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2016 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 2016 Annual Radiological Environmental Operating Report. This report covers operation of Units 1, 2 and 3 during the 2016 calendar year.

Any questions concerning this report may be directed to Kay Brocklesby at 864-873-6661.

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Enclosure

IE25
NRR

U. S. Nuclear Regulatory Commission
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ANNUAL RADIOLOGICAL ENVIRONMENTAL OPERATING REPORT

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

2016



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

AREOR	Annual Radiological Environmental Operating Report
ARERR	Annual Radiological Effluent Release Report
BW	BiWeekly
C	Control
CR	Condition Report (analogous to Nuclear Condition Report (NCR))
ERA	Environmental Resource Associates
EZA	Eckert & Ziegler Analytics
GEL	General Engineering Laboratory
GI-LLI	Gastrointestinal – Lower Large Intestine
GPS	Global Positioning System
I	Indicator
IR	Inner Ring
ISFSI	Independent Spent Fuel Storage Installation
LLD	Lower Limit of Detection
LLI	Low Level Iodine
M	Monthly
MDA	Minimum Detectable Activity
mrem	Millirem
MWe	Megawatt (electrical)
NIST	National Institute of Standards and Technology
NCR	Nuclear Condition Report (analogous to Condition Report (CR))
NRC	Nuclear Regulatory Commission
ODCM	Offsite Dose Calculation Manual
ONS	Oconee Nuclear Station
OR	Outer Ring
pCi/kg	picocurie per kilogram
pCi/l	picocurie per liter
pCi/m ³	picocurie per cubic meter
Q	Quarterly
REMP	Radiological Environmental Monitoring Program
SA	Semiannually
SI	Special Interest
SLCs	Selected Licensee Commitments
SM	Semimonthly
T. Body	Total Body
TECH SPECS	Technical Specifications
TLD	Thermoluminescent Dosimeter
μCi/ml	microcurie per milliliter
UFSAR	Updated Final Safety Analysis Report
W	Weekly

1.0 EXECUTIVE SUMMARY

This Annual Radiological Environmental Operating Report describes the Oconee Nuclear Station Radiological Environmental Monitoring Program (REMP), and the program results for the calendar year 2016.

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-four samples were analyzed comprising 1,089 test results in order to compile data for the 2016 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 2016 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 5.43E-02 mrem for 2016. 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.

¹NCRP (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

An environmental monitoring program 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:

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

Where:

\bar{x} = estimate of the mean,

i = individual sample,

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

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

2.3.2 LOWER LEVEL OF DETECTION AND MINIMUM DETECTABLE ACTIVITY

The Lower Level 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* lower limit of detection. The actual LLD is dependent upon the standard deviation of the background counting rate, the counting efficiency, the sample size (mass or volume), the radiochemical yield, and the radioactive decay of the sample between sample collection and counting. The "required" LLD's for each sample medium and selected radionuclides are given in the 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 Chernobyl accident or the Fukushima accident). Some of these factors may be obvious while others are sometimes unknown. Therefore, how trends are identified will include some judgment by plant personnel.

Figure 2.1-1

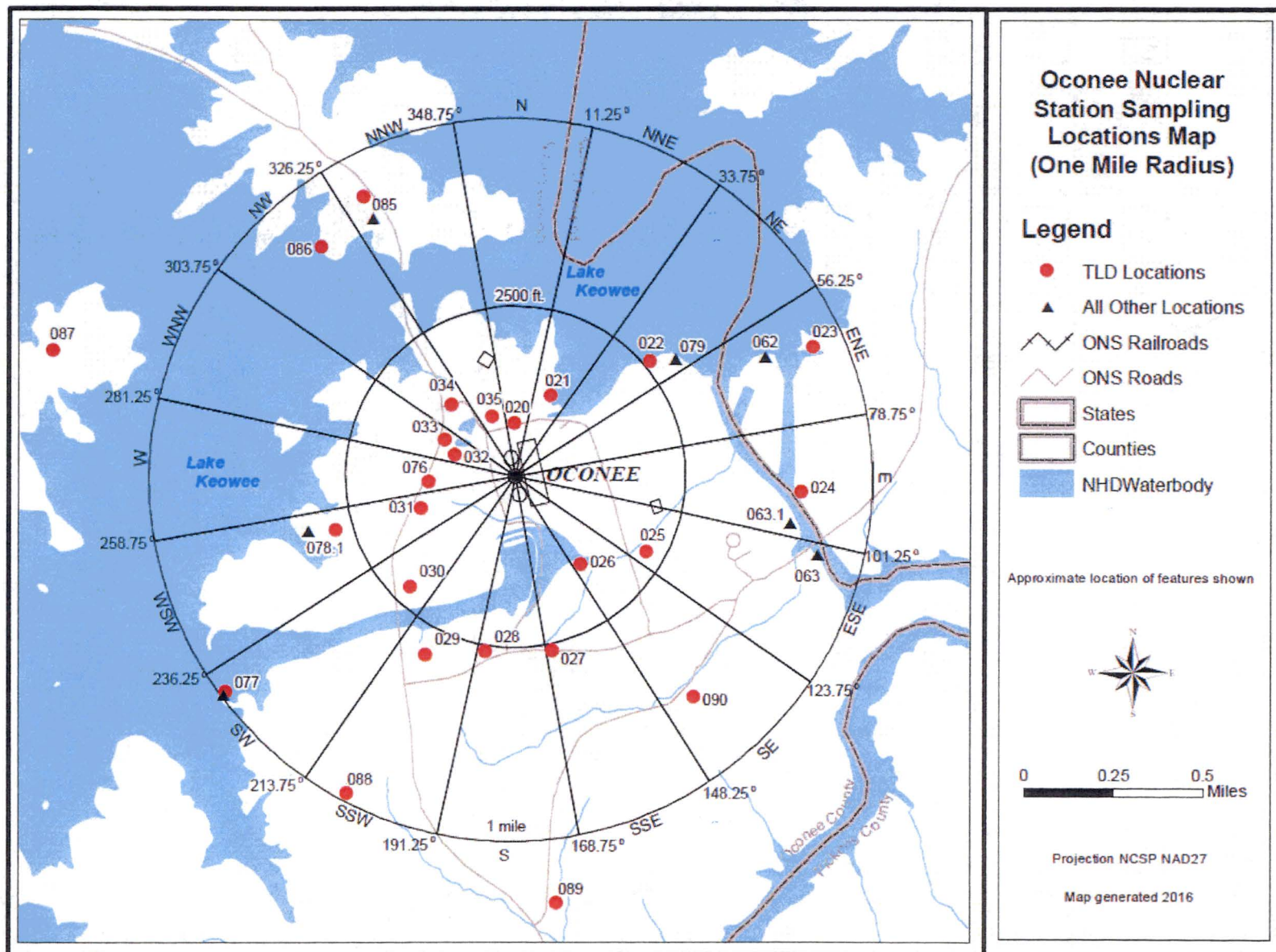


Figure 2.1-2

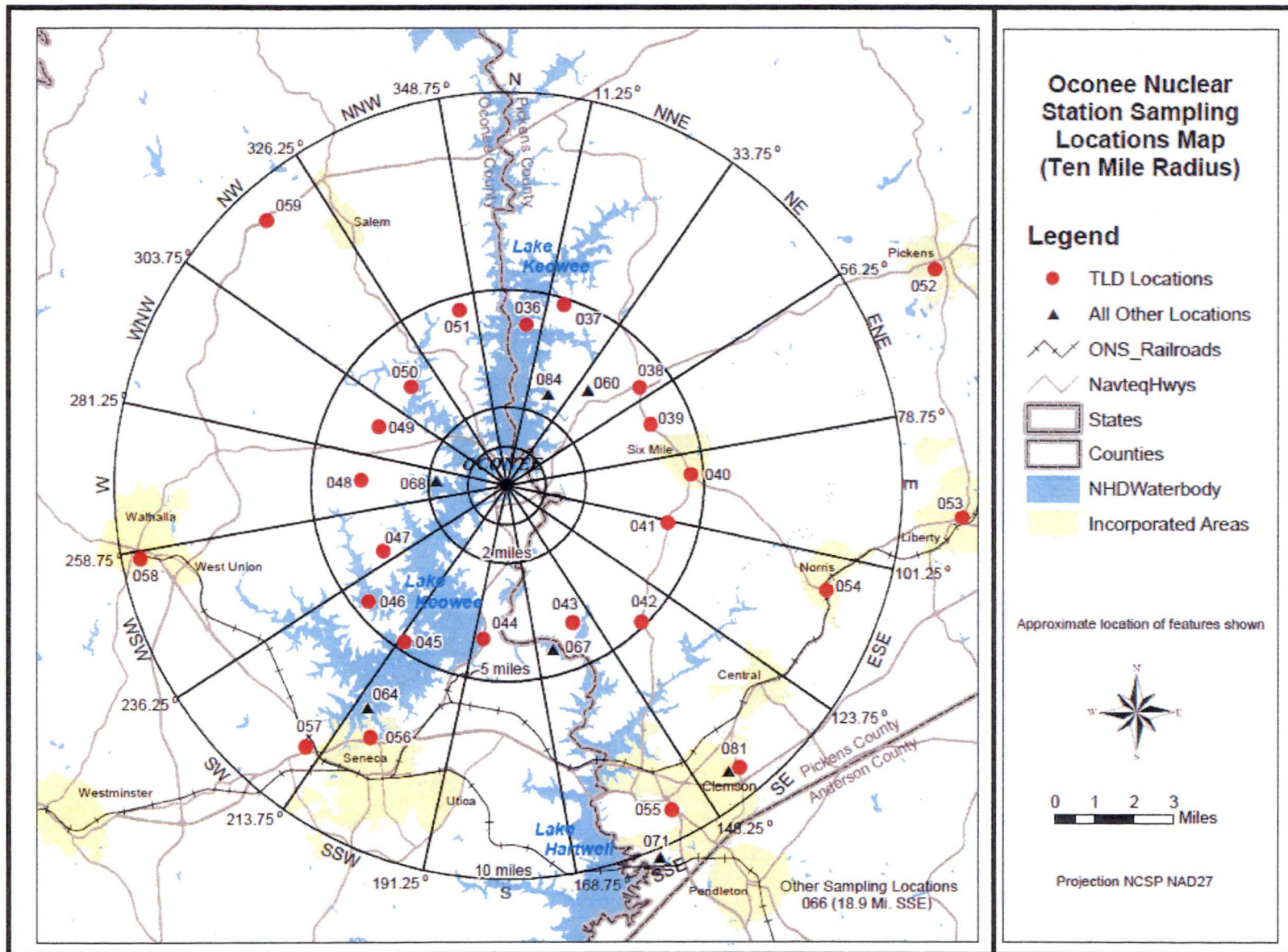


TABLE 2.1-A

**OCONEE RADIOLOGICAL MONITORING PROGRAM
SAMPLING LOCATIONS**

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	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						

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

** Control for Fish Only

[] Location Numbers prior to 1984

TABLE 2.1-B

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

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**	SI	Skimmer wall shared with air monitoring station	1.00	SW
036	OR	Mile Creek Landing	4.18	N	078.1**	SI	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**	SI	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**	SI	Lake Keowee Service Rd at Boat Landing	0.83	NW
040	OR	Microwave Tower, Six Mile	4.74	E	087**	SI	End of Waterfall Rd	1.33	WNW
041	OR	JCT HWY 101 & 133	4.25	ESE	088**	SI	Doug Hollow Rd / Transmission Tower	1.00	SSW
042	OR	Lawrence Chapel Church, HWY 133	4.93	SE	089**	SI	Intersection Hwy 130 & Keowee River Rd	1.19	S
043	OR	HWY 291 at Issaqueena Park	4.09	SSE	090**	SI	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 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 2016 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 2016 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 2016 information required by Technical Specification Administrative Control 5.6.2 are located in Appendix B. REMP results for 2016 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 2016.

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 2016 due to ONS operation was 1.84% 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.

Data presented in Sections 3.1 - 3.8 support the conclusion that there were no significant increases in radionuclides in the environment around ONS due to station operations in 2016.

3.1 AIRBORNE RADIOIODINE AND PARTICULATES

In 2016, 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.

Western North Carolina wildfires created smoky conditions affecting some air monitoring equipment during 2016 reducing air flow due to filter loading. Air radioiodine and particulate samples collected during these conditions indicated reduced volume, but no sampling deviations or data anomalies were incurred (NCR # 02080812, 02082178).

There was no detectable I-131 in air samples in 2016. Table 3.1-A gives the highest indicator location annual mean and control location annual mean for I-131 since the preoperational period. The table shows 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 2016 due to ONS plant operations. No gamma emitting particulates due to ONS plant 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. Both the indicator and control location results are similar in concentration and are near the lower range of preoperational gross beta results which ranged from 0.04 to 1.46 pCi/m³.

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

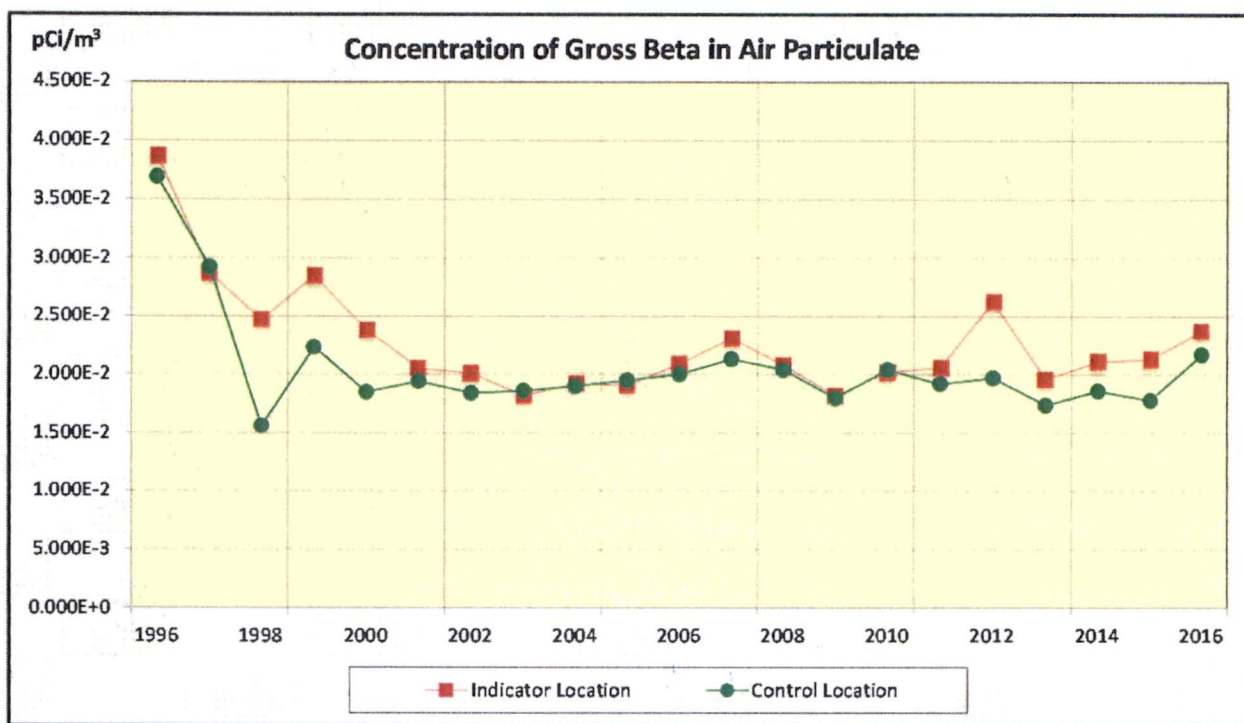
Table 3.1-A Mean Concentration of Air Radioiodine (I-131)

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
1996	0.00E0	0.00E0
1997	0.00E0	0.00E0
1998	0.00E0	0.00E0
1999	0.00E0	0.00E0
2000	0.00E0	0.00E0
2001	0.00E0	0.00E0
2002	0.00E0	0.00E0
2003	0.00E0	0.00E0
2004	0.00E0	0.00E0
2005	0.00E0	0.00E0
2006	0.00E0	0.00E0
2007	0.00E0	0.00E0
2008	0.00E0	0.00E0
2009	0.00E0	0.00E0
2010	0.00E0	0.00E0
2011 ⁽²⁾	5.05E-2	4.13E-2
2012	0.00E0	0.00E0
2013	0.00E0	0.00E0
2014 ⁽³⁾	0.00E0	0.00E0
2015	0.00E0	0.00E0
2016	0.00E0	0.00E0

0.00E0 indicates no detectable measurements
1979 - 1986 mean based on all net activity

(1) 1987 - Gamma spectroscopy system change.
(2) 2011 concentration affected by Fukushima Daiichi
(3) 2014 - Gamma spectroscopy system change

Figure 3.1



There is no reporting level for gross beta in air particulate

Table 3.1-B 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

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 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 lists the highest indicator location annual mean and control location annual mean for gross beta results since the preoperational period. The indicator location had an average concentration of 1.44 pCi/liter in 2016, and the control location had a concentration of 1.15 pCi/liter. For comparison purposes, the 2015 indicator mean was 2.34 pCi/liter. The table shows that 2016 gross beta levels in drinking water are lower than preoperational concentrations. The dose for consumption of water was less than one mrem per year and there were no abnormal releases exceeding 1 pCi/liter I-131 in 2016; therefore low-level iodine analysis is not required.

Tritium was detected in four of the twelve composite samples during 2016. The 2016 mean indicator location 066 concentration was 317 pCi/liter, which is 1.59% of the 20,000 pCi/l Tritium reporting level. Table 3.2 and Figure 3.2 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 2016. Gamma spectroscopy analysis has not detected any gamma activity in the water supplies since 1988. K-40 observed in drinking water samples is a naturally occurring radionuclide.

Figure 3.2

Current reporting level implemented 1984

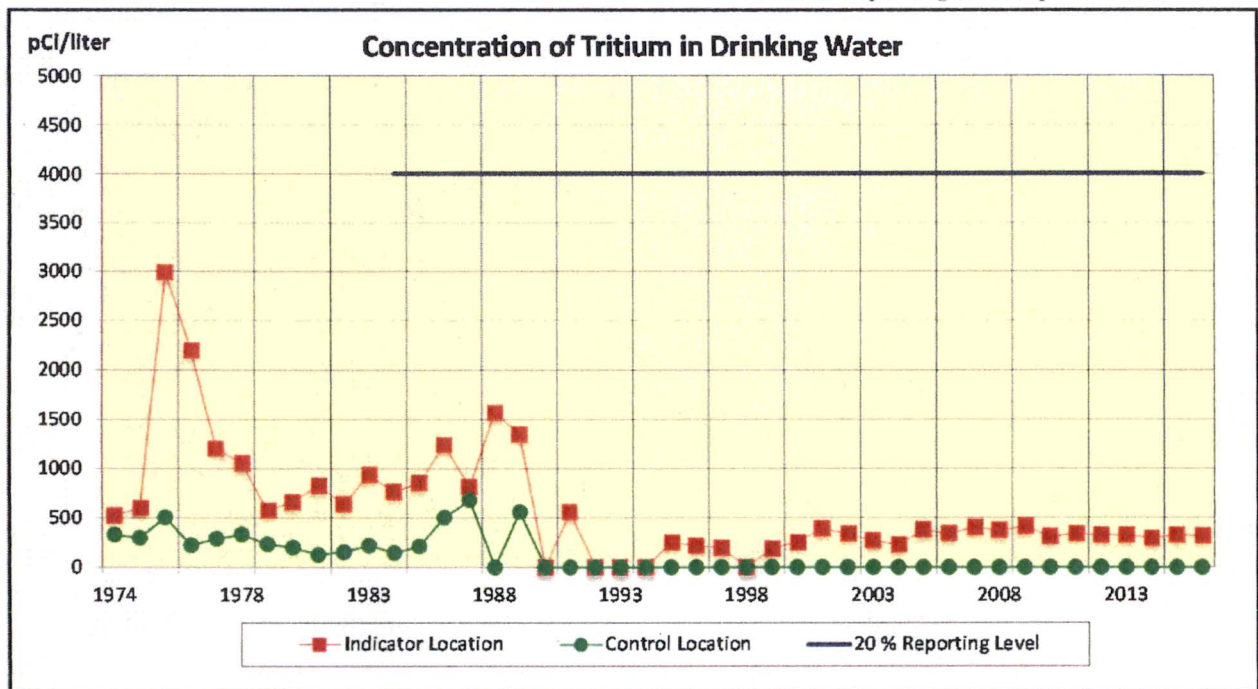


Table 3.2 Mean Concentrations of Radionuclides in Drinking Water

Year	Gross Beta (pCi/l)		Tritium (pCi/l)	
	Indicator Location	Control Location	Indicator Location	Control Location
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
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	317	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

3.3 SURFACE WATER

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

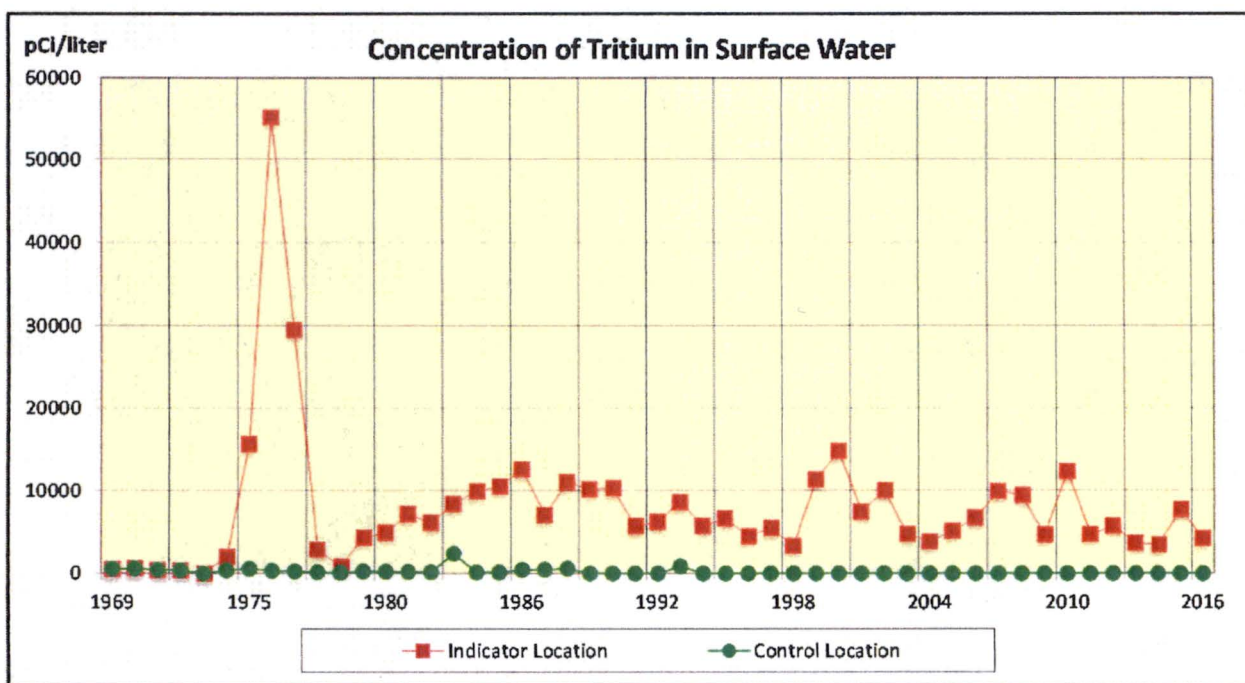
Tritium was detected in the four indicator location samples. The 2016 average concentration was 4,285 pCi/liter. The individual samples ranged from 3,380 to 4,710 pCi/liter. For comparison purposes, the 2015 mean concentration was 7,730 pCi/liter. Tritium was not detected in any control surface water samples.

Figure 3.3 shows the indicator and control annual means for Tritium since the preoperational period. Table 3.3 lists the indicator annual means.

Gamma spectroscopy analysis did not detect any station related gamma activity during 2016. No gamma emitting radionuclides attributable to station operation have been detected in surface water samples since 1999. Table 3.3 summarizes 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 2016 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 Mean Concentrations of Radionuclides in Surface Water

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
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 ⁽²⁾	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

0.00E0 indicates no detectable measurements
1979-1986 mean based on all net activity results

(1) 1987 – Gamma spectroscopy system change
(2) 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 2016. No indicator dairies were sampled during 2016.

A milk animal was identified by the 2016 land use census in the E sector at 3.27 miles and appears on Figure 3.9, but the location cannot supply sufficient milk to participate in the sampling program (NCR # 02045091). No indicator dairies suitable for REMP sampling purposes were identified by the census.

There were no gamma emitting radionuclides due to ONS plant operations identified in milk samples in 2016. 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 lists the highest indicator location annual mean and control location annual mean for Cs-137 since the preoperational period. The table shows similar concentrations for both indicator and control locations.

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

Table 3.4 Mean Concentration of Radionuclides in Milk

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
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	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

0.00E0 indicates no detectable measurements
1979 - 1986 mean based on all net activity results

(1) 1987 – Gamma spectroscopy system change
(2) 2014 – Gamma spectroscopy system change

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. No indicator dairies suitable for REMP sampling purposes were identified by the 2016 land use census (NCR # 02045091).

3.5 BROADLEAF VEGETATION

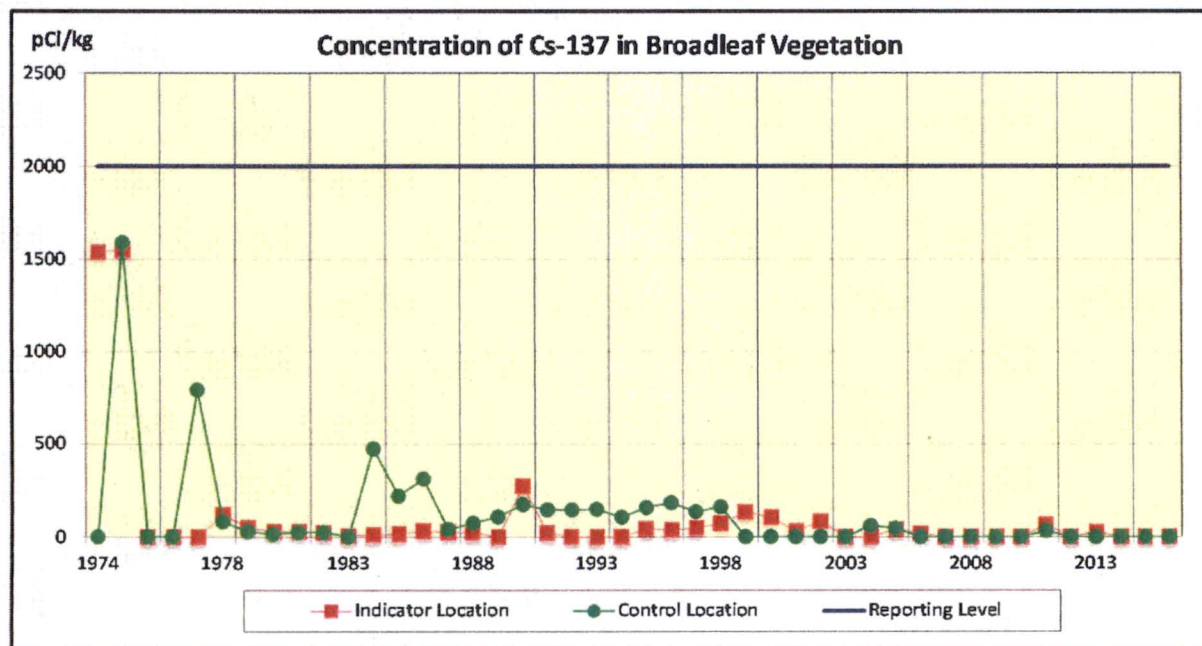
Gamma spectroscopy was performed on 48 broadleaf vegetation samples during 2016. Three indicator locations and one control location were sampled. There were no gamma emitting radionuclides attributable to ONS station operation identified in vegetation samples in 2016.

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

0.00E0 indicates no detectable measurements

Qualitative results reported prior to 1974

1979 - 1986 mean based on all net activity

(1) 1987 - Gamma spectroscopy system change

(2) 2014 - Gamma spectroscopy system change

† Control location changed to 073 in 1984

†† Control location 081 added in 1998

††† Control location 073 removed in 1999

†††† 2011 concentration affected by Fukushima Daiichi

3.6 FISH

In 2016, gamma spectroscopy was performed on 12 fish samples. Two downstream indicator locations and one control location were sampled. Cs-137 was identified in three of the eight indicator location samples. Cs-137 was detected in one of the four control location samples at a mean concentration of 13.1 pCi/kg. The highest average indicator concentration for Cs-137 was 27.4 pCi/kg (1.37 % of reporting level).

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 2016. 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

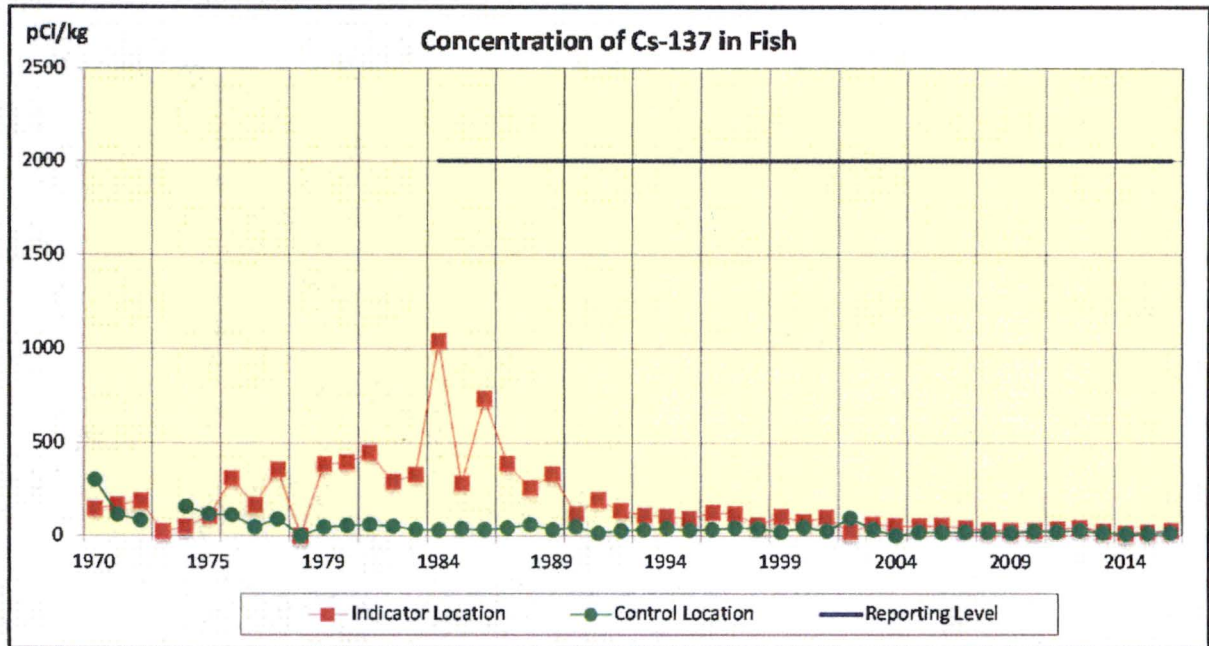
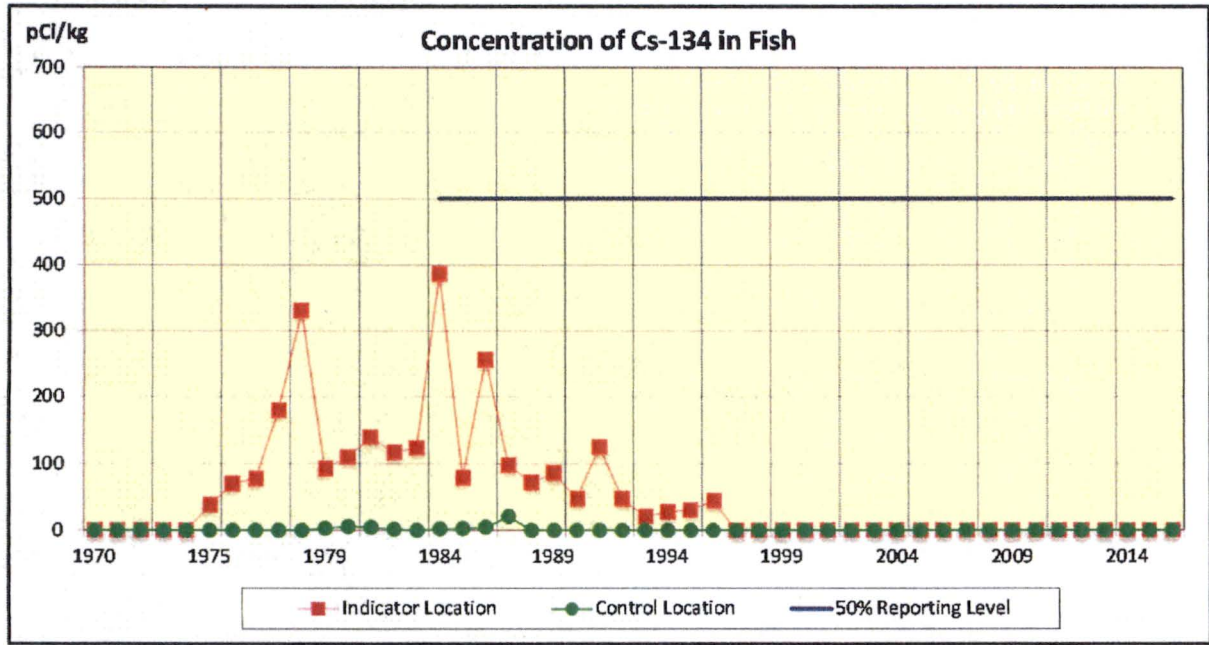


Figure 3.6-2



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

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 change

3.7 SHORELINE SEDIMENT

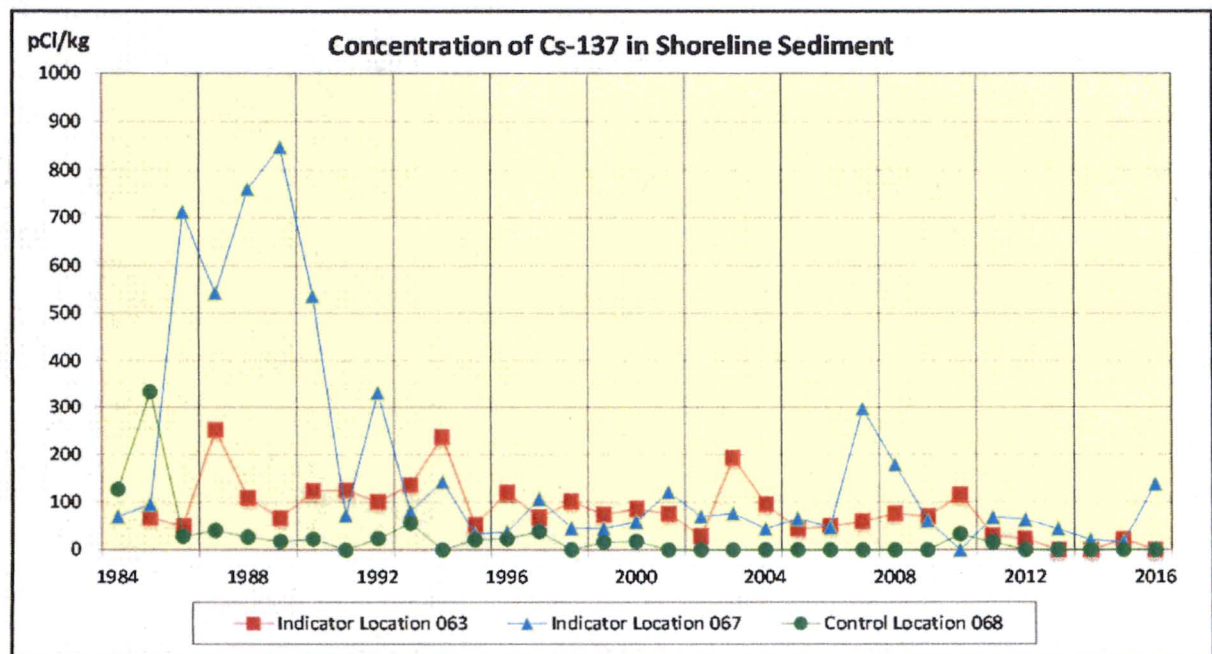
Gamma spectroscopy was performed on six sediment samples. Two downstream indicator locations and one control location were sampled. Four samples were taken from indicator locations and two from the control location.

Cs-137 was identified in two of the four indicator location samples. Cs-137 was not identified in the control location samples. The highest 2016 individual sample Cs-137 concentration was 254 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

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 change

3.8 DIRECT GAMMA RADIATION

3.8.1 ENVIRONMENTAL TLD

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

In 2016, 199 total TLDs were analyzed, 191 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 106 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 2016 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 2016 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 2016, 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.

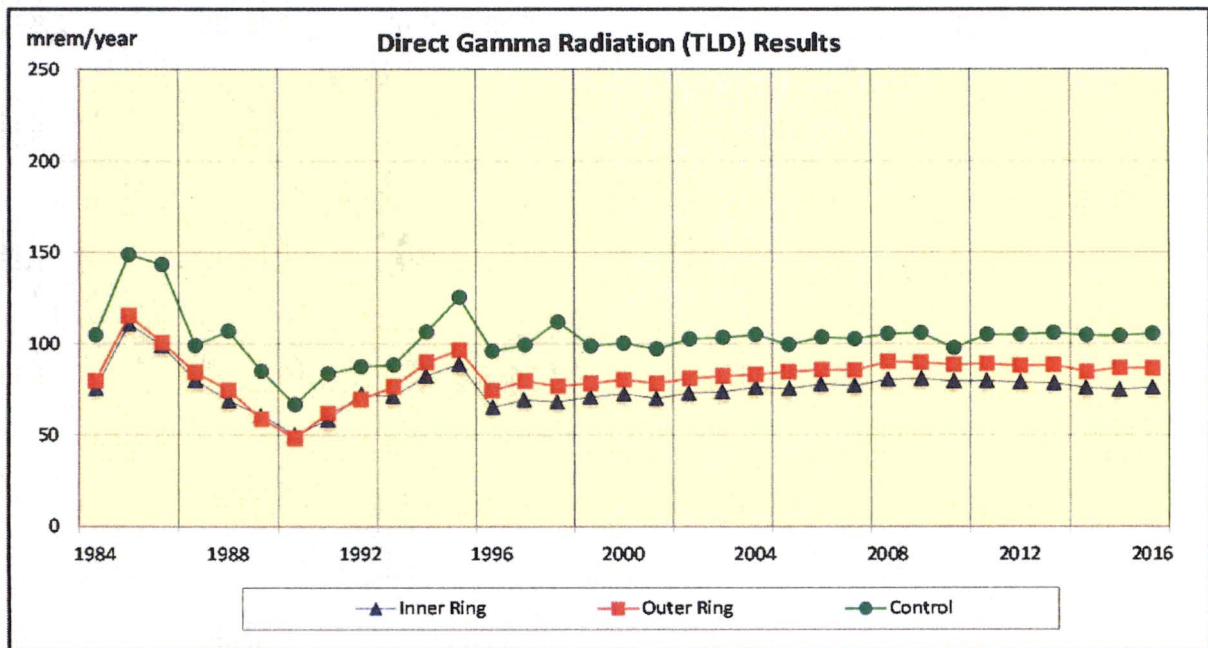
A TLD intercomparison program is conducted as part of the quality assurance program. Results of this program are included in section 5.7.

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 598 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

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

Table 3.8-B Direct Gamma Radiation (TLD) Oconee 2016 Investigation Level

Oconee 2016 MDD_Q: 7

Oconee 2016 MDD_A: 11

Location	Quarterly (mrem)										Annual(mrem)		
	B _Q	M _Q Q1	M _Q Q2	M _Q Q3	M _Q Q4	L _Q Q1	L _Q Q2	L _Q Q3	L _Q Q4	B _A	M _A *	L _A	
20	18.9	20.1	19.7	16.2	19.2	ND	ND	ND	ND	75.7	75.2	ND	
21	14.0	14.6	13.5	12.0	13.8	ND	ND	ND	ND	56.9	53.9	ND	
22	21.8	23.9	21.5	18.9	24.0	ND	ND	ND	ND	89.7	88.4	ND	
23	21.9	22.4	21.1	19.7	25.0	ND	ND	ND	ND	87.8	88.2	ND	
24	22.8	25.7	26.9	23.9	29.5	ND	ND	ND	ND	98.6	106.0	ND	
25	17.1	18.9	19.0	15.1	18.7	ND	ND	ND	ND	72.9	71.7	ND	
26	16.5	18.3	16.4	14.3	15.1	ND	ND	ND	ND	67.2	64.2	ND	
27	19.2	20.0	17.8	16.8	19.3	ND	ND	ND	ND	78.1	73.8	ND	
28	17.0	17.9	16.1	14.5	16.4	ND	ND	ND	ND	68.3	64.9	ND	
29	15.7	16.1	16.0	12.9	18.8	ND	ND	ND	ND	63.3	63.7	ND	
30	17.0	19.2	18.2	14.9	17.6	ND	ND	ND	ND	70.6	69.9	ND	
31	16.4	18.3	15.9	14.3	16.6	ND	ND	ND	ND	65.7	65.2	ND	
32	22.9	22.0	18.4	16.5	19.7	ND	ND	ND	ND	94.5	76.7	ND	
33	19.5	19.6	16.2	14.4	17.1	ND	ND	ND	ND	77.9	67.3	ND	
34	21.5	20.0	18.6	15.2	17.7	ND	ND	ND	ND	86.0	71.5	ND	
35	22.9	25.7	23.3	19.9	23.2	ND	ND	ND	ND	93.3	92.0	ND	
36	26.5	28.4	26.2	22.3	26.8	ND	ND	ND	ND	105.1	103.7	ND	
37	20.4	19.3	20.3	16.4	19.0	ND	ND	ND	ND	82.0	75.1	ND	
38	21.9	24.7	22.3	19.8	21.4	ND	ND	ND	ND	87.5	88.2	ND	
39	24.2	25.4	24.4	22.9	23.9	ND	ND	ND	ND	96.2	96.6	ND	
40	23.7	29.0	27.3	22.5	25.8	ND	ND	ND	ND	101.1	104.6	ND	
41	17.3	18.9	16.7	14.3	17.1	ND	ND	ND	ND	69.1	67.0	ND	
42	25.0	26.4	28.4	23.0	23.9	ND	ND	ND	ND	102.2	101.7	ND	
43	23.8	25.4	24.1	21.2	24.9	ND	ND	ND	ND	95.3	95.6	ND	
44	18.3	20.0	18.5	17.1	18.4	ND	ND	ND	ND	80.0	74.1	ND	
45	17.0	16.9	17.6	14.9	18.4	ND	ND	ND	ND	67.9	67.8	ND	
46	21.5	22.5	24.7	19.8	21.5	ND	ND	ND	ND	91.8	88.4	ND	
47	22.4	24.2	21.9	18.3	22.5	ND	ND	ND	ND	91.1	87.0	ND	
48	25.3	26.8	25.2	21.3	27.5	ND	ND	ND	ND	101.3	100.7	ND	
49	20.7	21.9	20.5	18.5	23.8	ND	ND	ND	ND	82.6	84.6	ND	
50	17.7	19.6	18.3	15.5	20.3	ND	ND	ND	ND	70.9	73.7	ND	
51	19.0	18.9	19.4	17.3	19.0	ND	ND	ND	ND	76.2	74.6	ND	
52	22.9	25.5	23.8	18.5	23.7	ND	ND	ND	ND	94.8	91.5	ND	
53	25.1	27.9	25.1	19.9	24.7	ND	ND	ND	ND	102.3	97.6	ND	
54	18.5	20.2	18.4	14.5	17.5	ND	ND	ND	ND	76.5	70.7	ND	
55	15.5	17.1	17.0	13.3	15.2	ND	ND	ND	ND	65.1	62.6	ND	
56	22.8	25.7	23.9	21.0	25.5	ND	ND	ND	ND	91.8	96.0	ND	
57	22.4	26.7	23.2	21.5	23.8	ND	ND	ND	ND	93.6	95.2	ND	
58	29.3	34.1	30.3	26.8	31.3	ND	ND	ND	ND	119.7	122.5	ND	
59	24.1	25.8	24.5	---	28.6	ND	ND	ND	ND	98.5	105.3	ND	
76	20.8	24.1	22.8	21.0	24.4	ND	ND	ND	ND	89.0	92.3	ND	
81	21.9	24.5	22.6	19.7	21.8	ND	ND	ND	ND	91.1	88.5	ND	

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

--- indicates no data resulting from missing TLD, erroneous TLD reading, or omitted after investigation^{Note}

Eight indicator location TLDs [077, 078.1, 085, 086, 087, 088, 089, 090] were added to the Oconee REMP with the Oconee ODCM Revision 58 (NCR # 02035669). The eight TLD locations are scheduled to be included in Table 3.8-B with the 2017 analysis.

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).

Table 3.8-B definition of terms

- 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 - M_a 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 (5/18 – 5/19/2016) 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. No program changes were required based on the results of the census.

Table 3.9 Oconee 2016 Land Use Census Results*

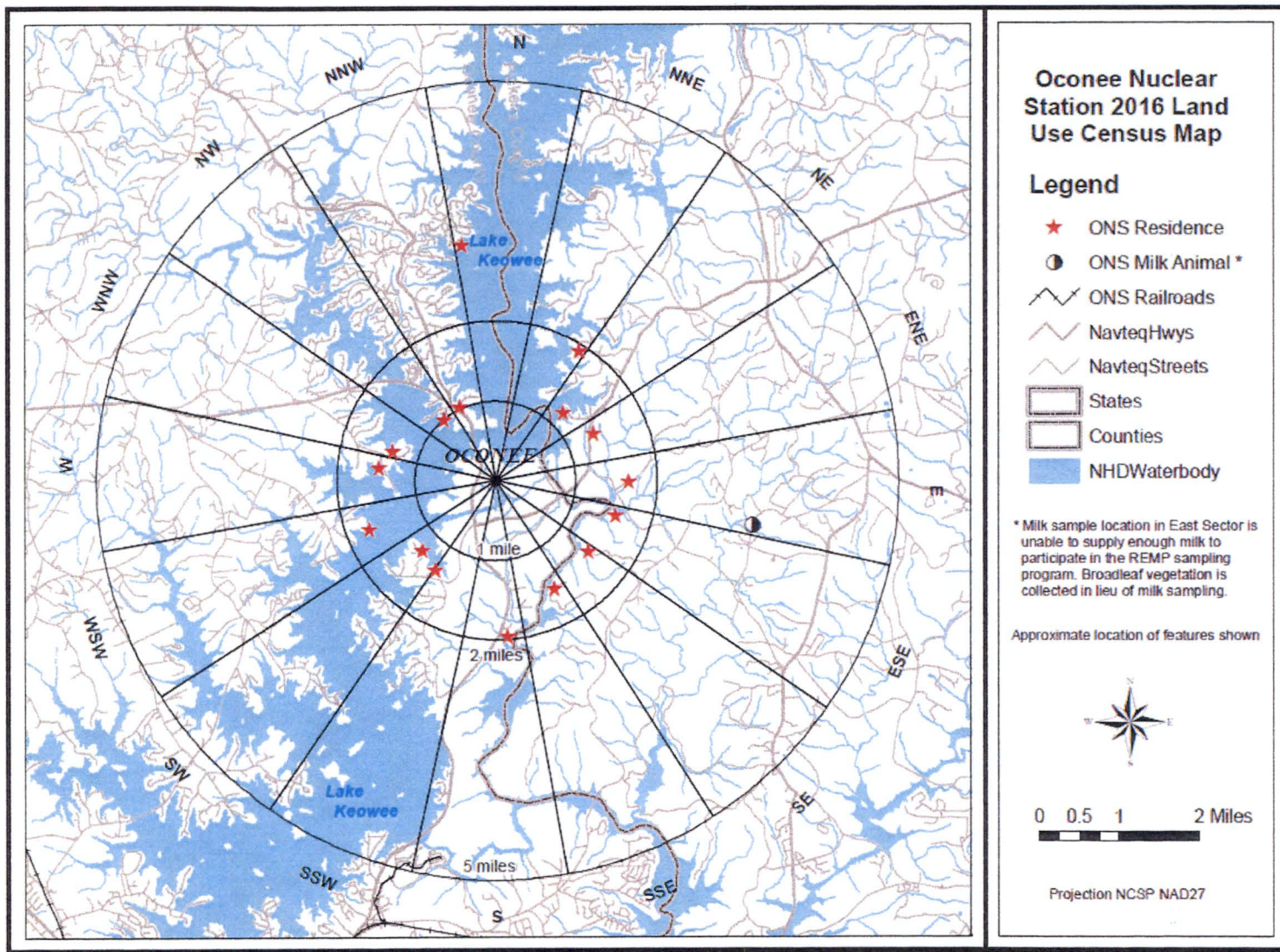
Sector		Distance (Miles)	Sector		Distance (Miles)
N	Nearest Residence	2.98	S	Nearest Residence	1.96
	Nearest Milk Animal	-		Nearest Milk Animal	-
NNE	Nearest Residence	1.84	SSW	Nearest Residence	1.36
	Nearest Milk Animal	-		Nearest Milk Animal	-
NE	Nearest Residence	1.20	SW	Nearest Residence	1.27
	Nearest Milk Animal	-		Nearest Milk Animal	-
ENE	Nearest Residence	1.34	WSW	Nearest Residence	1.76
	Nearest Milk Animal	-		Nearest Milk Animal	-
E	Nearest Residence	1.64	W	Nearest Residence	1.58
	Nearest Milk Animal	3.27 ⁽¹⁾		Nearest Milk Animal	-
ESE	Nearest Residence	1.57	WNW	Nearest Residence	1.35
	Nearest Milk Animal	-		Nearest Milk Animal	-
SE	Nearest Residence	1.46	NW	Nearest Residence	1.04
	Nearest Milk Animal	-		Nearest Milk Animal	-
SSE	Nearest Residence	1.54	NNW	Nearest Residence	1.03
	Nearest Milk Animal	-		Nearest Milk Animal	-

"-" indicates no occurrences within the 5 mile radius

(1) Sample location is unable to supply sufficient milk for participation in the REMP sampling program. Broadleaf vegetation is collected in lieu of milk sampling (NCR # 02045091).

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

Figure 3.9



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 2016 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 vegetation, milk, 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 2016 was $4.12\text{E-}2$ mrem to the adult liver from the consumption of fish.

4.2 ESTIMATED DOSE FROM RELEASES

Throughout the year, dose estimates were calculated based on actual 2016 liquid and gaseous effluent release data. Effluent-based dose estimates were calculated using the RETDAS computer program 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 RETDAS 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 indicate 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 2016 environmental sample results was 6.91E-2 mrem to the child liver. The maximum total organ dose of 1.58E-1 mrem for liquid effluent-based estimates was to the child liver, total body, thyroid, kidney, lung, and GI-LLI.

In calculations based on gaseous release pathways, vegetation was the predominant dose pathway for effluent samples. The gaseous effluent dose is due to C-14 and tritium in broadleaf vegetation. The maximum total organ dose for gaseous effluent estimates was 3.38E-1 mrem to the child bone, with C-14 being the primary dose contributor. No radioactivity was detected from gaseous pathways in environmental samples; therefore, there is no calculated dose.

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
2016 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	067 (4.34 mi SSE)	3.57E-04
Skin	Effluent	Teen	Shoreline Sediment	Discharge Pt.	3.09E-04
Bone	Environmental	Child	Fish	063 (0.80 mi ESE)	3.23E-02
Bone	Effluent	Child	Fresh Water Fish	Discharge Pt.	7.17E-03
Liver	Environmental	Child	Fish	063 (0.80 mi ESE)	6.91E-02
Liver	Effluent	Child	Drinking Water	18.9 mi SSE	1.58E-01
T. Body	Environmental	Adult	Fish	063 (0.80 mi ESE)	5.43E-02
T. Body	Effluent	Child	Drinking Water	18.9 mi SSE	1.58E-01
Thyroid	Environmental	Child	Drinking Water	066 (18.9 mi SSE)	3.82E-02
Thyroid	Effluent	Child	Drinking Water	18.9 mi SSE	1.58E-01
Kidney	Environmental	Child	Drinking Water	066 (18.9 mi SSE)	4.83E-02
Kidney	Effluent	Child	Drinking Water	18.9 mi SSE	1.58E-01
Lung	Environmental	Child	Drinking Water	066 (18.9 mi SSE)	4.18E-02
Lung	Effluent	Child	Drinking Water	18.9 mi SSE	1.58E-01
GI-LLI	Environmental	Child	Drinking Water	066 (18.9 mi SSE)	3.84E-02
GI-LLI	Effluent	Child	Drinking Water	18.9 mi SSE	1.58E-01

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

(2) Critical Pathway is the highest individual dose within the identified Critical Age group.

(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	-	-	-	0.00E+00
Skin	Effluent	All	Ground Plane	1.0 mi. SW	4.88E-08
Bone	Environmental	-	-	-	0.00E+00
Bone	Effluent	Child	Vegetation	1.0 mi. SW	3.38E-01
Liver	Environmental	-	-	-	0.00E+00
Liver	Effluent	Child	Vegetation	1.0 mi. SW	1.10E-01
T. Body	Environmental	-	-	-	0.00E+00
T. Body	Effluent	Child	Vegetation	1.0 mi. SW	1.10E-01
Thyroid	Environmental	-	-	-	0.00E+00
Thyroid	Effluent	Child	Vegetation	1.0 mi. SW	1.10E-01
Kidney	Environmental	-	-	-	0.00E+00
Kidney	Effluent	Child	Vegetation	1.0 mi. SW	1.10E-01
Lung	Environmental	-	-	-	0.00E+00
Lung	Effluent	Child	Vegetation	1.0 mi. SW	1.10E-01
GI-LLI	Environmental	-	-	-	0.00E+00
GI-LLI	Effluent	Child	Vegetation	1.0 mi. SW	1.10E-01

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

(2) Critical Pathway is the highest individual dose within the identified Critical Age group.

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

TABLE 4.1-B*Maximum Individual Dose for 2016 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	3.22E-02	3.22E-02	3.22E-02	3.22E-02	3.22E-02	3.22E-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	3.22E-02	3.22E-02	3.22E-02	3.22E-02	3.22E-02	3.22E-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	3.28E-02	3.28E-02	3.28E-02	3.28E-02	3.28E-02	3.28E-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	3.23E-02	3.63E-02	9.96E-03	5.40E-03	1.55E-02	9.02E-03	5.60E-03	0.00E+00
	Shoreline Sediment	0.00E+00	0.00E+00	6.40E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.46E-05
	TOTAL	3.23E-02	6.91E-02	4.28E-02	3.82E-02	4.83E-02	4.18E-02	3.84E-02	7.46E-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	1.71E-02	1.71E-02	1.71E-02	1.71E-02	1.71E-02	1.71E-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	2.56E-02	4.06E-02	1.84E-02	6.54E-03	1.81E-02	1.10E-02	7.03E-03	0.00E+00
	Shoreline Sediment	0.00E+00	0.00E+00	3.06E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.57E-04
	TOTAL	2.56E-02	5.77E-02	3.58E-02	2.36E-02	3.52E-02	2.81E-02	2.41E-02	3.57E-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	2.43E-02	2.43E-02	2.43E-02	2.43E-02	2.43E-02	2.43E-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	2.39E-02	4.12E-02	2.99E-02	8.50E-03	1.96E-02	1.22E-02	9.14E-03	0.00E+00
	Shoreline Sediment	0.00E+00	0.00E+00	5.48E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.40E-05
	TOTAL	2.39E-02	6.55E-02	5.43E-02	3.28E-02	4.39E-02	3.65E-02	3.34E-02	6.40E-05

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

Oconee Nuclear Station
Dose from Drinking Water Pathway for 2016 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

Radionuclide	<u>Ingestion Dose Factor</u>							<u>Highest Annual Net Mean Concentration</u>		<u>Dose (mrem)</u>						
	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	317	0.00E+00	3.22E-02	3.22E-02	3.22E-02	3.22E-02	3.22E-02	3.22E-02
Dose Commitment (mrem) =										0.00E+00	3.22E-02	3.22E-02	3.22E-02	3.22E-02	3.22E-02	3.22E-02

Oconee Nuclear Station
Dose from Drinking Water Pathway for 2016 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

Radionuclide	<u>Ingestion Dose Factor</u>							<u>Highest Annual Net Mean Concentration</u>		<u>Dose (mrem)</u>						
	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
Co-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	317	0.00E+00	3.28E-02	3.28E-02	3.28E-02	3.28E-02	3.28E-02	3.28E-02
Dose Commitment (mrem) =										0.00E+00	3.28E-02	3.28E-02	3.28E-02	3.28E-02	3.28E-02	3.28E-02

Oconee Nuclear Station
Dose from Fish Pathway for 2016 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 = 4285 pCi/l x 0.9 = 3857 pCi/kg

Usage (intake in one year) = 6.9 kg

Radionuclide	<u>Ingestion Dose Factor</u>							<u>Highest Annual Net Mean Concentration</u>		<u>Dose (mrem)</u>						
	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
Co-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	063	14.3	3.23E-02	3.09E-02	4.56E-03	0.00E+00	1.01E-02	3.62E-03	1.93E-04
H-3	NO DATA	2.03E-07	2.03E-07	2.03E-07	2.03E-07	2.03E-07	2.03E-07	063	3857	0.00E+00	5.40E-03	5.40E-03	5.40E-03	5.40E-03	5.40E-03	5.40E-03
Dose Commitment (mrem) =										3.23E-02	3.63E-02	9.96E-03	5.40E-03	1.55E-02	9.02E-03	5.60E-03

Oconee Nuclear Station
Dose from Shoreline Sediment Pathway for 2016 Data
Maximum Exposed Child

Shoreline Recreation = 14 hr (in one year)
 Shore Width Factor = 0.2
 Sediment Surface Mass = 40 kg/m²

Child Dose from Shoreline Sediment Pathway (mrem) = Shoreline Recreation (hr) x External Dose Factor (mrem/hr per pCi/m²) x Shore Width Factor x Sediment Surface Mass (kg/m²) x Sediment Concentration (pCi/kg)

Radionuclide	<u>External Dose Factor Standing on Contaminated Ground</u>		Indicator Location	Sediment (pCi/kg)	<u>Dose</u>	
	(mrem/hr per pCi/m ²)				(mrem)	
	T. Body	Skin			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	067	136	6.40E-05	7.46E-05
Dose Commitment (mrem) =					6.40E-05	7.46E-05

*Oconee Nuclear Station
Dose from Drinking Water Pathway for 2016 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

Radionuclide	<u>Ingestion Dose Factor</u>							<u>Highest Annual Net Mean Concentration</u>		<u>Dose (mrem)</u>						
	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	317	0.00E+00	1.71E-02	1.71E-02	1.71E-02	1.71E-02	1.71E-02	1.71E-02
Dose Commitment (mrem)=										0.00E+00	1.71E-02	1.71E-02	1.71E-02	1.71E-02	1.71E-02	1.71E-02

*Oconee Nuclear Station
Dose from Fish Pathway for 2016 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 = 4285 pCi/l x 0.9 = 3857 pCi/kg

Usage (intake in one year) = 16 kg

Radionuclide	<u>Ingestion Dose Factor</u>							<u>Highest Annual Net Mean Concentration</u>		<u>Dose (mrem)</u>						
	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	063	14.3	2.56E-02	3.41E-02	1.19E-02	0.00E+00	1.16E-02	4.51E-03	4.85E-04
H-3	NO DATA	1.06E-07	1.06E-07	1.06E-07	1.06E-07	1.06E-07	1.06E-07	063	3857	0.00E+00	6.54E-03	6.54E-03	6.54E-03	6.54E-03	6.54E-03	6.54E-03
Dose Commitment (mrem) =										2.56E-02	4.06E-02	1.84E-02	6.54E-03	1.81E-02	1.10E-02	7.03E-03

Oconee Nuclear Station
Dose from Shoreline Sediment Pathway for 2016 Data
Maximum Exposed Teen

Shoreline Recreation = 67 hr (in one year)
 Shore Width Factor = 0.2
 Sediment Surface Mass = 40 kg/m²

Teen Dose from Shoreline Sediment Pathway (mrem) = Shoreline Recreation (hr) x External Dose Factor (mrem/hr per pCi/m²) x Shore Width Factor x Sediment Surface Mass (kg/m²) x Sediment Concentration (pCi/kg)

Radionuclide	External Dose Factor Standing <u>on Contaminated Ground</u>		Indicator Location	Sediment (pCi/kg)	<u>Dose</u>	
	(mrem/hr per pCi/m ²) T. Body	Skin			(mrem) - 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	067	136	3.06E-04	3.57E-04
Dose Commitment (mrem) =					3.06E-04	3.57E-04

Oconee Nuclear Station
Dose from Drinking Water Pathway for 2016 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

Radionuclide	<u>Ingestion Dose Factor</u>							<u>Highest Annual Net Mean Concentration</u>		<u>Dose (mrem)</u>						
	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	317	0.00E+00	2.43E-02	2.43E-02	2.43E-02	2.43E-02	2.43E-02	2.43E-02
Dose Commitment (mrem) =										0.00E+00	2.43E-02	2.43E-02	2.43E-02	2.43E-02	2.43E-02	2.43E-02

Oconee Nuclear Station
Dose from Fish Pathway for 2016 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 = 4285 pCi/l x 0.9 = 3857 pCi/kg

Usage (intake in one year) = 21 kg

Radionuclide	<u>Ingestion Dose Factor</u>							<u>Highest Annual Net Mean Concentration</u>		<u>Dose (mrem)</u>						
	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	063	14.3	2.39E-02	3.27E-02	2.14E-02	0.00E+00	1.11E-02	3.69E-03	6.34E-04
H-3	NO DATA	1.05E-07	1.05E-07	1.05E-07	1.05E-07	1.05E-07	1.05E-07	063	3857	0.00E+00	8.50E-03	8.50E-03	8.50E-03	8.50E-03	8.50E-03	8.50E-03
Dose Commitment (mrem) =										2.39E-02	4.12E-02	2.99E-02	8.50E-03	1.96E-02	1.22E-02	9.14E-03

Oconee Nuclear Station
Dose from Shoreline Sediment Pathway for 2016 Data
Maximum Exposed Adult

Shoreline Recreation = 12 hr (in one year)
 Shore Width Factor = 0.2
 Sediment Surface Mass = 40 kg/m²

Adult Dose from Shoreline Sediment Pathway (mrem) = Shoreline Recreation (hr) x External Dose Factor (mrem/hr per pCi/m²) x Shore Width Factor x Sediment Surface Mass (kg/m²) x Sediment Concentration (pCi/kg)

Radionuclide	External Dose Factor Standing on Contaminated Ground (mrem/hr per pCi/m ²)		Highest Annual Net Mean Concentration		Dose (mrem)	
	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	067	136	5.48E-05	6.40E-05
Dose Commitment (mrem) =					5.48E-05	6.40E-05

5.0 QUALITY ASSURANCE

5.1 SAMPLE COLLECTION

EnRad Laboratories and the Environmental Water Resources Group 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.

5.3 DOSIMETRY ANALYSIS

The Radiation Dosimetry and Records group performed the environmental dosimetry measurements as specified by approved dosimetry analysis procedures.

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, surface water, and ground water samples.

5.5 DUKE ENERGY INTERLABORATORY COMPARISON PROGRAM

In 2016 Duke Energy Environmental Laboratory (EnRad) participated in interlaboratory programs to satisfy Radiological Environmental Monitoring Program requirements in

Duke Energy nuclear plant Offsite Dose Calculation Manuals and Selected Licensee Commitments Manuals, as applicable. In addition, EnRad Laboratory participated in the ERA RadCheMTM Proficiency Testing program to satisfy North Carolina state drinking water radiochemistry certification requirements.

EnRad Laboratory participated in three interlaboratory programs: Eckert & Ziegler Analytics (EZA), ERA, and Fleet Scientific Services (FSS). EZA results were evaluated against IP 84750 acceptance criteria stated in EnRad Procedure 515, Cross Check Program Administration. ERA evaluated reported results based on National Environmental Laboratory Accreditation Conference (NELAC) Field of Proficiency Testing criteria. FSS results were evaluated as prescribed in Duke Energy Nuclear Generation Procedure SRPMP 9-2.

Low-level Iodine-131 analysis of drinking water was not required during 2016 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 2016 in the ONS program. This dose was calculated monthly during 2016 to ensure that low-level Iodine-131 analysis of drinking water samples was not required.

5.5.1 DUKE ENERGY INTERLABORATORY PROGRAM

EnRad Laboratories participated in the Duke Energy Fleet Scientific Services (FSS) Interlaboratory Program during 2016. Interlaboratory cross check samples including mixed gamma in water (Marinelli beakers), low-level I-131 in water, gross beta in water, and tritium in water samples were analyzed during 2016. A summary of the EnRad Laboratory program results for 2016 is documented in Table 5.0-A.

Interlaboratory cross checks were distributed by Fleet Scientific Services (FSS) staff in accordance with SRPMP 9-2. One media type, water, was analyzed for mixed gamma, tritium, beta, and LLI-131. Table 5.0-A lists results for specific analyses. One-hundred and seventy-four results were reported of which 164 (94.3%) were in agreement.

NCR # 02072622 was written by FSS staff due to five out of nine third quarter alpha nuclide results from the FSS cross check samples Alpha/Beta in Water (Q163ABW1, Q163ABW2 and Q163ABW3) showed non-agreement, three other results showed warning limit evaluations.

In the third quarter of 2016, one data set of the three analyzed for FSS Tritium in Water Sample Q163TWR3 showed a low bias when compared to the known value. NCR # 02074856 was initiated to investigate why this sample set was lower than expected.

5.5.2 ECKERT & ZIEGLER ANALYTICS CROSS CHECK PROGRAM

EnRad Laboratories participated in the Eckert & Ziegler Analytics Cross Check Program during 2016. Cross check samples including air filters (single and composites), air cartridges, gross beta in water, various mixed gamma samples in

Marinelli beakers (soil, vegetation, milk, and water), tritium in water, and Iodine in milk and water samples were analyzed at various times of the year. A summary of the EnRad Laboratory program results for 2016 is documented in Table 5.0-B.

Interlaboratory cross check samples from EZA were received and analyzed in all four quarters of 2016. Table 5.0-B lists the performance for specific samples. Seventy-nine results were reported of which 79 (100%) met the acceptance criteria based on IP 84750. Five EZA cross check samples did exhibit either a high or low bias in at least one nuclide of interest and EnRad proactively initiated NCRs to investigate these biases. The first bias was found in the second quarter gross alpha/beta in water sample (E11527), where a high alpha activity bias was evident in the sample set. NCR # 02052857 was written to investigate the high alpha activity bias in the water samples.

In the third quarter of 2016, the Gamma in Composite Filter cross check (E11590) showed a low activity bias for the Cr-51 nuclide, the other eight reported nuclides were all found to be in trend. NCR # 02080821 was initiated to track the actions for investigating the Cr-51 activity bias. The Gamma in Water cross check (E11588), which was also analyzed in the third quarter of 2016 showed a high activity bias for the Fe-59 isotope. The remaining nine isotopes of sample E11588 were all found to be within trend, NCR # 02074444 was written to investigate the high Fe-59 activity bias.

NCR # 02027474 was written to document and track the associated actions of an overall high activity bias in the LLI-131 in Milk cross check samples (E11472) analyzed in the first quarter of 2016. In the second quarter of 2016, LLI-131 in Water cross check samples (E11526) also showed an overall high bias within the sample set. NCR # 02045683 was initiated to investigate this continued LLI-131 bias since the samples are analyzed the same and the simulated milk matrix is similar to that of the water. In the third quarter of 2016, cross check E11592, LLI-131 in Milk was analyzed and no activity bias was evident.

5.5.3 ERA PROFICIENCY TESTING

EnRad Laboratories performed method proficiency testing through a program administered by Environmental Resource Associates (ERA) of Arvada, CO. ERA supplied requested method proficiency samples for analysis and nuclide concentration determination. ERA reported proficiency test results to the North Carolina Department of Health and Human Services, North Carolina Public Health Drinking Water Laboratory Certification Program. A summary of these proficiency test data for 2016 is documented in Table 5.0-C.

Proficiency samples were distributed in the second and fourth quarters. Table 5.0-C summarizes the results and evaluation. Fourteen results were reported of which 14 (100%) were in agreement.

Two NCRs were proactively written to investigate nuclide activity biases seen in ERA Proficiency Samples. NCR # 02032824 was written to investigate a high activity bias in the Zn-65 nuclide of Proficiency Sample RAD-105, Gamma

Emitters in Water, which was analyzed in the second quarter of 2016. The remaining four identified nuclides in sample RAD-105 were within trend. In the fourth quarter of 2016, NCR # 02081918 was written to document and track the actions of an overall high bias in the sample set for Proficiency Sample RAD-107, I-131 in Water. However, during review of data for AREOR preparations, it was found that the closure for NCR # 02081918 was insufficient to explain the event, so NCR # 02103716 was generated to better document the possible cause of the I-131 bias.

5.6 INTERCOMPARISON PROGRAM

Oconee Nuclear Station routinely participates in an environmental sample intercomparison program. Program elements include sampling frequency and analysis parameters for drinking water, surface water, milk, fish, broadleaf vegetation, and shoreline sediment samples that have been collected. Samples are routinely split with a vendor laboratory for intercomparison analysis.

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 2016 Nuclear Technology Services Intercomparison Report is documented in Table 5.0-D.

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. During third and fourth quarters of 2016 an environmental external TLD cross check failed and NCR # 02106779 was written to document the failures. To prevent recurrence, the two TLDs were pulled and visually inspected for abnormalities in the elements and overall integrity of the TLDs and no abnormalities were found. The two TLDs were then annealed and irradiated to 100 GU, then read 7 days later. Both TLDs over responded on E3 or E4 and were outside of the 10% acceptance criteria per procedure RD/0/B/4000/13, Environmental Monitoring. TLD # 103523 and 103511 were both removed from Environmental TLD inventory and removed from service. Complete documentation of any evaluation will be available and provided to the NRC upon request.

TABLE 5.0-A

DUKE ENERGY

INTERLABORATORY COMPARISON PROGRAM

2016 EnRad Fleet Scientific Services Cross Check Performance Summary

Interlaboratory cross checks were distributed by Fleet Scientific Services (FSS) staff in accordance with SRPMP 9-2. One media type, water, was analyzed for mixed gamma, tritium, beta, and LLI-131. Table 5.0-A lists results for specific analyses. One-hundred and seventy-four results were reported of which 164 (94.3%) were in agreement.

Sample	Sample ID	Nuclide	Quarter	Units	EnRad Value	GO Value	EnRad/GO Ratio	Evaluation
Gamma in Water	Q161GWR 1.0 L	Mn-54	1	pCi/L	7540	6890	1.09	Agreement
			1	pCi/L	7500	6890	1.09	Agreement
			1	pCi/L	7540	6890	1.09	Agreement
		Co-57	1	pCi/L	4960	4880	1.02	Agreement
			1	pCi/L	5060	4880	1.04	Agreement
			1	pCi/L	5070	4880	1.04	Agreement
		Co-60	1	pCi/L	4400	4370	1.01	Agreement
			1	pCi/L	4760	4370	1.09	Agreement
			1	pCi/L	4530	4370	1.04	Agreement
		Zn-65	1	pCi/L	11900	10600	1.12	Agreement
			1	pCi/L	12200	10600	1.15	Agreement
			1	pCi/L	11800	10600	1.11	Agreement
		Y-88	1	pCi/L	3170	3310	0.96	Agreement
			1	pCi/L	3460	3310	1.04	Agreement
			1	pCi/L	3270	3310	0.99	Agreement
		Sn-113	1	pCi/L	9800	9190	1.07	Agreement
			1	pCi/L	9720	9190	1.06	Agreement
			1	pCi/L	9700	9190	1.06	Agreement
		Cs-134	1	pCi/L	6970	7750	0.90	Agreement
			1	pCi/L	7020	7750	0.91	Agreement
			1	pCi/L	6980	7750	0.90	Agreement
		Cs-137	1	pCi/L	5240	4930	1.06	Agreement
			1	pCi/L	5340	4930	1.08	Agreement
			1	pCi/L	5230	4930	1.06	Agreement

TABLE 5.0-A (Cont.)

Sample	Sample ID	Nuclide	Quarter	Units	EnRad Value	GO Value	EnRad/GO Ratio	Evaluation
Gamma in Water	Q161GWR 3.5 L	Mn-54	1	pCi/L	7640	6890	1.11	Agreement
			1	pCi/L	7680	6890	1.12	Agreement
			1	pCi/L	7690	6890	1.12	Agreement
		Co-57	1	pCi/L	5110	4880	1.05	Agreement
			1	pCi/L	5240	4880	1.07	Agreement
			1	pCi/L	5210	4880	1.07	Agreement
		Co-60	1	pCi/L	4750	4370	1.09	Agreement
			1	pCi/L	4710	4370	1.08	Agreement
			1	pCi/L	4630	4370	1.06	Agreement
		Zn-65	1	pCi/L	11900	10600	1.12	Agreement
			1	pCi/L	12000	10600	1.13	Agreement
			1	pCi/L	11800	10600	1.11	Agreement
		Y-88	1	pCi/L	3360	3310	1.01	Agreement
			1	pCi/L	3490	3310	1.05	Agreement
			1	pCi/L	3380	3310	1.02	Agreement
		Sn-113	1	pCi/L	9970	9190	1.08	Agreement
			1	pCi/L	9970	9190	1.08	Agreement
			1	pCi/L	9860	9190	1.07	Agreement
		Cs-134	1	pCi/L	7410	7750	0.96	Agreement
			1	pCi/L	7390	7750	0.95	Agreement
			1	pCi/L	7350	7750	0.95	Agreement
		Cs-137	1	pCi/L	5340	4930	1.08	Agreement
			1	pCi/L	5420	4930	1.10	Agreement
			1	pCi/L	5250	4930	1.06	Agreement

TABLE 5.0-A (Cont.)

Sample	Sample ID	Nuclide	Quarter	Units	EnRad Value	GO Value	EnRad/GO Ratio	Evaluation
Gamma in Water	Q163GWR 0.25 L	Cr-51	3	pCi/L	30400	26400	1.15	Agreement
			3	pCi/L	28800	26400	1.09	Agreement
			3	pCi/L	28600	26400	1.08	Agreement
		Mn-54	3	pCi/L	26700	21800	1.23	Agreement
			3	pCi/L	25300	21800	1.16	Agreement
			3	pCi/L	24900	21800	1.14	Agreement
		Co-58	3	pCi/L	23100	20200	1.14	Agreement
			3	pCi/L	21700	20200	1.07	Agreement
			3	pCi/L	21500	20200	1.06	Agreement
		Fe-59	3	pCi/L	19100	14900	1.28	Warning ¹
			3	pCi/L	18100	14900	1.21	Agreement
			3	pCi/L	18000	14900	1.20	Agreement
		Co-60	3	pCi/L	38100	31400	1.21	Agreement
			3	pCi/L	35600	31400	1.13	Agreement
			3	pCi/L	35600	31400	1.13	Agreement
		Zn-65	3	pCi/L	52500	40000	1.31	Warning ¹
			3	pCi/L	49200	40000	1.23	Agreement
			3	pCi/L	49100	40000	1.23	Agreement
		Cs-134	3	pCi/L	32100	31300	1.03	Agreement
			3	pCi/L	30200	31300	0.97	Agreement
			3	pCi/L	29700	31300	0.95	Agreement
		Cs-137	3	pCi/L	25900	22100	1.17	Agreement
			3	pCi/L	24500	22100	1.11	Agreement
			3	pCi/L	24100	22100	1.09	Agreement
		Ce-141	3	pCi/L	16900	14700	1.15	Agreement
			3	pCi/L	15800	14700	1.08	Agreement
			3	pCi/L	16100	14700	1.10	Agreement

1) Warnings were caused by expected double humped coincidence summing and the FSS cross check provider did not request an investigation and does not constitute a non-agreement.

TABLE 5.0-A (Cont.)

Sample	Sample ID	Nuclide	Quarter	Units	EnRad Value	GO Value	EnRad/GO Ratio	Evaluation
Gamma in Water	Q163GWR 0.5 L	Cr-51	3	pCi/L	27200	26400	1.03	Agreement
			3	pCi/L	27200	26400	1.03	Agreement
			3	pCi/L	26900	26400	1.02	Agreement
		Mn-54	3	pCi/L	23700	21800	1.09	Agreement
			3	pCi/L	23900	21800	1.10	Agreement
			3	pCi/L	24000	21800	1.10	Agreement
		Co-58	3	pCi/L	20400	20200	1.01	Agreement
			3	pCi/L	20700	20200	1.02	Agreement
			3	pCi/L	20700	20200	1.02	Agreement
		Fe-59	3	pCi/L	16800	14900	1.12	Agreement
			3	pCi/L	17100	14900	1.14	Agreement
			3	pCi/L	17200	14900	1.15	Agreement
		Co-60	3	pCi/L	33500	31400	1.07	Agreement
			3	pCi/L	34200	31400	1.09	Agreement
			3	pCi/L	34000	31400	1.08	Agreement
		Zn-65	3	pCi/L	46100	40000	1.15	Agreement
			3	pCi/L	47000	40000	1.17	Agreement
			3	pCi/L	46900	40000	1.17	Agreement
		Cs-134	3	pCi/L	30900	31300	0.99	Agreement
			3	pCi/L	28800	31300	0.92	Agreement
			3	pCi/L	28800	31300	0.92	Agreement
		Cs-137	3	pCi/L	22900	22100	1.04	Agreement
			3	pCi/L	23300	22100	1.05	Agreement
			3	pCi/L	23200	22100	1.05	Agreement
		Ce-141	3	pCi/L	15000	14700	1.02	Agreement
			3	pCi/L	15300	14700	1.04	Agreement
			3	pCi/L	15300	14700	1.04	Agreement

TABLE 5.0-A (Cont.)

Sample	Sample ID	Nuclide	Quarter	Units	EnRad Value	GO Value	EnRad/GO Ratio	Evaluation
Gamma in Water	Q163GWR 3.5 L	Cr-51	3	pCi/L	27700	26400	1.05	Agreement
			3	pCi/L	27600	26400	1.04	Agreement
			3	pCi/L	27400	26400	1.04	Agreement
		Mn-54	3	pCi/L	23600	21800	1.08	Agreement
			3	pCi/L	23800	21800	1.09	Agreement
			3	pCi/L	23700	21800	1.09	Agreement
		Co-58	3	pCi/L	20600	20200	1.02	Agreement
			3	pCi/L	20800	20200	1.03	Agreement
			3	pCi/L	20700	20200	1.02	Agreement
		Fe-59	3	pCi/L	16500	14900	1.10	Agreement
			3	pCi/L	16700	14900	1.12	Agreement
			3	pCi/L	16500	14900	1.10	Agreement
		Co-60	3	pCi/L	34100	31400	1.09	Agreement
			3	pCi/L	34100	31400	1.09	Agreement
			3	pCi/L	34000	31400	1.08	Agreement
		Zn-65	3	pCi/L	45600	40000	1.14	Agreement
			3	pCi/L	45900	40000	1.15	Agreement
			3	pCi/L	45500	40000	1.14	Agreement
		Cs-134	3	pCi/L	32700	31300	1.05	Agreement
			3	pCi/L	30100	31300	0.96	Agreement
			3	pCi/L	29900	31300	0.96	Agreement
		Cs-137	3	pCi/L	23100	22100	1.05	Agreement
			3	pCi/L	23400	22100	1.06	Agreement
			3	pCi/L	23200	22100	1.05	Agreement
		Ce-141	3	pCi/L	15400	14700	1.05	Agreement
			3	pCi/L	15700	14700	1.07	Agreement
			3	pCi/L	15500	14700	1.06	Agreement

TABLE 5.0-A (Cont.)

Sample	Sample ID	Nuclide	Quarter	Units	EnRad Value	GO Value	EnRad/GO Ratio	Evaluation
Tritium in Water	Q161TWR1	H-3	1	pCi/L	4880	4730	1.03	Agreement
			1	pCi/L	4810	4730	1.02	Agreement
			1	pCi/L	4770	4730	1.01	Agreement
	Q161TWR2	H-3	1	pCi/L	80200	81200	0.99	Agreement
			1	pCi/L	80100	81200	0.99	Agreement
			1	pCi/L	79700	81200	0.98	Agreement
	Q161TWR3	H-3	1	pCi/L	488	471	1.04	Agreement
			1	pCi/L	478	471	1.02	Agreement
			1	pCi/L	479	471	1.02	Agreement
Tritium in Water	Q163TWR1	H-3	3	pCi/L	1230	1250	0.98	Agreement
			3	pCi/L	1170	1250	0.93	Agreement
			3	pCi/L	1220	1250	0.97	Agreement
	Q163TWR2	H-3	3	pCi/L	134000	134000	1.00	Agreement
			3	pCi/L	134000	134000	1.00	Agreement
			3	pCi/L	132000	134000	0.99	Agreement
	Q163TWR3	H-3	3	pCi/L	380	387	0.98	Agreement ²
			3	pCi/L	388	387	1.00	Agreement ²
			3	pCi/L	413	387	1.07	Agreement ²

2) NCR # 02074856

TABLE 5.0-A (Cont.)

Sample	Sample ID	Nuclide	Quarter	Units	EnRad Value	GO Value	EnRad/GO Ratio	Evaluation
LLI-131 in Water	Q162LIW4	I-131	2	pCi/L	84.7	79.6	1.06	Agreement
			2	pCi/L	85.6	79.6	1.07	Agreement
			2	pCi/L	84.4	79.6	1.06	Agreement
	Q162LIW5	I-131	2	pCi/L	2030	1850	1.10	Agreement
			2	pCi/L	1950	1850	1.05	Agreement
			2	pCi/L	2000	1850	1.08	Agreement
	Q162LIW6	I-131	2	pCi/L	403	380	1.06	Agreement
			2	pCi/L	396	380	1.04	Agreement
			2	pCi/L	391	380	1.03	Agreement
Alpha Beta in Water	Q163ABW1	Am-241	3	pCi/L	603	470	1.28	Warning ³
			3	pCi/L	591	470	1.26	Warning ³
			3	pCi/L	588	470	1.25	Agreement
		Cs-137	3	pCi/L	293	289	1.01	Agreement
			3	pCi/L	293	289	1.01	Agreement
			3	pCi/L	288	289	1.00	Agreement
	Q163ABW2	Am-241	3	pCi/L	381	271	1.41	Non-Agreement ³
			3	pCi/L	380	271	1.40	Non-Agreement ³
			3	pCi/L	377	271	1.39	Non-Agreement ³
		Cs-137	3	pCi/L	262	258	1.02	Agreement
			3	pCi/L	260	258	1.01	Agreement
			3	pCi/L	270	258	1.05	Agreement
	Q163ABW3	Am-241	3	pCi/L	321	238	1.35	Non-Agreement ³
			3	pCi/L	326	238	1.37	Non-Agreement ³
			3	pCi/L	308	238	1.29	Warning ³
		Cs-137	3	pCi/L	489	493	0.99	Agreement
			3	pCi/L	486	493	0.99	Agreement
			3	pCi/L	483	493	0.98	Agreement

3) NCR # 02072622

TABLE 5.0-B

ECKERT & ZIEGLER ANALYTICS CROSS CHECK PROGRAM

2016 Cross Check Results for EnRad Laboratories

Interlaboratory cross check samples from EZA were received and analyzed in all four quarters of 2016. 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-B lists the performance for specific samples. Seventy-nine results were reported of which 79 (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	E11474A	Cs-137	1	pCi	139	134	1.05	Agreement
	E11591	Cs-137	3	pCi	55.5	56.7	0.98	Agreement
	E11665A	Cs-137	4	pCi	225	228	0.99	Agreement
Gamma in Soil	E11529	Ce-141	2	pCi/g	0.19	0.21	0.92	Agreement
		Cr-51	2	pCi/g	0.41	0.42	0.98	Agreement
		Cs-134	2	pCi/g	0.26	0.27	0.97	Agreement
		Cs-137	2	pCi/g	0.25	0.26	0.94	Agreement
		Co-58	2	pCi/g	0.20	0.22	0.91	Agreement
		Mn-54	2	pCi/g	0.20	0.19	1.02	Agreement
		Fe-59	2	pCi/g	0.19	0.19	1.04	Agreement
		Zn-65	2	pCi/g	0.37	0.36	1.04	Agreement
		Co-60	2	pCi/g	0.25	0.26	0.96	Agreement
LLI-131 in Water	E11526	I-131	2	pCi/L	109	99.8	1.09	Agreement ¹
Gross Alpha/Beta in Water	E11527	Am-241	2	pCi/L	83.6	74.9	1.12	Agreement ²
		Cs-137	2	pCi/L	251	250	1.00	Agreement ²
Gamma in Vegetation (Coffee Grounds)	E11528	Ce-141	2	pCi/g	0.23	0.23	1.01	Agreement
		Cr-51	2	pCi/g	0.44	0.45	0.98	Agreement
		Cs-134	2	pCi/g	0.27	0.29	0.94	Agreement
		Cs-137	2	pCi/g	0.20	0.20	1.00	Agreement
		Co-58	2	pCi/g	0.22	0.23	0.96	Agreement
		Mn-54	2	pCi/g	0.21	0.21	1.00	Agreement
		Fe-59	2	pCi/g	0.20	0.20	1.00	Agreement
		Zn-65	2	pCi/g	0.45	0.39	1.17	Agreement
		Co-60	2	pCi/g	0.28	0.28	0.98	Agreement

1) NCR # 02045683

2) NCR # 02052857

TABLE 5.0-B (Cont.)

Sample	Sample ID	Nuclide	Quarter	Units	EnRad Value	EZA Value	EnRad/EZA Ratio	Evaluation
Gamma in Composite Filter	E11471	Ce-141	1	pCi	80.1	75.6	1.06	Agreement
		Cr-51	1	pCi	213	187	1.14	Agreement
		Cs-134	1	pCi	102	99.9	1.02	Agreement
		Cs-137	1	pCi	119	124	0.96	Agreement
		Co-58	1	pCi	86.9	90.2	0.96	Agreement
		Mn-54	1	pCi	92.9	89.6	1.04	Agreement
		Fe-59	1	pCi	110	101	1.09	Agreement
		Zn-65	1	pCi	139	137	1.01	Agreement
		Co-60	1	pCi	195	187	1.04	Agreement
Gamma in Composite Filter	E11590	Ce-141	3	pCi	76.0	70.3	1.08	Agreement
		Cr-51	3	pCi	183	178	1.03	Agreement ³
		Cs-134	3	pCi	102	102	1.00	Agreement
		Cs-137	3	pCi	88.3	89.4	0.99	Agreement
		Co-58	3	pCi	72.1	73.4	0.98	Agreement
		Mn-54	3	pCi	115	115	1.00	Agreement
		Fe-59	3	pCi	63.5	68.4	0.93	Agreement
		Zn-65	3	pCi	143	135	1.06	Agreement
		Co-60	3	pCi	104	102	1.02	Agreement
Gamma in Water	E11588	I-131	3	pCi/L	50.3	49.0	1.03	Agreement
		Ce-141	3	pCi/L	89.5	85.2	1.05	Agreement
		Cr-51	3	pCi/L	230	215	1.07	Agreement
		Cs-134	3	pCi/L	112	124	0.90	Agreement
		Cs-137	3	pCi/L	112	108	1.03	Agreement
		Co-58	3	pCi/L	88.9	89.0	1.00	Agreement
		Mn-54	3	pCi/L	149	139	1.07	Agreement
		Fe-59	3	pCi/L	97.4	82.8	1.18	Agreement ⁴
		Zn-65	3	pCi/L	180	163	1.10	Agreement
		Co-60	3	pCi/L	131	123	1.06	Agreement

3) NCR # 02080821

4) NCR # 02074444

TABLE 5.0-B (Cont.)

Sample	Sample ID	Nuclide	Quarter	Units	EnRad Value	EZA Value	EnRad/EZA Ratio	Evaluation
Gamma in Filter (Falcon)	E11589	Ce-141	3	pCi	84.6	72.9	1.16	Agreement
		Cr-51	3	pCi	209	184	1.13	Agreement
		Cs-134	3	pCi	123	106	1.16	Agreement
		Cs-137	3	pCi	99.8	92.7	1.08	Agreement
		Co-58	3	pCi	75.8	76.1	1.00	Agreement
		Mn-54	3	pCi	123	119	1.03	Agreement
		Fe-59	3	pCi	79.7	70.9	1.12	Agreement
		Zn-65	3	pCi	171	140	1.22	Agreement
		Co-60	3	pCi	116	105	1.10	Agreement
Gamma in Milk	E11475	I-131	1	pCi/L	86.5	82.2	1.05	Agreement
		Ce-141	1	pCi/L	101	98.4	1.03	Agreement
		Cr-51	1	pCi/L	243	243	1.00	Agreement
		Cs-134	1	pCi/L	121	130	0.93	Agreement
		Cs-137	1	pCi/L	175	161	1.09	Agreement
		Co-58	1	pCi/L	117	117	1.00	Agreement
		Mn-54	1	pCi/L	127	117	1.09	Agreement
		Fe-59	1	pCi/L	143	131	1.09	Agreement
		Zn-65	1	pCi/L	186	179	1.04	Agreement
		Co-60	1	pCi/L	266	244	1.09	Agreement
Gross Alpha/Beta in Water	E11668	Am-241	4	pCi/L	135	146	0.92	Agreement
		Cs-137	4	pCi/L	270	293	0.92	Agreement
LLI-131 in Milk	E11472	I-131	1	pCi/L	102	92	1.11	Agreement ⁵
	E11592	I-131	3	pCi/L	82.6	81.5	1.01	Agreement
Tritium in Water	E11530	H-3	2	pCi/L	12200	12000	1.01	Agreement
	E11666	H-3	4	pCi/L	11900	11900	1.00	Agreement
I-131 in Charcoal Cartridge	E11473	I-131	1	pCi	90	89	1.01	Agreement
	E11587	I-131	3	pCi	61.9	58.6	1.06	Agreement

5) NCR # 02027474

TABLE 5.0-C

ENVIRONMENTAL RESOURCE ASSOCIATES (ERA)

PROFICIENCY TESTING

2016 Proficiency Test Results for EnRad Laboratories

North Carolina Department of Health and Human Services Laboratory Certification

EnRad Laboratories

Proficiency test samples are received, prepared, and analyzed in second and fourth quarters of 2016. Results are reported directly to Environmental Resource Associates as described in the instruction package within the study period. Proficiency test data are reported to ERA for evaluation. The acceptance criteria for the program was based on the National Environmental Laboratory Accreditation Conference (NELAC) Field of Proficiency Testing criteria. Fourteen results were reported of which 14 (100 %) met the acceptance criteria. ERA reports proficiency test results to the North Carolina Department of Health and Human Services, North Carolina Public Drinking Water Laboratory Certification Program. This testing is to satisfy the North Carolina state drinking water radiochemistry certification requirements.

Sample	Sample ID	Nuclide	Quarter	Units	EnRad Value	ERA Value	Acceptance Limits	Evaluation
Gamma Emitters in Water	RAD-105	Ba-133	2	pCi/L	56.6	58.8	48.7-64.9	Agreement
		Cs-134	2	pCi/L	42.8	43.3	34.6-47.6	Agreement
		Cs-137	2	pCi/L	86.3	78.4	70.6-88.9	Agreement
		Co-60	2	pCi/L	101	102	91.8-114	Agreement
		Zn-65	2	pCi/L	244	214	193-251	Agreement ¹
	RAD-107	Ba-133	4	pCi/L	54	54.9	45.4-60.7	Agreement
		Cs-134	4	pCi/L	77.4	81.8	67.0-90.0	Agreement
		Cs-137	4	pCi/L	210	210	189-233	Agreement
		Co-60	4	pCi/L	68.9	64.5	58.0-73.4	Agreement
		Zn-65	4	pCi/L	280	245	220-287	Agreement
Tritium in Water	RAD-105	H-3	2	pCi/L	7940	7840	6790-8620	Agreement
	RAD-107	H-3	4	pCi/L	9670	9820	8540-10800	Agreement
Iodine-131 in Water	RAD-105	I-131	2	pCi/L	28.1	26.6	22.1-31.3	Agreement
	RAD-107	I-131	4	pCi/L	30.7	26.3	21.9-31.0	Agreement ²

1) NCR # 02032824

2) NCR # 02081918

TABLE 5.0-D

2016 ENVIRONMENTAL DOSIMETER CROSS-CHECK RESULTS

Nuclear Technology Services

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

1st Quarter 2016						2nd Quarter 2016							
TLD Number	Reported (mR)	Delivered (mR)	Bias (% diff)	Pass/Fail Criteria	Pass/Fail	TLD Number	Reported (mR)	Delivered (mR)	Bias (% diff)	Pass/Fail Criteria	Pass/Fail		
102234	90.33	88.74	1.79	<+/-15%	Pass	103685	16.86	15.90	6.04	<+/-15%	Pass		
102082	87.38	88.74	-1.53	<+/-15%	Pass	103686	17.24	15.90	8.43	<+/-15%	Pass		
103299	90.78	88.74	2.30	<+/-15%	Pass	103704	15.76	15.90	-0.88	<+/-15%	Pass		
103287	95.55	88.74	7.67	<+/-15%	Pass	103705	16.21	15.90	1.95	<+/-15%	Pass		
103752	92.49	88.74	4.23	<+/-15%	Pass	103714	17.45	15.90	9.75	<+/-15%	Pass		
			Average Bias (B)	2.89					Average Bias (B)	5.06			
			Standard Deviation (S)	3.38					Standard Deviation (S)	4.45			
			Measure Performance B +S	6.27	<15%	Pass				Measure Performance B +S	9.51	<15%	Pass
3rd Quarter 2016						4th Quarter 2016							
TLD Number	Reported (mR)	Delivered (mR)	Bias (% diff)	Pass/Fail Criteria	Pass/Fail	TLD Number	Reported (mR)	Delivered (mR)	Bias (% diff)	Pass/Fail Criteria	Pass/Fail		
102058	73.65	69.8	5.58	<+/-15%	Pass	100527	81.50	75.3	8.23	<+/-15%	Pass		
103540	76.65	69.8	9.88	<+/-15%	Pass	100345	80.56	75.3	6.99	<+/-15%	Pass		
103523	82.05	69.8	17.62	<+/-15%	Fail ¹	101386	82.55	75.3	9.63	<+/-15%	Pass		
100795	74.03	69.8	6.12	<+/-15%	Pass	100123	81.17	75.3	7.80	<+/-15%	Pass		
100355	71.79	69.8	2.91	<+/-15%	Pass	103511	87.26	75.3	15.88	<+/-15%	Fail ¹		
			Average Bias (B)	8.42					Average Bias (B)	9.71			
			Standard Deviation (S)	5.71					Standard Deviation (S)	3.58			
			Measure Performance B +S	14.13	<15%	Pass				Measure Performance B +S	13.29	<15%	Pass

1) NCR # 02106779 generated for 3rd and 4th Quarter 2016 failures

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, and the Environmental Water Resources Group.

Section IV of this appendix describes the environmental sampling frequencies and analysis procedures by media type.

I. CHANGE OF SAMPLING PROCEDURES

Telemetric REMP air location equipment monitoring was implemented during 2016 and dual air sampler placement discontinued (NCR # 01993676).

REMP air filter orientation was changed during 2016 by inward facing the scrim side (shiny side or fuzzy side) and outward facing the crosshatch side (dull side or paper side) as indicated by manufacturer recommendation (NCR # 02026783, 02088364).

Eight indicator location TLDs were added to the Oconee REMP with ODCM revision 58 (NCR # 02035669). The sampling procedure was changed in 2016 with programmatic changes implemented in 2017 (ODCM revision 58). Indicator location number, distance/sector, and description are shown.

- 077 (1.00 miles SW) - Skimmer wall, air monitoring location
- 078.1 (0.53 miles WSW) - ONS Recreation site, air monitoring location
- 085 (0.88 miles NNW) - Lake Services Bldg 9125, air monitoring location
- 086 (0.83 miles NW) - Lake Keowee Service Rd at Boat Landing
- 087 (1.33 miles WNW) - End of Waterfall Road
- 088 (1.00 SSW) - Doug Hollow Rd / Transmission Tower
- 089 (1.19 miles S) - Intersection Hwy 130 & Keowee River Road
- 090 (0.79 miles SE) - Crescent Resources, Keowee River Road at Beaver Dam

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 quarterly by using low-level environmental liquid scintillation analysis technique on a Perkin-Elmer 2900TR liquid scintillation system or Perkin-Elmer 3100TR liquid scintillation system. Tritium samples are distilled and batch processed with a laboratory fortified blank, matrix spike, matrix spike duplicate, and blank to verify instrument performance and sample preparation technique are acceptable.

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

III. CHANGE OF ANALYSIS PROCEDURES

REMP air filter orientation was changed during 2016 by inward facing the scrim side (shiny side or fuzzy side) and outward facing the crosshatch side (dull side or paper side) as indicated by manufacturer recommendation (NCR # 02026783, 02088364). Calibration standards using the new configuration were implemented during 2016.

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 063 = Lake Hartwell Hwy 183 Bridge (0.80 mi. ESE)

Location 067 = Lawrence Ramsey Bridge Hwy 27 (4.34 mi. SSE)

Location 068 = High Falls County Park (1.82 mi. W)(Control)

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 17 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 5/18 – 5/19/2016. Results are shown in Table 3.9. No changes were made to the sampling procedures during 2016 as a result of the 2016 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

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

Oconee Nuclear Station
Oconee County, South Carolina

Docket Numbers 50-269, 270, 287
Calendar Year 2016

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	2.23E-2 (260/260) 8.51E-3 – 5.59E-2	077 (1.00 mi SW)	2.37E-2 (52/52) 1.11E-2 – 4.53E-2	081 (9.33 mi SE) 2.17E-2 (52/52) 9.83E-3 – 4.26E-2	0
	Gamma 24	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	1.28 (20/26) 0.59 – 2.24	066 (18.9 mi SSE)	1.44 (10/13) 0.60 – 2.24	064 (6.67 mi SSW) 1.15 (11/13) 0.78 – 1.82	0
	Gamma 39	See Table 2.2-C	All less than LLD	----	----	All less than LLD	0
	Tritium 12	2000	317 (4/8) 295 - 368	066 (18.9 mi SSE)	317 (4/4) 295 - 368	All less than LLD	0
Surface Water (pCi/l)	Gamma 26	See Table 2.2-C	All less than LLD	----	----	All less than LLD	0
	Tritium 8	2000	4285 (4/4) 3380 - 4710	063.1 (0.79 mi E)	4285 (4/4) 3380 - 4710	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 2016

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 Cs-137	See Table 2.2-C 150	21.1 (3/8) 11.8 – 27.4	063 (0.8 mi ESE)	27.4 (1/4) 27.4 – 27.4	060 (2.28 mi NE) 13.1 (1/4) 13.1 – 13.1	0
Sediments--Shoreline (pCi/kg, dry)	Gamma 6 Cs-137	See Table 2.2-C 180	136 (2/4) 18.9 – 254	067 (4.34 mi SSE)	136 (2/2) 18.9 – 254	All less than LLD	0
TLD (mR per quarter) ⁽⁵⁾	TLD Readout 199 ⁽⁴⁾	----	21.6 (191/191) 12.6 – 31.1	024 (0.81 mi E)	27.9 (4/4) 25.3 – 31.1	058 (9.39 mi WSW) 081 (9.33 mi SE) 27.8 (8/8) 20.7 – 35.9	0

Footnotes to Appendix B

1. The Lower Limit of Detection (LLD) is the smallest concentration of radioactive material in a sample that will yield a net count above system background which will be detected with 95 percent probability and with only 5 percent probability of falsely concluding that a blank observation represents a "real" signal. Due to counting statistics and varying volumes, occasionally lower LLDs are achieved. Refer to Section 2.3.2 for an explanation of how LLD values were derived.
2. Mean and range are based on detectable measurements only.
3. The fractions of all samples with detectable activities at specific locations are indicated in parentheses.
4. Missing samples or surveillances are discussed in Appendix C or Appendix D.
5. TLD exposure is reported in milliroentgen (mR) per standard quarter (91 days).

APPENDIX C

**SAMPLING DEVIATIONS
&
UNAVAILABLE ANALYSES**

APPENDIX C

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 99.8% availability in 2016.

Location	Scheduled Collection Dates	Code	Description & Action to Prevent Recurrence	Corrective Action
085	2/22 – 2/29/2016	PI	2.41 hours downtime due to severe thunderstorm.	NCR # 02006841
077	5/16 – 5/23/2016	PI	3.03 hours downtime due to severe thunderstorm.	NCR # 02032753
078.1	5/16 – 5/23/2016	PI	3.02 hours downtime due to severe thunderstorm.	NCR # 02032754
077	6/13 – 6/20/2016	PI	1.78 hours downtime, cause unknown.	NCR # 02040542
078.1	6/13 – 6/20/2016	PI	0.67 hours downtime, cause unknown.	NCR # 02040544
078.1	6/27 – 7/5/2016	PI	107 hours downtime due to severe thunderstorm.	NCR # 02043745
081	7/5 – 7/11/2016	PI	2.60 hours downtime due to severe thunderstorm.	NCR # 02045193
077	11/28 – 12/5/2016	PI	3.27 hours downtime due to loss of retail power.	NCR # 02083974
078.1	11/28 – 12/5/2016	PI	3.29 hours downtime due to loss of retail power.	NCR # 02083974
079	11/28 – 12/5/2016	PI	1.23 hours downtime due to loss of retail power.	NCR # 02083974
077	12/5 – 12/12/2016	PI	0.14 hours downtime due to loss of retail power.	NCR # 02086137
078.1	12/5 – 12/12/2016	PI	0.12 hours downtime due to loss of retail power.	NCR # 02086138

Drinking Water and Surface Water

REMP monthly drinking water samples (Drinking Water (DW)) or surface water samples (Surface Water (SW)) that experience any downtime during a surveillance period are reported as a Deviation and classified as a "Sampling Deviation." However, the sample is counted and the data reported, whereas a Deviation with no available sample is classified as an "Unavailable Analyses" and does not have any data reported. The drinking and surface water samplers operated for a total of 99.9% availability in 2016. There were no drinking water or surface water sampling deviations or unavailable drinking water or surface water samples during 2016.

Location	Scheduled Collection Dates	Code	Description & Action to Prevent Recurrence	Corrective Action
063	2/29 – 3/28/2016 3/28 – 4/25/2016	PI	Reservoir pump was found out of service 3/28/2016 due to tripped breaker. Available composite was collected, a grab sample was taken. Work request 20027395 was initiated. Breaker repaired and pump returned to service, estimated downtime of 2 days.	NCR # 02014969

C.2 UNAVAILABLE ANALYSES

TLD

Location	Scheduled Collection Dates	Code	Description & Action to Prevent Recurrence	Corrective Action
059	6/14 – 9/13/2016	VN	TLD missing at time of collection.	NCR # 02062223

APPENDIX D

ANALYTICAL DEVIATIONS

No Analytical deviations were incurred for the
2016 Radiological Environmental Monitoring Program

APPENDIX E

**RADIOLOGICAL
ENVIRONMENTAL MONITORING
PROGRAM RESULTS**

2016

This appendix includes sample analysis report summaries and supportive data generated from each sample medium for 2016.

OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

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

Sample Point 077 [INDICATOR - SW @ 1 miles]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
398716	12/28/2015 - 1/5/2016	Beta	2.04E-02	2.43E-03	2.15E-03
398980	1/5/2016 - 1/11/2016	Beta	1.11E-02	2.64E-03	3.38E-03
399287	1/11/2016 - 1/18/2016	Beta	2.71E-02	3.00E-03	2.62E-03
400028	1/18/2016 - 1/25/2016	Beta	1.60E-02	2.53E-03	2.68E-03
400390	1/25/2016 - 2/1/2016	Beta	2.29E-02	2.89E-03	2.90E-03
401028	2/1/2016 - 2/8/2016	Beta	1.84E-02	2.65E-03	2.70E-03
401382	2/8/2016 - 2/15/2016	Beta	1.79E-02	2.65E-03	2.74E-03
401827	2/15/2016 - 2/22/2016	Beta	1.36E-02	2.39E-03	2.68E-03
402348	2/22/2016 - 2/29/2016	Beta	1.47E-02	2.43E-03	2.62E-03
403072	2/29/2016 - 3/7/2016	Beta	1.52E-02	2.61E-03	3.04E-03
404563	3/7/2016 - 3/14/2016	Beta	1.55E-02	2.65E-03	3.12E-03
405430	3/14/2016 - 3/21/2016	Beta	2.35E-02	2.97E-03	3.03E-03
406061	3/21/2016 - 3/28/2016	Beta	1.92E-02	2.73E-03	2.85E-03
406420	12/28/2015 - 3/28/2016	Cs-134	<6.54E-04	0.00E+00	6.54E-04
		Cs-137	<2.90E-04	0.00E+00	2.90E-04
		Be-7	1.57E-01	2.48E-02	1.23E-02
		K-40	<1.19E-02	0.00E+00	1.19E-02
406414	3/28/2016 - 4/4/2016	Beta	1.90E-02	2.72E-03	2.88E-03
407594	4/4/2016 - 4/11/2016	Beta	1.68E-02	2.66E-03	2.93E-03
408155	4/11/2016 - 4/18/2016	Beta	1.86E-02	2.67E-03	2.77E-03
409477	4/18/2016 - 4/25/2016	Beta	2.51E-02	2.92E-03	2.58E-03
409809	4/25/2016 - 5/2/2016	Beta	2.24E-02	2.83E-03	2.68E-03
410983	5/2/2016 - 5/9/2016	Beta	1.87E-02	2.61E-03	2.52E-03
411455	5/9/2016 - 5/16/2016	Beta	2.28E-02	2.89E-03	2.76E-03
411788	5/16/2016 - 5/23/2016	Beta	1.90E-02	2.71E-03	2.79E-03
412248	5/23/2016 - 5/31/2016	Beta	2.75E-02	2.93E-03	2.70E-03
412766	5/31/2016 - 6/6/2016	Beta	2.47E-02	3.22E-03	3.07E-03



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

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

Sample Point 077 [INDICATOR- SW @ 1 miles]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
413381	6/6/2016 - 6/13/2016	Beta	2.57E-02	3.00E-03	2.71E-03
413917	6/13/2016 - 6/20/2016	Beta	2.68E-02	3.11E-03	2.97E-03
415055	6/20/2016 - 6/27/2016	Beta	2.54E-02	2.99E-03	2.72E-03
415456	3/28/2016 - 6/27/2016	Cs-134	<5.62E-04	0.00E+00	5.62E-04
		Cs-137	<6.89E-04	0.00E+00	6.89E-04
		Be-7	2.17E-01	3.05E-02	1.15E-02
		K-40	<1.41E-02	0.00E+00	1.41E-02
415450	6/27/2016 - 7/5/2016	Beta	3.12E-02	2.92E-03	2.17E-03
416433	7/5/2016 - 7/11/2016	Beta	1.86E-02	3.02E-03	3.32E-03
417046	7/11/2016 - 7/18/2016	Beta	2.05E-02	2.81E-03	2.88E-03
417437	7/18/2016 - 7/25/2016	Beta	2.70E-02	3.10E-03	2.88E-03
417830	7/25/2016 - 8/1/2016	Beta	2.24E-02	2.90E-03	2.86E-03
418306	8/1/2016 - 8/8/2016	Beta	1.99E-02	2.78E-03	2.89E-03
419024	8/8/2016 - 8/15/2016	Beta	1.15E-02	2.33E-03	2.81E-03
419522	8/15/2016 - 8/22/2016	Beta	1.43E-02	2.57E-03	3.01E-03
420051	8/22/2016 - 8/29/2016	Beta	3.09E-02	3.25E-03	2.87E-03
420597	8/29/2016 - 9/6/2016	Beta	2.89E-02	2.89E-03	2.44E-03
421463	9/6/2016 - 9/12/2016	Beta	3.84E-02	3.91E-03	3.51E-03
422599	9/12/2016 - 9/19/2016	Beta	2.95E-02	3.18E-03	2.79E-03
423342	9/19/2016 - 9/26/2016	Beta	2.66E-02	3.02E-03	2.67E-03
424482	6/27/2016 - 9/26/2016	Cs-134	<4.63E-04	0.00E+00	4.63E-04
		Cs-137	<2.90E-04	0.00E+00	2.90E-04
		Be-7	1.71E-01	2.57E-02	8.23E-03
		K-40	<1.46E-02	0.00E+00	1.46E-02
424476	9/26/2016 - 10/3/2016	Beta	3.12E-02	3.26E-03	2.85E-03
425478	10/3/2016 - 10/10/2016	Beta	2.30E-02	2.88E-03	2.85E-03
426020	10/10/2016 - 10/17/2016	Beta	3.39E-02	3.41E-03	2.90E-03
426389	10/17/2016 - 10/24/2016	Beta	2.32E-02	2.93E-03	2.86E-03
427073	10/24/2016 - 10/31/2016	Beta	4.53E-02	3.72E-03	2.54E-03



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

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

Sample Point 077 [INDICATOR - SW @ 1 miles]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
427741	10/31/2016 - 11/7/2016	Beta	4.27E-02	3.59E-03	2.54E-03
428241	11/7/2016 - 11/14/2016	Beta	1.34E-02	2.43E-03	2.76E-03
428917	11/14/2016 - 11/21/2016	Beta	2.39E-02	4.01E-03	4.49E-03
429419	11/21/2016 - 11/28/2016	Beta	3.27E-02	3.34E-03	2.88E-03
429979	11/28/2016 - 12/5/2016	Beta	2.33E-02	2.98E-03	2.99E-03
430605	12/5/2016 - 12/12/2016	Beta	2.29E-02	2.81E-03	2.63E-03
431087	12/12/2016 - 12/19/2016	Beta	3.00E-02	3.48E-03	2.94E-03
431487	12/19/2016 - 12/27/2016	Beta	4.06E-02	3.67E-03	2.87E-03
431839	9/26/2016 - 12/27/2016	Cs-134	<5.79E-04	0.00E+00	5.79E-04
		Cs-137	<5.68E-04	0.00E+00	5.68E-04
		Be-7	1.54E-01	2.39E-02	1.23E-02
		K-40	<1.02E-02	0.00E+00	1.02E-02

Sample Point 078.1 [INDICATOR - WSW @ 0.53 miles]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
398717	12/28/2015 - 1/5/2016	Beta	2.00E-02	2.41E-03	2.15E-03
398981	1/5/2016 - 1/11/2016	Beta	8.98E-03	2.51E-03	3.38E-03
399288	1/11/2016 - 1/18/2016	Beta	1.92E-02	2.64E-03	2.62E-03
400029	1/18/2016 - 1/25/2016	Beta	1.53E-02	2.49E-03	2.68E-03
400391	1/25/2016 - 2/1/2016	Beta	2.13E-02	2.82E-03	2.90E-03
401029	2/1/2016 - 2/8/2016	Beta	1.83E-02	2.65E-03	2.70E-03
401383	2/8/2016 - 2/15/2016	Beta	1.71E-02	2.61E-03	2.74E-03
401828	2/15/2016 - 2/22/2016	Beta	1.29E-02	2.35E-03	2.68E-03
402349	2/22/2016 - 2/29/2016	Beta	1.52E-02	2.45E-03	2.63E-03
403073	2/29/2016 - 3/7/2016	Beta	1.48E-02	2.59E-03	3.04E-03
404564	3/7/2016 - 3/14/2016	Beta	1.82E-02	2.77E-03	3.12E-03
405431	3/14/2016 - 3/21/2016	Beta	1.86E-02	2.76E-03	3.03E-03
406062	3/21/2016 - 3/28/2016	Beta	1.99E-02	2.76E-03	2.85E-03
406421	12/28/2015 - 3/28/2016	Cs-134	<5.61E-04	0.00E+00	5.61E-04
		Cs-137	<6.87E-04	0.00E+00	6.87E-04
		Be-7	1.27E-01	2.21E-02	1.43E-02



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (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
406421	12/28/2015 - 3/28/2016	K-40	8.85E-03	6.24E-03	7.85E-03
406415	3/28/2016 - 4/4/2016	Beta	1.95E-02	2.75E-03	2.87E-03
407595	4/4/2016 - 4/11/2016	Beta	1.40E-02	2.52E-03	2.94E-03
408156	4/11/2016 - 4/18/2016	Beta	2.12E-02	2.79E-03	2.76E-03
409478	4/18/2016 - 4/25/2016	Beta	2.46E-02	2.90E-03	2.59E-03
409810	4/25/2016 - 5/2/2016	Beta	2.12E-02	2.77E-03	2.68E-03
410984	5/2/2016 - 5/9/2016	Beta	1.67E-02	2.51E-03	2.52E-03
411456	5/9/2016 - 5/16/2016	Beta	2.14E-02	2.83E-03	2.76E-03
411789	5/16/2016 - 5/23/2016	Beta	1.60E-02	2.56E-03	2.79E-03
412249	5/23/2016 - 5/31/2016	Beta	2.75E-02	2.94E-03	2.71E-03
412767	5/31/2016 - 6/6/2016	Beta	2.17E-02	3.08E-03	3.07E-03
413382	6/6/2016 - 6/13/2016	Beta	2.14E-02	2.81E-03	2.71E-03
413918	6/13/2016 - 6/20/2016	Beta	2.28E-02	2.93E-03	2.95E-03
415056	6/20/2016 - 6/27/2016	Beta	2.56E-02	3.00E-03	2.72E-03
415457	3/28/2016 - 6/27/2016	Cs-134	<5.38E-04	0.00E+00	5.38E-04
		Cs-137	<2.91E-04	0.00E+00	2.91E-04
		Be-7	2.12E-01	3.00E-02	9.23E-03
		K-40	<1.09E-02	0.00E+00	1.09E-02
415451	6/27/2016 - 7/5/2016	Beta	5.59E-02	9.31E-03	9.79E-03
416434	7/5/2016 - 7/11/2016	Beta	1.61E-02	2.89E-03	3.32E-03
417047	7/11/2016 - 7/18/2016	Beta	1.89E-02	2.74E-03	2.88E-03
417438	7/18/2016 - 7/25/2016	Beta	2.65E-02	3.07E-03	2.88E-03
417831	7/25/2016 - 8/1/2016	Beta	1.88E-02	2.73E-03	2.86E-03
418307	8/1/2016 - 8/8/2016	Beta	2.06E-02	2.81E-03	2.89E-03
419025	8/8/2016 - 8/15/2016	Beta	9.85E-03	2.23E-03	2.81E-03
419523	8/15/2016 - 8/22/2016	Beta	1.09E-02	2.39E-03	3.01E-03
420052	8/22/2016 - 8/29/2016	Beta	2.55E-02	3.03E-03	2.87E-03



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (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
420598	8/29/2016 - 9/6/2016	Beta	2.92E-02	2.91E-03	2.44E-03
421464	9/6/2016 - 9/12/2016	Beta	3.59E-02	3.82E-03	3.51E-03
422600	9/12/2016 - 9/19/2016	Beta	2.47E-02	2.98E-03	2.79E-03
423343	9/19/2016 - 9/26/2016	Beta	2.50E-02	2.95E-03	2.67E-03
424483	6/27/2016 - 9/26/2016	Cs-134	<1.51E-04	0.00E+00	1.51E-04
		Cs-137	<6.24E-04	0.00E+00	6.24E-04
		Be-7	1.61E-01	2.57E-02	1.31E-02
		K-40	<1.55E-02	0.00E+00	1.55E-02
424477	9/26/2016 - 10/3/2016	Beta	2.97E-02	3.20E-03	2.85E-03
425479	10/3/2016 - 10/10/2016	Beta	2.09E-02	2.82E-03	2.89E-03
426021	10/10/2016 - 10/17/2016	Beta	3.09E-02	3.26E-03	2.86E-03
426390	10/17/2016 - 10/24/2016	Beta	2.06E-02	2.81E-03	2.86E-03
427074	10/24/2016 - 10/31/2016	Beta	4.24E-02	3.62E-03	2.54E-03
427742	10/31/2016 - 11/7/2016	Beta	4.19E-02	3.57E-03	2.54E-03
428242	11/7/2016 - 11/14/2016	Beta	1.54E-02	2.54E-03	2.75E-03
428918	11/14/2016 - 11/21/2016	Beta	2.65E-02	4.15E-03	4.50E-03
429420	11/21/2016 - 11/28/2016	Beta	2.50E-02	3.02E-03	2.88E-03
429980	11/28/2016 - 12/5/2016	Beta	1.88E-02	2.78E-03	2.99E-03
430606	12/5/2016 - 12/12/2016	Beta	2.09E-02	2.72E-03	2.63E-03
431088	12/12/2016 - 12/19/2016	Beta	2.11E-02	3.06E-03	2.94E-03
431488	12/19/2016 - 12/27/2016	Beta	3.60E-02	3.50E-03	2.87E-03
431840	9/26/2016 - 12/27/2016	Cs-134	<5.75E-04	0.00E+00	5.75E-04
		Cs-137	<5.94E-04	0.00E+00	5.94E-04
		Be-7	1.13E-01	2.13E-02	1.53E-02
		K-40	9.39E-03	5.87E-03	6.09E-03

Sample Point 079 [INDICATOR - NE @ 0.56 miles]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
398718	12/28/2015 - 1/5/2016	Beta	1.75E-02	2.29E-03	2.14E-03
398982	1/5/2016 - 1/11/2016	Beta	9.65E-03	2.57E-03	3.40E-03
399289	1/11/2016 - 1/18/2016	Beta	2.19E-02	2.77E-03	2.61E-03



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

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

Sample Point 079 [INDICATOR - NE @ 0.56 miles]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
400030	1/18/2016 - 1/25/2016	Beta	1.68E-02	2.58E-03	2.69E-03
400392	1/25/2016 - 2/1/2016	Beta	2.09E-02	2.80E-03	2.89E-03
401030	2/1/2016 - 2/8/2016	Beta	1.53E-02	2.50E-03	2.71E-03
401384	2/8/2016 - 2/15/2016	Beta	2.12E-02	2.80E-03	2.74E-03
401829	2/15/2016 - 2/22/2016	Beta	1.21E-02	2.31E-03	2.69E-03
402350	2/22/2016 - 2/29/2016	Beta	1.45E-02	2.42E-03	2.62E-03
403074	2/29/2016 - 3/7/2016	Beta	1.60E-02	2.65E-03	3.04E-03
404565	3/7/2016 - 3/14/2016	Beta	1.46E-02	2.61E-03	3.12E-03
405432	3/14/2016 - 3/21/2016	Beta	1.91E-02	2.78E-03	3.03E-03
406063	3/21/2016 - 3/28/2016	Beta	2.05E-02	2.78E-03	2.85E-03
406422	12/28/2015 - 3/28/2016	Cs-134	<3.46E-04	0.00E+00	3.46E-04
		Cs-137	<4.45E-04	0.00E+00	4.45E-04
		Be-7	1.41E-01	2.22E-02	1.24E-02
		K-40	<1.21E-02	0.00E+00	1.21E-02
406416	3/28/2016 - 4/4/2016	Beta	1.81E-02	2.67E-03	2.86E-03
407596	4/4/2016 - 4/11/2016	Beta	1.46E-02	2.57E-03	2.96E-03
408157	4/11/2016 - 4/18/2016	Beta	1.92E-02	2.70E-03	2.76E-03
409479	4/18/2016 - 4/25/2016	Beta	2.27E-02	2.81E-03	2.58E-03
409811	4/25/2016 - 5/2/2016	Beta	2.00E-02	2.73E-03	2.69E-03
410985	5/2/2016 - 5/9/2016	Beta	1.56E-02	2.44E-03	2.51E-03
411457	5/9/2016 - 5/16/2016	Beta	2.06E-02	2.79E-03	2.76E-03
411790	5/16/2016 - 5/23/2016	Beta	1.31E-02	2.37E-03	2.73E-03
412250	5/23/2016 - 5/31/2016	Beta	2.53E-02	2.85E-03	2.72E-03
412768	5/31/2016 - 6/6/2016	Beta	1.86E-02	2.92E-03	3.07E-03
413383	6/6/2016 - 6/13/2016	Beta	2.05E-02	2.76E-03	2.72E-03
413919	6/13/2016 - 6/20/2016	Beta	2.30E-02	2.92E-03	2.92E-03
415057	6/20/2016 - 6/27/2016	Beta	2.63E-02	3.04E-03	2.74E-03



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

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

Sample Point 079 [INDICATOR - NE @ 0.56 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
415458	3/28/2016 - 6/27/2016	Cs-134	<4.88E-04	0.00E+00	4.88E-04
		Cs-137	<5.46E-04	0.00E+00	5.46E-04
		Be-7	1.86E-01	2.84E-02	1.21E-02
		K-40	8.03E-03	4.90E-03	1.98E-03
415452	6/27/2016 - 7/5/2016	Beta	2.16E-02	2.51E-03	2.16E-03
416435	7/5/2016 - 7/11/2016	Beta	1.57E-02	2.88E-03	3.33E-03
417048	7/11/2016 - 7/18/2016	Beta	1.89E-02	2.73E-03	2.87E-03
417439	7/18/2016 - 7/25/2016	Beta	2.22E-02	2.90E-03	2.89E-03
417832	7/25/2016 - 8/1/2016	Beta	1.83E-02	2.70E-03	2.86E-03
418308	8/1/2016 - 8/8/2016	Beta	1.90E-02	2.74E-03	2.89E-03
419026	8/8/2016 - 8/15/2016	Beta	1.02E-02	2.25E-03	2.79E-03
419524	8/15/2016 - 8/22/2016	Beta	1.10E-02	2.40E-03	3.01E-03
420053	8/22/2016 - 8/29/2016	Beta	2.36E-02	2.96E-03	2.88E-03
420599	8/29/2016 - 9/6/2016	Beta	2.09E-02	2.56E-03	2.44E-03
421465	9/6/2016 - 9/12/2016	Beta	3.59E-02	3.80E-03	3.49E-03
422601	9/12/2016 - 9/19/2016	Beta	2.64E-02	3.06E-03	2.80E-03
423344	9/19/2016 - 9/26/2016	Beta	2.44E-02	2.93E-03	2.67E-03
424484	6/27/2016 - 9/26/2016	Cs-134	<5.98E-04	0.00E+00	5.98E-04
		Cs-137	<3.66E-04	0.00E+00	3.66E-04
		Be-7	1.38E-01	2.22E-02	9.19E-03
		K-40	<1.29E-02	0.00E+00	1.29E-02
424478	9/26/2016 - 10/3/2016	Beta	3.00E-02	3.21E-03	2.85E-03
425480	10/3/2016 - 10/10/2016	Beta	2.12E-02	2.81E-03	2.86E-03
426022	10/10/2016 - 10/17/2016	Beta	2.68E-02	3.12E-03	2.89E-03
426391	10/17/2016 - 10/24/2016	Beta	1.99E-02	2.78E-03	2.87E-03
427075	10/24/2016 - 10/31/2016	Beta	3.84E-02	3.47E-03	2.54E-03
427743	10/31/2016 - 11/7/2016	Beta	3.96E-02	3.48E-03	2.53E-03
428243	11/7/2016 - 11/14/2016	Beta	1.76E-02	2.65E-03	2.75E-03
428919	11/14/2016 - 11/21/2016	Beta	1.92E-02	3.77E-03	4.50E-03



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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
429421	11/21/2016 - 11/28/2016	Beta	1.90E-02	2.75E-03	2.88E-03
429981	11/28/2016 - 12/5/2016	Beta	1.94E-02	2.78E-03	2.95E-03
430607	12/5/2016 - 12/12/2016	Beta	2.01E-02	2.69E-03	2.64E-03
431089	12/12/2016 - 12/19/2016	Beta	2.47E-02	3.23E-03	2.94E-03
431489	12/19/2016 - 12/27/2016	Beta	3.78E-02	3.57E-03	2.88E-03
431841	9/26/2016 - 12/27/2016	Cs-134	<4.70E-04	0.00E+00	4.70E-04
		Cs-137	<4.29E-04	0.00E+00	4.29E-04
		Be-7	1.27E-01	2.18E-02	1.11E-02
		K-40	<1.32E-02	0.00E+00	1.32E-02

Sample Point 081 [CONTROL - SE @ 9.33 miles]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
398719	12/28/2015 - 1/5/2016	Beta	1.79E-02	2.32E-03	2.15E-03
398983	1/5/2016 - 1/11/2016	Beta	9.83E-03	2.56E-03	3.37E-03
399290	1/11/2016 - 1/18/2016	Beta	2.40E-02	2.88E-03	2.64E-03
400031	1/18/2016 - 1/25/2016	Beta	1.16E-02	2.28E-03	2.66E-03
400393	1/25/2016 - 2/1/2016	Beta	1.96E-02	2.76E-03	2.92E-03
401031	2/1/2016 - 2/8/2016	Beta	1.67E-02	2.56E-03	2.69E-03
401385	2/8/2016 - 2/15/2016	Beta	1.71E-02	2.60E-03	2.74E-03
401830	2/15/2016 - 2/22/2016	Beta	1.28E-02	2.34E-03	2.68E-03
402351	2/22/2016 - 2/29/2016	Beta	1.39E-02	2.39E-03	2.63E-03
403075	2/29/2016 - 3/7/2016	Beta	1.16E-02	2.43E-03	3.04E-03
404566	3/7/2016 - 3/14/2016	Beta	1.36E-02	2.57E-03	3.15E-03
405433	3/14/2016 - 3/21/2016	Beta	1.92E-02	2.78E-03	3.03E-03
406064	3/21/2016 - 3/28/2016	Beta	1.71E-02	2.62E-03	2.84E-03
406423	12/28/2015 - 3/28/2016	Cs-134	<7.22E-04	0.00E+00	7.22E-04
		Cs-137	<6.62E-04	0.00E+00	6.62E-04
		Be-7	1.34E-01	2.17E-02	1.31E-02
		K-40	<1.40E-02	0.00E+00	1.40E-02
406417	3/28/2016 - 4/4/2016	Beta	1.58E-02	2.58E-03	2.90E-03
407597	4/4/2016 - 4/11/2016	Beta	1.42E-02	2.51E-03	2.90E-03



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

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

Sample Point 081 [CONTROL - SE @ 9.33 miles]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
408158	4/11/2016 - 4/18/2016	Beta	1.96E-02	2.72E-03	2.77E-03
409480	4/18/2016 - 4/25/2016	Beta	2.50E-02	2.91E-03	2.59E-03
409812	4/25/2016 - 5/2/2016	Beta	1.99E-02	2.72E-03	2.68E-03
410986	5/2/2016 - 5/9/2016	Beta	1.42E-02	2.37E-03	2.51E-03
411458	5/9/2016 - 5/16/2016	Beta	2.06E-02	2.79E-03	2.76E-03
411791	5/16/2016 - 5/23/2016	Beta	1.61E-02	2.53E-03	2.74E-03
412251	5/23/2016 - 5/31/2016	Beta	2.22E-02	2.72E-03	2.70E-03
412769	5/31/2016 - 6/6/2016	Beta	1.94E-02	2.97E-03	3.08E-03
413384	6/6/2016 - 6/13/2016	Beta	2.19E-02	2.83E-03	2.71E-03
413920	6/13/2016 - 6/20/2016	Beta	1.99E-02	2.80E-03	2.95E-03
415058	6/20/2016 - 6/27/2016	Beta	2.76E-02	3.08E-03	2.71E-03
415459	3/28/2016 - 6/27/2016	Cs-134	<6.77E-04	0.00E+00	6.77E-04
		Cs-137	<4.98E-04	0.00E+00	4.98E-04
		Be-7	2.07E-01	2.85E-02	1.31E-02
		K-40	<1.28E-02	0.00E+00	1.28E-02
415453	6/27/2016 - 7/5/2016	Beta	2.68E-02	2.74E-03	2.17E-03
416436	7/5/2016 - 7/11/2016	Beta	1.58E-02	2.91E-03	3.37E-03
417049	7/11/2016 - 7/18/2016	Beta	2.03E-02	2.80E-03	2.89E-03
417440	7/18/2016 - 7/25/2016	Beta	2.43E-02	2.99E-03	2.89E-03
417833	7/25/2016 - 8/1/2016	Beta	1.63E-02	2.60E-03	2.85E-03
418309	8/1/2016 - 8/8/2016	Beta	2.14E-02	2.85E-03	2.89E-03
419027	8/8/2016 - 8/15/2016	Beta	1.02E-02	2.26E-03	2.81E-03
419525	8/15/2016 - 8/22/2016	Beta	1.11E-02	2.40E-03	3.00E-03
420054	8/22/2016 - 8/29/2016	Beta	2.87E-02	3.17E-03	2.87E-03
420600	8/29/2016 - 9/6/2016	Beta	2.66E-02	2.80E-03	2.44E-03
421466	9/6/2016 - 9/12/2016	Beta	4.26E-02	4.07E-03	3.51E-03
422602	9/12/2016 - 9/19/2016	Beta	3.29E-02	3.33E-03	2.81E-03



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

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

Sample Point 081 [CONTROL - SE @ 9.33 miles]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
423345	9/19/2016 - 9/26/2016	Beta	2.41E-02	2.90E-03	2.65E-03
424485	6/27/2016 - 9/26/2016	Cs-134	<3.84E-04	0.00E+00	3.84E-04
		Cs-137	<3.83E-04	0.00E+00	3.83E-04
		Be-7	1.52E-01	2.46E-02	1.48E-02
		K-40	<1.49E-02	0.00E+00	1.49E-02
424479	9/26/2016 - 10/3/2016	Beta	2.95E-02	3.20E-03	2.86E-03
425481	10/3/2016 - 10/10/2016	Beta	2.14E-02	2.87E-03	2.93E-03
426023	10/10/2016 - 10/17/2016	Beta	3.21E-02	3.28E-03	2.81E-03
426392	10/17/2016 - 10/24/2016	Beta	2.18E-02	2.87E-03	2.86E-03
427076	10/24/2016 - 10/31/2016	Beta	4.25E-02	3.63E-03	2.54E-03
427744	10/31/2016 - 11/7/2016	Beta	3.96E-02	3.50E-03	2.56E-03
428244	11/7/2016 - 11/14/2016	Beta	2.06E-02	2.79E-03	2.74E-03
428920	11/14/2016 - 11/21/2016	Beta	1.68E-02	3.18E-03	3.74E-03
429422	11/21/2016 - 11/28/2016	Beta	2.83E-02	3.15E-03	2.87E-03
429982	11/28/2016 - 12/5/2016	Beta	1.96E-02	2.79E-03	2.95E-03
430608	12/5/2016 - 12/12/2016	Beta	1.97E-02	2.65E-03	2.61E-03
431090	12/12/2016 - 12/19/2016	Beta	3.32E-02	3.63E-03	2.95E-03
431490	12/19/2016 - 12/27/2016	Beta	4.09E-02	3.69E-03	2.87E-03
431842	9/26/2016 - 12/27/2016	Cs-134	<5.38E-04	0.00E+00	5.38E-04
		Cs-137	<4.72E-04	0.00E+00	4.72E-04
		Be-7	1.29E-01	2.27E-02	1.59E-02
		K-40	<1.40E-02	0.00E+00	1.40E-02

Sample Point 084 [INDICATOR - NNE @ 2.58 miles]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
398720	12/28/2015 - 1/5/2016	Beta	1.90E-02	2.37E-03	2.15E-03
398984	1/5/2016 - 1/11/2016	Beta	9.38E-03	2.53E-03	3.37E-03
399291	1/11/2016 - 1/18/2016	Beta	2.04E-02	2.71E-03	2.63E-03
400032	1/18/2016 - 1/25/2016	Beta	1.85E-02	2.65E-03	2.67E-03
400394	1/25/2016 - 2/1/2016	Beta	2.04E-02	2.79E-03	2.90E-03
401032	2/1/2016 - 2/8/2016	Beta	1.86E-02	2.66E-03	2.69E-03



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (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
401386	2/8/2016 - 2/15/2016	Beta	1.77E-02	2.64E-03	2.74E-03
401831	2/15/2016 - 2/22/2016	Beta	1.66E-02	2.55E-03	2.68E-03
402352	2/22/2016 - 2/29/2016	Beta	1.53E-02	2.46E-03	2.62E-03
403076	2/29/2016 - 3/7/2016	Beta	1.51E-02	2.61E-03	3.04E-03
404567	3/7/2016 - 3/14/2016	Beta	1.57E-02	2.66E-03	3.12E-03
405434	3/14/2016 - 3/21/2016	Beta	1.91E-02	2.79E-03	3.04E-03
406065	3/21/2016 - 3/28/2016	Beta	1.79E-02	2.66E-03	2.85E-03
406424	12/28/2015 - 3/28/2016	Cs-134	<5.65E-04	0.00E+00	5.65E-04
		Cs-137	<4.86E-04	0.00E+00	4.86E-04
		Be-7	1.43E-01	2.26E-02	1.37E-02
		K-40	<1.06E-02	0.00E+00	1.06E-02
406418	3/28/2016 - 4/4/2016	Beta	1.66E-02	2.62E-03	2.90E-03
407598	4/4/2016 - 4/11/2016	Beta	1.18E-02	2.38E-03	2.90E-03
408159	4/11/2016 - 4/18/2016	Beta	1.88E-02	2.68E-03	2.77E-03
409481	4/18/2016 - 4/25/2016	Beta	2.49E-02	2.91E-03	2.58E-03
409813	4/25/2016 - 5/2/2016	Beta	1.88E-02	2.66E-03	2.68E-03
410987	5/2/2016 - 5/9/2016	Beta	1.70E-02	2.52E-03	2.51E-03
411459	5/9/2016 - 5/16/2016	Beta	2.01E-02	2.77E-03	2.76E-03
411792	5/16/2016 - 5/23/2016	Beta	1.60E-02	2.53E-03	2.75E-03
412252	5/23/2016 - 5/31/2016	Beta	2.38E-02	2.78E-03	2.70E-03
412770	5/31/2016 - 6/6/2016	Beta	1.99E-02	2.99E-03	3.07E-03
413385	6/6/2016 - 6/13/2016	Beta	2.39E-02	2.92E-03	2.71E-03
413921	6/13/2016 - 6/20/2016	Beta	2.82E-02	3.15E-03	2.94E-03
415059	6/20/2016 - 6/27/2016	Beta	2.75E-02	3.08E-03	2.72E-03
415460	3/28/2016 - 6/27/2016	Cs-134	<4.36E-04	0.00E+00	4.36E-04
		Cs-137	<5.57E-04	0.00E+00	5.57E-04
		Be-7	1.91E-01	2.66E-02	1.11E-02
		K-40	<1.16E-02	0.00E+00	1.16E-02
415454	6/27/2016 - 7/5/2016	Beta	2.57E-02	2.71E-03	2.17E-03



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (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
416437	7/5/2016 - 7/11/2016	Beta	1.63E-02	2.90E-03	3.32E-03
417050	7/11/2016 - 7/18/2016	Beta	1.92E-02	2.74E-03	2.88E-03
417441	7/18/2016 - 7/25/2016	Beta	2.06E-02	2.81E-03	2.88E-03
417834	7/25/2016 - 8/1/2016	Beta	2.04E-02	2.81E-03	2.86E-03
418310	8/1/2016 - 8/8/2016	Beta	2.24E-02	2.90E-03	2.89E-03
419028	8/8/2016 - 8/15/2016	Beta	1.01E-02	2.25E-03	2.81E-03
419526	8/15/2016 - 8/22/2016	Beta	1.04E-02	2.36E-03	3.01E-03
420055	8/22/2016 - 8/29/2016	Beta	2.62E-02	3.06E-03	2.87E-03
420601	8/29/2016 - 9/6/2016	Beta	2.67E-02	2.81E-03	2.44E-03
421467	9/6/2016 - 9/12/2016	Beta	4.05E-02	3.99E-03	3.51E-03
422603	9/12/2016 - 9/19/2016	Beta	2.65E-02	3.07E-03	2.80E-03
423346	9/19/2016 - 9/26/2016	Beta	2.15E-02	2.79E-03	2.66E-03
424486	6/27/2016 - 9/26/2016	Cs-134	<5.17E-04	0.00E+00	5.17E-04
		Cs-137	<4.09E-04	0.00E+00	4.09E-04
		Be-7	1.44E-01	2.16E-02	5.82E-03
		K-40	6.76E-03	5.71E-03	7.98E-03
424480	9/26/2016 - 10/3/2016	Beta	2.95E-02	3.20E-03	2.86E-03
425482	10/3/2016 - 10/10/2016	Beta	1.82E-02	2.67E-03	2.86E-03
426024	10/10/2016 - 10/17/2016	Beta	3.03E-02	3.25E-03	2.88E-03
426393	10/17/2016 - 10/24/2016	Beta	2.18E-02	2.86E-03	2.86E-03
427077	10/24/2016 - 10/31/2016	Beta	4.38E-02	3.68E-03	2.54E-03
427745	10/31/2016 - 11/7/2016	Beta	4.25E-02	3.59E-03	2.54E-03
428245	11/7/2016 - 11/14/2016	Beta	2.09E-02	2.82E-03	2.75E-03
428921	11/14/2016 - 11/21/2016	Beta	2.04E-02	3.84E-03	4.49E-03
429423	11/21/2016 - 11/28/2016	Beta	2.16E-02	3.49E-03	3.84E-03
429983	11/28/2016 - 12/5/2016	Beta	2.33E-02	2.94E-03	2.93E-03
430609	12/5/2016 - 12/12/2016	Beta	2.00E-02	2.68E-03	2.63E-03



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (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
431091	12/12/2016 - 12/19/2016	Beta	3.03E-02	3.50E-03	2.95E-03
431491	12/19/2016 - 12/27/2016	Beta	3.72E-02	3.55E-03	2.87E-03
431843	9/26/2016 - 12/27/2016	Cs-134	<6.03E-04	0.00E+00	6.03E-04
		Cs-137	<5.18E-04	0.00E+00	5.18E-04
		Be-7	1.43E-01	2.34E-02	1.38E-02
		K-40	4.69E-03	6.17E-03	1.01E-02

Sample Point 085 [INDICATOR - NNW @ 0.88 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
398721	12/28/2015 - 1/5/2016	Beta	2.15E-02	2.48E-03	2.15E-03
398985	1/5/2016 - 1/11/2016	Beta	1.24E-02	2.71E-03	3.37E-03
399292	1/11/2016 - 1/18/2016	Beta	2.68E-02	2.99E-03	2.62E-03
400033	1/18/2016 - 1/25/2016	Beta	1.57E-02	2.52E-03	2.69E-03
400395	1/25/2016 - 2/1/2016	Beta	1.97E-02	2.75E-03	2.90E-03
401033	2/1/2016 - 2/8/2016	Beta	2.15E-02	2.80E-03	2.70E-03
401387	2/8/2016 - 2/15/2016	Beta	1.76E-02	2.63E-03	2.75E-03
401832	2/15/2016 - 2/22/2016	Beta	1.72E-02	2.57E-03	2.68E-03
402353	2/22/2016 - 2/29/2016	Beta	1.46E-02	2.45E-03	2.66E-03
403077	2/29/2016 - 3/7/2016	Beta	1.55E-02	2.62E-03	3.03E-03
404568	3/7/2016 - 3/14/2016	Beta	1.37E-02	2.56E-03	3.12E-03
405435	3/14/2016 - 3/21/2016	Beta	1.66E-02	2.67E-03	3.03E-03
406066	3/21/2016 - 3/28/2016	Beta	1.74E-02	2.65E-03	2.85E-03
406425	12/28/2015 - 3/28/2016	Cs-134	<3.84E-04	0.00E+00	3.84E-04
		Cs-137	<5.41E-04	0.00E+00	5.41E-04
		Be-7	1.51E-01	2.39E-02	1.07E-02
		K-40	<1.35E-02	0.00E+00	1.35E-02
406419	3/28/2016 - 4/4/2016	Beta	1.36E-02	2.45E-03	2.87E-03
407599	4/4/2016 - 4/11/2016	Beta	1.33E-02	2.48E-03	2.93E-03
408160	4/11/2016 - 4/18/2016	Beta	2.14E-02	2.80E-03	2.76E-03
409482	4/18/2016 - 4/25/2016	Beta	2.23E-02	2.79E-03	2.59E-03
409814	4/25/2016 - 5/2/2016	Beta	2.10E-02	2.77E-03	2.68E-03



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

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

Sample Point 085 [INDICATOR - NNW @ 0.88 miles]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
410988	5/2/2016 - 5/9/2016	Beta	1.32E-02	2.32E-03	2.52E-03
411460	5/9/2016 - 5/16/2016	Beta	2.35E-02	2.92E-03	2.76E-03
411793	5/16/2016 - 5/23/2016	Beta	1.64E-02	2.54E-03	2.74E-03
412253	5/23/2016 - 5/31/2016	Beta	2.67E-02	2.90E-03	2.71E-03
412771	5/31/2016 - 6/6/2016	Beta	2.03E-02	3.00E-03	3.07E-03
413386	6/6/2016 - 6/13/2016	Beta	2.28E-02	2.87E-03	2.71E-03
413922	6/13/2016 - 6/20/2016	Beta	2.21E-02	2.89E-03	2.94E-03
415060	6/20/2016 - 6/27/2016	Beta	2.49E-02	2.97E-03	2.72E-03
415461	3/28/2016 - 6/27/2016	Cs-134	<7.08E-04	0.00E+00	7.08E-04
		Cs-137	<4.89E-04	0.00E+00	4.89E-04
		Be-7	1.71E-01	2.51E-02	1.11E-02
		K-40	<1.29E-02	0.00E+00	1.29E-02
415455	6/27/2016 - 7/5/2016	Beta	3.12E-02	2.92E-03	2.16E-03
416438	7/5/2016 - 7/11/2016	Beta	1.55E-02	2.86E-03	3.32E-03
417051	7/11/2016 - 7/18/2016	Beta	1.94E-02	2.77E-03	2.88E-03
417442	7/18/2016 - 7/25/2016	Beta	2.96E-02	3.20E-03	2.88E-03
417835	7/25/2016 - 8/1/2016	Beta	2.01E-02	2.79E-03	2.86E-03
418311	8/1/2016 - 8/8/2016	Beta	2.02E-02	2.80E-03	2.89E-03
419029	8/8/2016 - 8/15/2016	Beta	8.51E-03	2.16E-03	2.81E-03
419527	8/15/2016 - 8/22/2016	Beta	1.35E-02	2.53E-03	3.01E-03
420056	8/22/2016 - 8/29/2016	Beta	2.65E-02	3.07E-03	2.87E-03
420602	8/29/2016 - 9/6/2016	Beta	3.11E-02	2.98E-03	2.44E-03
421468	9/6/2016 - 9/12/2016	Beta	3.88E-02	3.93E-03	3.51E-03
422604	9/12/2016 - 9/19/2016	Beta	2.79E-02	3.12E-03	2.79E-03
423347	9/19/2016 - 9/26/2016	Beta	2.47E-02	2.94E-03	2.66E-03
424487	6/27/2016 - 9/26/2016	Cs-134	<5.77E-04	0.00E+00	5.77E-04
		Cs-137	<4.09E-04	0.00E+00	4.09E-04
		Be-7	1.71E-01	2.46E-02	9.50E-03
		K-40	9.71E-03	5.95E-03	6.59E-03



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

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

Sample Point 085 [INDICATOR - NNW @ 0.88 miles]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
424481	9/26/2016 - 10/3/2016	Beta	2.77E-02	3.12E-03	2.85E-03
425483	10/3/2016 - 10/10/2016	Beta	2.19E-02	2.87E-03	2.90E-03
426025	10/10/2016 - 10/17/2016	Beta	3.12E-02	3.27E-03	2.85E-03
426394	10/17/2016 - 10/24/2016	Beta	2.19E-02	2.87E-03	2.86E-03
427078	10/24/2016 - 10/31/2016	Beta	4.08E-02	3.56E-03	2.54E-03
427746	10/31/2016 - 11/7/2016	Beta	4.64E-02	3.73E-03	2.54E-03
428246	11/7/2016 - 11/14/2016	Beta	2.13E-02	2.83E-03	2.75E-03
428922	11/14/2016 - 11/21/2016	Beta	2.69E-02	4.17E-03	4.50E-03
429424	11/21/2016 - 11/28/2016	Beta	2.69E-02	3.10E-03	2.88E-03
429984	11/28/2016 - 12/5/2016	Beta	2.10E-02	2.84E-03	2.93E-03
430610	12/5/2016 - 12/12/2016	Beta	2.37E-02	2.84E-03	2.63E-03
431092	12/12/2016 - 12/19/2016	Beta	3.77E-02	3.83E-03	2.94E-03
431492	12/19/2016 - 12/27/2016	Beta	4.13E-02	3.70E-03	2.87E-03
431844	9/26/2016 - 12/27/2016	Cs-134	<8.62E-04	0.00E+00	8.62E-04
		Cs-137	<5.33E-04	0.00E+00	5.33E-04
		Be-7	1.45E-01	2.41E-02	1.40E-02
		K-40	7.71E-03	6.69E-03	9.69E-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
398728	12/28/2015 - 1/5/2016	I-131	<1.43E-02	0.00E+00	1.43E-02
		Cs-134	<1.15E-02	0.00E+00	1.15E-02
		Cs-137	<1.42E-02	0.00E+00	1.42E-02
		Be-7	<8.26E-02	0.00E+00	8.26E-02
		K-40	4.58E-01	1.71E-01	4.13E-02
398986	1/5/2016 - 1/11/2016	I-131	<8.55E-03	0.00E+00	8.55E-03
		Cs-134	<7.82E-03	0.00E+00	7.82E-03
		Cs-137	<1.05E-02	0.00E+00	1.05E-02
		Be-7	<7.52E-02	0.00E+00	7.52E-02
		K-40	<1.35E-01	0.00E+00	1.35E-01
399293	1/11/2016 - 1/18/2016	I-131	<1.86E-02	0.00E+00	1.86E-02
		Cs-134	<1.16E-02	0.00E+00	1.16E-02
		Cs-137	<8.03E-03	0.00E+00	8.03E-03
		Be-7	<1.19E-01	0.00E+00	1.19E-01
		K-40	3.41E-01	1.94E-01	2.35E-01
400034	1/18/2016 - 1/25/2016	I-131	<7.68E-03	0.00E+00	7.68E-03
		Cs-134	<8.27E-03	0.00E+00	8.27E-03
		Cs-137	<7.36E-03	0.00E+00	7.36E-03
		Be-7	<5.79E-02	0.00E+00	5.79E-02



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

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

Sample Point 077 [INDICATOR - SW @ 1 miles]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
400034	1/18/2016 - 1/25/2016	K-40	<3.21E-01	0.00E+00	3.21E-01
400396	1/25/2016 - 2/1/2016	I-131	<1.69E-02	0.00E+00	1.69E-02
		Cs-134	<1.63E-02	0.00E+00	1.63E-02
		Cs-137	<1.41E-02	0.00E+00	1.41E-02
		Be-7	<9.19E-02	0.00E+00	9.19E-02
		K-40	6.41E-01	2.17E-01	4.69E-02
401034	2/1/2016 - 2/8/2016	I-131	<8.60E-03	0.00E+00	8.60E-03
		Cs-134	<5.49E-03	0.00E+00	5.49E-03
		Cs-137	<8.32E-03	0.00E+00	8.32E-03
		Be-7	<6.09E-02	0.00E+00	6.09E-02
		K-40	3.39E-01	1.35E-01	1.19E-01
401388	2/8/2016 - 2/15/2016	I-131	<9.30E-03	0.00E+00	9.30E-03
		Cs-134	<7.64E-03	0.00E+00	7.64E-03
		Cs-137	<8.42E-03	0.00E+00	8.42E-03
		Be-7	<4.73E-02	0.00E+00	4.73E-02
		K-40	3.23E-01	1.25E-01	9.23E-02
401833	2/15/2016 - 2/22/2016	I-131	<8.19E-03	0.00E+00	8.19E-03
		Cs-134	<7.09E-03	0.00E+00	7.09E-03
		Cs-137	<7.52E-03	0.00E+00	7.52E-03
		Be-7	<5.66E-02	0.00E+00	5.66E-02
		K-40	4.21E-01	1.46E-01	1.11E-01
402354	2/22/2016 - 2/29/2016	I-131	<8.72E-03	0.00E+00	8.72E-03
		Cs-134	<7.45E-03	0.00E+00	7.45E-03
		Cs-137	<6.64E-03	0.00E+00	6.64E-03
		Be-7	<4.81E-02	0.00E+00	4.81E-02
		K-40	3.10E-01	1.27E-01	1.12E-01
403078	2/29/2016 - 3/7/2016	I-131	<6.90E-03	0.00E+00	6.90E-03
		Cs-134	<8.26E-03	0.00E+00	8.26E-03
		Cs-137	<8.21E-03	0.00E+00	8.21E-03
		Be-7	<4.10E-02	0.00E+00	4.10E-02
		K-40	3.78E-01	1.49E-01	1.33E-01
404569	3/7/2016 - 3/14/2016	I-131	<1.02E-02	0.00E+00	1.02E-02
		Cs-134	<6.02E-03	0.00E+00	6.02E-03
		Cs-137	<9.35E-03	0.00E+00	9.35E-03
		Be-7	<5.28E-02	0.00E+00	5.28E-02
		K-40	4.83E-01	1.55E-01	1.04E-01
405436	3/14/2016 - 3/21/2016	I-131	<8.57E-03	0.00E+00	8.57E-03
		Cs-134	<7.03E-03	0.00E+00	7.03E-03
		Cs-137	<7.45E-03	0.00E+00	7.45E-03
		Be-7	<6.31E-02	0.00E+00	6.31E-02
		K-40	3.77E-01	1.49E-01	1.49E-01
406067	3/21/2016 - 3/28/2016	I-131	<1.12E-02	0.00E+00	1.12E-02
		Cs-134	<7.60E-03	0.00E+00	7.60E-03
		Cs-137	<8.92E-03	0.00E+00	8.92E-03
		Be-7	<5.13E-02	0.00E+00	5.13E-02
		K-40	3.46E-01	1.23E-01	2.76E-02
406426	3/28/2016 - 4/4/2016	I-131	<1.10E-02	0.00E+00	1.10E-02
		Cs-134	<6.26E-03	0.00E+00	6.26E-03
		Cs-137	<5.50E-03	0.00E+00	5.50E-03
		Be-7	<4.74E-02	0.00E+00	4.74E-02



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

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

Sample Point 077 [INDICATOR - SW @ 1 miles]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
406426	3/28/2016 - 4/4/2016	K-40	5.28E-01	1.54E-01	2.75E-02
407600	4/4/2016 - 4/11/2016	I-131	<8.10E-03	0.00E+00	8.10E-03
		Cs-134	<6.54E-03	0.00E+00	6.54E-03
		Cs-137	<8.86E-03	0.00E+00	8.86E-03
		Be-7	<6.61E-02	0.00E+00	6.61E-02
		K-40	4.15E-01	1.60E-01	1.51E-01
408161	4/11/2016 - 4/18/2016	I-131	<1.16E-02	0.00E+00	1.16E-02
		Cs-134	<5.80E-03	0.00E+00	5.80E-03
		Cs-137	<7.20E-03	0.00E+00	7.20E-03
		Be-7	<5.90E-02	0.00E+00	5.90E-02
		K-40	3.57E-01	1.48E-01	1.59E-01
409483	4/18/2016 - 4/25/2016	I-131	<6.20E-03	0.00E+00	6.20E-03
		Cs-134	<3.73E-03	0.00E+00	3.73E-03
		Cs-137	<4.90E-03	0.00E+00	4.90E-03
		Be-7	<3.37E-02	0.00E+00	3.37E-02
		K-40	3.50E-01	1.02E-01	9.12E-02
409815	4/25/2016 - 5/2/2016	I-131	<8.11E-03	0.00E+00	8.11E-03
		Cs-134	<9.30E-03	0.00E+00	9.30E-03
		Cs-137	<1.11E-02	0.00E+00	1.11E-02
		Be-7	<4.28E-02	0.00E+00	4.28E-02
		K-40	<2.70E-01	0.00E+00	2.70E-01
410989	5/2/2016 - 5/9/2016	I-131	<7.40E-03	0.00E+00	7.40E-03
		Cs-134	<6.77E-03	0.00E+00	6.77E-03
		Cs-137	<9.94E-03	0.00E+00	9.94E-03
		Be-7	<4.64E-02	0.00E+00	4.64E-02
		K-40	4.10E-01	1.35E-01	2.78E-02
411461	5/9/2016 - 5/16/2016	I-131	<7.43E-03	0.00E+00	7.43E-03
		Cs-134	<8.02E-03	0.00E+00	8.02E-03
		Cs-137	<6.76E-03	0.00E+00	6.76E-03
		Be-7	<5.73E-02	0.00E+00	5.73E-02
		K-40	4.87E-01	1.56E-01	1.04E-01
411794	5/16/2016 - 5/23/2016	I-131	<9.95E-03	0.00E+00	9.95E-03
		Cs-134	<7.23E-03	0.00E+00	7.23E-03
		Cs-137	<7.19E-03	0.00E+00	7.19E-03
		Be-7	<5.51E-02	0.00E+00	5.51E-02
		K-40	<2.94E-01	0.00E+00	2.94E-01
412254	5/23/2016 - 5/31/2016	I-131	<7.84E-03	0.00E+00	7.84E-03
		Cs-134	<6.41E-03	0.00E+00	6.41E-03
		Cs-137	<6.36E-03	0.00E+00	6.36E-03
		Be-7	<4.58E-02	0.00E+00	4.58E-02
		K-40	2.18E-01	9.10E-02	2.46E-02
412772	5/31/2016 - 6/6/2016	I-131	<1.12E-02	0.00E+00	1.12E-02
		Cs-134	<8.31E-03	0.00E+00	8.31E-03
		Cs-137	<8.48E-03	0.00E+00	8.48E-03
		Be-7	<7.60E-02	0.00E+00	7.60E-02
		K-40	5.53E-01	1.93E-01	1.60E-01
413387	6/6/2016 - 6/13/2016	I-131	<8.58E-03	0.00E+00	8.58E-03
		Cs-134	<7.62E-03	0.00E+00	7.62E-03
		Cs-137	<8.41E-03	0.00E+00	8.41E-03
		Be-7	<4.66E-02	0.00E+00	4.66E-02



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

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

Sample Point 077 [INDICATOR - SW @ 1 miles]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
413387	6/6/2016 - 6/13/2016	K-40	4.19E-01	1.45E-01	1.12E-01
413923	6/13/2016 - 6/20/2016	I-131	<1.22E-02	0.00E+00	1.22E-02
		Cs-134	<8.67E-03	0.00E+00	8.67E-03
		Cs-137	<8.15E-03	0.00E+00	8.15E-03
		Be-7	<4.76E-02	0.00E+00	4.76E-02
		K-40	2.40E-01	1.07E-01	3.10E-02
415061	6/20/2016 - 6/27/2016	I-131	<1.10E-02	0.00E+00	1.10E-02
		Cs-134	<7.24E-03	0.00E+00	7.24E-03
		Cs-137	<6.44E-03	0.00E+00	6.44E-03
		Be-7	<5.84E-02	0.00E+00	5.84E-02
		K-40	4.35E-01	1.45E-01	9.55E-02
415462	6/27/2016 - 7/5/2016	I-131	<6.85E-03	0.00E+00	6.85E-03
		Cs-134	<7.18E-03	0.00E+00	7.18E-03
		Cs-137	<6.39E-03	0.00E+00	6.39E-03
		Be-7	<4.63E-02	0.00E+00	4.63E-02
		K-40	3.11E-01	1.27E-01	1.19E-01
416439	7/5/2016 - 7/11/2016	I-131	<1.03E-02	0.00E+00	1.03E-02
		Cs-134	<7.73E-03	0.00E+00	7.73E-03
		Cs-137	<8.81E-03	0.00E+00	8.81E-03
		Be-7	<7.02E-02	0.00E+00	7.02E-02
		K-40	<3.58E-01	0.00E+00	3.58E-01
417052	7/11/2016 - 7/18/2016	I-131	<7.93E-03	0.00E+00	7.93E-03
		Cs-134	<6.22E-03	0.00E+00	6.22E-03
		Cs-137	<8.84E-03	0.00E+00	8.84E-03
		Be-7	<4.60E-02	0.00E+00	4.60E-02
		K-40	3.16E-01	1.43E-01	1.63E-01
417443	7/18/2016 - 7/25/2016	I-131	<8.55E-03	0.00E+00	8.55E-03
		Cs-134	<6.05E-03	0.00E+00	6.05E-03
		Cs-137	<7.53E-03	0.00E+00	7.53E-03
		Be-7	<4.32E-02	0.00E+00	4.32E-02
		K-40	2.76E-01	1.20E-01	1.06E-01
417836	7/25/2016 - 8/1/2016	I-131	<5.30E-03	0.00E+00	5.30E-03
		Cs-134	<8.37E-03	0.00E+00	8.37E-03
		Cs-137	<5.81E-03	0.00E+00	5.81E-03
		Be-7	<6.35E-02	0.00E+00	6.35E-02
		K-40	4.53E-01	1.51E-01	1.07E-01
418312	8/1/2016 - 8/8/2016	I-131	<9.46E-03	0.00E+00	9.46E-03
		Cs-134	<3.70E-03	0.00E+00	3.70E-03
		Cs-137	<6.73E-03	0.00E+00	6.73E-03
		Be-7	<6.67E-02	0.00E+00	6.67E-02
		K-40	4.32E-01	1.56E-01	1.45E-01
419030	8/8/2016 - 8/15/2016	I-131	<1.25E-02	0.00E+00	1.25E-02
		Cs-134	<5.69E-03	0.00E+00	5.69E-03
		Cs-137	<1.04E-02	0.00E+00	1.04E-02
		Be-7	<4.55E-02	0.00E+00	4.55E-02
		K-40	5.57E-01	1.79E-01	1.48E-01
419528	8/15/2016 - 8/22/2016	I-131	<6.92E-03	0.00E+00	6.92E-03
		Cs-134	<7.18E-03	0.00E+00	7.18E-03
		Cs-137	<4.66E-03	0.00E+00	4.66E-03
		Be-7	<3.76E-02	0.00E+00	3.76E-02



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

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

Sample Point 077 [INDICATOR - SW @ 1 miles]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
427079	10/24/2016 - 10/31/2016	K-40	3.46E-01	1.30E-01	9.67E-02
427747	10/31/2016 - 11/7/2016	I-131	<9.55E-03	0.00E+00	9.55E-03
		Cs-134	<7.64E-03	0.00E+00	7.64E-03
		Cs-137	<9.48E-03	0.00E+00	9.48E-03
		Be-7	<4.70E-02	0.00E+00	4.70E-02
		K-40	3.29E-01	1.57E-01	1.94E-01
428247	11/7/2016 - 11/14/2016	I-131	<9.15E-03	0.00E+00	9.15E-03
		Cs-134	<4.56E-03	0.00E+00	4.56E-03
		Cs-137	<7.32E-03	0.00E+00	7.32E-03
		Be-7	<5.22E-02	0.00E+00	5.22E-02
		K-40	4.39E-01	1.51E-01	1.15E-01
428923	11/14/2016 - 11/21/2016	I-131	<2.57E-02	0.00E+00	2.57E-02
		Cs-134	<1.28E-02	0.00E+00	1.28E-02
		Cs-137	<1.14E-02	0.00E+00	1.14E-02
		Be-7	<9.94E-02	0.00E+00	9.94E-02
		K-40	5.37E-01	2.10E-01	1.77E-01
429425	11/21/2016 - 11/28/2016	I-131	<4.72E-03	0.00E+00	4.72E-03
		Cs-134	<8.31E-03	0.00E+00	8.31E-03
		Cs-137	<8.25E-03	0.00E+00	8.25E-03
		Be-7	<5.82E-02	0.00E+00	5.82E-02
		K-40	4.17E-01	1.43E-01	3.14E-02
429985	11/28/2016 - 12/5/2016	I-131	<9.54E-03	0.00E+00	9.54E-03
		Cs-134	<6.32E-03	0.00E+00	6.32E-03
		Cs-137	<6.45E-03	0.00E+00	6.45E-03
		Be-7	<6.82E-02	0.00E+00	6.82E-02
		K-40	4.73E-01	1.46E-01	2.79E-02
430611	12/5/2016 - 12/12/2016	I-131	<7.13E-03	0.00E+00	7.13E-03
		Cs-134	<5.64E-03	0.00E+00	5.64E-03
		Cs-137	<7.65E-03	0.00E+00	7.65E-03
		Be-7	<5.98E-02	0.00E+00	5.98E-02
		K-40	3.43E-01	1.32E-01	1.14E-01
431093	12/12/2016 - 12/19/2016	I-131	<8.65E-03	0.00E+00	8.65E-03
		Cs-134	<7.00E-03	0.00E+00	7.00E-03
		Cs-137	<5.73E-03	0.00E+00	5.73E-03
		Be-7	<5.68E-02	0.00E+00	5.68E-02
		K-40	3.62E-01	1.55E-01	1.74E-01
431493	12/19/2016 - 12/27/2016	I-131	<8.21E-03	0.00E+00	8.21E-03
		Cs-134	<7.97E-03	0.00E+00	7.97E-03
		Cs-137	<6.32E-03	0.00E+00	6.32E-03
		Be-7	<4.83E-02	0.00E+00	4.83E-02
		K-40	3.17E-01	1.18E-01	9.31E-02

Sample Point 078.1 [INDICATOR - WSW @ 0.53 miles]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
398729	12/28/2015 - 1/5/2016	I-131	<1.44E-02	0.00E+00	1.44E-02
		Cs-134	<1.21E-02	0.00E+00	1.21E-02
		Cs-137	<1.33E-02	0.00E+00	1.33E-02
		Be-7	<1.14E-01	0.00E+00	1.14E-01
		K-40	<4.04E-01	0.00E+00	4.04E-01
398987	1/5/2016 - 1/11/2016	I-131	<7.82E-03	0.00E+00	7.82E-03
		Cs-134	<8.26E-03	0.00E+00	8.26E-03
		Cs-137	<7.83E-03	0.00E+00	7.83E-03



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

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

Sample Point 078.1 [INDICATOR - WSW @ 0.53 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
398987	1/5/2016 - 1/11/2016	Be-7	<7.03E-02	0.00E+00	7.03E-02
		K-40	<3.53E-01	0.00E+00	3.53E-01
399294	1/11/2016 - 1/18/2016	I-131	<1.54E-02	0.00E+00	1.54E-02
		Cs-134	<1.47E-02	0.00E+00	1.47E-02
		Cs-137	<1.31E-02	0.00E+00	1.31E-02
		Be-7	<6.60E-02	0.00E+00	6.60E-02
		K-40	4.21E-01	2.16E-01	2.56E-01
400035	1/18/2016 - 1/25/2016	I-131	<6.22E-03	0.00E+00	6.22E-03
		Cs-134	<6.94E-03	0.00E+00	6.94E-03
		Cs-137	<8.63E-03	0.00E+00	8.63E-03
		Be-7	<6.29E-02	0.00E+00	6.29E-02
		K-40	3.79E-01	1.31E-01	2.85E-02
400397	1/25/2016 - 2/1/2016	I-131	<1.43E-02	0.00E+00	1.43E-02
		Cs-134	<1.22E-02	0.00E+00	1.22E-02
		Cs-137	<1.29E-02	0.00E+00	1.29E-02
		Be-7	<7.55E-02	0.00E+00	7.55E-02
		K-40	3.86E-01	2.07E-01	2.49E-01
401035	2/1/2016 - 2/8/2016	I-131	<6.14E-03	0.00E+00	6.14E-03
		Cs-134	<5.95E-03	0.00E+00	5.95E-03
		Cs-137	<8.07E-03	0.00E+00	8.07E-03
		Be-7	<5.61E-02	0.00E+00	5.61E-02
		K-40	3.50E-01	1.47E-01	1.54E-01
401389	2/8/2016 - 2/15/2016	I-131	<1.18E-02	0.00E+00	1.18E-02
		Cs-134	<3.71E-03	0.00E+00	3.71E-03
		Cs-137	<5.82E-03	0.00E+00	5.82E-03
		Be-7	<5.33E-02	0.00E+00	5.33E-02
		K-40	5.46E-01	1.58E-01	2.85E-02
401834	2/15/2016 - 2/22/2016	I-131	<7.57E-03	0.00E+00	7.57E-03
		Cs-134	<4.53E-03	0.00E+00	4.53E-03
		Cs-137	<1.01E-02	0.00E+00	1.01E-02
		Be-7	<3.65E-02	0.00E+00	3.65E-02
		K-40	3.76E-01	1.30E-01	2.83E-02
402355	2/22/2016 - 2/29/2016	I-131	<7.43E-03	0.00E+00	7.43E-03
		Cs-134	<3.64E-03	0.00E+00	3.64E-03
		Cs-137	<8.66E-03	0.00E+00	8.66E-03
		Be-7	<4.81E-02	0.00E+00	4.81E-02
		K-40	<9.65E-02	0.00E+00	9.65E-02
403079	2/29/2016 - 3/7/2016	I-131	<9.70E-03	0.00E+00	9.70E-03
		Cs-134	<7.59E-03	0.00E+00	7.59E-03
		Cs-137	<6.77E-03	0.00E+00	6.77E-03
		Be-7	<4.37E-02	0.00E+00	4.37E-02
		K-40	2.25E-01	1.20E-01	1.41E-01
404570	3/7/2016 - 3/14/2016	I-131	<8.58E-03	0.00E+00	8.58E-03
		Cs-134	<6.86E-03	0.00E+00	6.86E-03
		Cs-137	<7.25E-03	0.00E+00	7.25E-03
		Be-7	<5.18E-02	0.00E+00	5.18E-02
		K-40	3.39E-01	1.39E-01	1.35E-01
405437	3/14/2016 - 3/21/2016	I-131	<8.02E-03	0.00E+00	8.02E-03
		Cs-134	<6.35E-03	0.00E+00	6.35E-03
		Cs-137	<9.04E-03	0.00E+00	9.04E-03



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

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

Sample Point 078.1 [INDICATOR - WSW @ 0.53 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
405437	3/14/2016 - 3/21/2016	Be-7	<4.69E-02	0.00E+00	4.69E-02
		K-40	3.39E-01	1.37E-01	1.30E-01
406068	3/21/2016 - 3/28/2016	Nuclide	Activity	2 Sigma Error	MDA
		I-131	<8.23E-03	0.00E+00	8.23E-03
		Cs-134	<7.77E-03	0.00E+00	7.77E-03
		Cs-137	<9.65E-03	0.00E+00	9.65E-03
		Be-7	<5.64E-02	0.00E+00	5.64E-02
406427	3/28/2016 - 4/4/2016	K-40	3.77E-01	1.30E-01	2.83E-02
		Nuclide	Activity	2 Sigma Error	MDA
406427	3/28/2016 - 4/4/2016	I-131	<1.04E-02	0.00E+00	1.04E-02
		Cs-134	<5.84E-03	0.00E+00	5.84E-03
		Cs-137	<6.24E-03	0.00E+00	6.24E-03
		Be-7	<6.28E-02	0.00E+00	6.28E-02
		K-40	3.55E-01	1.39E-01	1.12E-01
407601	4/4/2016 - 4/11/2016	Nuclide	Activity	2 Sigma Error	MDA
		I-131	<1.10E-02	0.00E+00	1.10E-02
		Cs-134	<5.52E-03	0.00E+00	5.52E-03
		Cs-137	<4.70E-03	0.00E+00	4.70E-03
		Be-7	<5.42E-02	0.00E+00	5.42E-02
408162	4/11/2016 - 4/18/2016	K-40	<3.20E-01	0.00E+00	3.20E-01
		Nuclide	Activity	2 Sigma Error	MDA
408162	4/11/2016 - 4/18/2016	I-131	<6.74E-03	0.00E+00	6.74E-03
		Cs-134	<6.91E-03	0.00E+00	6.91E-03
		Cs-137	<8.58E-03	0.00E+00	8.58E-03
		Be-7	<6.96E-02	0.00E+00	6.96E-02
		K-40	3.42E-01	1.38E-01	1.32E-01
409484	4/18/2016 - 4/25/2016	Nuclide	Activity	2 Sigma Error	MDA
		I-131	<1.00E-02	0.00E+00	1.00E-02
		Cs-134	<6.70E-03	0.00E+00	6.70E-03
		Cs-137	<9.35E-03	0.00E+00	9.35E-03
		Be-7	<5.08E-02	0.00E+00	5.08E-02
409816	4/25/2016 - 5/2/2016	K-40	2.73E-01	1.29E-01	1.43E-01
		Nuclide	Activity	2 Sigma Error	MDA
409816	4/25/2016 - 5/2/2016	I-131	<1.03E-02	0.00E+00	1.03E-02
		Cs-134	<6.47E-03	0.00E+00	6.47E-03
		Cs-137	<1.06E-02	0.00E+00	1.06E-02
		Be-7	<6.47E-02	0.00E+00	6.47E-02
		K-40	3.95E-01	1.68E-01	1.88E-01
410990	5/2/2016 - 5/9/2016	Nuclide	Activity	2 Sigma Error	MDA
		I-131	<6.79E-03	0.00E+00	6.79E-03
		Cs-134	<9.01E-03	0.00E+00	9.01E-03
		Cs-137	<8.92E-03	0.00E+00	8.92E-03
		Be-7	<3.59E-02	0.00E+00	3.59E-02
411462	5/9/2016 - 5/16/2016	K-40	3.76E-01	1.63E-01	1.92E-01
		Nuclide	Activity	2 Sigma Error	MDA
411462	5/9/2016 - 5/16/2016	I-131	<9.26E-03	0.00E+00	9.26E-03
		Cs-134	<6.07E-03	0.00E+00	6.07E-03
		Cs-137	<5.84E-03	0.00E+00	5.84E-03
		Be-7	<6.45E-02	0.00E+00	6.45E-02
		K-40	3.75E-01	1.35E-01	9.38E-02
411795	5/16/2016 - 5/23/2016	Nuclide	Activity	2 Sigma Error	MDA
		I-131	<8.97E-03	0.00E+00	8.97E-03
		Cs-134	<7.60E-03	0.00E+00	7.60E-03
		Cs-137	<5.52E-03	0.00E+00	5.52E-03
		Be-7	<4.68E-02	0.00E+00	4.68E-02
412255	5/23/2016 - 5/31/2016	K-40	3.24E-01	1.31E-01	1.18E-01
		Nuclide	Activity	2 Sigma Error	MDA
412255	5/23/2016 - 5/31/2016	I-131	<8.01E-03	0.00E+00	8.01E-03
		Cs-134	<7.09E-03	0.00E+00	7.09E-03
		Cs-137	<7.84E-03	0.00E+00	7.84E-03



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

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

Sample Point 078.1 [INDICATOR - WSW @ 0.53 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
412255	5/23/2016 - 5/31/2016	Be-7	<4.30E-02	0.00E+00	4.30E-02
		K-40	2.89E-01	1.16E-01	9.94E-02
412773	5/31/2016 - 6/6/2016	I-131	<1.05E-02	0.00E+00	1.05E-02
		Cs-134	<8.85E-03	0.00E+00	8.85E-03
		Cs-137	<7.47E-03	0.00E+00	7.47E-03
		Be-7	<8.10E-02	0.00E+00	8.10E-02
		K-40	4.03E-01	1.56E-01	1.35E-01
413388	6/6/2016 - 6/13/2016	I-131	<5.38E-03	0.00E+00	5.38E-03
		Cs-134	<6.45E-03	0.00E+00	6.45E-03
		Cs-137	<9.69E-03	0.00E+00	9.69E-03
		Be-7	<5.59E-02	0.00E+00	5.59E-02
		K-40	4.94E-01	1.51E-01	2.85E-02
413924	6/13/2016 - 6/20/2016	I-131	<9.09E-03	0.00E+00	9.09E-03
		Cs-134	<7.73E-03	0.00E+00	7.73E-03
		Cs-137	<7.93E-03	0.00E+00	7.93E-03
		Be-7	<4.75E-02	0.00E+00	4.75E-02
		K-40	5.10E-01	1.61E-01	1.12E-01
415062	6/20/2016 - 6/27/2016	I-131	<5.22E-03	0.00E+00	5.22E-03
		Cs-134	<6.83E-03	0.00E+00	6.83E-03
		Cs-137	<1.00E-02	0.00E+00	1.00E-02
		Be-7	<5.49E-02	0.00E+00	5.49E-02
		K-40	4.63E-01	1.55E-01	1.17E-01
415463	6/27/2016 - 7/5/2016	I-131	<2.76E-02	0.00E+00	2.76E-02
		Cs-134	<3.31E-02	0.00E+00	3.31E-02
		Cs-137	<3.55E-02	0.00E+00	3.55E-02
		Be-7	<2.56E-01	0.00E+00	2.56E-01
		K-40	1.97E+00	6.37E-01	4.92E-01
416440	7/5/2016 - 7/11/2016	I-131	<9.75E-03	0.00E+00	9.75E-03
		Cs-134	<5.48E-03	0.00E+00	5.48E-03
		Cs-137	<9.63E-03	0.00E+00	9.63E-03
		Be-7	<5.04E-02	0.00E+00	5.04E-02
		K-40	4.74E-01	1.85E-01	1.93E-01
417053	7/11/2016 - 7/18/2016	I-131	<9.76E-03	0.00E+00	9.76E-03
		Cs-134	<5.72E-03	0.00E+00	5.72E-03
		Cs-137	<7.11E-03	0.00E+00	7.11E-03
		Be-7	<6.08E-02	0.00E+00	6.08E-02
		K-40	3.22E-01	1.40E-01	1.52E-01
417444	7/18/2016 - 7/25/2016	I-131	<7.90E-03	0.00E+00	7.90E-03
		Cs-134	<6.82E-03	0.00E+00	6.82E-03
		Cs-137	<9.03E-03	0.00E+00	9.03E-03
		Be-7	<5.83E-02	0.00E+00	5.83E-02
		K-40	4.64E-01	1.45E-01	2.80E-02
417837	7/25/2016 - 8/1/2016	I-131	<1.07E-02	0.00E+00	1.07E-02
		Cs-134	<4.97E-03	0.00E+00	4.97E-03
		Cs-137	<1.06E-02	0.00E+00	1.06E-02
		Be-7	<3.15E-02	0.00E+00	3.15E-02
		K-40	4.73E-01	1.60E-01	1.14E-01
418313	8/1/2016 - 8/8/2016	I-131	<1.02E-02	0.00E+00	1.02E-02
		Cs-134	<8.93E-03	0.00E+00	8.93E-03
		Cs-137	<1.21E-02	0.00E+00	1.21E-02



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

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

Sample Point 078.1 [INDICATOR - WSW @ 0.53 miles]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
418313	8/1/2016 - 8/8/2016	Be-7	<5.15E-02	0.00E+00	5.15E-02
		K-40	5.04E-01	1.57E-01	3.04E-02
419031	8/8/2016 - 8/15/2016	Nuclide	Activity	2 Sigma Error	MDA
		I-131	<6.61E-03	0.00E+00	6.61E-03
		Cs-134	<7.14E-03	0.00E+00	7.14E-03
		Cs-137	<4.35E-03	0.00E+00	4.35E-03
		Be-7	<3.55E-02	0.00E+00	3.55E-02
419529	8/15/2016 - 8/22/2016	K-40	4.91E-01	1.62E-01	1.35E-01
		Nuclide	Activity	2 Sigma Error	MDA
419529	8/15/2016 - 8/22/2016	I-131	<1.03E-02	0.00E+00	1.03E-02
		Cs-134	<7.64E-03	0.00E+00	7.64E-03
		Cs-137	<9.50E-03	0.00E+00	9.50E-03
		Be-7	<3.19E-02	0.00E+00	3.19E-02
		K-40	4.44E-01	1.60E-01	1.33E-01
420058	8/22/2016 - 8/29/2016	Nuclide	Activity	2 Sigma Error	MDA
		I-131	<9.69E-03	0.00E+00	9.69E-03
		Cs-134	<6.99E-03	0.00E+00	6.99E-03
		Cs-137	<9.95E-03	0.00E+00	9.95E-03
		Be-7	<3.96E-02	0.00E+00	3.96E-02
420058	8/22/2016 - 8/29/2016	K-40	3.93E-01	1.46E-01	1.12E-01
		Nuclide	Activity	2 Sigma Error	MDA
420604	8/29/2016 - 9/6/2016	I-131	<5.58E-03	0.00E+00	5.58E-03
		Cs-134	<7.34E-03	0.00E+00	7.34E-03
		Cs-137	<7.86E-03	0.00E+00	7.86E-03
		Be-7	<5.69E-02	0.00E+00	5.69E-02
		K-40	4.22E-01	1.29E-01	2.43E-02
421470	9/6/2016 - 9/12/2016	Nuclide	Activity	2 Sigma Error	MDA
		I-131	<7.43E-03	0.00E+00	7.43E-03
		Cs-134	<8.99E-03	0.00E+00	8.99E-03
		Cs-137	<9.22E-03	0.00E+00	9.22E-03
		Be-7	<6.89E-02	0.00E+00	6.89E-02
421470	9/6/2016 - 9/12/2016	K-40	4.18E-01	1.54E-01	1.10E-01
		Nuclide	Activity	2 Sigma Error	MDA
422606	9/12/2016 - 9/19/2016	I-131	<1.11E-02	0.00E+00	1.11E-02
		Cs-134	<7.56E-03	0.00E+00	7.56E-03
		Cs-137	<7.52E-03	0.00E+00	7.52E-03
		Be-7	<7.62E-02	0.00E+00	7.62E-02
		K-40	3.57E-01	1.26E-01	2.84E-02
423349	9/19/2016 - 9/26/2016	Nuclide	Activity	2 Sigma Error	MDA
		I-131	<6.00E-03	0.00E+00	6.00E-03
		Cs-134	<6.29E-03	0.00E+00	6.29E-03
		Cs-137	<7.15E-03	0.00E+00	7.15E-03
		Be-7	<6.44E-02	0.00E+00	6.44E-02
423349	9/19/2016 - 9/26/2016	K-40	3.98E-01	1.32E-01	2.76E-02
		Nuclide	Activity	2 Sigma Error	MDA
424489	9/26/2016 - 10/3/2016	I-131	<7.58E-03	0.00E+00	7.58E-03
		Cs-134	<6.08E-03	0.00E+00	6.08E-03
		Cs-137	<7.57E-03	0.00E+00	7.57E-03
		Be-7	<5.69E-02	0.00E+00	5.69E-02
		K-40	4.41E-01	1.55E-01	1.33E-01
425485	10/3/2016 - 10/10/2016	Nuclide	Activity	2 Sigma Error	MDA
		I-131	<8.47E-03	0.00E+00	8.47E-03
		Cs-134	<4.57E-03	0.00E+00	4.57E-03
		Cs-137	<8.02E-03	0.00E+00	8.02E-03
		Be-7	<5.59E-02	0.00E+00	5.59E-02
425485	10/3/2016 - 10/10/2016	K-40	<3.15E-01	0.00E+00	3.15E-01
		Nuclide	Activity	2 Sigma Error	MDA
426027	10/10/2016 - 10/17/2016	I-131	<8.81E-03	0.00E+00	8.81E-03
		Cs-134	<5.85E-03	0.00E+00	5.85E-03
		Cs-137	<1.13E-02	0.00E+00	1.13E-02
		Nuclide	Activity	2 Sigma Error	MDA



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

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

Sample Point 078.1 [INDICATOR - WSW @ 0.53 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
426027	10/10/2016 - 10/17/2016	Be-7	<1.18E-02	0.00E+00	1.18E-02
		K-40	5.34E-01	1.81E-01	1.63E-01
426396	10/17/2016 - 10/24/2016	I-131	<8.99E-03	0.00E+00	8.99E-03
		Cs-134	<3.67E-03	0.00E+00	3.67E-03
		Cs-137	<8.76E-03	0.00E+00	8.76E-03
		Be-7	<4.78E-02	0.00E+00	4.78E-02
		K-40	2.19E-01	1.23E-01	1.53E-01
427080	10/24/2016 - 10/31/2016	I-131	<9.88E-03	0.00E+00	9.88E-03
		Cs-134	<7.59E-03	0.00E+00	7.59E-03
		Cs-137	<1.17E-02	0.00E+00	1.17E-02
		Be-7	<4.64E-02	0.00E+00	4.64E-02
		K-40	3.94E-01	1.38E-01	3.05E-02
427748	10/31/2016 - 11/7/2016	I-131	<8.42E-03	0.00E+00	8.42E-03
		Cs-134	<6.31E-03	0.00E+00	6.31E-03
		Cs-137	<7.02E-03	0.00E+00	7.02E-03
		Be-7	<5.98E-02	0.00E+00	5.98E-02
		K-40	4.85E-01	1.60E-01	1.14E-01
428248	11/7/2016 - 11/14/2016	I-131	<8.01E-03	0.00E+00	8.01E-03
		Cs-134	<8.16E-03	0.00E+00	8.16E-03
		Cs-137	<7.26E-03	0.00E+00	7.26E-03
		Be-7	<1.19E-02	0.00E+00	1.19E-02
		K-40	<4.01E-01	0.00E+00	4.01E-01
428924	11/14/2016 - 11/21/2016	I-131	<2.62E-02	0.00E+00	2.62E-02
		Cs-134	<1.03E-02	0.00E+00	1.03E-02
		Cs-137	<1.27E-02	0.00E+00	1.27E-02
		Be-7	<1.13E-01	0.00E+00	1.13E-01
		K-40	7.17E-01	2.42E-01	1.81E-01
429426	11/21/2016 - 11/28/2016	I-131	<9.58E-03	0.00E+00	9.58E-03
		Cs-134	<6.84E-03	0.00E+00	6.84E-03
		Cs-137	<7.23E-03	0.00E+00	7.23E-03
		Be-7	<4.22E-02	0.00E+00	4.22E-02
		K-40	4.85E-01	1.48E-01	2.80E-02
429986	11/28/2016 - 12/5/2016	I-131	<7.89E-03	0.00E+00	7.89E-03
		Cs-134	<8.50E-03	0.00E+00	8.50E-03
		Cs-137	<8.73E-03	0.00E+00	8.73E-03
		Be-7	<7.54E-02	0.00E+00	7.54E-02
		K-40	4.37E-01	1.45E-01	3.04E-02
430612	12/5/2016 - 12/12/2016	I-131	<5.94E-03	0.00E+00	5.94E-03
		Cs-134	<6.74E-03	0.00E+00	6.74E-03
		Cs-137	<7.79E-03	0.00E+00	7.79E-03
		Be-7	<6.10E-02	0.00E+00	6.10E-02
		K-40	3.02E-01	1.31E-01	1.33E-01
431094	12/12/2016 - 12/19/2016	I-131	<8.80E-03	0.00E+00	8.80E-03
		Cs-134	<8.43E-03	0.00E+00	8.43E-03
		Cs-137	<4.62E-03	0.00E+00	4.62E-03
		Be-7	<6.84E-02	0.00E+00	6.84E-02
		K-40	4.28E-01	1.56E-01	1.40E-01
431494	12/19/2016 - 12/27/2016	I-131	<8.21E-03	0.00E+00	8.21E-03
		Cs-134	<6.69E-03	0.00E+00	6.69E-03
		Cs-137	<6.29E-03	0.00E+00	6.29E-03



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

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

Sample Point 078.1 [INDICATOR - WSW @ 0.53 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
431494	12/19/2016 - 12/27/2016	Be-7	<3.18E-02	0.00E+00	3.18E-02
		K-40	5.02E-01	1.42E-01	2.43E-02

Sample Point 079 [INDICATOR - NE @ 0.56 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
398730	12/28/2015 - 1/5/2016	I-131	<1.90E-02	0.00E+00	1.90E-02
		Cs-134	<1.21E-02	0.00E+00	1.21E-02
		Cs-137	<8.73E-03	0.00E+00	8.73E-03
		Be-7	<8.21E-02	0.00E+00	8.21E-02
		K-40	6.29E-01	2.34E-01	2.36E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
398988	1/5/2016 - 1/11/2016	I-131	<9.17E-03	0.00E+00	9.17E-03
		Cs-134	<7.71E-03	0.00E+00	7.71E-03
		Cs-137	<1.20E-02	0.00E+00	1.20E-02
		Be-7	<8.88E-02	0.00E+00	8.88E-02
		K-40	4.77E-01	1.97E-01	2.12E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
399295	1/11/2016 - 1/18/2016	I-131	<1.54E-02	0.00E+00	1.54E-02
		Cs-134	<1.40E-02	0.00E+00	1.40E-02
		Cs-137	<1.54E-02	0.00E+00	1.54E-02
		Be-7	<8.54E-02	0.00E+00	8.54E-02
		K-40	<5.11E-01	0.00E+00	5.11E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
400036	1/18/2016 - 1/25/2016	I-131	<6.99E-03	0.00E+00	6.99E-03
		Cs-134	<7.14E-03	0.00E+00	7.14E-03
		Cs-137	<7.55E-03	0.00E+00	7.55E-03
		Be-7	<6.08E-02	0.00E+00	6.08E-02
		K-40	2.97E-01	1.37E-01	1.51E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
400398	1/25/2016 - 2/1/2016	I-131	<1.51E-02	0.00E+00	1.51E-02
		Cs-134	<1.22E-02	0.00E+00	1.22E-02
		Cs-137	<1.70E-02	0.00E+00	1.70E-02
		Be-7	<8.39E-02	0.00E+00	8.39E-02
		K-40	6.89E-01	2.42E-01	1.93E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
401036	2/1/2016 - 2/8/2016	I-131	<8.28E-03	0.00E+00	8.28E-03
		Cs-134	<8.84E-03	0.00E+00	8.84E-03
		Cs-137	<8.31E-03	0.00E+00	8.31E-03
		Be-7	<6.28E-02	0.00E+00	6.28E-02
		K-40	<3.03E-01	0.00E+00	3.03E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
401390	2/8/2016 - 2/15/2016	I-131	<8.26E-03	0.00E+00	8.26E-03
		Cs-134	<8.68E-03	0.00E+00	8.68E-03
		Cs-137	<8.16E-03	0.00E+00	8.16E-03
		Be-7	<5.34E-02	0.00E+00	5.34E-02
		K-40	4.47E-01	1.48E-01	3.10E-02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
401835	2/15/2016 - 2/22/2016	I-131	<1.20E-02	0.00E+00	1.20E-02
		Cs-134	<9.56E-03	0.00E+00	9.56E-03
		Cs-137	<6.33E-03	0.00E+00	6.33E-03
		Be-7	<4.74E-02	0.00E+00	4.74E-02
		K-40	4.48E-01	1.48E-01	3.11E-02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
402356	2/22/2016 - 2/29/2016	I-131	<7.94E-03	0.00E+00	7.94E-03
		Cs-134	<7.88E-03	0.00E+00	7.88E-03
		Cs-137	<7.04E-03	0.00E+00	7.04E-03
		Be-7	<4.64E-02	0.00E+00	4.64E-02
		K-40	5.08E-01	1.61E-01	1.22E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
403080	2/29/2016 - 3/7/2016	I-131	<1.01E-02	0.00E+00	1.01E-02
		Cs-134	<7.79E-03	0.00E+00	7.79E-03



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

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

Sample Point 079 [INDICATOR - NE @ 0.56 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
403080	2/29/2016 - 3/7/2016	Cs-137	<8.98E-03	0.00E+00	8.98E-03
		Be-7	<5.36E-02	0.00E+00	5.36E-02
		K-40	3.50E-01	1.40E-01	1.14E-01
404571	3/7/2016 - 3/14/2016	I-131	<1.01E-02	0.00E+00	1.01E-02
		Cs-134	<4.01E-03	0.00E+00	4.01E-03
		Cs-137	<8.87E-03	0.00E+00	8.87E-03
		Be-7	<5.30E-02	0.00E+00	5.30E-02
		K-40	3.81E-01	1.54E-01	1.53E-01
405438	3/14/2016 - 3/21/2016	I-131	<7.25E-03	0.00E+00	7.25E-03
		Cs-134	<4.52E-03	0.00E+00	4.52E-03
		Cs-137	<9.08E-03	0.00E+00	9.08E-03
		Be-7	<4.26E-02	0.00E+00	4.26E-02
		K-40	2.86E-01	1.34E-01	1.48E-01
406069	3/21/2016 - 3/28/2016	I-131	<7.46E-03	0.00E+00	7.46E-03
		Cs-134	<6.01E-03	0.00E+00	6.01E-03
		Cs-137	<7.47E-03	0.00E+00	7.47E-03
		Be-7	<4.34E-02	0.00E+00	4.34E-02
		K-40	2.37E-01	1.21E-01	1.38E-01
406428	3/28/2016 - 4/4/2016	I-131	<1.03E-02	0.00E+00	1.03E-02
		Cs-134	<8.12E-03	0.00E+00	8.12E-03
		Cs-137	<6.23E-03	0.00E+00	6.23E-03
		Be-7	<4.78E-02	0.00E+00	4.78E-02
		K-40	4.41E-01	1.46E-01	3.07E-02
407602	4/4/2016 - 4/11/2016	I-131	<9.86E-03	0.00E+00	9.86E-03
		Cs-134	<7.95E-03	0.00E+00	7.95E-03
		Cs-137	<9.16E-03	0.00E+00	9.16E-03
		Be-7	<5.48E-02	0.00E+00	5.48E-02
		K-40	3.77E-01	1.60E-01	1.67E-01
408163	4/11/2016 - 4/18/2016	I-131	<9.36E-03	0.00E+00	9.36E-03
		Cs-134	<6.58E-03	0.00E+00	6.58E-03
		Cs-137	<6.71E-03	0.00E+00	6.71E-03
		Be-7	<5.31E-02	0.00E+00	5.31E-02
		K-40	3.03E-01	1.15E-01	2.83E-02
409485	4/18/2016 - 4/25/2016	I-131	<8.55E-03	0.00E+00	8.55E-03
		Cs-134	<6.92E-03	0.00E+00	6.92E-03
		Cs-137	<1.09E-02	0.00E+00	1.09E-02
		Be-7	<5.60E-02	0.00E+00	5.60E-02
		K-40	4.01E-01	1.45E-01	1.06E-01
409817	4/25/2016 - 5/2/2016	I-131	<7.51E-03	0.00E+00	7.51E-03
		Cs-134	<6.66E-03	0.00E+00	6.66E-03
		Cs-137	<6.80E-03	0.00E+00	6.80E-03
		Be-7	<6.41E-02	0.00E+00	6.41E-02
		K-40	3.63E-01	1.48E-01	1.51E-01
410991	5/2/2016 - 5/9/2016	I-131	<9.09E-03	0.00E+00	9.09E-03
		Cs-134	<7.75E-03	0.00E+00	7.75E-03
		Cs-137	<7.95E-03	0.00E+00	7.95E-03
		Be-7	<6.24E-02	0.00E+00	6.24E-02
		K-40	4.49E-01	1.51E-01	1.11E-01
411463	5/9/2016 - 5/16/2016	I-131	<8.14E-03	0.00E+00	8.14E-03
		Cs-134	<7.76E-03	0.00E+00	7.76E-03



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

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

Sample Point 079 [INDICATOR - NE @ 0.56 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
411463	5/9/2016 - 5/16/2016	Cs-137	<8.20E-03	0.00E+00	8.20E-03
		Be-7	<6.69E-02	0.00E+00	6.69E-02
		K-40	4.09E-01	1.48E-01	1.06E-01
411796	5/16/2016 - 5/23/2016	I-131	<8.53E-03	0.00E+00	8.53E-03
		Cs-134	<6.42E-03	0.00E+00	6.42E-03
		Cs-137	<9.96E-03	0.00E+00	9.96E-03
		Be-7	<6.86E-02	0.00E+00	6.86E-02
		K-40	3.81E-01	1.45E-01	1.19E-01
412256	5/23/2016 - 5/31/2016	I-131	<6.33E-03	0.00E+00	6.33E-03
		Cs-134	<5.86E-03	0.00E+00	5.86E-03
		Cs-137	<5.63E-03	0.00E+00	5.63E-03
		Be-7	<3.66E-02	0.00E+00	3.66E-02
		K-40	3.88E-01	1.30E-01	2.77E-02
412774	5/31/2016 - 6/6/2016	I-131	<9.46E-03	0.00E+00	9.46E-03
		Cs-134	<7.29E-03	0.00E+00	7.29E-03
		Cs-137	<6.41E-03	0.00E+00	6.41E-03
		Be-7	<5.36E-02	0.00E+00	5.36E-02
		K-40	5.07E-01	1.73E-01	1.32E-01
413389	6/6/2016 - 6/13/2016	I-131	<8.14E-03	0.00E+00	8.14E-03
		Cs-134	<7.10E-03	0.00E+00	7.10E-03
		Cs-137	<8.84E-03	0.00E+00	8.84E-03
		Be-7	<6.37E-02	0.00E+00	6.37E-02
		K-40	3.82E-01	1.38E-01	1.01E-01
413925	6/13/2016 - 6/20/2016	I-131	<1.02E-02	0.00E+00	1.02E-02
		Cs-134	<5.67E-03	0.00E+00	5.67E-03
		Cs-137	<8.58E-03	0.00E+00	8.58E-03
		Be-7	<4.58E-02	0.00E+00	4.58E-02
		K-40	4.43E-01	1.53E-01	1.12E-01
415063	6/20/2016 - 6/27/2016	I-131	<1.17E-02	0.00E+00	1.17E-02
		Cs-134	<8.45E-03	0.00E+00	8.45E-03
		Cs-137	<7.90E-03	0.00E+00	7.90E-03
		Be-7	<5.51E-02	0.00E+00	5.51E-02
		K-40	5.88E-01	1.65E-01	2.80E-02
415464	6/27/2016 - 7/5/2016	I-131	<7.16E-03	0.00E+00	7.16E-03
		Cs-134	<5.48E-03	0.00E+00	5.48E-03
		Cs-137	<5.58E-03	0.00E+00	5.58E-03
		Be-7	<5.09E-02	0.00E+00	5.09E-02
		K-40	2.84E-01	1.04E-01	2.41E-02
416441	7/5/2016 - 7/11/2016	I-131	<1.01E-02	0.00E+00	1.01E-02
		Cs-134	<8.44E-03	0.00E+00	8.44E-03
		Cs-137	<7.43E-03	0.00E+00	7.43E-03
		Be-7	<6.17E-02	0.00E+00	6.17E-02
		K-40	4.45E-01	1.59E-01	3.66E-02
417054	7/11/2016 - 7/18/2016	I-131	<4.59E-03	0.00E+00	4.59E-03
		Cs-134	<8.09E-03	0.00E+00	8.09E-03
		Cs-137	<1.00E-02	0.00E+00	1.00E-02
		Be-7	<7.53E-02	0.00E+00	7.53E-02
		K-40	3.83E-01	1.47E-01	1.25E-01
417445	7/18/2016 - 7/25/2016	I-131	<1.09E-02	0.00E+00	1.09E-02
		Cs-134	<6.62E-03	0.00E+00	6.62E-03



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

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

Sample Point 079 [INDICATOR - NE @ 0.56 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
417445	7/18/2016 - 7/25/2016	Cs-137	<8.97E-03	0.00E+00	8.97E-03
		Be-7	<5.78E-02	0.00E+00	5.78E-02
		K-40	4.53E-01	1.58E-01	1.16E-01
417838	7/25/2016 - 8/1/2016	I-131	<1.04E-02	0.00E+00	1.04E-02
		Cs-134	<9.11E-03	0.00E+00	9.11E-03
		Cs-137	<9.57E-03	0.00E+00	9.57E-03
		Be-7	<5.74E-02	0.00E+00	5.74E-02
418314	8/1/2016 - 8/8/2016	K-40	4.12E-01	1.42E-01	3.10E-02
419032	8/8/2016 - 8/15/2016	I-131	<1.09E-02	0.00E+00	1.09E-02
		Cs-134	<7.73E-03	0.00E+00	7.73E-03
		Cs-137	<8.92E-03	0.00E+00	8.92E-03
		Be-7	<4.72E-02	0.00E+00	4.72E-02
41932	8/8/2016 - 8/15/2016	K-40	3.05E-01	1.28E-01	1.02E-01
419530	8/15/2016 - 8/22/2016	I-131	<8.02E-03	0.00E+00	8.02E-03
		Cs-134	<7.58E-03	0.00E+00	7.58E-03
		Cs-137	<8.75E-03	0.00E+00	8.75E-03
		Be-7	<5.64E-02	0.00E+00	5.64E-02
419530	8/15/2016 - 8/22/2016	K-40	3.79E-01	1.48E-01	1.33E-01
420059	8/22/2016 - 8/29/2016	I-131	<8.29E-03	0.00E+00	8.29E-03
		Cs-134	<8.32E-03	0.00E+00	8.32E-03
		Cs-137	<8.27E-03	0.00E+00	8.27E-03
		Be-7	<6.26E-02	0.00E+00	6.26E-02
420059	8/22/2016 - 8/29/2016	K-40	3.95E-01	1.39E-01	3.14E-02
420605	8/29/2016 - 9/6/2016	I-131	<1.14E-02	0.00E+00	1.14E-02
		Cs-134	<7.71E-03	0.00E+00	7.71E-03
		Cs-137	<9.57E-03	0.00E+00	9.57E-03
		Be-7	<4.07E-02	0.00E+00	4.07E-02
420605	8/29/2016 - 9/6/2016	K-40	3.68E-01	1.55E-01	1.62E-01
421471	9/6/2016 - 9/12/2016	I-131	<7.30E-03	0.00E+00	7.30E-03
		Cs-134	<6.32E-03	0.00E+00	6.32E-03
		Cs-137	<6.28E-03	0.00E+00	6.28E-03
		Be-7	<5.68E-02	0.00E+00	5.68E-02
421471	9/6/2016 - 9/12/2016	K-40	3.76E-01	1.30E-01	9.99E-02
422607	9/12/2016 - 9/19/2016	I-131	<8.83E-03	0.00E+00	8.83E-03
		Cs-134	<8.31E-03	0.00E+00	8.31E-03
		Cs-137	<7.40E-03	0.00E+00	7.40E-03
		Be-7	<6.31E-02	0.00E+00	6.31E-02
422607	9/12/2016 - 9/19/2016	K-40	6.01E-01	1.77E-01	3.20E-02
423350	9/19/2016 - 9/26/2016	I-131	<6.56E-03	0.00E+00	6.56E-03
		Cs-134	<7.40E-03	0.00E+00	7.40E-03
		Cs-137	<6.59E-03	0.00E+00	6.59E-03
		Be-7	<5.24E-02	0.00E+00	5.24E-02
423350	9/19/2016 - 9/26/2016	K-40	4.42E-01	1.42E-01	2.85E-02
423350	9/19/2016 - 9/26/2016	I-131	<8.53E-03	0.00E+00	8.53E-03
		Cs-134	<7.55E-03	0.00E+00	7.55E-03
		Cs-137	<1.06E-02	0.00E+00	1.06E-02
		Be-7	<4.60E-02	0.00E+00	4.60E-02
423350	9/19/2016 - 9/26/2016	K-40	4.25E-01	1.63E-01	1.58E-01
424490	9/26/2016 - 10/3/2016	I-131	<8.12E-03	0.00E+00	8.12E-03
		Cs-134	<7.07E-03	0.00E+00	7.07E-03



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

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

Sample Point 079 [INDICATOR - NE @ 0.56 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
424490	9/26/2016 - 10/3/2016	Cs-137	<9.45E-03	0.00E+00	9.45E-03
		Be-7	<5.66E-02	0.00E+00	5.66E-02
		K-40	3.79E-01	1.42E-01	1.01E-01
425486	10/3/2016 - 10/10/2016	I-131	<9.24E-03	0.00E+00	9.24E-03
		Cs-134	<6.12E-03	0.00E+00	6.12E-03
		Cs-137	<7.61E-03	0.00E+00	7.61E-03
		Be-7	<5.35E-02	0.00E+00	5.35E-02
426028	10/10/2016 - 10/17/2016	K-40	3.84E-01	1.43E-01	1.32E-01
426397	10/17/2016 - 10/24/2016	I-131	<8.78E-03	0.00E+00	8.78E-03
		Cs-134	<7.28E-03	0.00E+00	7.28E-03
		Cs-137	<7.71E-03	0.00E+00	7.71E-03
		Be-7	<5.80E-02	0.00E+00	5.80E-02
427081	10/24/2016 - 10/31/2016	K-40	2.94E-01	1.35E-01	1.46E-01
427749	10/31/2016 - 11/7/2016	I-131	<9.15E-03	0.00E+00	9.15E-03
		Cs-134	<5.74E-03	0.00E+00	5.74E-03
		Cs-137	<4.87E-03	0.00E+00	4.87E-03
		Be-7	<3.96E-02	0.00E+00	3.96E-02
428249	11/7/2016 - 11/14/2016	K-40	<2.85E-01	0.00E+00	2.85E-01
428925	11/14/2016 - 11/21/2016	I-131	<7.06E-03	0.00E+00	7.06E-03
		Cs-134	<7.45E-03	0.00E+00	7.45E-03
		Cs-137	<6.27E-03	0.00E+00	6.27E-03
		Be-7	<5.74E-02	0.00E+00	5.74E-02
429427	11/21/2016 - 11/28/2016	K-40	<2.64E-01	0.00E+00	2.64E-01
429987	11/28/2016 - 12/5/2016	I-131	<9.63E-03	0.00E+00	9.63E-03
		Cs-134	<8.13E-03	0.00E+00	8.13E-03
		Cs-137	<6.51E-03	0.00E+00	6.51E-03
		Be-7	<5.59E-02	0.00E+00	5.59E-02
430613	12/5/2016 - 12/12/2016	K-40	3.73E-01	1.29E-01	2.81E-02
429987	11/28/2016 - 12/5/2016	I-131	<2.62E-02	0.00E+00	2.62E-02
		Cs-134	<1.59E-02	0.00E+00	1.59E-02
		Cs-137	<1.30E-02	0.00E+00	1.30E-02
		Be-7	<1.06E-01	0.00E+00	1.06E-01
429987	11/28/2016 - 12/5/2016	K-40	4.74E-01	2.15E-01	2.16E-01
429987	11/28/2016 - 12/5/2016	I-131	<6.17E-03	0.00E+00	6.17E-03
		Cs-134	<7.32E-03	0.00E+00	7.32E-03
		Cs-137	<6.53E-03	0.00E+00	6.53E-03
		Be-7	<4.71E-02	0.00E+00	4.71E-02
429987	11/28/2016 - 12/5/2016	K-40	4.35E-01	1.71E-01	1.90E-01
429987	11/28/2016 - 12/5/2016	I-131	<7.95E-03	0.00E+00	7.95E-03
		Cs-134	<7.07E-03	0.00E+00	7.07E-03
		Cs-137	<8.04E-03	0.00E+00	8.04E-03
		Be-7	<5.24E-02	0.00E+00	5.24E-02
429987	11/28/2016 - 12/5/2016	K-40	<3.14E-01	0.00E+00	3.14E-01
429987	11/28/2016 - 12/5/2016	I-131	<9.39E-03	0.00E+00	9.39E-03
		Cs-134	<5.63E-03	0.00E+00	5.63E-03



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

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

Sample Point 079 [INDICATOR - NE @ 0.56 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
430613	12/5/2016 - 12/12/2016	Cs-137	<9.16E-03	0.00E+00	9.16E-03
		Be-7	<3.88E-02	0.00E+00	3.88E-02
		K-40	<2.89E-01	0.00E+00	2.89E-01
431095	12/12/2016 - 12/19/2016	I-131	<8.93E-03	0.00E+00	8.93E-03
		Cs-134	<6.05E-03	0.00E+00	6.05E-03
		Cs-137	<8.38E-03	0.00E+00	8.38E-03
		Be-7	<5.95E-02	0.00E+00	5.95E-02
		K-40	3.30E-01	1.40E-01	1.26E-01
431495	12/19/2016 - 12/27/2016	I-131	<7.91E-03	0.00E+00	7.91E-03
		Cs-134	<6.86E-03	0.00E+00	6.86E-03
		Cs-137	<7.04E-03	0.00E+00	7.04E-03
		Be-7	<4.21E-02	0.00E+00	4.21E-02
		K-40	3.69E-01	1.21E-01	2.50E-02

Sample Point 081 [CONTROL - SE @ 9.33 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
398731	12/28/2015 - 1/5/2016	I-131	<1.55E-02	0.00E+00	1.55E-02
		Cs-134	<1.28E-02	0.00E+00	1.28E-02
		Cs-137	<8.80E-03	0.00E+00	8.80E-03
		Be-7	<8.29E-02	0.00E+00	8.29E-02
		K-40	7.00E-01	2.30E-01	1.78E-01
398989	1/5/2016 - 1/11/2016	I-131	<9.84E-03	0.00E+00	9.84E-03
		Cs-134	<1.06E-02	0.00E+00	1.06E-02
		Cs-137	<1.02E-02	0.00E+00	1.02E-02
		Be-7	<5.61E-02	0.00E+00	5.61E-02
		K-40	4.61E-01	1.69E-01	1.38E-01
399296	1/11/2016 - 1/18/2016	I-131	<1.66E-02	0.00E+00	1.66E-02
		Cs-134	<1.33E-02	0.00E+00	1.33E-02
		Cs-137	<1.44E-02	0.00E+00	1.44E-02
		Be-7	<7.73E-02	0.00E+00	7.73E-02
		K-40	<4.77E-01	0.00E+00	4.77E-01
400037	1/18/2016 - 1/25/2016	I-131	<8.76E-03	0.00E+00	8.76E-03
		Cs-134	<7.38E-03	0.00E+00	7.38E-03
		Cs-137	<8.60E-03	0.00E+00	8.60E-03
		Be-7	<3.68E-02	0.00E+00	3.68E-02
		K-40	4.30E-01	1.40E-01	2.84E-02
400399	1/25/2016 - 2/1/2016	I-131	<1.79E-02	0.00E+00	1.79E-02
		Cs-134	<1.45E-02	0.00E+00	1.45E-02
		Cs-137	<1.52E-02	0.00E+00	1.52E-02
		Be-7	<1.12E-01	0.00E+00	1.12E-01
		K-40	5.75E-01	2.06E-01	4.72E-02
401037	2/1/2016 - 2/8/2016	I-131	<7.55E-03	0.00E+00	7.55E-03
		Cs-134	<8.81E-03	0.00E+00	8.81E-03
		Cs-137	<7.55E-03	0.00E+00	7.55E-03
		Be-7	<8.37E-02	0.00E+00	8.37E-02
		K-40	4.64E-01	1.58E-01	1.27E-01
401391	2/8/2016 - 2/15/2016	I-131	<1.70E-03	0.00E+00	1.70E-03
		Cs-134	<6.89E-03	0.00E+00	6.89E-03
		Cs-137	<7.29E-03	0.00E+00	7.29E-03
		Be-7	<6.94E-02	0.00E+00	6.94E-02
		K-40	3.17E-01	1.27E-01	1.03E-01
401836	2/15/2016 - 2/22/2016	I-131	<8.63E-03	0.00E+00	8.63E-03



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

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

Sample Point 081 [CONTROL - SE @ 9.33 miles]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
401836	2/15/2016 - 2/22/2016	Cs-134	<7.24E-03	0.00E+00	7.24E-03
		Cs-137	<8.44E-03	0.00E+00	8.44E-03
		Be-7	<5.83E-02	0.00E+00	5.83E-02
		K-40	4.54E-01	1.50E-01	1.05E-01
402357	2/22/2016 - 2/29/2016	I-131	<8.06E-03	0.00E+00	8.06E-03
		Cs-134	<6.37E-03	0.00E+00	6.37E-03
		Cs-137	<9.89E-03	0.00E+00	9.89E-03
		Be-7	<4.63E-02	0.00E+00	4.63E-02
		K-40	3.13E-01	1.31E-01	1.13E-01
403081	2/29/2016 - 3/7/2016	I-131	<8.65E-03	0.00E+00	8.65E-03
		Cs-134	<7.79E-03	0.00E+00	7.79E-03
		Cs-137	<6.56E-03	0.00E+00	6.56E-03
		Be-7	<4.29E-02	0.00E+00	4.29E-02
		K-40	4.14E-01	1.43E-01	9.85E-02
404572	3/7/2016 - 3/14/2016	I-131	<1.07E-02	0.00E+00	1.07E-02
		Cs-134	<5.19E-03	0.00E+00	5.19E-03
		Cs-137	<8.98E-03	0.00E+00	8.98E-03
		Be-7	<5.16E-02	0.00E+00	5.16E-02
		K-40	5.32E-01	1.55E-01	2.77E-02
405439	3/14/2016 - 3/21/2016	I-131	<9.23E-03	0.00E+00	9.23E-03
		Cs-134	<8.12E-03	0.00E+00	8.12E-03
		Cs-137	<7.26E-03	0.00E+00	7.26E-03
		Be-7	<5.95E-02	0.00E+00	5.95E-02
		K-40	3.87E-01	1.40E-01	1.06E-01
406070	3/21/2016 - 3/28/2016	I-131	<9.40E-03	0.00E+00	9.40E-03
		Cs-134	<7.69E-03	0.00E+00	7.69E-03
		Cs-137	<5.58E-03	0.00E+00	5.58E-03
		Be-7	<5.57E-02	0.00E+00	5.57E-02
		K-40	3.65E-01	1.36E-01	1.06E-01
406429	3/28/2016 - 4/4/2016	I-131	<1.07E-02	0.00E+00	1.07E-02
		Cs-134	<6.78E-03	0.00E+00	6.78E-03
		Cs-137	<7.81E-03	0.00E+00	7.81E-03
		Be-7	<3.69E-02	0.00E+00	3.69E-02
		K-40	4.59E-01	1.43E-01	2.77E-02
407603	4/4/2016 - 4/11/2016	I-131	<1.13E-02	0.00E+00	1.13E-02
		Cs-134	<3.97E-03	0.00E+00	3.97E-03
		Cs-137	<1.01E-02	0.00E+00	1.01E-02
		Be-7	<5.73E-02	0.00E+00	5.73E-02
		K-40	4.27E-01	1.55E-01	1.27E-01
408164	4/11/2016 - 4/18/2016	I-131	<9.10E-03	0.00E+00	9.10E-03
		Cs-134	<8.68E-03	0.00E+00	8.68E-03
		Cs-137	<7.31E-03	0.00E+00	7.31E-03
		Be-7	<4.79E-02	0.00E+00	4.79E-02
		K-40	3.32E-01	1.39E-01	1.27E-01
409486	4/18/2016 - 4/25/2016	I-131	<7.38E-03	0.00E+00	7.38E-03
		Cs-134	<9.01E-03	0.00E+00	9.01E-03
		Cs-137	<4.55E-03	0.00E+00	4.55E-03
		Be-7	<6.36E-02	0.00E+00	6.36E-02
		K-40	3.63E-01	1.26E-01	2.81E-02
409818	4/25/2016 - 5/2/2016	I-131	<1.11E-02	0.00E+00	1.11E-02



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

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

Sample Point 081 [CONTROL - SE @ 9.33 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
409818	4/25/2016 - 5/2/2016	Cs-134	<6.62E-03	0.00E+00	6.62E-03
		Cs-137	<6.36E-03	0.00E+00	6.36E-03
		Be-7	<5.31E-02	0.00E+00	5.31E-02
		K-40	4.45E-01	1.54E-01	1.04E-01
410992	5/2/2016 - 5/9/2016	I-131	<7.43E-03	0.00E+00	7.43E-03
		Cs-134	<8.00E-03	0.00E+00	8.00E-03
		Cs-137	<1.15E-02	0.00E+00	1.15E-02
		Be-7	<5.13E-02	0.00E+00	5.13E-02
		K-40	4.45E-01	1.46E-01	3.02E-02
411464	5/9/2016 - 5/16/2016	I-131	<1.02E-02	0.00E+00	1.02E-02
		Cs-134	<7.26E-03	0.00E+00	7.26E-03
		Cs-137	<9.00E-03	0.00E+00	9.00E-03
		Be-7	<6.57E-02	0.00E+00	6.57E-02
		K-40	3.39E-01	1.32E-01	1.11E-01
411797	5/16/2016 - 5/23/2016	I-131	<1.00E-02	0.00E+00	1.00E-02
		Cs-134	<6.47E-03	0.00E+00	6.47E-03
		Cs-137	<8.66E-03	0.00E+00	8.66E-03
		Be-7	<4.27E-02	0.00E+00	4.27E-02
		K-40	3.91E-01	1.31E-01	2.79E-02
412257	5/23/2016 - 5/31/2016	I-131	<9.94E-03	0.00E+00	9.94E-03
		Cs-134	<6.78E-03	0.00E+00	6.78E-03
		Cs-137	<6.96E-03	0.00E+00	6.96E-03
		Be-7	<5.20E-02	0.00E+00	5.20E-02
		K-40	<2.33E-01	0.00E+00	2.33E-01
412775	5/31/2016 - 6/6/2016	I-131	<6.98E-03	0.00E+00	6.98E-03
		Cs-134	<1.11E-02	0.00E+00	1.11E-02
		Cs-137	<7.62E-03	0.00E+00	7.62E-03
		Be-7	<6.45E-02	0.00E+00	6.45E-02
		K-40	4.39E-01	1.51E-01	3.30E-02
413390	6/6/2016 - 6/13/2016	I-131	<9.04E-03	0.00E+00	9.04E-03
		Cs-134	<7.72E-03	0.00E+00	7.72E-03
		Cs-137	<9.58E-03	0.00E+00	9.58E-03
		Be-7	<4.74E-02	0.00E+00	4.74E-02
		K-40	3.78E-01	1.35E-01	3.11E-02
413926	6/13/2016 - 6/20/2016	I-131	<7.96E-03	0.00E+00	7.96E-03
		Cs-134	<5.36E-03	0.00E+00	5.36E-03
		Cs-137	<7.44E-03	0.00E+00	7.44E-03
		Be-7	<5.65E-02	0.00E+00	5.65E-02
		K-40	3.67E-01	1.34E-01	9.97E-02
415064	6/20/2016 - 6/27/2016	I-131	<8.97E-03	0.00E+00	8.97E-03
		Cs-134	<7.66E-03	0.00E+00	7.66E-03
		Cs-137	<8.46E-03	0.00E+00	8.46E-03
		Be-7	<6.47E-02	0.00E+00	6.47E-02
		K-40	3.28E-01	1.32E-01	1.18E-01
415465	6/27/2016 - 7/5/2016	I-131	<8.28E-03	0.00E+00	8.28E-03
		Cs-134	<6.05E-03	0.00E+00	6.05E-03
		Cs-137	<6.40E-03	0.00E+00	6.40E-03
		Be-7	<3.74E-02	0.00E+00	3.74E-02
		K-40	2.93E-01	1.07E-01	2.48E-02
416442	7/5/2016 - 7/11/2016	Nuclide	Activity	2 Sigma Error	MDA
		I-131	<9.83E-03	0.00E+00	9.83E-03



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

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

Sample Point 081 [CONTROL - SE @ 9.33 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
416442	7/5/2016 - 7/11/2016	Cs-134	<8.11E-03	0.00E+00	8.11E-03
		Cs-137	<1.07E-02	0.00E+00	1.07E-02
		Be-7	<7.68E-02	0.00E+00	7.68E-02
		K-40	4.27E-01	1.67E-01	1.54E-01
417055	7/11/2016 - 7/18/2016	I-131	<8.12E-03	0.00E+00	8.12E-03
		Cs-134	<8.10E-03	0.00E+00	8.10E-03
		Cs-137	<6.50E-03	0.00E+00	6.50E-03
		Be-7	<4.71E-02	0.00E+00	4.71E-02
		K-40	3.22E-01	1.19E-01	2.81E-02
417446	7/18/2016 - 7/25/2016	I-131	<9.81E-03	0.00E+00	9.81E-03
		Cs-134	<6.48E-03	0.00E+00	6.48E-03
		Cs-137	<8.05E-03	0.00E+00	8.05E-03
		Be-7	<5.66E-02	0.00E+00	5.66E-02
		K-40	3.86E-01	1.45E-01	1.14E-01
417839	7/25/2016 - 8/1/2016	I-131	<7.38E-03	0.00E+00	7.38E-03
		Cs-134	<7.21E-03	0.00E+00	7.21E-03
		Cs-137	<7.16E-03	0.00E+00	7.16E-03
		Be-7	<2.84E-02	0.00E+00	2.84E-02
		K-40	3.75E-01	1.58E-01	1.79E-01
418315	8/1/2016 - 8/8/2016	I-131	<1.02E-02	0.00E+00	1.02E-02
		Cs-134	<6.81E-03	0.00E+00	6.81E-03
		Cs-137	<6.46E-03	0.00E+00	6.46E-03
		Be-7	<2.86E-02	0.00E+00	2.86E-02
		K-40	4.74E-01	1.46E-01	2.79E-02
419033	8/8/2016 - 8/15/2016	I-131	<7.83E-03	0.00E+00	7.83E-03
		Cs-134	<6.71E-03	0.00E+00	6.71E-03
		Cs-137	<8.34E-03	0.00E+00	8.34E-03
		Be-7	<5.74E-02	0.00E+00	5.74E-02
		K-40	<3.23E-01	0.00E+00	3.23E-01
419531	8/15/2016 - 8/22/2016	I-131	<9.03E-03	0.00E+00	9.03E-03
		Cs-134	<5.85E-03	0.00E+00	5.85E-03
		Cs-137	<5.62E-03	0.00E+00	5.62E-03
		Be-7	<5.88E-02	0.00E+00	5.88E-02
		K-40	4.77E-01	1.47E-01	2.81E-02
420060	8/22/2016 - 8/29/2016	I-131	<7.39E-03	0.00E+00	7.39E-03
		Cs-134	<8.00E-03	0.00E+00	8.00E-03
		Cs-137	<9.47E-03	0.00E+00	9.47E-03
		Be-7	<4.16E-02	0.00E+00	4.16E-02
		K-40	4.00E-01	1.42E-01	1.10E-01
420606	8/29/2016 - 9/6/2016	I-131	<6.85E-03	0.00E+00	6.85E-03
		Cs-134	<7.80E-03	0.00E+00	7.80E-03
		Cs-137	<5.40E-03	0.00E+00	5.40E-03
		Be-7	<5.67E-02	0.00E+00	5.67E-02
		K-40	2.85E-01	1.18E-01	1.02E-01
421472	9/6/2016 - 9/12/2016	I-131	<1.16E-02	0.00E+00	1.16E-02
		Cs-134	<7.59E-03	0.00E+00	7.59E-03
		Cs-137	<7.75E-03	0.00E+00	7.75E-03
		Be-7	<6.98E-02	0.00E+00	6.98E-02
		K-40	4.49E-01	1.61E-01	1.21E-01
422608	9/12/2016 - 9/19/2016	I-131	<8.74E-03	0.00E+00	8.74E-03



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

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

Sample Point 081 [CONTROL - SE @ 9.33 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
422608	9/12/2016 - 9/19/2016	Cs-134	<9.00E-03	0.00E+00	9.00E-03
		Cs-137	<8.79E-03	0.00E+00	8.79E-03
		Be-7	<4.70E-02	0.00E+00	4.70E-02
		K-40	5.87E-01	1.71E-01	3.06E-02
423351	9/19/2016 - 9/26/2016	I-131	<7.98E-03	0.00E+00	7.98E-03
		Cs-134	<5.85E-03	0.00E+00	5.85E-03
		Cs-137	<7.93E-03	0.00E+00	7.93E-03
		Be-7	<3.64E-02	0.00E+00	3.64E-02
		K-40	3.91E-01	1.38E-01	9.45E-02
424491	9/26/2016 - 10/3/2016	I-131	<7.01E-03	0.00E+00	7.01E-03
		Cs-134	<4.71E-03	0.00E+00	4.71E-03
		Cs-137	<7.57E-03	0.00E+00	7.57E-03
		Be-7	<4.35E-02	0.00E+00	4.35E-02
		K-40	2.94E-01	1.30E-01	1.31E-01
425487	10/3/2016 - 10/10/2016	I-131	<1.03E-02	0.00E+00	1.03E-02
		Cs-134	<6.40E-03	0.00E+00	6.40E-03
		Cs-137	<5.63E-03	0.00E+00	5.63E-03
		Be-7	<6.63E-02	0.00E+00	6.63E-02
		K-40	3.54E-01	1.26E-01	2.82E-02
426029	10/10/2016 - 10/17/2016	I-131	<7.45E-03	0.00E+00	7.45E-03
		Cs-134	<6.42E-03	0.00E+00	6.42E-03
		Cs-137	<8.71E-03	0.00E+00	8.71E-03
		Be-7	<4.61E-02	0.00E+00	4.61E-02
		K-40	4.93E-01	1.73E-01	1.58E-01
426398	10/17/2016 - 10/24/2016	I-131	<8.90E-03	0.00E+00	8.90E-03
		Cs-134	<6.75E-03	0.00E+00	6.75E-03
		Cs-137	<4.38E-03	0.00E+00	4.38E-03
		Be-7	<6.98E-02	0.00E+00	6.98E-02
		K-40	3.78E-01	1.29E-01	2.77E-02
427082	10/24/2016 - 10/31/2016	I-131	<9.74E-03	0.00E+00	9.74E-03
		Cs-134	<6.97E-03	0.00E+00	6.97E-03
		Cs-137	<6.61E-03	0.00E+00	6.61E-03
		Be-7	<6.33E-02	0.00E+00	6.33E-02
		K-40	4.33E-01	1.41E-01	2.86E-02
427750	10/31/2016 - 11/7/2016	I-131	<1.04E-02	0.00E+00	1.04E-02
		Cs-134	<6.36E-03	0.00E+00	6.36E-03
		Cs-137	<9.27E-03	0.00E+00	9.27E-03
		Be-7	<7.13E-02	0.00E+00	7.13E-02
		K-40	2.97E-01	1.38E-01	1.49E-01
428250	11/7/2016 - 11/14/2016	I-131	<1.03E-02	0.00E+00	1.03E-02
		Cs-134	<1.00E-02	0.00E+00	1.00E-02
		Cs-137	<1.09E-02	0.00E+00	1.09E-02
		Be-7	<6.73E-02	0.00E+00	6.73E-02
		K-40	3.70E-01	1.34E-01	3.14E-02
428926	11/14/2016 - 11/21/2016	I-131	<1.86E-02	0.00E+00	1.86E-02
		Cs-134	<1.24E-02	0.00E+00	1.24E-02
		Cs-137	<1.11E-02	0.00E+00	1.11E-02
		Be-7	<7.79E-02	0.00E+00	7.79E-02
		K-40	4.15E-01	1.70E-01	1.55E-01
429428	11/21/2016 - 11/28/2016	I-131	<9.77E-03	0.00E+00	9.77E-03



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

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

Sample Point 081 [CONTROL - SE @ 9.33 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
429428	11/21/2016 - 11/28/2016	Cs-134	<6.98E-03	0.00E+00	6.98E-03
		Cs-137	<7.38E-03	0.00E+00	7.38E-03
		Be-7	<3.71E-02	0.00E+00	3.71E-02
		K-40	3.96E-01	1.59E-01	1.68E-01
429988	11/28/2016 - 12/5/2016	Nuclide	Activity	2 Sigma Error	MDA
		I-131	<1.00E-02	0.00E+00	1.00E-02
		Cs-134	<7.61E-03	0.00E+00	7.61E-03
		Cs-137	<4.93E-03	0.00E+00	4.93E-03
		Be-7	<6.16E-02	0.00E+00	6.16E-02
430614	12/5/2016 - 12/12/2016	K-40	4.66E-01	1.58E-01	1.12E-01
		Nuclide	Activity	2 Sigma Error	MDA
		I-131	<9.10E-03	0.00E+00	9.10E-03
		Cs-134	<6.35E-03	0.00E+00	6.35E-03
		Cs-137	<9.26E-03	0.00E+00	9.26E-03
431096	12/12/2016 - 12/19/2016	Be-7	<4.56E-02	0.00E+00	4.56E-02
		K-40	5.06E-01	1.76E-01	1.65E-01
		Nuclide	Activity	2 Sigma Error	MDA
		I-131	<1.24E-02	0.00E+00	1.24E-02
		Cs-134	<1.35E-03	0.00E+00	1.35E-03
431496	12/19/2016 - 12/27/2016	Cs-137	<9.82E-03	0.00E+00	9.82E-03
		Be-7	<3.75E-02	0.00E+00	3.75E-02
		K-40	3.12E-01	1.37E-01	1.42E-01
		Nuclide	Activity	2 Sigma Error	MDA
		I-131	<9.02E-03	0.00E+00	9.02E-03

Sample Point 084 [INDICATOR - NNE @ 2.58 miles]

398732	12/28/2015 - 1/5/2016	Cs-134	<1.35E-02	0.00E+00	1.35E-02
		Cs-134	<1.39E-02	0.00E+00	1.39E-02
		Cs-137	<1.34E-02	0.00E+00	1.34E-02
		Be-7	<9.48E-02	0.00E+00	9.48E-02
		K-40	5.35E-01	1.86E-01	4.14E-02
398990	1/5/2016 - 1/11/2016	Nuclide	Activity	2 Sigma Error	MDA
		I-131	<1.05E-02	0.00E+00	1.05E-02
		Cs-134	<4.69E-03	0.00E+00	4.69E-03
		Cs-137	<1.04E-02	0.00E+00	1.04E-02
		Be-7	<7.15E-02	0.00E+00	7.15E-02
399297	1/11/2016 - 1/18/2016	K-40	6.13E-01	1.89E-01	3.61E-02
		Nuclide	Activity	2 Sigma Error	MDA
		I-131	<1.65E-02	0.00E+00	1.65E-02
		Cs-134	<1.72E-02	0.00E+00	1.72E-02
		Cs-137	<1.54E-02	0.00E+00	1.54E-02
400038	1/18/2016 - 1/25/2016	Be-7	<1.13E-01	0.00E+00	1.13E-01
		K-40	4.94E-01	1.91E-01	4.78E-02
		Nuclide	Activity	2 Sigma Error	MDA
		I-131	<6.23E-03	0.00E+00	6.23E-03
		Cs-134	<7.78E-03	0.00E+00	7.78E-03
400400	1/25/2016 - 2/1/2016	Cs-137	<8.59E-03	0.00E+00	8.59E-03
		Be-7	<5.57E-02	0.00E+00	5.57E-02
		K-40	4.82E-01	1.49E-01	2.84E-02
		Nuclide	Activity	2 Sigma Error	MDA
		I-131	<1.34E-02	0.00E+00	1.34E-02



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

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

Sample Point 084 [INDICATOR - NNE @ 2.58 miles]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
401038	2/1/2016 - 2/8/2016	I-131	<9.87E-03	0.00E+00	9.87E-03
		Cs-134	<5.84E-03	0.00E+00	5.84E-03
		Cs-137	<5.61E-03	0.00E+00	5.61E-03
		Be-7	<5.53E-02	0.00E+00	5.53E-02
		K-40	2.79E-01	1.10E-01	2.80E-02
401392	2/8/2016 - 2/15/2016	I-131	<7.46E-03	0.00E+00	7.46E-03
		Cs-134	<8.03E-03	0.00E+00	8.03E-03
		Cs-137	<9.48E-03	0.00E+00	9.48E-03
		Be-7	<6.25E-02	0.00E+00	6.25E-02
		K-40	5.42E-01	1.57E-01	2.77E-02
401837	2/15/2016 - 2/22/2016	I-131	<9.11E-03	0.00E+00	9.11E-03
		Cs-134	<7.21E-03	0.00E+00	7.21E-03
		Cs-137	<1.04E-02	0.00E+00	1.04E-02
		Be-7	<4.67E-02	0.00E+00	4.67E-02
		K-40	2.96E-01	1.13E-01	2.77E-02
402358	2/22/2016 - 2/29/2016	I-131	<7.40E-03	0.00E+00	7.40E-03
		Cs-134	<8.74E-03	0.00E+00	8.74E-03
		Cs-137	<8.43E-03	0.00E+00	8.43E-03
		Be-7	<7.12E-02	0.00E+00	7.12E-02
		K-40	3.36E-01	1.37E-01	1.31E-01
403082	2/29/2016 - 3/7/2016	I-131	<9.61E-03	0.00E+00	9.61E-03
		Cs-134	<7.68E-03	0.00E+00	7.68E-03
		Cs-137	<7.87E-03	0.00E+00	7.87E-03
		Be-7	<4.73E-02	0.00E+00	4.73E-02
		K-40	2.78E-01	1.31E-01	1.46E-01
404573	3/7/2016 - 3/14/2016	I-131	<1.64E-03	0.00E+00	1.64E-03
		Cs-134	<7.58E-03	0.00E+00	7.58E-03
		Cs-137	<7.77E-03	0.00E+00	7.77E-03
		Be-7	<4.68E-02	0.00E+00	4.68E-02
		K-40	2.82E-01	1.23E-01	1.17E-01
405440	3/14/2016 - 3/21/2016	I-131	<9.20E-03	0.00E+00	9.20E-03
		Cs-134	<6.41E-03	0.00E+00	6.41E-03
		Cs-137	<9.11E-03	0.00E+00	9.11E-03
		Be-7	<5.60E-02	0.00E+00	5.60E-02
		K-40	4.32E-01	1.46E-01	1.00E-01
406071	3/21/2016 - 3/28/2016	I-131	<8.29E-03	0.00E+00	8.29E-03
		Cs-134	<8.64E-03	0.00E+00	8.64E-03
		Cs-137	<8.12E-03	0.00E+00	8.12E-03
		Be-7	<5.32E-02	0.00E+00	5.32E-02
		K-40	3.99E-01	1.39E-01	3.09E-02
406430	3/28/2016 - 4/4/2016	I-131	<1.09E-02	0.00E+00	1.09E-02
		Cs-134	<8.40E-03	0.00E+00	8.40E-03
		Cs-137	<5.81E-03	0.00E+00	5.81E-03
		Be-7	<6.86E-02	0.00E+00	6.86E-02
		K-40	3.78E-01	1.30E-01	2.84E-02
407604	4/4/2016 - 4/11/2016	I-131	<8.70E-03	0.00E+00	8.70E-03
		Cs-134	<8.46E-03	0.00E+00	8.46E-03
		Cs-137	<7.91E-03	0.00E+00	7.91E-03
		Be-7	<5.58E-02	0.00E+00	5.58E-02
		K-40	4.56E-01	1.76E-01	1.95E-01



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

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

Sample Point 084 [INDICATOR - NNE @ 2.58 miles]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
408165	4/11/2016 - 4/18/2016	I-131	<1.03E-02	0.00E+00	1.03E-02
		Cs-134	<7.66E-03	0.00E+00	7.66E-03
		Cs-137	<9.51E-03	0.00E+00	9.51E-03
		Be-7	<7.66E-02	0.00E+00	7.66E-02
		K-40	3.28E-01	1.50E-01	1.76E-01
409487	4/18/2016 - 4/25/2016	I-131	<1.01E-02	0.00E+00	1.01E-02
		Cs-134	<6.49E-03	0.00E+00	6.49E-03
		Cs-137	<9.45E-03	0.00E+00	9.45E-03
		Be-7	<5.74E-02	0.00E+00	5.74E-02
		K-40	3.73E-01	1.44E-01	1.21E-01
409819	4/25/2016 - 5/2/2016	I-131	<6.83E-03	0.00E+00	6.83E-03
		Cs-134	<5.80E-03	0.00E+00	5.80E-03
		Cs-137	<8.46E-03	0.00E+00	8.46E-03
		Be-7	<5.85E-02	0.00E+00	5.85E-02
		K-40	2.57E-01	1.05E-01	2.78E-02
410993	5/2/2016 - 5/9/2016	I-131	<9.11E-03	0.00E+00	9.11E-03
		Cs-134	<7.06E-03	0.00E+00	7.06E-03
		Cs-137	<7.48E-03	0.00E+00	7.48E-03
		Be-7	<5.23E-02	0.00E+00	5.23E-02
		K-40	3.65E-01	1.27E-01	2.83E-02
411465	5/9/2016 - 5/16/2016	I-131	<8.75E-03	0.00E+00	8.75E-03
		Cs-134	<8.59E-03	0.00E+00	8.59E-03
		Cs-137	<6.59E-03	0.00E+00	6.59E-03
		Be-7	<6.03E-02	0.00E+00	6.03E-02
		K-40	4.32E-01	1.40E-01	2.85E-02
411798	5/16/2016 - 5/23/2016	I-131	<7.93E-03	0.00E+00	7.93E-03
		Cs-134	<8.54E-03	0.00E+00	8.54E-03
		Cs-137	<6.20E-03	0.00E+00	6.20E-03
		Be-7	<5.71E-02	0.00E+00	5.71E-02
		K-40	4.73E-01	1.51E-01	3.05E-02
412258	5/23/2016 - 5/31/2016	I-131	<6.42E-03	0.00E+00	6.42E-03
		Cs-134	<8.09E-03	0.00E+00	8.09E-03
		Cs-137	<6.66E-03	0.00E+00	6.66E-03
		Be-7	<5.68E-02	0.00E+00	5.68E-02
		K-40	4.00E-01	1.26E-01	2.52E-02
412776	5/31/2016 - 6/6/2016	I-131	<1.15E-02	0.00E+00	1.15E-02
		Cs-134	<8.76E-03	0.00E+00	8.76E-03
		Cs-137	<1.01E-02	0.00E+00	1.01E-02
		Be-7	<7.43E-02	0.00E+00	7.43E-02
		K-40	4.55E-01	1.59E-01	3.52E-02
413391	6/6/2016 - 6/13/2016	I-131	<1.13E-02	0.00E+00	1.13E-02
		Cs-134	<7.02E-03	0.00E+00	7.02E-03
		Cs-137	<8.72E-03	0.00E+00	8.72E-03
		Be-7	<6.45E-02	0.00E+00	6.45E-02
		K-40	4.00E-01	1.44E-01	9.58E-02
413927	6/13/2016 - 6/20/2016	I-131	<8.71E-03	0.00E+00	8.71E-03
		Cs-134	<7.63E-03	0.00E+00	7.63E-03
		Cs-137	<6.23E-03	0.00E+00	6.23E-03
		Be-7	<6.57E-02	0.00E+00	6.57E-02
		K-40	4.00E-01	1.67E-01	1.85E-01



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

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

Sample Point 084 [INDICATOR - NNE @ 2.58 miles]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
415065	6/20/2016 - 6/27/2016	I-131	<7.41E-03	0.00E+00	7.41E-03
		Cs-134	<6.32E-03	0.00E+00	6.32E-03
		Cs-137	<6.44E-03	0.00E+00	6.44E-03
		Be-7	<5.84E-02	0.00E+00	5.84E-02
		K-40	3.55E-01	1.40E-01	1.32E-01
415466	6/27/2016 - 7/5/2016	I-131	<1.01E-02	0.00E+00	1.01E-02
		Cs-134	<4.35E-03	0.00E+00	4.35E-03
		Cs-137	<7.63E-03	0.00E+00	7.63E-03
		Be-7	<5.31E-02	0.00E+00	5.31E-02
		K-40	4.50E-01	1.39E-01	2.65E-02
416443	7/5/2016 - 7/11/2016	I-131	<8.43E-03	0.00E+00	8.43E-03
		Cs-134	<8.94E-03	0.00E+00	8.94E-03
		Cs-137	<1.05E-02	0.00E+00	1.05E-02
		Be-7	<5.43E-02	0.00E+00	5.43E-02
		K-40	4.19E-01	1.79E-01	2.01E-01
417056	7/11/2016 - 7/18/2016	I-131	<9.21E-03	0.00E+00	9.21E-03
		Cs-134	<7.94E-03	0.00E+00	7.94E-03
		Cs-137	<7.07E-03	0.00E+00	7.07E-03
		Be-7	<6.36E-02	0.00E+00	6.36E-02
		K-40	<3.12E-01	0.00E+00	3.12E-01
417447	7/18/2016 - 7/25/2016	I-131	<9.37E-03	0.00E+00	9.37E-03
		Cs-134	<5.79E-03	0.00E+00	5.79E-03
		Cs-137	<8.98E-03	0.00E+00	8.98E-03
		Be-7	<5.83E-02	0.00E+00	5.83E-02
		K-40	3.47E-01	1.34E-01	1.14E-01
417840	7/25/2016 - 8/1/2016	I-131	<8.46E-03	0.00E+00	8.46E-03
		Cs-134	<8.00E-03	0.00E+00	8.00E-03
		Cs-137	<7.81E-03	0.00E+00	7.81E-03
		Be-7	<4.65E-02	0.00E+00	4.65E-02
		K-40	3.47E-01	1.23E-01	2.77E-02
418316	8/1/2016 - 8/8/2016	I-131	<8.42E-03	0.00E+00	8.42E-03
		Cs-134	<8.00E-03	0.00E+00	8.00E-03
		Cs-137	<8.40E-03	0.00E+00	8.40E-03
		Be-7	<2.85E-02	0.00E+00	2.85E-02
		K-40	5.65E-01	1.66E-01	9.72E-02
419034	8/8/2016 - 8/15/2016	I-131	<7.24E-03	0.00E+00	7.24E-03
		Cs-134	<6.68E-03	0.00E+00	6.68E-03
		Cs-137	<6.33E-03	0.00E+00	6.33E-03
		Be-7	<5.00E-02	0.00E+00	5.00E-02
		K-40	3.32E-01	1.20E-01	2.73E-02
419532	8/15/2016 - 8/22/2016	I-131	<9.49E-03	0.00E+00	9.49E-03
		Cs-134	<8.82E-03	0.00E+00	8.82E-03
		Cs-137	<7.92E-03	0.00E+00	7.92E-03
		Be-7	<4.22E-02	0.00E+00	4.22E-02
		K-40	2.83E-01	1.34E-01	1.50E-01
420061	8/22/2016 - 8/29/2016	I-131	<1.09E-02	0.00E+00	1.09E-02
		Cs-134	<7.58E-03	0.00E+00	7.58E-03
		Cs-137	<6.38E-03	0.00E+00	6.38E-03
		Be-7	<4.15E-02	0.00E+00	4.15E-02
		K-40	3.64E-01	1.46E-01	1.49E-01



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

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

Sample Point 084 [INDICATOR - NNE @ 2.58 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
420607	8/29/2016 - 9/6/2016	I-131	<5.62E-03	0.00E+00	5.62E-03
		Cs-134	<5.51E-03	0.00E+00	5.51E-03
		Cs-137	<7.82E-03	0.00E+00	7.82E-03
		Be-7	<4.48E-02	0.00E+00	4.48E-02
		K-40	4.02E-01	1.40E-01	1.26E-01
421473	9/6/2016 - 9/12/2016	I-131	<9.61E-03	0.00E+00	9.61E-03
		Cs-134	<6.64E-03	0.00E+00	6.64E-03
		Cs-137	<7.39E-03	0.00E+00	7.39E-03
		Be-7	<5.39E-02	0.00E+00	5.39E-02
		K-40	3.94E-01	1.59E-01	1.55E-01
422609	9/12/2016 - 9/19/2016	I-131	<1.20E-02	0.00E+00	1.20E-02
		Cs-134	<7.06E-03	0.00E+00	7.06E-03
		Cs-137	<1.17E-02	0.00E+00	1.17E-02
		Be-7	<5.71E-02	0.00E+00	5.71E-02
		K-40	5.41E-01	1.63E-01	3.05E-02
423352	9/19/2016 - 9/26/2016	I-131	<8.34E-03	0.00E+00	8.34E-03
		Cs-134	<6.26E-03	0.00E+00	6.26E-03
		Cs-137	<6.38E-03	0.00E+00	6.38E-03
		Be-7	<5.77E-02	0.00E+00	5.77E-02
		K-40	2.94E-01	1.13E-01	2.75E-02
424492	9/26/2016 - 10/3/2016	I-131	<9.25E-03	0.00E+00	9.25E-03
		Cs-134	<8.25E-03	0.00E+00	8.25E-03
		Cs-137	<8.06E-03	0.00E+00	8.06E-03
		Be-7	<6.65E-02	0.00E+00	6.65E-02
		K-40	3.61E-01	1.37E-01	1.11E-01
425488	10/3/2016 - 10/10/2016	I-131	<7.69E-03	0.00E+00	7.69E-03
		Cs-134	<7.39E-03	0.00E+00	7.39E-03
		Cs-137	<6.94E-03	0.00E+00	6.94E-03
		Be-7	<4.97E-02	0.00E+00	4.97E-02
		K-40	3.68E-01	1.33E-01	1.02E-01
426030	10/10/2016 - 10/17/2016	I-131	<8.12E-03	0.00E+00	8.12E-03
		Cs-134	<5.29E-03	0.00E+00	5.29E-03
		Cs-137	<7.99E-03	0.00E+00	7.99E-03
		Be-7	<5.59E-02	0.00E+00	5.59E-02
		K-40	4.49E-01	1.43E-01	2.83E-02
426399	10/17/2016 - 10/24/2016	I-131	<9.94E-03	0.00E+00	9.94E-03
		Cs-134	<7.67E-03	0.00E+00	7.67E-03
		Cs-137	<8.11E-03	0.00E+00	8.11E-03
		Be-7	<4.05E-02	0.00E+00	4.05E-02
		K-40	3.53E-01	1.45E-01	1.37E-01
427083	10/24/2016 - 10/31/2016	I-131	<9.99E-03	0.00E+00	9.99E-03
		Cs-134	<6.81E-03	0.00E+00	6.81E-03
		Cs-137	<6.46E-03	0.00E+00	6.46E-03
		Be-7	<6.50E-02	0.00E+00	6.50E-02
		K-40	3.38E-01	1.33E-01	1.15E-01
427751	10/31/2016 - 11/7/2016	I-131	<9.32E-03	0.00E+00	9.32E-03
		Cs-134	<7.57E-03	0.00E+00	7.57E-03
		Cs-137	<6.18E-03	0.00E+00	6.18E-03
		Be-7	<4.67E-02	0.00E+00	4.67E-02
		K-40	2.92E-01	1.17E-01	3.04E-02



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

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

Sample Point 084 [INDICATOR - NNE @ 2.58 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
428251	11/7/2016 - 11/14/2016	I-131	<1.07E-02	0.00E+00	1.07E-02
		Cs-134	<8.18E-03	0.00E+00	8.18E-03
		Cs-137	<1.13E-02	0.00E+00	1.13E-02
		Be-7	<6.61E-02	0.00E+00	6.61E-02
		K-40	4.66E-01	1.88E-01	2.15E-01
428927	11/14/2016 - 11/21/2016	I-131	<2.22E-02	0.00E+00	2.22E-02
		Cs-134	<1.21E-02	0.00E+00	1.21E-02
		Cs-137	<1.24E-02	0.00E+00	1.24E-02
		Be-7	<7.95E-02	0.00E+00	7.95E-02
		K-40	3.88E-01	1.85E-01	1.91E-01
429429	11/21/2016 - 11/28/2016	I-131	<1.33E-02	0.00E+00	1.33E-02
		Cs-134	<9.47E-03	0.00E+00	9.47E-03
		Cs-137	<9.66E-03	0.00E+00	9.66E-03
		Be-7	<6.95E-02	0.00E+00	6.95E-02
		K-40	7.53E-01	2.37E-01	1.71E-01
429989	11/28/2016 - 12/5/2016	I-131	<7.76E-03	0.00E+00	7.76E-03
		Cs-134	<8.21E-03	0.00E+00	8.21E-03
		Cs-137	<7.02E-03	0.00E+00	7.02E-03
		Be-7	<5.03E-02	0.00E+00	5.03E-02
		K-40	4.61E-01	1.42E-01	2.71E-02
430615	12/5/2016 - 12/12/2016	I-131	<8.18E-03	0.00E+00	8.18E-03
		Cs-134	<5.61E-03	0.00E+00	5.61E-03
		Cs-137	<8.18E-03	0.00E+00	8.18E-03
		Be-7	<5.65E-02	0.00E+00	5.65E-02
		K-40	4.47E-01	1.69E-01	1.85E-01
431097	12/12/2016 - 12/19/2016	I-131	<9.04E-03	0.00E+00	9.04E-03
		Cs-134	<8.48E-03	0.00E+00	8.48E-03
		Cs-137	<9.88E-03	0.00E+00	9.88E-03
		Be-7	<3.36E-02	0.00E+00	3.36E-02
		K-40	4.25E-01	1.46E-01	3.20E-02
431497	12/19/2016 - 12/27/2016	I-131	<7.89E-03	0.00E+00	7.89E-03
		Cs-134	<6.60E-03	0.00E+00	6.60E-03
		Cs-137	<7.71E-03	0.00E+00	7.71E-03
		Be-7	<5.60E-02	0.00E+00	5.60E-02
		K-40	3.87E-01	1.32E-01	9.98E-02

Sample Point 085 [INDICATOR - NNW @ 0.88 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
398733	12/28/2015 - 1/5/2016	I-131	<1.54E-02	0.00E+00	1.54E-02
		Cs-134	<1.08E-02	0.00E+00	1.08E-02
		Cs-137	<1.33E-02	0.00E+00	1.33E-02
		Be-7	<1.10E-01	0.00E+00	1.10E-01
		K-40	5.17E-01	1.99E-01	1.71E-01
398991	1/5/2016 - 1/11/2016	I-131	<9.18E-03	0.00E+00	9.18E-03
		Cs-134	<9.44E-03	0.00E+00	9.44E-03
		Cs-137	<1.04E-02	0.00E+00	1.04E-02
		Be-7	<7.10E-02	0.00E+00	7.10E-02
		K-40	<9.22E-02	0.00E+00	9.22E-02
399298	1/11/2016 - 1/18/2016	I-131	<1.35E-02	0.00E+00	1.35E-02
		Cs-134	<1.54E-02	0.00E+00	1.54E-02
		Cs-137	<8.03E-03	0.00E+00	8.03E-03
		Be-7	<9.34E-02	0.00E+00	9.34E-02
		K-40	5.63E-01	2.05E-01	4.77E-02



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

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

Sample Point 085 [INDICATOR - NNW @ 0.88 miles]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
Sample ID: 400039	Sample Dates: 1/18/2016 - 1/25/2016	I-131	<9.05E-03	0.00E+00	9.05E-03
		Cs-134	<8.30E-03	0.00E+00	8.30E-03
		Cs-137	<9.68E-03	0.00E+00	9.68E-03
		Be-7	<5.33E-02	0.00E+00	5.33E-02
		K-40	2.47E-01	1.47E-01	1.94E-01
Sample ID: 400401	Sample Dates: 1/25/2016 - 2/1/2016	I-131	<2.05E-02	0.00E+00	2.05E-02
		Cs-134	<1.22E-02	0.00E+00	1.22E-02
		Cs-137	<1.51E-02	0.00E+00	1.51E-02
		Be-7	<9.20E-02	0.00E+00	9.20E-02
		K-40	7.74E-01	2.73E-01	2.61E-01
Sample ID: 401039	Sample Dates: 2/1/2016 - 2/8/2016	I-131	<8.61E-03	0.00E+00	8.61E-03
		Cs-134	<7.90E-03	0.00E+00	7.90E-03
		Cs-137	<8.10E-03	0.00E+00	8.10E-03
		Be-7	<5.24E-02	0.00E+00	5.24E-02
		K-40	4.57E-01	1.45E-01	2.88E-02
Sample ID: 401393	Sample Dates: 2/8/2016 - 2/15/2016	I-131	<8.25E-03	0.00E+00	8.25E-03
		Cs-134	<8.59E-03	0.00E+00	8.59E-03
		Cs-137	<8.02E-03	0.00E+00	8.02E-03
		Be-7	<5.27E-02	0.00E+00	5.27E-02
		K-40	4.44E-01	1.75E-01	1.96E-01
Sample ID: 401838	Sample Dates: 2/15/2016 - 2/22/2016	I-131	<6.97E-03	0.00E+00	6.97E-03
		Cs-134	<5.38E-03	0.00E+00	5.38E-03
		Cs-137	<8.15E-03	0.00E+00	8.15E-03
		Be-7	<5.65E-02	0.00E+00	5.65E-02
		K-40	4.31E-01	1.49E-01	1.13E-01
Sample ID: 402359	Sample Dates: 2/22/2016 - 2/29/2016	I-131	<9.75E-03	0.00E+00	9.75E-03
		Cs-134	<8.24E-03	0.00E+00	8.24E-03
		Cs-137	<6.32E-03	0.00E+00	6.32E-03
		Be-7	<7.76E-02	0.00E+00	7.76E-02
		K-40	2.88E-01	1.44E-01	1.70E-01
Sample ID: 403083	Sample Dates: 2/29/2016 - 3/7/2016	I-131	<8.03E-03	0.00E+00	8.03E-03
		Cs-134	<7.83E-03	0.00E+00	7.83E-03
		Cs-137	<7.36E-03	0.00E+00	7.36E-03
		Be-7	<6.02E-02	0.00E+00	6.02E-02
		K-40	3.83E-01	1.48E-01	1.41E-01
Sample ID: 404574	Sample Dates: 3/7/2016 - 3/14/2016	I-131	<9.20E-03	0.00E+00	9.20E-03
		Cs-134	<6.90E-03	0.00E+00	6.90E-03
		Cs-137	<9.63E-03	0.00E+00	9.63E-03
		Be-7	<4.28E-02	0.00E+00	4.28E-02
		K-40	3.25E-01	1.40E-01	1.47E-01
Sample ID: 405441	Sample Dates: 3/14/2016 - 3/21/2016	I-131	<7.93E-03	0.00E+00	7.93E-03
		Cs-134	<7.29E-03	0.00E+00	7.29E-03
		Cs-137	<7.24E-03	0.00E+00	7.24E-03
		Be-7	<6.56E-02	0.00E+00	6.56E-02
		K-40	4.77E-01	1.47E-01	2.81E-02
Sample ID: 406072	Sample Dates: 3/21/2016 - 3/28/2016	I-131	<9.81E-03	0.00E+00	9.81E-03
		Cs-134	<7.60E-03	0.00E+00	7.60E-03
		Cs-137	<7.14E-03	0.00E+00	7.14E-03
		Be-7	<3.64E-02	0.00E+00	3.64E-02
		K-40	3.55E-01	1.35E-01	1.14E-01



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

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

Sample Point 085 [INDICATOR - NNW @ 0.88 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
406431	3/28/2016 - 4/4/2016	I-131	<1.18E-02	0.00E+00	1.18E-02
		Cs-134	<7.12E-03	0.00E+00	7.12E-03
		Cs-137	<9.50E-03	0.00E+00	9.50E-03
		Be-7	<7.08E-02	0.00E+00	7.08E-02
		K-40	6.60E-01	1.90E-01	1.20E-01
407605	4/4/2016 - 4/11/2016	I-131	<6.80E-03	0.00E+00	6.80E-03
		Cs-134	<6.56E-03	0.00E+00	6.56E-03
		Cs-137	<1.03E-02	0.00E+00	1.03E-02
		Be-7	<3.78E-02	0.00E+00	3.78E-02
		K-40	4.14E-01	1.67E-01	1.84E-01
408166	4/11/2016 - 4/18/2016	I-131	<7.24E-03	0.00E+00	7.24E-03
		Cs-134	<8.48E-03	0.00E+00	8.48E-03
		Cs-137	<1.11E-02	0.00E+00	1.11E-02
		Be-7	<5.21E-02	0.00E+00	5.21E-02
		K-40	4.45E-01	1.76E-01	1.91E-01
409488	4/18/2016 - 4/25/2016	I-131	<7.23E-03	0.00E+00	7.23E-03
		Cs-134	<7.57E-03	0.00E+00	7.57E-03
		Cs-137	<8.36E-03	0.00E+00	8.36E-03
		Be-7	<4.18E-02	0.00E+00	4.18E-02
		K-40	3.76E-01	1.28E-01	2.76E-02
409820	4/25/2016 - 5/2/2016	I-131	<8.65E-03	0.00E+00	8.65E-03
		Cs-134	<5.32E-03	0.00E+00	5.32E-03
		Cs-137	<8.04E-03	0.00E+00	8.04E-03
		Be-7	<4.77E-02	0.00E+00	4.77E-02
		K-40	3.27E-01	1.21E-01	2.86E-02
410994	5/2/2016 - 5/9/2016	I-131	<1.00E-02	0.00E+00	1.00E-02
		Cs-134	<6.55E-03	0.00E+00	6.55E-03
		Cs-137	<8.13E-03	0.00E+00	8.13E-03
		Be-7	<6.57E-02	0.00E+00	6.57E-02
		K-40	4.45E-01	1.47E-01	3.09E-02
411466	5/9/2016 - 5/16/2016	I-131	<8.70E-03	0.00E+00	8.70E-03
		Cs-134	<6.46E-03	0.00E+00	6.46E-03
		Cs-137	<1.00E-02	0.00E+00	1.00E-02
		Be-7	<5.70E-02	0.00E+00	5.70E-02
		K-40	4.16E-01	1.42E-01	3.05E-02
411799	5/16/2016 - 5/23/2016	I-131	<9.87E-03	0.00E+00	9.87E-03
		Cs-134	<6.44E-03	0.00E+00	6.44E-03
		Cs-137	<7.99E-03	0.00E+00	7.99E-03
		Be-7	<4.67E-02	0.00E+00	4.67E-02
		K-40	4.49E-01	1.47E-01	3.04E-02
412259	5/23/2016 - 5/31/2016	I-131	<1.07E-02	0.00E+00	1.07E-02
		Cs-134	<8.48E-03	0.00E+00	8.48E-03
		Cs-137	<7.26E-03	0.00E+00	7.26E-03
		Be-7	<1.06E-02	0.00E+00	1.06E-02
		K-40	3.03E-01	1.45E-01	1.76E-01
412777	5/31/2016 - 6/6/2016	I-131	<9.02E-03	0.00E+00	9.02E-03
		Cs-134	<7.62E-03	0.00E+00	7.62E-03
		Cs-137	<6.72E-03	0.00E+00	6.72E-03
		Be-7	<4.96E-02	0.00E+00	4.96E-02
		K-40	4.50E-01	1.63E-01	1.26E-01



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

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

Sample Point 085 [INDICATOR - NNW @ 0.88 miles]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
413392	6/6/2016 - 6/13/2016	I-131	<6.84E-03	0.00E+00	6.84E-03
		Cs-134	<7.25E-03	0.00E+00	7.25E-03
		Cs-137	<7.21E-03	0.00E+00	7.21E-03
		Be-7	<5.48E-02	0.00E+00	5.48E-02
		K-40	4.63E-01	1.44E-01	2.79E-02
413928	6/13/2016 - 6/20/2016	I-131	<5.60E-03	0.00E+00	5.60E-03
		Cs-134	<6.51E-03	0.00E+00	6.51E-03
		Cs-137	<1.03E-02	0.00E+00	1.03E-02
		Be-7	<4.80E-02	0.00E+00	4.80E-02
		K-40	2.76E-01	1.45E-01	1.84E-01
415066	6/20/2016 - 6/27/2016	I-131	<6.78E-03	0.00E+00	6.78E-03
		Cs-134	<8.07E-03	0.00E+00	8.07E-03
		Cs-137	<6.48E-03	0.00E+00	6.48E-03
		Be-7	<6.78E-02	0.00E+00	6.78E-02
		K-40	4.34E-01	1.40E-01	2.80E-02
415467	6/27/2016 - 7/5/2016	I-131	<8.18E-03	0.00E+00	8.18E-03
		Cs-134	<6.18E-03	0.00E+00	6.18E-03
		Cs-137	<5.06E-03	0.00E+00	5.06E-03
		Be-7	<4.21E-02	0.00E+00	4.21E-02
		K-40	3.00E-01	1.26E-01	1.33E-01
416444	7/5/2016 - 7/11/2016	I-131	<1.04E-02	0.00E+00	1.04E-02
		Cs-134	<6.22E-03	0.00E+00	6.22E-03
		Cs-137	<1.01E-02	0.00E+00	1.01E-02
		Be-7	<4.98E-02	0.00E+00	4.98E-02
		K-40	5.18E-01	1.66E-01	3.34E-02
417057	7/11/2016 - 7/18/2016	I-131	<9.03E-03	0.00E+00	9.03E-03
		Cs-134	<7.01E-03	0.00E+00	7.01E-03
		Cs-137	<8.72E-03	0.00E+00	8.72E-03
		Be-7	<4.26E-02	0.00E+00	4.26E-02
		K-40	3.42E-01	1.22E-01	2.81E-02
417448	7/18/2016 - 7/25/2016	I-131	<6.14E-03	0.00E+00	6.14E-03
		Cs-134	<4.79E-03	0.00E+00	4.79E-03
		Cs-137	<7.35E-03	0.00E+00	7.35E-03
		Be-7	<4.76E-02	0.00E+00	4.76E-02
		K-40	4.84E-01	1.49E-01	2.85E-02
417841	7/25/2016 - 8/1/2016	I-131	<9.94E-03	0.00E+00	9.94E-03
		Cs-134	<8.17E-03	0.00E+00	8.17E-03
		Cs-137	<6.56E-03	0.00E+00	6.56E-03
		Be-7	<4.25E-02	0.00E+00	4.25E-02
		K-40	5.15E-01	1.62E-01	1.09E-01
418317	8/1/2016 - 8/8/2016	I-131	<9.49E-03	0.00E+00	9.49E-03
		Cs-134	<8.19E-03	0.00E+00	8.19E-03
		Cs-137	<8.61E-03	0.00E+00	8.61E-03
		Be-7	<5.18E-02	0.00E+00	5.18E-02
		K-40	5.04E-01	1.52E-01	2.85E-02
419035	8/8/2016 - 8/15/2016	I-131	<8.41E-03	0.00E+00	8.41E-03
		Cs-134	<6.35E-03	0.00E+00	6.35E-03
		Cs-137	<7.89E-03	0.00E+00	7.89E-03
		Be-7	<3.62E-02	0.00E+00	3.62E-02
		K-40	3.73E-01	1.29E-01	2.80E-02



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

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

Sample Point 085 [INDICATOR - NNW @ 0.88 miles]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
419533	8/15/2016 - 8/22/2016	I-131	<1.00E-02	0.00E+00	1.00E-02
		Cs-134	<8.28E-03	0.00E+00	8.28E-03
		Cs-137	<8.08E-03	0.00E+00	8.08E-03
		Be-7	<5.63E-02	0.00E+00	5.63E-02
		K-40	2.83E-01	1.29E-01	1.34E-01
420062	8/22/2016 - 8/29/2016	I-131	<7.47E-03	0.00E+00	7.47E-03
		Cs-134	<8.14E-03	0.00E+00	8.14E-03
		Cs-137	<7.29E-03	0.00E+00	7.29E-03
		Be-7	<5.16E-02	0.00E+00	5.16E-02
		K-40	3.17E-01	1.26E-01	1.01E-01
420608	8/29/2016 - 9/6/2016	I-131	<7.92E-03	0.00E+00	7.92E-03
		Cs-134	<5.16E-03	0.00E+00	5.16E-03
		Cs-137	<8.45E-03	0.00E+00	8.45E-03
		Be-7	<4.91E-02	0.00E+00	4.91E-02
		K-40	3.21E-01	1.38E-01	1.58E-01
421474	9/6/2016 - 9/12/2016	I-131	<9.07E-03	0.00E+00	9.07E-03
		Cs-134	<8.99E-03	0.00E+00	8.99E-03
		Cs-137	<8.45E-03	0.00E+00	8.45E-03
		Be-7	<4.26E-02	0.00E+00	4.26E-02
		K-40	4.82E-01	1.71E-01	1.37E-01
422610	9/12/2016 - 9/19/2016	I-131	<1.09E-02	0.00E+00	1.09E-02
		Cs-134	<6.45E-03	0.00E+00	6.45E-03
		Cs-137	<8.74E-03	0.00E+00	8.74E-03
		Be-7	<6.87E-02	0.00E+00	6.87E-02
		K-40	3.59E-01	1.31E-01	3.04E-02
423353	9/19/2016 - 9/26/2016	I-131	<5.97E-03	0.00E+00	5.97E-03
		Cs-134	<7.63E-03	0.00E+00	7.63E-03
		Cs-137	<5.55E-03	0.00E+00	5.55E-03
		Be-7	<4.15E-02	0.00E+00	4.15E-02
		K-40	4.94E-01	1.57E-01	1.08E-01
424493	9/26/2016 - 10/3/2016	I-131	<9.19E-03	0.00E+00	9.19E-03
		Cs-134	<9.31E-03	0.00E+00	9.31E-03
		Cs-137	<7.38E-03	0.00E+00	7.38E-03
		Be-7	<5.22E-02	0.00E+00	5.22E-02
		K-40	3.68E-01	1.43E-01	1.30E-01
425489	10/3/2016 - 10/10/2016	I-131	<9.58E-03	0.00E+00	9.58E-03
		Cs-134	<5.79E-03	0.00E+00	5.79E-03
		Cs-137	<6.44E-03	0.00E+00	6.44E-03
		Be-7	<4.71E-02	0.00E+00	4.71E-02
		K-40	4.22E-01	1.37E-01	2.79E-02
426031	10/10/2016 - 10/17/2016	I-131	<8.02E-03	0.00E+00	8.02E-03
		Cs-134	<6.88E-03	0.00E+00	6.88E-03
		Cs-137	<9.62E-03	0.00E+00	9.62E-03
		Be-7	<6.22E-02	0.00E+00	6.22E-02
		K-40	3.95E-01	1.43E-01	1.16E-01
426400	10/17/2016 - 10/24/2016	I-131	<8.02E-03	0.00E+00	8.02E-03
		Cs-134	<8.50E-03	0.00E+00	8.50E-03
		Cs-137	<4.46E-03	0.00E+00	4.46E-03
		Be-7	<4.23E-02	0.00E+00	4.23E-02
		K-40	3.65E-01	1.28E-01	2.82E-02



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

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

Sample Point 085 [INDICATOR - NNW @ 0.88 miles]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
427084	10/24/2016 - 10/31/2016	I-131	<8.18E-03	0.00E+00	8.18E-03
		Cs-134	<6.47E-03	0.00E+00	6.47E-03
		Cs-137	<9.72E-03	0.00E+00	9.72E-03
		Be-7	<4.28E-02	0.00E+00	4.28E-02
		K-40	4.32E-01	1.50E-01	1.15E-01
427752	10/31/2016 - 11/7/2016	I-131	<8.85E-03	0.00E+00	8.85E-03
		Cs-134	<8.57E-03	0.00E+00	8.57E-03
		Cs-137	<8.82E-03	0.00E+00	8.82E-03
		Be-7	<5.03E-02	0.00E+00	5.03E-02
		K-40	3.49E-01	1.36E-01	1.22E-01
428252	11/7/2016 - 11/14/2016	I-131	<8.23E-03	0.00E+00	8.23E-03
		Cs-134	<8.34E-03	0.00E+00	8.34E-03
		Cs-137	<9.03E-03	0.00E+00	9.03E-03
		Be-7	<4.84E-02	0.00E+00	4.84E-02
		K-40	3.83E-01	1.37E-01	3.15E-02
428928	11/14/2016 - 11/21/2016	I-131	<1.77E-02	0.00E+00	1.77E-02
		Cs-134	<9.25E-03	0.00E+00	9.25E-03
		Cs-137	<1.25E-02	0.00E+00	1.25E-02
		Be-7	<9.36E-02	0.00E+00	9.36E-02
		K-40	6.22E-01	2.69E-01	3.21E-01
429430	11/21/2016 - 11/28/2016	I-131	<7.03E-03	0.00E+00	7.03E-03
		Cs-134	<7.00E-03	0.00E+00	7.00E-03
		Cs-137	<6.63E-03	0.00E+00	6.63E-03
		Be-7	<4.80E-02	0.00E+00	4.80E-02
		K-40	4.03E-01	1.36E-01	2.87E-02
429990	11/28/2016 - 12/5/2016	I-131	<8.47E-03	0.00E+00	8.47E-03
		Cs-134	<3.55E-03	0.00E+00	3.55E-03
		Cs-137	<5.56E-03	0.00E+00	5.56E-03
		Be-7	<5.52E-02	0.00E+00	5.52E-02
		K-40	3.34E-01	1.55E-01	1.88E-01
430616	12/5/2016 - 12/12/2016	I-131	<7.80E-03	0.00E+00	7.80E-03
		Cs-134	<5.14E-03	0.00E+00	5.14E-03
		Cs-137	<7.78E-03	0.00E+00	7.78E-03
		Be-7	<5.04E-02	0.00E+00	5.04E-02
		K-40	<3.09E-01	0.00E+00	3.09E-01
431098	12/12/2016 - 12/19/2016	I-131	<9.85E-03	0.00E+00	9.85E-03
		Cs-134	<8.43E-03	0.00E+00	8.43E-03
		Cs-137	<4.62E-03	0.00E+00	4.62E-03
		Be-7	<4.92E-02	0.00E+00	4.92E-02
		K-40	4.89E-01	1.66E-01	1.41E-01
431498	12/19/2016 - 12/27/2016	I-131	<9.64E-03	0.00E+00	9.64E-03
		Cs-134	<5.18E-03	0.00E+00	5.18E-03
		Cs-137	<7.17E-03	0.00E+00	7.17E-03
		Be-7	<4.66E-02	0.00E+00	4.66E-02
		K-40	4.26E-01	1.43E-01	1.01E-01

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

Sample Point 060 [INDICATOR - NE @ 3.23 miles]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
398479	12/7/2015 - 1/5/2016	Beta	1.27E+00	7.63E-01	1.23E+00
		Mn-54	<4.05E+00	0.00E+00	4.05E+00
		Co-58	<3.55E+00	0.00E+00	3.55E+00
		Fe-59	<8.84E+00	0.00E+00	8.84E+00



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

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

Sample Point 060 [INDICATOR - NE @ 3.23 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
398479	12/7/2015 - 1/5/2016	Co-60	<3.51E+00	0.00E+00	3.51E+00
		Zn-65	<8.46E+00	0.00E+00	8.46E+00
		Zr-95	<6.78E+00	0.00E+00	6.78E+00
		Nb-95	<4.02E+00	0.00E+00	4.02E+00
		I-131	<1.15E+01	0.00E+00	1.15E+01
		Cs-134	<3.23E+00	0.00E+00	3.23E+00
		Cs-137	<3.72E+00	0.00E+00	3.72E+00
		BaLa-140	<6.96E+00	0.00E+00	6.96E+00
		Be-7	<3.83E+01	0.00E+00	3.83E+01
		K-40	<6.11E+01	0.00E+00	6.11E+01
		400161	1/5/2016 - 2/1/2016	Beta	<5.61E-01
Mn-54	<2.88E+00			0.00E+00	2.88E+00
Co-58	<3.00E+00			0.00E+00	3.00E+00
Fe-59	<6.64E+00			0.00E+00	6.64E+00
Co-60	<3.10E+00			0.00E+00	3.10E+00
Zn-65	<7.91E+00			0.00E+00	7.91E+00
Zr-95	<5.32E+00			0.00E+00	5.32E+00
Nb-95	<4.48E+00			0.00E+00	4.48E+00
I-131	<1.19E+01			0.00E+00	1.19E+01
Cs-134	<4.28E+00			0.00E+00	4.28E+00
Cs-137	<3.50E+00			0.00E+00	3.50E+00
BaLa-140	<9.19E+00			0.00E+00	9.19E+00
Be-7	<3.01E+01			0.00E+00	3.01E+01
K-40	1.83E+01			2.81E+01	4.72E+01
401966	2/1/2016 - 2/29/2016	Beta	1.69E+00	7.56E-01	1.17E+00
		Mn-54	<4.15E+00	0.00E+00	4.15E+00
		Co-58	<4.42E+00	0.00E+00	4.42E+00
		Fe-59	<6.82E+00	0.00E+00	6.82E+00
		Co-60	<3.84E+00	0.00E+00	3.84E+00
		Zn-65	<8.84E+00	0.00E+00	8.84E+00
		Zr-95	<9.46E+00	0.00E+00	9.46E+00
		Nb-95	<3.21E+00	0.00E+00	3.21E+00
		I-131	<1.20E+01	0.00E+00	1.20E+01
		Cs-134	<3.72E+00	0.00E+00	3.72E+00
		Cs-137	<4.49E+00	0.00E+00	4.49E+00
		BaLa-140	<9.66E+00	0.00E+00	9.66E+00
		Be-7	<3.11E+01	0.00E+00	3.11E+01
		K-40	5.97E+01	3.64E+01	4.70E+01
403612	12/7/2015 - 2/29/2016	H3DW	<-6.1E+01	0.00E+00	1.97E+02
405638	2/29/2016 - 3/28/2016	Beta	6.19E-01	6.92E-01	1.16E+00
		Mn-54	<1.42E+00	0.00E+00	1.42E+00
		Co-58	<1.75E+00	0.00E+00	1.75E+00
		Fe-59	<3.16E+00	0.00E+00	3.16E+00
		Co-60	<1.63E+00	0.00E+00	1.63E+00
		Zn-65	<2.55E+00	0.00E+00	2.55E+00
		Zr-95	<3.26E+00	0.00E+00	3.26E+00
		Nb-95	<2.28E+00	0.00E+00	2.28E+00
		I-131	<9.67E+00	0.00E+00	9.67E+00
		Cs-134	<1.56E+00	0.00E+00	1.56E+00
		Cs-137	<1.69E+00	0.00E+00	1.69E+00
		BaLa-140	<5.66E+00	0.00E+00	5.66E+00
		Be-7	<1.55E+01	0.00E+00	1.55E+01
		K-40	4.75E+01	1.57E+01	1.95E+01
408522	3/28/2016 - 4/25/2016	Beta	<4.22E-01	0.00E+00	1.26E+00
		Mn-54	<3.58E+00	0.00E+00	3.58E+00
		Co-58	<3.70E+00	0.00E+00	3.70E+00
		Fe-59	<8.11E+00	0.00E+00	8.11E+00
		Co-60	<4.09E+00	0.00E+00	4.09E+00
		Zn-65	<1.14E+01	0.00E+00	1.14E+01



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

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

Sample Point 060 [INDICATOR - NE @ 3.23 miles]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
408522	3/28/2016 - 4/25/2016	Zr-95	<9.09E+00	0.00E+00	9.09E+00
		Nb-95	<5.99E+00	0.00E+00	5.99E+00
		I-131	<9.87E+00	0.00E+00	9.87E+00
		Cs-134	<4.90E+00	0.00E+00	4.90E+00
		Cs-137	<3.22E+00	0.00E+00	3.22E+00
		BaLa-140	<7.10E+00	0.00E+00	7.10E+00
		Be-7	<3.59E+01	0.00E+00	3.59E+01
		K-40	<8.45E+01	0.00E+00	8.45E+01
		411595	4/25/2016 - 5/23/2016	Beta	<-1.8E-02
Mn-54	<2.39E+00			0.00E+00	2.39E+00
Co-58	<3.49E+00			0.00E+00	3.49E+00
Fe-59	<8.84E+00			0.00E+00	8.84E+00
Co-60	<4.71E+00			0.00E+00	4.71E+00
Zn-65	<8.23E+00			0.00E+00	8.23E+00
Zr-95	<7.30E+00			0.00E+00	7.30E+00
Nb-95	<3.64E+00			0.00E+00	3.64E+00
I-131	<1.18E+01			0.00E+00	1.18E+01
Cs-134	<4.47E+00			0.00E+00	4.47E+00
Cs-137	<4.94E+00			0.00E+00	4.94E+00
BaLa-140	<6.09E+00			0.00E+00	6.09E+00
Be-7	<3.38E+01			0.00E+00	3.38E+01
K-40	<6.44E+01			0.00E+00	6.44E+01
413186	2/29/2016 - 5/23/2016			Nuclide	Activity
		H3DW	<1.74E+01	0.00E+00	1.96E+02
413518	5/23/2016 - 6/20/2016	Nuclide	Activity	2 Sigma Error	MDA
		Beta	6.34E-01	7.28E-01	1.22E+00
		Mn-54	<3.74E+00	0.00E+00	3.74E+00
		Co-58	<2.05E+00	0.00E+00	2.05E+00
		Fe-59	<8.37E+00	0.00E+00	8.37E+00
		Co-60	<2.48E+00	0.00E+00	2.48E+00
		Zn-65	<7.37E+00	0.00E+00	7.37E+00
		Zr-95	<6.82E+00	0.00E+00	6.82E+00
		Nb-95	<3.50E+00	0.00E+00	3.50E+00
		I-131	<1.13E+01	0.00E+00	1.13E+01
		Cs-134	<2.89E+00	0.00E+00	2.89E+00
		Cs-137	<3.75E+00	0.00E+00	3.75E+00
		BaLa-140	<2.02E+00	0.00E+00	2.02E+00
		Be-7	<3.49E+01	0.00E+00	3.49E+01
		K-40	<5.48E+01	0.00E+00	5.48E+01
416857	6/20/2016 - 7/18/2016	Nuclide	Activity	2 Sigma Error	MDA
		Beta	1.36E+00	8.06E-01	1.32E+00
		Mn-54	<3.99E+00	0.00E+00	3.99E+00
		Co-58	<3.06E+00	0.00E+00	3.06E+00
		Fe-59	<9.64E+00	0.00E+00	9.64E+00
		Co-60	<4.62E+00	0.00E+00	4.62E+00
		Zn-65	<6.09E+00	0.00E+00	6.09E+00
		Zr-95	<9.89E+00	0.00E+00	9.89E+00
		Nb-95	<4.99E+00	0.00E+00	4.99E+00
		I-131	<1.17E+01	0.00E+00	1.17E+01
		Cs-134	<2.73E+00	0.00E+00	2.73E+00
		Cs-137	<4.02E+00	0.00E+00	4.02E+00
		BaLa-140	<7.97E+00	0.00E+00	7.97E+00
		Be-7	<3.71E+01	0.00E+00	3.71E+01
		K-40	<6.14E+01	0.00E+00	6.14E+01
418779	7/18/2016 - 8/15/2016	Nuclide	Activity	2 Sigma Error	MDA
		Beta	1.22E+00	7.36E-01	1.18E+00
		Mn-54	<3.14E+00	0.00E+00	3.14E+00
		Co-58	<3.02E+00	0.00E+00	3.02E+00
		Fe-59	<5.80E+00	0.00E+00	5.80E+00
		Co-60	<3.46E+00	0.00E+00	3.46E+00
		Zn-65	<5.02E+00	0.00E+00	5.02E+00
		Zr-95	<3.70E+00	0.00E+00	3.70E+00
		Nb-95	<3.54E+00	0.00E+00	3.54E+00



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

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

Sample Point 060 [INDICATOR - NE @ 3.23 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
418779	7/18/2016 - 8/15/2016	I-131	<1.15E+01	0.00E+00	1.15E+01
		Cs-134	<3.38E+00	0.00E+00	3.38E+00
		Cs-137	<2.53E+00	0.00E+00	2.53E+00
		BaLa-140	<6.95E+00	0.00E+00	6.95E+00
		Be-7	<2.23E+01	0.00E+00	2.23E+01
		K-40	<4.94E+01	0.00E+00	4.94E+01
420867	5/23/2016 - 8/15/2016	Nuclide	Activity	2 Sigma Error	MDA
		H3DW	<2.50E+01	0.00E+00	1.96E+02
420778	8/15/2016 - 9/12/2016	Nuclide	Activity	2 Sigma Error	MDA
		Beta	1.38E+00	7.48E-01	1.19E+00
		Mn-54	<1.72E+00	0.00E+00	1.72E+00
		Co-58	<2.05E+00	0.00E+00	2.05E+00
		Fe-59	<4.16E+00	0.00E+00	4.16E+00
		Co-60	<1.76E+00	0.00E+00	1.76E+00
		Zn-65	<3.37E+00	0.00E+00	3.37E+00
		Zr-95	<3.92E+00	0.00E+00	3.92E+00
		Nb-95	<2.81E+00	0.00E+00	2.81E+00
		I-131	<1.12E+01	0.00E+00	1.12E+01
		Cs-134	<2.01E+00	0.00E+00	2.01E+00
		Cs-137	<1.80E+00	0.00E+00	1.80E+00
		BaLa-140	<6.71E+00	0.00E+00	6.71E+00
		Be-7	7.94E+00	1.43E+01	2.40E+01
K-40	4.97E+01	1.96E+01	2.56E+01		
424744	9/12/2016 - 10/10/2016	Nuclide	Activity	2 Sigma Error	MDA
		Beta	1.38E+00	7.28E-01	1.15E+00
		Mn-54	<3.09E+00	0.00E+00	3.09E+00
		Co-58	<3.69E+00	0.00E+00	3.69E+00
		Fe-59	<6.78E+00	0.00E+00	6.78E+00
		Co-60	<2.45E+00	0.00E+00	2.45E+00
		Zn-65	<5.50E+00	0.00E+00	5.50E+00
		Zr-95	<5.85E+00	0.00E+00	5.85E+00
		Nb-95	<3.20E+00	0.00E+00	3.20E+00
		I-131	<1.15E+01	0.00E+00	1.15E+01
		Cs-134	<2.99E+00	0.00E+00	2.99E+00
		Cs-137	<3.10E+00	0.00E+00	3.10E+00
		BaLa-140	<8.37E+00	0.00E+00	8.37E+00
		Be-7	<3.05E+01	0.00E+00	3.05E+01
K-40	<5.18E+01	0.00E+00	5.18E+01		
427418	10/10/2016 - 11/7/2016	Nuclide	Activity	2 Sigma Error	MDA
		Beta	1.07E+00	6.87E-01	1.11E+00
		Mn-54	<3.11E+00	0.00E+00	3.11E+00
		Co-58	<3.59E+00	0.00E+00	3.59E+00
		Fe-59	<3.35E+00	0.00E+00	3.35E+00
		Co-60	<3.01E+00	0.00E+00	3.01E+00
		Zn-65	<7.67E+00	0.00E+00	7.67E+00
		Zr-95	<6.37E+00	0.00E+00	6.37E+00
		Nb-95	<4.04E+00	0.00E+00	4.04E+00
		I-131	<1.14E+01	0.00E+00	1.14E+01
		Cs-134	<3.01E+00	0.00E+00	3.01E+00
		Cs-137	<2.34E+00	0.00E+00	2.34E+00
		BaLa-140	<7.81E+00	0.00E+00	7.81E+00
		Be-7	<2.53E+01	0.00E+00	2.53E+01
K-40	<4.99E+01	0.00E+00	4.99E+01		
427846	8/15/2016 - 12/5/2016	Nuclide	Activity	2 Sigma Error	MDA
		H3DW	<2.95E+01	0.00E+00	1.88E+02
429631	11/7/2016 - 12/5/2016	Nuclide	Activity	2 Sigma Error	MDA
		Beta	5.88E-01	7.23E-01	1.22E+00
		Mn-54	<3.40E+00	0.00E+00	3.40E+00
		Co-58	<3.31E+00	0.00E+00	3.31E+00
		Fe-59	<6.13E+00	0.00E+00	6.13E+00
		Co-60	<3.09E+00	0.00E+00	3.09E+00
		Zn-65	<5.30E+00	0.00E+00	5.30E+00
		Zr-95	<6.09E+00	0.00E+00	6.09E+00



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

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

Sample Point 060 [INDICATOR - NE @ 3.23 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
429631	11/7/2016 - 12/5/2016	Nb-95	<4.72E+00	0.00E+00	4.72E+00
		I-131	<1.07E+01	0.00E+00	1.07E+01
		Cs-134	<3.77E+00	0.00E+00	3.77E+00
		Cs-137	<3.56E+00	0.00E+00	3.56E+00
		BaLa-140	<7.35E+00	0.00E+00	7.35E+00
		Be-7	<2.80E+01	0.00E+00	2.80E+01
		K-40	4.26E+01	2.37E+01	2.80E+01

Sample Point 064 [CONTROL - SSW @ 6.67 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
398480	12/7/2015 - 1/5/2016	Beta	<5.36E-01	0.00E+00	1.23E+00
		Mn-54	<3.84E+00	0.00E+00	3.84E+00
		Co-58	<3.90E+00	0.00E+00	3.90E+00
		Fe-59	<9.55E+00	0.00E+00	9.55E+00
		Co-60	<2.68E+00	0.00E+00	2.68E+00
		Zn-65	<7.26E+00	0.00E+00	7.26E+00
		Zr-95	<6.12E+00	0.00E+00	6.12E+00
		Nb-95	<4.26E+00	0.00E+00	4.26E+00
		I-131	<1.14E+01	0.00E+00	1.14E+01
		Cs-134	<3.08E+00	0.00E+00	3.08E+00
		Cs-137	<3.12E+00	0.00E+00	3.12E+00
		BaLa-140	<1.16E+01	0.00E+00	1.16E+01
		Be-7	<3.35E+01	0.00E+00	3.35E+01
		K-40	<5.55E+01	0.00E+00	5.55E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
400162	1/5/2016 - 2/1/2016	Beta	8.47E-01	7.02E-01	1.15E+00
		Mn-54	<3.93E+00	0.00E+00	3.93E+00
		Co-58	<3.30E+00	0.00E+00	3.30E+00
		Fe-59	<6.07E+00	0.00E+00	6.07E+00
		Co-60	<4.68E+00	0.00E+00	4.68E+00
		Zn-65	<8.01E+00	0.00E+00	8.01E+00
		Zr-95	<7.73E+00	0.00E+00	7.73E+00
		Nb-95	<5.59E+00	0.00E+00	5.59E+00
		I-131	<1.19E+01	0.00E+00	1.19E+01
		Cs-134	<4.13E+00	0.00E+00	4.13E+00
		Cs-137	<4.83E+00	0.00E+00	4.83E+00
		BaLa-140	<1.19E+01	0.00E+00	1.19E+01
		Be-7	<2.72E+01	0.00E+00	2.72E+01
		K-40	<5.95E+01	0.00E+00	5.95E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
401967	2/1/2016 - 2/29/2016	Beta	7.78E-01	7.09E-01	1.17E+00
		Mn-54	<4.46E+00	0.00E+00	4.46E+00
		Co-58	<4.48E+00	0.00E+00	4.48E+00
		Fe-59	<9.33E+00	0.00E+00	9.33E+00
		Co-60	<4.31E+00	0.00E+00	4.31E+00
		Zn-65	<7.11E+00	0.00E+00	7.11E+00
		Zr-95	<9.59E+00	0.00E+00	9.59E+00
		Nb-95	<5.33E+00	0.00E+00	5.33E+00
		I-131	<1.12E+01	0.00E+00	1.12E+01
		Cs-134	<3.56E+00	0.00E+00	3.56E+00
		Cs-137	<5.05E+00	0.00E+00	5.05E+00
		BaLa-140	<9.43E+00	0.00E+00	9.43E+00
		Be-7	<3.15E+01	0.00E+00	3.15E+01
		K-40	3.00E+01	2.53E+01	3.35E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
403613	12/7/2015 - 2/29/2016	H3DW	<-6.1E+01	0.00E+00	1.96E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
405639	2/29/2016 - 3/28/2016	Beta	8.59E-01	7.06E-01	1.16E+00
		Mn-54	<1.55E+00	0.00E+00	1.55E+00
		Co-58	<1.85E+00	0.00E+00	1.85E+00
		Fe-59	<3.59E+00	0.00E+00	3.59E+00
		Co-60	<1.70E+00	0.00E+00	1.70E+00
		Zn-65	<3.69E+00	0.00E+00	3.69E+00
		Zr-95	<3.55E+00	0.00E+00	3.55E+00



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

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

Sample Point 064 [CONTROL - SSW @ 6.67 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
405639	2/29/2016 - 3/28/2016	Nb-95	<2.50E+00	0.00E+00	2.50E+00
		I-131	<1.18E+01	0.00E+00	1.18E+01
		Cs-134	<1.65E+00	0.00E+00	1.65E+00
		Cs-137	<1.53E+00	0.00E+00	1.53E+00
		BaLa-140	<5.99E+00	0.00E+00	5.99E+00
		Be-7	<1.58E+01	0.00E+00	1.58E+01
		K-40	2.55E+01	1.72E+01	2.64E+01
		408523	3/28/2016 - 4/25/2016	Beta	1.03E+00
Mn-54	<2.47E+00			0.00E+00	2.47E+00
Co-58	<2.61E+00			0.00E+00	2.61E+00
Fe-59	<4.21E+00			0.00E+00	4.21E+00
Co-60	<2.82E+00			0.00E+00	2.82E+00
Zn-65	<3.90E+00			0.00E+00	3.90E+00
Zr-95	<4.63E+00			0.00E+00	4.63E+00
Nb-95	<2.68E+00			0.00E+00	2.68E+00
I-131	<1.08E+01			0.00E+00	1.08E+01
Cs-134	<2.88E+00			0.00E+00	2.88E+00
Cs-137	<2.06E+00			0.00E+00	2.06E+00
BaLa-140	<6.03E+00			0.00E+00	6.03E+00
Be-7	<2.69E+01			0.00E+00	2.69E+01
K-40	<3.33E+01			0.00E+00	3.33E+01
411596	4/25/2016 - 5/23/2016	Beta	9.14E-01	8.21E-01	1.36E+00
		Mn-54	<2.81E+00	0.00E+00	2.81E+00
		Co-58	<2.70E+00	0.00E+00	2.70E+00
		Fe-59	<7.15E+00	0.00E+00	7.15E+00
		Co-60	<4.22E+00	0.00E+00	4.22E+00
		Zn-65	<5.99E+00	0.00E+00	5.99E+00
		Zr-95	<6.60E+00	0.00E+00	6.60E+00
		Nb-95	<3.81E+00	0.00E+00	3.81E+00
		I-131	<1.18E+01	0.00E+00	1.18E+01
		Cs-134	<2.50E+00	0.00E+00	2.50E+00
		Cs-137	<2.27E+00	0.00E+00	2.27E+00
		BaLa-140	<8.60E+00	0.00E+00	8.60E+00
		Be-7	<3.04E+01	0.00E+00	3.04E+01
		K-40	4.52E+01	2.26E+01	2.30E+01
413187	2/29/2016 - 5/23/2016	H3DW	<3.97E+01	0.00E+00	1.96E+02
413519	5/23/2016 - 6/20/2016	Beta	1.52E+00	7.71E-01	1.22E+00
		Mn-54	<3.21E+00	0.00E+00	3.21E+00
		Co-58	<3.06E+00	0.00E+00	3.06E+00
		Fe-59	<6.95E+00	0.00E+00	6.95E+00
		Co-60	<3.85E+00	0.00E+00	3.85E+00
		Zn-65	<7.38E+00	0.00E+00	7.38E+00
		Zr-95	<5.42E+00	0.00E+00	5.42E+00
		Nb-95	<3.75E+00	0.00E+00	3.75E+00
		I-131	<1.20E+01	0.00E+00	1.20E+01
		Cs-134	<3.18E+00	0.00E+00	3.18E+00
		Cs-137	<3.30E+00	0.00E+00	3.30E+00
		BaLa-140	<8.81E+00	0.00E+00	8.81E+00
		Be-7	<2.74E+01	0.00E+00	2.74E+01
		K-40	<6.18E+01	0.00E+00	6.18E+01
416858	6/20/2016 - 7/18/2016	Beta	9.45E-01	7.88E-01	1.32E+00
		Mn-54	<2.66E+00	0.00E+00	2.66E+00
		Co-58	<3.24E+00	0.00E+00	3.24E+00
		Fe-59	<5.46E+00	0.00E+00	5.46E+00
		Co-60	<2.59E+00	0.00E+00	2.59E+00
		Zn-65	<4.76E+00	0.00E+00	4.76E+00
		Zr-95	<4.89E+00	0.00E+00	4.89E+00
		Nb-95	<3.22E+00	0.00E+00	3.22E+00
		I-131	<9.99E+00	0.00E+00	9.99E+00



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

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

Sample Point 064 [CONTROL - SSW @ 6.67 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
416858	6/20/2016 - 7/18/2016	Cs-134	<2.64E+00	0.00E+00	2.64E+00
		Cs-137	<2.89E+00	0.00E+00	2.89E+00
		BaLa-140	<8.17E+00	0.00E+00	8.17E+00
		Be-7	<1.94E+01	0.00E+00	1.94E+01
		K-40	<4.55E+01	0.00E+00	4.55E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
418780	7/18/2016 - 8/15/2016	Beta	1.23E+00	7.37E-01	1.18E+00
		Mn-54	<2.50E+00	0.00E+00	2.50E+00
		Co-58	<2.78E+00	0.00E+00	2.78E+00
		Fe-59	<5.91E+00	0.00E+00	5.91E+00
		Co-60	<3.18E+00	0.00E+00	3.18E+00
		Zn-65	<5.11E+00	0.00E+00	5.11E+00
		Zr-95	<5.42E+00	0.00E+00	5.42E+00
		Nb-95	<3.97E+00	0.00E+00	3.97E+00
		I-131	<1.11E+01	0.00E+00	1.11E+01
		Cs-134	<3.52E+00	0.00E+00	3.52E+00
		Cs-137	<3.82E+00	0.00E+00	3.82E+00
		BaLa-140	<6.38E+00	0.00E+00	6.38E+00
		Be-7	<2.15E+01	0.00E+00	2.15E+01
		K-40	<5.04E+01	0.00E+00	5.04E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
420868	5/23/2016 - 8/15/2016	H3DW	<2.49E+01	0.00E+00	1.95E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
420779	8/15/2016 - 9/12/2016	Beta	1.35E+00	7.47E-01	1.19E+00
		Mn-54	<2.19E+00	0.00E+00	2.19E+00
		Co-58	<2.99E+00	0.00E+00	2.99E+00
		Fe-59	<5.15E+00	0.00E+00	5.15E+00
		Co-60	<2.32E+00	0.00E+00	2.32E+00
		Zn-65	<4.76E+00	0.00E+00	4.76E+00
		Zr-95	<4.80E+00	0.00E+00	4.80E+00
		Nb-95	<3.13E+00	0.00E+00	3.13E+00
		I-131	<1.18E+01	0.00E+00	1.18E+01
		Cs-134	<2.46E+00	0.00E+00	2.46E+00
		Cs-137	<2.86E+00	0.00E+00	2.86E+00
		BaLa-140	<8.28E+00	0.00E+00	8.28E+00
		Be-7	<2.35E+01	0.00E+00	2.35E+01
		K-40	<3.10E+01	0.00E+00	3.10E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
424745	9/12/2016 - 10/10/2016	Beta	1.36E+00	7.31E-01	1.15E+00
		Mn-54	<3.81E+00	0.00E+00	3.81E+00
		Co-58	<3.83E+00	0.00E+00	3.83E+00
		Fe-59	<7.58E+00	0.00E+00	7.58E+00
		Co-60	<3.33E+00	0.00E+00	3.33E+00
		Zn-65	<7.43E+00	0.00E+00	7.43E+00
		Zr-95	<6.79E+00	0.00E+00	6.79E+00
		Nb-95	<4.48E+00	0.00E+00	4.48E+00
		I-131	<1.16E+01	0.00E+00	1.16E+01
		Cs-134	<3.20E+00	0.00E+00	3.20E+00
		Cs-137	<3.45E+00	0.00E+00	3.45E+00
		BaLa-140	<7.73E+00	0.00E+00	7.73E+00
		Be-7	<3.42E+01	0.00E+00	3.42E+01
		K-40	<5.79E+01	0.00E+00	5.79E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
427419	10/10/2016 - 11/7/2016	Beta	1.82E+00	7.24E-01	1.11E+00
		Mn-54	<2.90E+00	0.00E+00	2.90E+00
		Co-58	<2.67E+00	0.00E+00	2.67E+00
		Fe-59	<6.40E+00	0.00E+00	6.40E+00
		Co-60	<2.53E+00	0.00E+00	2.53E+00
		Zn-65	<6.70E+00	0.00E+00	6.70E+00
		Zr-95	<4.52E+00	0.00E+00	4.52E+00
		Nb-95	<4.35E+00	0.00E+00	4.35E+00
		I-131	<1.13E+01	0.00E+00	1.13E+01
		Cs-134	<3.58E+00	0.00E+00	3.58E+00
		Cs-137	<2.89E+00	0.00E+00	2.89E+00



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

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

Sample Point 064 [CONTROL - SSW @ 6.67 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
427419	10/10/2016 - 11/7/2016	BaLa-140	<5.09E+00	0.00E+00	5.09E+00
		Be-7	<2.48E+01	0.00E+00	2.48E+01
		K-40	<4.79E+01	0.00E+00	4.79E+01
427847	8/15/2016 - 12/5/2016	H3DW	<-1.8E+01	0.00E+00	1.88E+02
429632	11/7/2016 - 12/5/2016	Beta	<3.20E-01	0.00E+00	1.22E+00
		Mn-54	<2.96E+00	0.00E+00	2.96E+00
		Co-58	<3.91E+00	0.00E+00	3.91E+00
		Fe-59	<6.50E+00	0.00E+00	6.50E+00
		Co-60	<2.32E+00	0.00E+00	2.32E+00
		Zn-65	<5.53E+00	0.00E+00	5.53E+00
		Zr-95	<7.17E+00	0.00E+00	7.17E+00
		Nb-95	<4.85E+00	0.00E+00	4.85E+00
		I-131	<1.06E+01	0.00E+00	1.06E+01
		Cs-134	<3.28E+00	0.00E+00	3.28E+00
		Cs-137	<3.63E+00	0.00E+00	3.63E+00
		BaLa-140	<5.20E+00	0.00E+00	5.20E+00
		Be-7	<2.74E+01	0.00E+00	2.74E+01
		K-40	<6.56E+01	0.00E+00	6.56E+01

Sample Point 066 [INDICATOR - SSE @ 18.9 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
398481	12/7/2015 - 1/5/2016	Beta	1.36E+00	7.70E-01	1.23E+00
		Mn-54	<2.59E+00	0.00E+00	2.59E+00
		Co-58	<2.98E+00	0.00E+00	2.98E+00
		Fe-59	<6.50E+00	0.00E+00	6.50E+00
		Co-60	<2.74E+00	0.00E+00	2.74E+00
		Zn-65	<5.05E+00	0.00E+00	5.05E+00
		Zr-95	<5.73E+00	0.00E+00	5.73E+00
		Nb-95	<3.83E+00	0.00E+00	3.83E+00
		I-131	<1.16E+01	0.00E+00	1.16E+01
		Cs-134	<3.04E+00	0.00E+00	3.04E+00
		Cs-137	<2.50E+00	0.00E+00	2.50E+00
		BaLa-140	<6.01E+00	0.00E+00	6.01E+00
		Be-7	<2.17E+01	0.00E+00	2.17E+01
		K-40	<4.44E+01	0.00E+00	4.44E+01
400163	1/5/2016 - 2/1/2016	Beta	2.24E+00	8.11E-01	1.24E+00
		Mn-54	<3.39E+00	0.00E+00	3.39E+00
		Co-58	<3.34E+00	0.00E+00	3.34E+00
		Fe-59	<6.08E+00	0.00E+00	6.08E+00
		Co-60	<4.32E+00	0.00E+00	4.32E+00
		Zn-65	<7.94E+00	0.00E+00	7.94E+00
		Zr-95	<5.92E+00	0.00E+00	5.92E+00
		Nb-95	<5.50E+00	0.00E+00	5.50E+00
		I-131	<1.20E+01	0.00E+00	1.20E+01
		Cs-134	<3.11E+00	0.00E+00	3.11E+00
		Cs-137	<3.89E+00	0.00E+00	3.89E+00
		BaLa-140	<1.03E+01	0.00E+00	1.03E+01
		Be-7	<3.00E+01	0.00E+00	3.00E+01
		K-40	<4.76E+01	0.00E+00	4.76E+01
401968	2/1/2016 - 2/29/2016	Beta	1.61E+00	7.52E-01	1.18E+00
		Mn-54	<2.74E+00	0.00E+00	2.74E+00
		Co-58	<3.05E+00	0.00E+00	3.05E+00
		Fe-59	<8.51E+00	0.00E+00	8.51E+00
		Co-60	<3.11E+00	0.00E+00	3.11E+00
		Zn-65	<5.72E+00	0.00E+00	5.72E+00
		Zr-95	<5.40E+00	0.00E+00	5.40E+00
		Nb-95	<3.09E+00	0.00E+00	3.09E+00
		I-131	<1.11E+01	0.00E+00	1.11E+01
		Cs-134	<3.66E+00	0.00E+00	3.66E+00
		Cs-137	<3.19E+00	0.00E+00	3.19E+00



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

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

Sample Point 066 [INDICATOR - SSE @ 18.9 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
401968	2/1/2016 - 2/29/2016	BaLa-140	<9.38E+00	0.00E+00	9.38E+00
		Be-7	<2.88E+01	0.00E+00	2.88E+01
		K-40	<5.14E+01	0.00E+00	5.14E+01
403614	12/7/2015 - 2/29/2016	H3DW	2.96E+02	1.22E+02	1.96E+02
405640	2/29/2016 - 3/28/2016	Beta	1.50E+00	7.44E-01	1.17E+00
		Mn-54	<1.29E+00	0.00E+00	1.29E+00
		Co-58	<1.66E+00	0.00E+00	1.66E+00
		Fe-59	<3.46E+00	0.00E+00	3.46E+00
		Co-60	<1.32E+00	0.00E+00	1.32E+00
		Zn-65	<2.32E+00	0.00E+00	2.32E+00
		Zr-95	<2.89E+00	0.00E+00	2.89E+00
		Nb-95	<2.20E+00	0.00E+00	2.20E+00
		I-131	<9.93E+00	0.00E+00	9.93E+00
		Cs-134	<1.42E+00	0.00E+00	1.42E+00
		Cs-137	<1.39E+00	0.00E+00	1.39E+00
		BaLa-140	<4.66E+00	0.00E+00	4.66E+00
		Be-7	<1.29E+01	0.00E+00	1.29E+01
		K-40	6.19E+01	1.56E+01	1.86E+01
408524	3/28/2016 - 4/25/2016	Beta	1.14E+00	7.81E-01	1.27E+00
		Mn-54	<2.38E+00	0.00E+00	2.38E+00
		Co-58	<2.97E+00	0.00E+00	2.97E+00
		Fe-59	<6.07E+00	0.00E+00	6.07E+00
		Co-60	<2.91E+00	0.00E+00	2.91E+00
		Zn-65	<5.63E+00	0.00E+00	5.63E+00
		Zr-95	<4.51E+00	0.00E+00	4.51E+00
		Nb-95	<3.77E+00	0.00E+00	3.77E+00
		I-131	<9.76E+00	0.00E+00	9.76E+00
		Cs-134	<3.57E+00	0.00E+00	3.57E+00
		Cs-137	<3.38E+00	0.00E+00	3.38E+00
		BaLa-140	<5.60E+00	0.00E+00	5.60E+00
		Be-7	<2.35E+01	0.00E+00	2.35E+01
		K-40	<4.63E+01	0.00E+00	4.63E+01
411597	4/25/2016 - 5/23/2016	Beta	<2.03E-01	0.00E+00	1.36E+00
		Mn-54	<3.16E+00	0.00E+00	3.16E+00
		Co-58	<2.70E+00	0.00E+00	2.70E+00
		Fe-59	<6.08E+00	0.00E+00	6.08E+00
		Co-60	<2.66E+00	0.00E+00	2.66E+00
		Zn-65	<3.68E+00	0.00E+00	3.68E+00
		Zr-95	<5.27E+00	0.00E+00	5.27E+00
		Nb-95	<3.57E+00	0.00E+00	3.57E+00
		I-131	<1.10E+01	0.00E+00	1.10E+01
		Cs-134	<2.20E+00	0.00E+00	2.20E+00
		Cs-137	<2.53E+00	0.00E+00	2.53E+00
		BaLa-140	<6.42E+00	0.00E+00	6.42E+00
		Be-7	<2.48E+01	0.00E+00	2.48E+01
		K-40	5.28E+01	2.61E+01	3.47E+01
413188	2/29/2016 - 5/23/2016	H3DW	2.95E+02	1.24E+02	1.96E+02
413520	5/23/2016 - 6/20/2016	Beta	<5.09E-01	0.00E+00	1.23E+00
		Mn-54	<2.91E+00	0.00E+00	2.91E+00
		Co-58	<2.76E+00	0.00E+00	2.76E+00
		Fe-59	<6.05E+00	0.00E+00	6.05E+00
		Co-60	<2.40E+00	0.00E+00	2.40E+00
		Zn-65	<3.13E+00	0.00E+00	3.13E+00
		Zr-95	<5.42E+00	0.00E+00	5.42E+00
		Nb-95	<3.33E+00	0.00E+00	3.33E+00
		I-131	<1.16E+01	0.00E+00	1.16E+01
		Cs-134	<2.74E+00	0.00E+00	2.74E+00



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

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

Sample Point 066 [INDICATOR - SSE @ 18.9 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
413520	5/23/2016 - 6/20/2016	Cs-137	<2.74E+00	0.00E+00	2.74E+00
		BaLa-140	<5.54E+00	0.00E+00	5.54E+00
		Be-7	<2.15E+01	0.00E+00	2.15E+01
		K-40	<5.04E+01	0.00E+00	5.04E+01
416859	6/20/2016 - 7/18/2016	Beta	1.13E+00	8.01E-01	1.33E+00
		Mn-54	<3.41E+00	0.00E+00	3.41E+00
		Co-58	<4.00E+00	0.00E+00	4.00E+00
		Fe-59	<5.11E+00	0.00E+00	5.11E+00
		Co-60	<3.03E+00	0.00E+00	3.03E+00
		Zn-65	<7.95E+00	0.00E+00	7.95E+00
		Zr-95	<5.95E+00	0.00E+00	5.95E+00
		Nb-95	<4.50E+00	0.00E+00	4.50E+00
		I-131	<1.19E+01	0.00E+00	1.19E+01
		Cs-134	<3.34E+00	0.00E+00	3.34E+00
		Cs-137	<2.81E+00	0.00E+00	2.81E+00
		BaLa-140	<7.26E+00	0.00E+00	7.26E+00
		Be-7	<3.36E+01	0.00E+00	3.36E+01
		K-40	5.32E+01	3.50E+01	5.10E+01
418781	7/18/2016 - 8/15/2016	Beta	1.70E+00	7.65E-01	1.19E+00
		Mn-54	<2.81E+00	0.00E+00	2.81E+00
		Co-58	<3.40E+00	0.00E+00	3.40E+00
		Fe-59	<5.57E+00	0.00E+00	5.57E+00
		Co-60	<2.46E+00	0.00E+00	2.46E+00
		Zn-65	<5.75E+00	0.00E+00	5.75E+00
		Zr-95	<6.33E+00	0.00E+00	6.33E+00
		Nb-95	<3.73E+00	0.00E+00	3.73E+00
		I-131	<1.12E+01	0.00E+00	1.12E+01
		Cs-134	<3.02E+00	0.00E+00	3.02E+00
		Cs-137	<2.96E+00	0.00E+00	2.96E+00
		BaLa-140	<6.32E+00	0.00E+00	6.32E+00
		Be-7	<2.73E+01	0.00E+00	2.73E+01
		K-40	7.05E+01	2.86E+01	3.15E+01
420869	5/23/2016 - 8/15/2016	H3DW	3.10E+02	1.23E+02	1.97E+02
420780	8/15/2016 - 9/12/2016	Beta	6.00E-01	7.15E-01	1.20E+00
		Mn-54	<2.22E+00	0.00E+00	2.22E+00
		Co-58	<2.26E+00	0.00E+00	2.26E+00
		Fe-59	<5.70E+00	0.00E+00	5.70E+00
		Co-60	<2.01E+00	0.00E+00	2.01E+00
		Zn-65	<3.24E+00	0.00E+00	3.24E+00
		Zr-95	<4.03E+00	0.00E+00	4.03E+00
		Nb-95	<2.87E+00	0.00E+00	2.87E+00
		I-131	<1.18E+01	0.00E+00	1.18E+01
		Cs-134	<2.35E+00	0.00E+00	2.35E+00
		Cs-137	<2.42E+00	0.00E+00	2.42E+00
		BaLa-140	<5.14E+00	0.00E+00	5.14E+00
		Be-7	<2.00E+01	0.00E+00	2.00E+01
		K-40	4.40E+01	2.23E+01	3.08E+01
424746	9/12/2016 - 10/10/2016	Beta	1.86E+00	7.58E-01	1.16E+00
		Mn-54	<3.20E+00	0.00E+00	3.20E+00
		Co-58	<3.56E+00	0.00E+00	3.56E+00
		Fe-59	<7.21E+00	0.00E+00	7.21E+00
		Co-60	<2.39E+00	0.00E+00	2.39E+00
		Zn-65	<5.69E+00	0.00E+00	5.69E+00
		Zr-95	<5.35E+00	0.00E+00	5.35E+00
		Nb-95	<4.54E+00	0.00E+00	4.54E+00
		I-131	<1.17E+01	0.00E+00	1.17E+01
		Cs-134	<3.19E+00	0.00E+00	3.19E+00
		Cs-137	<3.50E+00	0.00E+00	3.50E+00
		BaLa-140	<1.03E+01	0.00E+00	1.03E+01



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

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

Sample Point 066 [INDICATOR - SSE @ 18.9 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
424746	9/12/2016 - 10/10/2016	Be-7	<3.12E+01	0.00E+00	3.12E+01
		K-40	<5.14E+01	0.00E+00	5.14E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
427420	10/10/2016 - 11/7/2016	Beta	1.22E+00	8.89E-01	1.45E+00
		Mn-54	<2.28E+00	0.00E+00	2.28E+00
		Co-58	<2.88E+00	0.00E+00	2.88E+00
		Fe-59	<5.84E+00	0.00E+00	5.84E+00
		Co-60	<2.29E+00	0.00E+00	2.29E+00
		Zn-65	<4.98E+00	0.00E+00	4.98E+00
		Zr-95	<3.80E+00	0.00E+00	3.80E+00
		Nb-95	<3.06E+00	0.00E+00	3.06E+00
		I-131	<1.02E+01	0.00E+00	1.02E+01
		Cs-134	<2.62E+00	0.00E+00	2.62E+00
		Cs-137	<3.10E+00	0.00E+00	3.10E+00
		BaLa-140	<6.47E+00	0.00E+00	6.47E+00
		Be-7	<2.55E+01	0.00E+00	2.55E+01
		K-40	<4.25E+01	0.00E+00	4.25E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
427848	8/15/2016 - 12/5/2016	H3DW	3.68E+02	1.19E+02	1.88E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
429633	11/7/2016 - 12/5/2016	Beta	<5.58E-01	0.00E+00	1.25E+00
		Mn-54	<3.12E+00	0.00E+00	3.12E+00
		Co-58	<3.07E+00	0.00E+00	3.07E+00
		Fe-59	<6.99E+00	0.00E+00	6.99E+00
		Co-60	<3.87E+00	0.00E+00	3.87E+00
		Zn-65	<6.14E+00	0.00E+00	6.14E+00
		Zr-95	<4.91E+00	0.00E+00	4.91E+00
		Nb-95	<3.76E+00	0.00E+00	3.76E+00
		I-131	<1.18E+01	0.00E+00	1.18E+01
		Cs-134	<4.22E+00	0.00E+00	4.22E+00
		Cs-137	<3.51E+00	0.00E+00	3.51E+00
		BaLa-140	<5.81E+00	0.00E+00	5.81E+00
		Be-7	<2.76E+01	0.00E+00	2.76E+01
		K-40	5.82E+01	2.94E+01	3.59E+01

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

Sample Point 060 [CONTROL FISH / INDICATOR - NE @ 3.23 miles]

Sample ID:	Sample Dates:	FREESWIM	Nuclide	Activity	2 Sigma Error	MDA
407428	4/5/2016 - 4/5/2016		Mn-54	<1.02E+01	0.00E+00	1.02E+01
			Co-58	<9.03E+00	0.00E+00	9.03E+00
			Fe-59	<3.38E+01	0.00E+00	3.38E+01
			Co-60	<1.45E+01	0.00E+00	1.45E+01
			Zn-65	<3.96E+01	0.00E+00	3.96E+01
			Nb-95	<1.06E+01	0.00E+00	1.06E+01
			I-131	<1.58E+01	0.00E+00	1.58E+01
			Cs-134	<1.27E+01	0.00E+00	1.27E+01
			Cs-137	<2.34E+01	0.00E+00	2.34E+01
			Be-7	<7.64E+01	0.00E+00	7.64E+01
			K-40	3.83E+03	5.55E+02	1.68E+02
			Ag-110M	<7.67E+00	0.00E+00	7.67E+00
			Sb-122	<6.90E+01	0.00E+00	6.90E+01
			Sb-125	<2.89E+01	0.00E+00	2.89E+01

Sample ID:	Sample Dates:	BOTMFEEDER	Nuclide	Activity	2 Sigma Error	MDA
407429	4/5/2016 - 4/5/2016		Mn-54	<1.79E+01	0.00E+00	1.79E+01
			Co-58	<1.40E+01	0.00E+00	1.40E+01
			Fe-59	<3.67E+01	0.00E+00	3.67E+01
			Co-60	<2.59E+01	0.00E+00	2.59E+01
			Zn-65	<4.24E+01	0.00E+00	4.24E+01
			Nb-95	<1.98E+01	0.00E+00	1.98E+01
			I-131	<2.50E+01	0.00E+00	2.50E+01
			Cs-134	<2.13E+01	0.00E+00	2.13E+01
			Cs-137	1.31E+01	1.48E+01	2.37E+01
			Be-7	<1.26E+02	0.00E+00	1.26E+02



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

Media Type: FISH Concentration (Activity): pCi/kg wet
 Sample Point 060 [CONTROL FISH / INDICATOR - NE @ 3.23 miles]

Sample ID:	Sample Dates:	Location:	Nuclide	Activity	2 Sigma Error	MDA
407429	4/5/2016 - 4/5/2016	BOTMFEEDER	K-40	3.39E+03	5.97E+02	3.40E+02
			Ag-110M	<1.65E+01	0.00E+00	1.65E+01
			Sb-122	<9.14E+01	0.00E+00	9.14E+01
			Sb-125	<4.01E+01	0.00E+00	4.01E+01

Sample ID:	Sample Dates:	Location:	Nuclide	Activity	2 Sigma Error	MDA
425293	10/10/2016 - 10/10/2016	FREESWIM	Mn-54	<2.16E+01	0.00E+00	2.16E+01
			Co-58	<1.93E+01	0.00E+00	1.93E+01
			Fe-59	<2.91E+01	0.00E+00	2.91E+01
			Co-60	<1.83E+01	0.00E+00	1.83E+01
			Zn-65	<5.48E+01	0.00E+00	5.48E+01
			Nb-95	<1.76E+01	0.00E+00	1.76E+01
			I-131	<1.48E+01	0.00E+00	1.48E+01
			Cs-134	<2.54E+01	0.00E+00	2.54E+01
			Cs-137	<2.48E+01	0.00E+00	2.48E+01
			Be-7	<1.13E+02	0.00E+00	1.13E+02
			K-40	3.95E+03	6.65E+02	3.42E+02
			Ag-110M	<2.05E+01	0.00E+00	2.05E+01
			Sb-122	<3.91E+01	0.00E+00	3.91E+01
			Sb-125	<3.54E+01	0.00E+00	3.54E+01

Sample ID:	Sample Dates:	Location:	Nuclide	Activity	2 Sigma Error	MDA
425294	10/10/2016 - 10/10/2016	BOTMFEEDER	Mn-54	<1.47E+01	0.00E+00	1.47E+01
			Co-58	<1.27E+01	0.00E+00	1.27E+01
			Fe-59	<4.11E+01	0.00E+00	4.11E+01
			Co-60	<2.37E+01	0.00E+00	2.37E+01
			Zn-65	<4.15E+01	0.00E+00	4.15E+01
			Nb-95	<1.76E+01	0.00E+00	1.76E+01
			I-131	<1.48E+01	0.00E+00	1.48E+01
			Cs-134	<1.83E+01	0.00E+00	1.83E+01
			Cs-137	<2.57E+01	0.00E+00	2.57E+01
			Be-7	<8.04E+01	0.00E+00	8.04E+01
			K-40	3.26E+03	6.05E+02	3.83E+02
			Ag-110M	<8.66E+00	0.00E+00	8.66E+00
			Sb-122	<4.48E+01	0.00E+00	4.48E+01
			Sb-125	<3.56E+01	0.00E+00	3.56E+01

Sample Point 063 [INDICATOR - ESE @ 0.8 miles]

Sample ID:	Sample Dates:	Location:	Nuclide	Activity	2 Sigma Error	MDA
407430	4/5/2016 - 4/5/2016	FREESWIM	Mn-54	<1.37E+01	0.00E+00	1.37E+01
			Co-58	<2.28E+01	0.00E+00	2.28E+01
			Fe-59	<5.01E+01	0.00E+00	5.01E+01
			Co-60	<2.29E+01	0.00E+00	2.29E+01
			Zn-65	<4.92E+01	0.00E+00	4.92E+01
			Nb-95	<2.17E+01	0.00E+00	2.17E+01
			I-131	<2.78E+01	0.00E+00	2.78E+01
			Cs-134	<1.78E+01	0.00E+00	1.78E+01
			Cs-137	<2.67E+01	0.00E+00	2.67E+01
			Be-7	<1.37E+02	0.00E+00	1.37E+02
			K-40	3.85E+03	6.64E+02	2.73E+02
			Ag-110M	<1.92E+01	0.00E+00	1.92E+01
			Sb-122	<8.55E+01	0.00E+00	8.55E+01
			Sb-125	<4.13E+01	0.00E+00	4.13E+01

Sample ID:	Sample Dates:	Location:	Nuclide	Activity	2 Sigma Error	MDA
407431	4/6/2016 - 4/6/2016	BOTMFEEDER	Mn-54	<1.39E+01	0.00E+00	1.39E+01
			Co-58	<1.27E+01	0.00E+00	1.27E+01
			Fe-59	<3.28E+01	0.00E+00	3.28E+01
			Co-60	<2.00E+01	0.00E+00	2.00E+01
			Zn-65	<3.84E+01	0.00E+00	3.84E+01
			Nb-95	<1.55E+01	0.00E+00	1.55E+01
			I-131	<1.51E+01	0.00E+00	1.51E+01
			Cs-134	<1.82E+01	0.00E+00	1.82E+01
			Cs-137	2.74E+01	1.43E+01	1.73E+01
			Be-7	<1.20E+02	0.00E+00	1.20E+02
			K-40	3.35E+03	5.55E+02	2.28E+02
			Ag-110M	<1.31E+01	0.00E+00	1.31E+01



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

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

Sample Point 063 [INDICATOR - ESE @ 0.8 miles]

Sample ID:	Sample Dates:		Nuclide	Activity	2 Sigma Error	MDA
407431	4/6/2016 - 4/6/2016	BOTMFEEDER	Sb-122	<7.22E+01	0.00E+00	7.22E+01
			Sb-125	<2.77E+01	0.00E+00	2.77E+01

Sample ID:	Sample Dates:		Nuclide	Activity	2 Sigma Error	MDA
425295	10/10/2016 - 10/10/2016	FREESWIM	Mn-54	<3.29E+01	0.00E+00	3.29E+01
			Co-58	<2.82E+01	0.00E+00	2.82E+01
			Fe-59	<7.60E+01	0.00E+00	7.60E+01
			Co-60	<3.15E+01	0.00E+00	3.15E+01
			Zn-65	<4.36E+01	0.00E+00	4.36E+01
			Nb-95	<3.24E+01	0.00E+00	3.24E+01
			I-131	<3.25E+01	0.00E+00	3.25E+01
			Cs-134	<3.43E+01	0.00E+00	3.43E+01
			Cs-137	<4.10E+01	0.00E+00	4.10E+01
			Be-7	<2.36E+02	0.00E+00	2.36E+02
			K-40	4.64E+03	8.80E+02	9.24E+01
			Ag-110M	<2.85E+01	0.00E+00	2.85E+01
			Sb-122	<7.68E+01	0.00E+00	7.68E+01
			Sb-125	<8.13E+01	0.00E+00	8.13E+01

Sample ID:	Sample Dates:		Nuclide	Activity	2 Sigma Error	MDA
425296	10/10/2016 - 10/10/2016	BOTMFEEDER	Mn-54	<4.00E+01	0.00E+00	4.00E+01
			Co-58	<4.01E+01	0.00E+00	4.01E+01
			Fe-59	<1.01E+02	0.00E+00	1.01E+02
			Co-60	<4.50E+01	0.00E+00	4.50E+01
			Zn-65	<1.02E+02	0.00E+00	1.02E+02
			Nb-95	<4.29E+01	0.00E+00	4.29E+01
			I-131	<3.86E+01	0.00E+00	3.86E+01
			Cs-134	<3.46E+01	0.00E+00	3.46E+01
			Cs-137	<5.60E+01	0.00E+00	5.60E+01
			Be-7	<3.16E+02	0.00E+00	3.16E+02
			K-40	4.16E+03	1.04E+03	7.49E+02
			Ag-110M	<5.59E+01	0.00E+00	5.59E+01
			Sb-122	<8.68E+01	0.00E+00	8.68E+01
			Sb-125	<1.04E+02	0.00E+00	1.04E+02

Sample Point 067 [INDICATOR - SSE @ 4.34 miles]

Sample ID:	Sample Dates:		Nuclide	Activity	2 Sigma Error	MDA
407432	4/5/2016 - 4/5/2016	FREESWIM	Mn-54	<1.41E+01	0.00E+00	1.41E+01
			Co-58	<1.02E+01	0.00E+00	1.02E+01
			Fe-59	<3.06E+01	0.00E+00	3.06E+01
			Co-60	<1.83E+01	0.00E+00	1.83E+01
			Zn-65	<3.80E+01	0.00E+00	3.80E+01
			Nb-95	<1.68E+01	0.00E+00	1.68E+01
			I-131	<1.78E+01	0.00E+00	1.78E+01
			Cs-134	<1.69E+01	0.00E+00	1.69E+01
			Cs-137	1.18E+01	1.08E+01	1.63E+01
			Be-7	<1.08E+02	0.00E+00	1.08E+02
			K-40	3.88E+03	5.84E+02	4.13E+01
			Ag-110M	<1.32E+01	0.00E+00	1.32E+01
			Sb-122	<7.34E+01	0.00E+00	7.34E+01
			Sb-125	<3.62E+01	0.00E+00	3.62E+01

Sample ID:	Sample Dates:		Nuclide	Activity	2 Sigma Error	MDA
407433	4/5/2016 - 4/6/2016	BOTMFEEDER	Mn-54	<1.22E+01	0.00E+00	1.22E+01
			Co-58	<1.40E+01	0.00E+00	1.40E+01
			Fe-59	<3.55E+01	0.00E+00	3.55E+01
			Co-60	<2.15E+01	0.00E+00	2.15E+01
			Zn-65	<3.47E+01	0.00E+00	3.47E+01
			Nb-95	<1.41E+01	0.00E+00	1.41E+01
			I-131	<1.87E+01	0.00E+00	1.87E+01
			Cs-134	<1.79E+01	0.00E+00	1.79E+01
			Cs-137	<1.90E+01	0.00E+00	1.90E+01
			Be-7	<1.12E+02	0.00E+00	1.12E+02
			K-40	2.74E+03	4.93E+02	2.45E+02
			Ag-110M	<1.18E+01	0.00E+00	1.18E+01
			Sb-122	<6.29E+01	0.00E+00	6.29E+01
			Sb-125	<3.18E+01	0.00E+00	3.18E+01



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

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

Sample Point 067 [INDICATOR - SSE @ 4.34 miles]

Sample ID:	Sample Dates:	FREESWIM	Nuclide	Activity	2 Sigma Error	MDA
425297	10/10/2016 - 10/10/2016		Mn-54	<2.29E+01	0.00E+00	2.29E+01
			Co-58	<1.65E+01	0.00E+00	1.65E+01
			Fe-59	<5.29E+01	0.00E+00	5.29E+01
			Co-60	<2.39E+01	0.00E+00	2.39E+01
			Zn-65	<5.47E+01	0.00E+00	5.47E+01
			Nb-95	<2.73E+01	0.00E+00	2.73E+01
			I-131	<2.21E+01	0.00E+00	2.21E+01
			Cs-134	<4.63E+00	0.00E+00	4.63E+00
			Cs-137	<3.15E+01	0.00E+00	3.15E+01
			Be-7	<1.62E+02	0.00E+00	1.62E+02
			K-40	3.84E+03	6.59E+02	6.02E+01
			Ag-110M	<1.98E+01	0.00E+00	1.98E+01
			Sb-122	<3.60E+01	0.00E+00	3.60E+01
			Sb-125	<5.73E+01	0.00E+00	5.73E+01

Sample ID:	Sample Dates:	BOTMFEEDER	Nuclide	Activity	2 Sigma Error	MDA
425298	10/10/2016 - 10/10/2016		Mn-54	<2.08E+01	0.00E+00	2.08E+01
			Co-58	<1.57E+01	0.00E+00	1.57E+01
			Fe-59	<3.32E+01	0.00E+00	3.32E+01
			Co-60	<1.28E+01	0.00E+00	1.28E+01
			Zn-65	<3.65E+01	0.00E+00	3.65E+01
			Nb-95	<1.86E+01	0.00E+00	1.86E+01
			I-131	<1.50E+01	0.00E+00	1.50E+01
			Cs-134	<1.89E+01	0.00E+00	1.89E+01
			Cs-137	2.42E+01	1.40E+01	1.78E+01
			Be-7	<9.96E+01	0.00E+00	9.96E+01
			K-40	3.81E+03	6.03E+02	4.74E+01
			Ag-110M	<1.63E+01	0.00E+00	1.63E+01
			Sb-122	<2.81E+01	0.00E+00	2.81E+01
			Sb-125	<5.08E+01	0.00E+00	5.08E+01

Media Type: MILK Concentration (Activity): pCi/l

Sample Point 071 [CONTROL - SSE @ 10.2 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
399299	1/11/2016 - 1/11/2016	LLI-131	<5.50E-01	0.00E+00	5.50E-01
		I-131	<5.86E+00	0.00E+00	5.86E+00
		Cs-134	<6.37E+00	0.00E+00	6.37E+00
		Cs-137	<8.51E+00	0.00E+00	8.51E+00
		BaLa-140	<2.24E+00	0.00E+00	2.24E+00
		Be-7	<5.44E+01	0.00E+00	5.44E+01
		K-40	1.54E+03	2.48E+02	1.46E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
400402	1/25/2016 - 1/25/2016	LLI-131	<5.93E-01	0.00E+00	5.93E-01
		I-131	<7.82E+00	0.00E+00	7.82E+00
		Cs-134	<6.66E+00	0.00E+00	6.66E+00
		Cs-137	<6.91E+00	0.00E+00	6.91E+00
		BaLa-140	<6.34E+00	0.00E+00	6.34E+00
		Be-7	<5.92E+01	0.00E+00	5.92E+01
		K-40	1.62E+03	2.51E+02	8.97E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
401394	2/8/2016 - 2/8/2016	LLI-131	<6.32E-01	0.00E+00	6.32E-01
		I-131	<5.15E+00	0.00E+00	5.15E+00
		Cs-134	<8.30E+00	0.00E+00	8.30E+00
		Cs-137	<7.71E+00	0.00E+00	7.71E+00
		BaLa-140	<2.17E+00	0.00E+00	2.17E+00
		Be-7	<5.38E+01	0.00E+00	5.38E+01
		K-40	1.44E+03	2.29E+02	9.99E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
402360	2/22/2016 - 2/22/2016	LLI-131	<6.24E-01	0.00E+00	6.24E-01
		I-131	<5.61E+00	0.00E+00	5.61E+00
		Cs-134	<7.97E+00	0.00E+00	7.97E+00
		Cs-137	<9.44E+00	0.00E+00	9.44E+00
		BaLa-140	<7.73E+00	0.00E+00	7.73E+00
		Be-7	<4.70E+01	0.00E+00	4.70E+01



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

Media Type: MILK Concentration (Activity): pCi/l

Sample Point 071 [CONTROL - SSE @ 10:2 miles]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
402360	2/22/2016 - 2/22/2016	K-40	1.47E+03	2.45E+02	1.60E+02
404579	3/7/2016 - 3/7/2016	Nuclide	Activity	2 Sigma Error	MDA
		LLI-131	<5.07E-01	0.00E+00	5.07E-01
		I-131	<7.45E+00	0.00E+00	7.45E+00
		Cs-134	<7.28E+00	0.00E+00	7.28E+00
		Cs-137	<8.54E+00	0.00E+00	8.54E+00
		BaLa-140	<6.57E+00	0.00E+00	6.57E+00
		Be-7	<4.95E+01	0.00E+00	4.95E+01
406073	3/21/2016 - 3/21/2016	K-40	1.68E+03	2.58E+02	8.37E+01
		Nuclide	Activity	2 Sigma Error	MDA
		LLI-131	<6.47E-01	0.00E+00	6.47E-01
		I-131	<7.91E+00	0.00E+00	7.91E+00
		Cs-134	<7.38E+00	0.00E+00	7.38E+00
		Cs-137	<9.31E+00	0.00E+00	9.31E+00
407610	4/4/2016 - 4/4/2016	BaLa-140	<1.06E+01	0.00E+00	1.06E+01
		Be-7	<5.83E+01	0.00E+00	5.83E+01
		K-40	1.55E+03	2.40E+02	1.05E+02
		Nuclide	Activity	2 Sigma Error	MDA
		LLI-131	<6.45E-01	0.00E+00	6.45E-01
		I-131	<6.41E+00	0.00E+00	6.41E+00
409489	4/18/2016 - 4/18/2016	Cs-134	<9.05E+00	0.00E+00	9.05E+00
		Cs-137	<7.20E+00	0.00E+00	7.20E+00
		BaLa-140	<2.34E+00	0.00E+00	2.34E+00
		Be-7	<2.37E+01	0.00E+00	2.37E+01
		K-40	1.39E+03	2.24E+02	7.93E+01
		Nuclide	Activity	2 Sigma Error	MDA
410999	5/2/2016 - 5/2/2016	LLI-131	<6.19E-01	0.00E+00	6.19E-01
		I-131	<6.15E+00	0.00E+00	6.15E+00
		Cs-134	<5.44E+00	0.00E+00	5.44E+00
		Cs-137	<5.57E+00	0.00E+00	5.57E+00
		BaLa-140	<8.70E+00	0.00E+00	8.70E+00
		Be-7	<4.57E+01	0.00E+00	4.57E+01
		K-40	1.39E+03	2.34E+02	1.09E+02
411800	5/16/2016 - 5/16/2016				
		Nuclide	Activity	2 Sigma Error	MDA
		LLI-131	<6.21E-01	0.00E+00	6.21E-01
		I-131	<7.05E+00	0.00E+00	7.05E+00
		Cs-134	<6.52E+00	0.00E+00	6.52E+00
		Cs-137	<5.76E+00	0.00E+00	5.76E+00
		BaLa-140	<6.38E+00	0.00E+00	6.38E+00
412778	5/31/2016 - 5/31/2016	Be-7	<5.62E+01	0.00E+00	5.62E+01
		K-40	1.47E+03	2.42E+02	1.50E+02
		Nuclide	Activity	2 Sigma Error	MDA
		LLI-131	<6.34E-01	0.00E+00	6.34E-01
		I-131	<6.97E+00	0.00E+00	6.97E+00
		Cs-134	<9.14E+00	0.00E+00	9.14E+00
413929	6/13/2016 - 6/13/2016	Cs-137	<6.54E+00	0.00E+00	6.54E+00
		BaLa-140	<5.99E+00	0.00E+00	5.99E+00
		Be-7	<5.17E+01	0.00E+00	5.17E+01
		K-40	1.39E+03	2.23E+02	7.83E+01
		Nuclide	Activity	2 Sigma Error	MDA
		LLI-131	<5.55E-01	0.00E+00	5.55E-01
I-131	<5.56E+00	0.00E+00	5.56E+00		
Cs-134	<6.88E+00	0.00E+00	6.88E+00		
Cs-137	<8.41E+00	0.00E+00	8.41E+00		



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

Media Type: MILK Concentration (Activity): pCi/l

Sample Point 071 [CONTROL - SSE @ 10.2 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
413929	6/13/2016 - 6/13/2016	BaLa-140	<7.56E+00	0.00E+00	7.56E+00
		Be-7	<5.84E+01	0.00E+00	5.84E+01
		K-40	1.55E+03	2.39E+02	9.12E+01
415468	6/27/2016 - 6/27/2016	LLI-131	<6.30E-01	0.00E+00	6.30E-01
		I-131	<5.13E+00	0.00E+00	5.13E+00
		Cs-134	<7.40E+00	0.00E+00	7.40E+00
		Cs-137	<8.41E+00	0.00E+00	8.41E+00
		BaLa-140	<9.66E+00	0.00E+00	9.66E+00
		Be-7	<5.82E+01	0.00E+00	5.82E+01
417058	7/11/2016 - 7/11/2016	K-40	1.53E+03	2.39E+02	1.07E+02
		LLI-131	<6.31E-01	0.00E+00	6.31E-01
		I-131	<7.83E+00	0.00E+00	7.83E+00
417842	7/25/2016 - 7/25/2016	Cs-134	<7.38E+00	0.00E+00	7.38E+00
		Cs-137	<6.52E+00	0.00E+00	6.52E+00
		BaLa-140	<7.48E+00	0.00E+00	7.48E+00
		Be-7	<3.72E+01	0.00E+00	3.72E+01
		K-40	1.56E+03	2.40E+02	9.64E+01
419036	8/8/2016 - 8/8/2016	LLI-131	<6.06E-01	0.00E+00	6.06E-01
		I-131	<5.14E+00	0.00E+00	5.14E+00
		Cs-134	<8.74E+00	0.00E+00	8.74E+00
		Cs-137	<7.73E+00	0.00E+00	7.73E+00
		BaLa-140	<2.18E+00	0.00E+00	2.18E+00
		Be-7	<4.05E+01	0.00E+00	4.05E+01
420063	8/22/2016 - 8/22/2016	K-40	1.61E+03	2.44E+02	8.08E+01
		LLI-131	<6.50E-01	0.00E+00	6.50E-01
		I-131	<5.75E+00	0.00E+00	5.75E+00
421479	9/6/2016 - 9/6/2016	Cs-134	<8.33E+00	0.00E+00	8.33E+00
		Cs-137	<8.17E+00	0.00E+00	8.17E+00
		BaLa-140	<2.31E+00	0.00E+00	2.31E+00
		Be-7	<5.43E+01	0.00E+00	5.43E+01
		K-40	1.53E+03	2.42E+02	8.06E+01
423354	9/19/2016 - 9/19/2016	LLI-131	<5.00E-01	0.00E+00	5.00E-01
		I-131	<3.39E+00	0.00E+00	3.39E+00
		Cs-134	<7.40E+00	0.00E+00	7.40E+00
		Cs-137	<8.41E+00	0.00E+00	8.41E+00
		BaLa-140	<5.93E+00	0.00E+00	5.93E+00
		Be-7	<5.61E+01	0.00E+00	5.61E+01
425494	10/3/2016 - 10/3/2016	K-40	1.45E+03	2.25E+02	1.73E+01
		LLI-131	<6.39E-01	0.00E+00	6.39E-01
		I-131	<6.87E+00	0.00E+00	6.87E+00
425494	10/3/2016 - 10/3/2016	Cs-134	<7.38E+00	0.00E+00	7.38E+00
		Cs-137	<8.39E+00	0.00E+00	8.39E+00
		BaLa-140	<2.17E+00	0.00E+00	2.17E+00
		Be-7	<5.38E+01	0.00E+00	5.38E+01
		K-40	1.34E+03	2.25E+02	1.36E+02
425494	10/3/2016 - 10/3/2016	LLI-131	<6.04E-01	0.00E+00	6.04E-01
		I-131	<6.70E+00	0.00E+00	6.70E+00



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

Media Type: MILK Concentration (Activity): pCi/l

Sample Point 071 [CONTROL - SSE @ 10.2 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
425494	10/3/2016 - 10/3/2016	Cs-134	<6.86E+00	0.00E+00	6.86E+00
		Cs-137	<6.52E+00	0.00E+00	6.52E+00
		BaLa-140	<2.19E+00	0.00E+00	2.19E+00
		Be-7	<4.37E+01	0.00E+00	4.37E+01
		K-40	1.53E+03	2.38E+02	1.05E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
426401	10/17/2016 - 10/17/2016	LLI-131	<6.31E-01	0.00E+00	6.31E-01
		I-131	<5.86E+00	0.00E+00	5.86E+00
		Cs-134	<5.63E+00	0.00E+00	5.63E+00
		Cs-137	<6.07E+00	0.00E+00	6.07E+00
		BaLa-140	<2.19E+00	0.00E+00	2.19E+00
		Be-7	<4.91E+01	0.00E+00	4.91E+01
K-40			1.54E+03	2.39E+02	1.07E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
427753	10/31/2016 - 10/31/2016	LLI-131	<5.71E-01	0.00E+00	5.71E-01
		I-131	<7.30E+00	0.00E+00	7.30E+00
		Cs-134	<4.08E+00	0.00E+00	4.08E+00
		Cs-137	<6.43E+00	0.00E+00	6.43E+00
		BaLa-140	<9.26E+00	0.00E+00	9.26E+00
		Be-7	<4.90E+01	0.00E+00	4.90E+01
K-40			1.57E+03	2.48E+02	1.06E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
428929	11/14/2016 - 11/14/2016	LLI-131	<6.41E-01	0.00E+00	6.41E-01
		I-131	<7.58E+00	0.00E+00	7.58E+00
		Cs-134	<7.12E+00	0.00E+00	7.12E+00
		Cs-137	<7.99E+00	0.00E+00	7.99E+00
		BaLa-140	<8.03E+00	0.00E+00	8.03E+00
		Be-7	<5.85E+01	0.00E+00	5.85E+01
K-40			1.48E+03	2.32E+02	7.85E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
429991	11/28/2016 - 11/28/2016	LLI-131	<6.03E-01	0.00E+00	6.03E-01
		I-131	<5.37E+00	0.00E+00	5.37E+00
		Cs-134	<9.04E+00	0.00E+00	9.04E+00
		Cs-137	<6.76E+00	0.00E+00	6.76E+00
		BaLa-140	<7.75E+00	0.00E+00	7.75E+00
		Be-7	<4.19E+01	0.00E+00	4.19E+01
K-40			1.49E+03	2.38E+02	1.12E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
431099	12/12/2016 - 12/12/2016	LLI-131	<5.28E-01	0.00E+00	5.28E-01
		I-131	<6.14E+00	0.00E+00	6.14E+00
		Cs-134	<6.30E+00	0.00E+00	6.30E+00
		Cs-137	<5.57E+00	0.00E+00	5.57E+00
		BaLa-140	<7.53E+00	0.00E+00	7.53E+00
		Be-7	<5.16E+01	0.00E+00	5.16E+01
K-40			1.63E+03	2.46E+02	8.47E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
431851	12/27/2016 - 12/27/2016	LLI-131	<5.47E-01	0.00E+00	5.47E-01
		I-131	<6.92E+00	0.00E+00	6.92E+00
		Cs-134	<7.40E+00	0.00E+00	7.40E+00
		Cs-137	<7.73E+00	0.00E+00	7.73E+00
		BaLa-140	<1.06E+01	0.00E+00	1.06E+01
		Be-7	<4.91E+01	0.00E+00	4.91E+01
K-40			1.40E+03	2.29E+02	1.15E+02

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

Sample Point 063 [INDICATOR - ESE @ 0.8 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
406122	3/21/2016 - 3/21/2016	Mn-54	<4.52E+01	0.00E+00	4.52E+01
		Co-58	<3.78E+01	0.00E+00	3.78E+01
		Fe-59	<8.95E+01	0.00E+00	8.95E+01
		Co-60	<3.86E+01	0.00E+00	3.86E+01
		Zn-65	<8.63E+01	0.00E+00	8.63E+01



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

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

Sample Point 063 [INDICATOR - ESE @ 0.8 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
406122	3/21/2016 - 3/21/2016	Zr-95	<9.87E+01	0.00E+00	9.87E+01
		Nb-95	<5.61E+01	0.00E+00	5.61E+01
		I-131	<1.11E+02	0.00E+00	1.11E+02
		Cs-134	<5.83E+01	0.00E+00	5.83E+01
		Cs-137	<4.08E+01	0.00E+00	4.08E+01
		Be-7	<3.08E+02	0.00E+00	3.08E+02
		K-40	2.29E+04	2.16E+03	4.98E+02
		Co-57	<3.62E+01	0.00E+00	3.62E+01
		Mo-99	<1.17E+04	0.00E+00	1.17E+04
		Ag-110M	<3.61E+01	0.00E+00	3.61E+01
		Sb-122	<1.93E+03	0.00E+00	1.93E+03
		Sb-125	<9.82E+01	0.00E+00	9.82E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
421851	9/19/2016 - 9/19/2016	Mn-54	<3.37E+01	0.00E+00	3.37E+01
		Co-58	<2.55E+01	0.00E+00	2.55E+01
		Fe-59	<7.67E+01	0.00E+00	7.67E+01
		Co-60	<3.28E+01	0.00E+00	3.28E+01
		Zn-65	<8.03E+01	0.00E+00	8.03E+01
		Zr-95	<5.28E+01	0.00E+00	5.28E+01
		Nb-95	<2.58E+01	0.00E+00	2.58E+01
		I-131	<2.71E+01	0.00E+00	2.71E+01
		Cs-134	<4.00E+01	0.00E+00	4.00E+01
		Cs-137	<3.34E+01	0.00E+00	3.34E+01
		Be-7	<1.86E+02	0.00E+00	1.86E+02
		K-40	2.57E+04	2.60E+03	2.06E+02
		Co-57	<2.14E+01	0.00E+00	2.14E+01
		Mo-99	<5.66E+02	0.00E+00	5.66E+02
		Ag-110M	<2.49E+01	0.00E+00	2.49E+01
		Sb-122	<5.81E+01	0.00E+00	5.81E+01
		Sb-125	<7.25E+01	0.00E+00	7.25E+01

Sample Point 067 [INDICATOR - SSE @ 4.34 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
406123	3/21/2016 - 3/21/2016	Mn-54	<3.24E+01	0.00E+00	3.24E+01
		Co-58	<2.45E+01	0.00E+00	2.45E+01
		Fe-59	<5.50E+01	0.00E+00	5.50E+01
		Co-60	<2.73E+01	0.00E+00	2.73E+01
		Zn-65	<5.70E+01	0.00E+00	5.70E+01
		Zr-95	<5.69E+01	0.00E+00	5.69E+01
		Nb-95	<3.13E+01	0.00E+00	3.13E+01
		I-131	<7.31E+01	0.00E+00	7.31E+01
		Cs-134	<3.03E+01	0.00E+00	3.03E+01
		Cs-137	1.89E+01	2.38E+01	3.90E+01
		Be-7	2.38E+02	1.95E+02	3.10E+02
		K-40	1.36E+04	1.40E+03	4.64E+02
		Co-57	<1.93E+01	0.00E+00	1.93E+01
		Mo-99	<7.71E+03	0.00E+00	7.71E+03
		Ag-110M	<2.41E+01	0.00E+00	2.41E+01
		Sb-122	<9.99E+02	0.00E+00	9.99E+02
		Sb-125	<5.83E+01	0.00E+00	5.83E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
421852	9/19/2016 - 9/19/2016	Mn-54	<3.17E+01	0.00E+00	3.17E+01
		Co-58	<2.82E+01	0.00E+00	2.82E+01
		Fe-59	<5.23E+01	0.00E+00	5.23E+01
		Co-60	<3.04E+01	0.00E+00	3.04E+01
		Zn-65	<5.46E+01	0.00E+00	5.46E+01
		Zr-95	<5.66E+01	0.00E+00	5.66E+01
		Nb-95	<2.59E+01	0.00E+00	2.59E+01
		I-131	<3.54E+01	0.00E+00	3.54E+01
		Cs-134	<4.53E+01	0.00E+00	4.53E+01
		Cs-137	2.54E+02	5.00E+01	5.10E+01
		Be-7	1.77E+02	1.89E+02	3.08E+02
		K-40	1.24E+04	1.32E+03	2.72E+02
		Co-57	<2.58E+01	0.00E+00	2.58E+01
		Mo-99	<4.30E+02	0.00E+00	4.30E+02



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

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

Sample Point 067 [INDICATOR - SSE @ 4.34 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
421852	9/19/2016 - 9/19/2016	Ag-110M	<2.71E+01	0.00E+00	2.71E+01
		Sb-122	<8.39E+01	0.00E+00	8.39E+01
		Sb-125	<7.56E+01	0.00E+00	7.56E+01

Sample Point 068 [CONTROL - W @ 1.82 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
406124	3/21/2016 - 3/21/2016	Mn-54	<2.68E+01	0.00E+00	2.68E+01
		Co-58	<2.41E+01	0.00E+00	2.41E+01
		Fe-59	<4.70E+01	0.00E+00	4.70E+01
		Co-60	<2.20E+01	0.00E+00	2.20E+01
		Zn-65	<5.64E+01	0.00E+00	5.64E+01
		Zr-95	<5.66E+01	0.00E+00	5.66E+01
		Nb-95	<3.44E+01	0.00E+00	3.44E+01
		I-131	<5.97E+01	0.00E+00	5.97E+01
		Cs-134	<3.87E+01	0.00E+00	3.87E+01
		Cs-137	<2.90E+01	0.00E+00	2.90E+01
		Be-7	<2.45E+02	0.00E+00	2.45E+02
		K-40	5.83E+03	7.99E+02	4.02E+02
		Co-57	<1.83E+01	0.00E+00	1.83E+01
		Mo-99	<7.67E+03	0.00E+00	7.67E+03
		Ag-110M	<2.13E+01	0.00E+00	2.13E+01
		Sb-122	<1.42E+03	0.00E+00	1.42E+03
		Sb-125	<5.66E+01	0.00E+00	5.66E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
421853	9/19/2016 - 9/19/2016	Mn-54	<1.97E+01	0.00E+00	1.97E+01
		Co-58	<1.52E+01	0.00E+00	1.52E+01
		Fe-59	<3.83E+01	0.00E+00	3.83E+01
		Co-60	<1.74E+01	0.00E+00	1.74E+01
		Zn-65	<3.96E+01	0.00E+00	3.96E+01
		Zr-95	<3.06E+01	0.00E+00	3.06E+01
		Nb-95	<1.59E+01	0.00E+00	1.59E+01
		I-131	<1.92E+01	0.00E+00	1.92E+01
		Cs-134	<2.61E+01	0.00E+00	2.61E+01
		Cs-137	<1.41E+01	0.00E+00	1.41E+01
		Be-7	<1.15E+02	0.00E+00	1.15E+02
		K-40	6.74E+03	7.82E+02	1.42E+02
		Co-57	<1.48E+01	0.00E+00	1.48E+01
		Mo-99	<2.37E+02	0.00E+00	2.37E+02
		Ag-110M	<1.63E+01	0.00E+00	1.63E+01
		Sb-122	<3.34E+01	0.00E+00	3.34E+01
		Sb-125	<4.00E+01	0.00E+00	4.00E+01

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

Sample Point 062 [CONTROL - ENE @ 0.85 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
398996	12/7/2015 - 1/5/2016	Mn-54	<2.92E+00	0.00E+00	2.92E+00
		Co-58	<3.26E+00	0.00E+00	3.26E+00
		Fe-59	<6.67E+00	0.00E+00	6.67E+00
		Co-60	<2.83E+00	0.00E+00	2.83E+00
		Zn-65	<4.44E+00	0.00E+00	4.44E+00
		Zr-95	<5.98E+00	0.00E+00	5.98E+00
		Nb-95	<3.69E+00	0.00E+00	3.69E+00
		I-131	<1.18E+01	0.00E+00	1.18E+01
		Cs-134	<3.13E+00	0.00E+00	3.13E+00
		Cs-137	<2.42E+00	0.00E+00	2.42E+00
		BaLa-140	<9.58E+00	0.00E+00	9.58E+00
		Be-7	<2.58E+01	0.00E+00	2.58E+01
		K-40	5.98E+01	2.60E+01	2.75E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
401044	1/5/2016 - 2/1/2016	Mn-54	<3.50E+00	0.00E+00	3.50E+00
		Co-58	<4.44E+00	0.00E+00	4.44E+00
		Fe-59	<1.06E+01	0.00E+00	1.06E+01
		Co-60	<3.33E+00	0.00E+00	3.33E+00
		Zn-65	<6.12E+00	0.00E+00	6.12E+00



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

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

Sample Point 062 [CONTROL - ENE @ 0.85 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
401044	1/5/2016 - 2/1/2016	Zr-95	<8.74E+00	0.00E+00	8.74E+00
		Nb-95	<5.25E+00	0.00E+00	5.25E+00
		I-131	<1.16E+01	0.00E+00	1.16E+01
		Cs-134	<3.19E+00	0.00E+00	3.19E+00
		Cs-137	<4.32E+00	0.00E+00	4.32E+00
		BaLa-140	<1.17E+01	0.00E+00	1.17E+01
		Be-7	<1.93E+01	0.00E+00	1.93E+01
		K-40	<5.64E+01	0.00E+00	5.64E+01
		403084	2/1/2016 - 2/29/2016	Mn-54	<3.67E+00
Co-58	<3.92E+00			0.00E+00	3.92E+00
Fe-59	<8.53E+00			0.00E+00	8.53E+00
Co-60	<3.56E+00			0.00E+00	3.56E+00
Zn-65	<6.56E+00			0.00E+00	6.56E+00
Zr-95	<5.62E+00			0.00E+00	5.62E+00
Nb-95	<4.01E+00			0.00E+00	4.01E+00
I-131	<1.17E+01			0.00E+00	1.17E+01
Cs-134	<3.74E+00			0.00E+00	3.74E+00
Cs-137	<3.10E+00			0.00E+00	3.10E+00
BaLa-140	<8.21E+00			0.00E+00	8.21E+00
Be-7	<3.45E+01			0.00E+00	3.45E+01
K-40	<4.70E+01			0.00E+00	4.70E+01
403615	12/7/2015 - 2/29/2016	H3SW	<-6.7E+01	0.00E+00	1.96E+02
406432	2/29/2016 - 3/28/2016	Mn-54	<1.80E+00	0.00E+00	1.80E+00
		Co-58	<1.74E+00	0.00E+00	1.74E+00
		Fe-59	<4.18E+00	0.00E+00	4.18E+00
		Co-60	<1.50E+00	0.00E+00	1.50E+00
		Zn-65	<3.48E+00	0.00E+00	3.48E+00
		Zr-95	<3.79E+00	0.00E+00	3.79E+00
		Nb-95	<2.59E+00	0.00E+00	2.59E+00
		I-131	<1.16E+01	0.00E+00	1.16E+01
		Cs-134	<1.76E+00	0.00E+00	1.76E+00
		Cs-137	<1.74E+00	0.00E+00	1.74E+00
		BaLa-140	<4.89E+00	0.00E+00	4.89E+00
		Be-7	<1.70E+01	0.00E+00	1.70E+01
		K-40	6.53E+01	1.98E+01	2.35E+01
409821	3/28/2016 - 4/25/2016	Mn-54	<2.86E+00	0.00E+00	2.86E+00
		Co-58	<3.53E+00	0.00E+00	3.53E+00
		Fe-59	<7.58E+00	0.00E+00	7.58E+00
		Co-60	<3.81E+00	0.00E+00	3.81E+00
		Zn-65	<6.61E+00	0.00E+00	6.61E+00
		Zr-95	<5.95E+00	0.00E+00	5.95E+00
		Nb-95	<3.78E+00	0.00E+00	3.78E+00
		I-131	<1.14E+01	0.00E+00	1.14E+01
		Cs-134	<4.11E+00	0.00E+00	4.11E+00
		Cs-137	<3.33E+00	0.00E+00	3.33E+00
		BaLa-140	<1.13E+01	0.00E+00	1.13E+01
		Be-7	<2.79E+01	0.00E+00	2.79E+01
		K-40	3.21E+01	3.74E+01	6.06E+01
412260	4/25/2016 - 5/23/2016	Mn-54	<2.82E+00	0.00E+00	2.82E+00
		Co-58	<2.59E+00	0.00E+00	2.59E+00
		Fe-59	<7.87E+00	0.00E+00	7.87E+00
		Co-60	<2.87E+00	0.00E+00	2.87E+00
		Zn-65	<5.76E+00	0.00E+00	5.76E+00
		Zr-95	<4.95E+00	0.00E+00	4.95E+00
		Nb-95	<4.19E+00	0.00E+00	4.19E+00
		I-131	<1.19E+01	0.00E+00	1.19E+01
		Cs-134	<2.78E+00	0.00E+00	2.78E+00
		Cs-137	<3.47E+00	0.00E+00	3.47E+00
		BaLa-140	<1.06E+01	0.00E+00	1.06E+01



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

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

Sample Point 062 [CONTROL - ENE @ 0.85 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
412260	4/25/2016 - 5/23/2016	Be-7	<3.86E+01	0.00E+00	3.86E+01
		K-40	<5.32E+01	0.00E+00	5.32E+01
413189	2/29/2016 - 5/23/2016	H3SW	<-4.7E+01	0.00E+00	1.95E+02
415067	5/23/2016 - 6/20/2016	Mn-54	<2.45E+00	0.00E+00	2.45E+00
		Co-58	<2.81E+00	0.00E+00	2.81E+00
		Fe-59	<6.29E+00	0.00E+00	6.29E+00
		Co-60	<2.72E+00	0.00E+00	2.72E+00
		Zn-65	<6.04E+00	0.00E+00	6.04E+00
		Zr-95	<5.26E+00	0.00E+00	5.26E+00
		Nb-95	<2.97E+00	0.00E+00	2.97E+00
		I-131	<1.05E+01	0.00E+00	1.05E+01
		Cs-134	<3.25E+00	0.00E+00	3.25E+00
		Cs-137	<3.01E+00	0.00E+00	3.01E+00
		BaLa-140	<6.41E+00	0.00E+00	6.41E+00
		Be-7	<2.60E+01	0.00E+00	2.60E+01
		K-40	1.99E+01	2.55E+01	4.19E+01
417449	6/20/2016 - 7/18/2016	Mn-54	<4.99E+00	0.00E+00	4.99E+00
		Co-58	<4.67E+00	0.00E+00	4.67E+00
		Fe-59	<8.43E+00	0.00E+00	8.43E+00
		Co-60	<4.27E+00	0.00E+00	4.27E+00
		Zn-65	<7.86E+00	0.00E+00	7.86E+00
		Zr-95	<6.85E+00	0.00E+00	6.85E+00
		Nb-95	<5.77E+00	0.00E+00	5.77E+00
		I-131	<1.20E+01	0.00E+00	1.20E+01
		Cs-134	<3.17E+00	0.00E+00	3.17E+00
		Cs-137	<4.08E+00	0.00E+00	4.08E+00
		BaLa-140	<1.06E+01	0.00E+00	1.06E+01
		Be-7	<3.11E+01	0.00E+00	3.11E+01
		K-40	<6.39E+01	0.00E+00	6.39E+01
419534	7/18/2016 - 8/15/2016	Mn-54	<3.14E+00	0.00E+00	3.14E+00
		Co-58	<4.00E+00	0.00E+00	4.00E+00
		Fe-59	<6.83E+00	0.00E+00	6.83E+00
		Co-60	<3.46E+00	0.00E+00	3.46E+00
		Zn-65	<9.39E+00	0.00E+00	9.39E+00
		Zr-95	<6.66E+00	0.00E+00	6.66E+00
		Nb-95	<4.98E+00	0.00E+00	4.98E+00
		I-131	<1.17E+01	0.00E+00	1.17E+01
		Cs-134	<4.43E+00	0.00E+00	4.43E+00
		Cs-137	<4.95E+00	0.00E+00	4.95E+00
		BaLa-140	<9.62E+00	0.00E+00	9.62E+00
		Be-7	<3.99E+01	0.00E+00	3.99E+01
		K-40	<5.06E+01	0.00E+00	5.06E+01
420870	5/23/2016 - 8/15/2016	H3SW	<-9.5E+01	0.00E+00	1.97E+02
422611	8/15/2016 - 9/12/2016	Mn-54	<1.30E+00	0.00E+00	1.30E+00
		Co-58	<1.70E+00	0.00E+00	1.70E+00
		Fe-59	<3.85E+00	0.00E+00	3.85E+00
		Co-60	<1.50E+00	0.00E+00	1.50E+00
		Zn-65	<2.86E+00	0.00E+00	2.86E+00
		Zr-95	<3.00E+00	0.00E+00	3.00E+00
		Nb-95	<2.29E+00	0.00E+00	2.29E+00
		I-131	<1.01E+01	0.00E+00	1.01E+01
		Cs-134	<1.87E+00	0.00E+00	1.87E+00
		Cs-137	<1.68E+00	0.00E+00	1.68E+00
		BaLa-140	<5.52E+00	0.00E+00	5.52E+00
		Be-7	<1.44E+01	0.00E+00	1.44E+01
		K-40	5.15E+01	1.66E+01	2.02E+01



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

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

Sample Point 062 [CONTROL - ENE @ 0.85 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
426032	9/12/2016 - 10/10/2016	Mn-54	<3.80E+00	0.00E+00	3.80E+00
		Co-58	<5.05E+00	0.00E+00	5.05E+00
		Fe-59	<8.44E+00	0.00E+00	8.44E+00
		Co-60	<3.86E+00	0.00E+00	3.86E+00
		Zn-65	<7.12E+00	0.00E+00	7.12E+00
		Zr-95	<6.24E+00	0.00E+00	6.24E+00
		Nb-95	<4.82E+00	0.00E+00	4.82E+00
		I-131	<1.12E+01	0.00E+00	1.12E+01
		Cs-134	<3.99E+00	0.00E+00	3.99E+00
		Cs-137	<3.67E+00	0.00E+00	3.67E+00
		BaLa-140	<8.71E+00	0.00E+00	8.71E+00
		Be-7	<3.01E+01	0.00E+00	3.01E+01
		K-40	<6.40E+01	0.00E+00	6.40E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
428257	10/10/2016 - 11/7/2016	Mn-54	<2.45E+00	0.00E+00	2.45E+00
		Co-58	<2.74E+00	0.00E+00	2.74E+00
		Fe-59	<7.96E+00	0.00E+00	7.96E+00
		Co-60	<3.02E+00	0.00E+00	3.02E+00
		Zn-65	<6.53E+00	0.00E+00	6.53E+00
		Zr-95	<6.47E+00	0.00E+00	6.47E+00
		Nb-95	<4.77E+00	0.00E+00	4.77E+00
		I-131	<1.19E+01	0.00E+00	1.19E+01
		Cs-134	<3.11E+00	0.00E+00	3.11E+00
		Cs-137	<3.15E+00	0.00E+00	3.15E+00
		BaLa-140	<7.83E+00	0.00E+00	7.83E+00
		Be-7	<3.40E+01	0.00E+00	3.40E+01
		K-40	<5.00E+01	0.00E+00	5.00E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
427849	8/15/2016 - 12/5/2016	H3SW	<-9.9E+00	0.00E+00	1.89E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
430621	11/7/2016 - 12/5/2016	Mn-54	<4.73E+00	0.00E+00	4.73E+00
		Co-58	<3.24E+00	0.00E+00	3.24E+00
		Fe-59	<1.02E+01	0.00E+00	1.02E+01
		Co-60	<4.58E+00	0.00E+00	4.58E+00
		Zn-65	<9.98E+00	0.00E+00	9.98E+00
		Zr-95	<6.75E+00	0.00E+00	6.75E+00
		Nb-95	<5.92E+00	0.00E+00	5.92E+00
		I-131	<1.10E+01	0.00E+00	1.10E+01
		Cs-134	<4.04E+00	0.00E+00	4.04E+00
		Cs-137	<3.92E+00	0.00E+00	3.92E+00
		BaLa-140	<1.19E+01	0.00E+00	1.19E+01
		Be-7	<3.30E+01	0.00E+00	3.30E+01
		K-40	<7.39E+01	0.00E+00	7.39E+01

Sample Point 063.1 [INDICATOR - E @ 0.79 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
398997	12/7/2015 - 1/5/2016	Mn-54	<2.77E+00	0.00E+00	2.77E+00
		Co-58	<2.97E+00	0.00E+00	2.97E+00
		Fe-59	<5.83E+00	0.00E+00	5.83E+00
		Co-60	<2.64E+00	0.00E+00	2.64E+00
		Zn-65	<4.46E+00	0.00E+00	4.46E+00
		Zr-95	<5.96E+00	0.00E+00	5.96E+00
		Nb-95	<3.62E+00	0.00E+00	3.62E+00
		I-131	<1.00E+01	0.00E+00	1.00E+01
		Cs-134	<2.26E+00	0.00E+00	2.26E+00
		Cs-137	<3.17E+00	0.00E+00	3.17E+00
		BaLa-140	<7.00E+00	0.00E+00	7.00E+00
		Be-7	<2.32E+01	0.00E+00	2.32E+01
		K-40	4.50E+01	3.34E+01	5.17E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
401045	1/5/2016 - 2/1/2016	Mn-54	<2.81E+00	0.00E+00	2.81E+00
		Co-58	<3.45E+00	0.00E+00	3.45E+00
		Fe-59	<7.81E+00	0.00E+00	7.81E+00
		Co-60	<4.18E+00	0.00E+00	4.18E+00



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

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

Sample Point 063.1 [INDICATOR - E @ 0.79 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
401045	1/5/2016 - 2/1/2016	Zn-65	<6.50E+00	0.00E+00	6.50E+00
		Zr-95	<7.39E+00	0.00E+00	7.39E+00
		Nb-95	<4.36E+00	0.00E+00	4.36E+00
		I-131	<1.18E+01	0.00E+00	1.18E+01
		Cs-134	<2.93E+00	0.00E+00	2.93E+00
		Cs-137	<3.02E+00	0.00E+00	3.02E+00
		BaLa-140	<6.34E+00	0.00E+00	6.34E+00
		Be-7	<3.64E+01	0.00E+00	3.64E+01
		K-40	<5.84E+01	0.00E+00	5.84E+01
		403085	2/1/2016 - 2/29/2016	Mn-54	<2.57E+00
Co-58	<2.58E+00			0.00E+00	2.58E+00
Fe-59	<6.12E+00			0.00E+00	6.12E+00
Co-60	<2.23E+00			0.00E+00	2.23E+00
Zn-65	<5.68E+00			0.00E+00	5.68E+00
Zr-95	<4.58E+00			0.00E+00	4.58E+00
Nb-95	<3.22E+00			0.00E+00	3.22E+00
I-131	<1.20E+01			0.00E+00	1.20E+01
Cs-134	<2.13E+00			0.00E+00	2.13E+00
Cs-137	<2.50E+00			0.00E+00	2.50E+00
BaLa-140	<6.73E+00			0.00E+00	6.73E+00
Be-7	<3.00E+01			0.00E+00	3.00E+01
K-40	4.50E+01			2.37E+01	3.05E+01
403616	12/7/2015 - 2/29/2016	H3SW	4.41E+03	2.01E+02	1.95E+02
406433	2/29/2016 - 3/28/2016	Mn-54	<1.74E+00	0.00E+00	1.74E+00
		Co-58	<1.94E+00	0.00E+00	1.94E+00
		Fe-59	<4.54E+00	0.00E+00	4.54E+00
		Co-60	<1.56E+00	0.00E+00	1.56E+00
		Zn-65	<3.85E+00	0.00E+00	3.85E+00
		Zr-95	<3.04E+00	0.00E+00	3.04E+00
		Nb-95	<2.82E+00	0.00E+00	2.82E+00
		I-131	<1.20E+01	0.00E+00	1.20E+01
		Cs-134	<1.73E+00	0.00E+00	1.73E+00
		Cs-137	<1.80E+00	0.00E+00	1.80E+00
		BaLa-140	<5.87E+00	0.00E+00	5.87E+00
		Be-7	<1.71E+01	0.00E+00	1.71E+01
		K-40	4.06E+01	2.05E+01	3.00E+01
409822	3/28/2016 - 4/25/2016	Mn-54	<2.58E+00	0.00E+00	2.58E+00
		Co-58	<2.98E+00	0.00E+00	2.98E+00
		Fe-59	<4.24E+00	0.00E+00	4.24E+00
		Co-60	<2.60E+00	0.00E+00	2.60E+00
		Zn-65	<6.37E+00	0.00E+00	6.37E+00
		Zr-95	<5.29E+00	0.00E+00	5.29E+00
		Nb-95	<3.49E+00	0.00E+00	3.49E+00
		I-131	<1.10E+01	0.00E+00	1.10E+01
		Cs-134	<3.94E+00	0.00E+00	3.94E+00
		Cs-137	<2.27E+00	0.00E+00	2.27E+00
		BaLa-140	<7.32E+00	0.00E+00	7.32E+00
		Be-7	<3.32E+01	0.00E+00	3.32E+01
		K-40	3.93E+01	2.35E+01	3.04E+01
412261	4/25/2016 - 5/23/2016	Mn-54	<2.16E+00	0.00E+00	2.16E+00
		Co-58	<2.40E+00	0.00E+00	2.40E+00
		Fe-59	<5.70E+00	0.00E+00	5.70E+00
		Co-60	<2.49E+00	0.00E+00	2.49E+00
		Zn-65	<4.96E+00	0.00E+00	4.96E+00
		Zr-95	<4.40E+00	0.00E+00	4.40E+00
		Nb-95	<3.02E+00	0.00E+00	3.02E+00
		I-131	<1.04E+01	0.00E+00	1.04E+01
		Cs-134	<2.67E+00	0.00E+00	2.67E+00
		Cs-137	<2.10E+00	0.00E+00	2.10E+00



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

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

Sample Point 063.1 [INDICATOR - E @ 0.79 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
412261	4/25/2016 - 5/23/2016	BaLa-140	<5.24E+00	0.00E+00	5.24E+00
		Be-7	<2.20E+01	0.00E+00	2.20E+01
		K-40	<3.74E+01	0.00E+00	3.74E+01
413190	2/29/2016 - 5/23/2016	H3SW	3.38E+03	1.99E+02	1.95E+02
415068	5/23/2016 - 6/20/2016	Mn-54	<3.06E+00	0.00E+00	3.06E+00
		Co-58	<3.19E+00	0.00E+00	3.19E+00
		Fe-59	<7.31E+00	0.00E+00	7.31E+00
		Co-60	<3.06E+00	0.00E+00	3.06E+00
		Zn-65	<6.26E+00	0.00E+00	6.26E+00
		Zr-95	<5.44E+00	0.00E+00	5.44E+00
		Nb-95	<4.85E+00	0.00E+00	4.85E+00
		I-131	<1.20E+01	0.00E+00	1.20E+01
		Cs-134	<2.81E+00	0.00E+00	2.81E+00
		Cs-137	<3.31E+00	0.00E+00	3.31E+00
		BaLa-140	<4.16E+00	0.00E+00	4.16E+00
		Be-7	<2.53E+01	0.00E+00	2.53E+01
		K-40	<5.42E+01	0.00E+00	5.42E+01
417450	6/20/2016 - 7/18/2016	Mn-54	<4.18E+00	0.00E+00	4.18E+00
		Co-58	<5.83E+00	0.00E+00	5.83E+00
		Fe-59	<1.15E+01	0.00E+00	1.15E+01
		Co-60	<3.83E+00	0.00E+00	3.83E+00
		Zn-65	<8.29E+00	0.00E+00	8.29E+00
		Zr-95	<6.20E+00	0.00E+00	6.20E+00
		Nb-95	<4.76E+00	0.00E+00	4.76E+00
		I-131	<1.18E+01	0.00E+00	1.18E+01
		Cs-134	<4.22E+00	0.00E+00	4.22E+00
		Cs-137	<2.80E+00	0.00E+00	2.80E+00
		BaLa-140	<9.55E+00	0.00E+00	9.55E+00
		Be-7	<3.79E+01	0.00E+00	3.79E+01
		K-40	<5.01E+01	0.00E+00	5.01E+01
419535	7/18/2016 - 8/15/2016	Mn-54	<2.90E+00	0.00E+00	2.90E+00
		Co-58	<3.94E+00	0.00E+00	3.94E+00
		Fe-59	<7.11E+00	0.00E+00	7.11E+00
		Co-60	<2.48E+00	0.00E+00	2.48E+00
		Zn-65	<6.63E+00	0.00E+00	6.63E+00
		Zr-95	<6.48E+00	0.00E+00	6.48E+00
		Nb-95	<4.10E+00	0.00E+00	4.10E+00
		I-131	<1.16E+01	0.00E+00	1.16E+01
		Cs-134	<2.98E+00	0.00E+00	2.98E+00
		Cs-137	<3.81E+00	0.00E+00	3.81E+00
		BaLa-140	<9.11E+00	0.00E+00	9.11E+00
		Be-7	<2.57E+01	0.00E+00	2.57E+01
		K-40	6.82E+01	3.24E+01	4.11E+01
420871	5/23/2016 - 8/15/2016	H3SW	4.64E+03	2.04E+02	1.96E+02
422612	8/15/2016 - 9/12/2016	Mn-54	<1.85E+00	0.00E+00	1.85E+00
		Co-58	<2.42E+00	0.00E+00	2.42E+00
		Fe-59	<5.66E+00	0.00E+00	5.66E+00
		Co-60	<2.29E+00	0.00E+00	2.29E+00
		Zn-65	<3.09E+00	0.00E+00	3.09E+00
		Zr-95	<3.57E+00	0.00E+00	3.57E+00
		Nb-95	<3.17E+00	0.00E+00	3.17E+00
		I-131	<1.19E+01	0.00E+00	1.19E+01
		Cs-134	<2.16E+00	0.00E+00	2.16E+00
		Cs-137	<2.36E+00	0.00E+00	2.36E+00
		BaLa-140	<6.36E+00	0.00E+00	6.36E+00
		Be-7	<2.30E+01	0.00E+00	2.30E+01



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

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

Sample Point 063.1 [INDICATOR - E @ 0.79 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
422612	8/15/2016 - 9/12/2016	K-40	4.54E+01	2.26E+01	3.06E+01
426033	9/12/2016 - 10/10/2016	Mn-54	<2.69E+00	0.00E+00	2.69E+00
		Co-58	<3.01E+00	0.00E+00	3.01E+00
		Fe-59	<8.25E+00	0.00E+00	8.25E+00
		Co-60	<2.14E+00	0.00E+00	2.14E+00
		Zn-65	<6.38E+00	0.00E+00	6.38E+00
		Zr-95	<6.61E+00	0.00E+00	6.61E+00
		Nb-95	<4.22E+00	0.00E+00	4.22E+00
		I-131	<1.14E+01	0.00E+00	1.14E+01
		Cs-134	<3.09E+00	0.00E+00	3.09E+00
		Cs-137	<3.58E+00	0.00E+00	3.58E+00
		BaLa-140	<7.64E+00	0.00E+00	7.64E+00
		Be-7	<3.24E+01	0.00E+00	3.24E+01
		K-40	5.09E+01	2.94E+01	4.02E+01
428258	10/10/2016 - 11/7/2016	Mn-54	<2.50E+00	0.00E+00	2.50E+00
		Co-58	<2.69E+00	0.00E+00	2.69E+00
		Fe-59	<5.86E+00	0.00E+00	5.86E+00
		Co-60	<2.77E+00	0.00E+00	2.77E+00
		Zn-65	<6.85E+00	0.00E+00	6.85E+00
		Zr-95	<3.86E+00	0.00E+00	3.86E+00
		Nb-95	<4.29E+00	0.00E+00	4.29E+00
		I-131	<1.16E+01	0.00E+00	1.16E+01
		Cs-134	<2.30E+00	0.00E+00	2.30E+00
		Cs-137	<3.33E+00	0.00E+00	3.33E+00
		BaLa-140	<6.42E+00	0.00E+00	6.42E+00
		Be-7	<2.37E+01	0.00E+00	2.37E+01
		K-40	<5.14E+01	0.00E+00	5.14E+01
427850	8/15/2016 - 12/5/2016	H3SW	4.71E+03	2.04E+02	1.88E+02
430622	11/7/2016 - 12/5/2016	Mn-54	<2.68E+00	0.00E+00	2.68E+00
		Co-58	<2.98E+00	0.00E+00	2.98E+00
		Fe-59	<7.55E+00	0.00E+00	7.55E+00
		Co-60	<2.15E+00	0.00E+00	2.15E+00
		Zn-65	<6.20E+00	0.00E+00	6.20E+00
		Zr-95	<6.18E+00	0.00E+00	6.18E+00
		Nb-95	<4.09E+00	0.00E+00	4.09E+00
		I-131	<1.11E+01	0.00E+00	1.11E+01
		Cs-134	<3.97E+00	0.00E+00	3.97E+00
		Cs-137	<4.00E+00	0.00E+00	4.00E+00
		BaLa-140	<8.38E+00	0.00E+00	8.38E+00
		Be-7	<2.60E+01	0.00E+00	2.60E+01
		K-40	<4.93E+01	0.00E+00	4.93E+01

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

Sample Point 020 [INDICATOR - N @ 0.16 miles]

TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
403503	12/15/2015 - 3/15/2016	mR/Std Qtr	21.23
413077	3/15/2016 - 6/14/2016	mR/Std Qtr	20.66
421076	6/14/2016 - 9/13/2016	mR/Std Qtr	17.09
430420	9/13/2016 - 12/13/2016	mR/Std Qtr	20.23

Sample Point 021 [INDICATOR - NNE @ 0.25 miles]

TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
403504	12/15/2015 - 3/15/2016	mR/Std Qtr	15.39



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

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

Sample Point 021 [INDICATOR - NNE @ 0.25 miles]

TLD RING TLD_INNER

Sample ID	Sample Dates	Nuclide	Activity
413078	3/15/2016 - 6/14/2016	mR/Std Qtr	14.19
421077	6/14/2016 - 9/13/2016	mR/Std Qtr	12.60
430421	9/13/2016 - 12/13/2016	mR/Std Qtr	14.49

Sample Point 022 [INDICATOR - NE @ 0.53 miles]

TLD RING TLD_INNER

Sample ID	Sample Dates	Nuclide	Activity
403505	12/15/2015 - 3/15/2016	mR/Std Qtr	25.19
413079	3/15/2016 - 6/14/2016	mR/Std Qtr	22.62
421078	6/14/2016 - 9/13/2016	mR/Std Qtr	19.88
430422	9/13/2016 - 12/13/2016	mR/Std Qtr	25.30

Sample Point 023 [INDICATOR - ENE @ 0.93 miles]

TLD RING TLD_INNER

Sample ID	Sample Dates	Nuclide	Activity
403506	12/15/2015 - 3/15/2016	mR/Std Qtr	26.17
413080	3/15/2016 - 6/14/2016	mR/Std Qtr	24.90
421079	6/14/2016 - 9/13/2016	mR/Std Qtr	20.70
430423	9/13/2016 - 12/13/2016	mR/Std Qtr	28.30

Sample Point 024 [INDICATOR - E @ 0.81 miles]

TLD RING TLD_INNER

Sample ID	Sample Dates	Nuclide	Activity
403507	12/15/2015 - 3/15/2016	mR/Std Qtr	27.02
413081	3/15/2016 - 6/14/2016	mR/Std Qtr	28.32
421080	6/14/2016 - 9/13/2016	mR/Std Qtr	25.25
430424	9/13/2016 - 12/13/2016	mR/Std Qtr	31.10

Sample Point 025 [INDICATOR - ESE @ 0.42 miles]

TLD RING TLD_INNER

Sample ID	Sample Dates	Nuclide	Activity
403508	12/15/2015 - 3/15/2016	mR/Std Qtr	19.92
413082	3/15/2016 - 6/14/2016	mR/Std Qtr	20.04
421081	6/14/2016 - 9/13/2016	mR/Std Qtr	15.88
430425	9/13/2016 - 12/13/2016	mR/Std Qtr	19.71

Sample Point 026 [INDICATOR - SE @ 0.34 miles]

TLD RING TLD_INNER

Sample ID	Sample Dates	Nuclide	Activity
403509	12/15/2015 - 3/15/2016	mR/Std Qtr	19.34
413083	3/15/2016 - 6/14/2016	mR/Std Qtr	17.30
421082	6/14/2016 - 9/13/2016	mR/Std Qtr	15.12



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

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

Sample Point 026 [INDICATOR - SE @ 0.34 miles]

TLD RING TLD_INNER

Sample ID: 430426	Sample Dates: 9/13/2016 - 12/13/2016	Nuclide mR/Std Qtr	Activity 15.88
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Sample Point 027 [INDICATOR - SSE @ 0.49 miles]

TLD RING TLD_INNER

Sample ID: 403510	Sample Dates: 12/15/2015 - 3/15/2016	Nuclide mR/Std Qtr	Activity 21.00
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Sample ID: 413084	Sample Dates: 3/15/2016 - 6/14/2016	Nuclide mR/Std Qtr	Activity 18.75
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Sample ID: 421083	Sample Dates: 6/14/2016 - 9/13/2016	Nuclide mR/Std Qtr	Activity 17.73
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Sample ID: 430427	Sample Dates: 9/13/2016 - 12/13/2016	Nuclide mR/Std Qtr	Activity 20.26
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Sample Point 028 [INDICATOR - S @ 0.46 miles]

TLD RING TLD_INNER

Sample ID: 403511	Sample Dates: 12/15/2015 - 3/15/2016	Nuclide mR/Std Qtr	Activity 18.82
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Sample ID: 413085	Sample Dates: 3/15/2016 - 6/14/2016	Nuclide mR/Std Qtr	Activity 16.94
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Sample ID: 421084	Sample Dates: 6/14/2016 - 9/13/2016	Nuclide mR/Std Qtr	Activity 15.34
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Sample ID: 430428	Sample Dates: 9/13/2016 - 12/13/2016	Nuclide mR/Std Qtr	Activity 17.33
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Sample Point 029 [INDICATOR - SSW @ 0.56 miles]

TLD RING TLD_INNER

Sample ID: 403512	Sample Dates: 12/15/2015 - 3/15/2016	Nuclide mR/Std Qtr	Activity 16.94
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Sample ID: 413086	Sample Dates: 3/15/2016 - 6/14/2016	Nuclide mR/Std Qtr	Activity 16.80
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Sample ID: 421085	Sample Dates: 6/14/2016 - 9/13/2016	Nuclide mR/Std Qtr	Activity 13.61
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Sample ID: 430429	Sample Dates: 9/13/2016 - 12/13/2016	Nuclide mR/Std Qtr	Activity 19.78
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Sample Point 030 [INDICATOR - SW @ 0.42 miles]

TLD RING TLD_INNER

Sample ID: 403513	Sample Dates: 12/15/2015 - 3/15/2016	Nuclide mR/Std Qtr	Activity 20.17
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Sample ID: 413087	Sample Dates: 3/15/2016 - 6/14/2016	Nuclide mR/Std Qtr	Activity 19.21
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Sample ID: 421086	Sample Dates: 6/14/2016 - 9/13/2016	Nuclide mR/Std Qtr	Activity 15.73
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Sample ID: 430430	Sample Dates: 9/13/2016 - 12/13/2016	Nuclide mR/Std Qtr	Activity 18.48
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Sample Point 031 [INDICATOR - WSW @ 0.27 miles]

TLD RING TLD_INNER

Sample ID: 403514	Sample Dates: 12/15/2015 - 3/15/2016	Nuclide mR/Std Qtr	Activity 19.31
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Sample ID: 413088	Sample Dates: 3/15/2016 - 6/14/2016	Nuclide mR/Std Qtr	Activity 16.69
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Sample ID: 421087	Sample Dates: 6/14/2016 - 9/13/2016	Nuclide mR/Std Qtr	Activity 15.10
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Sample ID: 430431	Sample Dates: 9/13/2016 - 12/13/2016	Nuclide mR/Std Qtr	Activity 17.55
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OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

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

Sample Point 032 [INDICATOR - WNW @ 0.19 miles]

TLD RING TLD_INNER

Sample ID	Sample Dates	Nuclide	Activity
403515	12/15/2015 - 3/15/2016	mR/Std Qtr	23.21
413089	3/15/2016 - 6/14/2016	mR/Std Qtr	19.44
421088	6/14/2016 - 9/13/2016	mR/Std Qtr	17.40
430432	9/13/2016 - 12/13/2016	mR/Std Qtr	20.75

Sample Point 033 [INDICATOR - WNW @ 0.21 miles]

TLD RING TLD_INNER

Sample ID	Sample Dates	Nuclide	Activity
403516	12/15/2015 - 3/15/2016	mR/Std Qtr	20.63
413090	3/15/2016 - 6/14/2016	mR/Std Qtr	17.02
421089	6/14/2016 - 9/13/2016	mR/Std Qtr	15.15
430433	9/13/2016 - 12/13/2016	mR/Std Qtr	17.98

Sample Point 034 [INDICATOR - NW @ 0.22 miles]

TLD RING TLD_INNER

Sample ID	Sample Dates	Nuclide	Activity
403517	12/15/2015 - 3/15/2016	mR/Std Qtr	21.09
413091	3/15/2016 - 6/14/2016	mR/Std Qtr	19.56
421090	6/14/2016 - 9/13/2016	mR/Std Qtr	16.03
430434	9/13/2016 - 12/13/2016	mR/Std Qtr	18.65

Sample Point 035 [INDICATOR - NNW @ 0.17 miles]

TLD RING TLD_INNER

Sample ID	Sample Dates	Nuclide	Activity
403518	12/15/2015 - 3/15/2016	mR/Std Qtr	27.02
413092	3/15/2016 - 6/14/2016	mR/Std Qtr	24.46
421091	6/14/2016 - 9/13/2016	mR/Std Qtr	20.92
430435	9/13/2016 - 12/13/2016	mR/Std Qtr	24.40

Sample Point 036 [INDICATOR - N @ 4.18 miles]

TLD RING TLD_OUTER

Sample ID	Sample Dates	Nuclide	Activity
403519	12/15/2015 - 3/15/2016	mR/Std Qtr	29.91
413093	3/15/2016 - 6/14/2016	mR/Std Qtr	27.64
421092	6/14/2016 - 9/13/2016	mR/Std Qtr	23.52
430436	9/13/2016 - 12/13/2016	mR/Std Qtr	28.20

Sample Point 037 [INDICATOR - NNE @ 4.85 miles]

TLD RING TLD_OUTER

Sample ID	Sample Dates	Nuclide	Activity
403520	12/15/2015 - 3/15/2016	mR/Std Qtr	20.31
413094	3/15/2016 - 6/14/2016	mR/Std Qtr	21.40



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

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

Sample Point 037 [INDICATOR - NNE @ 4.85 miles]

TLD RING TLD_OUTER

Sample ID	Sample Dates	Nuclide	Activity
421093	6/14/2016 - 9/13/2016	mR/Std Qtr	17.29
430437	9/13/2016 - 12/13/2016	mR/Std Qtr	19.99

Sample Point 038 [INDICATOR - NE @ 4.24 miles]

TLD RING TLD_OUTER

Sample ID	Sample Dates	Nuclide	Activity
403521	12/15/2015 - 3/15/2016	mR/Std Qtr	25.96
413095	3/15/2016 - 6/14/2016	mR/Std Qtr	23.46
421094	6/14/2016 - 9/13/2016	mR/Std Qtr	20.77
430438	9/13/2016 - 12/13/2016	mR/Std Qtr	22.51

Sample Point 039 [INDICATOR - ENE @ 4.02 miles]

TLD RING TLD_OUTER

Sample ID	Sample Dates	Nuclide	Activity
403522	12/15/2015 - 3/15/2016	mR/Std Qtr	26.75
413096	3/15/2016 - 6/14/2016	mR/Std Qtr	25.75
421095	6/14/2016 - 9/13/2016	mR/Std Qtr	24.13
430439	9/13/2016 - 12/13/2016	mR/Std Qtr	25.23

Sample Point 040 [INDICATOR - E @ 4.74 miles]

TLD RING TLD_OUTER

Sample ID	Sample Dates	Nuclide	Activity
403523	12/15/2015 - 3/15/2016	mR/Std Qtr	30.47
413097	3/15/2016 - 6/14/2016	mR/Std Qtr	28.72
421096	6/14/2016 - 9/13/2016	mR/Std Qtr	23.73
430440	9/13/2016 - 12/13/2016	mR/Std Qtr	27.18

Sample Point 041 [INDICATOR - ESE @ 4.25 miles]

TLD RING TLD_OUTER

Sample ID	Sample Dates	Nuclide	Activity
403524	12/15/2015 - 3/15/2016	mR/Std Qtr	19.91
413098	3/15/2016 - 6/14/2016	mR/Std Qtr	17.65
421097	6/14/2016 - 9/13/2016	mR/Std Qtr	14.99
430441	9/13/2016 - 12/13/2016	mR/Std Qtr	18.02

Sample Point 042 [INDICATOR - SE @ 4.93 miles]

TLD RING TLD_OUTER

Sample ID	Sample Dates	Nuclide	Activity
403525	12/15/2015 - 3/15/2016	mR/Std Qtr	27.84
413099	3/15/2016 - 6/14/2016	mR/Std Qtr	29.93
421098	6/14/2016 - 9/13/2016	mR/Std Qtr	24.20
430442	9/13/2016 - 12/13/2016	mR/Std Qtr	25.22



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

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

Sample Point 043 [INDICATOR - SSE @ 4.09 miles]

TLD RING TLD_OUTER

Sample ID	Sample Dates	Nuclide	Activity
403526	12/15/2015 - 3/15/2016	mR/Std Qtr	26.71
413100	3/15/2016 - 6/14/2016	mR/Std Qtr	25.44
421099	6/14/2016 - 9/13/2016	mR/Std Qtr	22.31
430443	9/13/2016 - 12/13/2016	mR/Std Qtr	26.23

Sample Point 044 [INDICATOR - S @ 3.96 miles]

TLD RING TLD_OUTER

Sample ID	Sample Dates	Nuclide	Activity
403527	12/15/2015 - 3/15/2016	mR/Std Qtr	21.07
413101	3/15/2016 - 6/14/2016	mR/Std Qtr	19.51
421100	6/14/2016 - 9/13/2016	mR/Std Qtr	18.02
430444	9/13/2016 - 12/13/2016	mR/Std Qtr	19.44

Sample Point 045 [INDICATOR - SSW @ 4.78 miles]

TLD RING TLD_OUTER

Sample ID	Sample Dates	Nuclide	Activity
403528	12/15/2015 - 3/15/2016	mR/Std Qtr	17.76
413102	3/15/2016 - 6/14/2016	mR/Std Qtr	18.53
421101	6/14/2016 - 9/13/2016	mR/Std Qtr	15.72
430445	9/13/2016 - 12/13/2016	mR/Std Qtr	19.41

Sample Point 046 [INDICATOR - SW @ 4.61 miles]

TLD RING TLD_OUTER

Sample ID	Sample Dates	Nuclide	Activity
403529	12/15/2015 - 3/15/2016	mR/Std Qtr	23.72
413103	3/15/2016 - 6/14/2016	mR/Std Qtr	25.98
421102	6/14/2016 - 9/13/2016	mR/Std Qtr	20.84
430446	9/13/2016 - 12/13/2016	mR/Std Qtr	22.64

Sample Point 047 [INDICATOR - WSW @ 3.58 miles]

TLD RING TLD_OUTER

Sample ID	Sample Dates	Nuclide	Activity
403530	12/15/2015 - 3/15/2016	mR/Std Qtr	25.53
413104	3/15/2016 - 6/14/2016	mR/Std Qtr	23.10
421103	6/14/2016 - 9/13/2016	mR/Std Qtr	19.27
430447	9/13/2016 - 12/13/2016	mR/Std Qtr	23.69

Sample Point 048 [INDICATOR - W @ 3.64 miles]

TLD RING TLD_OUTER

Sample ID	Sample Dates	Nuclide	Activity
403531	12/15/2015 - 3/15/2016	mR/Std Qtr	28.16
413105	3/15/2016 - 6/14/2016	mR/Std Qtr	26.48



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

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

Sample Point 048 [INDICATOR - W @ 3.64 miles]

TLD RING TLD_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
421104	6/14/2016 - 9/13/2016	mR/Std Qtr	22.40
430448	9/13/2016 - 12/13/2016	mR/Std Qtr	28.86

Sample Point 049 [INDICATOR - WNW @ 3.6 miles]

TLD RING TLD_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
403532	12/15/2015 - 3/15/2016	mR/Std Qtr	23.04
413106	3/15/2016 - 6/14/2016	mR/Std Qtr	21.56
421105	6/14/2016 - 9/13/2016	mR/Std Qtr	19.53
430449	9/13/2016 - 12/13/2016	mR/Std Qtr	25.04

Sample Point 050 [INDICATOR - NW @ 3.53 miles]

TLD RING TLD_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
403533	12/15/2015 - 3/15/2016	mR/Std Qtr	20.58
413107	3/15/2016 - 6/14/2016	mR/Std Qtr	19.30
421106	6/14/2016 - 9/13/2016	mR/Std Qtr	16.29
430450	9/13/2016 - 12/13/2016	mR/Std Qtr	21.39

Sample Point 051 [INDICATOR - NNW @ 4.64 miles]

TLD RING TLD_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
403534	12/15/2015 - 3/15/2016	mR/Std Qtr	19.92
413108	3/15/2016 - 6/14/2016	mR/Std Qtr	20.42
421107	6/14/2016 - 9/13/2016	mR/Std Qtr	18.19
430451	9/13/2016 - 12/13/2016	mR/Std Qtr	19.98

Sample Point 052 [INDICATOR - ENE @ 12.4 miles]

TLD RING TLD_SPEC

Sample ID:	Sample Dates:	Nuclide	Activity
403535	12/15/2015 - 3/15/2016	mR/Std Qtr	26.82
413109	3/15/2016 - 6/14/2016	mR/Std Qtr	25.10
421108	6/14/2016 - 9/13/2016	mR/Std Qtr	19.48
430452	9/13/2016 - 12/13/2016	mR/Std Qtr	24.94

Sample Point 053 [INDICATOR - E @ 11.7 miles]

TLD RING TLD_SPEC

Sample ID:	Sample Dates:	Nuclide	Activity
403536	12/15/2015 - 3/15/2016	mR/Std Qtr	29.40
413110	3/15/2016 - 6/14/2016	mR/Std Qtr	26.36
421109	6/14/2016 - 9/13/2016	mR/Std Qtr	20.88
430453	9/13/2016 - 12/13/2016	mR/Std Qtr	26.03



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

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

Sample Point 054 [INDICATOR - ESE @ 8.6 miles]

TLD RING TLD_SPEC

Sample ID:	Sample Dates:	Nuclide	Activity
403537	12/15/2015 - 3/15/2016	mR/Std Qtr	21.27
413111	3/15/2016 - 6/14/2016	mR/Std Qtr	19.38
421110	6/14/2016 - 9/13/2016	mR/Std Qtr	15.33
430454	9/13/2016 - 12/13/2016	mR/Std Qtr	18.45

Sample Point 055 [INDICATOR - SSE @ 9.27 miles]

TLD RING TLD_SPEC

Sample ID:	Sample Dates:	Nuclide	Activity
403538	12/15/2015 - 3/15/2016	mR/Std Qtr	17.99
413112	3/15/2016 - 6/14/2016	mR/Std Qtr	17.91
421111	6/14/2016 - 9/13/2016	mR/Std Qtr	13.95
430455	9/13/2016 - 12/13/2016	mR/Std Qtr	16.00

Sample Point 056 [INDICATOR - SSW @ 7.3 miles]

TLD RING TLD_SPEC

Sample ID:	Sample Dates:	Nuclide	Activity
403539	12/15/2015 - 3/15/2016	mR/Std Qtr	27.00
413113	3/15/2016 - 6/14/2016	mR/Std Qtr	25.18
421112	6/14/2016 - 9/13/2016	mR/Std Qtr	22.12
430456	9/13/2016 - 12/13/2016	mR/Std Qtr	26.84

Sample Point 057 [INDICATOR - SW @ 8.42 miles]

TLD RING TLD_SPEC

Sample ID:	Sample Dates:	Nuclide	Activity
403540	12/15/2015 - 3/15/2016	mR/Std Qtr	28.11
413114	3/15/2016 - 6/14/2016	mR/Std Qtr	24.36
421113	6/14/2016 - 9/13/2016	mR/Std Qtr	22.58
430457	9/13/2016 - 12/13/2016	mR/Std Qtr	25.12

Sample Point 058 [CONTROL - WSW @ 9.39 miles]

TLD RING TLD_CTRL

Sample ID:	Sample Dates:	Nuclide	Activity
403541	12/15/2015 - 3/15/2016	mR/Std Qtr	35.86
413115	3/15/2016 - 6/14/2016	mR/Std Qtr	31.94
421114	6/14/2016 - 9/13/2016	mR/Std Qtr	28.23
430458	9/13/2016 - 12/13/2016	mR/Std Qtr	32.95

Sample Point 059 [INDICATOR - NW @ 9.2 miles]

TLD RING TLD_SPEC

Sample ID:	Sample Dates:	Nuclide	Activity
403542	12/15/2015 - 3/15/2016	mR/Std Qtr	27.18
413116	3/15/2016 - 6/14/2016	mR/Std Qtr	25.84



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

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

Sample Point 059 [INDICATOR - NW @ 9.2 miles]

TLD RING TLD_SPEC

Sample ID: 430459	Sample Dates: 9/13/2016 - 12/13/2016	Nuclide mR/Std Qtr	Activity 30.10
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Sample Point 076 [INDICATOR - W @ 0.19 miles]

TLD RING TLD_INNER

Sample ID: 403543	Sample Dates: 12/15/2015 - 3/15/2016	Nuclide mR/Std Qtr	Activity 25.35
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Sample ID: 413117	Sample Dates: 3/15/2016 - 6/14/2016	Nuclide mR/Std Qtr	Activity 24.00
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Sample ID: 421116	Sample Dates: 6/14/2016 - 9/13/2016	Nuclide mR/Std Qtr	Activity 22.06
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Sample ID: 430460	Sample Dates: 9/13/2016 - 12/13/2016	Nuclide mR/Std Qtr	Activity 25.70
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Sample Point 077 [INDICATOR - SW @ 1 miles]

TLD RING TLD_SPEC

Sample ID: 403559	Sample Dates: 12/15/2015 - 3/15/2016	Nuclide mR/Std Qtr	Activity 21.80
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Sample ID: 413133	Sample Dates: 3/15/2016 - 6/14/2016	Nuclide mR/Std Qtr	Activity 20.07
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Sample ID: 421117	Sample Dates: 6/14/2016 - 9/13/2016	Nuclide mR/Std Qtr	Activity 17.02
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Sample ID: 430461	Sample Dates: 9/13/2016 - 12/13/2016	Nuclide mR/Std Qtr	Activity 17.24
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Sample Point 078.1 [INDICATOR - WSW @ 0.53 miles]

TLD RING TLD_SPEC

Sample ID: 403558	Sample Dates: 12/15/2015 - 3/15/2016	Nuclide mR/Std Qtr	Activity 28.68
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Sample ID: 413132	Sample Dates: 3/15/2016 - 6/14/2016	Nuclide mR/Std Qtr	Activity 26.75
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Sample ID: 421118	Sample Dates: 6/14/2016 - 9/13/2016	Nuclide mR/Std Qtr	Activity 23.30
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Sample ID: 430462	Sample Dates: 9/13/2016 - 12/13/2016	Nuclide mR/Std Qtr	Activity 25.92
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Sample Point 081 [CONTROL - SE @ 9.33 miles]

TLD RING TLD_CTRL

Sample ID: 403544	Sample Dates: 12/15/2015 - 3/15/2016	Nuclide mR/Std Qtr	Activity 25.85
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Sample ID: 413118	Sample Dates: 3/15/2016 - 6/14/2016	Nuclide mR/Std Qtr	Activity 23.84
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Sample ID: 421119	Sample Dates: 6/14/2016 - 9/13/2016	Nuclide mR/Std Qtr	Activity 20.69
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Sample ID: 430463	Sample Dates: 9/13/2016 - 12/13/2016	Nuclide mR/Std Qtr	Activity 22.93
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Sample Point 085 [INDICATOR - NNW @ 0.88 miles]

TLD RING TLD_SPEC

Sample ID: 403569	Sample Dates: 12/15/2015 - 3/15/2016	Nuclide mR/Std Qtr	Activity 21.82
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Sample ID: 413143	Sample Dates: 3/15/2016 - 6/14/2016	Nuclide mR/Std Qtr	Activity 21.06
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Sample ID: 421120	Sample Dates: 6/14/2016 - 9/13/2016	Nuclide mR/Std Qtr	Activity 18.03
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Sample ID: 430464	Sample Dates: 9/13/2016 - 12/13/2016	Nuclide mR/Std Qtr	Activity 19.50
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OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

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

Sample Point 086 [INDICATOR - NW @ 0.83 miles]

TLD RING TLD_SPEC

Sample ID	Sample Dates	Nuclide	Activity
403570	12/15/2015 - 3/15/2016	mR/Std Qtr	19.64
413144	3/15/2016 - 6/14/2016	mR/Std Qtr	16.76
421121	6/14/2016 - 9/13/2016	mR/Std Qtr	16.05
430465	9/13/2016 - 12/13/2016	mR/Std Qtr	19.62

Sample Point 087 [INDICATOR - WNW @ 1.33 miles]

TLD RING TLD_SPEC

Sample ID	Sample Dates	Nuclide	Activity
403557	12/15/2015 - 3/15/2016	mR/Std Qtr	19.64
413131	3/15/2016 - 6/14/2016	mR/Std Qtr	18.82
421122	6/14/2016 - 9/13/2016	mR/Std Qtr	15.42
430466	9/13/2016 - 12/13/2016	mR/Std Qtr	18.78

Sample Point 088 [INDICATOR - SSW @ 1 miles]

TLD RING TLD_SPEC

Sample ID	Sample Dates	Nuclide	Activity
403560	12/15/2015 - 3/15/2016	mR/Std Qtr	22.20
413134	3/15/2016 - 6/14/2016	mR/Std Qtr	20.62
421123	6/14/2016 - 9/13/2016	mR/Std Qtr	18.34
430467	9/13/2016 - 12/13/2016	mR/Std Qtr	22.79

Sample Point 089 [INDICATOR - S @ 1.19 miles]

TLD RING TLD_SPEC

Sample ID	Sample Dates	Nuclide	Activity
403561	12/15/2015 - 3/15/2016	mR/Std Qtr	24.66
413135	3/15/2016 - 6/14/2016	mR/Std Qtr	23.36
421124	6/14/2016 - 9/13/2016	mR/Std Qtr	21.87
430468	9/13/2016 - 12/13/2016	mR/Std Qtr	23.24

Sample Point 090 [INDICATOR - SE @ 0.79 miles]

TLD RING TLD_SPEC

Sample ID	Sample Dates	Nuclide	Activity
403562	12/15/2015 - 3/15/2016	mR/Std Qtr	26.61
413136	3/15/2016 - 6/14/2016	mR/Std Qtr	24.92
421125	6/14/2016 - 9/13/2016	mR/Std Qtr	22.69
430469	9/13/2016 - 12/13/2016	mR/Std Qtr	24.53

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

Sample Point 077 [INDICATOR - SW @ 1 miles]

Sample ID	Sample Dates	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
398992	1/5/2016 - 1/5/2016		Mn-54	<2.65E+01	0.00E+00	2.65E+01
			Co-58	<2.17E+01	0.00E+00	2.17E+01
			Fe-59	<6.02E+01	0.00E+00	6.02E+01



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

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

Sample Point 077 [INDICATOR - SW @ 1 miles]

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
398992	1/5/2016 - 1/5/2016	MIXEDBLV	Co-60	<2.73E+01	0.00E+00	2.73E+01
			Zn-65	<6.14E+01	0.00E+00	6.14E+01
			Zr-95	<5.24E+01	0.00E+00	5.24E+01
			Nb-95	<2.76E+01	0.00E+00	2.76E+01
			I-131	<2.83E+01	0.00E+00	2.83E+01
			Cs-134	<3.40E+01	0.00E+00	3.40E+01
			Cs-137	<3.42E+01	0.00E+00	3.42E+01
			BaLa-140	<1.06E+01	0.00E+00	1.06E+01
			Be-7	1.88E+03	4.05E+02	3.67E+02
			K-40	2.88E+03	6.79E+02	5.09E+02
401040	2/1/2016 - 2/1/2016	MIXEDBLV	Mn-54	<2.66E+01	0.00E+00	2.66E+01
			Co-58	<2.33E+01	0.00E+00	2.33E+01
			Fe-59	<6.49E+01	0.00E+00	6.49E+01
			Co-60	<3.64E+01	0.00E+00	3.64E+01
			Zn-65	<5.41E+01	0.00E+00	5.41E+01
			Zr-95	<5.79E+01	0.00E+00	5.79E+01
			Nb-95	<2.75E+01	0.00E+00	2.75E+01
			I-131	<3.18E+01	0.00E+00	3.18E+01
			Cs-134	<3.86E+01	0.00E+00	3.86E+01
			Cs-137	<2.57E+01	0.00E+00	2.57E+01
			BaLa-140	<3.86E+01	0.00E+00	3.86E+01
			Be-7	1.22E+03	3.11E+02	3.20E+02
			K-40	2.24E+03	5.95E+02	5.59E+02
			404575	3/7/2016 - 3/7/2016	MIXEDBLV	Mn-54
Co-58	<2.77E+01	0.00E+00				2.77E+01
Fe-59	<5.61E+01	0.00E+00				5.61E+01
Co-60	<3.33E+01	0.00E+00				3.33E+01
Zn-65	<6.65E+01	0.00E+00				6.65E+01
Zr-95	<5.48E+01	0.00E+00				5.48E+01
Nb-95	<2.69E+01	0.00E+00				2.69E+01
I-131	<2.69E+01	0.00E+00				2.69E+01
Cs-134	<3.70E+01	0.00E+00				3.70E+01
Cs-137	<3.07E+01	0.00E+00				3.07E+01
BaLa-140	<4.07E+01	0.00E+00				4.07E+01
Be-7	1.58E+03	3.51E+02				3.37E+02
K-40	2.59E+03	5.82E+02				3.59E+02
407606	4/4/2016 - 4/4/2016	MIXEDBLV				Mn-54
			Co-58	<1.72E+01	0.00E+00	1.72E+01
			Fe-59	<2.75E+01	0.00E+00	2.75E+01
			Co-60	<1.25E+01	0.00E+00	1.25E+01
			Zn-65	<3.71E+01	0.00E+00	3.71E+01
			Zr-95	<2.99E+01	0.00E+00	2.99E+01
			Nb-95	<1.07E+01	0.00E+00	1.07E+01
			I-131	<1.25E+01	0.00E+00	1.25E+01
			Cs-134	<1.72E+01	0.00E+00	1.72E+01
			Cs-137	<1.67E+01	0.00E+00	1.67E+01
			BaLa-140	<1.33E+01	0.00E+00	1.33E+01
			Be-7	1.03E+03	2.22E+02	2.34E+02
			K-40	3.45E+03	5.37E+02	2.87E+02
			410995	5/2/2016 - 5/2/2016	MIXEDBLV	Mn-54
Co-58	<1.94E+01	0.00E+00				1.94E+01
Fe-59	<4.21E+01	0.00E+00				4.21E+01
Co-60	<1.26E+01	0.00E+00				1.26E+01
Zn-65	<4.48E+01	0.00E+00				4.48E+01
Zr-95	<3.51E+01	0.00E+00				3.51E+01
Nb-95	<1.96E+01	0.00E+00				1.96E+01
I-131	<1.95E+01	0.00E+00				1.95E+01
Cs-134	<2.04E+01	0.00E+00				2.04E+01
Cs-137	<2.37E+01	0.00E+00				2.37E+01
BaLa-140	<2.04E+01	0.00E+00				2.04E+01



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

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

Sample Point 077 [INDICATOR - SW @ 1 miles]

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
410995	5/2/2016 - 5/2/2016	MIXEDBLV	Be-7	2.54E+02	1.36E+02	1.90E+02
			K-40	3.56E+03	6.16E+02	4.20E+02
413393	6/6/2016 - 6/6/2016	MIXEDBLV	Mn-54	<1.87E+01	0.00E+00	1.87E+01
			Co-58	<1.31E+01	0.00E+00	1.31E+01
			Fe-59	<2.99E+01	0.00E+00	2.99E+01
			Co-60	<2.03E+01	0.00E+00	2.03E+01
			Zn-65	<3.83E+01	0.00E+00	3.83E+01
			Zr-95	<2.85E+01	0.00E+00	2.85E+01
			Nb-95	<1.43E+01	0.00E+00	1.43E+01
			I-131	<1.53E+01	0.00E+00	1.53E+01
			Cs-134	<1.85E+01	0.00E+00	1.85E+01
			Cs-137	<1.72E+01	0.00E+00	1.72E+01
			BaLa-140	<2.30E+01	0.00E+00	2.30E+01
			Be-7	6.73E+02	1.67E+02	1.99E+02
			K-40	3.40E+03	4.80E+02	2.61E+02
416445	7/5/2016 - 7/5/2016	MIXEDBLV	Mn-54	<2.37E+01	0.00E+00	2.37E+01
			Co-58	<2.26E+01	0.00E+00	2.26E+01
			Fe-59	<4.55E+01	0.00E+00	4.55E+01
			Co-60	<1.64E+01	0.00E+00	1.64E+01
			Zn-65	<5.79E+01	0.00E+00	5.79E+01
			Zr-95	<4.19E+01	0.00E+00	4.19E+01
			Nb-95	<2.47E+01	0.00E+00	2.47E+01
			I-131	<1.98E+01	0.00E+00	1.98E+01
			Cs-134	<3.06E+01	0.00E+00	3.06E+01
			Cs-137	<1.77E+01	0.00E+00	1.77E+01
			BaLa-140	<2.08E+01	0.00E+00	2.08E+01
			Be-7	5.03E+02	2.21E+02	3.15E+02
			K-40	4.75E+03	7.08E+02	2.85E+02
418318	8/1/2016 - 8/1/2016	MIXEDBLV	Mn-54	<2.42E+01	0.00E+00	2.42E+01
			Co-58	<2.20E+01	0.00E+00	2.20E+01
			Fe-59	<5.00E+01	0.00E+00	5.00E+01
			Co-60	<1.80E+01	0.00E+00	1.80E+01
			Zn-65	<6.12E+01	0.00E+00	6.12E+01
			Zr-95	<5.13E+01	0.00E+00	5.13E+01
			Nb-95	<2.02E+01	0.00E+00	2.02E+01
			I-131	<1.79E+01	0.00E+00	1.79E+01
			Cs-134	<3.67E+01	0.00E+00	3.67E+01
			Cs-137	<2.16E+01	0.00E+00	2.16E+01
			BaLa-140	<2.97E+01	0.00E+00	2.97E+01
			Be-7	8.98E+02	2.50E+02	2.91E+02
			K-40	3.74E+03	6.67E+02	4.73E+02
421475	9/6/2016 - 9/6/2016	MIXEDBLV	Mn-54	<1.28E+01	0.00E+00	1.28E+01
			Co-58	<1.10E+01	0.00E+00	1.10E+01
			Fe-59	<2.02E+01	0.00E+00	2.02E+01
			Co-60	<1.36E+01	0.00E+00	1.36E+01
			Zn-65	<3.02E+01	0.00E+00	3.02E+01
			Zr-95	<2.83E+01	0.00E+00	2.83E+01
			Nb-95	<1.08E+01	0.00E+00	1.08E+01
			I-131	<1.09E+01	0.00E+00	1.09E+01
			Cs-134	<2.27E+01	0.00E+00	2.27E+01
			Cs-137	<1.27E+01	0.00E+00	1.27E+01
			BaLa-140	<1.51E+01	0.00E+00	1.51E+01
			Be-7	2.15E+03	2.55E+02	1.51E+02
			K-40	3.01E+03	3.75E+02	2.10E+02
425490	10/3/2016 - 10/3/2016	MIXEDBLV	Mn-54	<3.37E+01	0.00E+00	3.37E+01
			Co-58	<3.67E+01	0.00E+00	3.67E+01
			Fe-59	<7.59E+01	0.00E+00	7.59E+01
			Co-60	<4.35E+01	0.00E+00	4.35E+01
			Zn-65	<8.53E+01	0.00E+00	8.53E+01



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

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

Sample Point 077 [INDICATOR - SW @ 1 miles]

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
425490	10/3/2016 - 10/3/2016	MIXEDBLV	Zr-95	<7.33E+01	0.00E+00	7.33E+01
			Nb-95	<3.82E+01	0.00E+00	3.82E+01
			I-131	<3.97E+01	0.00E+00	3.97E+01
			Cs-134	<4.65E+01	0.00E+00	4.65E+01
			Cs-137	<4.14E+01	0.00E+00	4.14E+01
			BaLa-140	<4.76E+01	0.00E+00	4.76E+01
			Be-7	2.75E+03	4.90E+02	3.54E+02
			K-40	3.90E+03	7.61E+02	8.38E+01

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
428253	11/7/2016 - 11/7/2016	MIXEDBLV	Mn-54	<2.41E+01	0.00E+00	2.41E+01
			Co-58	<3.22E+01	0.00E+00	3.22E+01
			Fe-59	<6.11E+01	0.00E+00	6.11E+01
			Co-60	<2.53E+01	0.00E+00	2.53E+01
			Zn-65	<5.35E+01	0.00E+00	5.35E+01
			Zr-95	<4.62E+01	0.00E+00	4.62E+01
			Nb-95	<2.81E+01	0.00E+00	2.81E+01
			I-131	<2.76E+01	0.00E+00	2.76E+01
			Cs-134	<2.86E+01	0.00E+00	2.86E+01
			Cs-137	<2.71E+01	0.00E+00	2.71E+01
			BaLa-140	<2.90E+01	0.00E+00	2.90E+01
			Be-7	1.74E+03	3.58E+02	3.36E+02
			K-40	2.74E+03	5.85E+02	3.67E+02

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
430617	12/5/2016 - 12/5/2016	MIXEDBLV	Mn-54	<3.71E+01	0.00E+00	3.71E+01
			Co-58	<3.16E+01	0.00E+00	3.16E+01
			Fe-59	<5.70E+01	0.00E+00	5.70E+01
			Co-60	<3.33E+01	0.00E+00	3.33E+01
			Zn-65	<6.33E+01	0.00E+00	6.33E+01
			Zr-95	<5.97E+01	0.00E+00	5.97E+01
			Nb-95	<3.08E+01	0.00E+00	3.08E+01
			I-131	<2.89E+01	0.00E+00	2.89E+01
			Cs-134	<4.16E+01	0.00E+00	4.16E+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	1.14E+03	3.08E+02	3.20E+02
			K-40	2.65E+03	6.68E+02	6.07E+02

Sample Point 079 [INDICATOR - NE @ 0.56 miles]

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
398993	1/5/2016 - 1/5/2016	MIXEDBLV	Mn-54	<2.04E+01	0.00E+00	2.04E+01
			Co-58	<2.03E+01	0.00E+00	2.03E+01
			Fe-59	<4.86E+01	0.00E+00	4.86E+01
			Co-60	<3.11E+01	0.00E+00	3.11E+01
			Zn-65	<4.08E+01	0.00E+00	4.08E+01
			Zr-95	<3.34E+01	0.00E+00	3.34E+01
			Nb-95	<2.30E+01	0.00E+00	2.30E+01
			I-131	<1.83E+01	0.00E+00	1.83E+01
			Cs-134	<2.84E+01	0.00E+00	2.84E+01
			Cs-137	<1.78E+01	0.00E+00	1.78E+01
			BaLa-140	<2.55E+01	0.00E+00	2.55E+01
			Be-7	3.65E+03	4.80E+02	2.44E+02
			K-40	2.96E+03	5.33E+02	2.31E+02

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
401041	2/1/2016 - 2/1/2016	MIXEDBLV	Mn-54	<2.73E+01	0.00E+00	2.73E+01
			Co-58	<2.10E+01	0.00E+00	2.10E+01
			Fe-59	<5.92E+01	0.00E+00	5.92E+01
			Co-60	<5.21E+00	0.00E+00	5.21E+00
			Zn-65	<4.40E+01	0.00E+00	4.40E+01
			Zr-95	<4.31E+01	0.00E+00	4.31E+01
			Nb-95	<1.94E+01	0.00E+00	1.94E+01
			I-131	<2.80E+01	0.00E+00	2.80E+01
			Cs-134	<2.08E+01	0.00E+00	2.08E+01
			Cs-137	<2.64E+01	0.00E+00	2.64E+01
			BaLa-140	<2.88E+01	0.00E+00	2.88E+01



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

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

Sample Point 079 [INDICATOR - NE @ 0.56 miles]

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
401041	2/1/2016 - 2/1/2016	MIXEDBLV	Be-7	4.30E+03	5.57E+02	2.93E+02
			K-40	3.19E+03	6.10E+02	4.48E+02
404576	3/7/2016 - 3/7/2016	MIXEDBLV	Mn-54	<2.67E+01	0.00E+00	2.67E+01
			Co-58	<1.42E+01	0.00E+00	1.42E+01
			Fe-59	<2.91E+01	0.00E+00	2.91E+01
			Co-60	<2.08E+01	0.00E+00	2.08E+01
			Zn-65	<5.02E+01	0.00E+00	5.02E+01
			Zr-95	<2.90E+01	0.00E+00	2.90E+01
			Nb-95	<1.07E+01	0.00E+00	1.07E+01
			I-131	<2.00E+01	0.00E+00	2.00E+01
			Cs-134	<2.42E+01	0.00E+00	2.42E+01
			Cs-137	<2.09E+01	0.00E+00	2.09E+01
			BaLa-140	<2.14E+01	0.00E+00	2.14E+01
			Be-7	3.52E+03	4.74E+02	2.66E+02
			K-40	3.11E+03	5.58E+02	3.47E+02
407607	4/4/2016 - 4/4/2016	MIXEDBLV	Mn-54	<2.61E+01	0.00E+00	2.61E+01
			Co-58	<1.79E+01	0.00E+00	1.79E+01
			Fe-59	<2.92E+01	0.00E+00	2.92E+01
			Co-60	<1.87E+01	0.00E+00	1.87E+01
			Zn-65	<5.04E+01	0.00E+00	5.04E+01
			Zr-95	<3.10E+01	0.00E+00	3.10E+01
			Nb-95	<1.63E+01	0.00E+00	1.63E+01
			I-131	<1.91E+01	0.00E+00	1.91E+01
			Cs-134	<2.33E+01	0.00E+00	2.33E+01
			Cs-137	<2.18E+01	0.00E+00	2.18E+01
			BaLa-140	<1.71E+01	0.00E+00	1.71E+01
			Be-7	1.09E+03	2.45E+02	2.39E+02
			K-40	4.18E+03	6.53E+02	2.99E+02
410996	5/2/2016 - 5/2/2016	MIXEDBLV	Mn-54	<2.29E+01	0.00E+00	2.29E+01
			Co-58	<2.18E+01	0.00E+00	2.18E+01
			Fe-59	<3.43E+01	0.00E+00	3.43E+01
			Co-60	<2.77E+01	0.00E+00	2.77E+01
			Zn-65	<5.09E+01	0.00E+00	5.09E+01
			Zr-95	<3.05E+01	0.00E+00	3.05E+01
			Nb-95	<2.42E+01	0.00E+00	2.42E+01
			I-131	<1.71E+01	0.00E+00	1.71E+01
			Cs-134	<1.86E+01	0.00E+00	1.86E+01
			Cs-137	<2.13E+01	0.00E+00	2.13E+01
			BaLa-140	<2.55E+01	0.00E+00	2.55E+01
			Be-7	2.31E+02	1.37E+02	1.94E+02
			K-40	3.00E+03	5.62E+02	3.48E+02
413394	6/6/2016 - 6/6/2016	MIXEDBLV	Mn-54	<2.46E+01	0.00E+00	2.46E+01
			Co-58	<2.44E+01	0.00E+00	2.44E+01
			Fe-59	<4.20E+01	0.00E+00	4.20E+01
			Co-60	<3.40E+01	0.00E+00	3.40E+01
			Zn-65	<5.91E+01	0.00E+00	5.91E+01
			Zr-95	<4.44E+01	0.00E+00	4.44E+01
			Nb-95	<2.58E+01	0.00E+00	2.58E+01
			I-131	<2.12E+01	0.00E+00	2.12E+01
			Cs-134	<2.76E+01	0.00E+00	2.76E+01
			Cs-137	<3.12E+01	0.00E+00	3.12E+01
			BaLa-140	<2.14E+01	0.00E+00	2.14E+01
			Be-7	3.42E+02	2.12E+02	3.16E+02
			K-40	3.25E+03	6.14E+02	2.43E+02
416446	7/5/2016 - 7/5/2016	MIXEDBLV	Mn-54	<2.31E+01	0.00E+00	2.31E+01
			Co-58	<2.29E+01	0.00E+00	2.29E+01
			Fe-59	<3.91E+01	0.00E+00	3.91E+01
			Co-60	<2.08E+01	0.00E+00	2.08E+01
			Zn-65	<4.04E+01	0.00E+00	4.04E+01



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

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

Sample Point 079 [INDICATOR - NE @ 0.56 miles]

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
416446	7/5/2016 - 7/5/2016	MIXEDBLV	Zr-95	<3.41E+01	0.00E+00	3.41E+01
			Nb-95	<2.37E+01	0.00E+00	2.37E+01
			I-131	<2.07E+01	0.00E+00	2.07E+01
			Cs-134	<2.70E+01	0.00E+00	2.70E+01
			Cs-137	<1.82E+01	0.00E+00	1.82E+01
			BaLa-140	<2.95E+01	0.00E+00	2.95E+01
			Be-7	1.01E+03	2.40E+02	2.32E+02
			K-40	3.33E+03	6.32E+02	4.81E+02
			418319	8/1/2016 - 8/1/2016	MIXEDBLV	Mn-54
Co-58	<2.62E+01	0.00E+00				2.62E+01
Fe-59	<4.76E+01	0.00E+00				4.76E+01
Co-60	<2.76E+01	0.00E+00				2.76E+01
Zn-65	<5.85E+01	0.00E+00				5.85E+01
Zr-95	<5.03E+01	0.00E+00				5.03E+01
Nb-95	<2.92E+01	0.00E+00				2.92E+01
I-131	<3.03E+01	0.00E+00				3.03E+01
Cs-134	<4.65E+01	0.00E+00				4.65E+01
Cs-137	<3.74E+01	0.00E+00				3.74E+01
BaLa-140	<3.51E+01	0.00E+00				3.51E+01
Be-7	1.36E+03	3.20E+02				3.11E+02
K-40	2.95E+03	6.40E+02				4.44E+02
421476	9/6/2016 - 9/6/2016	MIXEDBLV				Mn-54
			Co-58	<2.21E+01	0.00E+00	2.21E+01
			Fe-59	<4.40E+01	0.00E+00	4.40E+01
			Co-60	<2.36E+01	0.00E+00	2.36E+01
			Zn-65	<4.95E+01	0.00E+00	4.95E+01
			Zr-95	<3.96E+01	0.00E+00	3.96E+01
			Nb-95	<2.12E+01	0.00E+00	2.12E+01
			I-131	<1.77E+01	0.00E+00	1.77E+01
			Cs-134	<2.94E+01	0.00E+00	2.94E+01
			Cs-137	<2.24E+01	0.00E+00	2.24E+01
			BaLa-140	<2.75E+01	0.00E+00	2.75E+01
			Be-7	2.28E+03	3.73E+02	3.05E+02
			K-40	2.05E+03	4.59E+02	3.52E+02
			425491	10/3/2016 - 10/3/2016	MIXEDBLV	Mn-54
Co-58	<3.12E+01	0.00E+00				3.12E+01
Fe-59	<6.21E+01	0.00E+00				6.21E+01
Co-60	<3.30E+01	0.00E+00				3.30E+01
Zn-65	<9.27E+01	0.00E+00				9.27E+01
Zr-95	<6.00E+01	0.00E+00				6.00E+01
Nb-95	<3.90E+01	0.00E+00				3.90E+01
I-131	<2.86E+01	0.00E+00				2.86E+01
Cs-134	<3.74E+01	0.00E+00				3.74E+01
Cs-137	<2.45E+01	0.00E+00				2.45E+01
BaLa-140	<4.73E+01	0.00E+00				4.73E+01
Be-7	9.47E+02	3.07E+02				3.55E+02
K-40	3.03E+03	6.81E+02				3.68E+02
428254	11/7/2016 - 11/7/2016	MIXEDBLV				Mn-54
			Co-58	<3.54E+01	0.00E+00	3.54E+01
			Fe-59	<6.28E+01	0.00E+00	6.28E+01
			Co-60	<3.07E+01	0.00E+00	3.07E+01
			Zn-65	<5.97E+01	0.00E+00	5.97E+01
			Zr-95	<7.21E+01	0.00E+00	7.21E+01
			Nb-95	<3.30E+01	0.00E+00	3.30E+01
			I-131	<2.80E+01	0.00E+00	2.80E+01
			Cs-134	<3.30E+01	0.00E+00	3.30E+01
			Cs-137	<2.49E+01	0.00E+00	2.49E+01
			BaLa-140	<3.50E+01	0.00E+00	3.50E+01
			Be-7	8.68E+02	2.77E+02	3.10E+02
			K-40	3.66E+03	7.73E+02	5.83E+02



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

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

Sample Point 079 [INDICATOR - NE @ 0.56 miles]

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
430618	12/5/2016 - 12/5/2016		Mn-54	<2.19E+01	0.00E+00	2.19E+01
			Co-58	<3.42E+01	0.00E+00	3.42E+01
			Fe-59	<5.85E+01	0.00E+00	5.85E+01
			Co-60	<2.46E+01	0.00E+00	2.46E+01
			Zn-65	<6.51E+01	0.00E+00	6.51E+01
			Zr-95	<5.00E+01	0.00E+00	5.00E+01
			Nb-95	<3.08E+01	0.00E+00	3.08E+01
			I-131	<3.63E+01	0.00E+00	3.63E+01
			Cs-134	<3.56E+01	0.00E+00	3.56E+01
			Cs-137	<4.15E+01	0.00E+00	4.15E+01
			BaLa-140	<4.64E+01	0.00E+00	4.64E+01
			Be-7	1.91E+03	3.78E+02	3.06E+02
			K-40	3.49E+03	6.98E+02	3.99E+02

Sample Point 081 [CONTROL - SE @ 9.33 miles]

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
398994	1/5/2016 - 1/5/2016		Mn-54	<2.70E+01	0.00E+00	2.70E+01
			Co-58	<2.39E+01	0.00E+00	2.39E+01
			Fe-59	<4.91E+01	0.00E+00	4.91E+01
			Co-60	<2.73E+01	0.00E+00	2.73E+01
			Zn-65	<6.06E+01	0.00E+00	6.06E+01
			Zr-95	<5.05E+01	0.00E+00	5.05E+01
			Nb-95	<2.62E+01	0.00E+00	2.62E+01
			I-131	<2.96E+01	0.00E+00	2.96E+01
			Cs-134	<2.92E+01	0.00E+00	2.92E+01
			Cs-137	<2.80E+01	0.00E+00	2.80E+01
			BaLa-140	<2.07E+01	0.00E+00	2.07E+01
			Be-7	1.96E+03	3.69E+02	3.34E+02
			K-40	3.28E+03	5.98E+02	2.46E+02

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
401042	2/1/2016 - 2/1/2016		Mn-54	<2.46E+01	0.00E+00	2.46E+01
			Co-58	<2.62E+01	0.00E+00	2.62E+01
			Fe-59	<4.31E+01	0.00E+00	4.31E+01
			Co-60	<2.35E+01	0.00E+00	2.35E+01
			Zn-65	<6.22E+01	0.00E+00	6.22E+01
			Zr-95	<5.28E+01	0.00E+00	5.28E+01
			Nb-95	<3.22E+01	0.00E+00	3.22E+01
			I-131	<3.00E+01	0.00E+00	3.00E+01
			Cs-134	<4.69E+01	0.00E+00	4.69E+01
			Cs-137	<2.81E+01	0.00E+00	2.81E+01
			BaLa-140	<9.59E+00	0.00E+00	9.59E+00
			Be-7	1.40E+03	3.49E+02	3.75E+02
			K-40	2.92E+03	6.30E+02	4.20E+02

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
404577	3/7/2016 - 3/7/2016		Mn-54	<1.56E+01	0.00E+00	1.56E+01
			Co-58	<1.43E+01	0.00E+00	1.43E+01
			Fe-59	<4.75E+01	0.00E+00	4.75E+01
			Co-60	<2.61E+01	0.00E+00	2.61E+01
			Zn-65	<5.28E+01	0.00E+00	5.28E+01
			Zr-95	<4.14E+01	0.00E+00	4.14E+01
			Nb-95	<2.09E+01	0.00E+00	2.09E+01
			I-131	<1.91E+01	0.00E+00	1.91E+01
			Cs-134	<2.69E+01	0.00E+00	2.69E+01
			Cs-137	<2.17E+01	0.00E+00	2.17E+01
			BaLa-140	<2.51E+01	0.00E+00	2.51E+01
			Be-7	1.64E+03	2.94E+02	2.34E+02
			K-40	2.74E+03	4.92E+02	4.73E+01

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
407608	4/4/2016 - 4/4/2016		Mn-54	<3.07E+01	0.00E+00	3.07E+01
			Co-58	<2.79E+01	0.00E+00	2.79E+01
			Fe-59	<4.84E+01	0.00E+00	4.84E+01
			Co-60	<3.36E+01	0.00E+00	3.36E+01
			Zn-65	<7.79E+01	0.00E+00	7.79E+01
			Zr-95	<4.84E+01	0.00E+00	4.84E+01



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

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

Sample Point 081 [CONTROL - SE @ 9.33 miles]

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
407608	4/4/2016 - 4/4/2016	MIXEDBLV	Nb-95	<2.98E+01	0.00E+00	2.98E+01
			I-131	<2.51E+01	0.00E+00	2.51E+01
			Cs-134	<4.10E+01	0.00E+00	4.10E+01
			Cs-137	<3.33E+01	0.00E+00	3.33E+01
			BaLa-140	<3.72E+01	0.00E+00	3.72E+01
			Be-7	1.31E+03	3.11E+02	2.95E+02
			K-40	5.34E+03	8.54E+02	6.96E+01
410997	5/2/2016 - 5/2/2016	MIXEDBLV	Mn-54	<1.89E+01	0.00E+00	1.89E+01
			Co-58	<1.95E+01	0.00E+00	1.95E+01
			Fe-59	<4.60E+01	0.00E+00	4.60E+01
			Co-60	<1.89E+01	0.00E+00	1.89E+01
			Zn-65	<3.30E+01	0.00E+00	3.30E+01
			Zr-95	<3.74E+01	0.00E+00	3.74E+01
			Nb-95	<1.80E+01	0.00E+00	1.80E+01
			I-131	<1.48E+01	0.00E+00	1.48E+01
			Cs-134	<1.93E+01	0.00E+00	1.93E+01
			Cs-137	<2.24E+01	0.00E+00	2.24E+01
			BaLa-140	<1.49E+01	0.00E+00	1.49E+01
			Be-7	3.85E+02	1.51E+02	1.94E+02
			K-40	2.66E+03	4.67E+02	1.68E+02
413395	6/6/2016 - 6/6/2016	MIXEDBLV	Mn-54	<1.69E+01	0.00E+00	1.69E+01
			Co-58	<1.57E+01	0.00E+00	1.57E+01
			Fe-59	<3.06E+01	0.00E+00	3.06E+01
			Co-60	<1.77E+01	0.00E+00	1.77E+01
			Zn-65	<5.19E+01	0.00E+00	5.19E+01
			Zr-95	<4.12E+01	0.00E+00	4.12E+01
			Nb-95	<2.47E+01	0.00E+00	2.47E+01
			I-131	<1.80E+01	0.00E+00	1.80E+01
			Cs-134	<2.46E+01	0.00E+00	2.46E+01
			Cs-137	<2.68E+01	0.00E+00	2.68E+01
			BaLa-140	<2.55E+01	0.00E+00	2.55E+01
			Be-7	4.50E+02	1.75E+02	2.31E+02
			K-40	3.17E+03	5.53E+02	3.25E+02
416447	7/5/2016 - 7/5/2016	MIXEDBLV	Mn-54	<2.50E+01	0.00E+00	2.50E+01
			Co-58	<2.47E+01	0.00E+00	2.47E+01
			Fe-59	<5.08E+01	0.00E+00	5.08E+01
			Co-60	<2.63E+01	0.00E+00	2.63E+01
			Zn-65	<5.37E+01	0.00E+00	5.37E+01
			Zr-95	<4.07E+01	0.00E+00	4.07E+01
			Nb-95	<2.69E+01	0.00E+00	2.69E+01
			I-131	<1.87E+01	0.00E+00	1.87E+01
			Cs-134	<3.05E+01	0.00E+00	3.05E+01
			Cs-137	<2.73E+01	0.00E+00	2.73E+01
			BaLa-140	<3.02E+01	0.00E+00	3.02E+01
			Be-7	6.53E+02	2.60E+02	3.55E+02
			K-40	3.56E+03	7.41E+02	7.00E+02
418320	8/1/2016 - 8/1/2016	MIXEDBLV	Mn-54	<1.90E+01	0.00E+00	1.90E+01
			Co-58	<1.99E+01	0.00E+00	1.99E+01
			Fe-59	<4.97E+01	0.00E+00	4.97E+01
			Co-60	<2.93E+01	0.00E+00	2.93E+01
			Zn-65	<4.81E+01	0.00E+00	4.81E+01
			Zr-95	<2.84E+01	0.00E+00	2.84E+01
			Nb-95	<2.10E+01	0.00E+00	2.10E+01
			I-131	<1.72E+01	0.00E+00	1.72E+01
			Cs-134	<2.67E+01	0.00E+00	2.67E+01
			Cs-137	<2.82E+01	0.00E+00	2.82E+01
			BaLa-140	<2.84E+01	0.00E+00	2.84E+01
			Be-7	1.34E+03	2.99E+02	3.21E+02
			K-40	4.70E+03	7.09E+02	2.04E+02



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

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

Sample Point 081 [CONTROL - SE @ 9.33 miles]

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
421477	9/6/2016 - 9/6/2016	MIXEDBLV	Mn-54	<2.09E+01	0.00E+00	2.09E+01
			Co-58	<1.98E+01	0.00E+00	1.98E+01
			Fe-59	<5.60E+01	0.00E+00	5.60E+01
			Co-60	<1.29E+01	0.00E+00	1.29E+01
			Zn-65	<2.24E+01	0.00E+00	2.24E+01
			Zr-95	<4.00E+01	0.00E+00	4.00E+01
			Nb-95	<2.57E+01	0.00E+00	2.57E+01
			I-131	<1.89E+01	0.00E+00	1.89E+01
			Cs-134	<2.02E+01	0.00E+00	2.02E+01
			Cs-137	<1.85E+01	0.00E+00	1.85E+01
			BaLa-140	<6.07E+00	0.00E+00	6.07E+00
			Be-7	1.04E+03	2.41E+02	2.43E+02
			K-40	5.25E+03	7.78E+02	4.37E+02

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
425492	10/3/2016 - 10/3/2016	MIXEDBLV	Mn-54	<2.71E+01	0.00E+00	2.71E+01
			Co-58	<1.94E+01	0.00E+00	1.94E+01
			Fe-59	<5.24E+01	0.00E+00	5.24E+01
			Co-60	<2.44E+01	0.00E+00	2.44E+01
			Zn-65	<4.24E+01	0.00E+00	4.24E+01
			Zr-95	<4.15E+01	0.00E+00	4.15E+01
			Nb-95	<2.31E+01	0.00E+00	2.31E+01
			I-131	<2.44E+01	0.00E+00	2.44E+01
			Cs-134	<3.13E+01	0.00E+00	3.13E+01
			Cs-137	<2.44E+01	0.00E+00	2.44E+01
			BaLa-140	<3.15E+01	0.00E+00	3.15E+01
			Be-7	1.22E+03	2.70E+02	2.52E+02
			K-40	5.13E+03	8.58E+02	6.79E+02

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
428255	11/7/2016 - 11/7/2016	MIXEDBLV	Mn-54	<3.61E+01	0.00E+00	3.61E+01
			Co-58	<3.04E+01	0.00E+00	3.04E+01
			Fe-59	<7.82E+01	0.00E+00	7.82E+01
			Co-60	<3.39E+01	0.00E+00	3.39E+01
			Zn-65	<7.19E+01	0.00E+00	7.19E+01
			Zr-95	<7.04E+01	0.00E+00	7.04E+01
			Nb-95	<3.49E+01	0.00E+00	3.49E+01
			I-131	<2.92E+01	0.00E+00	2.92E+01
			Cs-134	<4.05E+01	0.00E+00	4.05E+01
			Cs-137	<3.81E+01	0.00E+00	3.81E+01
			BaLa-140	<3.92E+01	0.00E+00	3.92E+01
			Be-7	1.15E+03	3.64E+02	4.39E+02
			K-40	3.44E+03	7.34E+02	3.61E+02

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
430619	12/5/2016 - 12/5/2016	MIXEDBLV	Mn-54	<3.05E+01	0.00E+00	3.05E+01
			Co-58	<2.13E+01	0.00E+00	2.13E+01
			Fe-59	<4.17E+01	0.00E+00	4.17E+01
			Co-60	<2.38E+01	0.00E+00	2.38E+01
			Zn-65	<6.12E+01	0.00E+00	6.12E+01
			Zr-95	<4.36E+01	0.00E+00	4.36E+01
			Nb-95	<2.07E+01	0.00E+00	2.07E+01
			I-131	<2.84E+01	0.00E+00	2.84E+01
			Cs-134	<3.20E+01	0.00E+00	3.20E+01
			Cs-137	<2.66E+01	0.00E+00	2.66E+01
			BaLa-140	<3.91E+01	0.00E+00	3.91E+01
			Be-7	1.16E+03	3.16E+02	3.77E+02
			K-40	3.61E+03	6.62E+02	3.48E+02

Sample Point 084 [INDICATOR - NNE @ 2.58 miles]

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
398995	1/5/2016 - 1/5/2016	MIXEDBLV	Mn-54	<2.19E+01	0.00E+00	2.19E+01
			Co-58	<1.88E+01	0.00E+00	1.88E+01
			Fe-59	<3.45E+01	0.00E+00	3.45E+01
			Co-60	<3.06E+01	0.00E+00	3.06E+01
			Zn-65	<4.50E+01	0.00E+00	4.50E+01
			Zr-95	<3.26E+01	0.00E+00	3.26E+01



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

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

Sample Point 084 [INDICATOR - NNE @ 2.58 miles]

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
398995	1/5/2016 - 1/5/2016	MIXEDBLV	Nb-95	<2.29E+01	0.00E+00	2.29E+01
			I-131	<2.29E+01	0.00E+00	2.29E+01
			Cs-134	<2.55E+01	0.00E+00	2.55E+01
			Cs-137	<2.02E+01	0.00E+00	2.02E+01
			BaLa-140	<2.96E+01	0.00E+00	2.96E+01
			Be-7	8.12E+03	8.78E+02	2.35E+02
			K-40	3.18E+03	5.50E+02	4.99E+01
401043	2/1/2016 - 2/1/2016	MIXEDBLV	Mn-54	<2.46E+01	0.00E+00	2.46E+01
			Co-58	<2.67E+01	0.00E+00	2.67E+01
			Fe-59	<5.92E+01	0.00E+00	5.92E+01
			Co-60	<2.90E+01	0.00E+00	2.90E+01
			Zn-65	<5.39E+01	0.00E+00	5.39E+01
			Zr-95	<3.89E+01	0.00E+00	3.89E+01
			Nb-95	<2.20E+01	0.00E+00	2.20E+01
			I-131	<2.62E+01	0.00E+00	2.63E+01
			Cs-134	<3.08E+01	0.00E+00	3.08E+01
			Cs-137	<2.47E+01	0.00E+00	2.47E+01
			BaLa-140	<2.68E+01	0.00E+00	2.68E+01
			Be-7	5.50E+03	6.73E+02	2.96E+02
			K-40	3.37E+03	5.95E+02	5.60E+01
			404578	3/7/2016 - 3/7/2016	MIXEDBLV	Mn-54
Co-58	<8.99E+00	0.00E+00				8.99E+00
Fe-59	<1.70E+01	0.00E+00				1.70E+01
Co-60	<1.01E+01	0.00E+00				1.01E+01
Zn-65	<2.31E+01	0.00E+00				2.31E+01
Zr-95	<1.66E+01	0.00E+00				1.66E+01
Nb-95	<1.04E+01	0.00E+00				1.04E+01
I-131	<1.11E+01	0.00E+00				1.11E+01
Cs-134	<1.07E+01	0.00E+00				1.07E+01
Cs-137	<1.07E+01	0.00E+00				1.07E+01
BaLa-140	<1.30E+01	0.00E+00				1.30E+01
Be-7	6.21E+03	6.71E+02				8.81E+01
K-40	3.09E+03	3.44E+02				1.05E+02
407609	4/4/2016 - 4/4/2016	MIXEDBLV				Mn-54
			Co-58	<1.76E+01	0.00E+00	1.76E+01
			Fe-59	<2.36E+01	0.00E+00	2.36E+01
			Co-60	<2.44E+01	0.00E+00	2.44E+01
			Zn-65	<3.99E+01	0.00E+00	3.99E+01
			Zr-95	<3.35E+01	0.00E+00	3.35E+01
			Nb-95	<1.71E+01	0.00E+00	1.71E+01
			I-131	<1.64E+01	0.00E+00	1.64E+01
			Cs-134	<1.87E+01	0.00E+00	1.87E+01
			Cs-137	<2.10E+01	0.00E+00	2.10E+01
			BaLa-140	<1.61E+01	0.00E+00	1.61E+01
			Be-7	2.78E+03	3.89E+02	2.24E+02
			K-40	4.30E+03	6.36E+02	4.42E+01
			410998	5/2/2016 - 5/2/2016	MIXEDBLV	Mn-54
Co-58	<3.00E+01	0.00E+00				3.00E+01
Fe-59	<6.27E+01	0.00E+00				6.27E+01
Co-60	<2.91E+01	0.00E+00				2.91E+01
Zn-65	<5.08E+01	0.00E+00				5.08E+01
Zr-95	<4.30E+01	0.00E+00				4.30E+01
Nb-95	<2.66E+01	0.00E+00				2.66E+01
I-131	<2.55E+01	0.00E+00				2.55E+01
Cs-134	<2.98E+01	0.00E+00				2.98E+01
Cs-137	<3.55E+01	0.00E+00				3.55E+01
BaLa-140	<3.73E+01	0.00E+00				3.73E+01
Be-7	<2.89E+02	0.00E+00				2.89E+02
K-40	2.97E+03	6.56E+02				5.48E+02



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

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

Sample Point 084 [INDICATOR - NNE @ 2.58 miles]

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
413396	6/6/2016 - 6/6/2016	MIXEDBLV	Mn-54	<3.33E+01	0.00E+00	3.33E+01
			Co-58	<2.67E+01	0.00E+00	2.67E+01
			Fe-59	<6.08E+01	0.00E+00	6.08E+01
			Co-60	<2.58E+01	0.00E+00	2.58E+01
			Zn-65	<6.83E+01	0.00E+00	6.83E+01
			Zr-95	<5.47E+01	0.00E+00	5.47E+01
			Nb-95	<3.56E+01	0.00E+00	3.56E+01
			I-131	<2.61E+01	0.00E+00	2.61E+01
			Cs-134	<3.03E+01	0.00E+00	3.03E+01
			Cs-137	<3.09E+01	0.00E+00	3.09E+01
			BaLa-140	<9.68E+00	0.00E+00	9.68E+00
			Be-7	1.38E+03	3.42E+02	3.49E+02
			K-40	3.34E+03	7.10E+02	4.85E+02
			416448	7/5/2016 - 7/5/2016	MIXEDBLV	Mn-54
Co-58	<2.79E+01	0.00E+00				2.79E+01
Fe-59	<5.50E+01	0.00E+00				5.50E+01
Co-60	<2.45E+01	0.00E+00				2.45E+01
Zn-65	<3.83E+01	0.00E+00				3.83E+01
Zr-95	<4.01E+01	0.00E+00				4.01E+01
Nb-95	<2.60E+01	0.00E+00				2.60E+01
I-131	<1.95E+01	0.00E+00				1.95E+01
Cs-134	<2.63E+01	0.00E+00				2.63E+01
Cs-137	<3.06E+01	0.00E+00				3.06E+01
BaLa-140	<2.80E+01	0.00E+00				2.80E+01
Be-7	1.04E+03	2.36E+02				1.97E+02
K-40	3.13E+03	5.65E+02				5.55E+01
418321	8/1/2016 - 8/1/2016	MIXEDBLV				Mn-54
			Co-58	<2.52E+01	0.00E+00	2.52E+01
			Fe-59	<4.75E+01	0.00E+00	4.75E+01
			Co-60	<3.08E+01	0.00E+00	3.08E+01
			Zn-65	<7.94E+01	0.00E+00	7.94E+01
			Zr-95	<3.60E+01	0.00E+00	3.60E+01
			Nb-95	<2.66E+01	0.00E+00	2.66E+01
			I-131	<2.46E+01	0.00E+00	2.46E+01
			Cs-134	<3.84E+01	0.00E+00	3.84E+01
			Cs-137	<3.22E+01	0.00E+00	3.22E+01
			BaLa-140	<2.79E+01	0.00E+00	2.79E+01
			Be-7	7.52E+02	2.31E+02	2.55E+02
			K-40	1.67E+03	5.07E+02	5.33E+02
			421478	9/6/2016 - 9/6/2016	MIXEDBLV	Mn-54
Co-58	<3.03E+01	0.00E+00				3.03E+01
Fe-59	<3.80E+01	0.00E+00				3.80E+01
Co-60	<3.22E+01	0.00E+00				3.22E+01
Zn-65	<5.61E+01	0.00E+00				5.61E+01
Zr-95	<4.48E+01	0.00E+00				4.48E+01
Nb-95	<2.82E+01	0.00E+00				2.82E+01
I-131	<2.59E+01	0.00E+00				2.59E+01
Cs-134	<3.86E+01	0.00E+00				3.86E+01
Cs-137	<3.16E+01	0.00E+00				3.16E+01
BaLa-140	<4.11E+01	0.00E+00				4.11E+01
Be-7	1.87E+03	3.71E+02				3.52E+02
K-40	3.30E+03	6.38E+02				3.74E+02
425493	10/3/2016 - 10/3/2016	MIXEDBLV				Mn-54
			Co-58	<2.09E+01	0.00E+00	2.09E+01
			Fe-59	<4.02E+01	0.00E+00	4.02E+01
			Co-60	<1.91E+01	0.00E+00	1.91E+01
			Zn-65	<4.21E+01	0.00E+00	4.21E+01
			Zr-95	<3.84E+01	0.00E+00	3.84E+01
			Nb-95	<2.14E+01	0.00E+00	2.14E+01
			I-131	<3.17E+01	0.00E+00	3.17E+01



OCONEE Radiological Environmental Monitoring Analysis Report - 2016 (Appendix E)

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

Sample Point 084 [INDICATOR - NNE @ 2.58 miles]

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
425493	10/3/2016 - 10/3/2016	MIXEDBLV	Cs-134	<2.67E+01	0.00E+00	2.67E+01
			Cs-137	<2.23E+01	0.00E+00	2.23E+01
			BaLa-140	<2.52E+01	0.00E+00	2.52E+01
			Be-7	1.81E+03	2.44E+02	1.81E+02
			K-40	3.49E+03	4.86E+02	2.86E+02
428256	11/7/2016 - 11/7/2016	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
			Mn-54	<3.40E+01	0.00E+00	3.40E+01
			Co-58	<3.39E+01	0.00E+00	3.39E+01
			Fe-59	<8.33E+01	0.00E+00	8.33E+01
			Co-60	<3.51E+01	0.00E+00	3.51E+01
			Zn-65	<9.28E+01	0.00E+00	9.28E+01
			Zr-95	<5.87E+01	0.00E+00	5.87E+01
			Nb-95	<4.37E+01	0.00E+00	4.37E+01
			I-131	<4.13E+01	0.00E+00	4.13E+01
			Cs-134	<4.62E+01	0.00E+00	4.62E+01
			Cs-137	<5.78E+01	0.00E+00	5.78E+01
			BaLa-140	<6.61E+01	0.00E+00	6.61E+01
			Be-7	9.36E+02	3.62E+02	4.58E+02
			K-40	2.62E+03	6.65E+02	1.03E+02
			430620	12/5/2016 - 12/5/2016	MIXEDBLV	Nuclide
Mn-54	<2.59E+01	0.00E+00				2.59E+01
Co-58	<2.09E+01	0.00E+00				2.09E+01
Fe-59	<3.16E+01	0.00E+00				3.16E+01
Co-60	<2.85E+01	0.00E+00				2.85E+01
Zn-65	<4.54E+01	0.00E+00				4.55E+01
Zr-95	<3.86E+01	0.00E+00				3.86E+01
Nb-95	<1.89E+01	0.00E+00				1.89E+01
I-131	<2.78E+01	0.00E+00				2.78E+01
Cs-134	<2.51E+01	0.00E+00				2.51E+01
Cs-137	<2.51E+01	0.00E+00				2.51E+01
BaLa-140	<2.15E+01	0.00E+00				2.15E+01
Be-7	3.11E+03	4.60E+02				2.68E+02
K-40	2.52E+03	5.30E+02				2.80E+02



APPENDIX F

ERRATA TO
PREVIOUS REPORTS

APPENDIX F

ERRATA TO THE 2016 AREOR

Oconee AREOR: 2008

During a 2016 NOS audit, it was identified that some samples processed by the EnRad laboratory using the APEX gamma counting geometry 025LMAR310 did not have the required a priori lower limit of detection (LLD) calculated prior to performing the analysis. An a posteriori LLD was calculated and all required lower limit of detections were satisfied (NCR # 02021801). The failure to calculate the a priori LLD prior to performing the analysis is an Analytical Deviation.

EnRad performed an extent of condition to assess which samples had been processed using the 025LMAR310 geometry. The Sample Manager database was evaluated for any references to the 025LMAR310 geometry and its various alternate historical names. Oconee broadleaf vegetation indicator location 084 was determined to have been impacted (NCR # 02042799). Oconee broadleaf vegetation indicator location was located in the NNE sector at 2.58 miles (Sue Craig Road). The impacted sample was assigned Sample Manager ID # 93197 (Lab Manager LM3_28001026) for collection period 3MAR2008. Gamma analysis results and the a posteriori LLDs were reviewed and the analysis was determined valid.

The a posteriori LLD satisfied the requirements of Oconee Selected Licensee Commitments (SLC) 16.11 RADIOLOGICAL EFFLUENTS CONTROLS, 16.11.6 Radiological Environmental Monitoring, Table 16.11.6-2 (Maximum values for the Lower Limits of Detection (LLD)). While the a priori lower limits of detection (LLD) were not calculated prior to performing the analysis, all analytical results for this sample were valid. There were no collection discrepancies identified with this sample.

Oconee AREOR: 2014, 2015

During a 2016 Dosimetry Laboratory peer assessment, it was discovered the 2014 and 2015 (all quarters) internal environmental TLD crosschecks were not completed in accordance with procedure RD/0/B/4000/13, Environmental Monitoring (NCR # 02073609). Environmental monitoring is not National Voluntary Laboratory Accreditation Program (NVLAP) accredited, but the internal crosscheck data was reported to the NRC in the 2014 and 2015 AREORs. External environmental TLD crosschecks were performed during 2014 and 2015 in accordance with procedure RD/0/B/4000/13, Environmental Monitoring, therefore environmental TLD QA/QC was performed.

Laboratory TLD data supporting the 2014 and 2015 internal environmental TLD crosscheck result tables could not be located during the 2016 assessment. The internal environmental crosscheck (Duke Energy) table indicated in the quality assurance section of the 2014 and

2015 reports is therefore not considered acceptable and is removed from the 2014 and 2015 reports. The internal environmental TLD crosscheck data were not presented in the 2016 AREOR and were removed from the quality assurance section in entirety.

Oconee AREOR: 2015

During a 2016 NRC audit, it was determined the ISCO water sampling device at drinking water location 066 (Anderson Municipal Water Supply) operated one day beyond the calibration due date (NCR # 02036714). The calibration due date for the ISCO water sampler (EnRad ID # 00278) located and operating at Oconee REMP drinking water location 066 on 5/28/2015 was 5/27/2015. The ISCO sampler was not calibrated until 5/28/2015, therefore the ISCO sampler was out of calibration for one day during the collection period of 5/26/2015 to 6/22/2015. Location 066 is an indicator drinking water location and is located in the SSE sector at 18.9 miles.

Oconee AREOR: 2015

The 2015 appendix E “Radiological Environmental Monitoring Program Results” summary did not display the gross beta test component (Nuclide) for sample number 384918 in the 2015 report execution. The result was from drinking water location 064 (SSW sector at 6.67 miles (Seneca Drinking Water)) for monitoring period 7/20/2015 – 8/17/2015. The gross beta result for sample number 387918 was determined present in the database. Sample number 387918 gross beta result 9.31E-01 +/- 7.07E-01 pCi/l was included in the 2015 Appendix B “Radiological Environmental Monitoring Program Data Summary” and was included as one of the thirteen 2015 drinking water control location gross beta test results indicated. The amended 2015 report for sample 387918 is indicated below.

OCONEE Radiological Environmental Monitoring Analysis Report - 2015 (Appendix E)					
Media Type: DRINKING WATER Concentration (Activity): pCi/l					
Sample Point 064 [CONTROL - SSW @ 6.67 miles]					
Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
384918	7/20/2015 - 8/17/2015	Beta	9.31E-01	7.07E-01	1.16E+00
		Mn-54	<2.46E+00	0.00E+00	2.46E+00
		Co-58	<2.76E+00	0.00E+00	2.76E+00
		Fe-59	<5.81E+00	0.00E+00	5.81E+00
		Co-60	<2.73E+00	0.00E+00	2.73E+00
		Zn-65	<5.59E+00	0.00E+00	5.59E+00
		Zr-95	<5.08E+00	0.00E+00	5.08E+00
		Nb-95	<2.75E+00	0.00E+00	2.75E+00
		I-131	<1.13E+01	0.00E+00	1.13E+01
		Cs-134	<2.82E+00	0.00E+00	2.82E+00
		Cs-137	<2.94E+00	0.00E+00	2.94E+00
		BaLa-140	<8.14E+00	0.00E+00	8.14E+00
		Be-7	<2.69E+01	0.00E+00	2.69E+01
		K-40	1.06E+01	1.97E+01	3.40E+01