weekly air samples (Air Particulate (AP) or Air Radioiodine (AR)) that experience any downtime during a surveillance period are reported as a Deviation and classified as a "Sampling Deviation." However, the sample is counted and the data reported, whereas a Deviation with no available sample is classified as an "Unavailable Analyses" and does not have any data reported. The air samplers operated for a total of 99.46% availability in 2018.

Location	Scheduled Collection Dates	Code	Description & Action to Prevent Recurrence	Corrective Action
081	1/2 – 1/8/2018	PI	0.36 hours downtime, undetermined cause.	NCR # 02176077
085	1/22-1/29/2018	OT	Air sampler exceeded calibration due date and incorrect filter placed into field. Implemented procedural review of REMP Instrument Report and removed old filters from REMP supplies to prevent these recurrences.	NCR # 02179565 NCR # 02180971
078.1	4/30-5/7-2018	PI	33.85 hours downtime due to severe thunderstorm/high winds. Underground power leg burned up.	NCR # 02204607
077	5/7-5/14/2018	PI	2.93 hours downtime due to severe thunderstorm.	NCR # 02206651
078.1	5/7-5/14/2018	PI	4.25 hours downtime due to severe thunderstorm.	NCR # 02206652
078.1	6/11-6/18/2018	PI	6.24 hours downtime due to crew working on underground line repair.	NCR # 02214268
079	6/11-6/18/2018	PI	18.06 hours downtime due to severe thunderstorm tripping breaker.	NCR # 02214269
084	12/3-12/10/2018	PI	3.92 hours downtime due to unknown reason	NCR # 02248327
085	12/10-12/18/2018	SM	8.63 hours downtime due to air sampler motor seizing up.	NCR # 02249840

Drinking Water and Surface Water

REMP monthly drinking water samples (Drinking Water (DW)) or surface water samples (Surface Water (SW)) that experience any downtime during a surveillance period are reported as a Deviation and classified as a "Sampling Deviation." However, the sample is counted and the data reported, whereas a Deviation with no available sample is classified as an "Unavailable Analyses" and does not have any data reported. The drinking and surface water samplers operated for a total of 100% availability in 2018. There were no deviations for drinking water or surface water samples in 2018.

C.2 UNAVAILABLE ANALYSES

Air Particulate and Air Radioiodine

Location	Scheduled Collection Dates	Code	Description & Action to Prevent Recurrence	Corrective Action
078.1	4/23-4/30/2018	PI	163.18 hours downtime due to severe thunderstorm/high winds. Underground power leg burned up.	NCR # 02202968

APPENDIX D

ANALYTICAL DEVIATIONS

No Analytical deviations were incurred for the
2018 Radiological Environmental Monitoring Program

APPENDIX E

RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM RESULTS

2018

This appendix includes sample analysis report summaries and supportive data generated from each sample medium for 2018

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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
465646	1/2/2018 - 1/8/2018	Beta	3.48E-02	4.13E-03	3.86E-03
466007	1/8/2018 - 1/15/2018	Beta	1.57E-02	2.95E-03	3.54E-03
466209	1/15/2018 - 1/22/2018	Beta	2.74E-02	3.37E-03	3.18E-03
466394	1/22/2018 - 1/29/2018	Beta	1.46E-02	2.72E-03	3.15E-03
466992	1/29/2018 - 2/5/2018	Beta	1.95E-02	3.00E-03	3.09E-03
467344	2/5/2018 - 2/12/2018	Beta	1.85E-02	2.86E-03	3.00E-03
467668	2/12/2018 - 2/19/2018	Beta	1.31E-02	2.39E-03	2.77E-03
468442	2/19/2018 - 2/26/2018	Beta	1.32E-02	2.77E-03	3.42E-03
468770	2/26/2018 - 3/5/2018	Beta	2.34E-02	3.26E-03	3.31E-03
469578	3/5/2018 - 3/12/2018	Beta	2.70E-02	3.05E-03	2.92E-03
470613	3/12/2018 - 3/19/2018	Beta	2.36E-02	3.27E-03	3.35E-03
471164	3/19/2018 - 3/26/2018	Beta	1.91E-02	3.03E-03	3.31E-03
471725	3/26/2018 - 4/2/2018	Beta	1.51E-02	2.54E-03	2.90E-03
472522	1/2/2018 - 4/2/2018	Cs-134	<1.44E-03	0.00E+00	1.44E-03
		Cs-137	<1.44E-03	0.00E+00	1.44E-03
		Be-7	1.31E-01	3.73E-02	3.85E-02
		K-40	1.20E-02	1.21E-02	1.80E-02
472516	4/2/2018 - 4/9/2018	Beta	2.76E-02	3.06E-03	2.86E-03
472991	4/9/2018 - 4/16/2018	Beta	2.41E-02	2.90E-03	2.72E-03
473272	4/16/2018 - 4/23/2018	Beta	2.29E-02	2.84E-03	2.80E-03
473644	4/23/2018 - 4/30/2018	Beta	1.47E-02	2.81E-03	3.30E-03
474160	4/30/2018 - 5/7/2018	Beta	3.28E-02	3.68E-03	3.48E-03
474538	5/7/2018 - 5/14/2018	Beta	3.73E-02	3.86E-03	3.38E-03
474905	5/14/2018 - 5/21/2018	Beta	2.16E-02	3.04E-03	3.05E-03
475225	5/21/2018 - 5/29/2018	Beta	1.32E-02	2.18E-03	2.41E-03
475546	5/29/2018 - 6/4/2018	Beta	1.59E-02	2.86E-03	3.37E-03
476371	6/4/2018 - 6/11/2018	Beta	3.69E-02	3.86E-03	3.49E-03

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
477391	6/11/2018 - 6/18/2018	Beta	2.95E-02	3.06E-03	2.62E-03
478117	6/18/2018 - 6/25/2018	Beta	2.26E-02	3.38E-03	3.73E-03
478433	6/25/2018 - 7/2/2018	Beta	1.70E-02	2.91E-03	3.34E-03
478806	4/2/2018 - 7/2/2018	Cs-134	<9.72E-04	0.00E+00	9.72E-04
		Cs-137	<1.53E-03	0.00E+00	1.53E-03
		Be-7	2.19E-01	4.37E-02	3.01E-02
		K-40	<2.29E-02	0.00E+00	2.29E-02
478800	7/2/2018 - 7/9/2018	Beta	2.08E-02	2.69E-03	2.58E-03
479212	7/9/2018 - 7/16/2018	Beta	3.21E-02	3.71E-03	3.70E-03
479893	7/16/2018 - 7/23/2018	Beta	2.66E-02	3.43E-03	3.47E-03
480256	7/23/2018 - 7/30/2018	Beta	3.09E-02	3.59E-03	3.32E-03
481083	7/30/2018 - 8/6/2018	Beta	1.45E-02	2.53E-03	2.98E-03
481524	8/6/2018 - 8/13/2018	Beta	2.06E-02	3.07E-03	3.27E-03
481974	8/13/2018 - 8/20/2018	Beta	2.92E-02	3.57E-03	3.44E-03
482492	8/20/2018 - 8/27/2018	Beta	2.70E-02	3.47E-03	3.57E-03
482817	8/27/2018 - 9/4/2018	Beta	2.70E-02	3.02E-03	2.60E-03
483439	9/4/2018 - 9/10/2018	Beta	2.10E-02	3.10E-03	3.39E-03
484036	9/10/2018 - 9/17/2018	Beta	1.04E-02	2.34E-03	3.03E-03
484611	9/17/2018 - 9/24/2018	Beta	3.14E-02	3.60E-03	3.28E-03
485036	9/24/2018 - 10/1/2018	Beta	1.87E-02	2.98E-03	3.25E-03
485499	7/2/2018 - 10/1/2018	Cs-134	<1.25E-03	0.00E+00	1.25E-03
		Cs-137	<1.03E-03	0.00E+00	1.03E-03
		Be-7	1.51E-01	3.41E-02	1.90E-02
		K-40	<2.66E-02	0.00E+00	2.66E-02
485493	10/1/2018 - 10/8/2018	Beta	4.18E-02	3.93E-03	3.07E-03
486176	10/8/2018 - 10/15/2018	Beta	2.09E-02	3.06E-03	3.14E-03
486708	10/15/2018 - 10/22/2018	Beta	2.83E-02	3.50E-03	3.42E-03
487747	10/22/2018 - 10/29/2018	Beta	2.18E-02	3.21E-03	3.47E-03
487991	10/29/2018 - 11/5/2018	Beta	2.17E-02	2.80E-03	2.82E-03

EnRad Laboratories
13339 Hagers Ferry Road
Huntersville, North Carolina 28078

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
488483	11/5/2018 - 11/12/2018	Beta	2.04E-02	2.78E-03	2.84E-03
488862	11/12/2018 - 11/19/2018	Beta	2.34E-02	3.21E-03	3.21E-03
489159	11/19/2018 - 11/26/2018	Beta	2.82E-02	3.09E-03	2.82E-03
489741	11/26/2018 - 12/3/2018	Beta	2.45E-02	2.95E-03	2.92E-03
490164	12/3/2018 - 12/10/2018	Beta	1.66E-02	2.98E-03	3.49E-03
490811	12/10/2018 - 12/18/2018	Beta	1.82E-02	2.43E-03	2.49E-03
491186	12/18/2018 - 12/26/2018	Beta	1.90E-02	2.75E-03	2.82E-03
491487	12/26/2018 - 12/31/2018	Beta	1.89E-02	3.42E-03	4.08E-03
491772	10/1/2018 - 12/31/2018	Cs-134	<2.27E-03	0.00E+00	2.27E-03
		Cs-137	<1.58E-03	0.00E+00	1.58E-03
		Be-7	1.41E-01	3.65E-02	3.44E-02
		K-40	<2.84E-02	0.00E+00	2.84E-02

Sample Point 078.1 [INDICATOR - WSW @ 0.53 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
465647	1/2/2018 - 1/8/2018	Beta	3.06E-02	3.95E-03	3.86E-03
466008	1/8/2018 - 1/15/2018	Beta	1.90E-02	3.11E-03	3.54E-03
466210	1/15/2018 - 1/22/2018	Beta	2.45E-02	3.24E-03	3.18E-03
466395	1/22/2018 - 1/29/2018	Beta	1.66E-02	2.82E-03	3.15E-03
466993	1/29/2018 - 2/5/2018	Beta	1.63E-02	2.82E-03	3.08E-03
467345	2/5/2018 - 2/12/2018	Beta	1.96E-02	2.92E-03	3.01E-03
467669	2/12/2018 - 2/19/2018	Beta	1.51E-02	2.49E-03	2.77E-03
468443	2/19/2018 - 2/26/2018	Beta	1.39E-02	2.81E-03	3.42E-03
468771	2/26/2018 - 3/5/2018	Beta	2.15E-02	3.17E-03	3.31E-03
469579	3/5/2018 - 3/12/2018	Beta	2.28E-02	2.88E-03	2.92E-03
470614	3/12/2018 - 3/19/2018	Beta	2.50E-02	3.34E-03	3.35E-03
471165	3/19/2018 - 3/26/2018	Beta	1.82E-02	2.99E-03	3.31E-03
471726	3/26/2018 - 4/2/2018	Beta	1.43E-02	2.49E-03	2.89E-03
472523	1/2/2018 - 4/2/2018	Cs-134	<1.50E-03	0.00E+00	1.50E-03
		Cs-137	<1.36E-03	0.00E+00	1.36E-03
		Be-7	1.54E-01	4.01E-02	3.83E-02

OCONEE Radiological Environmental Monitoring Analysis Report - 2018 (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
472523	1/2/2018 - 4/2/2018	K-40	<3.13E-02	0.00E+00	3.13E-02
472517	4/2/2018 - 4/9/2018	Beta	2.24E-02	2.84E-03	2.86E-03
472992	4/9/2018 - 4/16/2018	Beta	2.25E-02	2.83E-03	2.72E-03
473273	4/16/2018 - 4/23/2018	Beta	1.93E-02	2.68E-03	2.81E-03
474161	5/1/2018 - 5/7/2018	Beta	2.32E-02	3.82E-03	4.35E-03
474539	5/7/2018 - 5/14/2018	Beta	2.87E-02	3.52E-03	3.41E-03
474906	5/14/2018 - 5/21/2018	Beta	1.84E-02	2.88E-03	3.05E-03
475226	5/21/2018 - 5/29/2018	Beta	1.03E-02	2.02E-03	2.41E-03
475547	5/29/2018 - 6/4/2018	Beta	1.29E-02	2.69E-03	3.37E-03
476372	6/4/2018 - 6/11/2018	Beta	3.06E-02	3.60E-03	3.48E-03
477392	6/11/2018 - 6/18/2018	Beta	2.41E-02	2.91E-03	2.72E-03
478118	6/18/2018 - 6/25/2018	Beta	1.95E-02	3.23E-03	3.73E-03
478434	6/25/2018 - 7/2/2018	Beta	1.60E-02	2.86E-03	3.34E-03
478807	4/2/2018 - 7/2/2018	Cs-134	<2.13E-03	0.00E+00	2.13E-03
		Cs-137	<1.33E-03	0.00E+00	1.33E-03
		Be-7	1.74E-01	4.36E-02	4.14E-02
		K-40	3.67E-02	1.85E-02	1.75E-02
478801	7/2/2018 - 7/9/2018	Beta	1.87E-02	2.60E-03	2.58E-03
479213	7/9/2018 - 7/16/2018	Beta	3.25E-02	3.72E-03	3.70E-03
479894	7/16/2018 - 7/23/2018	Beta	2.37E-02	3.30E-03	3.47E-03
480257	7/23/2018 - 7/30/2018	Beta	3.07E-02	3.58E-03	3.32E-03
481084	7/30/2018 - 8/6/2018	Beta	1.37E-02	2.49E-03	2.98E-03
481525	8/6/2018 - 8/13/2018	Beta	1.66E-02	2.87E-03	3.27E-03
481975	8/13/2018 - 8/20/2018	Beta	2.54E-02	3.40E-03	3.44E-03
482493	8/20/2018 - 8/27/2018	Beta	2.05E-02	3.18E-03	3.57E-03
482818	8/27/2018 - 9/4/2018	Beta	2.08E-02	2.74E-03	2.60E-03
483440	9/4/2018 - 9/10/2018	Beta	2.18E-02	3.14E-03	3.39E-03

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

Sample Point 078.1 [INDICATOR - WSW @ 0.53 miles]

Sample ID:	484037	Sample Dates: 9/10/2018 - 9/17/2018	Nuclide	Activity	2 Sigma Error	MDA
			Beta	7.15E-03	2.16E-03	3.03E-03
Sample ID:	484612	Sample Dates: 9/17/2018 - 9/24/2018	Nuclide	Activity	2 Sigma Error	MDA
			Beta	2.62E-02	3.37E-03	3.28E-03
Sample ID:	485037	Sample Dates: 9/24/2018 - 10/1/2018	Nuclide	Activity	2 Sigma Error	MDA
			Beta	1.74E-02	2.91E-03	3.25E-03
Sample ID:	485500	Sample Dates: 7/2/2018 - 10/1/2018	Nuclide	Activity	2 Sigma Error	MDA
			Cs-134	<1.86E-03	0.00E+00	1.86E-03
			Cs-137	<1.40E-03	0.00E+00	1.40E-03
			Be-7	1.59E-01	4.13E-02	4.15E-02
			K-40	<4.09E-02	0.00E+00	4.09E-02
Sample ID:	485494	Sample Dates: 10/1/2018 - 10/8/2018	Nuclide	Activity	2 Sigma Error	MDA
			Beta	3.44E-02	3.64E-03	3.07E-03
Sample ID:	486177	Sample Dates: 10/8/2018 - 10/15/2018	Nuclide	Activity	2 Sigma Error	MDA
			Beta	1.70E-02	2.87E-03	3.14E-03
Sample ID:	486709	Sample Dates: 10/15/2018 - 10/22/2018	Nuclide	Activity	2 Sigma Error	MDA
			Beta	2.75E-02	3.47E-03	3.42E-03
Sample ID:	487748	Sample Dates: 10/22/2018 - 10/29/2018	Nuclide	Activity	2 Sigma Error	MDA
			Beta	2.19E-02	3.22E-03	3.47E-03
Sample ID:	487992	Sample Dates: 10/29/2018 - 11/5/2018	Nuclide	Activity	2 Sigma Error	MDA
			Beta	2.02E-02	2.73E-03	2.82E-03
Sample ID:	488484	Sample Dates: 11/5/2018 - 11/12/2018	Nuclide	Activity	2 Sigma Error	MDA
			Beta	2.13E-02	2.81E-03	2.84E-03
Sample ID:	488863	Sample Dates: 11/12/2018 - 11/19/2018	Nuclide	Activity	2 Sigma Error	MDA
			Beta	2.20E-02	3.15E-03	3.21E-03
Sample ID:	489160	Sample Dates: 11/19/2018 - 11/26/2018	Nuclide	Activity	2 Sigma Error	MDA
			Beta	2.63E-02	3.02E-03	2.82E-03
Sample ID:	489742	Sample Dates: 11/26/2018 - 12/3/2018	Nuclide	Activity	2 Sigma Error	MDA
			Beta	2.93E-02	3.14E-03	2.92E-03
Sample ID:	490165	Sample Dates: 12/3/2018 - 12/10/2018	Nuclide	Activity	2 Sigma Error	MDA
			Beta	1.69E-02	3.00E-03	3.49E-03
Sample ID:	490812	Sample Dates: 12/10/2018 - 12/18/2018	Nuclide	Activity	2 Sigma Error	MDA
			Beta	1.82E-02	2.43E-03	2.49E-03
Sample ID:	491187	Sample Dates: 12/18/2018 - 12/26/2018	Nuclide	Activity	2 Sigma Error	MDA
			Beta	2.23E-02	2.92E-03	2.82E-03
Sample ID:	491488	Sample Dates: 12/26/2018 - 12/31/2018	Nuclide	Activity	2 Sigma Error	MDA
			Beta	2.17E-02	3.56E-03	4.08E-03
Sample ID:	491773	Sample Dates: 10/1/2018 - 12/31/2018	Nuclide	Activity	2 Sigma Error	MDA
			Cs-134	<1.43E-03	0.00E+00	1.43E-03
			Cs-137	<2.12E-03	0.00E+00	2.12E-03
			Be-7	1.67E-01	3.75E-02	2.77E-02
			K-40	<3.12E-02	0.00E+00	3.12E-02

Sample Point 079 [INDICATOR - NE @ 0.56 miles]

Sample ID:	465648	Sample Dates: 1/2/2018 - 1/8/2018	Nuclide	Activity	2 Sigma Error	MDA
			Beta	3.75E-02	4.24E-03	3.86E-03
Sample ID:	466009	Sample Dates: 1/8/2018 - 1/15/2018	Nuclide	Activity	2 Sigma Error	MDA
			Beta	1.86E-02	3.10E-03	3.55E-03
Sample ID:	466211	Sample Dates: 1/15/2018 - 1/22/2018	Nuclide	Activity	2 Sigma Error	MDA
			Beta	2.62E-02	3.31E-03	3.18E-03
Sample ID:	466396	Sample Dates: 1/22/2018 - 1/29/2018	Nuclide	Activity	2 Sigma Error	MDA
			Beta	1.46E-02	2.70E-03	3.13E-03

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
466994	1/29/2018 - 2/5/2018	Beta	1.87E-02	2.96E-03	3.11E-03
467346	2/5/2018 - 2/12/2018	Beta	1.88E-02	2.89E-03	3.00E-03
467670	2/12/2018 - 2/19/2018	Beta	1.68E-02	2.58E-03	2.77E-03
468444	2/19/2018 - 2/26/2018	Beta	1.24E-02	2.73E-03	3.42E-03
468772	2/26/2018 - 3/5/2018	Beta	2.06E-02	3.12E-03	3.31E-03
469580	3/5/2018 - 3/12/2018	Beta	1.86E-02	2.69E-03	2.92E-03
470615	3/12/2018 - 3/19/2018	Beta	2.36E-02	3.27E-03	3.33E-03
471166	3/19/2018 - 3/26/2018	Beta	1.56E-02	2.85E-03	3.31E-03
471727	3/26/2018 - 4/2/2018	Beta	1.42E-02	2.49E-03	2.90E-03
472524	1/2/2018 - 4/2/2018	Cs-134	<1.97E-03	0.00E+00	1.97E-03
		Cs-137	<1.15E-03	0.00E+00	1.15E-03
		Be-7	1.44E-01	3.73E-02	3.37E-02
		K-40	<2.29E-02	0.00E+00	2.29E-02
472518	4/2/2018 - 4/9/2018	Beta	2.40E-02	2.92E-03	2.87E-03
472993	4/9/2018 - 4/16/2018	Beta	1.94E-02	2.69E-03	2.73E-03
473274	4/16/2018 - 4/23/2018	Beta	2.17E-02	2.78E-03	2.80E-03
473646	4/23/2018 - 4/30/2018	Beta	1.07E-02	2.60E-03	3.31E-03
474162	4/30/2018 - 5/7/2018	Beta	2.60E-02	3.40E-03	3.48E-03
474540	5/7/2018 - 5/14/2018	Beta	2.94E-02	3.49E-03	3.31E-03
474907	5/14/2018 - 5/21/2018	Beta	1.83E-02	2.88E-03	3.06E-03
475227	5/21/2018 - 5/29/2018	Beta	1.06E-02	2.03E-03	2.39E-03
475548	5/29/2018 - 6/4/2018	Beta	1.43E-02	2.79E-03	3.41E-03
476373	6/4/2018 - 6/11/2018	Beta	3.24E-02	3.68E-03	3.48E-03
477393	6/11/2018 - 6/18/2018	Beta	2.22E-02	2.96E-03	2.92E-03
478119	6/18/2018 - 6/25/2018	Beta	2.17E-02	3.35E-03	3.74E-03
478435	6/25/2018 - 7/2/2018	Beta	1.47E-02	2.79E-03	3.34E-03
478808	4/2/2018 - 7/2/2018	Cs-134	<1.21E-03	0.00E+00	1.21E-03
		Cs-137	<1.51E-03	0.00E+00	1.51E-03
		Be-7	1.47E-01	3.43E-02	2.30E-02

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
478808	4/2/2018 - 7/2/2018	K-40	<2.28E-02	0.00E+00	2.28E-02
478802	7/2/2018 - 7/9/2018	Beta	1.84E-02	2.57E-03	2.58E-03
479214	7/9/2018 - 7/16/2018	Beta	2.88E-02	3.57E-03	3.69E-03
479895	7/16/2018 - 7/23/2018	Beta	1.93E-02	3.10E-03	3.48E-03
480258	7/23/2018 - 7/30/2018	Beta	2.42E-02	3.29E-03	3.31E-03
481085	7/30/2018 - 8/6/2018	Beta	1.51E-02	2.56E-03	2.98E-03
481526	8/6/2018 - 8/13/2018	Beta	1.95E-02	2.98E-03	3.20E-03
481976	8/13/2018 - 8/20/2018	Beta	2.51E-02	3.44E-03	3.51E-03
482494	8/20/2018 - 8/27/2018	Beta	2.15E-02	3.23E-03	3.57E-03
482819	8/27/2018 - 9/4/2018	Beta	2.06E-02	2.73E-03	2.59E-03
483441	9/4/2018 - 9/10/2018	Beta	2.04E-02	3.07E-03	3.39E-03
484038	9/10/2018 - 9/17/2018	Beta	5.02E-03	2.03E-03	3.02E-03
484613	9/17/2018 - 9/24/2018	Beta	2.55E-02	3.34E-03	3.29E-03
485038	9/24/2018 - 10/1/2018	Beta	1.40E-02	2.72E-03	3.23E-03
485501	7/2/2018 - 10/1/2018	Cs-134	<1.60E-03	0.00E+00	1.60E-03
		Cs-137	<1.17E-03	0.00E+00	1.17E-03
		Be-7	1.15E-01	3.17E-02	2.85E-02
		K-40	1.43E-02	1.16E-02	1.46E-02
485495	10/1/2018 - 10/8/2018	Beta	3.28E-02	3.59E-03	3.09E-03
486178	10/8/2018 - 10/15/2018	Beta	1.85E-02	2.95E-03	3.15E-03
486710	10/15/2018 - 10/22/2018	Beta	2.38E-02	3.30E-03	3.42E-03
487749	10/22/2018 - 10/29/2018	Beta	1.47E-02	2.86E-03	3.46E-03
487993	10/29/2018 - 11/5/2018	Beta	1.95E-02	2.70E-03	2.82E-03
488485	11/5/2018 - 11/12/2018	Beta	1.85E-02	2.68E-03	2.84E-03
488864	11/12/2018 - 11/19/2018	Beta	1.99E-02	3.05E-03	3.22E-03
489161	11/19/2018 - 11/26/2018	Beta	2.34E-02	2.89E-03	2.82E-03
489743	11/26/2018 - 12/3/2018	Beta	2.11E-02	2.80E-03	2.91E-03

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
490166	12/3/2018 - 12/10/2018	Beta	1.55E-02	2.93E-03	3.50E-03
490813	12/10/2018 - 12/18/2018	Beta	1.69E-02	2.37E-03	2.48E-03
491188	12/18/2018 - 12/26/2018	Beta	1.69E-02	2.66E-03	2.83E-03
491489	12/26/2018 - 12/31/2018	Beta	2.02E-02	3.46E-03	4.05E-03
491774	10/1/2018 - 12/31/2018	Cs-134	<1.25E-03	0.00E+00	1.25E-03
		Cs-137	<1.45E-03	0.00E+00	1.45E-03
		Be-7	1.06E-01	3.01E-02	2.66E-02
		K-40	1.51E-02	1.01E-02	4.54E-03

Sample Point 081 [CONTROL - SE @ 9.33 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
465649	1/2/2018 - 1/8/2018	Beta	3.67E-02	4.20E-03	3.84E-03
466010	1/8/2018 - 1/15/2018	Beta	1.66E-02	3.00E-03	3.55E-03
466212	1/15/2018 - 1/22/2018	Beta	2.89E-02	3.43E-03	3.17E-03
466397	1/22/2018 - 1/29/2018	Beta	1.36E-02	2.67E-03	3.17E-03
466995	1/29/2018 - 2/5/2018	Beta	1.59E-02	2.80E-03	3.08E-03
467347	2/5/2018 - 2/12/2018	Beta	1.95E-02	2.92E-03	3.00E-03
467671	2/12/2018 - 2/19/2018	Beta	1.20E-02	2.33E-03	2.78E-03
468445	2/19/2018 - 2/26/2018	Beta	1.05E-02	2.61E-03	3.41E-03
468773	2/26/2018 - 3/5/2018	Beta	2.09E-02	3.13E-03	3.32E-03
469581	3/5/2018 - 3/12/2018	Beta	2.13E-02	2.80E-03	2.90E-03
470616	3/12/2018 - 3/19/2018	Beta	2.29E-02	3.27E-03	3.38E-03
471167	3/19/2018 - 3/26/2018	Beta	1.79E-02	2.94E-03	3.28E-03
471728	3/26/2018 - 4/2/2018	Beta	1.36E-02	2.47E-03	2.91E-03
472525	1/2/2018 - 4/2/2018	Cs-134	<9.98E-04	0.00E+00	9.98E-04
		Cs-137	<1.75E-03	0.00E+00	1.75E-03
		Be-7	1.50E-01	3.55E-02	2.28E-02
		K-40	<2.52E-02	0.00E+00	2.52E-02
472519	4/2/2018 - 4/9/2018	Beta	2.32E-02	2.87E-03	2.84E-03
472994	4/9/2018 - 4/16/2018	Beta	2.16E-02	2.79E-03	2.73E-03
473275	4/16/2018 - 4/23/2018	Beta	1.65E-02	2.56E-03	2.82E-03

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

Sample Point 081 [CONTROL - SE @ 9.33 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
473647	4/23/2018 - 4/30/2018	Beta	1.17E-02	2.63E-03	3.28E-03
474163	4/30/2018 - 5/7/2018	Beta	2.59E-02	3.39E-03	3.49E-03
474541	5/7/2018 - 5/14/2018	Beta	3.19E-02	3.61E-03	3.33E-03
474908	5/14/2018 - 5/21/2018	Beta	1.78E-02	2.84E-03	3.04E-03
475228	5/21/2018 - 5/29/2018	Beta	1.05E-02	2.03E-03	2.40E-03
475549	5/29/2018 - 6/4/2018	Beta	1.46E-02	2.80E-03	3.38E-03
476374	6/4/2018 - 6/11/2018	Beta	3.05E-02	3.60E-03	3.49E-03
477394	6/11/2018 - 6/18/2018	Beta	2.39E-02	2.83E-03	2.61E-03
478120	6/18/2018 - 6/25/2018	Beta	2.30E-02	3.40E-03	3.73E-03
478436	6/25/2018 - 7/2/2018	Beta	1.51E-02	2.83E-03	3.35E-03
478809	4/2/2018 - 7/2/2018	Cs-134	<2.00E-03	0.00E+00	2.00E-03
		Cs-137	<1.53E-03	0.00E+00	1.53E-03
		Be-7	1.97E-01	4.38E-02	3.84E-02
		K-40	1.82E-02	1.11E-02	4.49E-03
478803	7/2/2018 - 7/9/2018	Beta	2.03E-02	2.67E-03	2.57E-03
479215	7/9/2018 - 7/16/2018	Beta	3.18E-02	3.70E-03	3.71E-03
479896	7/16/2018 - 7/23/2018	Beta	2.18E-02	3.22E-03	3.48E-03
480259	7/23/2018 - 7/30/2018	Beta	2.74E-02	3.43E-03	3.30E-03
481086	7/30/2018 - 8/6/2018	Beta	1.35E-02	2.48E-03	2.98E-03
481527	8/6/2018 - 8/13/2018	Beta	1.83E-02	2.97E-03	3.28E-03
481977	8/13/2018 - 8/20/2018	Beta	2.40E-02	3.33E-03	3.42E-03
482495	8/20/2018 - 8/27/2018	Beta	2.21E-02	3.25E-03	3.57E-03
482820	8/27/2018 - 9/4/2018	Beta	2.21E-02	2.80E-03	2.60E-03
483442	9/4/2018 - 9/10/2018	Beta	1.79E-02	2.96E-03	3.39E-03
484039	9/10/2018 - 9/17/2018	Beta	7.13E-03	2.17E-03	3.04E-03
484614	9/17/2018 - 9/24/2018	Beta	2.60E-02	3.36E-03	3.27E-03
485039	9/24/2018 - 10/1/2018	Beta	1.20E-02	2.62E-03	3.25E-03

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

Sample Point 081 [CONTROL - SE @ 9.33 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
485502	7/2/2018 - 10/1/2018	Cs-134	<1.27E-03	0.00E+00	1.27E-03
		Cs-137	<8.22E-04	0.00E+00	8.22E-04
		Be-7	1.41E-01	3.72E-02	3.61E-02
		K-40	<3.73E-02	0.00E+00	3.73E-02
485496	10/1/2018 - 10/8/2018	Beta	3.62E-02	3.73E-03	3.08E-03
486179	10/8/2018 - 10/15/2018	Beta	1.67E-02	2.84E-03	3.12E-03
486711	10/15/2018 - 10/22/2018	Beta	2.34E-02	3.28E-03	3.42E-03
487750	10/22/2018 - 10/29/2018	Beta	1.88E-02	3.07E-03	3.48E-03
487994	10/29/2018 - 11/5/2018	Beta	1.91E-02	2.69E-03	2.83E-03
488486	11/5/2018 - 11/12/2018	Beta	1.41E-02	2.46E-03	2.83E-03
488865	11/12/2018 - 11/19/2018	Beta	1.83E-02	2.96E-03	3.20E-03
489162	11/19/2018 - 11/26/2018	Beta	2.62E-02	3.02E-03	2.83E-03
489744	11/26/2018 - 12/3/2018	Beta	2.14E-02	2.82E-03	2.91E-03
490167	12/3/2018 - 12/10/2018	Beta	1.69E-02	2.99E-03	3.49E-03
490814	12/10/2018 - 12/18/2018	Beta	1.67E-02	2.36E-03	2.49E-03
491189	12/18/2018 - 12/26/2018	Beta	1.75E-02	2.68E-03	2.82E-03
491490	12/26/2018 - 12/31/2018	Beta	2.15E-02	3.56E-03	4.10E-03
491775	10/1/2018 - 12/31/2018	Cs-134	<1.82E-03	0.00E+00	1.82E-03
		Cs-137	<1.06E-03	0.00E+00	1.06E-03
		Be-7	1.09E-01	3.09E-02	2.66E-02
		K-40	<3.33E-02	0.00E+00	3.33E-02

Sample Point 084 [INDICATOR - NNE @ 2.58 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
465650	1/2/2018 - 1/8/2018	Beta	2.90E-02	3.86E-03	3.86E-03
466011	1/8/2018 - 1/15/2018	Beta	1.63E-02	2.98E-03	3.54E-03
466213	1/15/2018 - 1/22/2018	Beta	2.36E-02	3.20E-03	3.18E-03
466398	1/22/2018 - 1/29/2018	Beta	1.35E-02	2.66E-03	3.15E-03
466996	1/29/2018 - 2/5/2018	Beta	1.70E-02	2.87E-03	3.08E-03
467348	2/5/2018 - 2/12/2018	Beta	1.56E-02	2.71E-03	3.00E-03
467672	2/12/2018 - 2/19/2018	Beta	1.35E-02	2.41E-03	2.77E-03

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
468446	2/19/2018 - 2/26/2018	Beta	1.09E-02	2.64E-03	3.42E-03
468774	2/26/2018 - 3/5/2018	Beta	1.93E-02	3.05E-03	3.31E-03
469582	3/5/2018 - 3/12/2018	Beta	2.06E-02	2.78E-03	2.92E-03
470617	3/12/2018 - 3/19/2018	Beta	2.19E-02	3.19E-03	3.34E-03
471168	3/19/2018 - 3/26/2018	Beta	1.45E-02	2.79E-03	3.31E-03
471729	3/26/2018 - 4/2/2018	Beta	1.53E-02	2.54E-03	2.90E-03
472526	1/2/2018 - 4/2/2018	Cs-134	<1.48E-03	0.00E+00	1.48E-03
		Cs-137	<1.47E-03	0.00E+00	1.47E-03
		Be-7	1.47E-01	3.59E-02	2.52E-02
		K-40	<2.83E-02	0.00E+00	2.83E-02
472520	4/2/2018 - 4/9/2018	Beta	2.03E-02	2.76E-03	2.86E-03
472995	4/9/2018 - 4/16/2018	Beta	1.94E-02	2.69E-03	2.72E-03
473276	4/16/2018 - 4/23/2018	Beta	1.57E-02	2.51E-03	2.80E-03
473648	4/23/2018 - 4/30/2018	Beta	1.29E-02	2.73E-03	3.31E-03
474164	4/30/2018 - 5/7/2018	Beta	2.46E-02	3.33E-03	3.47E-03
474542	5/7/2018 - 5/14/2018	Beta	2.52E-02	3.31E-03	3.32E-03
474909	5/14/2018 - 5/21/2018	Beta	1.47E-02	2.68E-03	3.05E-03
475229	5/21/2018 - 5/29/2018	Beta	1.05E-02	2.03E-03	2.41E-03
475550	5/29/2018 - 6/4/2018	Beta	1.17E-02	2.64E-03	3.37E-03
476375	6/4/2018 - 6/11/2018	Beta	2.58E-02	3.40E-03	3.49E-03
477395	6/11/2018 - 6/18/2018	Beta	2.06E-02	2.69E-03	2.62E-03
478121	6/18/2018 - 6/25/2018	Beta	1.98E-02	3.25E-03	3.73E-03
478437	6/25/2018 - 7/2/2018	Beta	1.31E-02	2.71E-03	3.34E-03
478810	4/2/2018 - 7/2/2018	Cs-134	<1.70E-03	0.00E+00	1.70E-03
		Cs-137	<1.40E-03	0.00E+00	1.40E-03
		Be-7	1.56E-01	4.04E-02	3.89E-02
		K-40	<3.28E-02	0.00E+00	3.28E-02
478804	7/2/2018 - 7/9/2018	Beta	1.99E-02	2.65E-03	2.58E-03
479216	7/9/2018 - 7/16/2018	Beta	2.66E-02	3.48E-03	3.70E-03

OCONEE Radiological Environmental Monitoring Analysis Report - 2018 (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
479897	7/16/2018 - 7/23/2018	Beta	2.22E-02	3.24E-03	3.47E-03
480260	7/23/2018 - 7/30/2018	Beta	2.79E-02	3.45E-03	3.31E-03
481087	7/30/2018 - 8/6/2018	Beta	1.44E-02	2.53E-03	2.98E-03
481528	8/6/2018 - 8/13/2018	Beta	2.08E-02	3.08E-03	3.26E-03
481978	8/13/2018 - 8/20/2018	Beta	3.07E-02	3.63E-03	3.44E-03
482496	8/20/2018 - 8/27/2018	Beta	2.24E-02	3.26E-03	3.57E-03
482821	8/27/2018 - 9/4/2018	Beta	2.25E-02	2.82E-03	2.60E-03
483443	9/4/2018 - 9/10/2018	Beta	2.39E-02	3.23E-03	3.39E-03
484040	9/10/2018 - 9/17/2018	Beta	6.56E-03	2.13E-03	3.03E-03
484615	9/17/2018 - 9/24/2018	Beta	2.94E-02	3.51E-03	3.28E-03
485040	9/24/2018 - 10/1/2018	Beta	1.68E-02	2.88E-03	3.25E-03
485503	7/2/2018 - 10/1/2018	Cs-134	<1.22E-03	0.00E+00	1.22E-03
		Cs-137	<1.16E-03	0.00E+00	1.16E-03
		Be-7	1.19E-01	3.39E-02	3.45E-02
		K-40	<2.29E-02	0.00E+00	2.29E-02
485497	10/1/2018 - 10/8/2018	Beta	3.62E-02	3.71E-03	3.07E-03
486180	10/8/2018 - 10/15/2018	Beta	1.85E-02	2.94E-03	3.14E-03
486712	10/15/2018 - 10/22/2018	Beta	3.12E-02	3.62E-03	3.42E-03
487751	10/22/2018 - 10/29/2018	Beta	1.87E-02	3.06E-03	3.47E-03
487995	10/29/2018 - 11/5/2018	Beta	2.15E-02	2.80E-03	2.82E-03
488487	11/5/2018 - 11/12/2018	Beta	1.96E-02	2.74E-03	2.83E-03
488866	11/12/2018 - 11/19/2018	Beta	2.12E-02	3.10E-03	3.21E-03
489163	11/19/2018 - 11/26/2018	Beta	2.57E-02	2.99E-03	2.82E-03
489745	11/26/2018 - 12/3/2018	Beta	2.31E-02	2.89E-03	2.92E-03
490168	12/3/2018 - 12/10/2018	Beta	1.80E-02	3.10E-03	3.57E-03
490815	12/10/2018 - 12/18/2018	Beta	1.83E-02	2.43E-03	2.49E-03
491190	12/18/2018 - 12/26/2018	Beta	1.76E-02	2.69E-03	2.82E-03

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
491491	12/26/2018 - 12/31/2018	Beta	2.01E-02	3.48E-03	4.07E-03
491776	10/1/2018 - 12/31/2018	Cs-134	<1.37E-03	0.00E+00	1.37E-03
		Cs-137	<1.12E-03	0.00E+00	1.12E-03
		Be-7	1.23E-01	3.46E-02	3.20E-02
		K-40	<2.89E-02	0.00E+00	2.89E-02

Sample Point 085 [INDICATOR - NNW @ 0.88 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
465651	1/2/2018 - 1/8/2018	Beta	3.49E-02	4.12E-03	3.85E-03
466012	1/8/2018 - 1/15/2018	Beta	1.67E-02	3.01E-03	3.55E-03
466214	1/15/2018 - 1/22/2018	Beta	2.70E-02	3.35E-03	3.18E-03
468007	1/22/2018 - 1/24/2018	Beta	2.51E-02	4.89E-03	6.38E-03
		Cs-134	<2.93E-02	0.00E+00	2.93E-02
		Cs-137	<2.31E-02	0.00E+00	2.31E-02
		Be-7	<2.55E-01	0.00E+00	2.55E-01
		K-40	5.59E-01	2.79E-01	3.65E-01
466399	1/24/2018 - 1/29/2018	Beta	1.43E-02	3.47E-03	4.43E-03
466997	1/29/2018 - 2/5/2018	Beta	1.42E-02	2.71E-03	3.08E-03
467349	2/5/2018 - 2/12/2018	Beta	1.81E-02	2.85E-03	3.01E-03
467673	2/12/2018 - 2/19/2018	Beta	1.50E-02	2.49E-03	2.77E-03
468447	2/19/2018 - 2/26/2018	Beta	1.33E-02	2.77E-03	3.42E-03
468775	2/26/2018 - 3/5/2018	Beta	1.90E-02	3.04E-03	3.31E-03
469583	3/5/2018 - 3/12/2018	Beta	2.53E-02	2.99E-03	2.92E-03
470618	3/12/2018 - 3/19/2018	Beta	2.22E-02	3.21E-03	3.35E-03
471169	3/19/2018 - 3/26/2018	Beta	1.41E-02	2.77E-03	3.31E-03
471730	3/26/2018 - 4/2/2018	Beta	1.44E-02	2.50E-03	2.89E-03
472527	1/2/2018 - 4/2/2018	Cs-134	<1.80E-03	0.00E+00	1.80E-03
		Cs-137	<1.61E-03	0.00E+00	1.61E-03
		Be-7	1.59E-01	3.76E-02	2.01E-02
		K-40	<2.77E-02	0.00E+00	2.77E-02
472521	4/2/2018 - 4/9/2018	Beta	2.22E-02	2.84E-03	2.86E-03
472996	4/9/2018 - 4/16/2018	Beta	2.12E-02	2.76E-03	2.72E-03
473277	4/16/2018 - 4/23/2018	Beta	1.88E-02	2.66E-03	2.81E-03
473649	4/23/2018 - 4/30/2018	Beta	1.35E-02	2.75E-03	3.30E-03

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
474165	4/30/2018 - 5/7/2018	Beta	2.60E-02	3.39E-03	3.48E-03
474543	5/7/2018 - 5/14/2018	Beta	3.12E-02	3.57E-03	3.33E-03
474910	5/14/2018 - 5/21/2018	Beta	1.70E-02	2.81E-03	3.05E-03
475230	5/21/2018 - 5/29/2018	Beta	1.20E-02	2.11E-03	2.41E-03
475551	5/29/2018 - 6/4/2018	Beta	1.37E-02	2.74E-03	3.37E-03
476376	6/4/2018 - 6/11/2018	Beta	3.07E-02	3.61E-03	3.48E-03
477396	6/11/2018 - 6/18/2018	Beta	2.20E-02	2.75E-03	2.62E-03
478122	6/18/2018 - 6/25/2018	Beta	1.83E-02	3.18E-03	3.73E-03
478438	6/25/2018 - 7/2/2018	Beta	1.58E-02	2.86E-03	3.34E-03
478811	4/2/2018 - 7/2/2018	Cs-134	<9.93E-04	0.00E+00	9.93E-04
		Cs-137	<2.99E-04	0.00E+00	2.99E-04
		Be-7	1.40E-01	3.70E-02	3.55E-02
		K-40	<2.37E-02	0.00E+00	2.37E-02
478805	7/2/2018 - 7/9/2018	Beta	2.00E-02	2.66E-03	2.58E-03
479217	7/9/2018 - 7/16/2018	Beta	2.63E-02	3.47E-03	3.70E-03
479898	7/16/2018 - 7/23/2018	Beta	2.06E-02	3.16E-03	3.47E-03
480261	7/23/2018 - 7/30/2018	Beta	2.41E-02	3.28E-03	3.31E-03
481088	7/30/2018 - 8/6/2018	Beta	1.12E-02	2.37E-03	2.98E-03
481529	8/6/2018 - 8/13/2018	Beta	1.80E-02	2.94E-03	3.26E-03
481979	8/13/2018 - 8/20/2018	Beta	2.51E-02	3.39E-03	3.44E-03
482497	8/20/2018 - 8/27/2018	Beta	2.09E-02	3.19E-03	3.57E-03
482822	8/27/2018 - 9/4/2018	Beta	2.18E-02	2.78E-03	2.60E-03
483444	9/4/2018 - 9/10/2018	Beta	2.02E-02	3.06E-03	3.39E-03
484041	9/10/2018 - 9/17/2018	Beta	8.61E-03	2.25E-03	3.03E-03
484616	9/17/2018 - 9/24/2018	Beta	2.71E-02	3.42E-03	3.28E-03
485041	9/24/2018 - 10/1/2018	Beta	1.77E-02	2.93E-03	3.25E-03
485504	7/2/2018 - 10/1/2018	Cs-134	<1.59E-03	0.00E+00	1.59E-03
		Cs-137	<8.90E-04	0.00E+00	8.90E-04
		Be-7	1.53E-01	3.89E-02	3.45E-02

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
485504	7/2/2018 - 10/1/2018	K-40	<2.89E-02	0.00E+00	2.89E-02
485498	10/1/2018 - 10/8/2018	Beta	3.12E-02	3.51E-03	3.07E-03
486181	10/8/2018 - 10/15/2018	Beta	1.78E-02	2.91E-03	3.14E-03
486713	10/15/2018 - 10/22/2018	Beta	2.39E-02	3.31E-03	3.42E-03
487752	10/22/2018 - 10/29/2018	Beta	1.93E-02	3.09E-03	3.47E-03
487996	10/29/2018 - 11/5/2018	Beta	1.92E-02	2.69E-03	2.82E-03
488488	11/5/2018 - 11/12/2018	Beta	2.14E-02	2.82E-03	2.84E-03
488867	11/12/2018 - 11/19/2018	Beta	2.03E-02	3.06E-03	3.21E-03
489164	11/19/2018 - 11/26/2018	Beta	2.43E-02	2.93E-03	2.82E-03
489746	11/26/2018 - 12/3/2018	Beta	2.24E-02	2.86E-03	2.92E-03
490169	12/3/2018 - 12/10/2018	Beta	1.71E-02	3.01E-03	3.49E-03
490816	12/10/2018 - 12/18/2018	Beta	1.69E-02	2.45E-03	2.61E-03
491191	12/18/2018 - 12/26/2018	Beta	1.66E-02	2.63E-03	2.81E-03
491492	12/26/2018 - 12/31/2018	Beta	2.28E-02	3.62E-03	4.08E-03
491777	10/1/2018 - 12/31/2018	Cs-134	<1.93E-03	0.00E+00	1.93E-03
		Cs-137	<8.25E-04	0.00E+00	8.25E-04
		Be-7	9.83E-02	3.49E-02	4.29E-02
		K-40	2.22E-02	1.24E-02	4.63E-03

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

Sample Point 077 [INDICATOR - SW @ 1 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
465658	1/2/2018 - 1/8/2018	I-131	<2.55E-02	0.00E+00	2.55E-02
		Cs-134	<2.30E-02	0.00E+00	2.30E-02
		Cs-137	<2.02E-02	0.00E+00	2.02E-02
		Be-7	<1.45E-01	0.00E+00	1.45E-01
		K-40	4.38E-01	2.32E-01	3.06E-01
466013	1/8/2018 - 1/15/2018	I-131	<1.84E-02	0.00E+00	1.84E-02
		Cs-134	<1.90E-02	0.00E+00	1.90E-02
		Cs-137	<1.52E-02	0.00E+00	1.52E-02
		Be-7	<1.17E-01	0.00E+00	1.17E-01
		K-40	4.01E-01	1.87E-01	2.26E-01
466215	1/15/2018 - 1/22/2018	I-131	<2.45E-02	0.00E+00	2.45E-02
		Cs-134	<1.60E-02	0.00E+00	1.60E-02
		Cs-137	<1.88E-02	0.00E+00	1.88E-02
		Be-7	<1.27E-01	0.00E+00	1.27E-01
		K-40	5.53E-01	1.74E-01	3.49E-02
466400	1/22/2018 - 1/29/2018	I-131	<2.16E-02	0.00E+00	2.16E-02

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

Sample Point 077 [INDICATOR - SW @ 1 miles]

Sample ID: 466400 **Sample Dates: 1/22/2018 - 1/29/2018**

Nuclide	Activity	2 Sigma Error	MDA
Cs-134	<1.72E-02	0.00E+00	1.72E-02
Cs-137	<1.35E-02	0.00E+00	1.35E-02
Be-7	<1.21E-01	0.00E+00	1.21E-01
K-40	6.71E-01	2.05E-01	1.51E-01

Sample ID: 466998 **Sample Dates: 1/29/2018 - 2/5/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.26E-02	0.00E+00	2.26E-02
Cs-134	<2.01E-02	0.00E+00	2.01E-02
Cs-137	<2.14E-02	0.00E+00	2.14E-02
Be-7	<1.14E-01	0.00E+00	1.14E-01
K-40	6.47E-01	2.01E-01	1.44E-01

Sample ID: 467350 **Sample Dates: 2/5/2018 - 2/12/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.03E-02	0.00E+00	2.03E-02
Cs-134	<2.07E-02	0.00E+00	2.07E-02
Cs-137	<1.57E-02	0.00E+00	1.57E-02
Be-7	<1.33E-01	0.00E+00	1.33E-01
K-40	3.55E-01	1.54E-01	1.49E-01

Sample ID: 467674 **Sample Dates: 2/12/2018 - 2/19/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.24E-02	0.00E+00	2.24E-02
Cs-134	<1.62E-02	0.00E+00	1.62E-02
Cs-137	<2.03E-02	0.00E+00	2.03E-02
Be-7	<1.14E-01	0.00E+00	1.14E-01
K-40	6.45E-01	2.05E-01	1.63E-01

Sample ID: 468448 **Sample Dates: 2/19/2018 - 2/26/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.27E-02	0.00E+00	2.27E-02
Cs-134	<2.07E-02	0.00E+00	2.07E-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	5.54E-01	2.08E-01	2.23E-01

Sample ID: 468776 **Sample Dates: 2/26/2018 - 3/5/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.41E-02	0.00E+00	2.41E-02
Cs-134	<1.45E-02	0.00E+00	1.45E-02
Cs-137	<1.55E-02	0.00E+00	1.55E-02
Be-7	<1.03E-01	0.00E+00	1.03E-01
K-40	6.54E-01	2.13E-01	1.92E-01

Sample ID: 469584 **Sample Dates: 3/5/2018 - 3/12/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.06E-02	0.00E+00	2.06E-02
Cs-134	<1.71E-02	0.00E+00	1.71E-02
Cs-137	<1.76E-02	0.00E+00	1.76E-02
Be-7	<1.19E-01	0.00E+00	1.19E-01
K-40	5.53E-01	1.86E-01	1.49E-01

Sample ID: 470619 **Sample Dates: 3/12/2018 - 3/19/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.19E-02	0.00E+00	2.19E-02
Cs-134	<1.44E-02	0.00E+00	1.44E-02
Cs-137	<1.42E-02	0.00E+00	1.42E-02
Be-7	<1.43E-01	0.00E+00	1.43E-01
K-40	4.99E-01	1.77E-01	1.41E-01

Sample ID: 471170 **Sample Dates: 3/19/2018 - 3/26/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.55E-02	0.00E+00	2.55E-02
Cs-134	<1.68E-02	0.00E+00	1.68E-02
Cs-137	<1.98E-02	0.00E+00	1.98E-02
Be-7	<1.32E-01	0.00E+00	1.32E-01
K-40	4.39E-01	2.13E-01	2.75E-01

Sample ID: 471731 **Sample Dates: 3/26/2018 - 4/2/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.25E-02	0.00E+00	2.25E-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	<1.12E-01	0.00E+00	1.12E-01
K-40	4.36E-01	1.96E-01	2.35E-01

Sample ID: 472528 **Sample Dates: 4/2/2018 - 4/9/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<1.89E-02	0.00E+00	1.89E-02

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

Sample Point 077 [INDICATOR - SW @ 1 miles]

Sample ID: 472528 **Sample Dates: 4/2/2018 - 4/9/2018**

Nuclide	Activity	2 Sigma Error	MDA
Cs-134	<1.91E-02	0.00E+00	1.91E-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	3.15E-01	1.81E-01	2.45E-01

Sample ID: 472997 **Sample Dates: 4/9/2018 - 4/16/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.47E-02	0.00E+00	2.47E-02
Cs-134	<1.76E-02	0.00E+00	1.76E-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	4.68E-01	1.60E-01	3.52E-02

Sample ID: 473278 **Sample Dates: 4/16/2018 - 4/23/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.20E-02	0.00E+00	2.20E-02
Cs-134	<1.77E-02	0.00E+00	1.77E-02
Cs-137	<1.40E-02	0.00E+00	1.40E-02
Be-7	<1.12E-01	0.00E+00	1.12E-01
K-40	3.94E-01	1.88E-01	2.33E-01

Sample ID: 473650 **Sample Dates: 4/23/2018 - 4/30/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.49E-02	0.00E+00	2.49E-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	<1.32E-01	0.00E+00	1.32E-01
K-40	3.46E-01	1.81E-01	2.30E-01

Sample ID: 474166 **Sample Dates: 4/30/2018 - 5/7/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<1.78E-02	0.00E+00	1.78E-02
Cs-134	<1.73E-02	0.00E+00	1.73E-02
Cs-137	<1.95E-02	0.00E+00	1.95E-02
Be-7	<1.17E-01	0.00E+00	1.17E-01
K-40	4.51E-01	1.76E-01	1.70E-01

Sample ID: 474544 **Sample Dates: 5/7/2018 - 5/14/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.06E-02	0.00E+00	2.06E-02
Cs-134	<1.55E-02	0.00E+00	1.55E-02
Cs-137	<1.67E-02	0.00E+00	1.67E-02
Be-7	<1.23E-01	0.00E+00	1.23E-01
K-40	6.15E-01	1.96E-01	1.38E-01

Sample ID: 474911 **Sample Dates: 5/14/2018 - 5/21/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.36E-02	0.00E+00	2.36E-02
Cs-134	<1.96E-02	0.00E+00	1.96E-02
Cs-137	<1.77E-02	0.00E+00	1.77E-02
Be-7	<1.23E-01	0.00E+00	1.23E-01
K-40	<3.74E-01	0.00E+00	3.74E-01

Sample ID: 475231 **Sample Dates: 5/21/2018 - 5/29/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<1.88E-02	0.00E+00	1.88E-02
Cs-134	<9.62E-03	0.00E+00	9.62E-03
Cs-137	<1.55E-02	0.00E+00	1.55E-02
Be-7	<1.05E-01	0.00E+00	1.05E-01
K-40	<3.72E-01	0.00E+00	3.72E-01

Sample ID: 475552 **Sample Dates: 5/29/2018 - 6/4/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.66E-02	0.00E+00	2.66E-02
Cs-134	<2.23E-02	0.00E+00	2.23E-02
Cs-137	<2.07E-02	0.00E+00	2.07E-02
Be-7	<1.54E-01	0.00E+00	1.54E-01
K-40	4.80E-01	2.09E-01	2.34E-01

Sample ID: 476377 **Sample Dates: 6/4/2018 - 6/11/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.22E-02	0.00E+00	2.22E-02
Cs-134	<2.11E-02	0.00E+00	2.11E-02
Cs-137	<1.60E-02	0.00E+00	1.60E-02
Be-7	<1.27E-01	0.00E+00	1.27E-01
K-40	4.78E-01	1.62E-01	3.50E-02

Sample ID: 477397 **Sample Dates: 6/11/2018 - 6/18/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.34E-02	0.00E+00	2.34E-02

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

Sample Point 077 [INDICATOR - SW @ 1 miles]

Sample ID: 477397 **Sample Dates: 6/11/2018 - 6/18/2018**

Nuclide	Activity	2 Sigma Error	MDA
Cs-134	<1.33E-02	0.00E+00	1.33E-02
Cs-137	<1.57E-02	0.00E+00	1.57E-02
Be-7	<1.05E-01	0.00E+00	1.05E-01
K-40	5.75E-01	1.95E-01	1.72E-01

Sample ID: 478123 **Sample Dates: 6/18/2018 - 6/25/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.36E-02	0.00E+00	2.36E-02
Cs-134	<1.46E-02	0.00E+00	1.46E-02
Cs-137	<1.71E-02	0.00E+00	1.71E-02
Be-7	<1.21E-01	0.00E+00	1.21E-01
K-40	4.57E-01	1.69E-01	1.35E-01

Sample ID: 478439 **Sample Dates: 6/25/2018 - 7/2/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.17E-02	0.00E+00	2.17E-02
Cs-134	<1.59E-02	0.00E+00	1.59E-02
Cs-137	<2.08E-02	0.00E+00	2.08E-02
Be-7	<1.26E-01	0.00E+00	1.26E-01
K-40	5.77E-01	2.17E-01	2.38E-01

Sample ID: 478812 **Sample Dates: 7/2/2018 - 7/9/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.33E-02	0.00E+00	2.33E-02
Cs-134	<1.93E-02	0.00E+00	1.93E-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	<3.84E-01	0.00E+00	3.84E-01

Sample ID: 479218 **Sample Dates: 7/9/2018 - 7/16/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.55E-02	0.00E+00	2.55E-02
Cs-134	<1.95E-02	0.00E+00	1.95E-02
Cs-137	<1.56E-02	0.00E+00	1.56E-02
Be-7	<1.36E-01	0.00E+00	1.36E-01
K-40	5.68E-01	1.85E-01	1.34E-01

Sample ID: 479899 **Sample Dates: 7/16/2018 - 7/23/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.19E-02	0.00E+00	2.19E-02
Cs-134	<1.76E-02	0.00E+00	1.76E-02
Cs-137	<1.94E-02	0.00E+00	1.94E-02
Be-7	<1.19E-01	0.00E+00	1.19E-01
K-40	3.81E-01	2.11E-01	2.89E-01

Sample ID: 480262 **Sample Dates: 7/23/2018 - 7/30/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<1.57E-02	0.00E+00	1.57E-02
Cs-134	<1.79E-02	0.00E+00	1.79E-02
Cs-137	<1.78E-02	0.00E+00	1.78E-02
Be-7	4.86E-03	7.15E-02	1.31E-01
K-40	<3.82E-01	0.00E+00	3.82E-01

Sample ID: 481089 **Sample Dates: 7/30/2018 - 8/6/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.29E-02	0.00E+00	2.29E-02
Cs-134	<2.04E-02	0.00E+00	2.04E-02
Cs-137	<1.79E-02	0.00E+00	1.79E-02
Be-7	<1.09E-01	0.00E+00	1.09E-01
K-40	5.14E-01	2.00E-01	2.14E-01

Sample ID: 481530 **Sample Dates: 8/6/2018 - 8/13/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.33E-02	0.00E+00	2.33E-02
Cs-134	<1.91E-02	0.00E+00	1.91E-02
Cs-137	<1.81E-02	0.00E+00	1.81E-02
Be-7	<1.01E-01	0.00E+00	1.01E-01
K-40	<3.30E-01	0.00E+00	3.30E-01

Sample ID: 481980 **Sample Dates: 8/13/2018 - 8/20/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<1.78E-02	0.00E+00	1.78E-02
Cs-134	<1.64E-02	0.00E+00	1.64E-02
Cs-137	<1.28E-02	0.00E+00	1.28E-02
Be-7	<8.15E-02	0.00E+00	8.15E-02
K-40	2.03E-01	1.44E-01	2.01E-01

Sample ID: 482498 **Sample Dates: 8/20/2018 - 8/27/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<1.53E-02	0.00E+00	1.53E-02

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

Sample Point 077 [INDICATOR - SW @ 1 miles]

Sample ID: 482498 **Sample Dates: 8/20/2018 - 8/27/2018**

Nuclide	Activity	2 Sigma Error	MDA
Cs-134	<1.55E-02	0.00E+00	1.55E-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	1.76E-01	1.44E-01	2.13E-01

Sample ID: 482823 **Sample Dates: 8/27/2018 - 9/4/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<1.29E-02	0.00E+00	1.29E-02
Cs-134	<1.23E-02	0.00E+00	1.23E-02
Cs-137	<1.32E-02	0.00E+00	1.32E-02
Be-7	<8.55E-02	0.00E+00	8.55E-02
K-40	3.53E-01	1.33E-01	9.98E-02

Sample ID: 483445 **Sample Dates: 9/4/2018 - 9/10/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.41E-02	0.00E+00	2.41E-02
Cs-134	<1.74E-02	0.00E+00	1.74E-02
Cs-137	<1.82E-02	0.00E+00	1.82E-02
Be-7	<1.32E-01	0.00E+00	1.32E-01
K-40	6.25E-01	2.31E-01	2.36E-01

Sample ID: 484042 **Sample Dates: 9/10/2018 - 9/17/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<3.35E-02	0.00E+00	3.35E-02
Cs-134	<1.46E-02	0.00E+00	1.46E-02
Cs-137	<1.90E-02	0.00E+00	1.90E-02
Be-7	<1.52E-01	0.00E+00	1.52E-01
K-40	6.01E-01	1.25E-01	1.84E-01

Sample ID: 484617 **Sample Dates: 9/17/2018 - 9/24/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<1.79E-02	0.00E+00	1.79E-02
Cs-134	<1.86E-02	0.00E+00	1.86E-02
Cs-137	<1.48E-02	0.00E+00	1.48E-02
Be-7	<1.23E-01	0.00E+00	1.23E-01
K-40	6.62E-01	2.14E-01	1.92E-01

Sample ID: 485042 **Sample Dates: 9/24/2018 - 10/1/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.42E-02	0.00E+00	2.42E-02
Cs-134	<1.81E-02	0.00E+00	1.81E-02
Cs-137	<1.70E-02	0.00E+00	1.70E-02
Be-7	<1.28E-01	0.00E+00	1.28E-01
K-40	3.96E-01	1.97E-01	2.52E-01

Sample ID: 485505 **Sample Dates: 10/1/2018 - 10/8/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.32E-02	0.00E+00	2.32E-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	<1.07E-01	0.00E+00	1.07E-01
K-40	2.86E-01	1.69E-01	2.27E-01

Sample ID: 486182 **Sample Dates: 10/8/2018 - 10/15/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.46E-02	0.00E+00	2.46E-02
Cs-134	<1.71E-02	0.00E+00	1.71E-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	4.35E-01	2.19E-01	2.91E-01

Sample ID: 486714 **Sample Dates: 10/15/2018 - 10/22/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.29E-02	0.00E+00	2.29E-02
Cs-134	<1.72E-02	0.00E+00	1.72E-02
Cs-137	<1.52E-02	0.00E+00	1.52E-02
Be-7	<1.25E-01	0.00E+00	1.25E-01
K-40	3.79E-01	1.84E-01	2.27E-01

Sample ID: 487753 **Sample Dates: 10/22/2018 - 10/29/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.11E-02	0.00E+00	2.11E-02
Cs-134	<1.68E-02	0.00E+00	1.68E-02
Cs-137	<1.44E-02	0.00E+00	1.44E-02
Be-7	<1.03E-01	0.00E+00	1.03E-01
K-40	4.83E-01	1.96E-01	2.15E-01

Sample ID: 487997 **Sample Dates: 10/29/2018 - 11/5/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.05E-02	0.00E+00	2.05E-02

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

Sample Point 077 [INDICATOR - SW @ 1 miles]

Sample ID: 487997 **Sample Dates: 10/29/2018 - 11/5/2018**

Nuclide	Activity	2 Sigma Error	MDA
Cs-134	<1.57E-02	0.00E+00	1.57E-02
Cs-137	<1.46E-02	0.00E+00	1.46E-02
Be-7	<1.04E-01	0.00E+00	1.04E-01
K-40	6.83E-01	1.93E-01	3.43E-02

Sample ID: 488489 **Sample Dates: 11/5/2018 - 11/12/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.16E-02	0.00E+00	2.16E-02
Cs-134	<1.90E-02	0.00E+00	1.90E-02
Cs-137	<1.56E-02	0.00E+00	1.56E-02
Be-7	<1.03E-01	0.00E+00	1.03E-01
K-40	4.56E-01	1.58E-01	3.53E-02

Sample ID: 488868 **Sample Dates: 11/12/2018 - 11/19/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<3.38E-02	0.00E+00	3.38E-02
Cs-134	<1.80E-02	0.00E+00	1.80E-02
Cs-137	<1.95E-02	0.00E+00	1.95E-02
Be-7	<1.26E-01	0.00E+00	1.26E-01
K-40	4.28E-01	1.91E-01	2.26E-01

Sample ID: 489165 **Sample Dates: 11/19/2018 - 11/26/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<3.68E-02	0.00E+00	3.68E-02
Cs-134	<2.13E-02	0.00E+00	2.13E-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	4.48E-01	1.86E-01	2.01E-01

Sample ID: 489747 **Sample Dates: 11/26/2018 - 12/3/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.18E-02	0.00E+00	2.18E-02
Cs-134	<1.58E-02	0.00E+00	1.58E-02
Cs-137	<1.63E-02	0.00E+00	1.63E-02
Be-7	<1.18E-01	0.00E+00	1.18E-01
K-40	<3.85E-01	0.00E+00	3.85E-01

Sample ID: 490170 **Sample Dates: 12/3/2018 - 12/10/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<3.60E-02	0.00E+00	3.60E-02
Cs-134	<1.80E-02	0.00E+00	1.80E-02
Cs-137	<1.42E-02	0.00E+00	1.42E-02
Be-7	<1.23E-01	0.00E+00	1.23E-01
K-40	<4.07E-01	0.00E+00	4.07E-01

Sample ID: 490817 **Sample Dates: 12/10/2018 - 12/18/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<3.02E-02	0.00E+00	3.02E-02
Cs-134	<1.27E-02	0.00E+00	1.27E-02
Cs-137	<1.59E-02	0.00E+00	1.59E-02
Be-7	<7.63E-02	0.00E+00	7.63E-02
K-40	<2.53E-01	0.00E+00	2.53E-01

Sample ID: 491192 **Sample Dates: 12/18/2018 - 12/26/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<3.33E-02	0.00E+00	3.33E-02
Cs-134	<1.66E-02	0.00E+00	1.66E-02
Cs-137	<1.80E-02	0.00E+00	1.80E-02
Be-7	<1.06E-01	0.00E+00	1.06E-01
K-40	5.42E-01	1.96E-01	2.11E-01

Sample ID: 491493 **Sample Dates: 12/26/2018 - 12/31/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<3.76E-02	0.00E+00	3.76E-02
Cs-134	<1.74E-02	0.00E+00	1.74E-02
Cs-137	<2.12E-02	0.00E+00	2.12E-02
Be-7	<1.60E-01	0.00E+00	1.60E-01
K-40	5.66E-01	2.05E-01	4.80E-02

Sample Point 078.1 [INDICATOR - WSW @ 0.53 miles]

Sample ID: 465659 **Sample Dates: 1/2/2018 - 1/8/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.69E-02	0.00E+00	2.69E-02
Cs-134	<1.99E-02	0.00E+00	1.99E-02
Cs-137	<1.96E-02	0.00E+00	1.96E-02
Be-7	<1.42E-01	0.00E+00	1.42E-01
K-40	6.84E-01	2.40E-01	2.28E-01

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

Sample Point 078.1 [INDICATOR - WSW @ 0.53 miles]

Sample ID: 466014 Sample Dates: 1/8/2018 - 1/15/2018

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.55E-02	0.00E+00	2.55E-02
Cs-134	<1.65E-02	0.00E+00	1.65E-02
Cs-137	<1.77E-02	0.00E+00	1.77E-02
Be-7	<1.26E-01	0.00E+00	1.26E-01
K-40	5.63E-01	2.07E-01	2.18E-01

Sample ID: 466216 Sample Dates: 1/15/2018 - 1/22/2018

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.36E-02	0.00E+00	2.36E-02
Cs-134	<1.60E-02	0.00E+00	1.60E-02
Cs-137	<1.88E-02	0.00E+00	1.88E-02
Be-7	<1.40E-01	0.00E+00	1.40E-01
K-40	5.02E-01	1.65E-01	3.49E-02

Sample ID: 466401 Sample Dates: 1/22/2018 - 1/29/2018

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.62E-02	0.00E+00	2.62E-02
Cs-134	<1.43E-02	0.00E+00	1.43E-02
Cs-137	<1.68E-02	0.00E+00	1.68E-02
Be-7	<1.21E-01	0.00E+00	1.21E-01
K-40	5.83E-01	1.91E-01	1.48E-01

Sample ID: 466999 Sample Dates: 1/29/2018 - 2/5/2018

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.14E-02	0.00E+00	2.14E-02
Cs-134	<1.82E-02	0.00E+00	1.82E-02
Cs-137	<1.50E-02	0.00E+00	1.50E-02
Be-7	<1.26E-01	0.00E+00	1.26E-01
K-40	5.10E-01	1.96E-01	2.03E-01

Sample ID: 467351 Sample Dates: 2/5/2018 - 2/12/2018

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.24E-02	0.00E+00	2.24E-02
Cs-134	<1.84E-02	0.00E+00	1.84E-02
Cs-137	<1.98E-02	0.00E+00	1.98E-02
Be-7	<1.22E-01	0.00E+00	1.22E-01
K-40	6.21E-01	2.04E-01	1.79E-01

Sample ID: 467675 Sample Dates: 2/12/2018 - 2/19/2018

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.32E-02	0.00E+00	2.32E-02
Cs-134	<1.61E-02	0.00E+00	1.61E-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	4.18E-01	1.62E-01	1.30E-01

Sample ID: 468449 Sample Dates: 2/19/2018 - 2/26/2018

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.23E-02	0.00E+00	2.23E-02
Cs-134	<1.96E-02	0.00E+00	1.96E-02
Cs-137	<1.46E-02	0.00E+00	1.46E-02
Be-7	<1.37E-01	0.00E+00	1.37E-01
K-40	5.21E-01	1.89E-01	1.79E-01

Sample ID: 468777 Sample Dates: 2/26/2018 - 3/5/2018

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.16E-02	0.00E+00	2.16E-02
Cs-134	<1.81E-02	0.00E+00	1.81E-02
Cs-137	<1.93E-02	0.00E+00	1.93E-02
Be-7	<1.25E-01	0.00E+00	1.25E-01
K-40	5.96E-01	2.23E-01	2.48E-01

Sample ID: 469585 Sample Dates: 3/5/2018 - 3/12/2018

Nuclide	Activity	2 Sigma Error	MDA
I-131	<1.99E-02	0.00E+00	1.99E-02
Cs-134	<2.31E-02	0.00E+00	2.31E-02
Cs-137	<1.76E-02	0.00E+00	1.76E-02
Be-7	<1.30E-01	0.00E+00	1.30E-01
K-40	5.75E-01	1.94E-01	1.65E-01

Sample ID: 470620 Sample Dates: 3/12/2018 - 3/19/2018

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.41E-02	0.00E+00	2.41E-02
Cs-134	<1.86E-02	0.00E+00	1.86E-02
Cs-137	<1.54E-02	0.00E+00	1.54E-02
Be-7	<1.12E-01	0.00E+00	1.12E-01
K-40	<4.12E-01	0.00E+00	4.12E-01

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

Sample Point 078.1 [INDICATOR - WSW @ 0.53 miles]

Sample ID: 471171 **Sample Dates: 3/19/2018 - 3/26/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.19E-02	0.00E+00	2.19E-02
Cs-134	<1.53E-02	0.00E+00	1.53E-02
Cs-137	<1.98E-02	0.00E+00	1.98E-02
Be-7	<1.38E-01	0.00E+00	1.38E-01
K-40	5.30E-01	2.04E-01	2.19E-01

Sample ID: 471732 **Sample Dates: 3/26/2018 - 4/2/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<1.97E-02	0.00E+00	1.97E-02
Cs-134	<6.84E-03	0.00E+00	6.84E-03
Cs-137	<6.16E-03	0.00E+00	6.16E-03
Be-7	<5.32E-02	0.00E+00	5.32E-02
K-40	2.30E-01	7.51E-02	9.04E-02

Sample ID: 472529 **Sample Dates: 4/2/2018 - 4/9/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.04E-02	0.00E+00	2.04E-02
Cs-134	<1.34E-02	0.00E+00	1.34E-02
Cs-137	<1.72E-02	0.00E+00	1.72E-02
Be-7	2.69E-02	8.16E-02	1.43E-01
K-40	3.60E-01	1.75E-01	2.11E-01

Sample ID: 472998 **Sample Dates: 4/9/2018 - 4/16/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.62E-02	0.00E+00	2.62E-02
Cs-134	<2.07E-02	0.00E+00	2.07E-02
Cs-137	<1.66E-02	0.00E+00	1.66E-02
Be-7	<1.35E-01	0.00E+00	1.35E-01
K-40	4.64E-01	1.86E-01	1.94E-01

Sample ID: 473279 **Sample Dates: 4/16/2018 - 4/23/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.72E-02	0.00E+00	2.72E-02
Cs-134	<1.64E-02	0.00E+00	1.64E-02
Cs-137	<1.88E-02	0.00E+00	1.88E-02
Be-7	<1.35E-01	0.00E+00	1.35E-01
K-40	3.17E-01	1.68E-01	2.12E-01

Sample ID: 474167 **Sample Dates: 5/1/2018 - 5/7/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.39E-02	0.00E+00	2.39E-02
Cs-134	<1.89E-02	0.00E+00	1.89E-02
Cs-137	<2.22E-02	0.00E+00	2.22E-02
Be-7	<1.41E-01	0.00E+00	1.41E-01
K-40	6.69E-01	2.54E-01	2.71E-01

Sample ID: 474545 **Sample Dates: 5/7/2018 - 5/14/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.08E-02	0.00E+00	2.08E-02
Cs-134	<1.56E-02	0.00E+00	1.56E-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	5.28E-01	1.99E-01	2.00E-01

Sample ID: 474912 **Sample Dates: 5/14/2018 - 5/21/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.26E-02	0.00E+00	2.26E-02
Cs-134	<1.58E-02	0.00E+00	1.58E-02
Cs-137	<1.81E-02	0.00E+00	1.81E-02
Be-7	<1.01E-01	0.00E+00	1.01E-01
K-40	<3.93E-01	0.00E+00	3.93E-01

Sample ID: 475232 **Sample Dates: 5/21/2018 - 5/29/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<1.63E-02	0.00E+00	1.63E-02
Cs-134	<1.55E-02	0.00E+00	1.55E-02
Cs-137	<1.15E-02	0.00E+00	1.15E-02
Be-7	<9.99E-02	0.00E+00	9.99E-02
K-40	3.57E-01	1.61E-01	1.86E-01

Sample ID: 475553 **Sample Dates: 5/29/2018 - 6/4/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.59E-02	0.00E+00	2.59E-02
Cs-134	<2.16E-02	0.00E+00	2.16E-02
Cs-137	<2.23E-02	0.00E+00	2.23E-02
Be-7	<1.14E-01	0.00E+00	1.14E-01
K-40	7.42E-01	2.31E-01	1.66E-01

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

Sample Point 078.1 [INDICATOR - WSW @ 0.53 miles]

Sample ID: 476378 **Sample Dates: 6/4/2018 - 6/11/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<1.98E-02	0.00E+00	1.98E-02
Cs-134	<1.75E-02	0.00E+00	1.75E-02
Cs-137	<1.84E-02	0.00E+00	1.84E-02
Be-7	<1.27E-01	0.00E+00	1.27E-01
K-40	<4.29E-01	0.00E+00	4.29E-01

Sample ID: 477398 **Sample Dates: 6/11/2018 - 6/18/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.55E-02	0.00E+00	2.55E-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	<1.16E-01	0.00E+00	1.16E-01
K-40	5.27E-01	1.72E-01	3.57E-02

Sample ID: 478124 **Sample Dates: 6/18/2018 - 6/25/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.44E-02	0.00E+00	2.44E-02
Cs-134	<1.54E-02	0.00E+00	1.54E-02
Cs-137	<1.66E-02	0.00E+00	1.66E-02
Be-7	<1.11E-01	0.00E+00	1.11E-01
K-40	5.48E-01	2.23E-01	2.64E-01

Sample ID: 478440 **Sample Dates: 6/25/2018 - 7/2/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.21E-02	0.00E+00	2.21E-02
Cs-134	<1.92E-02	0.00E+00	1.92E-02
Cs-137	<1.74E-02	0.00E+00	1.74E-02
Be-7	<1.29E-01	0.00E+00	1.29E-01
K-40	5.34E-01	1.96E-01	1.92E-01

Sample ID: 478813 **Sample Dates: 7/2/2018 - 7/9/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.33E-02	0.00E+00	2.33E-02
Cs-134	<1.93E-02	0.00E+00	1.93E-02
Cs-137	<1.79E-02	0.00E+00	1.79E-02
Be-7	<1.15E-01	0.00E+00	1.15E-01
K-40	5.94E-01	2.00E-01	1.76E-01

Sample ID: 479219 **Sample Dates: 7/9/2018 - 7/16/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.43E-02	0.00E+00	2.43E-02
Cs-134	<1.83E-02	0.00E+00	1.83E-02
Cs-137	<1.51E-02	0.00E+00	1.51E-02
Be-7	<1.41E-01	0.00E+00	1.41E-01
K-40	<3.50E-01	0.00E+00	3.50E-01

Sample ID: 479900 **Sample Dates: 7/16/2018 - 7/23/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.06E-02	0.00E+00	2.06E-02
Cs-134	<1.62E-02	0.00E+00	1.62E-02
Cs-137	<1.66E-02	0.00E+00	1.66E-02
Be-7	<1.31E-01	0.00E+00	1.31E-01
K-40	4.57E-01	2.03E-01	2.44E-01

Sample ID: 480263 **Sample Dates: 7/23/2018 - 7/30/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.23E-02	0.00E+00	2.23E-02
Cs-134	<1.86E-02	0.00E+00	1.86E-02
Cs-137	<1.78E-02	0.00E+00	1.78E-02
Be-7	<1.17E-01	0.00E+00	1.17E-01
K-40	3.66E-01	1.66E-01	1.81E-01

Sample ID: 481090 **Sample Dates: 7/30/2018 - 8/6/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.30E-02	0.00E+00	2.30E-02
Cs-134	<1.52E-02	0.00E+00	1.52E-02
Cs-137	<1.74E-02	0.00E+00	1.74E-02
Be-7	<1.09E-01	0.00E+00	1.09E-01
K-40	4.71E-01	2.15E-01	2.71E-01

Sample ID: 481531 **Sample Dates: 8/6/2018 - 8/13/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.51E-02	0.00E+00	2.51E-02
Cs-134	<2.13E-02	0.00E+00	2.13E-02
Cs-137	<1.57E-02	0.00E+00	1.57E-02
Be-7	<1.27E-01	0.00E+00	1.27E-01
K-40	2.95E-01	1.63E-01	2.08E-01

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

Sample Point 078.1 [INDICATOR - WSW @ 0.53 miles]

Sample ID: 481981 **Sample Dates: 8/13/2018 - 8/20/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<1.92E-02	0.00E+00	1.92E-02
Cs-134	<9.67E-03	0.00E+00	9.67E-03
Cs-137	<1.49E-02	0.00E+00	1.49E-02
Be-7	<5.63E-02	0.00E+00	5.63E-02
K-40	<3.03E-01	0.00E+00	3.03E-01

Sample ID: 482499 **Sample Dates: 8/20/2018 - 8/27/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<1.46E-02	0.00E+00	1.46E-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	<9.60E-02	0.00E+00	9.60E-02
K-40	2.65E-01	1.46E-01	1.77E-01

Sample ID: 482824 **Sample Dates: 8/27/2018 - 9/4/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<1.51E-02	0.00E+00	1.51E-02
Cs-134	<1.65E-02	0.00E+00	1.65E-02
Cs-137	<1.32E-02	0.00E+00	1.32E-02
Be-7	<8.48E-02	0.00E+00	8.48E-02
K-40	3.09E-01	1.28E-01	1.07E-01

Sample ID: 483446 **Sample Dates: 9/4/2018 - 9/10/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.85E-02	0.00E+00	2.85E-02
Cs-134	<2.46E-02	0.00E+00	2.46E-02
Cs-137	<1.88E-02	0.00E+00	1.88E-02
Be-7	<1.17E-01	0.00E+00	1.17E-01
K-40	6.07E-01	2.27E-01	2.31E-01

Sample ID: 484043 **Sample Dates: 9/10/2018 - 9/17/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<3.42E-02	0.00E+00	3.42E-02
Cs-134	<1.96E-02	0.00E+00	1.96E-02
Cs-137	<1.31E-02	0.00E+00	1.31E-02
Be-7	<1.21E-01	0.00E+00	1.21E-01
K-40	3.59E-01	1.60E-01	1.63E-01

Sample ID: 484618 **Sample Dates: 9/17/2018 - 9/24/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.27E-02	0.00E+00	2.27E-02
Cs-134	<1.44E-02	0.00E+00	1.44E-02
Cs-137	<1.79E-02	0.00E+00	1.79E-02
Be-7	<1.18E-01	0.00E+00	1.18E-01
K-40	4.55E-01	1.81E-01	1.84E-01

Sample ID: 485043 **Sample Dates: 9/24/2018 - 10/1/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.93E-02	0.00E+00	2.93E-02
Cs-134	<1.87E-02	0.00E+00	1.87E-02
Cs-137	<1.79E-02	0.00E+00	1.79E-02
Be-7	<1.19E-01	0.00E+00	1.19E-01
K-40	4.16E-01	1.60E-01	1.26E-01

Sample ID: 485506 **Sample Dates: 10/1/2018 - 10/8/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<1.73E-02	0.00E+00	1.73E-02
Cs-134	<1.77E-02	0.00E+00	1.77E-02
Cs-137	<1.66E-02	0.00E+00	1.66E-02
Be-7	<1.07E-01	0.00E+00	1.07E-01
K-40	5.28E-01	2.00E-01	2.12E-01

Sample ID: 486183 **Sample Dates: 10/8/2018 - 10/15/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.12E-02	0.00E+00	2.12E-02
Cs-134	<1.70E-02	0.00E+00	1.70E-02
Cs-137	<1.51E-02	0.00E+00	1.51E-02
Be-7	<1.18E-01	0.00E+00	1.18E-01
K-40	5.09E-01	1.91E-01	1.85E-01

Sample ID: 486715 **Sample Dates: 10/15/2018 - 10/22/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.51E-02	0.00E+00	2.51E-02
Cs-134	<1.65E-02	0.00E+00	1.65E-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	4.70E-01	1.82E-01	1.82E-01

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

Sample Point 078.1 [INDICATOR - WSW @ 0.53 miles]

Sample ID: 487754 **Sample Dates: 10/22/2018 - 10/29/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.30E-02	0.00E+00	2.30E-02
Cs-134	<1.53E-02	0.00E+00	1.53E-02
Cs-137	<1.71E-02	0.00E+00	1.71E-02
Be-7	<1.10E-01	0.00E+00	1.10E-01
K-40	6.10E-01	2.07E-01	1.91E-01

Sample ID: 487998 **Sample Dates: 10/29/2018 - 11/5/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.06E-02	0.00E+00	2.06E-02
Cs-134	<1.71E-02	0.00E+00	1.71E-02
Cs-137	<1.72E-02	0.00E+00	1.72E-02
Be-7	<1.04E-01	0.00E+00	1.04E-01
K-40	5.09E-01	1.75E-01	1.26E-01

Sample ID: 488490 **Sample Dates: 11/5/2018 - 11/12/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<1.99E-02	0.00E+00	1.99E-02
Cs-134	<2.02E-02	0.00E+00	2.02E-02
Cs-137	<1.91E-02	0.00E+00	1.91E-02
Be-7	<1.26E-01	0.00E+00	1.26E-01
K-40	3.93E-01	1.77E-01	1.99E-01

Sample ID: 488869 **Sample Dates: 11/12/2018 - 11/19/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<3.44E-02	0.00E+00	3.44E-02
Cs-134	<1.59E-02	0.00E+00	1.59E-02
Cs-137	<1.77E-02	0.00E+00	1.77E-02
Be-7	<1.38E-01	0.00E+00	1.38E-01
K-40	4.31E-01	1.98E-01	2.44E-01

Sample ID: 489166 **Sample Dates: 11/19/2018 - 11/26/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.08E-02	0.00E+00	2.08E-02
Cs-134	<1.68E-02	0.00E+00	1.68E-02
Cs-137	<1.31E-02	0.00E+00	1.31E-02
Be-7	<1.39E-01	0.00E+00	1.39E-01
K-40	4.79E-01	1.98E-01	2.21E-01

Sample ID: 489748 **Sample Dates: 11/26/2018 - 12/3/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.15E-02	0.00E+00	2.15E-02
Cs-134	<1.58E-02	0.00E+00	1.58E-02
Cs-137	<1.82E-02	0.00E+00	1.82E-02
Be-7	<1.21E-01	0.00E+00	1.21E-01
K-40	<3.69E-01	0.00E+00	3.69E-01

Sample ID: 490171 **Sample Dates: 12/3/2018 - 12/10/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<3.76E-02	0.00E+00	3.76E-02
Cs-134	<1.67E-02	0.00E+00	1.67E-02
Cs-137	<1.69E-02	0.00E+00	1.69E-02
Be-7	<1.26E-01	0.00E+00	1.26E-01
K-40	<3.20E-01	0.00E+00	3.20E-01

Sample ID: 490818 **Sample Dates: 12/10/2018 - 12/18/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.48E-02	0.00E+00	2.48E-02
Cs-134	<1.43E-02	0.00E+00	1.43E-02
Cs-137	<1.04E-02	0.00E+00	1.04E-02
Be-7	<7.75E-02	0.00E+00	7.75E-02
K-40	<2.71E-01	0.00E+00	2.71E-01

Sample ID: 491193 **Sample Dates: 12/18/2018 - 12/26/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.88E-02	0.00E+00	2.88E-02
Cs-134	<1.35E-02	0.00E+00	1.35E-02
Cs-137	<1.49E-02	0.00E+00	1.49E-02
Be-7	<1.24E-01	0.00E+00	1.24E-01
K-40	5.00E-01	1.97E-01	2.30E-01

Sample ID: 491494 **Sample Dates: 12/26/2018 - 12/31/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<4.93E-02	0.00E+00	4.93E-02
Cs-134	<2.41E-02	0.00E+00	2.41E-02
Cs-137	<2.20E-02	0.00E+00	2.20E-02
Be-7	<1.99E-01	0.00E+00	1.99E-01
K-40	5.43E-01	2.40E-01	2.66E-01

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

Sample Point 079 [INDICATOR - NE @ 0.56 miles]

Sample ID: 465660 **Sample Dates: 1/2/2018 - 1/8/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.82E-02	0.00E+00	2.82E-02
Cs-134	<2.23E-02	0.00E+00	2.23E-02
Cs-137	<1.90E-02	0.00E+00	1.90E-02
Be-7	<1.68E-01	0.00E+00	1.68E-01
K-40	6.04E-01	2.25E-01	2.17E-01

Sample ID: 466015 **Sample Dates: 1/8/2018 - 1/15/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.77E-02	0.00E+00	2.77E-02
Cs-134	<1.58E-02	0.00E+00	1.58E-02
Cs-137	<1.72E-02	0.00E+00	1.72E-02
Be-7	<1.21E-01	0.00E+00	1.21E-01
K-40	5.53E-01	1.89E-01	1.57E-01

Sample ID: 466217 **Sample Dates: 1/15/2018 - 1/22/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.54E-02	0.00E+00	2.54E-02
Cs-134	<1.99E-02	0.00E+00	1.99E-02
Cs-137	<1.84E-02	0.00E+00	1.84E-02
Be-7	<1.32E-01	0.00E+00	1.32E-01
K-40	5.53E-01	1.85E-01	1.38E-01

Sample ID: 466402 **Sample Dates: 1/22/2018 - 1/29/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.27E-02	0.00E+00	2.27E-02
Cs-134	<1.90E-02	0.00E+00	1.90E-02
Cs-137	<1.81E-02	0.00E+00	1.81E-02
Be-7	<1.39E-01	0.00E+00	1.39E-01
K-40	5.65E-01	1.99E-01	1.89E-01

Sample ID: 467000 **Sample Dates: 1/29/2018 - 2/5/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.20E-02	0.00E+00	2.20E-02
Cs-134	<1.17E-02	0.00E+00	1.17E-02
Cs-137	<1.91E-02	0.00E+00	1.91E-02
Be-7	<1.46E-01	0.00E+00	1.46E-01
K-40	6.61E-01	2.16E-01	1.95E-01

Sample ID: 467352 **Sample Dates: 2/5/2018 - 2/12/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.24E-02	0.00E+00	2.24E-02
Cs-134	<1.58E-02	0.00E+00	1.58E-02
Cs-137	<1.77E-02	0.00E+00	1.77E-02
Be-7	<1.16E-01	0.00E+00	1.16E-01
K-40	5.56E-01	2.05E-01	2.15E-01

Sample ID: 467676 **Sample Dates: 2/12/2018 - 2/19/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.28E-02	0.00E+00	2.28E-02
Cs-134	<2.01E-02	0.00E+00	2.01E-02
Cs-137	<1.66E-02	0.00E+00	1.66E-02
Be-7	<9.18E-02	0.00E+00	9.18E-02
K-40	5.65E-01	1.92E-01	1.59E-01

Sample ID: 468450 **Sample Dates: 2/19/2018 - 2/26/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.28E-02	0.00E+00	2.28E-02
Cs-134	<1.72E-02	0.00E+00	1.72E-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	4.95E-01	1.85E-01	1.80E-01

Sample ID: 468778 **Sample Dates: 2/26/2018 - 3/5/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.87E-02	0.00E+00	2.87E-02
Cs-134	<1.45E-02	0.00E+00	1.45E-02
Cs-137	<1.80E-02	0.00E+00	1.80E-02
Be-7	<1.20E-01	0.00E+00	1.20E-01
K-40	4.18E-01	1.86E-01	2.16E-01

Sample ID: 469586 **Sample Dates: 3/5/2018 - 3/12/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.30E-02	0.00E+00	2.30E-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	<9.97E-02	0.00E+00	9.97E-02
K-40	<3.23E-01	0.00E+00	3.23E-01

Sample ID: 470621 **Sample Dates: 3/12/2018 - 3/19/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.15E-02	0.00E+00	2.15E-02
Cs-134	<1.43E-02	0.00E+00	1.43E-02
Cs-137	<1.91E-02	0.00E+00	1.91E-02
Be-7	<1.21E-01	0.00E+00	1.21E-01
K-40	5.00E-01	1.86E-01	1.77E-01

Sample ID: 471172 **Sample Dates: 3/19/2018 - 3/26/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.52E-02	0.00E+00	2.52E-02
Cs-134	<2.12E-02	0.00E+00	2.12E-02
Cs-137	<1.98E-02	0.00E+00	1.98E-02
Be-7	<1.17E-01	0.00E+00	1.17E-01
K-40	6.35E-01	2.09E-01	1.83E-01

Sample ID: 471733 **Sample Dates: 3/26/2018 - 4/2/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.01E-02	0.00E+00	2.01E-02
Cs-134	<1.26E-02	0.00E+00	1.26E-02
Cs-137	<1.80E-02	0.00E+00	1.80E-02
Be-7	<1.24E-01	0.00E+00	1.24E-01
K-40	4.69E-01	2.21E-01	2.87E-01

Sample ID: 472530 **Sample Dates: 4/2/2018 - 4/9/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.49E-02	0.00E+00	2.49E-02
Cs-134	<1.72E-02	0.00E+00	1.72E-02
Cs-137	<1.63E-02	0.00E+00	1.63E-02
Be-7	<9.28E-02	0.00E+00	9.28E-02
K-40	4.69E-01	1.85E-01	1.91E-01

Sample ID: 472999 **Sample Dates: 4/9/2018 - 4/16/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.26E-02	0.00E+00	2.26E-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	<1.21E-01	0.00E+00	1.21E-01
K-40	2.01E-01	1.51E-01	2.17E-01

Sample ID: 473280 **Sample Dates: 4/16/2018 - 4/23/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.52E-02	0.00E+00	2.52E-02
Cs-134	<2.00E-02	0.00E+00	2.00E-02
Cs-137	<1.56E-02	0.00E+00	1.56E-02
Be-7	<1.18E-01	0.00E+00	1.18E-01
K-40	5.14E-01	1.66E-01	3.40E-02

Sample ID: 473652 **Sample Dates: 4/23/2018 - 4/30/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.63E-02	0.00E+00	2.63E-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	<1.11E-01	0.00E+00	1.11E-01
K-40	4.58E-01	2.12E-01	2.68E-01

Sample ID: 474168 **Sample Dates: 4/30/2018 - 5/7/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.41E-02	0.00E+00	2.41E-02
Cs-134	<1.91E-02	0.00E+00	1.91E-02
Cs-137	<1.68E-02	0.00E+00	1.68E-02
Be-7	<1.11E-01	0.00E+00	1.11E-01
K-40	3.86E-01	1.92E-01	2.45E-01

Sample ID: 474546 **Sample Dates: 5/7/2018 - 5/14/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.29E-02	0.00E+00	2.29E-02
Cs-134	<1.80E-02	0.00E+00	1.80E-02
Cs-137	<1.96E-02	0.00E+00	1.96E-02
Be-7	<1.26E-01	0.00E+00	1.26E-01
K-40	3.70E-01	2.12E-01	2.96E-01

Sample ID: 474913 **Sample Dates: 5/14/2018 - 5/21/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.30E-02	0.00E+00	2.30E-02
Cs-134	<1.85E-02	0.00E+00	1.85E-02
Cs-137	<1.95E-02	0.00E+00	1.95E-02
Be-7	<1.21E-01	0.00E+00	1.21E-01
K-40	4.96E-01	1.96E-01	2.12E-01

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

Sample Point 079 [INDICATOR - NE @ 0.56 miles]

Sample ID: 475233 **Sample Dates: 5/21/2018 - 5/29/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.03E-02	0.00E+00	2.03E-02
Cs-134	<1.51E-02	0.00E+00	1.51E-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	3.71E-01	1.49E-01	1.42E-01

Sample ID: 475554 **Sample Dates: 5/29/2018 - 6/4/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.61E-02	0.00E+00	2.61E-02
Cs-134	<2.26E-02	0.00E+00	2.26E-02
Cs-137	<1.92E-02	0.00E+00	1.92E-02
Be-7	<1.62E-01	0.00E+00	1.62E-01
K-40	5.93E-01	2.28E-01	2.37E-01

Sample ID: 476379 **Sample Dates: 6/4/2018 - 6/11/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.23E-02	0.00E+00	2.23E-02
Cs-134	<1.99E-02	0.00E+00	1.99E-02
Cs-137	<1.84E-02	0.00E+00	1.84E-02
Be-7	<1.12E-01	0.00E+00	1.12E-01
K-40	<4.00E-01	0.00E+00	4.00E-01

Sample ID: 477399 **Sample Dates: 6/11/2018 - 6/18/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.38E-02	0.00E+00	2.38E-02
Cs-134	<1.59E-02	0.00E+00	1.59E-02
Cs-137	<2.12E-02	0.00E+00	2.12E-02
Be-7	<1.17E-01	0.00E+00	1.17E-01
K-40	4.19E-01	1.91E-01	2.16E-01

Sample ID: 478125 **Sample Dates: 6/18/2018 - 6/25/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.25E-02	0.00E+00	2.25E-02
Cs-134	<1.90E-02	0.00E+00	1.90E-02
Cs-137	<1.30E-02	0.00E+00	1.30E-02
Be-7	<1.18E-01	0.00E+00	1.18E-01
K-40	5.38E-01	2.03E-01	2.12E-01

Sample ID: 478441 **Sample Dates: 6/25/2018 - 7/2/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.11E-02	0.00E+00	2.11E-02
Cs-134	<2.09E-02	0.00E+00	2.09E-02
Cs-137	<1.42E-02	0.00E+00	1.42E-02
Be-7	<1.15E-01	0.00E+00	1.15E-01
K-40	6.40E-01	2.12E-01	1.94E-01

Sample ID: 478814 **Sample Dates: 7/2/2018 - 7/9/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.37E-02	0.00E+00	2.37E-02
Cs-134	<1.80E-02	0.00E+00	1.80E-02
Cs-137	<1.79E-02	0.00E+00	1.79E-02
Be-7	<1.30E-01	0.00E+00	1.30E-01
K-40	3.90E-01	1.92E-01	2.42E-01

Sample ID: 479220 **Sample Dates: 7/9/2018 - 7/16/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.04E-02	0.00E+00	2.04E-02
Cs-134	<1.77E-02	0.00E+00	1.77E-02
Cs-137	<1.75E-02	0.00E+00	1.75E-02
Be-7	<1.07E-01	0.00E+00	1.07E-01
K-40	4.87E-01	1.88E-01	1.94E-01

Sample ID: 479901 **Sample Dates: 7/16/2018 - 7/23/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.24E-02	0.00E+00	2.24E-02
Cs-134	<1.62E-02	0.00E+00	1.62E-02
Cs-137	<1.67E-02	0.00E+00	1.67E-02
Be-7	<1.37E-01	0.00E+00	1.37E-01
K-40	4.98E-01	1.76E-01	1.32E-01

Sample ID: 480264 **Sample Dates: 7/23/2018 - 7/30/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<1.84E-02	0.00E+00	1.84E-02
Cs-134	<1.79E-02	0.00E+00	1.79E-02
Cs-137	<1.07E-02	0.00E+00	1.07E-02
Be-7	<1.26E-01	0.00E+00	1.26E-01
K-40	6.64E-01	1.91E-01	3.46E-02

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

Sample Point 079 [INDICATOR - NE @ 0.56 miles]

Sample ID: 481091 **Sample Dates: 7/30/2018 - 8/6/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.20E-02	0.00E+00	2.20E-02
Cs-134	<1.52E-02	0.00E+00	1.52E-02
Cs-137	<1.54E-02	0.00E+00	1.54E-02
Be-7	<1.43E-01	0.00E+00	1.43E-01
K-40	5.97E-01	2.17E-01	2.31E-01

Sample ID: 481532 **Sample Dates: 8/6/2018 - 8/13/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.70E-02	0.00E+00	2.70E-02
Cs-134	<1.62E-02	0.00E+00	1.62E-02
Cs-137	<1.74E-02	0.00E+00	1.74E-02
Be-7	<1.04E-01	0.00E+00	1.04E-01
K-40	5.21E-01	2.05E-01	2.30E-01

Sample ID: 481982 **Sample Dates: 8/13/2018 - 8/20/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.37E-02	0.00E+00	2.37E-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	<1.17E-01	0.00E+00	1.17E-01
K-40	1.62E-01	1.47E-01	2.22E-01

Sample ID: 482500 **Sample Dates: 8/20/2018 - 8/27/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<1.40E-02	0.00E+00	1.40E-02
Cs-134	<1.28E-02	0.00E+00	1.28E-02
Cs-137	<1.47E-02	0.00E+00	1.47E-02
Be-7	<6.87E-02	0.00E+00	6.87E-02
K-40	2.29E-01	1.35E-01	1.71E-01

Sample ID: 482825 **Sample Dates: 8/27/2018 - 9/4/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<1.49E-02	0.00E+00	1.49E-02
Cs-134	<1.50E-02	0.00E+00	1.50E-02
Cs-137	<1.03E-02	0.00E+00	1.03E-02
Be-7	<7.68E-02	0.00E+00	7.68E-02
K-40	<2.53E-01	0.00E+00	2.53E-01

Sample ID: 483447 **Sample Dates: 9/4/2018 - 9/10/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.50E-02	0.00E+00	2.50E-02
Cs-134	<2.13E-02	0.00E+00	2.13E-02
Cs-137	<1.94E-02	0.00E+00	1.94E-02
Be-7	<1.42E-01	0.00E+00	1.42E-01
K-40	<4.33E-01	0.00E+00	4.33E-01

Sample ID: 484044 **Sample Dates: 9/10/2018 - 9/17/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<3.10E-02	0.00E+00	3.10E-02
Cs-134	<1.46E-02	0.00E+00	1.46E-02
Cs-137	<1.55E-02	0.00E+00	1.55E-02
Be-7	<1.14E-01	0.00E+00	1.14E-01
K-40	3.46E-01	1.81E-01	2.30E-01

Sample ID: 484619 **Sample Dates: 9/17/2018 - 9/24/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.07E-02	0.00E+00	2.07E-02
Cs-134	<1.74E-02	0.00E+00	1.74E-02
Cs-137	<1.42E-02	0.00E+00	1.42E-02
Be-7	<9.76E-02	0.00E+00	9.76E-02
K-40	2.72E-01	1.77E-01	2.50E-01

Sample ID: 485044 **Sample Dates: 9/24/2018 - 10/1/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.36E-02	0.00E+00	2.36E-02
Cs-134	<1.92E-02	0.00E+00	1.92E-02
Cs-137	<2.04E-02	0.00E+00	2.04E-02
Be-7	<1.30E-01	0.00E+00	1.30E-01
K-40	4.12E-01	1.75E-01	1.85E-01

Sample ID: 485507 **Sample Dates: 10/1/2018 - 10/8/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<1.99E-02	0.00E+00	1.99E-02
Cs-134	<1.33E-02	0.00E+00	1.33E-02
Cs-137	<1.62E-02	0.00E+00	1.62E-02
Be-7	<9.29E-02	0.00E+00	9.29E-02
K-40	2.35E-01	1.77E-01	2.62E-01

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

Sample Point 079 [INDICATOR - NE @ 0.56 miles]

Sample ID: 486184 Sample Dates: 10/8/2018 - 10/15/2018

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.60E-02	0.00E+00	2.60E-02
Cs-134	<1.90E-02	0.00E+00	1.90E-02
Cs-137	<2.16E-02	0.00E+00	2.16E-02
Be-7	<1.08E-01	0.00E+00	1.08E-01
K-40	5.94E-01	2.19E-01	2.36E-01

Sample ID: 486716 Sample Dates: 10/15/2018 - 10/22/2018

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.52E-02	0.00E+00	2.52E-02
Cs-134	<2.13E-02	0.00E+00	2.13E-02
Cs-137	<1.63E-02	0.00E+00	1.63E-02
Be-7	<1.13E-01	0.00E+00	1.13E-01
K-40	2.69E-01	1.59E-01	2.09E-01

Sample ID: 487755 Sample Dates: 10/22/2018 - 10/29/2018

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.40E-02	0.00E+00	2.40E-02
Cs-134	<1.94E-02	0.00E+00	1.94E-02
Cs-137	<1.49E-02	0.00E+00	1.49E-02
Be-7	<1.19E-01	0.00E+00	1.19E-01
K-40	5.81E-01	1.79E-01	3.50E-02

Sample ID: 487999 Sample Dates: 10/29/2018 - 11/5/2018

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.06E-02	0.00E+00	2.06E-02
Cs-134	<1.78E-02	0.00E+00	1.78E-02
Cs-137	<1.81E-02	0.00E+00	1.81E-02
Be-7	<1.29E-01	0.00E+00	1.29E-01
K-40	5.01E-01	1.89E-01	1.89E-01

Sample ID: 488491 Sample Dates: 11/5/2018 - 11/12/2018

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.54E-02	0.00E+00	2.54E-02
Cs-134	<1.46E-02	0.00E+00	1.46E-02
Cs-137	<1.67E-02	0.00E+00	1.67E-02
Be-7	<1.25E-01	0.00E+00	1.25E-01
K-40	3.91E-01	1.97E-01	2.52E-01

Sample ID: 488870 Sample Dates: 11/12/2018 - 11/19/2018

Nuclide	Activity	2 Sigma Error	MDA
I-131	<3.22E-02	0.00E+00	3.22E-02
Cs-134	<1.44E-02	0.00E+00	1.44E-02
Cs-137	<1.73E-02	0.00E+00	1.73E-02
Be-7	<1.50E-01	0.00E+00	1.50E-01
K-40	4.55E-01	1.94E-01	2.25E-01

Sample ID: 489167 Sample Dates: 11/19/2018 - 11/26/2018

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.45E-02	0.00E+00	2.45E-02
Cs-134	<1.61E-02	0.00E+00	1.61E-02
Cs-137	<1.71E-02	0.00E+00	1.71E-02
Be-7	<1.17E-01	0.00E+00	1.17E-01
K-40	4.05E-01	1.83E-01	2.11E-01

Sample ID: 489749 Sample Dates: 11/26/2018 - 12/3/2018

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.03E-02	0.00E+00	2.03E-02
Cs-134	<1.65E-02	0.00E+00	1.65E-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	4.73E-01	1.79E-01	1.69E-01

Sample ID: 490172 Sample Dates: 12/3/2018 - 12/10/2018

Nuclide	Activity	2 Sigma Error	MDA
I-131	<3.39E-02	0.00E+00	3.39E-02
Cs-134	<1.93E-02	0.00E+00	1.93E-02
Cs-137	<1.69E-02	0.00E+00	1.69E-02
Be-7	<1.27E-01	0.00E+00	1.27E-01
K-40	5.26E-01	1.69E-01	3.47E-02

Sample ID: 490819 Sample Dates: 12/10/2018 - 12/18/2018

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.45E-02	0.00E+00	2.45E-02
Cs-134	<1.81E-02	0.00E+00	1.81E-02
Cs-137	<1.34E-02	0.00E+00	1.34E-02
Be-7	<8.09E-02	0.00E+00	8.09E-02
K-40	2.84E-01	1.39E-01	1.56E-01

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

Sample Point 079 [INDICATOR - NE @ 0.56 miles]

Sample ID: 491194 Sample Dates: 12/18/2018 - 12/26/2018

Nuclide	Activity	2 Sigma Error	MDA
I-131	<3.93E-02	0.00E+00	3.93E-02
Cs-134	<1.77E-02	0.00E+00	1.77E-02
Cs-137	<1.20E-02	0.00E+00	1.20E-02
Be-7	<1.03E-01	0.00E+00	1.03E-01
K-40	<2.95E-01	0.00E+00	2.95E-01

Sample ID: 491495 Sample Dates: 12/26/2018 - 12/31/2018

Nuclide	Activity	2 Sigma Error	MDA
I-131	<4.95E-02	0.00E+00	4.95E-02
Cs-134	<2.95E-02	0.00E+00	2.95E-02
Cs-137	<2.51E-02	0.00E+00	2.51E-02
Be-7	<1.85E-01	0.00E+00	1.85E-01
K-40	6.24E-01	2.67E-01	3.08E-01

Sample Point 081 [CONTROL - SE @ 9.33 miles]

Sample ID: 465661 Sample Dates: 1/2/2018 - 1/8/2018

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.92E-02	0.00E+00	2.92E-02
Cs-134	<1.80E-02	0.00E+00	1.80E-02
Cs-137	<2.06E-02	0.00E+00	2.06E-02
Be-7	<1.30E-01	0.00E+00	1.30E-01
K-40	5.52E-01	2.26E-01	2.47E-01

Sample ID: 466016 Sample Dates: 1/8/2018 - 1/15/2018

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.32E-02	0.00E+00	2.32E-02
Cs-134	<1.72E-02	0.00E+00	1.72E-02
Cs-137	<1.77E-02	0.00E+00	1.77E-02
Be-7	<1.38E-01	0.00E+00	1.38E-01
K-40	4.58E-01	2.00E-01	2.40E-01

Sample ID: 466218 Sample Dates: 1/15/2018 - 1/22/2018

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.16E-02	0.00E+00	2.16E-02
Cs-134	<1.09E-02	0.00E+00	1.09E-02
Cs-137	<1.53E-02	0.00E+00	1.53E-02
Be-7	<1.08E-01	0.00E+00	1.08E-01
K-40	4.24E-01	1.77E-01	1.87E-01

Sample ID: 466403 Sample Dates: 1/22/2018 - 1/29/2018

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.05E-02	0.00E+00	2.05E-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	<1.19E-01	0.00E+00	1.19E-01
K-40	7.56E-01	2.24E-01	1.82E-01

Sample ID: 467001 Sample Dates: 1/29/2018 - 2/5/2018

Nuclide	Activity	2 Sigma Error	MDA
I-131	<1.96E-02	0.00E+00	1.96E-02
Cs-134	<1.75E-02	0.00E+00	1.75E-02
Cs-137	<1.55E-02	0.00E+00	1.55E-02
Be-7	<1.40E-01	0.00E+00	1.40E-01
K-40	4.07E-01	1.62E-01	1.43E-01

Sample ID: 467353 Sample Dates: 2/5/2018 - 2/12/2018

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.00E-02	0.00E+00	2.00E-02
Cs-134	<1.90E-02	0.00E+00	1.90E-02
Cs-137	<1.62E-02	0.00E+00	1.62E-02
Be-7	<8.87E-02	0.00E+00	8.87E-02
K-40	5.20E-01	1.89E-01	1.80E-01

Sample ID: 467677 Sample Dates: 2/12/2018 - 2/19/2018

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.62E-02	0.00E+00	2.62E-02
Cs-134	<1.37E-02	0.00E+00	1.37E-02
Cs-137	<1.72E-02	0.00E+00	1.72E-02
Be-7	<1.15E-01	0.00E+00	1.15E-01
K-40	4.15E-01	1.79E-01	1.94E-01

Sample ID: 468451 Sample Dates: 2/19/2018 - 2/26/2018

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.22E-02	0.00E+00	2.22E-02
Cs-134	<1.96E-02	0.00E+00	1.96E-02
Cs-137	<1.57E-02	0.00E+00	1.57E-02
Be-7	<1.26E-01	0.00E+00	1.26E-01
K-40	5.36E-01	1.77E-01	1.18E-01

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

Sample Point 081 [CONTROL - SE @ 9.33 miles]

Sample ID: 468779 **Sample Dates: 2/26/2018 - 3/5/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<1.95E-02	0.00E+00	1.95E-02
Cs-134	<1.75E-02	0.00E+00	1.75E-02
Cs-137	<2.10E-02	0.00E+00	2.10E-02
Be-7	<1.03E-01	0.00E+00	1.03E-01
K-40	6.25E-01	2.16E-01	2.15E-01

Sample ID: 469587 **Sample Dates: 3/5/2018 - 3/12/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<1.82E-02	0.00E+00	1.82E-02
Cs-134	<1.89E-02	0.00E+00	1.89E-02
Cs-137	<1.56E-02	0.00E+00	1.56E-02
Be-7	<1.16E-01	0.00E+00	1.16E-01
K-40	5.82E-01	2.14E-01	2.31E-01

Sample ID: 470622 **Sample Dates: 3/12/2018 - 3/19/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.25E-02	0.00E+00	2.25E-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	<1.32E-01	0.00E+00	1.32E-01
K-40	3.48E-01	1.72E-01	2.07E-01

Sample ID: 471173 **Sample Dates: 3/19/2018 - 3/26/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.20E-02	0.00E+00	2.20E-02
Cs-134	<1.67E-02	0.00E+00	1.67E-02
Cs-137	<1.64E-02	0.00E+00	1.64E-02
Be-7	<1.37E-01	0.00E+00	1.37E-01
K-40	6.81E-01	2.14E-01	1.81E-01

Sample ID: 471734 **Sample Dates: 3/26/2018 - 4/2/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.01E-02	0.00E+00	2.01E-02
Cs-134	<1.69E-02	0.00E+00	1.69E-02
Cs-137	<1.71E-02	0.00E+00	1.71E-02
Be-7	<1.42E-01	0.00E+00	1.42E-01
K-40	4.59E-01	1.79E-01	1.73E-01

Sample ID: 472531 **Sample Dates: 4/2/2018 - 4/9/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.09E-02	0.00E+00	2.09E-02
Cs-134	<1.49E-02	0.00E+00	1.49E-02
Cs-137	<1.56E-02	0.00E+00	1.56E-02
Be-7	<1.27E-01	0.00E+00	1.27E-01
K-40	5.46E-01	2.16E-01	2.52E-01

Sample ID: 473000 **Sample Dates: 4/9/2018 - 4/16/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.63E-02	0.00E+00	2.63E-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	<1.30E-01	0.00E+00	1.30E-01
K-40	<3.95E-01	0.00E+00	3.95E-01

Sample ID: 473281 **Sample Dates: 4/16/2018 - 4/23/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.42E-02	0.00E+00	2.42E-02
Cs-134	<1.71E-02	0.00E+00	1.71E-02
Cs-137	<1.40E-02	0.00E+00	1.40E-02
Be-7	<1.25E-01	0.00E+00	1.25E-01
K-40	3.72E-01	1.50E-01	1.21E-01

Sample ID: 473653 **Sample Dates: 4/23/2018 - 4/30/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.33E-02	0.00E+00	2.33E-02
Cs-134	<1.68E-02	0.00E+00	1.68E-02
Cs-137	<1.70E-02	0.00E+00	1.70E-02
Be-7	<9.94E-02	0.00E+00	9.94E-02
K-40	6.41E-01	2.03E-01	1.56E-01

Sample ID: 474169 **Sample Dates: 4/30/2018 - 5/7/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.29E-02	0.00E+00	2.29E-02
Cs-134	<2.04E-02	0.00E+00	2.04E-02
Cs-137	<1.78E-02	0.00E+00	1.78E-02
Be-7	<8.95E-02	0.00E+00	8.95E-02
K-40	4.48E-01	1.79E-01	1.82E-01

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

Sample Point 081 [CONTROL - SE @ 9.33 miles]

Sample ID: 474547 **Sample Dates: 5/7/2018 - 5/14/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.21E-02	0.00E+00	2.21E-02
Cs-134	<1.52E-02	0.00E+00	1.52E-02
Cs-137	<1.79E-02	0.00E+00	1.79E-02
Be-7	<1.05E-01	0.00E+00	1.05E-01
K-40	5.15E-01	1.68E-01	3.49E-02

Sample ID: 474914 **Sample Dates: 5/14/2018 - 5/21/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.01E-02	0.00E+00	2.01E-02
Cs-134	<1.84E-02	0.00E+00	1.84E-02
Cs-137	<1.89E-02	0.00E+00	1.89E-02
Be-7	<1.11E-01	0.00E+00	1.11E-01
K-40	3.40E-01	1.95E-01	2.69E-01

Sample ID: 475234 **Sample Dates: 5/21/2018 - 5/29/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.07E-02	0.00E+00	2.07E-02
Cs-134	<1.60E-02	0.00E+00	1.60E-02
Cs-137	<1.31E-02	0.00E+00	1.31E-02
Be-7	<9.06E-02	0.00E+00	9.06E-02
K-40	4.29E-01	1.59E-01	1.43E-01

Sample ID: 475555 **Sample Dates: 5/29/2018 - 6/4/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.36E-02	0.00E+00	2.36E-02
Cs-134	<2.02E-02	0.00E+00	2.02E-02
Cs-137	<2.23E-02	0.00E+00	2.23E-02
Be-7	<1.38E-01	0.00E+00	1.38E-01
K-40	4.89E-01	2.41E-01	3.14E-01

Sample ID: 476380 **Sample Dates: 6/4/2018 - 6/11/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<1.93E-02	0.00E+00	1.93E-02
Cs-134	<1.75E-02	0.00E+00	1.75E-02
Cs-137	<1.98E-02	0.00E+00	1.98E-02
Be-7	<1.33E-01	0.00E+00	1.33E-01
K-40	3.75E-01	2.03E-01	2.73E-01

Sample ID: 477400 **Sample Dates: 6/11/2018 - 6/18/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.11E-02	0.00E+00	2.11E-02
Cs-134	<1.57E-02	0.00E+00	1.57E-02
Cs-137	<1.94E-02	0.00E+00	1.94E-02
Be-7	<1.34E-01	0.00E+00	1.34E-01
K-40	4.68E-01	1.81E-01	1.79E-01

Sample ID: 478126 **Sample Dates: 6/18/2018 - 6/25/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.39E-02	0.00E+00	2.39E-02
Cs-134	<1.82E-02	0.00E+00	1.82E-02
Cs-137	<1.90E-02	0.00E+00	1.90E-02
Be-7	<1.21E-01	0.00E+00	1.21E-01
K-40	5.32E-01	1.71E-01	3.52E-02

Sample ID: 478442 **Sample Dates: 6/25/2018 - 7/2/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.18E-02	0.00E+00	2.18E-02
Cs-134	<1.52E-02	0.00E+00	1.52E-02
Cs-137	<1.70E-02	0.00E+00	1.70E-02
Be-7	<1.15E-01	0.00E+00	1.15E-01
K-40	6.49E-01	2.04E-01	1.58E-01

Sample ID: 478815 **Sample Dates: 7/2/2018 - 7/9/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.29E-02	0.00E+00	2.29E-02
Cs-134	<1.44E-02	0.00E+00	1.44E-02
Cs-137	<1.88E-02	0.00E+00	1.88E-02
Be-7	<1.30E-01	0.00E+00	1.30E-01
K-40	4.06E-01	1.66E-01	1.61E-01

Sample ID: 479221 **Sample Dates: 7/9/2018 - 7/16/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.50E-02	0.00E+00	2.50E-02
Cs-134	<1.90E-02	0.00E+00	1.90E-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	4.60E-01	1.86E-01	2.00E-01

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

Sample Point 081 [CONTROL - SE @ 9.33 miles]

Sample ID: 479902 **Sample Dates: 7/16/2018 - 7/23/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<1.98E-02	0.00E+00	1.98E-02
Cs-134	<1.96E-02	0.00E+00	1.96E-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	<3.68E-01	0.00E+00	3.68E-01

Sample ID: 480265 **Sample Dates: 7/23/2018 - 7/30/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.35E-02	0.00E+00	2.35E-02
Cs-134	<1.65E-02	0.00E+00	1.65E-02
Cs-137	<1.94E-02	0.00E+00	1.94E-02
Be-7	<1.20E-01	0.00E+00	1.20E-01
K-40	4.05E-01	1.61E-01	1.44E-01

Sample ID: 481092 **Sample Dates: 7/30/2018 - 8/6/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.07E-02	0.00E+00	2.07E-02
Cs-134	<1.87E-02	0.00E+00	1.87E-02
Cs-137	<2.13E-02	0.00E+00	2.13E-02
Be-7	<1.33E-01	0.00E+00	1.33E-01
K-40	<3.63E-01	0.00E+00	3.63E-01

Sample ID: 481533 **Sample Dates: 8/6/2018 - 8/13/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.47E-02	0.00E+00	2.47E-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	<1.34E-01	0.00E+00	1.34E-01
K-40	4.76E-01	2.12E-01	2.64E-01

Sample ID: 481983 **Sample Dates: 8/13/2018 - 8/20/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<1.96E-02	0.00E+00	1.96E-02
Cs-134	<1.56E-02	0.00E+00	1.56E-02
Cs-137	<9.12E-03	0.00E+00	9.12E-03
Be-7	<7.62E-02	0.00E+00	7.62E-02
K-40	<2.85E-01	0.00E+00	2.85E-01

Sample ID: 482501 **Sample Dates: 8/20/2018 - 8/27/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<1.48E-02	0.00E+00	1.48E-02
Cs-134	<1.32E-02	0.00E+00	1.32E-02
Cs-137	<1.57E-02	0.00E+00	1.57E-02
Be-7	<7.58E-02	0.00E+00	7.58E-02
K-40	3.33E-01	1.47E-01	1.46E-01

Sample ID: 482826 **Sample Dates: 8/27/2018 - 9/4/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<1.49E-02	0.00E+00	1.49E-02
Cs-134	<1.24E-02	0.00E+00	1.24E-02
Cs-137	<1.55E-02	0.00E+00	1.55E-02
Be-7	<6.23E-02	0.00E+00	6.23E-02
K-40	3.71E-01	1.29E-01	2.87E-02

Sample ID: 483448 **Sample Dates: 9/4/2018 - 9/10/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.93E-02	0.00E+00	2.93E-02
Cs-134	<1.91E-02	0.00E+00	1.91E-02
Cs-137	<1.49E-02	0.00E+00	1.49E-02
Be-7	<1.40E-01	0.00E+00	1.40E-01
K-40	6.87E-01	2.48E-01	2.62E-01

Sample ID: 484045 **Sample Dates: 9/10/2018 - 9/17/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<3.29E-02	0.00E+00	3.29E-02
Cs-134	<1.63E-02	0.00E+00	1.63E-02
Cs-137	<1.91E-02	0.00E+00	1.91E-02
Be-7	<1.29E-01	0.00E+00	1.29E-01
K-40	4.38E-01	2.07E-01	2.61E-01

Sample ID: 484620 **Sample Dates: 9/17/2018 - 9/24/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.12E-02	0.00E+00	2.12E-02
Cs-134	<1.51E-02	0.00E+00	1.51E-02
Cs-137	<1.63E-02	0.00E+00	1.63E-02
Be-7	<1.26E-01	0.00E+00	1.26E-01
K-40	3.96E-01	1.46E-01	3.46E-02

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

Sample Point 081 [CONTROL - SE @ 9.33 miles]

Sample ID: 485045 Sample Dates: 9/24/2018 - 10/1/2018

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.81E-02	0.00E+00	2.81E-02
Cs-134	<1.94E-02	0.00E+00	1.94E-02
Cs-137	<1.79E-02	0.00E+00	1.79E-02
Be-7	<1.28E-01	0.00E+00	1.28E-01
K-40	3.88E-01	1.81E-01	2.13E-01

Sample ID: 485508 Sample Dates: 10/1/2018 - 10/8/2018

Nuclide	Activity	2 Sigma Error	MDA
I-131	<1.94E-02	0.00E+00	1.94E-02
Cs-134	<1.96E-02	0.00E+00	1.96E-02
Cs-137	<1.52E-02	0.00E+00	1.52E-02
Be-7	<1.31E-01	0.00E+00	1.31E-01
K-40	6.33E-01	1.86E-01	3.43E-02

Sample ID: 486185 Sample Dates: 10/8/2018 - 10/15/2018

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.55E-02	0.00E+00	2.55E-02
Cs-134	<2.01E-02	0.00E+00	2.01E-02
Cs-137	<1.81E-02	0.00E+00	1.81E-02
Be-7	<1.22E-01	0.00E+00	1.22E-01
K-40	5.72E-01	1.89E-01	1.41E-01

Sample ID: 486717 Sample Dates: 10/15/2018 - 10/22/2018

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.09E-02	0.00E+00	2.09E-02
Cs-134	<1.96E-02	0.00E+00	1.96E-02
Cs-137	<1.67E-02	0.00E+00	1.67E-02
Be-7	<1.03E-01	0.00E+00	1.03E-01
K-40	5.07E-01	2.18E-01	2.68E-01

Sample ID: 487756 Sample Dates: 10/22/2018 - 10/29/2018

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.02E-02	0.00E+00	2.02E-02
Cs-134	<1.53E-02	0.00E+00	1.53E-02
Cs-137	<1.50E-02	0.00E+00	1.50E-02
Be-7	1.94E-02	7.66E-02	1.36E-01
K-40	6.32E-01	2.00E-01	1.49E-01

Sample ID: 488000 Sample Dates: 10/29/2018 - 11/5/2018

Nuclide	Activity	2 Sigma Error	MDA
I-131	<1.78E-02	0.00E+00	1.78E-02
Cs-134	<1.78E-02	0.00E+00	1.78E-02
Cs-137	<1.86E-02	0.00E+00	1.86E-02
Be-7	<1.21E-01	0.00E+00	1.21E-01
K-40	3.18E-01	1.70E-01	2.17E-01

Sample ID: 488492 Sample Dates: 11/5/2018 - 11/12/2018

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.22E-02	0.00E+00	2.22E-02
Cs-134	<1.61E-02	0.00E+00	1.61E-02
Cs-137	<1.44E-02	0.00E+00	1.44E-02
Be-7	<1.42E-01	0.00E+00	1.42E-01
K-40	3.95E-01	1.73E-01	1.87E-01

Sample ID: 488871 Sample Dates: 11/12/2018 - 11/19/2018

Nuclide	Activity	2 Sigma Error	MDA
I-131	<3.30E-02	0.00E+00	3.30E-02
Cs-134	<1.85E-02	0.00E+00	1.85E-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	4.54E-01	2.02E-01	2.45E-01

Sample ID: 489168 Sample Dates: 11/19/2018 - 11/26/2018

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.32E-02	0.00E+00	2.32E-02
Cs-134	<1.69E-02	0.00E+00	1.69E-02
Cs-137	<1.95E-02	0.00E+00	1.95E-02
Be-7	<1.04E-01	0.00E+00	1.04E-01
K-40	6.61E-01	2.15E-01	1.93E-01

Sample ID: 489750 Sample Dates: 11/26/2018 - 12/3/2018

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.10E-02	0.00E+00	2.10E-02
Cs-134	<1.90E-02	0.00E+00	1.90E-02
Cs-137	<1.57E-02	0.00E+00	1.57E-02
Be-7	<1.37E-01	0.00E+00	1.37E-01
K-40	3.47E-01	1.62E-01	1.81E-01

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

Sample Point 081 [CONTROL - SE @ 9.33 miles]

Sample ID: 490173 Sample Dates: 12/3/2018 - 12/10/2018

Nuclide	Activity	2 Sigma Error	MDA
I-131	<3.54E-02	0.00E+00	3.54E-02
Cs-134	<1.44E-02	0.00E+00	1.44E-02
Cs-137	<1.64E-02	0.00E+00	1.64E-02
Be-7	<1.30E-01	0.00E+00	1.30E-01
K-40	5.39E-01	1.92E-01	1.77E-01

Sample ID: 490820 Sample Dates: 12/10/2018 - 12/18/2018

Nuclide	Activity	2 Sigma Error	MDA
I-131	<3.05E-02	0.00E+00	3.05E-02
Cs-134	<1.01E-02	0.00E+00	1.01E-02
Cs-137	<1.26E-02	0.00E+00	1.26E-02
Be-7	<8.12E-02	0.00E+00	8.12E-02
K-40	<2.79E-01	0.00E+00	2.79E-01

Sample ID: 491195 Sample Dates: 12/18/2018 - 12/26/2018

Nuclide	Activity	2 Sigma Error	MDA
I-131	<4.81E-02	0.00E+00	4.81E-02
Cs-134	<1.35E-02	0.00E+00	1.35E-02
Cs-137	<1.58E-02	0.00E+00	1.58E-02
Be-7	<1.40E-01	0.00E+00	1.40E-01
K-40	3.59E-01	1.67E-01	2.01E-01

Sample ID: 491496 Sample Dates: 12/26/2018 - 12/31/2018

Nuclide	Activity	2 Sigma Error	MDA
I-131	<4.30E-02	0.00E+00	4.30E-02
Cs-134	<2.42E-02	0.00E+00	2.42E-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	6.40E-01	2.52E-01	2.54E-01

Sample Point 084 [INDICATOR - NNE @ 2.58 miles]

Sample ID: 465662 Sample Dates: 1/2/2018 - 1/8/2018

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.68E-02	0.00E+00	2.68E-02
Cs-134	<2.37E-02	0.00E+00	2.37E-02
Cs-137	<2.24E-02	0.00E+00	2.24E-02
Be-7	<1.38E-01	0.00E+00	1.38E-01
K-40	4.27E-01	2.10E-01	2.55E-01

Sample ID: 466017 Sample Dates: 1/8/2018 - 1/15/2018

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.04E-02	0.00E+00	2.04E-02
Cs-134	<1.65E-02	0.00E+00	1.65E-02
Cs-137	<1.77E-02	0.00E+00	1.77E-02
Be-7	<1.18E-01	0.00E+00	1.18E-01
K-40	5.42E-01	2.04E-01	2.18E-01

Sample ID: 466219 Sample Dates: 1/15/2018 - 1/22/2018

Nuclide	Activity	2 Sigma Error	MDA
I-131	<1.90E-02	0.00E+00	1.90E-02
Cs-134	<1.52E-02	0.00E+00	1.52E-02
Cs-137	<1.74E-02	0.00E+00	1.74E-02
Be-7	<1.35E-01	0.00E+00	1.35E-01
K-40	6.68E-01	2.03E-01	1.41E-01

Sample ID: 466404 Sample Dates: 1/22/2018 - 1/29/2018

Nuclide	Activity	2 Sigma Error	MDA
I-131	<1.95E-02	0.00E+00	1.95E-02
Cs-134	<1.91E-02	0.00E+00	1.91E-02
Cs-137	<1.58E-02	0.00E+00	1.58E-02
Be-7	<1.19E-01	0.00E+00	1.19E-01
K-40	6.76E-01	1.93E-01	3.45E-02

Sample ID: 467002 Sample Dates: 1/29/2018 - 2/5/2018

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.17E-02	0.00E+00	2.17E-02
Cs-134	<1.61E-02	0.00E+00	1.61E-02
Cs-137	<1.94E-02	0.00E+00	1.94E-02
Be-7	<1.23E-01	0.00E+00	1.23E-01
K-40	5.44E-01	1.73E-01	3.51E-02

Sample ID: 467354 Sample Dates: 2/5/2018 - 2/12/2018

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.42E-02	0.00E+00	2.42E-02
Cs-134	<1.84E-02	0.00E+00	1.84E-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	5.70E-01	1.87E-01	1.38E-01

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

Sample Point 084 [INDICATOR - NNE @ 2.58 miles]

Sample ID: 467678 **Sample Dates: 2/12/2018 - 2/19/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.35E-02	0.00E+00	2.35E-02
Cs-134	<1.62E-02	0.00E+00	1.62E-02
Cs-137	<1.94E-02	0.00E+00	1.94E-02
Be-7	<1.24E-01	0.00E+00	1.24E-01
K-40	4.38E-01	1.84E-01	2.00E-01

Sample ID: 468452 **Sample Dates: 2/19/2018 - 2/26/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.11E-02	0.00E+00	2.11E-02
Cs-134	<2.07E-02	0.00E+00	2.07E-02
Cs-137	<1.52E-02	0.00E+00	1.52E-02
Be-7	<1.18E-01	0.00E+00	1.18E-01
K-40	<3.47E-01	0.00E+00	3.47E-01

Sample ID: 468780 **Sample Dates: 2/26/2018 - 3/5/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.07E-02	0.00E+00	2.07E-02
Cs-134	<1.88E-02	0.00E+00	1.88E-02
Cs-137	<1.80E-02	0.00E+00	1.80E-02
Be-7	<1.26E-01	0.00E+00	1.26E-01
K-40	<4.34E-01	0.00E+00	4.34E-01

Sample ID: 469588 **Sample Dates: 3/5/2018 - 3/12/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.38E-02	0.00E+00	2.38E-02
Cs-134	<1.64E-02	0.00E+00	1.64E-02
Cs-137	<1.76E-02	0.00E+00	1.76E-02
Be-7	<9.99E-02	0.00E+00	9.99E-02
K-40	3.65E-01	1.89E-01	2.44E-01

Sample ID: 470623 **Sample Dates: 3/12/2018 - 3/19/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.44E-02	0.00E+00	2.44E-02
Cs-134	<1.98E-02	0.00E+00	1.98E-02
Cs-137	<1.42E-02	0.00E+00	1.42E-02
Be-7	<8.15E-02	0.00E+00	8.15E-02
K-40	4.01E-01	2.06E-01	2.72E-01

Sample ID: 471174 **Sample Dates: 3/19/2018 - 3/26/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.52E-02	0.00E+00	2.52E-02
Cs-134	<1.68E-02	0.00E+00	1.68E-02
Cs-137	<1.44E-02	0.00E+00	1.44E-02
Be-7	<1.07E-01	0.00E+00	1.07E-01
K-40	4.99E-01	1.85E-01	1.70E-01

Sample ID: 471735 **Sample Dates: 3/26/2018 - 4/2/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.00E-02	0.00E+00	2.00E-02
Cs-134	<1.53E-02	0.00E+00	1.53E-02
Cs-137	<1.85E-02	0.00E+00	1.85E-02
Be-7	<1.28E-01	0.00E+00	1.28E-01
K-40	3.53E-01	1.61E-01	1.72E-01

Sample ID: 472532 **Sample Dates: 4/2/2018 - 4/9/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<1.80E-02	0.00E+00	1.80E-02
Cs-134	<1.72E-02	0.00E+00	1.72E-02
Cs-137	<2.14E-02	0.00E+00	2.14E-02
Be-7	<1.31E-01	0.00E+00	1.31E-01
K-40	4.69E-01	2.06E-01	2.51E-01

Sample ID: 473001 **Sample Dates: 4/9/2018 - 4/16/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<3.05E-02	0.00E+00	3.05E-02
Cs-134	<1.76E-02	0.00E+00	1.76E-02
Cs-137	<1.86E-02	0.00E+00	1.86E-02
Be-7	<1.33E-01	0.00E+00	1.33E-01
K-40	4.25E-01	1.59E-01	1.10E-01

Sample ID: 473282 **Sample Dates: 4/16/2018 - 4/23/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.56E-02	0.00E+00	2.56E-02
Cs-134	<1.41E-02	0.00E+00	1.41E-02
Cs-137	<1.66E-02	0.00E+00	1.66E-02
Be-7	<1.33E-01	0.00E+00	1.33E-01
K-40	4.07E-01	1.82E-01	2.11E-01

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

Sample Point 084 [INDICATOR - NNE @ 2.58 miles]

Sample ID: 473654 **Sample Dates: 4/23/2018 - 4/30/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.50E-02	0.00E+00	2.50E-02
Cs-134	<1.90E-02	0.00E+00	1.90E-02
Cs-137	<1.95E-02	0.00E+00	1.95E-02
Be-7	<1.27E-01	0.00E+00	1.27E-01
K-40	5.58E-01	1.89E-01	1.50E-01

Sample ID: 474170 **Sample Dates: 4/30/2018 - 5/7/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.14E-02	0.00E+00	2.14E-02
Cs-134	<1.65E-02	0.00E+00	1.65E-02
Cs-137	<1.52E-02	0.00E+00	1.52E-02
Be-7	<1.17E-01	0.00E+00	1.17E-01
K-40	5.75E-01	2.14E-01	2.33E-01

Sample ID: 474548 **Sample Dates: 5/7/2018 - 5/14/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.23E-02	0.00E+00	2.23E-02
Cs-134	<1.67E-02	0.00E+00	1.67E-02
Cs-137	<1.42E-02	0.00E+00	1.42E-02
Be-7	<1.27E-01	0.00E+00	1.27E-01
K-40	3.47E-01	1.50E-01	1.36E-01

Sample ID: 474915 **Sample Dates: 5/14/2018 - 5/21/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.06E-02	0.00E+00	2.06E-02
Cs-134	<1.34E-02	0.00E+00	1.34E-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	4.35E-01	1.77E-01	1.82E-01

Sample ID: 475235 **Sample Dates: 5/21/2018 - 5/29/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.17E-02	0.00E+00	2.17E-02
Cs-134	<1.35E-02	0.00E+00	1.35E-02
Cs-137	<1.51E-02	0.00E+00	1.51E-02
Be-7	<1.14E-01	0.00E+00	1.14E-01
K-40	4.37E-01	1.73E-01	1.85E-01

Sample ID: 475556 **Sample Dates: 5/29/2018 - 6/4/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.49E-02	0.00E+00	2.49E-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	<1.14E-01	0.00E+00	1.14E-01
K-40	5.35E-01	2.14E-01	2.23E-01

Sample ID: 476381 **Sample Dates: 6/4/2018 - 6/11/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.29E-02	0.00E+00	2.29E-02
Cs-134	<1.81E-02	0.00E+00	1.81E-02
Cs-137	<1.65E-02	0.00E+00	1.65E-02
Be-7	<1.22E-01	0.00E+00	1.22E-01
K-40	6.45E-01	2.20E-01	2.18E-01

Sample ID: 477401 **Sample Dates: 6/11/2018 - 6/18/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.62E-02	0.00E+00	2.62E-02
Cs-134	<2.22E-02	0.00E+00	2.22E-02
Cs-137	<1.41E-02	0.00E+00	1.41E-02
Be-7	<1.15E-01	0.00E+00	1.15E-01
K-40	4.56E-01	1.79E-01	1.79E-01

Sample ID: 478127 **Sample Dates: 6/18/2018 - 6/25/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.31E-02	0.00E+00	2.31E-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	<1.36E-01	0.00E+00	1.36E-01
K-40	4.67E-01	1.85E-01	1.89E-01

Sample ID: 478443 **Sample Dates: 6/25/2018 - 7/2/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.14E-02	0.00E+00	2.14E-02
Cs-134	<1.44E-02	0.00E+00	1.44E-02
Cs-137	<1.54E-02	0.00E+00	1.54E-02
Be-7	<1.29E-01	0.00E+00	1.29E-01
K-40	4.31E-01	1.80E-01	1.91E-01

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

Sample Point 084 [INDICATOR - NNE @ 2.58 miles]

Sample ID: 478816 **Sample Dates: 7/2/2018 - 7/9/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.43E-02	0.00E+00	2.43E-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	<1.02E-01	0.00E+00	1.02E-01
K-40	3.92E-01	1.87E-01	2.28E-01

Sample ID: 479222 **Sample Dates: 7/9/2018 - 7/16/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.59E-02	0.00E+00	2.59E-02
Cs-134	<1.89E-02	0.00E+00	1.89E-02
Cs-137	<2.16E-02	0.00E+00	2.16E-02
Be-7	<1.39E-01	0.00E+00	1.39E-01
K-40	4.48E-01	1.74E-01	1.65E-01

Sample ID: 479903 **Sample Dates: 7/16/2018 - 7/23/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.43E-02	0.00E+00	2.43E-02
Cs-134	<1.62E-02	0.00E+00	1.62E-02
Cs-137	<1.61E-02	0.00E+00	1.61E-02
Be-7	<1.20E-01	0.00E+00	1.20E-01
K-40	4.98E-01	1.76E-01	1.31E-01

Sample ID: 480266 **Sample Dates: 7/23/2018 - 7/30/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<1.94E-02	0.00E+00	1.94E-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	<1.26E-01	0.00E+00	1.26E-01
K-40	6.75E-01	2.04E-01	1.42E-01

Sample ID: 481093 **Sample Dates: 7/30/2018 - 8/6/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.04E-02	0.00E+00	2.04E-02
Cs-134	<1.87E-02	0.00E+00	1.87E-02
Cs-137	<1.48E-02	0.00E+00	1.48E-02
Be-7	<1.33E-01	0.00E+00	1.33E-01
K-40	4.50E-01	2.13E-01	2.72E-01

Sample ID: 481534 **Sample Dates: 8/6/2018 - 8/13/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.65E-02	0.00E+00	2.65E-02
Cs-134	<1.42E-02	0.00E+00	1.42E-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	4.41E-01	1.72E-01	1.61E-01

Sample ID: 481984 **Sample Dates: 8/13/2018 - 8/20/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<3.16E-02	0.00E+00	3.16E-02
Cs-134	<1.64E-02	0.00E+00	1.64E-02
Cs-137	<1.59E-02	0.00E+00	1.59E-02
Be-7	<1.21E-01	0.00E+00	1.21E-01
K-40	5.27E-01	2.02E-01	2.18E-01

Sample ID: 482502 **Sample Dates: 8/20/2018 - 8/27/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<1.68E-02	0.00E+00	1.68E-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	<1.08E-01	0.00E+00	1.08E-01
K-40	2.28E-01	1.55E-01	2.17E-01

Sample ID: 482827 **Sample Dates: 8/27/2018 - 9/4/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<1.84E-02	0.00E+00	1.84E-02
Cs-134	<1.59E-02	0.00E+00	1.59E-02
Cs-137	<1.37E-02	0.00E+00	1.37E-02
Be-7	<9.54E-02	0.00E+00	9.54E-02
K-40	2.03E-01	1.41E-01	1.98E-01

Sample ID: 483449 **Sample Dates: 9/4/2018 - 9/10/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.92E-02	0.00E+00	2.92E-02
Cs-134	<2.34E-02	0.00E+00	2.34E-02
Cs-137	<1.88E-02	0.00E+00	1.88E-02
Be-7	<1.52E-01	0.00E+00	1.52E-01
K-40	6.60E-01	2.60E-01	3.05E-01

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

Sample Point 084 [INDICATOR - NNE @ 2.58 miles]

Sample ID: 484046 **Sample Dates: 9/10/2018 - 9/17/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<3.28E-02	0.00E+00	3.28E-02
Cs-134	<2.14E-02	0.00E+00	2.14E-02
Cs-137	<1.72E-02	0.00E+00	1.72E-02
Be-7	<1.22E-01	0.00E+00	1.22E-01
K-40	3.73E-01	1.75E-01	2.02E-01

Sample ID: 484621 **Sample Dates: 9/17/2018 - 9/24/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.46E-02	0.00E+00	2.46E-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	<1.01E-01	0.00E+00	1.01E-01
K-40	3.44E-01	1.75E-01	2.18E-01

Sample ID: 485046 **Sample Dates: 9/24/2018 - 10/1/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.64E-02	0.00E+00	2.64E-02
Cs-134	<1.60E-02	0.00E+00	1.60E-02
Cs-137	<2.01E-02	0.00E+00	2.01E-02
Be-7	<1.19E-01	0.00E+00	1.19E-01
K-40	5.46E-01	1.90E-01	1.63E-01

Sample ID: 485509 **Sample Dates: 10/1/2018 - 10/8/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.04E-02	0.00E+00	2.04E-02
Cs-134	<1.64E-02	0.00E+00	1.64E-02
Cs-137	<1.84E-02	0.00E+00	1.84E-02
Be-7	<1.16E-01	0.00E+00	1.16E-01
K-40	4.40E-01	1.81E-01	1.94E-01

Sample ID: 486186 **Sample Dates: 10/8/2018 - 10/15/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.71E-02	0.00E+00	2.71E-02
Cs-134	<1.77E-02	0.00E+00	1.77E-02
Cs-137	<1.67E-02	0.00E+00	1.67E-02
Be-7	<7.33E-02	0.00E+00	7.33E-02
K-40	<3.79E-01	0.00E+00	3.79E-01

Sample ID: 486718 **Sample Dates: 10/15/2018 - 10/22/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.63E-02	0.00E+00	2.63E-02
Cs-134	<1.51E-02	0.00E+00	1.51E-02
Cs-137	<1.72E-02	0.00E+00	1.72E-02
Be-7	<1.13E-01	0.00E+00	1.13E-01
K-40	5.08E-01	1.66E-01	3.44E-02

Sample ID: 487757 **Sample Dates: 10/22/2018 - 10/29/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.29E-02	0.00E+00	2.29E-02
Cs-134	<1.88E-02	0.00E+00	1.88E-02
Cs-137	<1.94E-02	0.00E+00	1.94E-02
Be-7	<1.03E-01	0.00E+00	1.03E-01
K-40	5.35E-01	2.20E-01	2.61E-01

Sample ID: 488001 **Sample Dates: 10/29/2018 - 11/5/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.13E-02	0.00E+00	2.13E-02
Cs-134	<1.24E-02	0.00E+00	1.24E-02
Cs-137	<1.52E-02	0.00E+00	1.52E-02
Be-7	<1.26E-01	0.00E+00	1.26E-01
K-40	3.23E-01	1.60E-01	1.88E-01

Sample ID: 488493 **Sample Dates: 11/5/2018 - 11/12/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.30E-02	0.00E+00	2.30E-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	<1.26E-01	0.00E+00	1.26E-01
K-40	5.51E-01	1.95E-01	1.78E-01

Sample ID: 488872 **Sample Dates: 11/12/2018 - 11/19/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<3.55E-02	0.00E+00	3.55E-02
Cs-134	<1.86E-02	0.00E+00	1.86E-02
Cs-137	<2.03E-02	0.00E+00	2.03E-02
Be-7	<1.29E-01	0.00E+00	1.29E-01
K-40	4.19E-01	2.14E-01	2.87E-01

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

Sample Point 084 [INDICATOR - NNE @ 2.58 miles]

Sample ID: 489169 Sample Dates: 11/19/2018 - 11/26/2018

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.03E-02	0.00E+00	2.03E-02
Cs-134	<1.82E-02	0.00E+00	1.82E-02
Cs-137	<1.55E-02	0.00E+00	1.55E-02
Be-7	<9.13E-02	0.00E+00	9.13E-02
K-40	6.13E-01	2.11E-01	2.03E-01

Sample ID: 489751 Sample Dates: 11/26/2018 - 12/3/2018

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.33E-02	0.00E+00	2.33E-02
Cs-134	<1.43E-02	0.00E+00	1.43E-02
Cs-137	<1.58E-02	0.00E+00	1.58E-02
Be-7	<1.37E-01	0.00E+00	1.37E-01
K-40	<3.95E-01	0.00E+00	3.95E-01

Sample ID: 490174 Sample Dates: 12/3/2018 - 12/10/2018

Nuclide	Activity	2 Sigma Error	MDA
I-131	<3.51E-02	0.00E+00	3.51E-02
Cs-134	<1.78E-02	0.00E+00	1.78E-02
Cs-137	<1.39E-02	0.00E+00	1.39E-02
Be-7	<1.33E-01	0.00E+00	1.33E-01
K-40	5.18E-01	1.77E-01	1.19E-01

Sample ID: 490821 Sample Dates: 12/10/2018 - 12/18/2018

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.12E-02	0.00E+00	2.12E-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	<1.14E-01	0.00E+00	1.14E-01
K-40	<2.35E-01	0.00E+00	2.35E-01

Sample ID: 491196 Sample Dates: 12/18/2018 - 12/26/2018

Nuclide	Activity	2 Sigma Error	MDA
I-131	<4.43E-02	0.00E+00	4.43E-02
Cs-134	<1.66E-02	0.00E+00	1.66E-02
Cs-137	<1.31E-02	0.00E+00	1.31E-02
Be-7	<1.13E-01	0.00E+00	1.13E-01
K-40	5.69E-01	2.02E-01	2.17E-01

Sample ID: 491497 Sample Dates: 12/26/2018 - 12/31/2018

Nuclide	Activity	2 Sigma Error	MDA
I-131	<4.99E-02	0.00E+00	4.99E-02
Cs-134	<2.31E-02	0.00E+00	2.31E-02
Cs-137	<2.12E-02	0.00E+00	2.12E-02
Be-7	<1.87E-01	0.00E+00	1.87E-01
K-40	8.34E-01	3.02E-01	3.23E-01

Sample Point 085 [INDICATOR - NNW @ 0.88 miles]

Sample ID: 465663 Sample Dates: 1/2/2018 - 1/8/2018

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.96E-02	0.00E+00	2.96E-02
Cs-134	<1.90E-02	0.00E+00	1.90E-02
Cs-137	<2.12E-02	0.00E+00	2.12E-02
Be-7	<1.48E-01	0.00E+00	1.48E-01
K-40	6.35E-01	2.23E-01	1.93E-01

Sample ID: 466018 Sample Dates: 1/8/2018 - 1/15/2018

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.46E-02	0.00E+00	2.46E-02
Cs-134	<1.91E-02	0.00E+00	1.91E-02
Cs-137	<1.99E-02	0.00E+00	1.99E-02
Be-7	<1.08E-01	0.00E+00	1.08E-01
K-40	5.18E-01	1.81E-01	1.49E-01

Sample ID: 466220 Sample Dates: 1/15/2018 - 1/22/2018

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.10E-02	0.00E+00	2.10E-02
Cs-134	<1.60E-02	0.00E+00	1.60E-02
Cs-137	<1.65E-02	0.00E+00	1.65E-02
Be-7	<1.09E-01	0.00E+00	1.09E-01
K-40	5.63E-01	1.89E-01	1.50E-01

Sample ID: 468008 Sample Dates: 1/22/2018 - 1/24/2018

Nuclide	Activity	2 Sigma Error	MDA
I-131	<4.48E-02	0.00E+00	4.48E-02
Cs-134	<2.75E-02	0.00E+00	2.75E-02
Cs-137	<2.36E-02	0.00E+00	2.36E-02
Be-7	<2.05E-01	0.00E+00	2.05E-01
K-40	2.11E+00	3.79E-01	3.41E-01

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

Sample Point 085 [INDICATOR - NNW @ 0.88 miles]

Sample ID: 466405 **Sample Dates: 1/24/2018 - 1/29/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.89E-02	0.00E+00	2.89E-02
Cs-134	<2.85E-02	0.00E+00	2.85E-02
Cs-137	<2.22E-02	0.00E+00	2.22E-02
Be-7	<1.77E-01	0.00E+00	1.77E-01
K-40	8.07E-01	2.78E-01	2.53E-01

Sample ID: 467003 **Sample Dates: 1/29/2018 - 2/5/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.71E-02	0.00E+00	2.71E-02
Cs-134	<1.95E-02	0.00E+00	1.95E-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	6.52E-01	2.18E-01	2.09E-01

Sample ID: 467355 **Sample Dates: 2/5/2018 - 2/12/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.14E-02	0.00E+00	2.14E-02
Cs-134	<1.78E-02	0.00E+00	1.78E-02
Cs-137	<1.62E-02	0.00E+00	1.62E-02
Be-7	<1.43E-01	0.00E+00	1.43E-01
K-40	5.69E-01	1.88E-01	1.44E-01

Sample ID: 467679 **Sample Dates: 2/12/2018 - 2/19/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.60E-02	0.00E+00	2.60E-02
Cs-134	<2.12E-02	0.00E+00	2.12E-02
Cs-137	<1.44E-02	0.00E+00	1.44E-02
Be-7	<1.39E-01	0.00E+00	1.39E-01
K-40	3.62E-01	1.91E-01	2.50E-01

Sample ID: 468453 **Sample Dates: 2/19/2018 - 2/26/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.15E-02	0.00E+00	2.15E-02
Cs-134	<1.65E-02	0.00E+00	1.65E-02
Cs-137	<1.67E-02	0.00E+00	1.67E-02
Be-7	<1.18E-01	0.00E+00	1.18E-01
K-40	5.20E-01	1.68E-01	3.44E-02

Sample ID: 468781 **Sample Dates: 2/26/2018 - 3/5/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.38E-02	0.00E+00	2.38E-02
Cs-134	<1.81E-02	0.00E+00	1.81E-02
Cs-137	<1.65E-02	0.00E+00	1.65E-02
Be-7	<1.31E-01	0.00E+00	1.31E-01
K-40	3.82E-01	1.87E-01	2.32E-01

Sample ID: 469589 **Sample Dates: 3/5/2018 - 3/12/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.13E-02	0.00E+00	2.13E-02
Cs-134	<1.71E-02	0.00E+00	1.71E-02
Cs-137	<1.57E-02	0.00E+00	1.57E-02
Be-7	<1.16E-01	0.00E+00	1.16E-01
K-40	4.38E-01	1.69E-01	1.52E-01

Sample ID: 470624 **Sample Dates: 3/12/2018 - 3/19/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.19E-02	0.00E+00	2.19E-02
Cs-134	<2.25E-02	0.00E+00	2.25E-02
Cs-137	<2.08E-02	0.00E+00	2.08E-02
Be-7	<1.16E-01	0.00E+00	1.16E-01
K-40	4.34E-01	1.91E-01	2.22E-01

Sample ID: 471175 **Sample Dates: 3/19/2018 - 3/26/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.04E-02	0.00E+00	2.04E-02
Cs-134	<2.17E-02	0.00E+00	2.17E-02
Cs-137	<1.71E-02	0.00E+00	1.71E-02
Be-7	<1.14E-01	0.00E+00	1.14E-01
K-40	4.64E-01	1.73E-01	1.48E-01

Sample ID: 471736 **Sample Dates: 3/26/2018 - 4/2/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<1.92E-02	0.00E+00	1.92E-02
Cs-134	<1.68E-02	0.00E+00	1.68E-02
Cs-137	<1.70E-02	0.00E+00	1.70E-02
Be-7	<1.25E-01	0.00E+00	1.25E-01
K-40	<4.43E-01	0.00E+00	4.43E-01

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

Sample Point 085 [INDICATOR - NNW @ 0.88 miles]

Sample ID: 472533 **Sample Dates: 4/2/2018 - 4/9/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.49E-02	0.00E+00	2.49E-02
Cs-134	<1.65E-02	0.00E+00	1.65E-02
Cs-137	<1.52E-02	0.00E+00	1.52E-02
Be-7	<1.04E-01	0.00E+00	1.04E-01
K-40	6.40E-01	2.30E-01	2.55E-01

Sample ID: 473002 **Sample Dates: 4/9/2018 - 4/16/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.35E-02	0.00E+00	2.35E-02
Cs-134	<1.83E-02	0.00E+00	1.83E-02
Cs-137	<1.77E-02	0.00E+00	1.77E-02
Be-7	<1.48E-01	0.00E+00	1.48E-01
K-40	<3.62E-01	0.00E+00	3.62E-01

Sample ID: 473283 **Sample Dates: 4/16/2018 - 4/23/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.76E-02	0.00E+00	2.76E-02
Cs-134	<1.49E-02	0.00E+00	1.49E-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	5.33E-01	1.88E-01	1.68E-01

Sample ID: 473655 **Sample Dates: 4/23/2018 - 4/30/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.59E-02	0.00E+00	2.59E-02
Cs-134	<2.01E-02	0.00E+00	2.01E-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	4.84E-01	1.83E-01	1.73E-01

Sample ID: 474171 **Sample Dates: 4/30/2018 - 5/7/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<1.97E-02	0.00E+00	1.97E-02
Cs-134	<1.59E-02	0.00E+00	1.59E-02
Cs-137	<1.87E-02	0.00E+00	1.87E-02
Be-7	<1.26E-01	0.00E+00	1.26E-01
K-40	4.46E-01	2.11E-01	2.71E-01

Sample ID: 474549 **Sample Dates: 5/7/2018 - 5/14/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.06E-02	0.00E+00	2.06E-02
Cs-134	<1.87E-02	0.00E+00	1.87E-02
Cs-137	<1.54E-02	0.00E+00	1.54E-02
Be-7	<1.15E-01	0.00E+00	1.15E-01
K-40	4.52E-01	1.89E-01	2.10E-01

Sample ID: 474916 **Sample Dates: 5/14/2018 - 5/21/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.33E-02	0.00E+00	2.33E-02
Cs-134	<1.58E-02	0.00E+00	1.58E-02
Cs-137	<1.72E-02	0.00E+00	1.72E-02
Be-7	<1.15E-01	0.00E+00	1.15E-01
K-40	3.92E-01	1.58E-01	1.39E-01

Sample ID: 475236 **Sample Dates: 5/21/2018 - 5/29/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<1.81E-02	0.00E+00	1.81E-02
Cs-134	<1.28E-02	0.00E+00	1.28E-02
Cs-137	<1.03E-02	0.00E+00	1.03E-02
Be-7	<1.00E-01	0.00E+00	1.00E-01
K-40	5.37E-01	1.62E-01	3.10E-02

Sample ID: 475557 **Sample Dates: 5/29/2018 - 6/4/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.40E-02	0.00E+00	2.40E-02
Cs-134	<2.43E-02	0.00E+00	2.43E-02
Cs-137	<2.07E-02	0.00E+00	2.07E-02
Be-7	<1.63E-01	0.00E+00	1.63E-01
K-40	6.40E-01	2.49E-01	2.82E-01

Sample ID: 476382 **Sample Dates: 6/4/2018 - 6/11/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.12E-02	0.00E+00	2.12E-02
Cs-134	<1.68E-02	0.00E+00	1.68E-02
Cs-137	<1.80E-02	0.00E+00	1.80E-02
Be-7	<1.16E-01	0.00E+00	1.16E-01
K-40	3.82E-01	1.86E-01	2.31E-01

OCONEE Radiological Environmental Monitoring Analysis Report - 2018 (Appendix E)

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

Sample Point 085 [INDICATOR - NNW @ 0.88 miles]

Sample ID: 477402 **Sample Dates: 6/11/2018 - 6/18/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.42E-02	0.00E+00	2.42E-02
Cs-134	<1.42E-02	0.00E+00	1.42E-02
Cs-137	<1.86E-02	0.00E+00	1.86E-02
Be-7	<1.18E-01	0.00E+00	1.18E-01
K-40	5.83E-01	1.78E-01	3.44E-02

Sample ID: 478128 **Sample Dates: 6/18/2018 - 6/25/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.47E-02	0.00E+00	2.47E-02
Cs-134	<1.54E-02	0.00E+00	1.54E-02
Cs-137	<1.71E-02	0.00E+00	1.71E-02
Be-7	<1.15E-01	0.00E+00	1.15E-01
K-40	4.87E-01	2.02E-01	2.30E-01

Sample ID: 478444 **Sample Dates: 6/25/2018 - 7/2/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.03E-02	0.00E+00	2.03E-02
Cs-134	<1.59E-02	0.00E+00	1.59E-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	4.34E-01	1.92E-01	2.25E-01

Sample ID: 478817 **Sample Dates: 7/2/2018 - 7/9/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.19E-02	0.00E+00	2.19E-02
Cs-134	<1.80E-02	0.00E+00	1.80E-02
Cs-137	<1.74E-02	0.00E+00	1.74E-02
Be-7	<1.09E-01	0.00E+00	1.09E-01
K-40	4.20E-01	1.95E-01	2.40E-01

Sample ID: 479223 **Sample Dates: 7/9/2018 - 7/16/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.40E-02	0.00E+00	2.40E-02
Cs-134	<1.83E-02	0.00E+00	1.83E-02
Cs-137	<1.46E-02	0.00E+00	1.46E-02
Be-7	<1.14E-01	0.00E+00	1.14E-01
K-40	3.87E-01	1.73E-01	1.95E-01

Sample ID: 479904 **Sample Dates: 7/16/2018 - 7/23/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.37E-02	0.00E+00	2.37E-02
Cs-134	<1.89E-02	0.00E+00	1.89E-02
Cs-137	<2.07E-02	0.00E+00	2.07E-02
Be-7	3.81E-02	7.24E-02	1.24E-01
K-40	<3.93E-01	0.00E+00	3.93E-01

Sample ID: 480267 **Sample Dates: 7/23/2018 - 7/30/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.05E-02	0.00E+00	2.05E-02
Cs-134	<1.92E-02	0.00E+00	1.92E-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	4.64E-01	1.67E-01	1.25E-01

Sample ID: 481094 **Sample Dates: 7/30/2018 - 8/6/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.40E-02	0.00E+00	2.40E-02
Cs-134	<1.35E-02	0.00E+00	1.35E-02
Cs-137	<2.20E-02	0.00E+00	2.20E-02
Be-7	<1.33E-01	0.00E+00	1.33E-01
K-40	4.47E-01	1.71E-01	1.51E-01

Sample ID: 481535 **Sample Dates: 8/6/2018 - 8/13/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.33E-02	0.00E+00	2.33E-02
Cs-134	<1.58E-02	0.00E+00	1.58E-02
Cs-137	<1.72E-02	0.00E+00	1.72E-02
Be-7	<1.13E-01	0.00E+00	1.13E-01
K-40	4.82E-01	1.61E-01	3.44E-02

Sample ID: 481985 **Sample Dates: 8/13/2018 - 8/20/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.04E-02	0.00E+00	2.04E-02
Cs-134	<1.21E-02	0.00E+00	1.21E-02
Cs-137	<1.70E-02	0.00E+00	1.70E-02
Be-7	<9.56E-02	0.00E+00	9.56E-02
K-40	<2.56E-01	0.00E+00	2.56E-01

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

Sample Point 085 [INDICATOR - NNW @ 0.88 miles]

Sample ID: 482503 Sample Dates: 8/20/2018 - 8/27/2018

Nuclide	Activity	2 Sigma Error	MDA
I-131	<1.66E-02	0.00E+00	1.66E-02
Cs-134	<2.01E-02	0.00E+00	2.01E-02
Cs-137	<1.46E-02	0.00E+00	1.46E-02
Be-7	<9.78E-02	0.00E+00	9.78E-02
K-40	<2.82E-01	0.00E+00	2.82E-01

Sample ID: 482828 Sample Dates: 8/27/2018 - 9/4/2018

Nuclide	Activity	2 Sigma Error	MDA
I-131	<1.61E-02	0.00E+00	1.61E-02
Cs-134	<1.33E-02	0.00E+00	1.33E-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	<2.48E-01	0.00E+00	2.48E-01

Sample ID: 483450 Sample Dates: 9/4/2018 - 9/10/2018

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.85E-02	0.00E+00	2.85E-02
Cs-134	<1.74E-02	0.00E+00	1.74E-02
Cs-137	<1.70E-02	0.00E+00	1.70E-02
Be-7	<1.55E-01	0.00E+00	1.55E-01
K-40	5.49E-01	1.95E-01	1.42E-01

Sample ID: 484047 Sample Dates: 9/10/2018 - 9/17/2018

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.72E-02	0.00E+00	2.72E-02
Cs-134	<1.83E-02	0.00E+00	1.83E-02
Cs-137	<1.81E-02	0.00E+00	1.81E-02
Be-7	<1.22E-01	0.00E+00	1.22E-01
K-40	5.80E-01	2.07E-01	2.05E-01

Sample ID: 484622 Sample Dates: 9/17/2018 - 9/24/2018

Nuclide	Activity	2 Sigma Error	MDA
I-131	<1.82E-02	0.00E+00	1.82E-02
Cs-134	<2.04E-02	0.00E+00	2.04E-02
Cs-137	<1.64E-02	0.00E+00	1.64E-02
Be-7	<1.21E-01	0.00E+00	1.21E-01
K-40	5.90E-01	1.80E-01	3.47E-02

Sample ID: 485047 Sample Dates: 9/24/2018 - 10/1/2018

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.82E-02	0.00E+00	2.82E-02
Cs-134	<1.68E-02	0.00E+00	1.68E-02
Cs-137	<1.70E-02	0.00E+00	1.70E-02
Be-7	<1.42E-01	0.00E+00	1.42E-01
K-40	5.66E-01	1.77E-01	3.49E-02

Sample ID: 485510 Sample Dates: 10/1/2018 - 10/8/2018

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.36E-02	0.00E+00	2.36E-02
Cs-134	<1.49E-02	0.00E+00	1.49E-02
Cs-137	<1.61E-02	0.00E+00	1.61E-02
Be-7	<1.22E-01	0.00E+00	1.22E-01
K-40	3.96E-01	1.70E-01	1.81E-01

Sample ID: 486187 Sample Dates: 10/8/2018 - 10/15/2018

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.52E-02	0.00E+00	2.52E-02
Cs-134	<1.63E-02	0.00E+00	1.63E-02
Cs-137	<1.56E-02	0.00E+00	1.56E-02
Be-7	<1.13E-01	0.00E+00	1.13E-01
K-40	5.52E-01	2.14E-01	2.38E-01

Sample ID: 486719 Sample Dates: 10/15/2018 - 10/22/2018

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.33E-02	0.00E+00	2.33E-02
Cs-134	<1.43E-02	0.00E+00	1.43E-02
Cs-137	<1.90E-02	0.00E+00	1.90E-02
Be-7	<9.93E-02	0.00E+00	9.93E-02
K-40	4.40E-01	1.91E-01	2.22E-01

Sample ID: 487758 Sample Dates: 10/22/2018 - 10/29/2018

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.66E-02	0.00E+00	2.66E-02
Cs-134	<1.61E-02	0.00E+00	1.61E-02
Cs-137	<2.10E-02	0.00E+00	2.10E-02
Be-7	<1.07E-01	0.00E+00	1.07E-01
K-40	5.78E-01	2.03E-01	1.93E-01

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

Sample Point 085 [INDICATOR - NNW @ 0.88 miles]

Sample ID: 488002 **Sample Dates: 10/29/2018 - 11/5/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.65E-02	0.00E+00	2.65E-02
Cs-134	<1.84E-02	0.00E+00	1.84E-02
Cs-137	<1.74E-02	0.00E+00	1.74E-02
Be-7	1.84E-02	7.34E-02	1.31E-01
K-40	5.48E-01	1.99E-01	1.99E-01

Sample ID: 488494 **Sample Dates: 11/5/2018 - 11/12/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.05E-02	0.00E+00	2.05E-02
Cs-134	<1.70E-02	0.00E+00	1.70E-02
Cs-137	<1.67E-02	0.00E+00	1.67E-02
Be-7	<1.10E-01	0.00E+00	1.10E-01
K-40	4.95E-01	1.90E-01	1.90E-01

Sample ID: 488873 **Sample Dates: 11/12/2018 - 11/19/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<3.72E-02	0.00E+00	3.72E-02
Cs-134	<1.79E-02	0.00E+00	1.79E-02
Cs-137	<1.63E-02	0.00E+00	1.63E-02
Be-7	<1.19E-01	0.00E+00	1.19E-01
K-40	4.36E-01	1.74E-01	1.71E-01

Sample ID: 489170 **Sample Dates: 11/19/2018 - 11/26/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<1.85E-02	0.00E+00	1.85E-02
Cs-134	<1.88E-02	0.00E+00	1.88E-02
Cs-137	<1.85E-02	0.00E+00	1.85E-02
Be-7	<1.42E-01	0.00E+00	1.42E-01
K-40	5.33E-01	2.11E-01	2.39E-01

Sample ID: 489752 **Sample Dates: 11/26/2018 - 12/3/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<2.44E-02	0.00E+00	2.44E-02
Cs-134	<1.24E-02	0.00E+00	1.24E-02
Cs-137	<1.52E-02	0.00E+00	1.52E-02
Be-7	<1.27E-01	0.00E+00	1.27E-01
K-40	4.26E-01	1.83E-01	2.04E-01

Sample ID: 490175 **Sample Dates: 12/3/2018 - 12/10/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<3.11E-02	0.00E+00	3.11E-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	<1.20E-01	0.00E+00	1.20E-01
K-40	4.98E-01	1.87E-01	1.80E-01

Sample ID: 490822 **Sample Dates: 12/10/2018 - 12/18/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<3.36E-02	0.00E+00	3.36E-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	<1.01E-01	0.00E+00	1.01E-01
K-40	<2.75E-01	0.00E+00	2.75E-01

Sample ID: 491197 **Sample Dates: 12/18/2018 - 12/26/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<3.91E-02	0.00E+00	3.91E-02
Cs-134	<1.48E-02	0.00E+00	1.48E-02
Cs-137	<1.53E-02	0.00E+00	1.53E-02
Be-7	<1.18E-01	0.00E+00	1.18E-01
K-40	<2.99E-01	0.00E+00	2.99E-01

Sample ID: 491498 **Sample Dates: 12/26/2018 - 12/31/2018**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<4.11E-02	0.00E+00	4.11E-02
Cs-134	<2.41E-02	0.00E+00	2.41E-02
Cs-137	<2.59E-02	0.00E+00	2.59E-02
Be-7	<2.25E-01	0.00E+00	2.25E-01
K-40	5.29E-01	2.36E-01	2.60E-01

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

Sample Point 060 [INDICATOR - NE @ 3.23 miles]

Sample ID: 466681 **Sample Dates: 1/2/2018 - 1/29/2018**

Nuclide	Activity	2 Sigma Error	MDA
Beta	1.02E+00	6.79E-01	1.10E+00
Mn-54	<2.00E+00	0.00E+00	2.00E+00
Co-58	<2.42E+00	0.00E+00	2.42E+00

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

Sample Point 060 [INDICATOR - NE @ 3.23 miles]

Sample ID: 466681 Sample Dates: 1/2/2018 - 1/29/2018

Nuclide	Activity	2 Sigma Error	MDA
Fe-59	<5.27E+00	0.00E+00	5.27E+00
Co-60	<3.15E+00	0.00E+00	3.15E+00
Zn-65	<7.73E+00	0.00E+00	7.73E+00
Zr-95	<6.15E+00	0.00E+00	6.15E+00
Nb-95	<4.40E+00	0.00E+00	4.40E+00
I-131	<1.18E+01	0.00E+00	1.18E+01
Cs-134	<3.07E+00	0.00E+00	3.07E+00
Cs-137	<3.14E+00	0.00E+00	3.14E+00
BaLa-140	<1.06E+01	0.00E+00	1.06E+01
Be-7	<2.44E+01	0.00E+00	2.44E+01
K-40	<4.84E+01	0.00E+00	4.84E+01

Sample ID: 468536 Sample Dates: 1/29/2018 - 2/26/2018

Nuclide	Activity	2 Sigma Error	MDA
Beta	<1.03E-01	0.00E+00	1.26E+00
Mn-54	<3.24E+00	0.00E+00	3.24E+00
Co-58	<3.48E+00	0.00E+00	3.48E+00
Fe-59	<5.80E+00	0.00E+00	5.80E+00
Co-60	<2.60E+00	0.00E+00	2.60E+00
Zn-65	<6.22E+00	0.00E+00	6.22E+00
Zr-95	<5.78E+00	0.00E+00	5.78E+00
Nb-95	<4.05E+00	0.00E+00	4.05E+00
I-131	<1.18E+01	0.00E+00	1.18E+01
Cs-134	<2.38E+00	0.00E+00	2.38E+00
Cs-137	<3.57E+00	0.00E+00	3.57E+00
BaLa-140	<6.20E+00	0.00E+00	6.20E+00
Be-7	<2.40E+01	0.00E+00	2.40E+01
K-40	3.54E+01	2.49E+01	3.64E+01

Sample ID: 471524 Sample Dates: 2/26/2018 - 3/26/2018

Nuclide	Activity	2 Sigma Error	MDA
Beta	<3.10E-01	0.00E+00	1.41E+00
Mn-54	<1.65E+00	0.00E+00	1.65E+00
Co-58	<2.17E+00	0.00E+00	2.17E+00
Fe-59	<4.06E+00	0.00E+00	4.06E+00
Co-60	<2.07E+00	0.00E+00	2.07E+00
Zn-65	<3.87E+00	0.00E+00	3.87E+00
Zr-95	<4.88E+00	0.00E+00	4.88E+00
Nb-95	<2.81E+00	0.00E+00	2.81E+00
I-131	<1.20E+01	0.00E+00	1.20E+01
Cs-134	<2.44E+00	0.00E+00	2.44E+00
Cs-137	<1.89E+00	0.00E+00	1.89E+00
BaLa-140	<6.39E+00	0.00E+00	6.39E+00
Be-7	<1.99E+01	0.00E+00	1.99E+01
K-40	4.54E+01	2.00E+01	2.62E+01

Sample ID: 467532 Sample Dates: 1/2/2018 - 4/23/2018

Nuclide	Activity	2 Sigma Error	MDA
H3DW	<6.64E+01	0.00E+00	1.82E+02

Sample ID: 473436 Sample Dates: 3/26/2018 - 4/23/2018

Nuclide	Activity	2 Sigma Error	MDA
Beta	1.53E+00	7.83E-01	1.24E+00
Mn-54	<2.37E+00	0.00E+00	2.37E+00
Co-58	<2.66E+00	0.00E+00	2.66E+00
Fe-59	<6.39E+00	0.00E+00	6.39E+00
Co-60	<2.89E+00	0.00E+00	2.89E+00
Zn-65	<6.76E+00	0.00E+00	6.76E+00
Zr-95	<5.09E+00	0.00E+00	5.09E+00
Nb-95	<3.27E+00	0.00E+00	3.27E+00
I-131	<1.20E+01	0.00E+00	1.20E+01
Cs-134	<2.83E+00	0.00E+00	2.83E+00
Cs-137	<2.64E+00	0.00E+00	2.64E+00
BaLa-140	<7.65E+00	0.00E+00	7.65E+00
Be-7	<2.85E+01	0.00E+00	2.85E+01
K-40	<5.16E+01	0.00E+00	5.16E+01

Sample ID: 475000 Sample Dates: 4/23/2018 - 5/21/2018

Nuclide	Activity	2 Sigma Error	MDA
Beta	<3.86E-01	0.00E+00	1.15E+00
Mn-54	<3.94E+00	0.00E+00	3.94E+00
Co-58	<4.81E+00	0.00E+00	4.81E+00
Fe-59	<9.88E+00	0.00E+00	9.88E+00

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

Sample Point 060 [INDICATOR - NE @ 3.23 miles]

Sample ID: 475000 Sample Dates: 4/23/2018 - 5/21/2018

Nuclide	Activity	2 Sigma Error	MDA
Co-60	<3.57E+00	0.00E+00	3.57E+00
Zn-65	<1.11E+01	0.00E+00	1.11E+01
Zr-95	<7.77E+00	0.00E+00	7.77E+00
Nb-95	<4.38E+00	0.00E+00	4.38E+00
I-131	<1.13E+01	0.00E+00	1.13E+01
Cs-134	<4.36E+00	0.00E+00	4.36E+00
Cs-137	<4.00E+00	0.00E+00	4.00E+00
BaLa-140	<8.61E+00	0.00E+00	8.61E+00
Be-7	<2.54E+01	0.00E+00	2.54E+01
K-40	4.35E+01	3.35E+01	4.71E+01

Sample ID: 477663 Sample Dates: 5/21/2018 - 6/18/2018

Nuclide	Activity	2 Sigma Error	MDA
Beta	1.29E+00	8.93E-01	1.46E+00
Mn-54	<2.36E+00	0.00E+00	2.36E+00
Co-58	<2.94E+00	0.00E+00	2.94E+00
Fe-59	<6.49E+00	0.00E+00	6.49E+00
Co-60	<2.85E+00	0.00E+00	2.85E+00
Zn-65	<5.27E+00	0.00E+00	5.27E+00
Zr-95	<3.51E+00	0.00E+00	3.51E+00
Nb-95	<3.08E+00	0.00E+00	3.08E+00
I-131	<1.07E+01	0.00E+00	1.07E+01
Cs-134	<3.46E+00	0.00E+00	3.46E+00
Cs-137	<2.39E+00	0.00E+00	2.39E+00
BaLa-140	<8.42E+00	0.00E+00	8.42E+00
Be-7	<2.27E+01	0.00E+00	2.27E+01
K-40	5.17E+01	2.65E+01	3.42E+01

Sample ID: 474729 Sample Dates: 4/23/2018 - 7/16/2018

Nuclide	Activity	2 Sigma Error	MDA
H3DW	<-1.2E+01	0.00E+00	1.98E+02

Sample ID: 479531 Sample Dates: 6/18/2018 - 7/16/2018

Nuclide	Activity	2 Sigma Error	MDA
Beta	2.58E+00	9.14E-01	1.39E+00
Mn-54	<2.67E+00	0.00E+00	2.67E+00
Co-58	<3.35E+00	0.00E+00	3.35E+00
Fe-59	<6.34E+00	0.00E+00	6.34E+00
Co-60	<2.79E+00	0.00E+00	2.79E+00
Zn-65	<5.90E+00	0.00E+00	5.90E+00
Zr-95	<5.73E+00	0.00E+00	5.73E+00
Nb-95	<3.90E+00	0.00E+00	3.90E+00
I-131	<1.19E+01	0.00E+00	1.19E+01
Cs-134	<3.57E+00	0.00E+00	3.57E+00
Cs-137	<2.92E+00	0.00E+00	2.92E+00
BaLa-140	<7.12E+00	0.00E+00	7.12E+00
Be-7	<2.36E+01	0.00E+00	2.36E+01
K-40	3.04E+01	2.54E+01	3.80E+01

Sample ID: 481631 Sample Dates: 7/16/2018 - 8/13/2018

Nuclide	Activity	2 Sigma Error	MDA
Beta	<4.73E-01	0.00E+00	1.21E+00
Mn-54	<3.10E+00	0.00E+00	3.10E+00
Co-58	<2.95E+00	0.00E+00	2.95E+00
Fe-59	<7.03E+00	0.00E+00	7.03E+00
Co-60	<3.21E+00	0.00E+00	3.21E+00
Zn-65	<5.02E+00	0.00E+00	5.02E+00
Zr-95	<5.99E+00	0.00E+00	5.99E+00
Nb-95	<4.15E+00	0.00E+00	4.15E+00
I-131	<1.17E+01	0.00E+00	1.17E+01
Cs-134	<1.93E+00	0.00E+00	1.93E+00
Cs-137	<2.12E+00	0.00E+00	2.12E+00
BaLa-140	<6.08E+00	0.00E+00	6.08E+00
Be-7	<2.17E+01	0.00E+00	2.17E+01
K-40	<3.95E+01	0.00E+00	3.95E+01

Sample ID: 483534 Sample Dates: 8/13/2018 - 9/10/2018

Nuclide	Activity	2 Sigma Error	MDA
Beta	<-6.7E-02	0.00E+00	1.28E+00
Mn-54	<3.49E+00	0.00E+00	3.49E+00
Co-58	<2.81E+00	0.00E+00	2.81E+00
Fe-59	<7.37E+00	0.00E+00	7.37E+00
Co-60	<2.06E+00	0.00E+00	2.06E+00

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

Sample Point 060 [INDICATOR - NE @ 3.23 miles]

Sample ID: 483534 Sample Dates: 8/13/2018 - 9/10/2018

Nuclide	Activity	2 Sigma Error	MDA
Zn-65	<7.29E+00	0.00E+00	7.29E+00
Zr-95	<5.86E+00	0.00E+00	5.86E+00
Nb-95	<4.63E+00	0.00E+00	4.63E+00
I-131	<1.17E+01	0.00E+00	1.17E+01
Cs-134	<4.20E+00	0.00E+00	4.20E+00
Cs-137	<3.94E+00	0.00E+00	3.94E+00
BaLa-140	<1.16E+01	0.00E+00	1.16E+01
Be-7	<2.76E+01	0.00E+00	2.76E+01
K-40	<7.59E+01	0.00E+00	7.59E+01

Sample ID: 481634 Sample Dates: 7/16/2018 - 10/8/2018

Nuclide	Activity	2 Sigma Error	MDA
H3DW	<0.00E+00	0.00E+00	1.83E+02

Sample ID: 485853 Sample Dates: 9/10/2018 - 10/8/2018

Nuclide	Activity	2 Sigma Error	MDA
Beta	1.56E+00	7.31E-01	1.15E+00
Mn-54	<4.30E+00	0.00E+00	4.30E+00
Co-58	<3.77E+00	0.00E+00	3.77E+00
Fe-59	<6.81E+00	0.00E+00	6.81E+00
Co-60	<3.44E+00	0.00E+00	3.44E+00
Zn-65	<3.88E+00	0.00E+00	3.88E+00
Zr-95	<6.33E+00	0.00E+00	6.33E+00
Nb-95	<4.85E+00	0.00E+00	4.85E+00
I-131	<1.14E+01	0.00E+00	1.14E+01
Cs-134	<3.95E+00	0.00E+00	3.95E+00
Cs-137	<4.29E+00	0.00E+00	4.29E+00
BaLa-140	<5.89E+00	0.00E+00	5.89E+00
Be-7	<3.57E+01	0.00E+00	3.57E+01
K-40	<5.88E+01	0.00E+00	5.88E+01

Sample ID: 488201 Sample Dates: 10/8/2018 - 11/5/2018

Nuclide	Activity	2 Sigma Error	MDA
Beta	<3.97E-01	0.00E+00	1.26E+00
Mn-54	<3.26E+00	0.00E+00	3.26E+00
Co-58	<3.63E+00	0.00E+00	3.63E+00
Fe-59	<6.91E+00	0.00E+00	6.91E+00
Co-60	<4.11E+00	0.00E+00	4.11E+00
Zn-65	<8.50E+00	0.00E+00	8.50E+00
Zr-95	<6.04E+00	0.00E+00	6.04E+00
Nb-95	<3.56E+00	0.00E+00	3.56E+00
I-131	<1.18E+01	0.00E+00	1.18E+01
Cs-134	<4.54E+00	0.00E+00	4.54E+00
Cs-137	<3.34E+00	0.00E+00	3.34E+00
BaLa-140	<9.73E+00	0.00E+00	9.73E+00
Be-7	<3.52E+01	0.00E+00	3.52E+01
K-40	<6.32E+01	0.00E+00	6.32E+01

Sample ID: 490030 Sample Dates: 11/5/2018 - 12/3/2018

Nuclide	Activity	2 Sigma Error	MDA
Beta	1.04E+00	8.22E-01	1.35E+00
Mn-54	<2.35E+00	0.00E+00	2.35E+00
Co-58	<2.70E+00	0.00E+00	2.70E+00
Fe-59	<4.90E+00	0.00E+00	4.90E+00
Co-60	<2.32E+00	0.00E+00	2.32E+00
Zn-65	<4.29E+00	0.00E+00	4.29E+00
Zr-95	<5.71E+00	0.00E+00	5.71E+00
Nb-95	<3.22E+00	0.00E+00	3.22E+00
I-131	<1.07E+01	0.00E+00	1.07E+01
Cs-134	<2.67E+00	0.00E+00	2.67E+00
Cs-137	<2.21E+00	0.00E+00	2.21E+00
BaLa-140	<6.96E+00	0.00E+00	6.96E+00
Be-7	<2.72E+01	0.00E+00	2.72E+01
K-40	6.94E+01	2.97E+01	3.94E+01

Sample ID: 488747 Sample Dates: 10/8/2018 - 12/31/2018

Nuclide	Activity	2 Sigma Error	MDA
H3DW	<5.70E+01	0.00E+00	1.87E+02

Sample ID: 491615 Sample Dates: 12/3/2018 - 12/31/2018

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<8.38E-01	0.00E+00	8.38E-01
Co-58	<8.75E-01	0.00E+00	8.75E-01
Fe-59	<1.95E+00	0.00E+00	1.95E+00
Co-60	<7.47E-01	0.00E+00	7.47E-01

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

Sample Point 060 [INDICATOR - NE @ 3.23 miles]

Sample ID: 491615 **Sample Dates: 12/3/2018 - 12/31/2018**

Nuclide	Activity	2 Sigma Error	MDA
Zn-65	<1.52E+00	0.00E+00	1.52E+00
Zr-95	<1.66E+00	0.00E+00	1.66E+00
Nb-95	<1.18E+00	0.00E+00	1.18E+00
I-131	<7.63E+00	0.00E+00	7.63E+00
Cs-134	<8.68E-01	0.00E+00	8.68E-01
Cs-137	<6.98E-01	0.00E+00	6.98E-01
BaLa-140	<3.41E+00	0.00E+00	3.41E+00
Be-7	<7.58E+00	0.00E+00	7.58E+00
K-40	2.67E+01	8.68E+00	1.23E+01
Beta	<2.78E+00	0.00E+00	2.78E+00

Sample Point 064 [CONTROL - SSW @ 6.67 miles]

Sample ID: 466682 **Sample Dates: 1/2/2018 - 1/29/2018**

Nuclide	Activity	2 Sigma Error	MDA
Beta	1.25E+00	6.94E-01	1.11E+00
Mn-54	<2.78E+00	0.00E+00	2.78E+00
Co-58	<2.66E+00	0.00E+00	2.66E+00
Fe-59	<6.34E+00	0.00E+00	6.34E+00
Co-60	<2.81E+00	0.00E+00	2.81E+00
Zn-65	<6.25E+00	0.00E+00	6.25E+00
Zr-95	<6.13E+00	0.00E+00	6.13E+00
Nb-95	<3.46E+00	0.00E+00	3.46E+00
I-131	<1.18E+01	0.00E+00	1.18E+01
Cs-134	<2.32E+00	0.00E+00	2.32E+00
Cs-137	<3.21E+00	0.00E+00	3.21E+00
BaLa-140	<7.09E+00	0.00E+00	7.09E+00
Be-7	<2.35E+01	0.00E+00	2.35E+01
K-40	3.17E+01	2.26E+01	3.11E+01

Sample ID: 468537 **Sample Dates: 1/29/2018 - 2/26/2018**

Nuclide	Activity	2 Sigma Error	MDA
Beta	<2.74E-01	0.00E+00	1.26E+00
Mn-54	<3.02E+00	0.00E+00	3.02E+00
Co-58	<3.19E+00	0.00E+00	3.19E+00
Fe-59	<6.65E+00	0.00E+00	6.65E+00
Co-60	<2.48E+00	0.00E+00	2.48E+00
Zn-65	<5.82E+00	0.00E+00	5.82E+00
Zr-95	<4.91E+00	0.00E+00	4.91E+00
Nb-95	<3.96E+00	0.00E+00	3.96E+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	<2.48E+00	0.00E+00	2.48E+00
BaLa-140	<8.00E+00	0.00E+00	8.00E+00
Be-7	<3.06E+01	0.00E+00	3.06E+01
K-40	5.17E+01	2.63E+01	3.29E+01

Sample ID: 471525 **Sample Dates: 2/26/2018 - 3/26/2018**

Nuclide	Activity	2 Sigma Error	MDA
Beta	1.20E+00	8.70E-01	1.42E+00
Mn-54	<1.76E+00	0.00E+00	1.76E+00
Co-58	<1.91E+00	0.00E+00	1.91E+00
Fe-59	<3.44E+00	0.00E+00	3.44E+00
Co-60	<1.69E+00	0.00E+00	1.69E+00
Zn-65	<3.24E+00	0.00E+00	3.24E+00
Zr-95	<2.98E+00	0.00E+00	2.98E+00
Nb-95	<2.13E+00	0.00E+00	2.13E+00
I-131	<1.15E+01	0.00E+00	1.15E+01
Cs-134	<1.79E+00	0.00E+00	1.79E+00
Cs-137	<1.76E+00	0.00E+00	1.76E+00
BaLa-140	<5.38E+00	0.00E+00	5.38E+00
Be-7	<1.70E+01	0.00E+00	1.70E+01
K-40	2.62E+01	1.41E+01	1.99E+01

Sample ID: 467533 **Sample Dates: 1/2/2018 - 4/23/2018**

Nuclide	Activity	2 Sigma Error	MDA
H3DW	<1.19E+01	0.00E+00	1.82E+02

Sample ID: 473437 **Sample Dates: 3/26/2018 - 4/23/2018**

Nuclide	Activity	2 Sigma Error	MDA
Beta	2.32E+00	8.27E-01	1.25E+00
Mn-54	<3.21E+00	0.00E+00	3.21E+00
Co-58	<2.94E+00	0.00E+00	2.94E+00

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

Sample Point 064 [CONTROL - SSW @ 6.67 miles]

Sample ID: 473437 Sample Dates: 3/26/2018 - 4/23/2018

Nuclide	Activity	2 Sigma Error	MDA
Fe-59	<6.27E+00	0.00E+00	6.27E+00
Co-60	<3.66E+00	0.00E+00	3.66E+00
Zn-65	<6.11E+00	0.00E+00	6.11E+00
Zr-95	<6.82E+00	0.00E+00	6.82E+00
Nb-95	<3.98E+00	0.00E+00	3.98E+00
I-131	<1.13E+01	0.00E+00	1.13E+01
Cs-134	<3.56E+00	0.00E+00	3.56E+00
Cs-137	<2.77E+00	0.00E+00	2.77E+00
BaLa-140	<1.05E+01	0.00E+00	1.05E+01
Be-7	<2.93E+01	0.00E+00	2.93E+01
K-40	5.20E+01	2.67E+01	3.18E+01

Sample ID: 475001 Sample Dates: 4/23/2018 - 5/21/2018

Nuclide	Activity	2 Sigma Error	MDA
Beta	9.77E-01	7.13E-01	1.16E+00
Mn-54	<2.51E+00	0.00E+00	2.51E+00
Co-58	<2.92E+00	0.00E+00	2.92E+00
Fe-59	<7.36E+00	0.00E+00	7.36E+00
Co-60	<3.20E+00	0.00E+00	3.20E+00
Zn-65	<5.58E+00	0.00E+00	5.58E+00
Zr-95	<5.60E+00	0.00E+00	5.60E+00
Nb-95	<3.57E+00	0.00E+00	3.57E+00
I-131	<1.14E+01	0.00E+00	1.14E+01
Cs-134	<3.14E+00	0.00E+00	3.14E+00
Cs-137	<2.74E+00	0.00E+00	2.74E+00
BaLa-140	<8.13E+00	0.00E+00	8.13E+00
Be-7	<3.23E+01	0.00E+00	3.23E+01
K-40	1.51E+01	2.71E+01	4.62E+01

Sample ID: 477664 Sample Dates: 5/21/2018 - 6/18/2018

Nuclide	Activity	2 Sigma Error	MDA
Beta	1.31E+00	8.96E-01	1.46E+00
Mn-54	<2.74E+00	0.00E+00	2.74E+00
Co-58	<2.66E+00	0.00E+00	2.66E+00
Fe-59	<6.57E+00	0.00E+00	6.57E+00
Co-60	<2.16E+00	0.00E+00	2.16E+00
Zn-65	<4.50E+00	0.00E+00	4.50E+00
Zr-95	<5.34E+00	0.00E+00	5.34E+00
Nb-95	<3.45E+00	0.00E+00	3.45E+00
I-131	<1.03E+01	0.00E+00	1.03E+01
Cs-134	<2.85E+00	0.00E+00	2.85E+00
Cs-137	<2.40E+00	0.00E+00	2.40E+00
BaLa-140	<6.40E+00	0.00E+00	6.40E+00
Be-7	<2.08E+01	0.00E+00	2.08E+01
K-40	5.05E+01	3.14E+01	4.74E+01

Sample ID: 474730 Sample Dates: 4/23/2018 - 7/16/2018

Nuclide	Activity	2 Sigma Error	MDA
H3DW	<-2.9E+01	0.00E+00	1.97E+02

Sample ID: 479532 Sample Dates: 6/18/2018 - 7/16/2018

Nuclide	Activity	2 Sigma Error	MDA
Beta	8.07E-01	8.34E-01	1.39E+00
Mn-54	<2.69E+00	0.00E+00	2.69E+00
Co-58	<3.18E+00	0.00E+00	3.18E+00
Fe-59	<6.11E+00	0.00E+00	6.11E+00
Co-60	<2.43E+00	0.00E+00	2.43E+00
Zn-65	<4.81E+00	0.00E+00	4.81E+00
Zr-95	<5.48E+00	0.00E+00	5.48E+00
Nb-95	<4.49E+00	0.00E+00	4.49E+00
I-131	<1.08E+01	0.00E+00	1.08E+01
Cs-134	<3.75E+00	0.00E+00	3.75E+00
Cs-137	<2.51E+00	0.00E+00	2.51E+00
BaLa-140	<6.84E+00	0.00E+00	6.84E+00
Be-7	<2.23E+01	0.00E+00	2.23E+01
K-40	8.61E+01	3.20E+01	3.54E+01

Sample ID: 481632 Sample Dates: 7/16/2018 - 8/13/2018

Nuclide	Activity	2 Sigma Error	MDA
Beta	6.83E-01	7.28E-01	1.21E+00
Mn-54	<2.34E+00	0.00E+00	2.34E+00
Co-58	<2.62E+00	0.00E+00	2.62E+00
Fe-59	<5.14E+00	0.00E+00	5.14E+00

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

Sample Point 064 [CONTROL - SSW @ 6.67 miles]

Sample ID: 481632 **Sample Dates: 7/16/2018 - 8/13/2018**

Nuclide	Activity	2 Sigma Error	MDA
Co-60	<2.45E+00	0.00E+00	2.45E+00
Zn-65	<5.18E+00	0.00E+00	5.18E+00
Zr-95	<4.55E+00	0.00E+00	4.55E+00
Nb-95	<3.38E+00	0.00E+00	3.38E+00
I-131	<1.08E+01	0.00E+00	1.08E+01
Cs-134	<2.40E+00	0.00E+00	2.40E+00
Cs-137	<2.20E+00	0.00E+00	2.20E+00
BaLa-140	<7.04E+00	0.00E+00	7.04E+00
Be-7	<2.33E+01	0.00E+00	2.33E+01
K-40	6.68E+01	3.24E+01	4.62E+01

Sample ID: 483535 **Sample Dates: 8/13/2018 - 9/10/2018**

Nuclide	Activity	2 Sigma Error	MDA
Beta	<1.45E-01	0.00E+00	1.43E+00
Mn-54	<1.89E+00	0.00E+00	1.89E+00
Co-58	<2.61E+00	0.00E+00	2.61E+00
Fe-59	<5.09E+00	0.00E+00	5.09E+00
Co-60	<2.13E+00	0.00E+00	2.13E+00
Zn-65	<4.53E+00	0.00E+00	4.53E+00
Zr-95	<4.63E+00	0.00E+00	4.63E+00
Nb-95	<3.23E+00	0.00E+00	3.23E+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	<2.33E+00	0.00E+00	2.33E+00
BaLa-140	<5.12E+00	0.00E+00	5.12E+00
Be-7	<2.26E+01	0.00E+00	2.26E+01
K-40	6.04E+01	2.30E+01	2.73E+01

Sample ID: 481635 **Sample Dates: 7/16/2018 - 10/8/2018**

Nuclide	Activity	2 Sigma Error	MDA
H3DW	<7.32E+01	0.00E+00	1.86E+02

Sample ID: 485854 **Sample Dates: 9/10/2018 - 10/8/2018**

Nuclide	Activity	2 Sigma Error	MDA
Beta	<4.63E-01	0.00E+00	1.15E+00
Mn-54	<3.47E+00	0.00E+00	3.47E+00
Co-58	<2.52E+00	0.00E+00	2.52E+00
Fe-59	<6.84E+00	0.00E+00	6.84E+00
Co-60	<2.46E+00	0.00E+00	2.46E+00
Zn-65	<7.04E+00	0.00E+00	7.04E+00
Zr-95	<6.86E+00	0.00E+00	6.86E+00
Nb-95	<3.93E+00	0.00E+00	3.93E+00
I-131	<1.02E+01	0.00E+00	1.02E+01
Cs-134	<3.60E+00	0.00E+00	3.60E+00
Cs-137	<2.79E+00	0.00E+00	2.79E+00
BaLa-140	<5.99E+00	0.00E+00	5.99E+00
Be-7	<2.26E+01	0.00E+00	2.26E+01
K-40	2.72E+01	2.13E+01	2.97E+01

Sample ID: 488202 **Sample Dates: 10/8/2018 - 11/5/2018**

Nuclide	Activity	2 Sigma Error	MDA
Beta	<2.22E-01	0.00E+00	1.26E+00
Mn-54	<2.14E+00	0.00E+00	2.14E+00
Co-58	<3.38E+00	0.00E+00	3.38E+00
Fe-59	<6.55E+00	0.00E+00	6.55E+00
Co-60	<2.48E+00	0.00E+00	2.48E+00
Zn-65	<6.58E+00	0.00E+00	6.58E+00
Zr-95	<5.29E+00	0.00E+00	5.29E+00
Nb-95	<3.36E+00	0.00E+00	3.36E+00
I-131	<1.20E+01	0.00E+00	1.20E+01
Cs-134	<2.50E+00	0.00E+00	2.50E+00
Cs-137	<3.02E+00	0.00E+00	3.02E+00
BaLa-140	<7.48E+00	0.00E+00	7.48E+00
Be-7	<2.38E+01	0.00E+00	2.38E+01
K-40	<4.78E+01	0.00E+00	4.78E+01

Sample ID: 490031 **Sample Dates: 11/5/2018 - 12/3/2018**

Nuclide	Activity	2 Sigma Error	MDA
Beta	1.59E+00	8.57E-01	1.37E+00
Mn-54	<2.98E+00	0.00E+00	2.98E+00
Co-58	<2.84E+00	0.00E+00	2.84E+00
Fe-59	<5.55E+00	0.00E+00	5.55E+00
Co-60	<3.01E+00	0.00E+00	3.01E+00

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

Sample Point 064 [CONTROL - SSW @ 6.67 miles]

Sample ID: 490031 Sample Dates: 11/5/2018 - 12/3/2018

Nuclide	Activity	2 Sigma Error	MDA
Zn-65	<6.23E+00	0.00E+00	6.23E+00
Zr-95	<5.04E+00	0.00E+00	5.04E+00
Nb-95	<2.77E+00	0.00E+00	2.77E+00
I-131	<1.10E+01	0.00E+00	1.10E+01
Cs-134	<3.30E+00	0.00E+00	3.30E+00
Cs-137	<2.51E+00	0.00E+00	2.51E+00
BaLa-140	<9.78E+00	0.00E+00	9.78E+00
Be-7	<2.80E+01	0.00E+00	2.80E+01
K-40	5.68E+01	2.79E+01	3.64E+01

Sample ID: 488748 Sample Dates: 10/8/2018 - 12/31/2018

Nuclide	Activity	2 Sigma Error	MDA
H3DW	<4.75E+01	0.00E+00	1.87E+02

Sample ID: 491616 Sample Dates: 12/3/2018 - 12/31/2018

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<1.35E+00	0.00E+00	1.35E+00
Co-58	<1.57E+00	0.00E+00	1.57E+00
Fe-59	<2.92E+00	0.00E+00	2.92E+00
Co-60	<1.34E+00	0.00E+00	1.34E+00
Zn-65	<2.89E+00	0.00E+00	2.89E+00
Zr-95	<2.72E+00	0.00E+00	2.72E+00
Nb-95	<1.75E+00	0.00E+00	1.75E+00
I-131	<1.20E+01	0.00E+00	1.20E+01
Cs-134	<1.57E+00	0.00E+00	1.57E+00
Cs-137	<1.24E+00	0.00E+00	1.24E+00
BaLa-140	<5.41E+00	0.00E+00	5.41E+00
Be-7	<1.51E+01	0.00E+00	1.51E+01
K-40	2.96E+01	1.30E+01	1.81E+01
Beta	<3.10E+00	0.00E+00	3.10E+00

Sample Point 066 [INDICATOR - SSE @ 18.9 miles]

Sample ID: 466683 Sample Dates: 1/2/2018 - 1/29/2018

Nuclide	Activity	2 Sigma Error	MDA
Beta	1.99E+00	7.40E-01	1.13E+00
Mn-54	<3.61E+00	0.00E+00	3.61E+00
Co-58	<3.79E+00	0.00E+00	3.79E+00
Fe-59	<9.50E+00	0.00E+00	9.50E+00
Co-60	<3.97E+00	0.00E+00	3.97E+00
Zn-65	<7.89E+00	0.00E+00	7.89E+00
Zr-95	<4.83E+00	0.00E+00	4.83E+00
Nb-95	<3.41E+00	0.00E+00	3.41E+00
I-131	<1.14E+01	0.00E+00	1.14E+01
Cs-134	<3.31E+00	0.00E+00	3.31E+00
Cs-137	<4.58E+00	0.00E+00	4.58E+00
BaLa-140	<8.97E+00	0.00E+00	8.97E+00
Be-7	<3.89E+01	0.00E+00	3.89E+01
K-40	<6.22E+01	0.00E+00	6.22E+01

Sample ID: 468538 Sample Dates: 1/29/2018 - 2/26/2018

Nuclide	Activity	2 Sigma Error	MDA
Beta	1.48E+00	8.06E-01	1.29E+00
Mn-54	<3.59E+00	0.00E+00	3.59E+00
Co-58	<3.40E+00	0.00E+00	3.40E+00
Fe-59	<8.72E+00	0.00E+00	8.72E+00
Co-60	<4.80E+00	0.00E+00	4.80E+00
Zn-65	<7.50E+00	0.00E+00	7.50E+00
Zr-95	<4.61E+00	0.00E+00	4.61E+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	<4.15E+00	0.00E+00	4.15E+00
Cs-137	<3.62E+00	0.00E+00	3.62E+00
BaLa-140	<7.97E+00	0.00E+00	7.97E+00
Be-7	<3.64E+01	0.00E+00	3.64E+01
K-40	<5.74E+01	0.00E+00	5.74E+01

Sample ID: 471526 Sample Dates: 2/26/2018 - 3/26/2018

Nuclide	Activity	2 Sigma Error	MDA
Beta	2.18E+00	9.25E-01	1.44E+00
Mn-54	<1.88E+00	0.00E+00	1.88E+00
Co-58	<2.73E+00	0.00E+00	2.73E+00
Fe-59	<5.31E+00	0.00E+00	5.31E+00

Sample ID: 471526 Sample Dates: 2/26/2018 - 3/26/2018

Nuclide	Activity	2 Sigma Error	MDA
Co-60	<2.00E+00	0.00E+00	2.00E+00
Zn-65	<3.19E+00	0.00E+00	3.19E+00
Zr-95	<4.71E+00	0.00E+00	4.71E+00
Nb-95	<3.54E+00	0.00E+00	3.54E+00
I-131	<1.19E+01	0.00E+00	1.19E+01
Cs-134	<2.14E+00	0.00E+00	2.14E+00
Cs-137	<1.80E+00	0.00E+00	1.80E+00
BaLa-140	<7.65E+00	0.00E+00	7.65E+00
Be-7	<2.11E+01	0.00E+00	2.11E+01
K-40	9.23E+01	2.43E+01	2.55E+01

Sample ID: 467534 Sample Dates: 1/2/2018 - 4/23/2018

Nuclide	Activity	2 Sigma Error	MDA
H3DW	4.57E+02	1.21E+02	1.83E+02

Sample ID: 473438 Sample Dates: 3/26/2018 - 4/23/2018

Nuclide	Activity	2 Sigma Error	MDA
Beta	2.33E+00	8.39E-01	1.27E+00
Mn-54	<2.94E+00	0.00E+00	2.94E+00
Co-58	<3.43E+00	0.00E+00	3.43E+00
Fe-59	<7.92E+00	0.00E+00	7.92E+00
Co-60	<1.66E+00	0.00E+00	1.66E+00
Zn-65	<6.61E+00	0.00E+00	6.61E+00
Zr-95	<5.33E+00	0.00E+00	5.33E+00
Nb-95	<3.91E+00	0.00E+00	3.91E+00
I-131	<8.91E+00	0.00E+00	8.91E+00
Cs-134	<3.63E+00	0.00E+00	3.63E+00
Cs-137	<2.58E+00	0.00E+00	2.58E+00
BaLa-140	<9.53E+00	0.00E+00	9.53E+00
Be-7	<3.14E+01	0.00E+00	3.14E+01
K-40	3.99E+01	2.78E+01	3.92E+01

Sample ID: 475002 Sample Dates: 4/23/2018 - 5/21/2018

Nuclide	Activity	2 Sigma Error	MDA
Beta	9.32E-01	7.20E-01	1.18E+00
Mn-54	<3.65E+00	0.00E+00	3.65E+00
Co-58	<4.27E+00	0.00E+00	4.27E+00
Fe-59	<6.58E+00	0.00E+00	6.58E+00
Co-60	<3.33E+00	0.00E+00	3.33E+00
Zn-65	<8.02E+00	0.00E+00	8.02E+00
Zr-95	<7.21E+00	0.00E+00	7.21E+00
Nb-95	<5.23E+00	0.00E+00	5.23E+00
I-131	<1.14E+01	0.00E+00	1.14E+01
Cs-134	<4.63E+00	0.00E+00	4.63E+00
Cs-137	<3.34E+00	0.00E+00	3.34E+00
BaLa-140	<8.09E+00	0.00E+00	8.09E+00
Be-7	<3.38E+01	0.00E+00	3.38E+01
K-40	7.90E+01	3.58E+01	3.55E+01

Sample ID: 477665 Sample Dates: 5/21/2018 - 6/18/2018

Nuclide	Activity	2 Sigma Error	MDA
Beta	1.31E+00	9.14E-01	1.49E+00
Mn-54	<3.60E+00	0.00E+00	3.60E+00
Co-58	<3.25E+00	0.00E+00	3.25E+00
Fe-59	<5.08E+00	0.00E+00	5.08E+00
Co-60	<2.55E+00	0.00E+00	2.55E+00
Zn-65	<7.63E+00	0.00E+00	7.63E+00
Zr-95	<5.36E+00	0.00E+00	5.36E+00
Nb-95	<4.12E+00	0.00E+00	4.12E+00
I-131	<1.19E+01	0.00E+00	1.19E+01
Cs-134	<3.57E+00	0.00E+00	3.57E+00
Cs-137	<3.49E+00	0.00E+00	3.49E+00
BaLa-140	<9.29E+00	0.00E+00	9.29E+00
Be-7	<3.90E+01	0.00E+00	3.90E+01
K-40	3.55E+01	2.81E+01	4.00E+01

Sample ID: 474731 Sample Dates: 4/23/2018 - 7/16/2018

Nuclide	Activity	2 Sigma Error	MDA
H3DW	4.05E+02	1.27E+02	1.98E+02

Sample ID: 479533 Sample Dates: 6/18/2018 - 7/16/2018

Nuclide	Activity	2 Sigma Error	MDA
Beta	1.03E+00	8.57E-01	1.41E+00
Mn-54	<3.14E+00	0.00E+00	3.14E+00
Co-58	<3.60E+00	0.00E+00	3.60E+00

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

Sample Point 066 [INDICATOR - SSE @ 18.9 miles]

Sample ID: 479533 Sample Dates: 6/18/2018 - 7/16/2018

Nuclide	Activity	2 Sigma Error	MDA
Fe-59	<7.79E+00	0.00E+00	7.79E+00
Co-60	<2.74E+00	0.00E+00	2.74E+00
Zn-65	<6.42E+00	0.00E+00	6.42E+00
Zr-95	<6.20E+00	0.00E+00	6.20E+00
Nb-95	<2.76E+00	0.00E+00	2.76E+00
I-131	<1.08E+01	0.00E+00	1.08E+01
Cs-134	<3.59E+00	0.00E+00	3.59E+00
Cs-137	<3.39E+00	0.00E+00	3.39E+00
BaLa-140	<8.22E+00	0.00E+00	8.22E+00
Be-7	<3.11E+01	0.00E+00	3.11E+01
K-40	4.61E+01	2.39E+01	2.75E+01

Sample ID: 481633 Sample Dates: 7/16/2018 - 8/13/2018

Nuclide	Activity	2 Sigma Error	MDA
Beta	6.92E-01	7.41E-01	1.23E+00
Mn-54	<2.28E+00	0.00E+00	2.28E+00
Co-58	<2.66E+00	0.00E+00	2.66E+00
Fe-59	<6.63E+00	0.00E+00	6.63E+00
Co-60	<2.63E+00	0.00E+00	2.63E+00
Zn-65	<6.30E+00	0.00E+00	6.30E+00
Zr-95	<5.84E+00	0.00E+00	5.84E+00
Nb-95	<4.25E+00	0.00E+00	4.25E+00
I-131	<1.10E+01	0.00E+00	1.10E+01
Cs-134	<2.62E+00	0.00E+00	2.62E+00
Cs-137	<2.29E+00	0.00E+00	2.29E+00
BaLa-140	<7.34E+00	0.00E+00	7.34E+00
Be-7	<2.44E+01	0.00E+00	2.44E+01
K-40	4.69E+01	2.67E+01	3.66E+01

Sample ID: 483536 Sample Dates: 8/13/2018 - 9/10/2018

Nuclide	Activity	2 Sigma Error	MDA
Beta	<4.85E-01	0.00E+00	1.30E+00
Mn-54	<2.57E+00	0.00E+00	2.57E+00
Co-58	<3.13E+00	0.00E+00	3.13E+00
Fe-59	<6.57E+00	0.00E+00	6.57E+00
Co-60	<3.09E+00	0.00E+00	3.09E+00
Zn-65	<6.89E+00	0.00E+00	6.89E+00
Zr-95	<6.16E+00	0.00E+00	6.16E+00
Nb-95	<2.77E+00	0.00E+00	2.77E+00
I-131	<1.18E+01	0.00E+00	1.18E+01
Cs-134	<3.32E+00	0.00E+00	3.32E+00
Cs-137	<2.80E+00	0.00E+00	2.80E+00
BaLa-140	<7.94E+00	0.00E+00	7.94E+00
Be-7	<2.66E+01	0.00E+00	2.66E+01
K-40	1.49E+01	2.31E+01	3.89E+01

Sample ID: 481636 Sample Dates: 7/16/2018 - 10/8/2018

Nuclide	Activity	2 Sigma Error	MDA
H3DW	3.14E+02	1.18E+02	1.86E+02

Sample ID: 485855 Sample Dates: 9/10/2018 - 10/8/2018

Nuclide	Activity	2 Sigma Error	MDA
Beta	1.33E+00	7.35E-01	1.17E+00
Mn-54	<2.39E+00	0.00E+00	2.39E+00
Co-58	<3.77E+00	0.00E+00	3.77E+00
Fe-59	<7.66E+00	0.00E+00	7.66E+00
Co-60	<2.80E+00	0.00E+00	2.80E+00
Zn-65	<6.23E+00	0.00E+00	6.23E+00
Zr-95	<6.50E+00	0.00E+00	6.50E+00
Nb-95	<3.88E+00	0.00E+00	3.88E+00
I-131	<1.19E+01	0.00E+00	1.19E+01
Cs-134	<3.54E+00	0.00E+00	3.54E+00
Cs-137	<3.85E+00	0.00E+00	3.85E+00
BaLa-140	<8.48E+00	0.00E+00	8.48E+00
Be-7	<2.25E+01	0.00E+00	2.25E+01
K-40	6.16E+01	2.75E+01	2.96E+01

Sample ID: 488203 Sample Dates: 10/8/2018 - 11/5/2018

Nuclide	Activity	2 Sigma Error	MDA
Beta	7.81E-01	7.73E-01	1.29E+00
Mn-54	<3.09E+00	0.00E+00	3.09E+00
Co-58	<2.74E+00	0.00E+00	2.74E+00
Fe-59	<6.54E+00	0.00E+00	6.54E+00

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

Sample Point 066 [INDICATOR - SSE @ 18.9 miles]

Sample ID: 488203 **Sample Dates: 10/8/2018 - 11/5/2018**

Nuclide	Activity	2 Sigma Error	MDA
Co-60	<2.88E+00	0.00E+00	2.88E+00
Zn-65	<5.71E+00	0.00E+00	5.71E+00
Zr-95	<6.52E+00	0.00E+00	6.52E+00
Nb-95	<4.13E+00	0.00E+00	4.13E+00
I-131	<1.18E+01	0.00E+00	1.18E+01
Cs-134	<3.04E+00	0.00E+00	3.04E+00
Cs-137	<2.88E+00	0.00E+00	2.88E+00
BaLa-140	<7.36E+00	0.00E+00	7.36E+00
Be-7	<2.41E+01	0.00E+00	2.41E+01
K-40	<4.51E+01	0.00E+00	4.51E+01

Sample ID: 490032 **Sample Dates: 11/5/2018 - 12/3/2018**

Nuclide	Activity	2 Sigma Error	MDA
Beta	2.24E+00	8.94E-01	1.38E+00
Mn-54	<2.06E+00	0.00E+00	2.06E+00
Co-58	<2.67E+00	0.00E+00	2.67E+00
Fe-59	<5.30E+00	0.00E+00	5.30E+00
Co-60	<2.49E+00	0.00E+00	2.49E+00
Zn-65	<5.07E+00	0.00E+00	5.07E+00
Zr-95	<4.89E+00	0.00E+00	4.89E+00
Nb-95	<3.05E+00	0.00E+00	3.05E+00
I-131	<1.10E+01	0.00E+00	1.10E+01
Cs-134	<2.18E+00	0.00E+00	2.18E+00
Cs-137	<2.30E+00	0.00E+00	2.30E+00
BaLa-140	<6.15E+00	0.00E+00	6.15E+00
Be-7	<2.26E+01	0.00E+00	2.26E+01
K-40	<3.40E+01	0.00E+00	3.40E+01

Sample ID: 488749 **Sample Dates: 10/8/2018 - 12/31/2018**

Nuclide	Activity	2 Sigma Error	MDA
H3DW	2.47E+02	1.16E+02	1.87E+02

Sample ID: 491617 **Sample Dates: 12/3/2018 - 12/31/2018**

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<1.25E+00	0.00E+00	1.25E+00
Co-58	<1.49E+00	0.00E+00	1.49E+00
Fe-59	<3.40E+00	0.00E+00	3.40E+00
Co-60	<1.29E+00	0.00E+00	1.29E+00
Zn-65	<3.05E+00	0.00E+00	3.05E+00
Zr-95	<3.07E+00	0.00E+00	3.07E+00
Nb-95	<2.08E+00	0.00E+00	2.08E+00
I-131	<1.20E+01	0.00E+00	1.20E+01
Cs-134	<1.57E+00	0.00E+00	1.57E+00
Cs-137	<1.35E+00	0.00E+00	1.35E+00
BaLa-140	<5.20E+00	0.00E+00	5.20E+00
Be-7	<1.38E+01	0.00E+00	1.38E+01
K-40	4.17E+01	1.57E+01	2.14E+01
Beta	<3.72E+00	0.00E+00	3.72E+00

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

Sample Point 060 [CONTROL FISH / INDICATOR - NE @ 3.23 miles]

Sample ID: 472828 **Sample Dates: 4/23/2018 - 4/25/2018** **FREESWIM**

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<2.55E+01	0.00E+00	2.55E+01
Co-58	<3.47E+01	0.00E+00	3.47E+01
Fe-59	<6.13E+01	0.00E+00	6.13E+01
Co-60	<3.28E+01	0.00E+00	3.28E+01
Zn-65	<5.87E+01	0.00E+00	5.87E+01
Nb-95	<3.31E+01	0.00E+00	3.31E+01
I-131	<6.65E+01	0.00E+00	6.65E+01
Cs-134	<2.17E+01	0.00E+00	2.17E+01
Cs-137	<3.62E+01	0.00E+00	3.62E+01
Be-7	<2.52E+02	0.00E+00	2.52E+02
K-40	2.90E+03	6.74E+02	4.33E+02
Ag-110M	<2.59E+01	0.00E+00	2.59E+01
Sb-122	<1.15E+03	0.00E+00	1.15E+03
Sb-125	<5.86E+01	0.00E+00	5.86E+01

Sample ID: 472829 **Sample Dates: 4/23/2018 - 4/25/2018** **BOTMFEEDER**

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<1.84E+01	0.00E+00	1.84E+01
Co-58	<4.34E+01	0.00E+00	4.34E+01

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

Sample Point 060 [CONTROL FISH / INDICATOR - NE @ 3.23 miles]

Sample ID: 472829 Sample Dates: 4/23/2018 - 4/25/2018 BOTMFEEDER

Nuclide	Activity	2 Sigma Error	MDA
Fe-59	<4.97E+01	0.00E+00	4.97E+01
Co-60	<3.88E+01	0.00E+00	3.88E+01
Zn-65	<1.12E+02	0.00E+00	1.12E+02
Nb-95	<2.20E+01	0.00E+00	2.20E+01
I-131	<8.86E+01	0.00E+00	8.86E+01
Cs-134	<3.63E+01	0.00E+00	3.63E+01
Cs-137	<2.54E+01	0.00E+00	2.54E+01
Be-7	<2.35E+02	0.00E+00	2.35E+02
K-40	3.93E+03	8.72E+02	5.95E+02
Ag-110M	<1.60E+01	0.00E+00	1.60E+01
Sb-122	<1.08E+03	0.00E+00	1.08E+03
Sb-125	<7.37E+01	0.00E+00	7.37E+01

Sample ID: 486017 Sample Dates: 10/22/2018 - 10/22/2018 FREESWIM

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<8.23E+01	0.00E+00	8.23E+01
Co-58	<5.66E+01	0.00E+00	5.66E+01
Fe-59	<1.42E+02	0.00E+00	1.42E+02
Co-60	<8.42E+01	0.00E+00	8.42E+01
Zn-65	<2.01E+02	0.00E+00	2.01E+02
Nb-95	<7.81E+01	0.00E+00	7.81E+01
I-131	<3.59E+02	0.00E+00	3.59E+02
Cs-134	<6.33E+01	0.00E+00	6.33E+01
Cs-137	<7.00E+01	0.00E+00	7.00E+01
Be-7	<7.67E+02	0.00E+00	7.67E+02
K-40	4.47E+03	1.12E+03	7.45E+02
Ag-110M	<7.05E+01	0.00E+00	7.05E+01
Sb-122	<1.18E+04	0.00E+00	1.18E+04
Sb-125	<1.66E+02	0.00E+00	1.66E+02

Sample ID: 486018 Sample Dates: 10/22/2018 - 10/24/2018 BOTMFEEDER

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<8.07E+01	0.00E+00	8.07E+01
Co-58	<6.20E+01	0.00E+00	6.20E+01
Fe-59	<1.41E+02	0.00E+00	1.41E+02
Co-60	<1.53E+01	0.00E+00	1.53E+01
Zn-65	<1.47E+02	0.00E+00	1.47E+02
Nb-95	<1.00E+02	0.00E+00	1.00E+02
I-131	<2.92E+02	0.00E+00	2.92E+02
Cs-134	<8.26E+01	0.00E+00	8.26E+01
Cs-137	<7.12E+01	0.00E+00	7.12E+01
Be-7	<5.20E+02	0.00E+00	5.20E+02
K-40	4.05E+03	1.04E+03	5.86E+02
Ag-110M	<5.18E+01	0.00E+00	5.18E+01
Sb-122	<7.91E+03	0.00E+00	7.91E+03
Sb-125	<1.52E+02	0.00E+00	1.52E+02

Sample Point 063 [INDICATOR - ESE @ 0.8 miles]

Sample ID: 472830 Sample Dates: 4/24/2018 - 4/24/2018 FREESWIM

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<4.55E+01	0.00E+00	4.55E+01
Co-58	<2.78E+01	0.00E+00	2.78E+01
Fe-59	<6.86E+01	0.00E+00	6.86E+01
Co-60	<4.63E+01	0.00E+00	4.63E+01
Zn-65	<1.26E+02	0.00E+00	1.26E+02
Nb-95	<6.20E+01	0.00E+00	6.20E+01
I-131	<9.57E+01	0.00E+00	9.57E+01
Cs-134	<4.12E+01	0.00E+00	4.12E+01
Cs-137	<6.36E+01	0.00E+00	6.36E+01
Be-7	<3.50E+02	0.00E+00	3.50E+02
K-40	5.16E+03	1.19E+03	8.88E+02
Ag-110M	<3.61E+01	0.00E+00	3.61E+01
Sb-122	<2.01E+03	0.00E+00	2.01E+03
Sb-125	<8.91E+01	0.00E+00	8.91E+01

Sample ID: 472831 Sample Dates: 4/25/2018 - 4/26/2018 BOTMFEEDER

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<3.84E+01	0.00E+00	3.84E+01
Co-58	<4.74E+01	0.00E+00	4.74E+01
Fe-59	<1.01E+02	0.00E+00	1.01E+02
Co-60	<3.08E+01	0.00E+00	3.08E+01

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

Sample Point 063 [INDICATOR - ESE @ 0.8 miles]

Sample ID:	472831	Sample Dates: 4/25/2018 - 4/26/2018	BOTMFEEDER	Nuclide	Activity	2 Sigma Error	MDA
				Zn-65	<9.82E+01	0.00E+00	9.82E+01
				Nb-95	<4.09E+01	0.00E+00	4.09E+01
				I-131	<9.42E+01	0.00E+00	9.42E+01
				Cs-134	<4.87E+01	0.00E+00	4.87E+01
				Cs-137	<5.03E+01	0.00E+00	5.03E+01
				Be-7	<2.91E+02	0.00E+00	2.91E+02
				K-40	3.86E+03	8.88E+02	4.33E+02
				Ag-110M	<3.06E+01	0.00E+00	3.06E+01
				Sb-122	<6.52E+02	0.00E+00	6.52E+02
				Sb-125	<8.11E+01	0.00E+00	8.11E+01

Sample ID:	486019	Sample Dates: 10/22/2018 - 10/22/2018	FREESWIM	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<6.00E+01	0.00E+00	6.00E+01
				Co-58	<7.52E+01	0.00E+00	7.52E+01
				Fe-59	<1.56E+02	0.00E+00	1.56E+02
				Co-60	<4.59E+01	0.00E+00	4.59E+01
				Zn-65	<1.37E+02	0.00E+00	1.37E+02
				Nb-95	<8.12E+01	0.00E+00	8.12E+01
				I-131	<3.15E+02	0.00E+00	3.15E+02
				Cs-134	<6.28E+01	0.00E+00	6.28E+01
				Cs-137	<6.16E+01	0.00E+00	6.16E+01
				Be-7	<5.40E+02	0.00E+00	5.40E+02
				K-40	4.06E+03	1.03E+03	7.60E+02
				Ag-110M	<5.55E+01	0.00E+00	5.55E+01
				Sb-122	<1.21E+04	0.00E+00	1.21E+04
				Sb-125	<1.46E+02	0.00E+00	1.46E+02

Sample ID:	486020	Sample Dates: 10/22/2018 - 10/23/2018	BOTMFEEDER	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<7.69E+01	0.00E+00	7.69E+01
				Co-58	<9.18E+01	0.00E+00	9.18E+01
				Fe-59	<1.78E+02	0.00E+00	1.78E+02
				Co-60	<7.24E+01	0.00E+00	7.24E+01
				Zn-65	<1.33E+02	0.00E+00	1.33E+02
				Nb-95	<1.03E+02	0.00E+00	1.03E+02
				I-131	<3.01E+02	0.00E+00	3.01E+02
				Cs-134	<6.84E+01	0.00E+00	6.84E+01
				Cs-137	<7.58E+01	0.00E+00	7.58E+01
				Be-7	<6.84E+02	0.00E+00	6.84E+02
				K-40	3.18E+03	1.04E+03	9.93E+02
				Ag-110M	<5.13E+01	0.00E+00	5.13E+01
				Sb-122	<1.25E+04	0.00E+00	1.25E+04
				Sb-125	<1.80E+02	0.00E+00	1.80E+02

Sample Point 067 [INDICATOR - SSE @ 4.34 miles]

Sample ID:	472832	Sample Dates: 4/24/2018 - 4/24/2018	FREESWIM	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<2.89E+01	0.00E+00	2.89E+01
				Co-58	<2.44E+01	0.00E+00	2.44E+01
				Fe-59	<5.97E+01	0.00E+00	5.97E+01
				Co-60	<2.53E+01	0.00E+00	2.53E+01
				Zn-65	<9.25E+01	0.00E+00	9.25E+01
				Nb-95	<3.45E+01	0.00E+00	3.45E+01
				I-131	<8.36E+01	0.00E+00	8.36E+01
				Cs-134	<2.47E+01	0.00E+00	2.47E+01
				Cs-137	<3.21E+01	0.00E+00	3.21E+01
				Be-7	1.01E+02	1.27E+02	2.04E+02
				K-40	3.09E+03	7.00E+02	9.30E+01
				Ag-110M	<1.94E+01	0.00E+00	1.94E+01
				Sb-122	<1.44E+03	0.00E+00	1.44E+03
				Sb-125	<6.65E+01	0.00E+00	6.65E+01

Sample ID:	472833	Sample Dates: 4/24/2018 - 4/25/2018	BOTMFEEDER	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<2.39E+01	0.00E+00	2.39E+01
				Co-58	<3.16E+01	0.00E+00	3.16E+01
				Fe-59	<7.77E+01	0.00E+00	7.77E+01
				Co-60	<4.19E+01	0.00E+00	4.19E+01
				Zn-65	<5.30E+01	0.00E+00	5.30E+01
				Nb-95	<3.15E+01	0.00E+00	3.15E+01

Media Type: FISH Concentration (Activity): pCi/kg wet
Sample Point 067 [INDICATOR - SSE @ 4.34 miles]

Sample ID: 472833 **Sample Dates: 4/24/2018 - 4/25/2018** **BOTMFEEDER**

Nuclide	Activity	2 Sigma Error	MDA
I-131	<5.37E+01	0.00E+00	5.37E+01
Cs-134	<2.64E+01	0.00E+00	2.64E+01
Cs-137	<2.95E+01	0.00E+00	2.95E+01
Be-7	<2.75E+02	0.00E+00	2.75E+02
K-40	3.48E+03	7.73E+02	5.27E+02
Ag-110M	<1.41E+01	0.00E+00	1.41E+01
Sb-122	<1.28E+03	0.00E+00	1.28E+03
Sb-125	<6.90E+01	0.00E+00	6.90E+01

Sample ID: 486021 **Sample Dates: 10/22/2018 - 10/22/2018** **FREESWIM**

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<6.98E+01	0.00E+00	6.98E+01
Co-58	<8.03E+01	0.00E+00	8.03E+01
Fe-59	<1.51E+02	0.00E+00	1.51E+02
Co-60	<4.04E+01	0.00E+00	4.04E+01
Zn-65	<1.09E+02	0.00E+00	1.09E+02
Nb-95	<8.60E+01	0.00E+00	8.60E+01
I-131	<3.82E+02	0.00E+00	3.82E+02
Cs-134	<7.33E+01	0.00E+00	7.33E+01
Cs-137	<7.25E+01	0.00E+00	7.25E+01
Be-7	<5.56E+02	0.00E+00	5.56E+02
K-40	5.31E+03	1.20E+03	6.81E+02
Ag-110M	<5.32E+01	0.00E+00	5.32E+01
Sb-122	<1.52E+04	0.00E+00	1.52E+04
Sb-125	<1.57E+02	0.00E+00	1.57E+02

Sample ID: 486022 **Sample Dates: 10/22/2018 - 10/22/2018** **BOTMFEEDER**

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<4.25E+01	0.00E+00	4.25E+01
Co-58	<5.91E+01	0.00E+00	5.91E+01
Fe-59	<1.48E+02	0.00E+00	1.48E+02
Co-60	<4.78E+01	0.00E+00	4.78E+01
Zn-65	<1.30E+02	0.00E+00	1.30E+02
Nb-95	<6.96E+01	0.00E+00	6.96E+01
I-131	<2.62E+02	0.00E+00	2.62E+02
Cs-134	<5.01E+01	0.00E+00	5.01E+01
Cs-137	<5.95E+01	0.00E+00	5.95E+01
Be-7	<4.30E+02	0.00E+00	4.30E+02
K-40	3.28E+03	8.79E+02	6.95E+02
Ag-110M	<5.58E+01	0.00E+00	5.58E+01
Sb-122	<1.05E+04	0.00E+00	1.05E+04
Sb-125	<1.13E+02	0.00E+00	1.13E+02

Media Type: MILK Concentration (Activity): pCi/l
Sample Point 071 [CONTROL - SSE @ 10.2 miles]

Sample ID: 466221 **Sample Dates: 1/8/2018 - 1/8/2018**

Nuclide	Activity	2 Sigma Error	MDA
LLI-131	<5.74E-01	0.00E+00	5.74E-01
I-131	<7.00E+00	0.00E+00	7.00E+00
Cs-134	<7.03E+00	0.00E+00	7.03E+00
Cs-137	<5.57E+00	0.00E+00	5.57E+00
BaLa-140	<8.76E+00	0.00E+00	8.76E+00
Be-7	<6.09E+01	0.00E+00	6.09E+01
K-40	1.52E+03	2.45E+02	9.82E+01

Sample ID: 467004 **Sample Dates: 1/22/2018 - 1/22/2018**

Nuclide	Activity	2 Sigma Error	MDA
LLI-131	<6.17E-01	0.00E+00	6.17E-01
I-131	<7.38E+00	0.00E+00	7.38E+00
Cs-134	<8.16E+00	0.00E+00	8.16E+00
Cs-137	<9.34E+00	0.00E+00	9.34E+00
BaLa-140	<2.35E+00	0.00E+00	2.35E+00
Be-7	<5.12E+01	0.00E+00	5.12E+01
K-40	1.57E+03	2.44E+02	1.08E+02

Sample ID: 467684 **Sample Dates: 2/5/2018 - 2/5/2018**

Nuclide	Activity	2 Sigma Error	MDA
LLI-131	<6.45E-01	0.00E+00	6.45E-01
I-131	<9.47E+00	0.00E+00	9.47E+00
Cs-134	<8.33E+00	0.00E+00	8.33E+00
Cs-137	<8.08E+00	0.00E+00	8.08E+00
BaLa-140	<9.11E+00	0.00E+00	9.11E+00

Media Type: MILK Concentration (Activity): pCi/l

Sample Point 071 [CONTROL - SSE @ 10.2 miles]

Sample ID: 467684 **Sample Dates: 2/5/2018 - 2/5/2018**

Nuclide	Activity	2 Sigma Error	MDA
Be-7	<5.89E+01	0.00E+00	5.89E+01
K-40	1.54E+03	2.37E+02	8.58E+01

Sample ID: 468782 **Sample Dates: 2/19/2018 - 2/19/2018**

Nuclide	Activity	2 Sigma Error	MDA
LLI-131	<5.86E-01	0.00E+00	5.86E-01
I-131	<7.48E+00	0.00E+00	7.48E+00
Cs-134	<6.88E+00	0.00E+00	6.88E+00
Cs-137	<8.08E+00	0.00E+00	8.08E+00
BaLa-140	<7.90E+00	0.00E+00	7.90E+00
Be-7	<5.22E+01	0.00E+00	5.22E+01
K-40	1.34E+03	2.18E+02	8.14E+01

Sample ID: 470629 **Sample Dates: 3/5/2018 - 3/5/2018**

Nuclide	Activity	2 Sigma Error	MDA
LLI-131	<6.40E-01	0.00E+00	6.40E-01
I-131	<7.61E+00	0.00E+00	7.61E+00
Cs-134	<8.33E+00	0.00E+00	8.33E+00
Cs-137	<7.73E+00	0.00E+00	7.73E+00
BaLa-140	<7.81E+00	0.00E+00	7.81E+00
Be-7	<6.84E+01	0.00E+00	6.84E+01
K-40	1.54E+03	2.35E+02	6.54E+01

Sample ID: 471737 **Sample Dates: 3/19/2018 - 3/19/2018**

Nuclide	Activity	2 Sigma Error	MDA
LLI-131	<6.10E-01	0.00E+00	6.10E-01
I-131	<6.82E+00	0.00E+00	6.82E+00
Cs-134	<6.31E+00	0.00E+00	6.31E+00
Cs-137	<6.08E+00	0.00E+00	6.08E+00
BaLa-140	<9.07E+00	0.00E+00	9.07E+00
Be-7	<6.09E+01	0.00E+00	6.09E+01
K-40	1.42E+03	2.25E+02	7.70E+01

Sample ID: 473007 **Sample Dates: 4/2/2018 - 4/2/2018**

Nuclide	Activity	2 Sigma Error	MDA
LLI-131	<6.33E-01	0.00E+00	6.33E-01
I-131	<6.18E+00	0.00E+00	6.18E+00
Cs-134	<8.79E+00	0.00E+00	8.79E+00
Cs-137	<5.57E+00	0.00E+00	5.57E+00
BaLa-140	<1.13E+01	0.00E+00	1.13E+01
Be-7	<5.82E+01	0.00E+00	5.82E+01
K-40	1.45E+03	2.36E+02	8.30E+01

Sample ID: 473656 **Sample Dates: 4/16/2018 - 4/16/2018**

Nuclide	Activity	2 Sigma Error	MDA
LLI-131	<5.85E-01	0.00E+00	5.85E-01
I-131	<7.20E+00	0.00E+00	7.20E+00
Cs-134	<7.89E+00	0.00E+00	7.89E+00
Cs-137	<7.73E+00	0.00E+00	7.73E+00
BaLa-140	<6.60E+00	0.00E+00	6.60E+00
Be-7	<4.76E+01	0.00E+00	4.76E+01
K-40	1.47E+03	2.30E+02	8.07E+01

Sample ID: 474550 **Sample Dates: 4/30/2018 - 4/30/2018**

Nuclide	Activity	2 Sigma Error	MDA
LLI-131	<6.47E-01	0.00E+00	6.47E-01
I-131	<8.65E+00	0.00E+00	8.65E+00
Cs-134	<6.30E+00	0.00E+00	6.30E+00
Cs-137	<6.79E+00	0.00E+00	6.79E+00
BaLa-140	<6.97E+00	0.00E+00	6.97E+00
Be-7	<4.20E+01	0.00E+00	4.20E+01
K-40	1.41E+03	2.41E+02	1.39E+02

Sample ID: 475237 **Sample Dates: 5/14/2018 - 5/14/2018**

Nuclide	Activity	2 Sigma Error	MDA
LLI-131	<6.35E-01	0.00E+00	6.35E-01
I-131	<7.52E+00	0.00E+00	7.52E+00
Cs-134	<6.64E+00	0.00E+00	6.64E+00
Cs-137	<6.40E+00	0.00E+00	6.40E+00
BaLa-140	<6.54E+00	0.00E+00	6.54E+00
Be-7	<4.93E+01	0.00E+00	4.93E+01
K-40	1.43E+03	2.33E+02	1.13E+02

Sample ID: 476383 **Sample Dates: 5/29/2018 - 5/29/2018**

Nuclide	Activity	2 Sigma Error	MDA
LLI-131	<5.88E-01	0.00E+00	5.88E-01
I-131	<6.72E+00	0.00E+00	6.72E+00

Media Type: MILK Concentration (Activity): pCi/l

Sample Point 071 [CONTROL - SSE @ 10.2 miles]

Sample ID: 476383 Sample Dates: 5/29/2018 - 5/29/2018

Nuclide	Activity	2 Sigma Error	MDA
Cs-134	<6.29E+00	0.00E+00	6.29E+00
Cs-137	<5.89E+00	0.00E+00	5.89E+00
BaLa-140	<7.51E+00	0.00E+00	7.51E+00
Be-7	<5.83E+01	0.00E+00	5.83E+01
K-40	1.42E+03	2.27E+02	9.99E+01

Sample ID: 478129 Sample Dates: 6/11/2018 - 6/11/2018

Nuclide	Activity	2 Sigma Error	MDA
LLI-131	<6.28E-01	0.00E+00	6.28E-01
I-131	<6.41E+00	0.00E+00	6.41E+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	<9.13E+00	0.00E+00	9.13E+00
Be-7	<4.58E+01	0.00E+00	4.58E+01
K-40	1.55E+03	2.43E+02	1.11E+02

Sample ID: 478818 Sample Dates: 6/25/2018 - 6/25/2018

Nuclide	Activity	2 Sigma Error	MDA
LLI-131	<6.15E-01	0.00E+00	6.15E-01
I-131	<6.83E+00	0.00E+00	6.83E+00
Cs-134	<7.12E+00	0.00E+00	7.12E+00
Cs-137	<6.29E+00	0.00E+00	6.29E+00
BaLa-140	<6.43E+00	0.00E+00	6.43E+00
Be-7	<4.85E+01	0.00E+00	4.85E+01
K-40	1.47E+03	2.32E+02	8.07E+01

Sample ID: 479905 Sample Dates: 7/9/2018 - 7/9/2018

Nuclide	Activity	2 Sigma Error	MDA
LLI-131	<6.17E-01	0.00E+00	6.17E-01
I-131	<6.17E+00	0.00E+00	6.17E+00
Cs-134	<7.82E+00	0.00E+00	7.82E+00
Cs-137	<7.78E+00	0.00E+00	7.78E+00
BaLa-140	<2.33E+00	0.00E+00	2.33E+00
Be-7	<6.96E+01	0.00E+00	6.96E+01
K-40	1.37E+03	2.25E+02	7.55E+01

Sample ID: 481095 Sample Dates: 7/23/2018 - 7/23/2018

Nuclide	Activity	2 Sigma Error	MDA
LLI-131	<6.17E-01	0.00E+00	6.17E-01
I-131	<9.13E+00	0.00E+00	9.13E+00
Cs-134	<8.34E+00	0.00E+00	8.34E+00
Cs-137	<9.23E+00	0.00E+00	9.23E+00
BaLa-140	<9.70E+00	0.00E+00	9.70E+00
Be-7	<5.50E+01	0.00E+00	5.50E+01
K-40	1.55E+03	2.55E+02	1.55E+02

Sample ID: 481990 Sample Dates: 8/6/2018 - 8/6/2018

Nuclide	Activity	2 Sigma Error	MDA
LLI-131	<6.46E-01	0.00E+00	6.46E-01
I-131	<8.46E+00	0.00E+00	8.46E+00
Cs-134	<9.56E+00	0.00E+00	9.56E+00
Cs-137	<6.85E+00	0.00E+00	6.85E+00
BaLa-140	<6.18E+00	0.00E+00	6.18E+00
Be-7	<5.15E+01	0.00E+00	5.15E+01
K-40	1.42E+03	2.31E+02	1.09E+02

Sample ID: 482829 Sample Dates: 8/20/2018 - 8/20/2018

Nuclide	Activity	2 Sigma Error	MDA
LLI-131	<5.72E-01	0.00E+00	5.72E-01
I-131	<6.53E+00	0.00E+00	6.53E+00
Cs-134	<6.31E+00	0.00E+00	6.31E+00
Cs-137	<5.57E+00	0.00E+00	5.57E+00
BaLa-140	<2.28E+00	0.00E+00	2.28E+00
Be-7	2.84E-01	2.93E+01	5.66E+01
K-40	1.46E+03	2.37E+02	1.36E+02

Sample ID: 483575 Sample Dates: 9/4/2018 - 9/4/2018

Nuclide	Activity	2 Sigma Error	MDA
LLI-131	<6.02E-01	0.00E+00	6.02E-01
I-131	<7.61E+00	0.00E+00	7.61E+00
Cs-134	<7.28E+00	0.00E+00	7.28E+00
Cs-137	<8.89E+00	0.00E+00	8.89E+00
BaLa-140	<6.65E+00	0.00E+00	6.65E+00
Be-7	<4.66E+01	0.00E+00	4.66E+01
K-40	1.41E+03	2.30E+02	8.03E+01

Media Type: MILK Concentration (Activity): pCi/l

Sample Point 071 [CONTROL - SSE @ 10.2 miles]

Sample ID: 485048 **Sample Dates: 9/17/2018 - 9/17/2018**

Nuclide	Activity	2 Sigma Error	MDA
LLI-131	<5.70E-01	0.00E+00	5.70E-01
I-131	<6.71E+00	0.00E+00	6.71E+00
Cs-134	<7.83E+00	0.00E+00	7.83E+00
Cs-137	<7.36E+00	0.00E+00	7.36E+00
BaLa-140	<9.78E+00	0.00E+00	9.78E+00
Be-7	<4.34E+01	0.00E+00	4.34E+01
K-40	1.48E+03	2.37E+02	7.66E+01

Sample ID: 486192 **Sample Dates: 10/1/2018 - 10/1/2018**

Nuclide	Activity	2 Sigma Error	MDA
LLI-131	<6.28E-01	0.00E+00	6.28E-01
I-131	<6.70E+00	0.00E+00	6.70E+00
Cs-134	<6.30E+00	0.00E+00	6.30E+00
Cs-137	<6.54E+00	0.00E+00	6.54E+00
BaLa-140	<8.75E+00	0.00E+00	8.75E+00
Be-7	<4.92E+01	0.00E+00	4.92E+01
K-40	1.62E+03	2.50E+02	1.20E+02

Sample ID: 487759 **Sample Dates: 10/15/2018 - 10/15/2018**

Nuclide	Activity	2 Sigma Error	MDA
LLI-131	<5.27E-01	0.00E+00	5.27E-01
I-131	<6.52E+00	0.00E+00	6.52E+00
Cs-134	<5.96E+00	0.00E+00	5.96E+00
Cs-137	<5.89E+00	0.00E+00	5.89E+00
BaLa-140	<2.29E+00	0.00E+00	2.29E+00
Be-7	<5.95E+01	0.00E+00	5.95E+01
K-40	1.34E+03	2.16E+02	1.80E+01

Sample ID: 488495 **Sample Dates: 10/29/2018 - 10/29/2018**

Nuclide	Activity	2 Sigma Error	MDA
LLI-131	<6.14E-01	0.00E+00	6.14E-01
I-131	<6.97E+00	0.00E+00	6.97E+00
Cs-134	<7.88E+00	0.00E+00	7.88E+00
Cs-137	<6.96E+00	0.00E+00	6.96E+00
BaLa-140	<7.55E+00	0.00E+00	7.55E+00
Be-7	<5.40E+01	0.00E+00	5.40E+01
K-40	1.32E+03	2.20E+02	1.12E+02

Sample ID: 489171 **Sample Dates: 11/12/2018 - 11/12/2018**

Nuclide	Activity	2 Sigma Error	MDA
LLI-131	<6.20E-01	0.00E+00	6.20E-01
I-131	<6.11E+00	0.00E+00	6.11E+00
Cs-134	<9.62E+00	0.00E+00	9.62E+00
Cs-137	<8.86E+00	0.00E+00	8.86E+00
BaLa-140	<9.13E+00	0.00E+00	9.13E+00
Be-7	<4.88E+01	0.00E+00	4.88E+01
K-40	1.33E+03	2.26E+02	1.32E+02

Sample ID: 490176 **Sample Dates: 11/26/2018 - 11/26/2018**

Nuclide	Activity	2 Sigma Error	MDA
LLI-131	<5.65E-01	0.00E+00	5.65E-01
I-131	<5.97E+00	0.00E+00	5.97E+00
Cs-134	<9.04E+00	0.00E+00	9.04E+00
Cs-137	<7.20E+00	0.00E+00	7.20E+00
BaLa-140	<7.69E+00	0.00E+00	7.69E+00
Be-7	<5.32E+01	0.00E+00	5.32E+01
K-40	1.46E+03	2.31E+02	8.39E+01

Sample ID: 491198 **Sample Dates: 12/10/2018 - 12/10/2018**

Nuclide	Activity	2 Sigma Error	MDA
LLI-131	<6.48E-01	0.00E+00	6.48E-01
I-131	<1.00E+01	0.00E+00	1.00E+01
Cs-134	<6.64E+00	0.00E+00	6.64E+00
Cs-137	<9.19E+00	0.00E+00	9.19E+00
BaLa-140	<1.00E+01	0.00E+00	1.00E+01
Be-7	<5.27E+01	0.00E+00	5.27E+01
K-40	1.45E+03	2.27E+02	1.80E+01

Sample ID: 491784 **Sample Dates: 12/26/2018 - 12/26/2018**

Nuclide	Activity	2 Sigma Error	MDA
LLI-131	<5.94E-01	0.00E+00	5.94E-01
I-131	<6.55E+00	0.00E+00	6.55E+00
Cs-134	<7.11E+00	0.00E+00	7.11E+00
Cs-137	<5.76E+00	0.00E+00	5.76E+00
BaLa-140	<7.69E+00	0.00E+00	7.69E+00
Be-7	<4.79E+01	0.00E+00	4.79E+01

Media Type: MILK Concentration (Activity): pCi/l

Sample Point 071 [CONTROL - SSE @ 10.2 miles]

Sample ID:	491784	Sample Dates: 12/26/2018 - 12/26/2018	Nuclide	Activity	2 Sigma Error	MDA
			K-40	1.28E+03	2.09E+02	1.78E+01

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

Sample Point 067 [INDICATOR - SSE @ 4.34 miles]

Sample ID:	470630	Sample Dates: 3/19/2018 - 3/19/2018	Nuclide	Activity	2 Sigma Error	MDA
			Mn-54	<7.84E+01	0.00E+00	7.84E+01
			Co-58	<7.88E+01	0.00E+00	7.88E+01
			Fe-59	<1.60E+02	0.00E+00	1.60E+02
			Co-60	<7.22E+01	0.00E+00	7.22E+01
			Zn-65	<1.39E+02	0.00E+00	1.39E+02
			Zr-95	<1.91E+02	0.00E+00	1.91E+02
			Nb-95	<1.09E+02	0.00E+00	1.09E+02
			I-131	<2.30E+02	0.00E+00	2.30E+02
			Cs-134	<1.31E+02	0.00E+00	1.31E+02
			Cs-137	1.11E+02	6.64E+02	1.12E+02
			BaLa-140	<1.20E+02	0.00E+00	1.20E+02
			Be-7	<0.00E+00	0.00E+00	0.00E+00
			K-40	1.68E+04	2.09E+03	0.00E+00
			Cr-51	<9.51E+02	0.00E+00	9.51E+02
			Co-57	<6.53E+01	0.00E+00	6.53E+01
			Y-88	<7.84E+01	0.00E+00	7.84E+01
			Ru-103	<8.96E+01	0.00E+00	8.96E+01
			Cd-109	<2.80E+03	0.00E+00	2.80E+03
			Ag-110M	<8.08E+01	0.00E+00	8.08E+01
			Sn-113	<9.98E+01	0.00E+00	9.98E+01
			Cd-115	<4.56E+03	0.00E+00	4.56E+03
			Sb-122	<5.43E+03	0.00E+00	5.43E+03
			Sb-124	<8.62E+01	0.00E+00	8.62E+01
			Sb-125	<1.78E+02	0.00E+00	1.78E+02
			Ba-133	<8.86E+01	0.00E+00	8.86E+01
			I-133	<6.86E+06	0.00E+00	6.86E+06
			Ce-139	<7.66E+01	0.00E+00	7.66E+01
			Ce-141	<1.67E+02	0.00E+00	1.67E+02
			Ce-144	<5.52E+02	0.00E+00	5.52E+02
			Hg-203	<1.31E+02	0.00E+00	1.31E+02
			Am-241	<3.71E+02	0.00E+00	3.71E+02
			Te-123M	<7.52E+01	0.00E+00	7.52E+01
Sample ID:	484048	Sample Dates: 9/17/2018 - 9/17/2018	Nuclide	Activity	2 Sigma Error	MDA
			Mn-54	<5.57E+01	0.00E+00	5.57E+01
			Co-58	<5.21E+01	0.00E+00	5.21E+01
			Fe-59	<8.81E+01	0.00E+00	8.81E+01
			Co-60	<3.92E+01	0.00E+00	3.92E+01
			Zn-65	<8.99E+01	0.00E+00	8.99E+01
			Zr-95	<1.47E+02	0.00E+00	1.47E+02
			Nb-95	<6.04E+01	0.00E+00	6.04E+01
			I-131	<1.07E+02	0.00E+00	1.07E+02
			Cs-134	<6.36E+01	0.00E+00	6.36E+01
			Cs-137	<5.09E+01	0.00E+00	5.09E+01
			Be-7	<4.33E+02	0.00E+00	4.33E+02
			K-40	1.27E+04	1.37E+03	6.52E+02
			Co-57	<5.07E+01	0.00E+00	5.07E+01
			Mo-99	<5.17E+03	0.00E+00	5.17E+03
			Ag-110M	<4.50E+01	0.00E+00	4.50E+01
			Sb-122	<1.32E+03	0.00E+00	1.32E+03
			Sb-125	<1.30E+02	0.00E+00	1.30E+02

Sample Point 068 [CONTROL - W @ 1.82 miles]

Sample ID:	470631	Sample Dates: 3/19/2018 - 3/19/2018	Nuclide	Activity	2 Sigma Error	MDA
			Mn-54	<2.91E+01	0.00E+00	2.91E+01
			Co-58	<2.95E+01	0.00E+00	2.95E+01
			Fe-59	<5.97E+01	0.00E+00	5.97E+01
			Co-60	<4.45E+01	0.00E+00	4.45E+01
			Zn-65	<7.96E+01	0.00E+00	7.96E+01
			Zr-95	<6.57E+01	0.00E+00	6.57E+01

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

Sample Point 068 [CONTROL - W @ 1.82 miles]

Sample ID: 470631 **Sample Dates: 3/19/2018 - 3/19/2018**

Nuclide	Activity	2 Sigma Error	MDA
Nb-95	<4.79E+01	0.00E+00	4.79E+01
I-131	<8.81E+01	0.00E+00	8.81E+01
Cs-134	<3.79E+01	0.00E+00	3.79E+01
Cs-137	<3.52E+01	0.00E+00	3.52E+01
Be-7	<3.96E+02	0.00E+00	3.96E+02
K-40	5.88E+03	9.89E+02	4.42E+02
Co-57	<2.26E+01	0.00E+00	2.26E+01
Mo-99	<9.70E+03	0.00E+00	9.70E+03
Ag-110M	<3.48E+01	0.00E+00	3.48E+01
Sb-122	<1.40E+03	0.00E+00	1.40E+03
Sb-125	<6.06E+01	0.00E+00	6.06E+01

Sample ID: 484049 **Sample Dates: 9/17/2018 - 9/17/2018**

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<2.71E+01	0.00E+00	2.71E+01
Co-58	<2.35E+01	0.00E+00	2.35E+01
Fe-59	<4.74E+01	0.00E+00	4.74E+01
Co-60	<2.21E+01	0.00E+00	2.21E+01
Zn-65	<4.76E+01	0.00E+00	4.76E+01
Zr-95	<5.45E+01	0.00E+00	5.45E+01
Nb-95	<3.35E+01	0.00E+00	3.35E+01
I-131	<5.45E+01	0.00E+00	5.45E+01
Cs-134	<4.04E+01	0.00E+00	4.04E+01
Cs-137	<3.39E+01	0.00E+00	3.39E+01
Be-7	7.65E+02	2.33E+02	2.84E+02
K-40	5.39E+03	7.62E+02	3.47E+02
Co-57	<2.12E+01	0.00E+00	2.12E+01
Mo-99	<1.79E+03	0.00E+00	1.79E+03
Ag-110M	<2.12E+01	0.00E+00	2.12E+01
Sb-122	<3.82E+02	0.00E+00	3.82E+02
Sb-125	<5.21E+01	0.00E+00	5.21E+01

Sample Point 091 [INDICATOR - S @ 2.09 miles]

Sample ID: 470632 **Sample Dates: 3/19/2018 - 3/19/2018**

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<9.32E+01	0.00E+00	9.32E+01
Co-58	<8.07E+01	0.00E+00	8.07E+01
Fe-59	<1.98E+02	0.00E+00	1.98E+02
Co-60	<8.96E+01	0.00E+00	8.96E+01
Zn-65	<1.84E+02	0.00E+00	1.84E+02
Zr-95	<1.25E+02	0.00E+00	1.25E+02
Nb-95	<9.07E+01	0.00E+00	9.07E+01
I-131	<1.61E+02	0.00E+00	1.61E+02
Cs-134	<8.80E+01	0.00E+00	8.80E+01
Cs-137	3.16E+02	9.79E+01	1.19E+02
Be-7	6.50E+02	5.31E+02	8.29E+02
K-40	3.05E+04	3.56E+03	8.20E+02
Co-57	<5.27E+01	0.00E+00	5.27E+01
Mo-99	<1.57E+04	0.00E+00	1.57E+04
Ag-110M	<6.24E+01	0.00E+00	6.24E+01
Sb-122	<2.36E+03	0.00E+00	2.36E+03
Sb-125	<1.52E+02	0.00E+00	1.52E+02

Sample ID: 484050 **Sample Dates: 9/17/2018 - 9/17/2018**

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<2.74E+01	0.00E+00	2.74E+01
Co-58	<2.52E+01	0.00E+00	2.52E+01
Fe-59	<5.82E+01	0.00E+00	5.82E+01
Co-60	<2.81E+01	0.00E+00	2.81E+01
Zn-65	<8.08E+01	0.00E+00	8.08E+01
Zr-95	<4.86E+01	0.00E+00	4.86E+01
Nb-95	<2.92E+01	0.00E+00	2.92E+01
I-131	<4.63E+01	0.00E+00	4.63E+01
Cs-134	<3.51E+01	0.00E+00	3.51E+01
Cs-137	1.93E+01	1.83E+01	2.92E+01
Be-7	5.25E+02	2.27E+02	3.30E+02
K-40	1.81E+04	1.77E+03	3.30E+02
Co-57	<2.07E+01	0.00E+00	2.07E+01
Mo-99	<2.19E+03	0.00E+00	2.19E+03
Ag-110M	<2.10E+01	0.00E+00	2.10E+01

Media Type: SEDIMENT_SHORE Concentration (Activity): pCi/kg
Sample Point 091 [INDICATOR - S @ 2.09 miles]

Sample ID: 484050 Sample Dates: 9/17/2018 - 9/17/2018

Nuclide	Activity	2 Sigma Error	MDA
Sb-122	<4.01E+02	0.00E+00	4.01E+02
Sb-125	<6.40E+01	0.00E+00	6.40E+01

Media Type: SURFACE WATER Concentration (Activity): pCi/l
Sample Point 062 [CONTROL - ENE @ 0.85 miles]

Sample ID: 467356 Sample Dates: 1/2/2018 - 1/29/2018

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<3.11E+00	0.00E+00	3.11E+00
Co-58	<3.20E+00	0.00E+00	3.20E+00
Fe-59	<5.93E+00	0.00E+00	5.93E+00
Co-60	<3.22E+00	0.00E+00	3.22E+00
Zn-65	<6.86E+00	0.00E+00	6.86E+00
Zr-95	<4.70E+00	0.00E+00	4.70E+00
Nb-95	<4.44E+00	0.00E+00	4.44E+00
I-131	<1.10E+01	0.00E+00	1.10E+01
Cs-134	<3.56E+00	0.00E+00	3.56E+00
Cs-137	<2.91E+00	0.00E+00	2.91E+00
BaLa-140	<7.67E+00	0.00E+00	7.67E+00
Be-7	<2.71E+01	0.00E+00	2.71E+01
K-40	<5.52E+01	0.00E+00	5.52E+01

Sample ID: 469590 Sample Dates: 1/29/2018 - 2/26/2018

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<3.19E+00	0.00E+00	3.19E+00
Co-58	<3.38E+00	0.00E+00	3.38E+00
Fe-59	<8.07E+00	0.00E+00	8.07E+00
Co-60	<4.01E+00	0.00E+00	4.01E+00
Zn-65	<9.63E+00	0.00E+00	9.63E+00
Zr-95	<4.31E+00	0.00E+00	4.31E+00
Nb-95	<4.98E+00	0.00E+00	4.98E+00
I-131	<1.15E+01	0.00E+00	1.15E+01
Cs-134	<4.04E+00	0.00E+00	4.04E+00
Cs-137	<2.92E+00	0.00E+00	2.92E+00
BaLa-140	<9.40E+00	0.00E+00	9.40E+00
Be-7	<2.52E+01	0.00E+00	2.52E+01
K-40	<5.48E+01	0.00E+00	5.48E+01

Sample ID: 472534 Sample Dates: 2/26/2018 - 3/26/2018

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<1.84E+00	0.00E+00	1.84E+00
Co-58	<1.74E+00	0.00E+00	1.74E+00
Fe-59	<3.68E+00	0.00E+00	3.68E+00
Co-60	<1.77E+00	0.00E+00	1.77E+00
Zn-65	<3.64E+00	0.00E+00	3.64E+00
Zr-95	<3.63E+00	0.00E+00	3.63E+00
Nb-95	<2.59E+00	0.00E+00	2.59E+00
I-131	<9.69E+00	0.00E+00	9.69E+00
Cs-134	<2.02E+00	0.00E+00	2.02E+00
Cs-137	<1.90E+00	0.00E+00	1.90E+00
BaLa-140	<5.12E+00	0.00E+00	5.12E+00
Be-7	<1.82E+01	0.00E+00	1.82E+01
K-40	2.67E+01	1.98E+01	3.08E+01

Sample ID: 467535 Sample Dates: 1/2/2018 - 4/23/2018

Nuclide	Activity	2 Sigma Error	MDA
H3SW	<6.64E+01	0.00E+00	1.82E+02

Sample ID: 474172 Sample Dates: 3/26/2018 - 4/23/2018

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<2.89E+00	0.00E+00	2.89E+00
Co-58	<2.94E+00	0.00E+00	2.94E+00
Fe-59	<5.95E+00	0.00E+00	5.95E+00
Co-60	<2.63E+00	0.00E+00	2.63E+00
Zn-65	<5.99E+00	0.00E+00	5.99E+00
Zr-95	<5.22E+00	0.00E+00	5.22E+00
Nb-95	<3.89E+00	0.00E+00	3.89E+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	<3.02E+00	0.00E+00	3.02E+00
BaLa-140	<7.80E+00	0.00E+00	7.80E+00
Be-7	<2.59E+01	0.00E+00	2.59E+01
K-40	2.53E+01	2.32E+01	3.57E+01

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

Sample Point 062 [CONTROL - ENE @ 0.85 miles]

Sample ID: 475558 **Sample Dates: 4/23/2018 - 5/21/2018**

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<3.38E+00	0.00E+00	3.38E+00
Co-58	<3.76E+00	0.00E+00	3.76E+00
Fe-59	<7.64E+00	0.00E+00	7.64E+00
Co-60	<3.87E+00	0.00E+00	3.87E+00
Zn-65	<7.11E+00	0.00E+00	7.11E+00
Zr-95	<7.10E+00	0.00E+00	7.10E+00
Nb-95	<6.72E+00	0.00E+00	6.72E+00
I-131	<1.03E+01	0.00E+00	1.03E+01
Cs-134	<4.22E+00	0.00E+00	4.22E+00
Cs-137	<3.49E+00	0.00E+00	3.49E+00
BaLa-140	<1.08E+01	0.00E+00	1.08E+01
Be-7	<4.31E+01	0.00E+00	4.31E+01
K-40	3.58E+01	2.76E+01	3.69E+01

Sample ID: 478445 **Sample Dates: 5/21/2018 - 6/18/2018**

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<3.37E+00	0.00E+00	3.37E+00
Co-58	<4.10E+00	0.00E+00	4.10E+00
Fe-59	<6.01E+00	0.00E+00	6.01E+00
Co-60	<3.67E+00	0.00E+00	3.67E+00
Zn-65	<5.59E+00	0.00E+00	5.59E+00
Zr-95	<6.86E+00	0.00E+00	6.86E+00
Nb-95	<2.33E+00	0.00E+00	2.33E+00
I-131	<1.18E+01	0.00E+00	1.18E+01
Cs-134	<2.06E+00	0.00E+00	2.06E+00
Cs-137	<2.79E+00	0.00E+00	2.79E+00
BaLa-140	<9.68E+00	0.00E+00	9.68E+00
Be-7	<2.79E+01	0.00E+00	2.79E+01
K-40	<4.15E+01	0.00E+00	4.15E+01

Sample ID: 474732 **Sample Dates: 4/23/2018 - 7/16/2018**

Nuclide	Activity	2 Sigma Error	MDA
H3SW	<-5.0E+01	0.00E+00	1.98E+02

Sample ID: 480268 **Sample Dates: 6/18/2018 - 7/16/2018**

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<2.22E+00	0.00E+00	2.22E+00
Co-58	<3.48E+00	0.00E+00	3.48E+00
Fe-59	<9.52E+00	0.00E+00	9.52E+00
Co-60	<3.86E+00	0.00E+00	3.86E+00
Zn-65	<7.10E+00	0.00E+00	7.10E+00
Zr-95	<7.47E+00	0.00E+00	7.47E+00
Nb-95	<6.36E+00	0.00E+00	6.36E+00
I-131	<1.08E+01	0.00E+00	1.08E+01
Cs-134	<3.48E+00	0.00E+00	3.48E+00
Cs-137	<3.48E+00	0.00E+00	3.48E+00
BaLa-140	<9.57E+00	0.00E+00	9.57E+00
Be-7	<3.26E+01	0.00E+00	3.26E+01
K-40	<6.60E+01	0.00E+00	6.60E+01

Sample ID: 482504 **Sample Dates: 7/16/2018 - 8/13/2018**

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<3.21E+00	0.00E+00	3.21E+00
Co-58	<3.26E+00	0.00E+00	3.26E+00
Fe-59	<8.54E+00	0.00E+00	8.54E+00
Co-60	<3.25E+00	0.00E+00	3.25E+00
Zn-65	<5.47E+00	0.00E+00	5.47E+00
Zr-95	<5.47E+00	0.00E+00	5.47E+00
Nb-95	<3.26E+00	0.00E+00	3.26E+00
I-131	<1.11E+01	0.00E+00	1.11E+01
Cs-134	<3.41E+00	0.00E+00	3.41E+00
Cs-137	<3.70E+00	0.00E+00	3.70E+00
BaLa-140	<6.47E+00	0.00E+00	6.47E+00
Be-7	<3.24E+01	0.00E+00	3.24E+01
K-40	<5.09E+01	0.00E+00	5.09E+01

Sample ID: 484150 **Sample Dates: 8/13/2018 - 9/10/2018**

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<3.44E+00	0.00E+00	3.44E+00
Co-58	<3.70E+00	0.00E+00	3.70E+00
Fe-59	<4.70E+00	0.00E+00	4.70E+00
Co-60	<3.03E+00	0.00E+00	3.03E+00
Zn-65	<6.11E+00	0.00E+00	6.11E+00

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

Sample Point 062 [CONTROL - ENE @ 0.85 miles]

Sample ID: 484150 Sample Dates: 8/13/2018 - 9/10/2018

Nuclide	Activity	2 Sigma Error	MDA
Zr-95	<6.28E+00	0.00E+00	6.28E+00
Nb-95	<4.19E+00	0.00E+00	4.19E+00
I-131	<1.15E+01	0.00E+00	1.15E+01
Cs-134	<2.22E+00	0.00E+00	2.22E+00
Cs-137	<1.98E+00	0.00E+00	1.98E+00
BaLa-140	<8.82E+00	0.00E+00	8.82E+00
Be-7	<3.01E+01	0.00E+00	3.01E+01
K-40	<3.74E+01	0.00E+00	3.74E+01

Sample ID: 481637 Sample Dates: 7/16/2018 - 10/8/2018

Nuclide	Activity	2 Sigma Error	MDA
H3SW	<-1.4E+01	0.00E+00	1.85E+02

Sample ID: 486720 Sample Dates: 9/10/2018 - 10/8/2018

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<3.50E+00	0.00E+00	3.50E+00
Co-58	<3.29E+00	0.00E+00	3.29E+00
Fe-59	<6.67E+00	0.00E+00	6.67E+00
Co-60	<3.37E+00	0.00E+00	3.37E+00
Zn-65	<7.77E+00	0.00E+00	7.77E+00
Zr-95	<6.56E+00	0.00E+00	6.56E+00
Nb-95	<4.16E+00	0.00E+00	4.16E+00
I-131	<1.14E+01	0.00E+00	1.14E+01
Cs-134	<2.80E+00	0.00E+00	2.80E+00
Cs-137	<3.54E+00	0.00E+00	3.54E+00
BaLa-140	<1.02E+01	0.00E+00	1.02E+01
Be-7	<3.58E+01	0.00E+00	3.58E+01
K-40	<5.41E+01	0.00E+00	5.41E+01

Sample ID: 488878 Sample Dates: 10/8/2018 - 11/5/2018

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<3.50E+00	0.00E+00	3.50E+00
Co-58	<3.22E+00	0.00E+00	3.22E+00
Fe-59	<7.64E+00	0.00E+00	7.64E+00
Co-60	<3.75E+00	0.00E+00	3.75E+00
Zn-65	<6.69E+00	0.00E+00	6.69E+00
Zr-95	<6.19E+00	0.00E+00	6.19E+00
Nb-95	<3.16E+00	0.00E+00	3.16E+00
I-131	<1.10E+01	0.00E+00	1.10E+01
Cs-134	<3.31E+00	0.00E+00	3.31E+00
Cs-137	<2.73E+00	0.00E+00	2.73E+00
BaLa-140	<7.75E+00	0.00E+00	7.75E+00
Be-7	<2.67E+01	0.00E+00	2.67E+01
K-40	5.68E+01	3.45E+01	5.01E+01

Sample ID: 490827 Sample Dates: 11/5/2018 - 12/3/2018

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<4.68E+00	0.00E+00	4.68E+00
Co-58	<3.93E+00	0.00E+00	3.93E+00
Fe-59	<8.76E+00	0.00E+00	8.76E+00
Co-60	<3.08E+00	0.00E+00	3.08E+00
Zn-65	<9.21E+00	0.00E+00	9.21E+00
Zr-95	<7.43E+00	0.00E+00	7.43E+00
Nb-95	<3.41E+00	0.00E+00	3.41E+00
I-131	<1.17E+01	0.00E+00	1.17E+01
Cs-134	<4.80E+00	0.00E+00	4.80E+00
Cs-137	<4.00E+00	0.00E+00	4.00E+00
BaLa-140	<2.65E+00	0.00E+00	2.65E+00
Be-7	<3.42E+01	0.00E+00	3.42E+01
K-40	<6.18E+01	0.00E+00	6.18E+01

Sample ID: 488750 Sample Dates: 10/8/2018 - 12/31/2018

Nuclide	Activity	2 Sigma Error	MDA
H3SW	<7.15E+00	0.00E+00	1.87E+02

Sample ID: 492245 Sample Dates: 12/3/2018 - 12/31/2018

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<1.22E+00	0.00E+00	1.22E+00
Co-58	<1.77E+00	0.00E+00	1.77E+00
Fe-59	<3.15E+00	0.00E+00	3.15E+00
Co-60	<1.39E+00	0.00E+00	1.39E+00
Zn-65	<2.75E+00	0.00E+00	2.75E+00
Zr-95	<2.64E+00	0.00E+00	2.64E+00
Nb-95	<2.24E+00	0.00E+00	2.24E+00
I-131	<1.06E+01	0.00E+00	1.06E+01

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

Sample Point 062 [CONTROL - ENE @ 0.85 miles]

Sample ID: 492245 Sample Dates: 12/3/2018 - 12/31/2018

Nuclide	Activity	2 Sigma Error	MDA
Cs-134	<1.56E+00	0.00E+00	1.56E+00
Cs-137	<1.52E+00	0.00E+00	1.52E+00
BaLa-140	<5.95E+00	0.00E+00	5.95E+00
Be-7	<1.33E+01	0.00E+00	1.33E+01
K-40	3.87E+01	5.16E+01	1.27E+01

Sample Point 063.1 [INDICATOR - E @ 0.79 miles]

Sample ID: 467357 Sample Dates: 1/2/2018 - 1/29/2018

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<2.73E+00	0.00E+00	2.73E+00
Co-58	<3.31E+00	0.00E+00	3.31E+00
Fe-59	<6.44E+00	0.00E+00	6.44E+00
Co-60	<2.83E+00	0.00E+00	2.83E+00
Zn-65	<6.03E+00	0.00E+00	6.03E+00
Zr-95	<6.61E+00	0.00E+00	6.61E+00
Nb-95	<4.43E+00	0.00E+00	4.43E+00
I-131	<1.08E+01	0.00E+00	1.08E+01
Cs-134	<3.40E+00	0.00E+00	3.40E+00
Cs-137	<2.37E+00	0.00E+00	2.37E+00
BaLa-140	<8.94E+00	0.00E+00	8.94E+00
Be-7	<2.98E+01	0.00E+00	2.98E+01
K-40	4.17E+01	3.41E+01	5.29E+01

Sample ID: 469591 Sample Dates: 1/29/2018 - 2/26/2018

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<2.56E+00	0.00E+00	2.56E+00
Co-58	<2.94E+00	0.00E+00	2.94E+00
Fe-59	<5.68E+00	0.00E+00	5.68E+00
Co-60	<2.19E+00	0.00E+00	2.19E+00
Zn-65	<5.22E+00	0.00E+00	5.22E+00
Zr-95	<4.69E+00	0.00E+00	4.69E+00
Nb-95	<3.00E+00	0.00E+00	3.00E+00
I-131	<1.04E+01	0.00E+00	1.04E+01
Cs-134	<3.31E+00	0.00E+00	3.31E+00
Cs-137	<2.48E+00	0.00E+00	2.48E+00
BaLa-140	<8.00E+00	0.00E+00	8.00E+00
Be-7	<2.80E+01	0.00E+00	2.80E+01
K-40	<4.34E+01	0.00E+00	4.34E+01

Sample ID: 472535 Sample Dates: 2/26/2018 - 3/26/2018

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<1.52E+00	0.00E+00	1.52E+00
Co-58	<1.54E+00	0.00E+00	1.54E+00
Fe-59	<4.22E+00	0.00E+00	4.22E+00
Co-60	<1.39E+00	0.00E+00	1.39E+00
Zn-65	<3.48E+00	0.00E+00	3.48E+00
Zr-95	<3.12E+00	0.00E+00	3.12E+00
Nb-95	<2.25E+00	0.00E+00	2.25E+00
I-131	<1.08E+01	0.00E+00	1.08E+01
Cs-134	<1.79E+00	0.00E+00	1.79E+00
Cs-137	<1.77E+00	0.00E+00	1.77E+00
BaLa-140	<5.59E+00	0.00E+00	5.59E+00
Be-7	<1.87E+01	0.00E+00	1.87E+01
K-40	5.18E+01	1.74E+01	2.20E+01

Sample ID: 467536 Sample Dates: 1/2/2018 - 4/23/2018

Nuclide	Activity	2 Sigma Error	MDA
H3SW	5.61E+03	2.32E+02	1.82E+02

Sample ID: 474173 Sample Dates: 3/26/2018 - 4/23/2018

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<2.98E+00	0.00E+00	2.98E+00
Co-58	<3.44E+00	0.00E+00	3.44E+00
Fe-59	<5.99E+00	0.00E+00	5.99E+00
Co-60	<2.98E+00	0.00E+00	2.98E+00
Zn-65	<6.38E+00	0.00E+00	6.38E+00
Zr-95	<6.11E+00	0.00E+00	6.11E+00
Nb-95	<4.33E+00	0.00E+00	4.33E+00
I-131	<1.15E+01	0.00E+00	1.15E+01
Cs-134	<2.97E+00	0.00E+00	2.97E+00
Cs-137	<3.51E+00	0.00E+00	3.51E+00
BaLa-140	<6.30E+00	0.00E+00	6.30E+00

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

Sample Point 063.1 [INDICATOR - E @ 0.79 miles]

Sample ID: 474173 Sample Dates: 3/26/2018 - 4/23/2018

Nuclide	Activity	2 Sigma Error	MDA
Be-7	<2.43E+01	0.00E+00	2.43E+01
K-40	1.05E+01	3.64E+01	4.17E+01

Sample ID: 475559 Sample Dates: 4/23/2018 - 5/21/2018

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<3.18E+00	0.00E+00	3.18E+00
Co-58	<3.21E+00	0.00E+00	3.21E+00
Fe-59	<5.31E+00	0.00E+00	5.31E+00
Co-60	<3.56E+00	0.00E+00	3.56E+00
Zn-65	<8.04E+00	0.00E+00	8.04E+00
Zr-95	<6.28E+00	0.00E+00	6.28E+00
Nb-95	<3.61E+00	0.00E+00	3.61E+00
I-131	<1.11E+01	0.00E+00	1.11E+01
Cs-134	<3.73E+00	0.00E+00	3.73E+00
Cs-137	<2.90E+00	0.00E+00	2.90E+00
BaLa-140	<7.47E+00	0.00E+00	7.47E+00
Be-7	<2.83E+01	0.00E+00	2.83E+01
K-40	<5.16E+01	0.00E+00	5.16E+01

Sample ID: 478446 Sample Dates: 5/21/2018 - 6/18/2018

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<2.85E+00	0.00E+00	2.85E+00
Co-58	<4.71E+00	0.00E+00	4.71E+00
Fe-59	<7.56E+00	0.00E+00	7.56E+00
Co-60	<2.14E+00	0.00E+00	2.14E+00
Zn-65	<6.44E+00	0.00E+00	6.44E+00
Zr-95	<6.80E+00	0.00E+00	6.80E+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	<3.62E+00	0.00E+00	3.62E+00
Cs-137	<4.23E+00	0.00E+00	4.23E+00
BaLa-140	<6.00E+00	0.00E+00	6.00E+00
Be-7	<2.70E+01	0.00E+00	2.70E+01
K-40	5.13E+01	3.30E+01	4.39E+01

Sample ID: 474733 Sample Dates: 4/23/2018 - 7/16/2018

Nuclide	Activity	2 Sigma Error	MDA
H3SW	3.41E+03	1.97E+02	1.97E+02

Sample ID: 480269 Sample Dates: 6/18/2018 - 7/16/2018

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<3.38E+00	0.00E+00	3.38E+00
Co-58	<4.22E+00	0.00E+00	4.22E+00
Fe-59	<6.84E+00	0.00E+00	6.84E+00
Co-60	<3.46E+00	0.00E+00	3.46E+00
Zn-65	<6.37E+00	0.00E+00	6.37E+00
Zr-95	<8.22E+00	0.00E+00	8.22E+00
Nb-95	<6.02E+00	0.00E+00	6.02E+00
I-131	<1.03E+01	0.00E+00	1.03E+01
Cs-134	<3.99E+00	0.00E+00	3.99E+00
Cs-137	<4.67E+00	0.00E+00	4.67E+00
BaLa-140	<1.07E+01	0.00E+00	1.07E+01
Be-7	<4.20E+01	0.00E+00	4.20E+01
K-40	<6.22E+01	0.00E+00	6.22E+01

Sample ID: 482505 Sample Dates: 7/16/2018 - 8/13/2018

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<2.97E+00	0.00E+00	2.97E+00
Co-58	<2.86E+00	0.00E+00	2.86E+00
Fe-59	<5.56E+00	0.00E+00	5.56E+00
Co-60	<2.12E+00	0.00E+00	2.12E+00
Zn-65	<5.12E+00	0.00E+00	5.12E+00
Zr-95	<6.39E+00	0.00E+00	6.39E+00
Nb-95	<3.98E+00	0.00E+00	3.98E+00
I-131	<1.19E+01	0.00E+00	1.19E+01
Cs-134	<3.17E+00	0.00E+00	3.17E+00
Cs-137	<3.11E+00	0.00E+00	3.11E+00
BaLa-140	<6.18E+00	0.00E+00	6.18E+00
Be-7	<2.96E+01	0.00E+00	2.96E+01
K-40	3.18E+01	1.87E+01	2.13E+01

Sample ID: 484151 Sample Dates: 8/13/2018 - 9/10/2018

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<3.63E+00	0.00E+00	3.63E+00
Co-58	<4.07E+00	0.00E+00	4.07E+00

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

Sample Point 063.1 [INDICATOR - E @ 0.79 miles]

Sample ID: 484151 **Sample Dates: 8/13/2018 - 9/10/2018**

Nuclide	Activity	2 Sigma Error	MDA
Fe-59	<8.28E+00	0.00E+00	8.28E+00
Co-60	<3.92E+00	0.00E+00	3.92E+00
Zn-65	<6.86E+00	0.00E+00	6.86E+00
Zr-95	<6.18E+00	0.00E+00	6.18E+00
Nb-95	<4.30E+00	0.00E+00	4.30E+00
I-131	<1.13E+01	0.00E+00	1.13E+01
Cs-134	<3.89E+00	0.00E+00	3.89E+00
Cs-137	<3.52E+00	0.00E+00	3.52E+00
BaLa-140	<1.95E+00	0.00E+00	1.95E+00
Be-7	<2.97E+01	0.00E+00	2.97E+01
K-40	<5.21E+01	0.00E+00	5.21E+01

Sample ID: 481638 **Sample Dates: 7/16/2018 - 10/8/2018**

Nuclide	Activity	2 Sigma Error	MDA
H3SW	1.29E+03	1.45E+02	1.86E+02

Sample ID: 486721 **Sample Dates: 9/10/2018 - 10/8/2018**

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<3.57E+00	0.00E+00	3.57E+00
Co-58	<3.42E+00	0.00E+00	3.42E+00
Fe-59	<7.09E+00	0.00E+00	7.09E+00
Co-60	<3.84E+00	0.00E+00	3.84E+00
Zn-65	<6.04E+00	0.00E+00	6.04E+00
Zr-95	<6.73E+00	0.00E+00	6.73E+00
Nb-95	<4.99E+00	0.00E+00	4.99E+00
I-131	<1.15E+01	0.00E+00	1.15E+01
Cs-134	<4.28E+00	0.00E+00	4.28E+00
Cs-137	<2.58E+00	0.00E+00	2.58E+00
BaLa-140	<9.11E+00	0.00E+00	9.11E+00
Be-7	<3.23E+01	0.00E+00	3.23E+01
K-40	4.34E+01	3.14E+01	4.43E+01

Sample ID: 488879 **Sample Dates: 10/8/2018 - 11/5/2018**

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<2.50E+00	0.00E+00	2.50E+00
Co-58	<3.52E+00	0.00E+00	3.52E+00
Fe-59	<5.89E+00	0.00E+00	5.89E+00
Co-60	<2.99E+00	0.00E+00	2.99E+00
Zn-65	<6.49E+00	0.00E+00	6.49E+00
Zr-95	<6.05E+00	0.00E+00	6.05E+00
Nb-95	<4.41E+00	0.00E+00	4.41E+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	<3.59E+00	0.00E+00	3.59E+00
BaLa-140	<7.69E+00	0.00E+00	7.69E+00
Be-7	<3.72E+01	0.00E+00	3.72E+01
K-40	6.28E+01	2.97E+01	3.56E+01

Sample ID: 490828 **Sample Dates: 11/5/2018 - 12/3/2018**

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	<4.64E+00	0.00E+00	4.64E+00
Co-60	<2.78E+00	0.00E+00	2.78E+00
Zn-65	<5.88E+00	0.00E+00	5.88E+00
Zr-95	<4.38E+00	0.00E+00	4.38E+00
Nb-95	<3.96E+00	0.00E+00	3.96E+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	<3.25E+00	0.00E+00	3.25E+00
BaLa-140	<5.61E+00	0.00E+00	5.61E+00
Be-7	<2.77E+01	0.00E+00	2.77E+01
K-40	3.98E+01	2.36E+01	3.19E+01

Sample ID: 488751 **Sample Dates: 10/8/2018 - 12/31/2018**

Nuclide	Activity	2 Sigma Error	MDA
H3SW	3.75E+03	2.01E+02	1.87E+02

Sample ID: 492246 **Sample Dates: 12/3/2018 - 12/31/2018**

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<1.04E+00	0.00E+00	1.04E+00
Co-58	<1.29E+00	0.00E+00	1.29E+00
Fe-59	<2.44E+00	0.00E+00	2.44E+00
Co-60	<9.11E-01	0.00E+00	9.11E-01
Zn-65	<2.13E+00	0.00E+00	2.13E+00

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

Sample Point 063.1 [INDICATOR - E @ 0.79 miles]

Sample ID: 492246 **Sample Dates:** 12/3/2018 - 12/31/2018

Nuclide	Activity	2 Sigma Error	MDA
Zr-95	<1.99E+00	0.00E+00	1.99E+00
Nb-95	<1.56E+00	0.00E+00	1.56E+00
I-131	<1.08E+01	0.00E+00	1.08E+01
Cs-134	<1.16E+00	0.00E+00	1.16E+00
Cs-137	<9.29E-01	0.00E+00	9.29E-01
BaLa-140	<4.15E+00	0.00E+00	4.15E+00
Be-7	<1.08E+01	0.00E+00	1.08E+01
K-40	1.78E+01	1.10E+01	1.72E+01

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

Sample Point 020 [INDICATOR - N @ 0.16 miles] TLD RING TLD_INNER

Sample ID: 470263 **Sample Dates:** 12/12/2017 - 3/13/2018 — **Nuclide** mR/Std Qtr **Activity** 23.01

Sample ID: 477221 **Sample Dates:** 3/13/2018 - 6/12/2018 — **Nuclide** mR/Std Qtr **Activity** 19.35

Sample ID: 483851 **Sample Dates:** 6/12/2018 - 9/11/2018 — **Nuclide** mR/Std Qtr **Activity** 18.02

Sample ID: 490635 **Sample Dates:** 9/11/2018 - 12/11/2018 — **Nuclide** mR/Std Qtr **Activity** 20.43

Sample Point 021 [INDICATOR - NNE @ 0.25 miles] TLD RING TLD_INNER

Sample ID: 470264 **Sample Dates:** 12/12/2017 - 3/13/2018 — **Nuclide** mR/Std Qtr **Activity** 16.52

Sample ID: 477222 **Sample Dates:** 3/13/2018 - 6/12/2018 — **Nuclide** mR/Std Qtr **Activity** 15.26

Sample ID: 483852 **Sample Dates:** 6/12/2018 - 9/11/2018 — **Nuclide** mR/Std Qtr **Activity** 14.51

Sample ID: 490636 **Sample Dates:** 9/11/2018 - 12/11/2018 — **Nuclide** mR/Std Qtr **Activity** 16.89

Sample Point 022 [INDICATOR - NE @ 0.53 miles] TLD RING TLD_INNER

Sample ID: 470265 **Sample Dates:** 12/12/2017 - 3/13/2018 — **Nuclide** mR/Std Qtr **Activity** 25.97

Sample ID: 477223 **Sample Dates:** 3/13/2018 - 6/12/2018 — **Nuclide** mR/Std Qtr **Activity** 24.56

Sample ID: 483853 **Sample Dates:** 6/12/2018 - 9/11/2018 — **Nuclide** mR/Std Qtr **Activity** 21.33

Sample ID: 490637 **Sample Dates:** 9/11/2018 - 12/11/2018 — **Nuclide** mR/Std Qtr **Activity** 24.35

Sample Point 023 [INDICATOR - ENE @ 0.93 miles] TLD RING TLD_INNER

Sample ID: 470266 **Sample Dates:** 12/12/2017 - 3/13/2018 — **Nuclide** mR/Std Qtr **Activity** 25.01

Sample ID: 477224 **Sample Dates:** 3/13/2018 - 6/12/2018 — **Nuclide** mR/Std Qtr **Activity** 23.85

Sample ID: 483854 **Sample Dates:** 6/12/2018 - 9/11/2018 — **Nuclide** mR/Std Qtr **Activity** 20.90

Sample ID: 490638 **Sample Dates:** 9/11/2018 - 12/11/2018 — **Nuclide** mR/Std Qtr **Activity** 22.00

Sample Point 024 [INDICATOR - E @ 0.81 miles] TLD RING TLD_INNER

Sample ID: 470267 **Sample Dates:** 12/12/2017 - 3/13/2018 — **Nuclide** mR/Std Qtr **Activity** 32.57

Sample ID: 477225 **Sample Dates:** 3/13/2018 - 6/12/2018 — **Nuclide** mR/Std Qtr **Activity** 30.01

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

Sample Point 024 [INDICATOR - E @ 0.81 miles] — TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
483855	6/12/2018 - 9/11/2018	mR/Std Qtr	27.86
490639	9/11/2018 - 12/11/2018	mR/Std Qtr	29.49

Sample Point 025 [INDICATOR - ESE @ 0.42 miles] — TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
470268	12/12/2017 - 3/13/2018	mR/Std Qtr	20.33
477226	3/13/2018 - 6/12/2018	mR/Std Qtr	18.13
483856	6/12/2018 - 9/11/2018	mR/Std Qtr	16.72
490640	9/11/2018 - 12/11/2018	mR/Std Qtr	17.60

Sample Point 026 [INDICATOR - SE @ 0.34 miles] — TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
470269	12/12/2017 - 3/13/2018	mR/Std Qtr	18.51
477227	3/13/2018 - 6/12/2018	mR/Std Qtr	18.16
483857	6/12/2018 - 9/11/2018	mR/Std Qtr	17.13
490641	9/11/2018 - 12/11/2018	mR/Std Qtr	17.12

Sample Point 027 [INDICATOR - SSE @ 0.49 miles] — TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
470270	12/12/2017 - 3/13/2018	mR/Std Qtr	19.79
477228	3/13/2018 - 6/12/2018	mR/Std Qtr	19.96
483858	6/12/2018 - 9/11/2018	mR/Std Qtr	18.29
490642	9/11/2018 - 12/11/2018	mR/Std Qtr	19.34

Sample Point 028 [INDICATOR - S @ 0.46 miles] — TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
470271	12/12/2017 - 3/13/2018	mR/Std Qtr	17.10
477229	3/13/2018 - 6/12/2018	mR/Std Qtr	17.06
483859	6/12/2018 - 9/11/2018	mR/Std Qtr	17.32
490643	9/11/2018 - 12/11/2018	mR/Std Qtr	18.72

Sample Point 029 [INDICATOR - SSW @ 0.56 miles] — TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
470272	12/12/2017 - 3/13/2018	mR/Std Qtr	18.52
477230	3/13/2018 - 6/12/2018	mR/Std Qtr	16.04
483860	6/12/2018 - 9/11/2018	mR/Std Qtr	15.39
490644	9/11/2018 - 12/11/2018	mR/Std Qtr	17.69

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

Sample Point 030 [INDICATOR - SW @ 0.42 miles] — TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
470273	12/12/2017 - 3/13/2018	mR/Std Qtr	21.32
477231	3/13/2018 - 6/12/2018	mR/Std Qtr	18.68
483861	6/12/2018 - 9/11/2018	mR/Std Qtr	18.00
490645	9/11/2018 - 12/11/2018	mR/Std Qtr	18.37

Sample Point 031 [INDICATOR - WSW @ 0.27 miles] — TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
470274	12/12/2017 - 3/13/2018	mR/Std Qtr	18.52
477232	3/13/2018 - 6/12/2018	mR/Std Qtr	17.48
483862	6/12/2018 - 9/11/2018	mR/Std Qtr	16.48
490646	9/11/2018 - 12/11/2018	mR/Std Qtr	18.45

Sample Point 032 [INDICATOR - WNW @ 0.19 miles] — TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
470275	12/12/2017 - 3/13/2018	mR/Std Qtr	22.58
477233	3/13/2018 - 6/12/2018	mR/Std Qtr	20.39
483863	6/12/2018 - 9/11/2018	mR/Std Qtr	18.14
490647	9/11/2018 - 12/11/2018	mR/Std Qtr	20.94

Sample Point 033 [INDICATOR - WNW @ 0.21 miles] — TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
470276	12/12/2017 - 3/13/2018	mR/Std Qtr	18.96
477234	3/13/2018 - 6/12/2018	mR/Std Qtr	18.94
483864	6/12/2018 - 9/11/2018	mR/Std Qtr	16.62
490648	9/11/2018 - 12/11/2018	mR/Std Qtr	19.55

Sample Point 034 [INDICATOR - NW @ 0.22 miles] — TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
470277	12/12/2017 - 3/13/2018	mR/Std Qtr	21.73
477235	3/13/2018 - 6/12/2018	mR/Std Qtr	18.59
483865	6/12/2018 - 9/11/2018	mR/Std Qtr	18.01
490649	9/11/2018 - 12/11/2018	mR/Std Qtr	19.66

Sample Point 035 [INDICATOR - NNW @ 0.17 miles] — TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
470278	12/12/2017 - 3/13/2018	mR/Std Qtr	26.47
477236	3/13/2018 - 6/12/2018	mR/Std Qtr	24.53

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

Sample Point 035 [INDICATOR - NNW @ 0.17 miles] — TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
483866	6/12/2018 - 9/11/2018	mR/Std Qtr	22.87
490650	9/11/2018 - 12/11/2018	mR/Std Qtr	24.15

Sample Point 036 [INDICATOR - N @ 4.18 miles] — TLD RING TLD_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
470279	12/12/2017 - 3/13/2018	mR/Std Qtr	29.58
477237	3/13/2018 - 6/12/2018	mR/Std Qtr	27.93
483867	6/12/2018 - 9/11/2018	mR/Std Qtr	25.08
490651	9/11/2018 - 12/11/2018	mR/Std Qtr	27.38

Sample Point 037 [INDICATOR - NNE @ 4.85 miles] — TLD RING TLD_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
470280	12/12/2017 - 3/13/2018	mR/Std Qtr	20.87
477238	3/13/2018 - 6/12/2018	mR/Std Qtr	19.20
483868	6/12/2018 - 9/11/2018	mR/Std Qtr	16.30
490652	9/11/2018 - 12/11/2018	mR/Std Qtr	18.99

Sample Point 038 [INDICATOR - NE @ 4.24 miles] — TLD RING TLD_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
470281	12/12/2017 - 3/13/2018	mR/Std Qtr	24.60
477239	3/13/2018 - 6/12/2018	mR/Std Qtr	22.72
483869	6/12/2018 - 9/11/2018	mR/Std Qtr	20.37
490653	9/11/2018 - 12/11/2018	mR/Std Qtr	23.17

Sample Point 039 [INDICATOR - ENE @ 4.02 miles] — TLD RING TLD_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
470282	12/12/2017 - 3/13/2018	mR/Std Qtr	25.08
477240	3/13/2018 - 6/12/2018	mR/Std Qtr	25.48
483870	6/12/2018 - 9/11/2018	mR/Std Qtr	23.23
490654	9/11/2018 - 12/11/2018	mR/Std Qtr	26.05

Sample Point 040 [INDICATOR - E @ 4.74 miles] — TLD RING TLD_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
470283	12/12/2017 - 3/13/2018	mR/Std Qtr	31.72
477241	3/13/2018 - 6/12/2018	mR/Std Qtr	28.11
483871	6/12/2018 - 9/11/2018	mR/Std Qtr	24.65
490655	9/11/2018 - 12/11/2018	mR/Std Qtr	26.97

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

Sample Point 041 [INDICATOR - ESE @ 4.25 miles] TLD RING TLD_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
470284	12/12/2017 - 3/13/2018	mR/Std Qtr	19.24
477242	3/13/2018 - 6/12/2018	mR/Std Qtr	17.87
483872	6/12/2018 - 9/11/2018	mR/Std Qtr	16.81
490656	9/11/2018 - 12/11/2018	mR/Std Qtr	17.93

Sample Point 042 [INDICATOR - SE @ 4.93 miles] TLD RING TLD_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
470285	12/12/2017 - 3/13/2018	mR/Std Qtr	28.08
477243	3/13/2018 - 6/12/2018	mR/Std Qtr	27.00
483873	6/12/2018 - 9/11/2018	mR/Std Qtr	25.99
490657	9/11/2018 - 12/11/2018	mR/Std Qtr	26.70

Sample Point 043 [INDICATOR - SSE @ 4.09 miles] TLD RING TLD_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
470286	12/12/2017 - 3/13/2018	mR/Std Qtr	26.71
477244	3/13/2018 - 6/12/2018	mR/Std Qtr	24.81
483874	6/12/2018 - 9/11/2018	mR/Std Qtr	22.71
490658	9/11/2018 - 12/11/2018	mR/Std Qtr	25.08

Sample Point 044 [INDICATOR - S @ 3.96 miles] TLD RING TLD_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
470287	12/12/2017 - 3/13/2018	mR/Std Qtr	21.80
477245	3/13/2018 - 6/12/2018	mR/Std Qtr	19.64
483875	6/12/2018 - 9/11/2018	mR/Std Qtr	19.30
490659	9/11/2018 - 12/11/2018	mR/Std Qtr	19.57

Sample Point 045 [INDICATOR - SSW @ 4.78 miles] TLD RING TLD_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
470288	12/12/2017 - 3/13/2018	mR/Std Qtr	19.03
477246	3/13/2018 - 6/12/2018	mR/Std Qtr	17.91
483876	6/12/2018 - 9/11/2018	mR/Std Qtr	16.89
490660	9/11/2018 - 12/11/2018	mR/Std Qtr	18.39

Sample Point 046 [INDICATOR - SW @ 4.61 miles] TLD RING TLD_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
470289	12/12/2017 - 3/13/2018	mR/Std Qtr	24.94
477247	3/13/2018 - 6/12/2018	mR/Std Qtr	24.98

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

Sample Point 046 [INDICATOR - SW @ 4.61 miles] — TLD RING TLD_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
483877	6/12/2018 - 9/11/2018	mR/Std Qtr	23.28
490661	9/11/2018 - 12/11/2018	mR/Std Qtr	24.44

Sample Point 047 [INDICATOR - WSW @ 3.58 miles] — TLD RING TLD_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
470290	12/12/2017 - 3/13/2018	mR/Std Qtr	25.44
477248	3/13/2018 - 6/12/2018	mR/Std Qtr	23.15
483878	6/12/2018 - 9/11/2018	mR/Std Qtr	22.30

Sample Point 048 [INDICATOR - W @ 3.64 miles] — TLD RING TLD_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
470291	12/12/2017 - 3/13/2018	mR/Std Qtr	27.21
477249	3/13/2018 - 6/12/2018	mR/Std Qtr	26.82
483879	6/12/2018 - 9/11/2018	mR/Std Qtr	23.38
490662	9/11/2018 - 12/11/2018	mR/Std Qtr	26.26

Sample Point 049 [INDICATOR - WNW @ 3.6 miles] — TLD RING TLD_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
470292	12/12/2017 - 3/13/2018	mR/Std Qtr	24.18
477250	3/13/2018 - 6/12/2018	mR/Std Qtr	22.71
483880	6/12/2018 - 9/11/2018	mR/Std Qtr	21.45
490663	9/11/2018 - 12/11/2018	mR/Std Qtr	22.72

Sample Point 050 [INDICATOR - NW @ 3.53 miles] — TLD RING TLD_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
470293	12/12/2017 - 3/13/2018	mR/Std Qtr	19.44
477251	3/13/2018 - 6/12/2018	mR/Std Qtr	19.19
483881	6/12/2018 - 9/11/2018	mR/Std Qtr	17.85
490664	9/11/2018 - 12/11/2018	mR/Std Qtr	20.49

Sample Point 051 [INDICATOR - NNW @ 4.64 miles] — TLD RING TLD_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
470294	12/12/2017 - 3/13/2018	mR/Std Qtr	21.90
477252	3/13/2018 - 6/12/2018	mR/Std Qtr	18.77
483882	6/12/2018 - 9/11/2018	mR/Std Qtr	18.52
490665	9/11/2018 - 12/11/2018	mR/Std Qtr	20.49

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

Sample Point 052 [INDICATOR - ENE @ 12.4 miles] TLD RING TLD_SPEC

Sample ID:	Sample Dates:	Nuclide	Activity
470295	12/12/2017 - 3/13/2018	mR/Std Qtr	27.72
477253	3/13/2018 - 6/12/2018	mR/Std Qtr	26.76
483883	6/12/2018 - 9/11/2018	mR/Std Qtr	22.29
490666	9/11/2018 - 12/11/2018	mR/Std Qtr	24.02

Sample Point 053 [INDICATOR - E @ 11.7 miles] TLD RING TLD_SPEC

Sample ID:	Sample Dates:	Nuclide	Activity
470296	12/12/2017 - 3/13/2018	mR/Std Qtr	29.98
477254	3/13/2018 - 6/12/2018	mR/Std Qtr	24.87
483884	6/12/2018 - 9/11/2018	mR/Std Qtr	24.02
490667	9/11/2018 - 12/11/2018	mR/Std Qtr	26.54

Sample Point 054 [INDICATOR - ESE @ 8.6 miles] TLD RING TLD_SPEC

Sample ID:	Sample Dates:	Nuclide	Activity
470297	12/12/2017 - 3/13/2018	mR/Std Qtr	23.41
477255	3/13/2018 - 6/12/2018	mR/Std Qtr	19.16
483885	6/12/2018 - 9/11/2018	mR/Std Qtr	17.77
490668	9/11/2018 - 12/11/2018	mR/Std Qtr	20.09

Sample Point 055 [INDICATOR - SSE @ 9.27 miles] TLD RING TLD_SPEC

Sample ID:	Sample Dates:	Nuclide	Activity
470298	12/12/2017 - 3/13/2018	mR/Std Qtr	17.06
477256	3/13/2018 - 6/12/2018	mR/Std Qtr	15.81
483886	6/12/2018 - 9/11/2018	mR/Std Qtr	14.98
490669	9/11/2018 - 12/11/2018	mR/Std Qtr	16.61

Sample Point 056 [INDICATOR - SSW @ 7.3 miles] TLD RING TLD_SPEC

Sample ID:	Sample Dates:	Nuclide	Activity
470299	12/12/2017 - 3/13/2018	mR/Std Qtr	24.13
477257	3/13/2018 - 6/12/2018	mR/Std Qtr	24.52
483887	6/12/2018 - 9/11/2018	mR/Std Qtr	22.56
490670	9/11/2018 - 12/11/2018	mR/Std Qtr	24.63

Sample Point 057 [INDICATOR - SW @ 8.42 miles] TLD RING TLD_SPEC

Sample ID:	Sample Dates:	Nuclide	Activity
470300	12/12/2017 - 3/13/2018	mR/Std Qtr	28.51
477258	3/13/2018 - 6/12/2018	mR/Std Qtr	25.86

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

Sample Point 057 [INDICATOR - SW @ 8.42 miles] — TLD RING TLD_SPEC

Sample ID:	Sample Dates:	Nuclide	Activity
483888	6/12/2018 - 9/11/2018	mR/Std Qtr	21.25
490671	9/11/2018 - 12/11/2018	mR/Std Qtr	20.47

Sample Point 058 [CONTROL - WSW @ 9.39 miles] — TLD RING TLD_CTRL

Sample ID:	Sample Dates:	Nuclide	Activity
470301	12/12/2017 - 3/13/2018	mR/Std Qtr	34.21
477259	3/13/2018 - 6/12/2018	mR/Std Qtr	33.11
483889	6/12/2018 - 9/11/2018	mR/Std Qtr	28.57
490672	9/11/2018 - 12/11/2018	mR/Std Qtr	31.07

Sample Point 059 [INDICATOR - NW @ 9.2 miles] — TLD RING TLD_SPEC

Sample ID:	Sample Dates:	Nuclide	Activity
470302	12/12/2017 - 3/13/2018	mR/Std Qtr	27.01
477260	3/13/2018 - 6/12/2018	mR/Std Qtr	24.66
483890	6/12/2018 - 9/11/2018	mR/Std Qtr	23.50
490673	9/11/2018 - 12/11/2018	mR/Std Qtr	25.94

Sample Point 076 [INDICATOR - W @ 0.19 miles] — TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
470303	12/12/2017 - 3/13/2018	mR/Std Qtr	29.18
477261	3/13/2018 - 6/12/2018	mR/Std Qtr	26.54
483891	6/12/2018 - 9/11/2018	mR/Std Qtr	22.50
490674	9/11/2018 - 12/11/2018	mR/Std Qtr	26.24

Sample Point 077 [INDICATOR - SW @ 1 miles] — TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
470304	12/12/2017 - 3/13/2018	mR/Std Qtr	21.15
477262	3/13/2018 - 6/12/2018	mR/Std Qtr	18.14
483892	6/12/2018 - 9/11/2018	mR/Std Qtr	17.10
490675	9/11/2018 - 12/11/2018	mR/Std Qtr	18.98

Sample Point 078.1 [INDICATOR - WSW @ 0.53 miles] — TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
470305	12/12/2017 - 3/13/2018	mR/Std Qtr	29.57
477263	3/13/2018 - 6/12/2018	mR/Std Qtr	30.44
483893	6/12/2018 - 9/11/2018	mR/Std Qtr	25.41
490676	9/11/2018 - 12/11/2018	mR/Std Qtr	27.28

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

Sample Point 081 [CONTROL - SE @ 9.33 miles] — TLD RING TLD_CTRL

Sample ID:	Sample Dates:	Nuclide	Activity
470306	12/12/2017 - 3/13/2018	mR/Std Qtr	27.43
477264	3/13/2018 - 6/12/2018	mR/Std Qtr	22.86
483894	6/12/2018 - 9/11/2018	mR/Std Qtr	22.59
490677	9/11/2018 - 12/11/2018	mR/Std Qtr	25.03

Sample Point 085 [INDICATOR - NNW @ 0.88 miles] — TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
470307	12/12/2017 - 3/13/2018	mR/Std Qtr	21.21
477265	3/13/2018 - 6/12/2018	mR/Std Qtr	20.93
483895	6/12/2018 - 9/11/2018	mR/Std Qtr	18.99
490678	9/11/2018 - 12/11/2018	mR/Std Qtr	19.88

Sample Point 086 [INDICATOR - NW @ 0.83 miles] — TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
470308	12/12/2017 - 3/13/2018	mR/Std Qtr	17.81
477266	3/13/2018 - 6/12/2018	mR/Std Qtr	17.99
483896	6/12/2018 - 9/11/2018	mR/Std Qtr	16.52
490679	9/11/2018 - 12/11/2018	mR/Std Qtr	16.63

Sample Point 087 [INDICATOR - WNW @ 1.33 miles] — TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
470309	12/12/2017 - 3/13/2018	mR/Std Qtr	19.28
477267	3/13/2018 - 6/12/2018	mR/Std Qtr	19.02
483897	6/12/2018 - 9/11/2018	mR/Std Qtr	17.40
490680	9/11/2018 - 12/11/2018	mR/Std Qtr	18.44

Sample Point 088 [INDICATOR - SSW @ 1 miles] — TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
470310	12/12/2017 - 3/13/2018	mR/Std Qtr	22.00
477268	3/13/2018 - 6/12/2018	mR/Std Qtr	22.82
483898	6/12/2018 - 9/11/2018	mR/Std Qtr	20.75
490681	9/11/2018 - 12/11/2018	mR/Std Qtr	21.79

Sample Point 089 [INDICATOR - S @ 1.19 miles] — TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
470311	12/12/2017 - 3/13/2018	mR/Std Qtr	24.69
477269	3/13/2018 - 6/12/2018	mR/Std Qtr	25.15

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

Sample Point 089 [INDICATOR - S @ 1.19 miles] — TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
483899	6/12/2018 - 9/11/2018	mR/Std Qtr	22.49
490682	9/11/2018 - 12/11/2018	mR/Std Qtr	23.85

Sample Point 090 [INDICATOR - SE @ 0.79 miles] — TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
470312	12/12/2017 - 3/13/2018	mR/Std Qtr	27.00
477270	3/13/2018 - 6/12/2018	mR/Std Qtr	25.62
483900	6/12/2018 - 9/11/2018	mR/Std Qtr	23.13
490683	9/11/2018 - 12/11/2018	mR/Std Qtr	24.41

Sample Point 092 [INDICATOR - WSW @ 3.62 miles] — TLD RING TLD_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
490684	9/11/2018 - 12/11/2018	mR/Std Qtr	22.95

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

Sample Point 077 [INDICATOR - SW @ 1 miles]

Sample ID: 466019 — Sample Dates: 1/2/2018 - 1/2/2018 — MIXEDBLV

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<2.12E+01	0.00E+00	2.12E+01
Co-58	<2.11E+01	0.00E+00	2.11E+01
Fe-59	<4.37E+01	0.00E+00	4.37E+01
Co-60	<2.20E+01	0.00E+00	2.20E+01
Zn-65	<4.43E+01	0.00E+00	4.43E+01
Zr-95	<3.84E+01	0.00E+00	3.84E+01
Nb-95	<2.43E+01	0.00E+00	2.43E+01
I-131	<3.79E+01	0.00E+00	3.79E+01
Cs-134	<2.38E+01	0.00E+00	2.38E+01
Cs-137	<2.17E+01	0.00E+00	2.17E+01
BaLa-140	<3.79E+01	0.00E+00	3.79E+01
Be-7	1.48E+03	2.48E+02	2.93E+02
K-40	3.15E+03	4.43E+02	4.18E+02

Sample ID: 467680 — Sample Dates: 2/5/2018 - 2/5/2018 — MIXEDBLV

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<3.65E+01	0.00E+00	3.65E+01
Co-58	<3.01E+01	0.00E+00	3.01E+01
Fe-59	<7.09E+01	0.00E+00	7.09E+01
Co-60	<2.59E+01	0.00E+00	2.59E+01
Zn-65	<7.40E+01	0.00E+00	7.40E+01
Zr-95	<6.06E+01	0.00E+00	6.06E+01
Nb-95	<4.15E+01	0.00E+00	4.15E+01
I-131	<4.76E+01	0.00E+00	4.76E+01
Cs-134	<3.62E+01	0.00E+00	3.62E+01
Cs-137	<3.93E+01	0.00E+00	3.93E+01
BaLa-140	<5.10E+01	0.00E+00	5.10E+01
Be-7	1.78E+03	3.95E+02	4.09E+02
K-40	2.44E+03	6.08E+02	5.74E+02

Sample ID: 470625 — Sample Dates: 3/5/2018 - 3/5/2018 — MIXEDBLV

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<3.57E+01	0.00E+00	3.57E+01
Co-58	<3.44E+01	0.00E+00	3.44E+01
Fe-59	<7.16E+01	0.00E+00	7.16E+01
Co-60	<3.88E+01	0.00E+00	3.88E+01
Zn-65	<7.94E+01	0.00E+00	7.94E+01
Zr-95	<8.01E+01	0.00E+00	8.01E+01
Nb-95	<4.02E+01	0.00E+00	4.02E+01
I-131	<4.18E+01	0.00E+00	4.18E+01
Cs-134	<4.36E+01	0.00E+00	4.36E+01
Cs-137	<4.28E+01	0.00E+00	4.28E+01
BaLa-140	<4.45E+01	0.00E+00	4.45E+01
Be-7	1.29E+03	6.63E+02	3.52E+02

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

Sample Point 077 [INDICATOR - SW @ 1 miles]

Sample ID:	470625	Sample Dates: 3/5/2018 - 3/5/2018	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
				K-40	3.27E+03	5.91E+02	5.25E+02
Sample ID:	**473003**	**Sample Dates: 4/2/2018 - 4/2/2018**	**MIXEDBLV**	**Nuclide**	**Activity**	**2 Sigma Error**	**MDA**
				Mn-54	<2.70E+01	0.00E+00	2.70E+01
				Co-58	<2.42E+01	0.00E+00	2.42E+01
				Fe-59	<4.82E+01	0.00E+00	4.82E+01
				Co-60	<2.62E+01	0.00E+00	2.62E+01
				Zn-65	<4.98E+01	0.00E+00	4.98E+01
				Zr-95	<3.98E+01	0.00E+00	3.98E+01
				Nb-95	<2.67E+01	0.00E+00	2.67E+01
				I-131	<1.91E+01	0.00E+00	1.91E+01
				Cs-134	<2.78E+01	0.00E+00	2.78E+01
				Cs-137	<2.66E+01	0.00E+00	2.66E+01
				BaLa-140	<1.57E+01	0.00E+00	1.57E+01
				Be-7	1.27E+03	2.66E+02	2.75E+02
				K-40	2.37E+03	4.72E+02	3.51E+02
Sample ID:	**474917**	**Sample Dates: 5/7/2018 - 5/7/2018**	**MIXEDBLV**	**Nuclide**	**Activity**	**2 Sigma Error**	**MDA**
				Mn-54	<3.62E+01	0.00E+00	3.62E+01
				Co-58	<2.87E+01	0.00E+00	2.87E+01
				Fe-59	<4.78E+01	0.00E+00	4.78E+01
				Co-60	<3.82E+01	0.00E+00	3.82E+01
				Zn-65	<6.35E+01	0.00E+00	6.35E+01
				Zr-95	<5.69E+01	0.00E+00	5.69E+01
				Nb-95	<2.47E+01	0.00E+00	2.47E+01
				I-131	<2.93E+01	0.00E+00	2.93E+01
				Cs-134	<3.32E+01	0.00E+00	3.32E+01
				Cs-137	<2.54E+01	0.00E+00	2.54E+01
				BaLa-140	<3.51E+01	0.00E+00	3.51E+01
				Be-7	4.22E+02	2.11E+02	2.95E+02
				K-40	4.53E+03	7.68E+02	3.80E+02
Sample ID:	**477403**	**Sample Dates: 6/4/2018 - 6/4/2018**	**MIXEDBLV**	**Nuclide**	**Activity**	**2 Sigma Error**	**MDA**
				Mn-54	<1.98E+01	0.00E+00	1.98E+01
				Co-58	<2.41E+01	0.00E+00	2.41E+01
				Fe-59	<5.56E+01	0.00E+00	5.56E+01
				Co-60	<2.65E+01	0.00E+00	2.65E+01
				Zn-65	<4.14E+01	0.00E+00	4.14E+01
				Zr-95	<4.39E+01	0.00E+00	4.39E+01
				Nb-95	<2.36E+01	0.00E+00	2.36E+01
				I-131	<3.00E+01	0.00E+00	3.00E+01
				Cs-134	<2.95E+01	0.00E+00	2.95E+01
				Cs-137	<2.94E+01	0.00E+00	2.94E+01
				BaLa-140	<3.36E+01	0.00E+00	3.36E+01
				Be-7	1.26E+03	2.83E+02	2.55E+02
				K-40	2.88E+03	6.07E+02	4.56E+02
Sample ID:	**478995**	**Sample Dates: 7/2/2018 - 7/2/2018**	**MIXEDBLV**	**Nuclide**	**Activity**	**2 Sigma Error**	**MDA**
				Mn-54	<2.74E+01	0.00E+00	2.74E+01
				Co-58	<2.90E+01	0.00E+00	2.90E+01
				Fe-59	<5.65E+01	0.00E+00	5.65E+01
				Co-60	<2.70E+01	0.00E+00	2.70E+01
				Zn-65	<7.32E+01	0.00E+00	7.32E+01
				Zr-95	<5.68E+01	0.00E+00	5.68E+01
				Nb-95	<2.71E+01	0.00E+00	2.71E+01
				I-131	<3.56E+01	0.00E+00	3.56E+01
				Cs-134	<3.65E+01	0.00E+00	3.65E+01
				Cs-137	<2.51E+01	0.00E+00	2.51E+01
				BaLa-140	<3.86E+01	0.00E+00	3.86E+01
				Be-7	1.82E+03	3.68E+02	3.16E+02
				K-40	3.09E+03	6.28E+02	2.88E+02
Sample ID:	**481986**	**Sample Dates: 8/6/2018 - 8/6/2018**	**MIXEDBLV**	**Nuclide**	**Activity**	**2 Sigma Error**	**MDA**
				Mn-54	<3.73E+01	0.00E+00	3.73E+01
				Co-58	<3.72E+01	0.00E+00	3.72E+01
				Fe-59	<5.73E+01	0.00E+00	5.73E+01
				Co-60	<3.36E+01	0.00E+00	3.36E+01
				Zn-65	<5.24E+01	0.00E+00	5.24E+01

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

Sample Point 077 [INDICATOR - SW @ 1 miles]

Sample ID: 481986 Sample Dates: 8/6/2018 - 8/6/2018 MIXEDBLV

Nuclide	Activity	2 Sigma Error	MDA
Zr-95	<6.22E+01	0.00E+00	6.22E+01
Nb-95	<2.94E+01	0.00E+00	2.94E+01
I-131	<2.59E+01	0.00E+00	2.59E+01
Cs-134	<4.04E+01	0.00E+00	4.04E+01
Cs-137	<2.78E+01	0.00E+00	2.78E+01
BaLa-140	<4.04E+01	0.00E+00	4.04E+01
Be-7	1.48E+03	3.40E+02	3.07E+02
K-40	4.07E+03	8.34E+02	6.66E+02

Sample ID: 483576 Sample Dates: 9/4/2018 - 9/4/2018 MIXEDBLV

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<2.71E+01	0.00E+00	2.71E+01
Co-58	<2.81E+01	0.00E+00	2.81E+01
Fe-59	<5.95E+01	0.00E+00	5.95E+01
Co-60	<2.64E+01	0.00E+00	2.64E+01
Zn-65	<4.67E+01	0.00E+00	4.67E+01
Zr-95	<4.23E+01	0.00E+00	4.23E+01
Nb-95	<3.16E+01	0.00E+00	3.16E+01
I-131	<4.80E+01	0.00E+00	4.80E+01
Cs-134	<3.49E+01	0.00E+00	3.49E+01
Cs-137	<2.71E+01	0.00E+00	2.71E+01
BaLa-140	<4.11E+01	0.00E+00	4.11E+01
Be-7	2.78E+03	4.00E+02	3.07E+02
K-40	4.27E+03	6.76E+02	5.64E+02

Sample ID: 486188 Sample Dates: 10/1/2018 - 10/1/2018 MIXEDBLV

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<3.98E+01	0.00E+00	3.98E+01
Co-58	<4.19E+01	0.00E+00	4.19E+01
Fe-59	<8.25E+01	0.00E+00	8.25E+01
Co-60	<4.29E+01	0.00E+00	4.29E+01
Zn-65	<7.85E+01	0.00E+00	7.85E+01
Zr-95	<6.02E+01	0.00E+00	6.02E+01
Nb-95	<3.05E+01	0.00E+00	3.05E+01
I-131	<4.49E+01	0.00E+00	4.49E+01
Cs-134	<4.12E+01	0.00E+00	4.12E+01
Cs-137	<4.20E+01	0.00E+00	4.20E+01
BaLa-140	<3.38E+01	0.00E+00	3.38E+01
Be-7	1.30E+03	4.16E+02	5.56E+02
K-40	3.22E+03	6.98E+02	5.45E+02

Sample ID: 488874 Sample Dates: 11/5/2018 - 11/5/2018 MIXEDBLV

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<1.42E+01	0.00E+00	1.42E+01
Co-58	<1.62E+01	0.00E+00	1.62E+01
Fe-59	<3.16E+01	0.00E+00	3.16E+01
Co-60	<1.03E+01	0.00E+00	1.03E+01
Zn-65	<3.11E+01	0.00E+00	3.11E+01
Zr-95	<3.28E+01	0.00E+00	3.28E+01
Nb-95	<1.63E+01	0.00E+00	1.63E+01
I-131	<4.32E+01	0.00E+00	4.32E+01
Cs-134	<2.32E+01	0.00E+00	2.32E+01
Cs-137	<1.73E+01	0.00E+00	1.73E+01
BaLa-140	<3.13E+01	0.00E+00	3.13E+01
Be-7	1.50E+03	2.50E+02	2.37E+02
K-40	3.58E+03	4.67E+02	2.09E+02

Sample ID: 490823 Sample Dates: 12/3/2018 - 12/3/2018 MIXEDBLV

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<2.99E+01	0.00E+00	2.99E+01
Co-58	<2.74E+01	0.00E+00	2.74E+01
Fe-59	<5.53E+01	0.00E+00	5.53E+01
Co-60	<2.96E+01	0.00E+00	2.96E+01
Zn-65	<6.15E+01	0.00E+00	6.15E+01
Zr-95	<4.47E+01	0.00E+00	4.47E+01
Nb-95	<2.75E+01	0.00E+00	2.75E+01
I-131	<3.86E+01	0.00E+00	3.86E+01
Cs-134	<3.51E+01	0.00E+00	3.51E+01
Cs-137	<2.68E+01	0.00E+00	2.68E+01
BaLa-140	<4.83E+01	0.00E+00	4.83E+01
Be-7	1.84E+03	3.15E+02	3.24E+02
K-40	2.39E+03	4.73E+02	4.90E+02

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

Sample Point 079 [INDICATOR - NE @ 0.56 miles]

Sample ID: 466020 **Sample Dates: 1/2/2018 - 1/2/2018** **MIXEDBLV**

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<2.65E+01	0.00E+00	2.65E+01
Co-58	<2.31E+01	0.00E+00	2.31E+01
Fe-59	<4.88E+01	0.00E+00	4.88E+01
Co-60	<2.67E+01	0.00E+00	2.67E+01
Zn-65	<5.14E+01	0.00E+00	5.14E+01
Zr-95	<5.10E+01	0.00E+00	5.10E+01
Nb-95	<2.92E+01	0.00E+00	2.92E+01
I-131	<4.63E+01	0.00E+00	4.63E+01
Cs-134	<3.14E+01	0.00E+00	3.14E+01
Cs-137	<3.22E+01	0.00E+00	3.22E+01
BaLa-140	<4.15E+01	0.00E+00	4.15E+01
Be-7	2.79E+03	3.92E+02	3.84E+02
K-40	6.54E+03	7.77E+02	4.54E+02

Sample ID: 467681 **Sample Dates: 2/5/2018 - 2/5/2018** **MIXEDBLV**

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<2.59E+01	0.00E+00	2.59E+01
Co-58	<2.57E+01	0.00E+00	2.57E+01
Fe-59	<6.04E+01	0.00E+00	6.04E+01
Co-60	<2.57E+01	0.00E+00	2.57E+01
Zn-65	<6.31E+01	0.00E+00	6.31E+01
Zr-95	<4.03E+01	0.00E+00	4.03E+01
Nb-95	<2.86E+01	0.00E+00	2.86E+01
I-131	<4.79E+01	0.00E+00	4.79E+01
Cs-134	<3.34E+01	0.00E+00	3.34E+01
Cs-137	<2.59E+01	0.00E+00	2.59E+01
BaLa-140	<3.49E+01	0.00E+00	3.49E+01
Be-7	1.68E+03	3.33E+02	2.81E+02
K-40	2.40E+03	4.92E+02	5.81E+01

Sample ID: 470626 **Sample Dates: 3/5/2018 - 3/5/2018** **MIXEDBLV**

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<3.90E+01	0.00E+00	3.90E+01
Co-58	<4.07E+01	0.00E+00	4.07E+01
Fe-59	<7.64E+01	0.00E+00	7.64E+01
Co-60	<3.57E+01	0.00E+00	3.57E+01
Zn-65	<8.57E+01	0.00E+00	8.57E+01
Zr-95	<7.04E+01	0.00E+00	7.04E+01
Nb-95	<3.83E+01	0.00E+00	3.83E+01
I-131	<4.23E+01	0.00E+00	4.23E+01
Cs-134	<4.75E+01	0.00E+00	4.75E+01
Cs-137	<4.05E+01	0.00E+00	4.05E+01
BaLa-140	<4.83E+01	0.00E+00	4.83E+01
Be-7	1.60E+03	3.96E+02	5.06E+02
K-40	3.57E+03	7.73E+02	8.59E+02

Sample ID: 473004 **Sample Dates: 4/2/2018 - 4/2/2018** **MIXEDBLV**

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<3.32E+01	0.00E+00	3.32E+01
Co-58	<3.46E+01	0.00E+00	3.46E+01
Fe-59	<6.82E+01	0.00E+00	6.82E+01
Co-60	<3.79E+01	0.00E+00	3.79E+01
Zn-65	<8.01E+01	0.00E+00	8.01E+01
Zr-95	<5.17E+01	0.00E+00	5.17E+01
Nb-95	<4.01E+01	0.00E+00	4.01E+01
I-131	<3.10E+01	0.00E+00	3.10E+01
Cs-134	<3.15E+01	0.00E+00	3.15E+01
Cs-137	<4.22E+01	0.00E+00	4.22E+01
BaLa-140	<3.61E+01	0.00E+00	3.61E+01
Be-7	1.98E+03	4.07E+02	3.53E+02
K-40	3.46E+03	7.28E+02	4.56E+02

Sample ID: 474918 **Sample Dates: 5/7/2018 - 5/7/2018** **MIXEDBLV**

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<3.21E+01	0.00E+00	3.21E+01
Co-58	<3.23E+01	0.00E+00	3.23E+01
Fe-59	<8.11E+01	0.00E+00	8.11E+01
Co-60	<3.69E+01	0.00E+00	3.69E+01
Zn-65	<6.92E+01	0.00E+00	6.92E+01
Zr-95	<6.97E+01	0.00E+00	6.97E+01
Nb-95	<3.94E+01	0.00E+00	3.94E+01
I-131	<3.76E+01	0.00E+00	3.76E+01

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

Sample Point 079 [INDICATOR - NE @ 0.56 miles]

Sample ID: 474918 **Sample Dates: 5/7/2018 - 5/7/2018** **MIXEDBLV**

Nuclide	Activity	2 Sigma Error	MDA
Cs-134	<3.92E+01	0.00E+00	3.92E+01
Cs-137	<4.08E+01	0.00E+00	4.08E+01
BaLa-140	<4.30E+01	0.00E+00	4.30E+01
Be-7	2.04E+03	4.19E+02	3.79E+02
K-40	6.12E+03	1.00E+03	4.81E+02

Sample ID: 477404 **Sample Dates: 6/4/2018 - 6/4/2018** **MIXEDBLV**

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<2.94E+01	0.00E+00	2.94E+01
Co-58	<2.47E+01	0.00E+00	2.47E+01
Fe-59	<5.19E+01	0.00E+00	5.19E+01
Co-60	<2.95E+01	0.00E+00	2.95E+01
Zn-65	<5.66E+01	0.00E+00	5.66E+01
Zr-95	<4.83E+01	0.00E+00	4.83E+01
Nb-95	<2.90E+01	0.00E+00	2.90E+01
I-131	<3.76E+01	0.00E+00	3.76E+01
Cs-134	<3.73E+01	0.00E+00	3.73E+01
Cs-137	<2.82E+01	0.00E+00	2.82E+01
BaLa-140	<3.70E+01	0.00E+00	3.70E+01
Be-7	2.06E+03	5.93E+02	3.06E+02
K-40	5.81E+03	1.24E+03	2.53E+02

Sample ID: 478996 **Sample Dates: 7/2/2018 - 7/2/2018** **MIXEDBLV**

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<3.12E+01	0.00E+00	3.12E+01
Co-58	<3.13E+01	0.00E+00	3.13E+01
Fe-59	<5.45E+01	0.00E+00	5.45E+01
Co-60	<3.41E+01	0.00E+00	3.41E+01
Zn-65	<8.29E+01	0.00E+00	8.29E+01
Zr-95	<6.67E+01	0.00E+00	6.67E+01
Nb-95	<3.38E+01	0.00E+00	3.38E+01
I-131	<3.72E+01	0.00E+00	3.72E+01
Cs-134	<4.42E+01	0.00E+00	4.42E+01
Cs-137	<3.16E+01	0.00E+00	3.16E+01
BaLa-140	<3.76E+01	0.00E+00	3.76E+01
Be-7	1.98E+03	4.29E+02	4.21E+02
K-40	4.97E+03	8.77E+02	4.22E+02

Sample ID: 481987 **Sample Dates: 8/6/2018 - 8/6/2018** **MIXEDBLV**

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<4.10E+01	0.00E+00	4.10E+01
Co-58	<3.09E+01	0.00E+00	3.09E+01
Fe-59	<6.34E+01	0.00E+00	6.34E+01
Co-60	<4.51E+01	0.00E+00	4.51E+01
Zn-65	<9.24E+01	0.00E+00	9.24E+01
Zr-95	<8.98E+01	0.00E+00	8.98E+01
Nb-95	<4.17E+01	0.00E+00	4.17E+01
I-131	<3.89E+01	0.00E+00	3.89E+01
Cs-134	<4.60E+01	0.00E+00	4.60E+01
Cs-137	<3.97E+01	0.00E+00	3.97E+01
BaLa-140	<1.36E+01	0.00E+00	1.36E+01
Be-7	3.43E+03	4.99E+02	3.87E+02
K-40	3.93E+03	9.00E+02	6.78E+02

Sample ID: 483577 **Sample Dates: 9/4/2018 - 9/4/2018** **MIXEDBLV**

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<2.35E+01	0.00E+00	2.35E+01
Co-58	<2.28E+01	0.00E+00	2.28E+01
Fe-59	<4.03E+01	0.00E+00	4.03E+01
Co-60	<2.07E+01	0.00E+00	2.07E+01
Zn-65	<4.92E+01	0.00E+00	4.92E+01
Zr-95	<4.39E+01	0.00E+00	4.39E+01
Nb-95	<2.65E+01	0.00E+00	2.65E+01
I-131	<3.57E+01	0.00E+00	3.57E+01
Cs-134	<2.69E+01	0.00E+00	2.69E+01
Cs-137	<2.00E+01	0.00E+00	2.00E+01
BaLa-140	<3.13E+01	0.00E+00	3.13E+01
Be-7	1.56E+03	2.79E+02	2.79E+02
K-40	4.45E+03	6.18E+02	3.53E+02

Sample ID: 486189 **Sample Dates: 10/1/2018 - 10/1/2018** **MIXEDBLV**

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<2.52E+01	0.00E+00	2.52E+01

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

Sample Point 079 [INDICATOR - NE @ 0.56 miles]

Sample ID:	486189	Sample Dates: 10/1/2018 - 10/1/2018	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
				Co-58	<2.65E+01	0.00E+00	2.65E+01
				Fe-59	<4.70E+01	0.00E+00	4.70E+01
				Co-60	<2.71E+01	0.00E+00	2.71E+01
				Zn-65	<5.54E+01	0.00E+00	5.54E+01
				Zr-95	<4.98E+01	0.00E+00	4.98E+01
				Nb-95	<2.48E+01	0.00E+00	2.48E+01
				I-131	<2.28E+01	0.00E+00	2.28E+01
				Cs-134	<3.32E+01	0.00E+00	3.32E+01
				Cs-137	<2.49E+01	0.00E+00	2.49E+01
				BaLa-140	<3.25E+01	0.00E+00	3.25E+01
				Be-7	1.37E+03	2.91E+02	3.13E+02
				K-40	4.51E+03	7.05E+02	4.93E+02
Sample ID:	488875	Sample Dates: 11/5/2018 - 11/5/2018	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<2.00E+01	0.00E+00	2.00E+01
				Co-58	<1.93E+01	0.00E+00	1.93E+01
				Fe-59	<4.37E+01	0.00E+00	4.37E+01
				Co-60	<2.14E+01	0.00E+00	2.14E+01
				Zn-65	<3.44E+01	0.00E+00	3.44E+01
				Zr-95	<2.87E+01	0.00E+00	2.87E+01
				Nb-95	<2.11E+01	0.00E+00	2.11E+01
				I-131	<4.79E+01	0.00E+00	4.79E+01
				Cs-134	<2.21E+01	0.00E+00	2.21E+01
				Cs-137	<1.67E+01	0.00E+00	1.67E+01
				BaLa-140	<4.02E+01	0.00E+00	4.02E+01
				Be-7	2.21E+03	3.22E+02	2.62E+02
				K-40	4.76E+03	5.90E+02	2.62E+02
Sample ID:	490824	Sample Dates: 12/3/2018 - 12/3/2018	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<2.26E+01	0.00E+00	2.26E+01
				Co-58	<1.96E+01	0.00E+00	1.96E+01
				Fe-59	<4.88E+01	0.00E+00	4.88E+01
				Co-60	<2.09E+01	0.00E+00	2.09E+01
				Zn-65	<4.57E+01	0.00E+00	4.57E+01
				Zr-95	<3.36E+01	0.00E+00	3.36E+01
				Nb-95	<2.18E+01	0.00E+00	2.18E+01
				I-131	<3.45E+01	0.00E+00	3.45E+01
				Cs-134	<2.35E+01	0.00E+00	2.35E+01
				Cs-137	<1.97E+01	0.00E+00	1.97E+01
				BaLa-140	<2.74E+01	0.00E+00	2.74E+01
				Be-7	1.99E+03	3.04E+02	2.85E+02
				K-40	4.58E+03	5.83E+02	2.96E+02

Sample Point 081 [CONTROL - SE @ 9.33 miles]

Sample ID:	466021	Sample Dates: 1/2/2018 - 1/2/2018	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<2.48E+01	0.00E+00	2.48E+01
				Co-58	<2.50E+01	0.00E+00	2.50E+01
				Fe-59	<4.50E+01	0.00E+00	4.50E+01
				Co-60	<2.11E+01	0.00E+00	2.11E+01
				Zn-65	<5.36E+01	0.00E+00	5.36E+01
				Zr-95	<5.03E+01	0.00E+00	5.03E+01
				Nb-95	<2.78E+01	0.00E+00	2.78E+01
				I-131	<4.79E+01	0.00E+00	4.79E+01
				Cs-134	<3.12E+01	0.00E+00	3.12E+01
				Cs-137	<2.68E+01	0.00E+00	2.68E+01
				BaLa-140	<4.20E+01	0.00E+00	4.20E+01
				Be-7	1.32E+03	4.28E+02	2.70E+02
				K-40	4.73E+03	6.08E+02	4.07E+02
Sample ID:	467682	Sample Dates: 2/5/2018 - 2/5/2018	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<2.71E+01	0.00E+00	2.71E+01
				Co-58	<3.29E+01	0.00E+00	3.29E+01
				Fe-59	<3.69E+01	0.00E+00	3.69E+01
				Co-60	<2.81E+01	0.00E+00	2.81E+01
				Zn-65	<6.57E+01	0.00E+00	6.57E+01
				Zr-95	<6.27E+01	0.00E+00	6.27E+01
				Nb-95	<3.47E+01	0.00E+00	3.47E+01

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

Sample Point 081 [CONTROL - SE @ 9.33 miles]

Sample ID:	467682	Sample Dates: 2/5/2018 - 2/5/2018	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
				I-131	<4.62E+01	0.00E+00	4.62E+01
				Cs-134	<2.73E+01	0.00E+00	2.73E+01
				Cs-137	<2.72E+01	0.00E+00	2.72E+01
				BaLa-140	<4.96E+01	0.00E+00	4.96E+01
				Be-7	1.35E+03	3.25E+02	3.31E+02
				K-40	2.57E+03	5.48E+02	2.82E+02
Sample ID:	470627	Sample Dates: 3/5/2018 - 3/5/2018	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<2.64E+01	0.00E+00	2.64E+01
				Co-58	<3.85E+01	0.00E+00	3.85E+01
				Fe-59	<5.41E+01	0.00E+00	5.41E+01
				Co-60	<3.08E+01	0.00E+00	3.08E+01
				Zn-65	<6.42E+01	0.00E+00	6.42E+01
				Zr-95	<4.74E+01	0.00E+00	4.74E+01
				Nb-95	<3.08E+01	0.00E+00	3.08E+01
				I-131	<2.84E+01	0.00E+00	2.84E+01
				Cs-134	<3.82E+01	0.00E+00	3.82E+01
				Cs-137	<2.85E+01	0.00E+00	2.85E+01
				BaLa-140	<3.92E+01	0.00E+00	3.92E+01
				Be-7	2.07E+03	3.45E+02	3.64E+02
				K-40	3.42E+03	3.37E+02	3.60E+02
Sample ID:	473005	Sample Dates: 4/2/2018 - 4/2/2018	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<3.49E+01	0.00E+00	3.49E+01
				Co-58	<2.89E+01	0.00E+00	2.89E+01
				Fe-59	<5.78E+01	0.00E+00	5.78E+01
				Co-60	<6.28E+00	0.00E+00	6.28E+00
				Zn-65	<6.41E+01	0.00E+00	6.41E+01
				Zr-95	<4.59E+01	0.00E+00	4.59E+01
				Nb-95	<2.81E+01	0.00E+00	2.81E+01
				I-131	<2.96E+01	0.00E+00	2.96E+01
				Cs-134	<4.20E+01	0.00E+00	4.20E+01
				Cs-137	<3.29E+01	0.00E+00	3.29E+01
				BaLa-140	<2.92E+01	0.00E+00	2.92E+01
				Be-7	1.99E+03	4.03E+02	4.04E+02
				K-40	3.14E+03	6.13E+02	2.91E+02
Sample ID:	474919	Sample Dates: 5/7/2018 - 5/7/2018	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<2.15E+01	0.00E+00	2.15E+01
				Co-58	<2.75E+01	0.00E+00	2.75E+01
				Fe-59	<7.14E+01	0.00E+00	7.14E+01
				Co-60	<4.31E+01	0.00E+00	4.31E+01
				Zn-65	<5.45E+01	0.00E+00	5.45E+01
				Zr-95	<4.98E+01	0.00E+00	4.98E+01
				Nb-95	<2.70E+01	0.00E+00	2.70E+01
				I-131	<3.36E+01	0.00E+00	3.36E+01
				Cs-134	<2.41E+01	0.00E+00	2.41E+01
				Cs-137	<3.55E+01	0.00E+00	3.55E+01
				BaLa-140	<4.07E+01	0.00E+00	4.07E+01
				Be-7	<2.86E+02	0.00E+00	2.86E+02
				K-40	4.21E+03	7.54E+02	4.54E+02
Sample ID:	477405	Sample Dates: 6/4/2018 - 6/4/2018	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<3.06E+01	0.00E+00	3.06E+01
				Co-58	<2.22E+01	0.00E+00	2.22E+01
				Fe-59	<6.79E+01	0.00E+00	6.79E+01
				Co-60	<2.27E+01	0.00E+00	2.27E+01
				Zn-65	<5.14E+01	0.00E+00	5.14E+01
				Zr-95	<4.42E+01	0.00E+00	4.42E+01
				Nb-95	<2.35E+01	0.00E+00	2.35E+01
				I-131	<3.12E+01	0.00E+00	3.12E+01
				Cs-134	<2.84E+01	0.00E+00	2.84E+01
				Cs-137	<2.72E+01	0.00E+00	2.72E+01
				BaLa-140	<4.55E+01	0.00E+00	4.55E+01
				Be-7	1.46E+03	3.25E+02	3.02E+02
				K-40	3.80E+03	7.12E+02	4.03E+02

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

Sample Point 081 [CONTROL - SE @ 9.33 miles]

Sample ID: 478997 **Sample Dates: 7/2/2018 - 7/2/2018** **MIXEDBLV**

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<3.92E+01	0.00E+00	3.92E+01
Co-58	<2.96E+01	0.00E+00	2.96E+01
Fe-59	<7.24E+01	0.00E+00	7.24E+01
Co-60	<3.96E+01	0.00E+00	3.96E+01
Zn-65	<6.93E+01	0.00E+00	6.93E+01
Zr-95	<4.37E+01	0.00E+00	4.37E+01
Nb-95	<2.91E+01	0.00E+00	2.91E+01
I-131	<3.38E+01	0.00E+00	3.38E+01
Cs-134	<3.29E+01	0.00E+00	3.29E+01
Cs-137	<2.84E+01	0.00E+00	2.84E+01
BaLa-140	<4.67E+01	0.00E+00	4.67E+01
Be-7	1.53E+03	3.67E+02	3.42E+02
K-40	4.05E+03	8.34E+02	6.00E+02

Sample ID: 481988 **Sample Dates: 8/6/2018 - 8/6/2018** **MIXEDBLV**

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<3.06E+01	0.00E+00	3.06E+01
Co-58	<3.33E+01	0.00E+00	3.33E+01
Fe-59	<5.40E+01	0.00E+00	5.40E+01
Co-60	<3.21E+01	0.00E+00	3.21E+01
Zn-65	<5.93E+01	0.00E+00	5.93E+01
Zr-95	<5.77E+01	0.00E+00	5.77E+01
Nb-95	<3.34E+01	0.00E+00	3.34E+01
I-131	<3.40E+01	0.00E+00	3.40E+01
Cs-134	<3.62E+01	0.00E+00	3.62E+01
Cs-137	<3.35E+01	0.00E+00	3.35E+01
BaLa-140	<3.24E+01	0.00E+00	3.24E+01
Be-7	1.27E+03	3.39E+02	4.12E+02
K-40	4.65E+03	7.75E+02	4.76E+02

Sample ID: 483578 **Sample Dates: 9/4/2018 - 9/4/2018** **MIXEDBLV**

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<4.24E+01	0.00E+00	4.24E+01
Co-58	<3.85E+01	0.00E+00	3.85E+01
Fe-59	<7.27E+01	0.00E+00	7.27E+01
Co-60	<4.22E+01	0.00E+00	4.22E+01
Zn-65	<8.67E+01	0.00E+00	8.67E+01
Zr-95	<7.02E+01	0.00E+00	7.02E+01
Nb-95	<3.34E+01	0.00E+00	3.34E+01
I-131	<3.99E+01	0.00E+00	3.99E+01
Cs-134	<4.55E+01	0.00E+00	4.55E+01
Cs-137	<3.74E+01	0.00E+00	3.74E+01
BaLa-140	<5.71E+01	0.00E+00	5.71E+01
Be-7	1.88E+03	4.21E+02	3.47E+02
K-40	3.36E+03	7.53E+02	3.35E+02

Sample ID: 486190 **Sample Dates: 10/1/2018 - 10/1/2018** **MIXEDBLV**

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<2.79E+01	0.00E+00	2.79E+01
Co-58	<3.70E+01	0.00E+00	3.70E+01
Fe-59	<6.39E+01	0.00E+00	6.39E+01
Co-60	<4.36E+01	0.00E+00	4.36E+01
Zn-65	<3.97E+01	0.00E+00	3.97E+01
Zr-95	<3.42E+01	0.00E+00	3.42E+01
Nb-95	<3.90E+01	0.00E+00	3.90E+01
I-131	<3.76E+01	0.00E+00	3.76E+01
Cs-134	<3.79E+01	0.00E+00	3.79E+01
Cs-137	<2.70E+01	0.00E+00	2.70E+01
BaLa-140	<5.06E+01	0.00E+00	5.06E+01
Be-7	1.74E+03	4.35E+02	4.82E+02
K-40	5.11E+03	9.78E+02	7.08E+02

Sample ID: 488876 **Sample Dates: 11/5/2018 - 11/5/2018** **MIXEDBLV**

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<1.37E+01	0.00E+00	1.37E+01
Co-58	<1.57E+01	0.00E+00	1.57E+01
Fe-59	<3.00E+01	0.00E+00	3.00E+01
Co-60	<1.62E+01	0.00E+00	1.62E+01
Zn-65	<3.09E+01	0.00E+00	3.09E+01
Zr-95	<2.55E+01	0.00E+00	2.55E+01
Nb-95	<1.71E+01	0.00E+00	1.71E+01
I-131	<4.53E+01	0.00E+00	4.53E+01

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

Sample Point 081 [CONTROL - SE @ 9.33 miles]

Sample ID: 488876 **Sample Dates: 11/5/2018 - 11/5/2018** **MIXEDBLV**

Nuclide	Activity	2 Sigma Error	MDA
Cs-134	<1.92E+01	0.00E+00	1.92E+01
Cs-137	<1.56E+01	0.00E+00	1.56E+01
BaLa-140	<3.23E+01	0.00E+00	3.23E+01
Be-7	1.00E+03	1.75E+02	1.81E+02
K-40	2.88E+03	3.78E+02	2.71E+02

Sample ID: 490825 **Sample Dates: 12/3/2018 - 12/3/2018** **MIXEDBLV**

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<3.41E+01	0.00E+00	3.41E+01
Co-58	<3.27E+01	0.00E+00	3.27E+01
Fe-59	<6.72E+01	0.00E+00	6.72E+01
Co-60	<2.62E+01	0.00E+00	2.62E+01
Zn-65	<8.22E+01	0.00E+00	8.22E+01
Zr-95	<5.53E+01	0.00E+00	5.53E+01
Nb-95	<3.35E+01	0.00E+00	3.35E+01
I-131	<4.77E+01	0.00E+00	4.77E+01
Cs-134	<4.07E+01	0.00E+00	4.07E+01
Cs-137	<2.54E+01	0.00E+00	2.54E+01
BaLa-140	<4.64E+01	0.00E+00	4.64E+01
Be-7	2.56E+03	4.39E+02	3.50E+02
K-40	4.05E+03	7.01E+02	3.59E+02

Sample Point 084 [INDICATOR - NNE @ 2.58 miles]

Sample ID: 466022 **Sample Dates: 1/2/2018 - 1/2/2018** **MIXEDBLV**

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<3.03E+01	0.00E+00	3.03E+01
Co-58	<2.86E+01	0.00E+00	2.86E+01
Fe-59	<5.34E+01	0.00E+00	5.34E+01
Co-60	<2.89E+01	0.00E+00	2.89E+01
Zn-65	<6.09E+01	0.00E+00	6.09E+01
Zr-95	<5.81E+01	0.00E+00	5.81E+01
Nb-95	<3.11E+01	0.00E+00	3.11E+01
I-131	<4.20E+01	0.00E+00	4.20E+01
Cs-134	<2.88E+01	0.00E+00	2.88E+01
Cs-137	<2.85E+01	0.00E+00	2.85E+01
BaLa-140	<4.77E+01	0.00E+00	4.77E+01
Be-7	3.91E+03	5.06E+02	3.72E+02
K-40	4.46E+03	6.59E+02	4.13E+02

Sample ID: 467683 **Sample Dates: 2/5/2018 - 2/5/2018** **MIXEDBLV**

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<2.27E+01	0.00E+00	2.27E+01
Co-58	<2.44E+01	0.00E+00	2.44E+01
Fe-59	<3.86E+01	0.00E+00	3.86E+01
Co-60	<2.09E+01	0.00E+00	2.09E+01
Zn-65	<4.88E+01	0.00E+00	4.88E+01
Zr-95	<2.86E+01	0.00E+00	2.86E+01
Nb-95	<2.13E+01	0.00E+00	2.13E+01
I-131	<3.26E+01	0.00E+00	3.26E+01
Cs-134	<1.90E+01	0.00E+00	1.90E+01
Cs-137	<2.18E+01	0.00E+00	2.18E+01
BaLa-140	<8.29E+00	0.00E+00	8.29E+00
Be-7	3.72E+03	4.87E+02	2.10E+02
K-40	2.61E+03	4.78E+02	4.72E+01

Sample ID: 470628 **Sample Dates: 3/5/2018 - 3/5/2018** **MIXEDBLV**

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<3.28E+01	0.00E+00	3.28E+01
Co-58	<3.41E+01	0.00E+00	3.41E+01
Fe-59	<7.92E+01	0.00E+00	7.92E+01
Co-60	<3.67E+01	0.00E+00	3.67E+01
Zn-65	<7.79E+01	0.00E+00	7.79E+01
Zr-95	<6.28E+01	0.00E+00	6.28E+01
Nb-95	<4.16E+01	0.00E+00	4.16E+01
I-131	<3.82E+01	0.00E+00	3.82E+01
Cs-134	<4.62E+01	0.00E+00	4.62E+01
Cs-137	<3.57E+01	0.00E+00	3.57E+01
BaLa-140	<2.80E+01	0.00E+00	2.80E+01
Be-7	6.21E+03	7.46E+02	4.84E+02
K-40	4.46E+03	7.72E+02	6.44E+02

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

Sample Point 084 [INDICATOR - NNE @ 2.58 miles]

Sample ID:	473006	Sample Dates: 4/2/2018 - 4/2/2018	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<1.57E+01	0.00E+00	1.57E+01
				Co-58	<1.51E+01	0.00E+00	1.51E+01
				Fe-59	<3.41E+01	0.00E+00	3.41E+01
				Co-60	<1.58E+01	0.00E+00	1.58E+01
				Zn-65	<3.93E+01	0.00E+00	3.93E+01
				Zr-95	<2.51E+01	0.00E+00	2.51E+01
				Nb-95	<1.94E+01	0.00E+00	1.94E+01
				I-131	<4.75E+01	0.00E+00	4.75E+01
				Cs-134	<1.85E+01	0.00E+00	1.85E+01
				Cs-137	<1.50E+01	0.00E+00	1.50E+01
				BaLa-140	<3.73E+01	0.00E+00	3.73E+01
				Be-7	4.59E+03	5.03E+02	1.97E+02
				K-40	4.21E+03	5.36E+02	2.49E+02
Sample ID:	474920	Sample Dates: 5/7/2018 - 5/7/2018	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<2.21E+01	0.00E+00	2.21E+01
				Co-58	<2.23E+01	0.00E+00	2.23E+01
				Fe-59	<5.12E+01	0.00E+00	5.12E+01
				Co-60	<2.73E+01	0.00E+00	2.73E+01
				Zn-65	<6.64E+01	0.00E+00	6.64E+01
				Zr-95	<3.59E+01	0.00E+00	3.59E+01
				Nb-95	<2.92E+01	0.00E+00	2.92E+01
				I-131	<3.25E+01	0.00E+00	3.25E+01
				Cs-134	<3.85E+01	0.00E+00	3.85E+01
				Cs-137	<1.82E+01	0.00E+00	1.82E+01
				BaLa-140	<2.38E+01	0.00E+00	2.38E+01
				Be-7	2.93E+02	2.22E+02	3.44E+02
				K-40	3.65E+03	6.90E+02	4.33E+02
Sample ID:	477406	Sample Dates: 6/4/2018 - 6/4/2018	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<3.50E+01	0.00E+00	3.50E+01
				Co-58	<2.91E+01	0.00E+00	2.91E+01
				Fe-59	<7.44E+01	0.00E+00	7.44E+01
				Co-60	<4.21E+01	0.00E+00	4.21E+01
				Zn-65	<5.28E+01	0.00E+00	5.28E+01
				Zr-95	<5.61E+01	0.00E+00	5.61E+01
				Nb-95	<3.71E+01	0.00E+00	3.71E+01
				I-131	<3.66E+01	0.00E+00	3.66E+01
				Cs-134	<4.61E+01	0.00E+00	4.61E+01
				Cs-137	<2.80E+01	0.00E+00	2.80E+01
				BaLa-140	<5.62E+01	0.00E+00	5.62E+01
				Be-7	1.98E+03	4.18E+02	3.91E+02
				K-40	4.65E+03	8.69E+02	5.69E+02
Sample ID:	478998	Sample Dates: 7/2/2018 - 7/2/2018	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<2.97E+01	0.00E+00	2.97E+01
				Co-58	<2.99E+01	0.00E+00	2.99E+01
				Fe-59	<7.24E+01	0.00E+00	7.24E+01
				Co-60	<3.43E+01	0.00E+00	3.43E+01
				Zn-65	<6.56E+01	0.00E+00	6.56E+01
				Zr-95	<5.76E+01	0.00E+00	5.76E+01
				Nb-95	<3.94E+01	0.00E+00	3.94E+01
				I-131	<3.19E+01	0.00E+00	3.19E+01
				Cs-134	<4.17E+01	0.00E+00	4.17E+01
				Cs-137	<2.30E+01	0.00E+00	2.30E+01
				BaLa-140	<2.99E+01	0.00E+00	2.99E+01
				Be-7	1.11E+03	3.17E+02	3.44E+02
				K-40	2.94E+03	6.26E+02	7.74E+01
Sample ID:	481989	Sample Dates: 8/6/2018 - 8/6/2018	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<3.83E+01	0.00E+00	3.83E+01
				Co-58	<3.45E+01	0.00E+00	3.45E+01
				Fe-59	<7.38E+01	0.00E+00	7.38E+01
				Co-60	<3.58E+01	0.00E+00	3.58E+01
				Zn-65	<9.70E+01	0.00E+00	9.70E+01
				Zr-95	<7.22E+01	0.00E+00	7.22E+01
				Nb-95	<3.72E+01	0.00E+00	3.72E+01
				I-131	<3.61E+01	0.00E+00	3.61E+01

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

Sample Point 084 [INDICATOR - NNE @ 2.58 miles]

Sample ID: 481989 **Sample Dates: 8/6/2018 - 8/6/2018** **MIXEDBLV**

Nuclide	Activity	2 Sigma Error	MDA
Cs-134	<4.50E+01	0.00E+00	4.50E+01
Cs-137	<3.72E+01	0.00E+00	3.72E+01
BaLa-140	<4.81E+01	0.00E+00	4.81E+01
Be-7	2.75E+03	5.28E+02	4.45E+02
K-40	3.75E+03	7.96E+02	4.30E+02

Sample ID: 483579 **Sample Dates: 9/4/2018 - 9/4/2018** **MIXEDBLV**

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<2.46E+01	0.00E+00	2.46E+01
Co-58	<3.03E+01	0.00E+00	3.03E+01
Fe-59	<5.60E+01	0.00E+00	5.60E+01
Co-60	<3.03E+01	0.00E+00	3.03E+01
Zn-65	<7.68E+01	0.00E+00	7.68E+01
Zr-95	<4.53E+01	0.00E+00	4.53E+01
Nb-95	<2.22E+01	0.00E+00	2.22E+01
I-131	<2.97E+01	0.00E+00	2.97E+01
Cs-134	<3.81E+01	0.00E+00	3.81E+01
Cs-137	<4.14E+01	0.00E+00	4.14E+01
BaLa-140	<4.48E+01	0.00E+00	4.48E+01
Be-7	9.42E+02	2.71E+02	2.94E+02
K-40	2.46E+03	5.73E+02	3.98E+02

Sample ID: 486191 **Sample Dates: 10/1/2018 - 10/1/2018** **MIXEDBLV**

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<2.52E+01	0.00E+00	2.52E+01
Co-58	<1.62E+01	0.00E+00	1.62E+01
Fe-59	<4.32E+01	0.00E+00	4.32E+01
Co-60	<2.59E+01	0.00E+00	2.59E+01
Zn-65	<5.47E+01	0.00E+00	5.47E+01
Zr-95	<4.20E+01	0.00E+00	4.20E+01
Nb-95	<2.38E+01	0.00E+00	2.38E+01
I-131	<3.08E+01	0.00E+00	3.08E+01
Cs-134	<2.76E+01	0.00E+00	2.76E+01
Cs-137	<2.79E+01	0.00E+00	2.79E+01
BaLa-140	<3.52E+01	0.00E+00	3.52E+01
Be-7	2.72E+03	3.93E+02	2.75E+02
K-40	4.34E+03	6.25E+02	4.22E+01

Sample ID: 488877 **Sample Dates: 11/5/2018 - 11/5/2018** **MIXEDBLV**

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<1.85E+01	0.00E+00	1.85E+01
Co-58	<2.11E+01	0.00E+00	2.11E+01
Fe-59	<4.83E+01	0.00E+00	4.83E+01
Co-60	<1.66E+01	0.00E+00	1.66E+01
Zn-65	<4.85E+01	0.00E+00	4.85E+01
Zr-95	<3.24E+01	0.00E+00	3.24E+01
Nb-95	<1.94E+01	0.00E+00	1.94E+01
I-131	<4.35E+01	0.00E+00	4.35E+01
Cs-134	<2.04E+01	0.00E+00	2.04E+01
Cs-137	<1.66E+01	0.00E+00	1.66E+01
BaLa-140	<2.91E+01	0.00E+00	2.91E+01
Be-7	2.35E+03	3.23E+02	2.23E+02
K-40	3.90E+03	5.14E+02	2.45E+02

Sample ID: 490826 **Sample Dates: 12/3/2018 - 12/3/2018** **MIXEDBLV**

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<3.58E+01	0.00E+00	3.58E+01
Co-58	<4.15E+01	0.00E+00	4.15E+01
Fe-59	<6.55E+01	0.00E+00	6.55E+01
Co-60	<4.15E+01	0.00E+00	4.15E+01
Zn-65	<6.26E+01	0.00E+00	6.26E+01
Zr-95	<5.57E+01	0.00E+00	5.57E+01
Nb-95	<4.10E+01	0.00E+00	4.10E+01
I-131	<4.28E+01	0.00E+00	4.28E+01
Cs-134	<4.46E+01	0.00E+00	4.46E+01
Cs-137	<3.29E+01	0.00E+00	3.29E+01
BaLa-140	<6.23E+01	0.00E+00	6.23E+01
Be-7	4.36E+03	6.73E+02	4.67E+02
K-40	2.92E+03	6.90E+02	5.38E+02

APPENDIX F

ERRATA TO PREVIOUS REPORTS

APPENDIX F

ERRATA TO THE 2018 AREOR

Oconee AREOR: 2017

Table 2.1-B in the 2017 AREOR incorrectly identified TLD Locations 077, 078.1, 085, 086, 087, 088, 089, and 090 as Measure Type of Special Interest (SI). The Measurement Type should have been Inner Ring (IR). The Inner Ring Average (mRem/yr) in Table 3.8-A and Figure 3.8 were also incorrect due to these TLD location being omitted from the Inner Ring Average calculation in 2017.

TABLE 2.1-B

OCONEE RADIOLOCICAL MONITORING PROGRAM
SAMPLING LOCATIONS (TLD SITES)

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

Site #	Measure Type	Location*	Distance (miles)	Sector	Site #	Measure Type	Location*	Distance (miles)	Sector
020	IR	Site Boundary	0.16	N	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	047	OR	New Hope Church, HWY 188	3.58	WSW
024	IR	Site Boundary	0.81	E	048	OR	JCT HWY 175 & 188	3.64	W
025	IR	Site Boundary	0.42	ESE	049	OR	JCT HWY 201 & 92	3.60	WNW
026	IR	Site Boundary	0.34	SE	050	OR	Stamp Creek Landing, End of HWY 92	3.53	NW
027	IR	Site Boundary	0.49	SSE	051	OR	HWY 128, 1 mile N OF HWY 130	4.64	NNW
028	IR	Site Boundary	0.46	S	052	SI	DPC Branch Office Site, Pickens	12.4	ENE
029	IR	Site Boundary	0.56	SSW	053	SI	DPC Branch Office Site, Liberty	11.7	E
030	IR	Site Boundary	0.42	SW	054	SI	Post Office - HWY 93 Norris	8.60	ESE
031	IR	Site Boundary	0.27	WSW	055	SI	Clemson Meteorology Plot	9.27	SSE
076	IR	Site Boundary	0.19	W	056	SI	Water Tower - Seneca	7.30	SSW
032	IR	Site Boundary	0.19	WNW	057	SI	Oconee Memorial Hospital	8.42	SW
033	IR	Site Boundary	0.21	WNW	058	C	Branch Rd Substation, Walhalla	9.39	WSW
034	IR	Site Boundary	0.22	NW	059	SI	Tamassee Dar School	9.20	NW
035	IR	Site Boundary	0.17	NNW	077**	IR	Skimmer wall shared with air monitoring station	1.00	SW
036	OR	Mile Creek Landing	4.18	N	078.1**	IR	ONS Recreation Site shared with air monitoring station	0.53	WSW
037	OR	Keowee Church, HWY 327	4.85	NNE	081	C	Clemson Operations Center	9.33	SE
038	OR	Convenience Mart, JCT HWY 183 & 133	4.24	NE	085**	IR	Lake Services Bldg 9125 shared with air monitoring location	0.88	NNW
039	OR	HWY 133, 1 mile East of JCT HWY 183 & 133	4.02	ENE	086**	IR	Lake Keowee Service Rd at Boat Landing	0.83	NW
040	OR	Microwave Tower, Six Mile	4.74	E	087**	IR	End of Waterfall Rd	1.33	WNW
041	OR	JCT HWY 101 & 133	4.25	ESE	088**	IR	Doug Hollow Rd / Transmission Tower	1.00	SSW
042	OR	Lawrence Chapel Church, HWY 133	4.93	SE	089**	IR	Intersection Hwy 130 & Keowee River Rd	1.19	S
043	OR	HWY 291 at Issaqueena Park	4.09	SSE	090**	IR	Crescent Resources, Keowee River Rd at Beaver Dam	0.79	SE

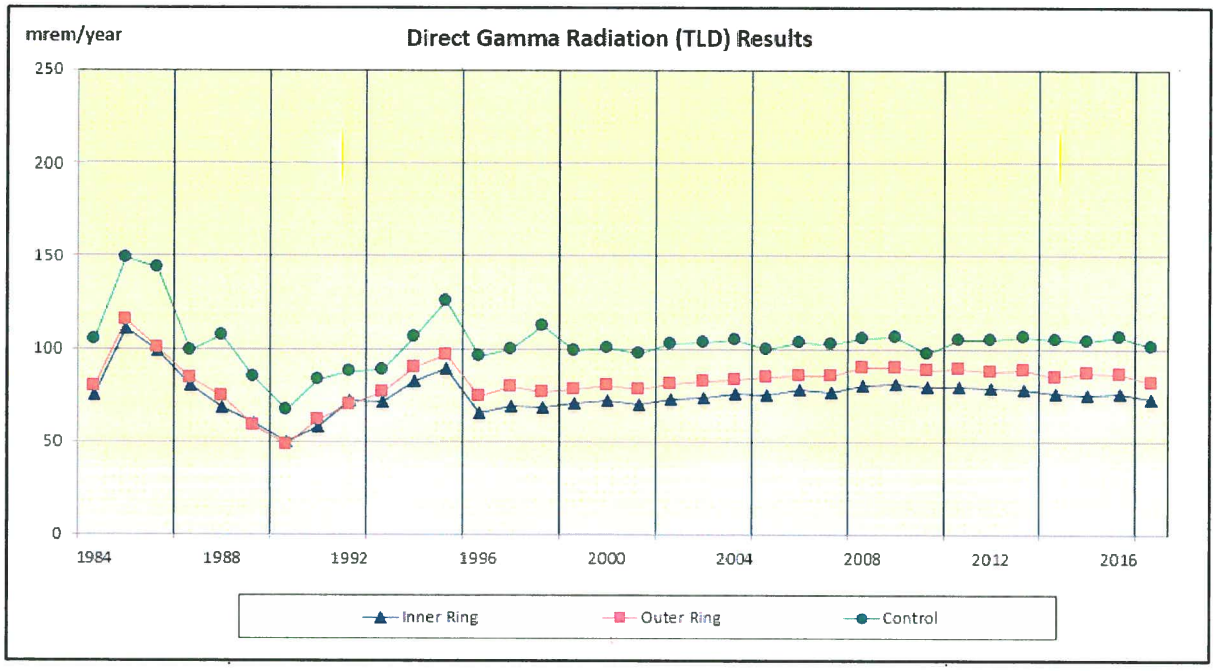
* GPS data reflect accuracy to within 2-5 meters. GPS field measurements were taken as close as possible to the item of interest.
** TLD location added to Oconee REMP, ODCM Revision 58 (NCR # 02035669).

Table 3.8-A Direct Gamma Radiation (TLD) Results[1]

Year	Inner Ring Average (mrem/yr)	Outer Ring Average (mrem/yr)	Control Average (mrem/yr)
Preoperational	1.07E2	1.18E2	1.42E2
1984	7.54E1	7.96E1	1.05E2
1985	1.11E2	1.15E2	1.49E2
1986	9.90E1	1.01E2	1.43E2
1987	8.01E1	8.44E1	9.91E1
1988	6.87E1	7.47E1	1.07E2
1989	6.05E1	5.86E1	8.49E1
1990	4.96E1	4.82E1	6.66E1
1991	5.81E1	6.18E1	8.36E1
1992	7.24E1	6.95E1	8.74E1
1993	7.11E1	7.66E1	8.84E1
1994	8.25E1	9.00E1	1.06E2
1995	8.89E1	9.66E1	1.25E2
1996	6.51E1	7.44E1	9.60E1
1997	6.92E1	7.96E1	9.93E1
1998	6.81E1	7.68E1	1.12E2
1999	7.08E1	7.84E1	9.88E1
2000	7.24E1	8.03E1	1.00E2
2001	6.99E1	7.83E1	9.71E1
2002	7.28E1	8.11E1	1.03E2
2003	7.36E1	8.23E1	1.03E2
2004	7.61E1	8.31E1	1.05E2
2005	7.54E1	8.46E1	9.95E1
2006	7.79E1	8.57E1	1.04E2
2007	7.70E1	8.55E1	1.03E2
2008	8.04E1	9.03E1	1.05E2
2009	8.08E1	8.98E1	1.06E2
2010	7.94E1	8.85E1	9.77E1
2011	7.96E1	8.91E1	1.05E2
2012	7.89E1	8.79E1	1.05E2
2013	7.83E1	8.84E1	1.06E2
2014	7.58E1	8.46E1	1.05E2
2015	7.48E1	8.67E1	1.04E2
2016	7.59E1	8.65E1	1.06E2
2017	7.32E1	8.17E1	1.01E2

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

Figure 3.8



There is no reporting level for Direct Radiation (TLD)