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U.S. Nuclear Regulatory Commission
Document Control Desk
Washington, D.C. 20555

Subject: Duke Energy Carolinas, LLC
Oconee Nuclear Station,
Docket Nos. 50-269, 50-270 and 50-287
2014 Annual Radioactive Effluent Release Report (ARERR)

Pursuant to Oconee Nuclear Station Technical Specification (TS) 5.6.3 and Selected Licensee Commitment 16.11-9, please find attached the Annual Radioactive Effluent Release Report for the period of January 1, 2014 through December 31, 2014. In accordance with TS 5.5.1, the Offsite Dose Calculation Manual (ODCM) is included in this submittal.

Attachment 1	Summary of Gaseous and Liquid Effluents Report
Attachment 2	Supplemental Information to the Gaseous and Liquid Effluents Report
Attachment 3	Solid Radioactive Waste Disposal Report
Attachment 4	Meteorological Data
Attachment 5	Unplanned Offsite Releases
Attachment 6	Assessment of Radiation Dose from Radioactive Effluents to Members of the Public (includes fuel cycle dose calculation results)
Attachment 7	Revisions to the Oconee UFSAR Section 16.11 Radiological Effluent Controls
Attachment 8	Revisions to the Radioactive Waste Process Control Program Manual (Compact Disc)
Attachment 9	Information to Support the NEI Groundwater Protection Initiative
Attachment 10	Inoperable Equipment
Attachment 11	Radioactive Waste Systems Changes

A009
IE48
NRR

Enclosure 2014 Offsite Dose Calculation Manual (Compact Disc)

Any questions concerning this report should be directed to Judy Smith at 864-873-4309.

Sincerely,

Scott Batson
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Oconee Nuclear Station

Attachments (11)
Enclosure (1)

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Attachment 1

Summary of Gaseous and Liquid Effluents Report

This attachment includes a summary of the quantities of radioactive liquid and gaseous effluents as outlined in Regulatory Guide 1.21, Revision 1, Appendix B.

(9 pages, including this cover sheet)

TABLE 1A

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT
PERIOD 1/1/14 TO 1/1/15
GASEOUS EFFLUENTS - SUMMATION OF ALL RELEASES

Oconee Nuclear Station Units 1, 2, & 3

REPORT FOR 2014	Units	QTR 1	QTR 2	QTR 3	QTR 4	YEAR
A. Fission and Activation Gases						
1. Total Release	Ci	6.11E+00	2.27E+00	1.00E+01	2.36E+01	4.20E+01
2. Avg. Release Rate	uCi/sec	7.86E-01	2.89E-02	1.26E+00	2.96E+00	1.33E+00
B. Iodine-131						
1. Total Release	Ci	0.00E+00	1.20E-07	0.00E+00	4.90E-06	5.02E-06
2. Avg. Release Rate	uCi/sec	0.00E+00	1.53E-08	0.00E+00	6.17E-07	1.59E-07
C. Particulates Half Life >= 8 days						
1. Total Release	Ci	9.49E-07	0.00E+00	0.00E+00	9.33E-12	9.49E-07
2. Avg. Release Rate	uCi/sec	1.22E-07	0.00E+00	0.00E+00	1.17E-12	3.01E-08
D. Tritium						
1. Total Release	Ci	3.12E+01	3.04E+01	6.04E+01	7.13E+01	1.93E+02
2. Avg. Release Rate	uCi/sec	4.01E+00	3.86E+00	7.60E+00	8.97E+00	6.13E+00
E. Carbon-14						
1. Total Release	Ci	6.06E+00	5.38E+00	6.07E+00	5.23E+00	2.27E+01
2. Avg. Release Rate	uCi/sec	7.80E-01	6.85E-01	7.64E-01	6.58E-01	7.21E-01
F. Gross Alpha Radioactivity						
1. Total Release	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2. Avg. Release Rate	uCi/sec	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

TABLE 1B

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT
PERIOD 1/1/14 TO 1/1/15
GASEOUS EFFLUENTS - ELEVATED RELEASES - CONTINUOUS MODE

Oconee Nuclear Station Units 1, 2, & 3

REPORT FOR 2014	Units	QTR 1	QTR 2	QTR 3	QTR 4	YEAR
1. Fission and Activation Gases						
XE-133	Ci	6.10E+00	2.11E+00	9.96E+00	2.34E+01	4.16E+01
2. Iodines						
I-131	Ci	0.00E+00	0.00E+00	0.00E+00	4.90E-06	4.90E-06
3. Particulates Half Life >= 8 days						
** No Nuclide Activities **		.....	.....	.....	.....	.....
4. Tritium						
H-3	Ci	3.06E+01	2.35E+01	5.72E+01	6.99E+01	1.81E+02
5. Carbon-14						
C-14	Ci	1.82E+00	1.61E+00	1.82E+00	1.57E+00	6.81E+00
6. Gross Alpha Radioactivity						
** No Nuclide Activities **		.....	.....	.....	.....	.....

TABLE 1B

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT
PERIOD 1/1/14 TO 1/1/15
GASEOUS EFFLUENTS - ELEVATED RELEASES - BATCH MODE

Oconee Nuclear Station Units 1, 2, & 3

REPORT FOR 2014	Units	QTR 1	QTR 2	QTR 3	QTR 4	YEAR
1. Fission and Activation Gases						
AR-41	Ci	4.70E-06	2.14E-02	2.67E-02	1.51E-02	6.33E-02
KR-85	Ci	3.41E-03	3.10E-03	1.10E-02	5.22E-03	2.27E-02
KR-85M	Ci	3.09E-06	0.00E+00	0.00E+00	3.45E-05	3.76E-05
XE-131M	Ci	1.00E-04	3.66E-05	9.01E-05	6.81E-04	9.08E-04
XE-133	Ci	1.17E-02	1.30E-01	2.92E-02	1.03E-01	2.74E-01
XE-133M	Ci	2.40E-04	6.29E-06	3.45E-04	1.72E-03	2.31E-03
XE-135	Ci	7.53E-04	2.43E-03	3.90E-04	6.10E-03	9.68E-03
Totals for Period...	Ci	1.62E-02	1.57E-01	6.78E-02	1.32E-01	3.73E-01
2. Iodines						
I-131	Ci	0.00E+00	1.20E-07	0.00E+00	0.00E+00	1.20E-07
I-133	Ci	2.43E-10	0.00E+00	0.00E+00	0.00E+00	2.43E-10
Totals for Period...	Ci	2.43E-10	1.20E-07	0.00E+00	0.00E+00	1.20E-07
3. Particulates Half Life >= 8 days						
CO-58	Ci	0.00E+00	0.00E+00	0.00E+00	9.33E-12	9.33E-12
4. Tritium						
H-3	Ci	3.60E-05	8.49E-02	5.87E-02	6.99E-02	2.13E-01
5. Carbon-14						
C-14	Ci	4.24E+00	3.77E+00	4.25E+00	3.66E+00	1.59E+01
6. Gross Alpha Radioactivity						
** No Nuclide Activities **		.....	.....	.....	.....	.....
7. Others						
C-11	Ci	1.48E-08	0.00E+00	0.00E+00	0.00E+00	1.48E-08

TABLE 1C

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT
PERIOD 1/1/14 TO 1/1/15
GASEOUS EFFLUENTS - GROUND RELEASES - CONTINUOUS MODE

Oconee Nuclear Station Units 1, 2, & 3

REPORT FOR 2014	Units	QTR 1	QTR 2	QTR 3	QTR 4	YEAR
1. Fission and Activation Gases						
** No Nuclide Activities **	.....	.....	.....	.....	.....	.....
2. Iodines						
** No Nuclide Activities **	.....	.....	.....	.....	.....	.....
3. Particulates Half Life >= 8 days						
CS-137	Ci	9.49E-07	0.00E+00	0.00E+00	0.00E+00	9.49E-07
4. Tritium						
H-3	Ci	5.24E-01	6.79E+00	3.18E+00	1.26E+00	1.18E+01
5. Carbon-14						
** No Nuclide Activities **	.....	.....	.....	.....	.....	.....
6. Gross Alpha Radioactivity						
** No Nuclide Activities **	.....	.....	.....	.....	.....	.....

TABLE 1C

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT
PERIOD 1/1/14 TO 1/1/15
GASEOUS EFFLUENTS - GROUND RELEASES - BATCH MODE

Oconee Nuclear Station Units 1, 2, & 3

REPORT FOR 2014	Units	QTR 1	QTR 2	QTR 3	QTR 4	YEAR
1. Fission and Activation Gases						
** No Nuclide Activities **		.....	.....	.....	.....	.....
2. Iodines						
** No Nuclide Activities **		.....	.....	.....	.....	.....
3. Particulates Half Life >= 8 days						
** No Nuclide Activities **		.....	.....	.....	.....	.....
4. Tritium						
H-3	Ci	0.00E+00	4.54E-05	0.00E+00	1.12E-01	1.12E-01
5. Carbon-14						
** No Nuclide Activities **		.....	.....	.....	.....	.....
6. Gross Alpha Radioactivity						
** No Nuclide Activities **		.....	.....	.....	.....	.....

TABLE 2A

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT
PERIOD 1/1/14 TO 1/1/15
LIQUID EFFLUENTS - SUMMATION OF ALL RELEASES

Oconee Nuclear Station Units 1, 2, & 3

REPORT FOR 2014	Unit	QTR 1	QTR 2	QTR 3	QTR 4	YEAR
A. Fission and Activation Products						
1. Total Release	Ci	3.74E-03	2.05E-03	1.56E-03	1.77E-03	9.12E-03
2. Average Diluted Concentration						
a. Continuous Releases	µCi/ml	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
b. Batch Releases	µCi/ml	4.47E-10	2.43E-10	1.82E-10	2.07E-10	2.69E-10
B. Tritium						
1. Total Release	Ci	2.07E+02	1.95E+02	9.74E+01	3.76E+02	8.75E+02
2. Average Diluted Concentration						
a. Continuous Releases	µCi/ml	2.77E-08	2.08E-08	3.68E-08	3.84E-08	3.09E-08
b. Batch Releases	µCi/ml	2.47E-05	2.31E-05	1.13E-05	4.39E-05	2.58E-05
C. Dissolved and Entrained Gases						
1. Total Release	Ci	0.00E+00	0.00E+00	0.00E+00	2.24E-05	2.24E-05
2. Average Diluted Concentration						
a. Continuous Releases	µCi/ml	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
b. Batch Releases	µCi/ml	0.00E+00	0.00E+00	0.00E+00	2.62E-12	6.61E-13
D. Gross Alpha Radioactivity						
1. Total Release	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2. Average Diluted Concentration						
a. Continuous Releases	µCi/ml	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
b. Batch Releases	µCi/ml	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E. Volume of Liquid Waste						
1. Continuous Releases	liters	7.41E+08	6.70E+08	5.47E+08	7.31E+08	2.69E+09
2. Batch Releases	liters	1.36E+06	2.44E+06	7.95E+05	3.55E+06	8.15E+06
F. Volume of Dilution Water						
1. Continuous Releases	liters	8.37E+09	8.44E+09	8.55E+09	8.55E+09	3.39E+10
2. Batch Releases	liters	8.37E+09	8.44E+09	8.55E+09	8.55E+09	3.39E+10

TABLE 2B

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT
PERIOD 1/1/14 TO 1/1/15
LIQUID EFFLUENTS - CONTINUOUS MODE

Oconee Nuclear Station Units 1, 2, & 3

REPORT FOR 2014	Unit	QTR 1	QTR 2	QTR 3	QTR 4	YEAR
1. Fission and Activation Products						
** No Nuclide Activities **		.....	.....	.....	.....	.....
2. Tritium						
H-3	Ci	2.52E-01	1.89E-01	3.35E-01	3.56E-01	1.13E+00
3. Dissolved and Entrained Gases						
** No Nuclide Activities **		.....	.....	.....	.....	.....
4. Gross Alpha Radioactivity						
** No Nuclide Activities **		.....	.....	.....	.....	.....

TABLE 2B

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT
PERIOD 1/1/14 TO 1/1/15
LIQUID EFFLUENTS - BATCH MODE

Oconee Nuclear Station Units 1, 2, & 3

REPORT FOR 2014	Units	QTR 1	QTR 2	QTR 3	QTR 4	YEAR
1. Fission and Activation Products						
AG-108M	Ci	0.00E+00	3.09E-06	0.00E+00	0.00E+00	3.09E-06
AG-110M	Ci	8.86E-05	0.00E+00	0.00E+00	9.04E-06	9.76E-05
CO-58	Ci	1.94E-03	1.23E-03	8.33E-04	6.34E-04	4.63E-03
CO-60	Ci	2.08E-04	7.34E-05	3.38E-05	9.09E-05	4.06E-04
CR-51	Ci	0.00E+00	1.92E-04	0.00E+00	0.00E+00	1.92E-04
CS-134	Ci	0.00E+00	0.00E+00	7.27E-06	0.00E+00	7.27E-06
CS-137	Ci	4.05E-05	5.84E-06	1.23E-04	1.33E-04	3.02E-04
FE-55	Ci	3.42E-04	0.00E+00	0.00E+00	0.00E+00	3.42E-04
FE-59	Ci	1.48E-05	0.00E+00	0.00E+00	0.00E+00	1.48E-05
I-131	Ci	0.00E+00	0.00E+00	0.00E+00	5.09E-06	5.09E-06
MN-54	Ci	4.36E-05	0.00E+00	0.00E+00	0.00E+00	4.36E-05
NB-95	Ci	1.35E-05	1.21E-05	0.00E+00	0.00E+00	2.56E-05
NB-97	Ci	0.00E+00	0.00E+00	0.00E+00	8.91E-06	8.91E-06
NI-63	Ci	2.47E-04	2.54E-04	5.40E-04	8.28E-04	1.87E-03
RU-103	Ci	3.52E-06	0.00E+00	0.00E+00	0.00E+00	3.52E-06
SB-124	Ci	5.06E-04	1.77E-04	0.00E+00	1.62E-05	7.00E-04
SB-125	Ci	2.77E-04	9.33E-05	2.29E-05	3.55E-05	4.29E-04
SN-113	Ci	0.00E+00	2.88E-06	0.00E+00	0.00E+00	2.88E-06
ZR-95	Ci	1.43E-05	8.10E-06	0.00E+00	0.00E+00	2.24E-05
ZR-97	Ci	0.00E+00	0.00E+00	0.00E+00	8.91E-06	8.91E-06
Totals for Period...	Ci	3.74E-03	2.05E-03	1.56E-03	1.77E-03	9.12E-03
2. Tritium						
H-3	Ci	2.07E+02	1.95E+02	9.71E+01	3.76E+02	8.74E+02
3. Dissolved and Entrained Gases						
XE-135	Ci	0.00E+00	0.00E+00	0.00E+00	2.24E-05	2.24E-05
4. Gross Alpha Radioactivity						
** No Nuclide Activities **		.....	.....	.....	.....	.....

Attachment 2

Supplemental Information

to the

Gaseous and Liquid Effluents Report

(5 pages, including this cover sheet)

Oconee 2014 ARERR - Carbon-14 Supplemental Information

Carbon-14 (C-14), with a half-life of 5730 years, is a naturally occurring isotope of carbon produced by cosmic ray interactions in the atmosphere. Nuclear weapons testing in the 1950s and 1960s significantly increased the amount of C-14 in the atmosphere. C-14 is also produced in commercial nuclear reactors, but the amounts produced are much less than those produced naturally or from weapons testing.

In Regulatory Guide 1.21, Revision 2, "Measuring, Evaluating, and Reporting Radioactive Material in Liquid and Gaseous Effluents and Solid Waste", the NRC recommends U.S. nuclear power plants evaluate whether C-14 is a "principal radionuclide", and if so, report the amount of C-14 released. At Oconee, improvements over the years in effluent management practices and fuel performance have resulted in a decrease in gaseous radionuclide (non-C-14) concentrations, and a change in the distribution of gaseous radionuclides released to the environment. As a result, C-14 has become a "principal radionuclide" for the gaseous effluent pathway at Oconee, as defined in Regulatory Guide 1.21, Rev. 2. Oconee's 2014 Annual Radioactive Effluent Release Report (ARERR) contains estimates of C-14 radioactivity released in 2014, and estimates of public dose resulting from the C-14 effluent.

Because the dose contribution of C-14 from liquid radioactive waste is much less than that contributed by gaseous radioactive waste, evaluation of C-14 in liquid radioactive waste at Oconee is not required (Ref. Reg. Guide 1.21, Rev. 2). The quantity of gaseous C-14 released to the environment can be estimated by use of a C-14 source term scaling factor based on power generation (Ref. Reg. Guide 1.21, Rev. 2). Many documents provide information related to the magnitude of C-14 in typical effluents from commercial nuclear power plants. Those documents suggest that nominal annual releases of C-14 in gaseous effluents are approximately 5 to 7.3 curies from PWRs (Ref. Reg. Guide 1.21, Rev. 2). A more recent study recommends a higher C-14 gaseous source term scaling factor of approximately 9.0 to 9.8 Ci/GWe-yr for a Westinghouse PWR and 10.4 to 11.3 for a CE PWR (Ref. EPRI 1021106). The EPRI report did not provide a source term scaling factor for a B&W PWR, but for the 2014 Oconee ARERR a source term scaling factor of 9.4 Ci/GWe-yr is assumed in order to be consistent with the scaling factor used for the Catawba and McGuire ARERRs. Using a source term scaling factor of 9.4 Ci/GWe-yr and actual electric generation (MWe-hrs) from Oconee in 2014 results in a site total C-14 gaseous release estimate to the environment of ~22 Curies. 70% of the C-14 gaseous effluent is assumed to be from batch releases (e.g. WGDTs), and 30% of C-14 gaseous effluent is assumed to be from continuous releases through the unit vents (ref. IAEA Technical Reports Series no. 421, "Management of Waste Containing Tritium and Carbon-14", 2004).

C-14 releases in PWRs occur primarily as a mix of organic carbon and carbon dioxide released from the waste gas system. Since the PWR operates with a reducing chemistry, most, if not all, of the C-14 species initially produced are organic (e.g., methane). As a general rule, C-14 in the primary coolant is essentially all organic with a large fraction as a gaseous species. Any time the RCS liquid or gas is exposed to an oxidizing environment (e.g. during shutdown or refueling), a slow transformation from an organic to an inorganic chemical form can occur. Various studies documenting measured C-14 releases from PWRs suggest a range of 70% to 95% organic with an average of 80% organic with the remainder being CO_2 (Ref. EPRI TR-105715). For the Oconee 2014 ARERR a value of 80% organic C-14 is assumed.

Public dose estimates from airborne C-14 are performed using dose models in NUREG-0133 and Regulatory Guide 1.109. The dose models and assumptions used are documented in the Oconee ODCM. The estimated C-14 dose impact on the maximum organ dose from airborne effluents released from Oconee in 2014 is well below the 10CFR50, Appendix I, ALARA design objective (i.e., 15 mrem/yr per unit).

OCONEE NUCLEAR STATION

2014 EFFLUENT AND WASTE DISPOSAL SUPPLEMENTAL INFORMATION

I. REGULATORY LIMITS - STATION

A. NOBLE GASES - AIR DOSE
1. CALENDAR QUARTER - GAMMA DOSE = 15 MRAD
2. CALENDAR QUARTER - BETA DOSE = 30 MRAD
3. CALENDAR YEAR - GAMMA DOSE = 30 MRAD
4. CALENDAR YEAR - BETA DOSE = 60 MRAD

B. LIQUID EFFLUENTS - DOSE
1. CALENDAR QUARTER - TOTAL BODY DOSE = 4.5 MREM
2. CALENDAR QUARTER - ORGAN DOSE = 15 MREM
3. CALENDAR YEAR - TOTAL BODY DOSE = 9 MREM
4. CALENDAR YEAR - ORGAN DOSE = 30 MREM

C. IODINE - 131 AND 133, TRITIUM, PARTICULATES W/T 1/2 > 8 DAYS - ORGAN DOSE
1. CALENDAR QUARTER = 22.5 MREM
2. CALENDAR YEAR = 45 MREM

II. MAXIMUM PERMISSIBLE EFFLUENT CONCENTRATIONS

A. GASEOUS EFFLUENTS - INFORMATION FOUND IN OFFSITE DOSE CALCULATION MANUAL
B. LIQUID EFFLUENTS - INFORMATION FOUND IN 10CFR20, APPENDIX B, TABLE 2, COLUMN 2

III. AVERAGE ENERGY - NOT APPLICABLE

IV. MEASUREMENTS AND APPROXIMATIONS OF TOTAL RADIOACTIVITY

ANALYSES OF SPECIFIC RADIONUCLIDES IN SELECTED OR COMPOSITED SAMPLES AS DESCRIBED IN THE SELECTED LICENSEE COMMITMENTS ARE USED TO DETERMINE THE RADIONUCLIDE COMPOSITION OF THE EFFLUENT. A SUMMARY DESCRIPTION OF THE METHOD USED FOR ESTIMATING OVERALL ERRORS ASSOCIATED WITH RADIOACTIVITY MEASUREMENTS IS PROVIDED AS PART OF THE "SUPPLEMENTAL INFORMATION" ATTACHMENT.

V. BATCH RELEASES

A. LIQUID EFFLUENT
1. 9.40E+01 = TOTAL NUMBER OF BATCH RELEASES
2. 1.91E+04 = TOTAL TIME (MIN.) FOR BATCH RELEASES.
3. 2.35E+02 = MAXIMUM TIME (MIN.) FOR A BATCH RELEASE.
4. 2.03E+02 = AVERAGE TIME (MIN.) FOR A BATCH RELEASE.
5. 1.14E+02 = MINIMUM TIME (MIN.) FOR A BATCH RELEASE.
6. 1.70E+04 = AVERAGE DILUTION WATER FLOW DURING RELEASES (GPM).

B. GASEOUS EFFLUENT
1. 7.10E+01 = TOTAL NUMBER OF BATCH RELEASES.
2. 1.17E+05 = TOTAL TIME (MIN.) FOR BATCH RELEASES.
3. 2.48E+04 = MAXIMUM TIME (MIN.) FOR A BATCH RELEASE.
4. 1.65E+03 = AVERAGE TIME (MIN.) FOR A BATCH RELEASE.
5. 9.00E+01 = MINIMUM TIME (MIN.) FOR A BATCH RELEASE.

VI. ABNORMAL RELEASES

(SEE "UNPLANNED OFFSITE RELEASES" ATTACHMENT)

OCONEE NUCLEAR STATION

Overall Estimate of Error for Effluent Radioactivity Release Reported

The estimated percentage of overall error for both Liquid and Gaseous effluent release data at Oconee Nuclear Station has been determined to be ± 30.3%. This value was derived by taking the square root of the sum of the squares of the following discrete individual estimates of error:

(1) Flow Rate Determining Devices = ± 20%

(2) Counting Statistical Error = ± 20%

(3) Calibration Error = ± 10%

(4) Calibration Source Error = ± 2.5%

(5) Sample Preparation Error = ± 3%

Oconee 2014 ARERR - Attachment 2 Supplemental Information

Summary of Changes in Land Use Census Affecting Effluent Dose Calculations

The 2014 Land Use Census was performed May 12-13, 2014, and the results were certified and made available for use on September 2, 2014. The following are changes to residences, gardens, and milk animals from the previous year.

Residences

No changes to nearest residence in each sector.

Gardens

Per Oconee SLC 16.11.6, broad leaf vegetation sampling shall be performed at the site boundary in the direction sector with the highest D/Q in lieu of the garden census. For consideration of dose from effluents, a garden is assumed at the site boundary in every sector. Therefore, no changes are anticipated to occur.

Milk Animals

No changes to nearest milk animal in each sector.

Attachment 3

Solid Radioactive Waste Disposal Report

(13 pages, including this cover sheet)

DUKE ENERGY
Oconee Nuclear Station
SOLID RADIOACTIVE WASTE SHIPPED TO A DISPOSAL FACILITY

Report Period: January - December 2014

Waste Type	NUMBER OF SHIPMENTS	NUMBER OF CONTAINERS	WASTE CLASS A-U	A-S	B	C	CONTAINER TYPE	BURIAL VOLUME CU. FT.	CU. M.	TOTAL ACTIVITY CURIES
1) WASTE FROM LIQUID SYSTEM										
(A) Dewatered Powdex Resin	3	9	9	0	0	0	GDP	1866.6	52.86	2.28
(B) Dewatered Primary Resin	4	4	0	1	3	0	TYPE A	481.2	13.63	247.74
(C) Dewatered Mechanical Filters										
1. Primary Filter Media	1	1	0	0	0	1	TYPE A	120.3	3.41	22.40
2. Secondary Filter Media	0	0	0	0	0	0	GDP	0	0.00	0.0000
(D) Solidified oil, liquid, sludge	0	0	0	0	0	0	GDP	0	0.00	0.00
2) DRY SOLID WASTE										
(A) Dry Active Waste - Processor to Burial	33	33	33	0	0	0	GDP	4759.8	134.79	0.26
Metal - Processor to Burial	16	16	16	0	0	0	GDP	837.96	23.73	2.70
(B) Dry Active Waste to Burial	3	3	0	3	0	0	TYPE A	360.9	10.22	2.01
(C) Dry Active Waste Brokered	0	0	0	0	0	0		0	0.00	0.00
(D) Irradiated Components	0	0	0	0	0	0	TYPE B	0	0.00	0.00
TOTAL	60	66	58	4	3	1		8426.81	238.63	277.39

OCONEE NUCLEAR STATION SOLID RADWASTE REPORT
Report Period: January - December 2014
Waste Type: Dewatered Powdex Resin

ISOTOPE:	% ABUNDANCE			# OF LINERS SHIPPED TO ENVIROCARE								9			# OF SHIPMENTS TO ENVIROCARE								3		TOTAL	AVE.
CR-51	0.0000	0.0000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MN-54	0.0498	0.0399	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.03
CO-57	0.0215	0.0181	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.02
CO-58	0.0014	0.0044	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
CO-60	2.1236	0.8910	1.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.36	1.45
NB-95	0.0000	0.0000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ZR-95	0.0000	0.0000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CS-134	0.2561	0.2508	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.75	0.25
RU-103	0.0000	0.0000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AG-110m	0.0550	0.0755	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
SB-125	5.9459	0.3104	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.32	2.11
I-131	0.0000	0.0000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CS-137	1.5573	0.9000	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.24	1.08
H-3	77.3488	92.3881	76.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	246.08	82.03
NI-63	3.7709	1.3881	10.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.60	5.20
FE-55	3.8739	1.8209	5.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.55	3.85
SR-90	0.0000	0.0000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TE-125m	0.0000	0.0000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CS-136	0.0000	0.0000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
XE-133	0.0000	0.0000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C-14	4.8005	1.7612	4.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.16	3.72
PU-241	0.0000	0.0000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ZN-65	0.0000	0.0000	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
FE-59	0.0000	0.0000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SB-124	0.0000	0.0000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RU-106	0.1853	0.1776	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46	0.15
CE-144	0.0166	0.0173	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.02
TE-132	0.0000	0.0000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AM-241	0.0000	0.0000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	100	100	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	299.92	99.97
CLASS C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
CLASS B	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
CLASS AS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
CLASS AU	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	
CURIES	0.777	0.67	0.837	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2.284	
CU. FT.	622.2	622.2	622.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1866.6	
CU. M	17.61907	17.61907	17.61907	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	52.85722	
RSR#	**14-2001**	**14-2002**	**14-2017**																							

OCONEE NUCLEAR STATION SOLID RADWASTE REPORT
Report Period: January - December 2014
Waste Type: Primary Resin

OF LINERS SHIPPED TO CNSI 4

OF SHIPMENTS TO CNSI 4

ISOTOPE:	% ABUNDANCE/LINER																				TOTAL	AVE
AG-110m	0.0000	0.0000	0.0827	0.0824	0.0000	0.0000	0.0000	0 0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0 0000	0.0000	0.0000	0.0000	0.0000	0 1651	0.0413
AM-241	0.0000	0.0002	0.0004	0.0002	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0 0000	0.0000	0.0000	0.0000	0.0000	0.0008	0.0002
Be-7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
C-14	0.3419	0.4618	0.5439	0.7677	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0 0000	0.0000	0.0000	0.0000	0.0000	0 0000	0 0000	0.0000	2 1153	0 5288
CE-144	0.0586	0.0426	0.0219	0.0243	*0.0000*	*0.0000*	*0.0000*	*0.0000*	*0.0000*	*0.0000*	*0.0000*	*0.0000*	*0.0000*	*0.0000*	*0.0000*	*0.0000*	*0.0000*	*0.0000*	*0.0000*	*0.0000*	*0.1454*	*0.0364*
CM-242	0.0000	0.0001	0.0001	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0003	0.0001
CM-243/44	0.0000	0.0002	0.0003	0.0002	0.0000	0.0000	0.0000	0 0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0007	0.0002
CO-57	0.3689	0.5171	0.4026	0.3203	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.6089	0.4022
CO-58	57.0258	22.6016	14.3860	7.7237	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	101.7371	25.4343
CO-60	2.0960	3.6748	3.6491	2.7786	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	12.1985	3.0496
CR-51	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CS-134	1.6862	2.0813	2.0877	1.7115	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	7.5667	1.8917
CS-136	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CS-137	5.6440	6.7805	7.4123	6.5149	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	26.3517	6.5879
FE-55	4.5316	15.7886	14.1228	18.6813	0.0000	0.0000	0.0000	0 0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	53.1243	13.2811
FE-59	0.0167	0.0081	0.0000	0.0000	0.0000	0 0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0248	0.0062
H-3	0.1230	0.0364	0.0000	0.0120	0.0000	0.0000	0.0000	0 0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1714	0.0429
I-129	0.0015	0.0000	0.0000	0.0007	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0022	0.0005
I-131	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
MN-54	0.4122	1.4911	0.8860	0.6421	0.0000	0 0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	3.4314	0.8579
NB-94	0.0000	0.0000	0.0051	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0 0000	0 0000	0 0051	0.0013
NB-95	0.0870	0.0831	0.0461	0.0090	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.2252	0.0563
NI-59	0.1546	0.2683	0.3693	0.4396	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.2318	0.3080
NI-63	26.5808	45.8537	55.3509	60.1256	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	187.9110	46.9778
PU-238	0.0000	0.0003	0.0000	0.0005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0 0000	0.0000	0.0000	0.0008	0.0002
PU-239/40	0.0000	0.0001	0.0002	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0004	0.0001
PU-241	0.0000	0.0061	0.0089	0.0090	0.0000	0.0000	0.0000	0 0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0240	0.0060
RU-106	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SB-124	0.4180	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.4180	0.1045
SB-125	0.2717	0.1184	0.0525	0.0526	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.4952	0.1238
SN-113	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SR-89	0.0000	0.0132	0.0029	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0 0000	0.0000	0.0000	0.0000	0.0000	0.0161	0.0040
SR-90	0.0267	0.0379	0.0516	0.0499	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1661	0.0415
TC-99	0.0158	0.0041	0.0000	0.0026	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0 0000	0.0000	0.0000	0.0000	0 0000	0.0000	0.0225	0.0056
TE-125m	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
XE-133	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
ZN-65	0.0482	0.1015	0.0787	0.0468	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0 0000	0.0000	0.0000	0.0000	0.0000	0.2752	0.0688
ZR-95	0.0508	0.0816	0.0289	0.0078	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1691	0.0423
TOTAL	99.96	100.05	99.43	99.95	0.00	0.00	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	399.16	99 79
CLASS C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
CLASS B	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	
CLASS AS	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
CLASS AU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

CURIES	8.54	61.5	114	63.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	247.74
CU. FT.	120.3	120.3	120.3	120.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	481.2
CU. M	3.41	3.41	3.41	3.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.63
RSR#	14-2007	14-2025	14-2034	14-2040																	

OCONEE NUCLEAR STATION SOLID RADWASTE REPORT
Report Period: January - December 2014
Waste Type: Primary filters

OF DRUMS/LINERS TO CNSI 1

ISOTOPE																						# OF SHIPMENTS TO CNSI 1 TOTAL	AVE.
AG-110m	0.38440	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38	0.384
AM-241	0.00000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000
BA-140	0.00000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000
C-14	0.35670	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36	0.357
CD-109	0.00000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000
CE-141	0.00000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000
CE-144	0.08790	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.088
CM-242	0.00000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000
CM-243/44	0.00000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000
CO-57	0.28840	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29	0.288
CO-58	4.68750	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.69	4.688
CO-60	11.29460	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.2946	11.29460
CR-51	0.00000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000
CS-134	0.39688	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.397
CS-136	0.00000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000
CS-137	0.95090	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.95	0.951
FE-55	43.61610	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	43.62	43.616
FE-59	0.02020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.020
H-3	0.14640	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.146
HG-203	0.00000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000
I-129	0.00000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000
MN-54	2.10270	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.10	2.103
NB-94	0.00000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000
NB-95	0.02600	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.026
NI-59	0.00000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000
NI-63	34.59820	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	34.60	34.598
PU-238	0.00000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000
PU-239	0.00000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000
PU-241	0.00000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000
RU-103	0.00000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000
RU-106	0.00000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000
SB-124	0.00000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000
SB-125	0.00000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000
SN-113	0.01430	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.014
SR-89	0.00000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00000	0.0000000
SR-90	0.00000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000
TC-99	0.00000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000	0.00000
TE-125m	0.00000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000	0.00000
XE-133	0.00000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000	0.00000
ZN-65	0.72770	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.7277	0.72770
ZR-95	0.26160	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.2616	0.26160
TOTAL	99.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	98.97	98.97

CLASS C	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
CLASS B	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CLASS AS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CLASS AU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CURIES	22.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22.4
CU. FT.	120.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	120.3
CU. M	3.406581	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3.406581
RSR#	14-2044																					

OCONEE NUCLEAR STATION SOLID RADWASTE REPORT
Report Period: January - December 2014
Waste Type: Secondary Filters

OF CONTAINERS SHIPPED TO DURATEK 0 # OF CONTAINERS SHIPPED TO CNSI / ENVIROCARE 0

OF SHIPMENTS TO DURATEK 0 # OF SHIPMENTS TO CNSI / ENVIROCARE 0

ISOTOPE																				TOTAL	AVE.
AG-108m	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
AG-110m	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
AM-241	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
C-14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
CE-144	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
CM-242	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
CM-243	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
CO-57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
CO-58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
CO-60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
CR-51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
CS-134	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
CS-136	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
CS-137	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
FE-55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
FE-59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
H-3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
I-131	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
MN-54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
NB-95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
NI-63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
PU-238	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
PU-239	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
PU-241	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
RU-103	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
RU-106	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
SB-124	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
SB-125	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
SR-89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
SR-90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
TE-125m	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
TRU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
XE-133	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
ZN-65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
CLASS C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
CLASS B	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
CLASS AS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
CLASS AU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
CURIES	0.00E+00	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
FT3 Shipped	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CU M Shipped	0.0000	0.0000	0.0000	0.0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0000
FT3 Buried	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
CU M Buried	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0	
RSR#																					

OCONEE NUCLEAR STATION SOLID RADWASTE REPORT
Report Period: January - December 2014
Waste Type: Solidified Oil, Liquid, Sludge

OF CONTAINERS SHIPPED 0

ISOTOPE.	% ABUNDANCE/LINER										# OF SHIPMENTS 0														TOTAL AVE.
CR-51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
MN-54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
CO-57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
CO-58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
CO-60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
NB-95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
ZR-95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
CS-134	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
RU-103	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
AG-110m	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
SB-125	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
I-131	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
CS-137	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
H-3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
NI-63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
FE-55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
SR-90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
TE-125m	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
CS-136	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
XE-133	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
C-14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
PU-241	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
TRU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
FE-59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
SB-124	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
RU-106	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
CE-144	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
CM-242	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
CLASS C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
CLASS B	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
CLASS AS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
CLASS AU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
CURIES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
CU. FT.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
CU. M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
RSR#																									

OCONEE NUCLEAR STATION SOLID RADWASTE REPORT
Report Period: January - December 2014
Waste Type: DAW to Processor

# OF SHIPMENTS FROM ONS TO ENERGY SOLUTIONS	31	# OF CONTAINERS FROM ONS TO ENERGY SOLUTIONS	56
# OF SHIPMENTS FROM PROCESSOR TO CLIVE	33	# OF CONTAINERS FROM PROCESSOR TO CLIVE	33
# OF SHIPMENTS FROM PROCESSOR TO BARNWELL	0	# OF CONTAINERS FROM PROCESSOR TO BARNWELL	0

RSR #	CU FT SHIPPED	CURIES SHIPPED	CU. FT. DISPOSAL FACILITY	CI TO DISPOSAL FACILITY
13-2032	0	0	134.6857	0.008815
13-2050	0	0	334	0.003919
13-2049	0	0	116	0.028198
13-2048	0	0	366.8571	0.010006
14-2004	934.4	0.00493	2.91429	4.05E-05
14-2005	1868.8	0.0206	198.5714	2.06E-02
14-2008	1868.8	0.00793	171.1429	7.94E-03
14-2010	1868.8	0.0499	262.8857	4.51E-02
14-2011	1868.8	0.00629	291.7143	6.29E-03
14-2013	1868.8	0.0411	47.9	1.05E-02
14-2014	934.4	0.0024	115.9286	2.96E-03
14-2015	1868.8	0.00225	78.6	4.39E-04
14-2016	934.4	0.913	5.33E+01	6.83E-04
14-2019	934.4	0.00105	222.8571	7.93E-04
14-2021	1868.8	0.0133	175.9286	1.33E-02
14-2022	1868.8	0.0287	177.4286	2.86E-02
14-2028	1868.8	0.0162	111.1714	1.68E-02
14-2029	1868.8	0.0916	0	0.00E+00
14-2035	1868.8	0.0146	77.85714	2.51E-03
14-2036	1542.4	0.00805	220.6429	8.04E-03
14-2037	1868.8	0.00576	206.2857	5.76E-03
14-2038	1868.8	0.00602	29.2	8.24E-04
14-2039	1868.8	0.00382	89.08571	1.04E-03
14-2041	1868.8	0.0126	229.8571	1.26E-02
14-2045	1401.6	0.0118	247.4286	1.18E-02
14-2046	1868.8	0.00207	58.48572	6.13E-04
14-2047	934.4	0.00314	359.7143	4.56E-03
14-2048	1868.8	0.00499	238.2429	4.65E-03
14-2049	934.4	0.00141	379.2571	2.58E-03
14-2050	2214.4	0.00301	336.2857	1.71E-03
14-2051	934.4	0.0048	0	0.00E+00
14-2056	1868.8	0.0104	159.4286	1.04E-02
14-2057	1574.4	0.0124	0	0.00E+00
14-2058	1868.8	0.0107	125.4286	9.15E-03
14-2059	1868.8	0.0347	92.28571	2.97E-02
TOTAL	50649.6	1.350	4759.84	0.25994
TOTAL CURIES BURIED	0.260			
TOTAL CUBIC FEET BURIED	4759.84			
TOTAL CUBIC METERS	134.79			

OCONEE NUCLEAR STATION SOLID RADWASTE REPORT
Report Period: January - December 2014
Waste Type: DAW to Burial

OF SHIPMENTS FROM ONS TO CNSI 3
OF CONTAINERS FROM ONS TO CNSI 3

RSR NUMBER	CUBIC FEET	CURIES	A-U	A-S	B	C
14-2032	120.3	1.61	0	1	0	0
14-2042	120.3	0.12	0	1	0	0
14-2043	120.3	0.276		1		
TOTAL	360.9	2.006	0	3	0	0

TOTAL CUBIC METERS 10.22

OCONEE NUCLEAR STATION SOLID RADWASTE REPORT
Report Period: January - December 2014
Waste Type: Metal

# OF SHIPMENTS TO PROCESSOR	7	# OF SHIPMENTS TO CLIVE	16
# OF CONTAINERS TO PROCESSOR	9	# OF CONTAINERS TO CLIVE:	16

RSR #	CU. FT.. TO PROCESSOR	CURIES TO PROCESSOR	CU. FT TO DISPOSAL FACILITY	CURIES TO DISPOSAL FACILITY
13-2028	0	0	1128.511	0.0930655
13-2029	0	0	1040	5.229022
13-2034	0	0	110.835	0.0012235
13-2041	0	0	132.6571	0.0172859
13-2050	0	0	62.30015	8.38E-04
14-2014	480	0.00371	221.1292	3.15E-03
14-2015	0	0	97.84358	6.62E-01
14-2016	864	0.796	139.4286	7.96E-04
14-2018	1152	4.52E-04	75.42857	2.03E+00
14-2019	576	2.30E-04	125.0341	4.88E-04
14-2039			15.67143	2.57E-04
14-2047	646.88	0.00143	0	0.00E+00
14-2049	479.2	0.00176	0	0.00E+00
14-2051	431.25	0.00118	163.4286	1.18E-03
TOTAL	4629.33	0.804762	837.96	2.69850

TOTAL CUBIC METERS 23.72895

OCONEE NUCLEAR STATION SOLID RADWASTE REPORT
Report Period: January - December 2014
Waste Type: Irradiated Components

OF CONTAINERS SHIPPED TO CNSI/DURATEK 0

ISOTOPE:	% ABUNDANCE/LINER										# OF SHIPMENTS TO CNSI/DURATEK												TOTAL	AVE.
											0													
AG-110m	0.00	0.00	0.00	0.00	0.00	0 00	0 00	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
C-14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
CE-144	0.00	0.00	0.00	0 00	0.00	0 00	0.00	0.00	0.00	0 00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
CM-242	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
CM-243	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
CO-57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
CO-58	0.00	0.00	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0 00	0.00	#DIV/0!
CO-60	0.00	0.00	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
CR-51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
CS-134	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
CS-136	0.00	0.00	0.00	0 00	0.00	0 00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
CS-137	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
FE-55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0 00	0.00	0.00	#DIV/0!
FE-59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
H-3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0 00	0.00	0 00	#DIV/0!
I-131	0 00	0.00	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
MN-54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
NB-95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
NI-59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
NI-63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0 00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0 00	0 00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
PU-238	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
PU-241	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0 0000	#DIV/0!
RU-103	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
RU-106	0.00	0.00	0.00	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
SB-124	0.00	0.00	0.00	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
SB-125	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
TA-182	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0 00	0.00	#DIV/0!
TE-125m	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
TRU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000	#DIV/0!
XE-133	0.00	0.00	0.00	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0 00	0.00	0 0000	#DIV/0!
ZR-95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00	0.0000	#DIV/0!
TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
CLASS C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
CLASS B	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
CLASS AS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
CLASS AU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
CURIES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
CU. FT.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
CU. M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
RSR#																								

Attachment 4

Meteorological Data

Oconee Nuclear Station

(3 pages, including this cover sheet)

Oconee Nuclear Station

Attachment 3.1.1

ONS 2014 Lower JFD (Hours of Occurrence)

		SECTOR															
		N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
		No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
A	0.46-0.75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0.76-1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1.01-1.25	1	0	0	0	0	0	0	0	1	4	1	1	0	1	1	2
	1.26-1.50	0	3	2	0	1	0	0	2	2	12	7	4	2	2	4	1
	1.51-2.00	14	14	10	10	5	2	3	2	13	42	69	22	9	10	4	4
	2.01-3.00	6	6	19	43	12	1	2	2	18	146	140	22	15	5	4	3
	3.01-4.00	1	2	11	22	7	0	2	1	5	57	30	13	5	6	2	1
	4.01-5.00	2	0	5	0	0	0	0	0	0	7	11	9	6	2	1	4
	5.01-6.00	0	1	1	0	0	0	0	0	0	0	1	2	1	2	5	0
	6.01-8.00	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0
	8.01-10.00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
	10.01-Max	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
B	0.46-0.75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0.76-1.00	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
	1.01-1.25	3	3	1	0	0	0	0	1	3	0	2	3	2	2	0	2
	1.26-1.50	5	0	2	1	2	0	1	0	0	7	6	5	4	2	1	0
	1.51-2.00	5	3	5	8	5	5	2	1	4	16	15	12	12	2	3	3
	2.01-3.00	1	5	14	32	12	2	1	4	3	44	47	12	1	1	3	1
	3.01-4.00	0	1	1	8	1	0	1	0	1	30	14	7	1	3	1	3
	4.01-5.00	0	0	2	2	1	0	0	0	0	3	7	7	4	1	1	1
	5.01-6.00	0	0	0	0	0	0	0	0	0	1	1	3	0	2	2	1
	6.01-8.00	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	0
	8.01-10.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
	10.01-Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C	0.46-0.75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0.76-1.00	0	0	0	0	0	0	1	0	0	1	0	1	2	1	1	1
	1.01-1.25	5	3	2	0	1	1	0	1	3	3	1	2	3	2	1	1
	1.26-1.50	7	4	4	4	3	1	1	4	6	4	8	5	11	3	3	3
	1.51-2.00	2	10	14	15	14	5	3	5	9	19	22	16	10	8	4	0
	2.01-3.00	1	1	17	41	17	3	6	3	6	33	36	13	3	0	3	0
	3.01-4.00	0	0	6	13	2	0	0	1	0	16	12	7	1	2	3	1
	4.01-5.00	0	0	1	1	0	0	0	0	0	3	14	6	5	2	4	2
	5.01-6.00	0	0	0	0	0	0	0	0	0	2	4	10	0	3	4	1
	6.01-8.00	0	0	0	0	0	0	0	0	0	0	1	5	1	4	3	0
	8.01-10.00	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
	10.01-Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D	0.46-0.75	3	0	3	1	3	2	4	0	2	4	3	2	5	5	1	3
	0.76-1.00	17	11	15	11	10	6	6	10	8	7	9	28	14	23	16	23
	1.01-1.25	25	18	16	16	15	9	16	13	12	12	21	26	18	25	28	30
	1.26-1.50	25	17	30	46	39	18	32	27	22	19	24	32	24	20	15	32
	1.51-2.00	12	23	91	122	109	40	38	34	33	61	55	41	29	12	12	17
	2.01-3.00	19	20	138	222	122	13	28	13	23	101	104	64	41	22	25	21
	3.01-4.00	4	5	25	38	12	2	3	2	2	41	82	61	35	23	23	13

Oconee Nuclear Station

	4.01-5.00	0	2	12	14	3	1	0	0	0	17	31	54	27	26	10	3
	5.01-6.00	0	0	2	1	0	0	0	0	0	2	17	26	14	15	7	1
	6.01-8.00	0	0	0	0	0	0	0	0	0	0	5	19	10	7	2	0
	8.01-10.00	0	0	0	0	0	0	0	0	0	0	0	3	2	1	2	0
	10.01-Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
E	0.46-0.75	17	8	7	0	6	6	1	4	8	3	11	8	10	20	26	20
	0.76-1.00	55	48	30	36	26	23	23	16	26	21	38	34	66	64	78	68
	1.01-1.25	45	27	22	33	43	32	19	23	28	24	32	30	36	50	55	65
	1.26-1.50	18	25	35	30	43	36	33	34	28	29	37	34	16	26	31	25
	1.51-2.00	11	6	24	52	45	39	41	46	40	44	42	24	23	15	13	8
	2.01-3.00	5	6	8	26	17	5	10	18	8	44	46	28	17	12	10	5
	3.01-4.00	0	0	0	1	0	0	0	0	0	14	23	17	9	4	2	0
	4.01-5.00	0	0	0	0	0	0	0	0	0	0	5	9	0	0	1	0
	5.01-6.00	0	0	0	0	0	0	0	0	0	1	7	2	2	0	0	0
	6.01-8.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8.01-10.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	10.01-Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F	0.46-0.75	0	0	2	2	0	0	2	0	2	1	2	0	4	7	3	3
	0.76-1.00	0	4	2	2	2	2	2	1	8	3	3	6	17	34	18	9
	1.01-1.25	3	3	3	0	2	0	1	1	0	2	5	5	14	44	18	0
	1.26-1.50	0	1	0	1	0	2	3	4	1	2	7	1	3	31	23	0
	1.51-2.00	1	0	0	0	1	1	10	0	0	3	9	0	6	5	4	0
	2.01-3.00	1	0	0	0	0	1	1	0	0	3	6	1	0	1	0	0
	3.01-4.00	0	0	0	0	0	0	0	0	0	0	3	1	0	0	0	0
	4.01-5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5.01-6.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6.01-8.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8.01-10.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	10.01-Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
G	0.46-0.75	1	0	0	0	0	0	0	0	1	0	0	2	3	1	2	0
	0.76-1.00	0	1	0	0	0	0	0	0	0	1	2	5	11	12	8	0
	1.01-1.25	0	0	0	0	0	0	1	0	0	0	0	2	7	15	2	1
	1.26-1.50	0	0	0	0	0	0	0	0	0	0	4	2	1	13	8	0
	1.51-2.00	0	0	0	0	0	0	0	0	0	0	0	1	1	1	3	0
	2.01-3.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3.01-4.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4.01-5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5.01-6.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6.01-8.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8.01-10.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	10.01-Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Attachment 5

Unplanned Offsite Releases

Unplanned Offsite Release of Oconee Nuclear Station "3A" Gaseous Waste Decay (GWD) Tank

Event Summary:
Release of "3C" GWD Tank began at 16:22 on 6/1/14 as Gaseous Waste Release (GWR) 2014-047. The rate of release was slowly increased until stable counts were observed on radiation monitor 3RIA-37. The "3C" GWD Tank release was terminated at 18:53 on 6/1/14 when an unexpected decrease in "3A" GWD Tank pressure was observed. The "3A" GWD Tank pressure decreased from 16.2 psig to 15.5 psig during the GWR 2014-047 release. When GWR 2014-047 release was stopped, the "3A" GWD Tank pressure stopped decreasing. Investigation identified two GWD system valves that were leaking past the seat during the release. The two GWD valves were repaired to prevent future occurrences.

A separate "3A" GWD Tank release permit, 2014-056, was created to account for the release activity and related dose. Based on the GWD Tank volume chart in OP/0/A/1108/001, Curves And General Information, a 0.7 psig decrease corresponds to a release volume of 100 ft^3. The concentrations of the radionuclides during the unplanned release were estimated to be the sampled concentrations identified during the "3A" GWD release 2014-048, which occurred on 6/3/2014. The total activity of the unplanned release was 1.29E-06 Curies.

Safety Significance:

The health and safety of the public were not compromised by this event. The total activity released was 1.29E-06 Curies. Calculated dose and dose rates to the Total Body, Skin, Gamma Air, and Beta Air were all well below the limits specified by Selected Licensee Commitments

Attachment 6

Assessment of Radiation Dose from Radioactive Effluents to Members of the Public (includes fuel cycle dose calculation results)

(13 pages, including this cover sheet)

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT
PERIOD 1/1/14 TO 1/1/15
GASEOUS ANNUAL DOSE SUMMARY REPORT

Oconee Nuclear Station Units 1, 2, & 3

1st Quarter 2014

=== IODINE, H3, and PARTICULATE DOSE LIMIT ANALYSIS ========== Quarter 1 2014 ====

Period-Limit	Critical Age	Critical Organ	Dose (mrem)	Limit (mrem)	Max % of Limit
Q1 - Maximum Organ Dose	CHILD	BONE	9.03E-02	2.25E+01	4.01E-01

Maximum Organ Dose Receptor Location: 1.0 Mile SW
Critical Pathway: Vegetation

Major Isotopic Contributors (5% or greater to total)

Nuclide	Percentage
C-14	1.00E+02

=== NOBLE GAS DOSE LIMIT ANALYSIS ========== Quarter 1 2014 ====

Period-Limit	Dose (mrad)	Limit (mrad)	% of Limit
Q1 - Maximum Gamma Air Dose	1.14E-04	1.50E+01	7.63E-04

Maximum Gamma Air Dose Receptor Location: 1.0 Mile SW

Major Isotopic Contributors (5% or greater to total)

Nuclide	Percentage
XE-133	9.99E+01

Q1 - Maximum Beta Air Dose	3.40E-04	3.00E+01	1.13E-03

Maximum Beta Air Dose Receptor Location: 1.0 Mile SW

Major Contributors (5% or greater to total)

Nuclide	Percentage
XE-133	9.99E+01

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT
PERIOD 1/1/14 TO 1/1/15
GASEOUS ANNUAL DOSE SUMMARY REPORT

Oconee Nuclear Station Units 1, 2, & 3

2nd Quarter 2014

=== IODINE, H3, and PARTICULATE DOSE LIMIT ANALYSIS ======= Quarter 2 2014 ====

Period-Limit	Critical Age	Critical Organ	Dose (mrem)	Limit (mrem)	Max % of Limit
Q2 - Maximum Organ Dose	CHILD	BONE	8.02E-02	2.25E+01	3.56E-01

Maximum Organ Dose Receptor Location: 1.0 Mile SW
Critical Pathway: Vegetation

Major Isotopic Contributors (5% or greater to total)

Nuclide	Percentage
C-14	1.00E+02

=== NOBLE GAS DOSE LIMIT ANALYSIS ========== Quarter 2 2014 ====

Period-Limit	Dose (mrad)	Limit (mrad)	% of Limit
Q2 - Maximum Gamma Air Dose	5.28E-05	1.50E+01	3.52E-04

Maximum Gamma Air Dose Receptor Location: 1.0 Mile SW

Major Isotopic Contributors (5% or greater to total)

Nuclide	Percentage
AR-41	2.00E+01
XE-133	7.95E+01

Q2 - Maximum Beta Air Dose	1.29E-04	3.00E+01	4.31E-04

Maximum Beta Air Dose Receptor Location: 1.0 Mile SW

Major Contributors (5% or greater to total)

Nuclide	Percentage
XE-133	9.66E+01

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT
PERIOD 1/1/14 TO 1/1/15
GASEOUS ANNUAL DOSE SUMMARY REPORT

Oconee Nuclear Station Units 1, 2, & 3

3rd Quarter 2014

=== IODINE, H3, and PARTICULATE DOSE LIMIT ANALYSIS======== Quarter 3 2014 ====

Period-Limit	Critical Age	Critical Organ	Dose (mrem)	Limit (mrem)	Max % of Limit
Q3 - Maximum Organ Dose	CHILD	BONE	9.04E-02	2.25E+01	4.02E-01

Maximum Organ Dose Receptor Location: 1.0 Mile SW
Critical Pathway: Vegetation

Major Isotopic Contributors (5% or greater to total)

Nuclide	Percentage
C-14	1.00E+02

=== NOBLE GAS DOSE LIMIT ANALYSIS========== Quarter 3 2014 ====

Period-Limit	Dose (mrad)	Limit (mrad)	% of Limit
Q3 - Maximum Gamma Air Dose	2.00E-04	1.50E+01	1.33E-03

Maximum Gamma Air Dose Receptor Location: 1.0 Mile SW

Major Isotopic Contributors (5% or greater to total)

Nuclide	Percentage
AR-41	6.59E+00
XE-133	9.34E+01

Q3 - Maximum Beta Air Dose	5.62E-04	3.00E+01	1.87E-03

Maximum Beta Air Dose Receptor Location: 1.0 Mile SW

Major Contributors (5% or greater to total)

Nuclide	Percentage
XE-133	9.90E+01

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT
PERIOD 1/1/14 TO 1/1/15
GASEOUS ANNUAL DOSE SUMMARY REPORT

Oconee Nuclear Station Units 1, 2, & 3

4th Quarter 2014

=== IODINE, H3, and PARTICULATE DOSE LIMIT ANALYSIS ===== Quarter 4 2014 =====

Period-Limit	Critical Age	Critical Organ	Dose (mrem)	Limit (mrem)	Max % of Limit
Q4 - Maximum Organ Dose	CHILD	BONE	7.79E-02	2.25E+01	3.46E-01

Maximum Organ Dose Receptor Location: 1.0 Mile SW
Critical Pathway: Vegetation

Major Isotopic Contributors (5% or greater to total)

Nuclide	Percentage
C-14	1.00E+02

=== NOBLE GAS DOSE LIMIT ANALYSIS ===== Quarter 4 2014 =====

Period-Limit	Dose (mrad)	Limit (mrad)	% of Limit
Q4 - Maximum Gamma Air Dose	4.48E-04	1.50E+01	2.99E-03

Maximum Gamma Air Dose Receptor Location: 1.0 Mile SW

Major Isotopic Contributors (5% or greater to total)

Nuclide	Percentage
XE-133	9.82E+01

Q4 - Maximum Beta Air Dose	1.31E-03	3.00E+01	4.38E-03

Maximum Beta Air Dose Receptor Location: 1.0 Mile SW

Major Contributors (5% or greater to total)

Nuclide	Percentage
XE-133	9.97E+01

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT
PERIOD 1/1/14 TO 1/1/15
GASEOUS ANNUAL DOSE SUMMARY REPORT

Oconee Nuclear Station Units 1, 2, & 3

ANNUAL 2014

=== IODINE, H3, and PARTICULATE DOSE LIMIT ANALYSIS=== Annual 2014 ===

Period-Limit	Critical Age	Critical Organ	Dose (mrem)	Limit (mrem)	Max % of Limit
Yr - Maximum Organ Dose	CHILD	BONE	3.39E-01	4.50E+01	7.53E-01

Maximum Organ Dose Receptor Location: 1.0 Mile SW
Critical Pathway: Vegetation

Major Isotopic Contributors (5% or greater to total)

Nuclide	Percentage
C-14	1.00E+02

=== NOBLE GAS DOSE LIMIT ANALYSIS=== Annual 2014 ===

Period-Limit	Dose (mrad)	Limit (mrad)	% of Limit
Yr - Maximum Gamma Air Dose	8.16E-04	3.00E+01	2.72E-03

Maximum Gamma Air Dose Receptor Location: 1.0 Mile SW

Major Isotopic Contributors (5% or greater to total)

Nuclide	Percentage
XE-133	9.60E+01

Yr - Maximum Beta Air Dose	2.35E-03	6.00E+01	3.91E-03

Maximum Beta Air Dose Receptor Location: 1.0 Mile SW

Major Contributors (5% or greater to total)

Nuclide	Percentage
XE-133	9.94E+01

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT
PERIOD 1/1/14 TO 1/1/15
LIQUID ANNUAL DOSE SUMMARY REPORT

Oconee Nuclear Station Units 1, 2, & 3

1st Quarter 2014

=== BATCH LIQUID RELEASES ========== Quarter 1 2014 ===

Period-Limit	Critical Age	Critical Organ	Dose (mrem)	Limit (mrem)	Max % of Limit
Q1 - Maximum Organ Dose	ADULT	GI-LLI	3.44E-02	1.50E+01	2.29E-01
Q1 - Total Body Dose	ADULT		3.15E-02	4.50E+00	6.99E-01

Maximum Organ
Critical Pathway: Fresh Water Fish
Major Isotopic Contributors (5% or greater to total)

Nuclide	Percentage
H-3	8.04E+01
NB-95	1.50E+01

Total Body
Critical Pathway: Fresh Water Fish
Major Isotopic Contributors (5% or greater to total)

Nuclide	Percentage
H-3	8.77E+01
CS-137	1.14E+01

=== CONTINUOUS LIQUID RELEASES (CTP 3) ========== Quarter 1 2014 ===

Period-Limit	Critical Age	Critical Organ	Dose (mrem)	Limit (mrem)	Max % of Limit
Q1 - Maximum Organ Dose	CHILD	LIVER	3.21E-05	1.50E+01	2.14E-04
Q1 - Total Body Dose	CHILD		3.21E-05	4.50E+00	7.13E-04

Maximum Organ
Critical Pathway: Potable Water
Major Isotopic Contributors (5% or greater to total)

Nuclide	Percentage
H-3	1.00E+02

Total Body
Critical Pathway: Potable Water
Major Isotopic Contributors (5% or greater to total)

Nuclide	Percentage
H-3	1.00E+02

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT
PERIOD 1/1/14 TO 1/1/15
LIQUID ANNUAL DOSE SUMMARY REPORT

Oconee Nuclear Station Units 1, 2, & 3

2nd Quarter 2014

=== BATCH LIQUID RELEASES ========== Quarter 2 2014 ======

Period-Limit	Critical Age	Critical Organ	Dose (mrem)	Limit (mrem)	Max % of Limit
Q2 - Maximum Organ Dose	ADULT	GI-LLI	3.14E-02	1.50E+01	2.10E-01
Q2 - Total Body Dose	CHILD		2.74E-02	4.50E+00	6.09E-01

Maximum Organ
Critical Pathway: Fresh Water Fish
Major Isotopic Contributors (5% or greater to total)

Nuclide	Percentage
H-3	8.29E+01
NB-95	1.47E+01

Total Body
Critical Pathway: Potable Water
Major Isotopic Contributors (5% or greater to total)

Nuclide	Percentage
H-3	9.89E+01

=== CONTINUOUS LIQUID RELEASES (CTP 3) ========== Quarter 2 2014 ======

Period-Limit	Critical Age	Critical Organ	Dose (mrem)	Limit (mrem)	Max % of Limit
Q2 - Maximum Organ Dose	CHILD	LIVER	2.44E-05	1.50E+01	1.62E-04
Q2 - Total Body Dose	CHILD		2.44E-05	4.50E+00	5.42E-04

Maximum Organ
Critical Pathway: Potable Water
Major Isotopic Contributors (5% or greater to total)

Nuclide	Percentage
H-3	1.00E+02

Total Body
Critical Pathway: Potable Water
Major Isotopic Contributors (5% or greater to total)

Nuclide	Percentage
H-3	1.00E+02

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT
PERIOD 1/1/14 TO 1/1/15
LIQUID ANNUAL DOSE SUMMARY REPORT

Oconee Nuclear Station Units 1, 2, & 3

3rd Quarter 2014

=== BATCH LIQUID RELEASES ========== Quarter 3 2014 ========

Period-Limit	Critical Age	Critical Organ	Dose (mrem)	Limit (mrem)	Max % of Limit
Q3 - Maximum Organ Dose	ADULT	LIVER	3.12E-02	1.50E+01	2.08E-01
Q3 - Total Body Dose	ADULT		2.51E-02	4.50E+00	5.58E-01

Maximum Organ
Critical Pathway: Fresh Water Fish
Major Isotopic Contributors (5% or greater to total)

Nuclide	Percentage
H-3	4.16E+01
CS-137	5.31E+01

Total Body
Critical Pathway: Fresh Water Fish
Major Isotopic Contributors (5% or greater to total)

Nuclide	Percentage
H-3	5.16E+01
CS-137	4.32E+01

=== CONTINUOUS LIQUID RELEASES (CTP 3) ========== Quarter 3 2014 ========

Period-Limit	Critical Age	Critical Organ	Dose (mrem)	Limit (mrem)	Max % of Limit
Q3 - Maximum Organ Dose	CHILD	LIVER	4.36E-05	1.50E+01	2.91E-04
Q3 - Total Body Dose	CHILD		4.36E-05	4.50E+00	9.69E-04

Maximum Organ
Critical Pathway: Potable Water
Major Isotopic Contributors (5% or greater to total)

Nuclide	Percentage
H-3	1.00E+02

Total Body
Critical Pathway: Potable Water
Major Isotopic Contributors (5% or greater to total)

Nuclide	Percentage
H-3	1.00E+02

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT
PERIOD 1/1/14 TO 1/1/15
LIQUID ANNUAL DOSE SUMMARY REPORT

Oconee Nuclear Station Units 1, 2, & 3

4th Quarter 2014

=== BATCH LIQUID RELEASES ========== Quarter 4 2014 ======

Period-Limit	Critical Age	Critical Organ	Dose (mrem)	Limit (mrem)	Max % of Limit
Q4 - Maximum Organ Dose	CHILD	LIVER	6.95E-02	1.50E+01	4.64E-01
Q4 - Total Body Dose	ADULT		6.22E-02	4.50E+00	1.38E+00

Maximum Organ
Critical Pathway: Potable Water
Major Isotopic Contributors (5% or greater to total)

Nuclide	Percentage
H-3	7.49E+01
CS-137	2.43E+01

Total Body
Critical Pathway: Fresh Water Fish
Major Isotopic Contributors (5% or greater to total)

Nuclide	Percentage
H-3	8.06E+01
CS-137	1.89E+01

=== CONTINUOUS LIQUID RELEASES (CTP 3) ========== Quarter 4 2014 ======

Period-Limit	Critical Age	Critical Organ	Dose (mrem)	Limit (mrem)	Max % of Limit
Q4 - Maximum Organ Dose	CHILD	LIVER	4.55E-05	1.50E+01	3.03E-04
Q4 - Total Body Dose	CHILD		4.55E-05	4.50E+00	1.01E-03

Maximum Organ
Critical Pathway: Potable Water
Major Isotopic Contributors (5% or greater to total)

Nuclide	Percentage
H-3	1.00E+02

Total Body
Critical Pathway: Potable Water
Major Isotopic Contributors (5% or greater to total)

Nuclide	Percentage
H-3	1.00E+02

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT
PERIOD 1/1/14 TO 1/1/15
LIQUID ANNUAL DOSE SUMMARY REPORT

Oconee Nuclear Station Units 1, 2, & 3

ANNUAL 2014

=== BATCH LIQUID RELEASES === Annual 2014 ===

Period-Limit	Critical Age	Critical Organ	Dose (mrem)	Limit (mrem)	Max % of Limit
Yr - Maximum Organ Dose	CHILD	LIVER	1.62E-01	3.00E+01	5.41E-01
Yr - Total Body Dose	ADULT		1.46E-01	9.00E+00	1.62E+00

Maximum Organ
Critical Pathway: Potable Water
Major Isotopic Contributors (5% or greater to total)

Nuclide	Percentage
H-3	7.47E+01
CS-137	2.37E+01

Total Body
Critical Pathway: Fresh Water Fish
Major Isotopic Contributors (5% or greater to total)

Nuclide	Percentage
H-3	8.03E+01
CS-137	1.84E+01

=== CONTINUOUS LIQUID RELEASES (CTP 3) === Annual 2014 ===

Period-Limit	Critical Age	Critical Organ	Dose (mrem)	Limit (mrem)	Max % of Limit
Yr - Maximum Organ Dose	CHILD	LIVER	1.46E-04	3.00E+01	4.85E-04
Yr - Total Body Dose	CHILD		1.46E-04	9.00E+00	1.62E-03

Maximum Organ
Critical Pathway: Potable Water
Major Isotopic Contributors (5% or greater to total)

Nuclide	Percentage
H-3	1.00E+02

Total Body
Critical Pathway: Potable Water
Major Isotopic Contributors (5% or greater to total)

Nuclide	Percentage
H-3	1.00E+02

Oconee Nuclear Station
2014 Radioactive Effluent and ISFSI
40CFR190 Uranium Fuel Cycle Dose Calculation Results

In accordance with the requirements of 40CFR190, the annual dose commitment to any member of the general public shall be calculated to assure that doses are limited to 25 millirems to the total body or any organ with the exception of the thyroid which is limited to 75 millirems. The fuel cycle dose assessment for Oconee Nuclear Station only includes liquid and gaseous effluent dose contributions from Oconee and direct and air-scatter dose from Oconee's onsite Independent Spent Fuel Storage Installation (ISFSI) since no other uranium fuel cycle facility contributes significantly to Oconee's maximum exposed individual. Included in the gaseous effluent dose calculations is an estimate of the dose contributed by Carbon-14 (Ref. *"Carbon-14 Supplemental Information"*, contained in the ARERR for further information). The combined dose to a maximum exposed individual from Oconee's effluent releases and direct and air-scatter dose from Oconee's ISFSI is below 40CFR190 limits as shown by the following summary:

I. 2014 Oconee 40CFR190 Effluent Dose Summary

The 40CFR190 effluent dose analysis to the maximum exposed individual from liquid and gas releases includes the dose from noble gases (i.e., total body and skin).

Maximum Total Body Dose = 2.54E-01 mrem

Maximum Location: 1.0 Mile, Southwest Sector
Critical Age: Child
Gas non-NG Contribution: 49.10%
Gas NG Contribution: 0.27%
Liquid Contribution: 50.63%

Maximum Organ (other than TB) Dose = 4.01E-01 mrem

Maximum Location: 1.0 Mile, Southwest Sector
Critical Age: Child
Critical Organ: Bone
Gas Contribution: 84.53%
Liquid Contribution: 15.47%

II. 2014 Oconee 40CFR190 ISFSI Dose Summary

Direct and air-scatter radiation dose contributions from the onsite Independent Spent Fuel Storage Installation (ISFSI) at Oconee have been calculated and documented in the "Oconee Nuclear Site 10CFR72.212 Written Evaluations" report. As discussed in the report, the dose rate at 500 meters is 6.84 mrem per year. The nearest resident from the Oconee ISFSI is ~ 1600 meters so the dose rate at the nearest resident location would be much less than 6.84 mrem per year.

The following excerpt, "C. 10CFR72.212(b)(2)(i)(C)- Requirements of 72.104", from the "Oconee Nuclear Site 10CFR72.212 Written Evaluations" report is provided to document the method used to estimate the Oconee ISFSI dose to the nearest "real individual".

C. **10CFR72.212(b)(2)(i)(C)- Requirements of 72.104**

" ...the requirements of§ 72.104 have been met. "

10 CFR 72.104, as clarified by ISG-13, stipulates that the licensee perform dose evaluations which establish that any real individual beyond the controlled area boundary not sustain a dose equivalent in excess of 0.25 mSv (25 mrem) due to direct radiation from the Independent Spent Fuel Storage Installation and other fuel cycle operations in the area. This same dose limit is stipulated by the EPA for the fuel cycle in 40 CFR 190.10(a). Also operational restrictions for ALARA and limits for effluents must be established.

In accordance with these requirements, Duke Energy Corporation has performed dose calculations that model the characteristics (initial enrichment, burnup and cooling time) of existing fuel in Phases I - V of the Oconee ISFSI, together with the characteristics of assumed "design basis" fuel in Phase VI of the Oconee ISFSI. Calculation OSC-8675 develops the radiation source terms used in subsequent shielding and skyshine calculations using the SCALE Code System.

More specifically, the SAS2 Module of the SCALE Code System was used to create a problem-dependent pin-cell model for the purpose of building cell- weighted, multigroup cross section sets for use in subsequent depletion calculations. The ORIGEN-S Module of the SCALE Code System was used to perform the fuel depletion and characterization calculations using the cross section sets created by SAS2. These characterization calculations yielded the photon and neutron source terms to be used as input to subsequent shielding calculations. As mentioned above, problem-dependent cross section sets were developed for these analyses since ORIGEN-S was used within the SAS2 sequence. Duke Energy Corporation Radiological Engineering is experienced in the use of the SCALE Code System, and the SCALE Code System is installed and maintained under the purview of the pertinent software and data quality assurance program.

The results of the radiation source term calculation were used as input to Calculation OSC-8706 to evaluate the shielding characteristics of a single Horizontal Storage Module. The MCNP Monte Carlo particle transport computer code was used to perform the transport calculations and to write a surface flux file for use in subsequent skyshine calculations.

Appropriate software quality controls have been implemented for the computer codes and data used in these analyses (specifically, Calculation DPC-1201.30-00-0010 contains the verification and validation for MCNP5, while SDQA-30269-NG0 documents the quality control measures in place for MCNP5).

Calculation OSC-8716 uses the surface flux files developed in OSC-8706 in a repeating array representing all of the Horizontal Storage Modules in the ISFSI, including Phase VI fully loaded with spent fuel. The source description in the MCNP input is constructed with source probabilities for each Horizontal Storage Module to represent the appropriate decay time associated with each HSM. Finally, a skyshine calculation is performed to obtain near- and far-field dose results from Phases I -VI of the Oconee ISFSI.

Calculation OSC-8716 Table 23.1-1, summarizes dose rate versus distance, showing a dose rate of 6.84 mRem per year at 500 meters, which is the longest distance at which results converge. The closest residence to the ISFSI is in the SW-SSW direction approximately 1 mile (-1600 meters) from the ISFSI, or 1.36 miles from the centerline of the site. This is conservatively farther than the distance used for computation of dose rates. The 2009 40CFR190 Uranium Fuel Cycle Dose Calculation Results for the ONS site show a maximum total body dose of 0.0754 mrem per year. The total dose rate from all operations to the nearest real individual is therefore less than 7 mRem per year.

These calculations need not consider any effluent from Phase VI. The Phase VI HSMs use the NUHOMS-24PHB DSCs, which are designed as "leak-tight". Per Appendix N, Section N.II.2.8 of the NUHOMS FSAR3 accidental releases are not credible.

Attachment 7

Revisions to the Oconee UFSAR Section 16.11 Radiological Effluent Controls

- SLC Change 2014-02 revised SLC 16.11.10, Radiological Effluent Control to clarify Routine Radiological Environmental Operating Reports are submitted by May 15 of each year per TS 5.6.2. Previously it has said "prior to" each year.

- SLC Change 2012-13 revised SLC 16.11.4, Operational Safety Review. The change eliminates an inconsistency in SLC Table 16.11.4 -1 between a footnote requiring samples to be changed every 24 hours and a statement in the table requiring a "week" sample change frequency. This is a table consistency/ clarification issue. Samples are collected and analyzed every 24 hours. Additionally, a new footnote (k) and reference to support Ce-144 and Mo-99 sampling were added.

(10 pages, including this cover sheet)

16.11 RADIOLOGICAL EFFLUENTS CONTROL

16.11.10 Radiological Environmental Operating Report

COMMITMENT

Routine Radiological Environmental Operating Reports covering the operation of the unit during the previous calendar year shall be submitted by May 15 of each year.

The Annual Radiological Environmental Operating Report shall include summaries, interpretations. and statistical evaluation of the results of the radiological environmental surveillance activities for the report period, including a comparison with preoperational studies, operational controls (as appropriate), and previous environmental surveillance reports and an assessment of the observed impacts of the plant operation on the environment. The reports shall also include the results of the land use censuses. If harmful effects are detected by the monitoring, the report shall provide an analysis of the problem and a planned course of action to alleviate the problem.

The Annual Radiological Environmental Operating Report shall include a summary of the results obtained as part of the required Interlaboratory Comparison Program. The Interlaboratory Comparison Program shall be described in the Annual Radiological Environmental Operating Report.

The Annual Radiological Environmental Operating Report shall include summarized and tabulated results of the radiological environmental samples required by SLCs taken during the report period. In the event that some results are not available for inclusion with the report, the report shall be submitted noting and explaining the reasons for the missing results. The missing data shall be submitted as soon as practical in a supplementary report.

The initial report shall also include the following: a summary description of the radiological environmental monitoring program including sampling methods for each sample type, size and physical characteristics of each sample type, sample preparation methods, analytical methods, and measuring equipment used; a map of all sampling locations keyed to a table giving distances and directions from one reactor; and, the result of land use censuses. Subsequent reports shall describe all substantial changes in these aspects.

APPLICABILITY: At all times.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. NA	A.1 NA	NA

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 16.11.10.1 NA	NA

BASES

NA

REFERENCES:

1. Oconee ITS
2. Offsite Dose Calculation Manual

16.11 RADIOLOGICAL EFFLUENTS CONTROL

16.11.4 Operational Safety Review

COMMITMENT Required sampling should be performed as detailed in Table 16.11.4-1.

APPLICABILITY: At all times

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. NA	A.1 NA	NA

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 16.11.4.1 N/A	N/A

Table 16.11.4-1
Minimum Sampling Frequency and Analysis Program

Item		Check		Frequency	Lower Limit of Detection[b] of Lab Analysis for Waste
1.	Decant Monitor Tank, Turbine Building Sump Monitor Tanks, Waste and Recycle Monitor Tanks	a.	Principal Gamma Emitters[c] including Dissolved Noble Gases	Composite Grab Sample prior to release of each batch[h]	<5E-06 µCi/ml (Ce-144) <5E-07 µCi/ml (Other Gamma Nuclides) <1E-05 µCi/ml (Dissolved Gases) <1E-06 µCi/ml (I-131)
		b.	Radiochemical Analysis Sr-89 and Sr-90	Quarterly from all composited batches[f]	<5E-08 µCi/ml
		c.	Tritium	Monthly Composite	<1E-05 µCi/ml
		d.	Gross Alpha Activity	Monthly Composite	<1E-07 µCi/ml
2.	Unit Vent Sampling (Includes Waste Gas Decay Tanks, Reactor Building Purges, Auxiliary Building Ventilation, Spent Fuel Pool Ventilation, Air Ejectors)	a.	Iodine Spectrum[a]	Continuous monitor, weekly sample[e]	<1E-10 µCi/cc (I-133)[j] <1E-12 µCi/cc (I-131)[j]
		b.	Particulates[a]		
		i.	Ce-144 & Mo-99	Weekly Composite[e]	<5E-10 µCi/cc[j][k]
		ii.	Other Principle Gamma Emitters[d]	Weekly Composite[e]	<1E-11 µCi/cc[j]
		iii.	Gross Alpha Activity	Monthly, using composite samples of one week	<1E-11 µCi/cc
		iv.	Radiochemical Analysis Sr-89, Sr-90	Quarterly Composite	<1E-11 µCi/cc
		c.	Gases by Principle Gamma Emitters[d]	Weekly Grab Sample	<1E-04 µCi/cc
		d.	Tritium	Weekly Grab Sample	<1E-06 µCi/cc
3.	Waste Gas Decay Tank	a.	Principle Gamma Emitters[d]	Grab Sample prior to release of each batch	<1E-04 µCi/cc (gases) <1E-10 µCi/cc (particulates and iodines) <5E-09 µCi/cc (Ce-144 and Mo-99)
		b.	Tritium	Grab Sample prior to release of each batch	<1E-06 µCi/cc
4.	Reactor Building	a.	Principle Gamma Emitters[d]	Grab sample each purge	<1E-04 µCi/cc (gases) <1E-10 µCi/cc (particulates and iodines) <5E-09 µCi/cc (Ce-144 and Mo-99)
		b.	Tritium	Grab sample each purge	<1E-06 µCi/cc

Table 16.11.4-1
Minimum Sampling Frequency and Analysis Program

Item		Check		Frequency	Lower Limit of Detection[b] of Lab Analysis for Waste
5.	Not Used				
6.	#3 Chemical Treatment Pond Effluent[i]	a.	Principle Gamma Emitters[c]	Weekly Continuous Composite[g]	<5E-07 µCi/ml
		b.	I-131	Weekly Continuous Composite[g]	<1E-06 µCi/ml
		c.	Tritium	Monthly Continuous Composite[g]	<1E-05 µCi/ml
		d.	Gross Alpha Activity	Monthly Continuous Composite[g]	<1E-07 µCi/ml
		e.	Sr-89 & Sr-90	Quarterly Continuous Composite[g]	<5E-08 µCi/ml
		f.	Dissolved and Entrained gases (Gamma Emitters)	Monthly Grab	<1E-05 µCi/ml
7.	Radwaste Facility Ventilation	a.	Iodine Spectrum[a]	Continuous monitor, weekly sample[e]	(I-133) <1E-09 µCi/cc (I-131) <1E-11 µCi/cc
		b.	Particulate[a]		
		i.	Ce-144 and Mo-99	Weekly Composite[e]	<5E-10 µCi/cc[j]
		ii.	Other Principle Gamma Emitters[d]	Weekly Composite[e]	<1E-11 µCi/cc[j]
		iii.	Gross Alpha Activity	Monthly, using composite samples of one week	<1E-11 µCi/cc
		iv.	Radiochemical Analysis Sr-89, Sr-90	Quarterly Composite	<1E-11 µCi/cc
		c.	Gases by Principle Gamma[d] Emitters	Weekly Grab Sample	<1E-04 µCi/cc
		d.	Tritium	Weekly Grab Sample	<1E-06 µCi/cc

Table 16.11.4-1
Minimum Sampling Frequency and Analysis Program

Item		Check		Frequency	Lower Limit of Detection[b] of Lab Analysis for Waste
8.	Hot Machine Shop Ventilation	a.	Iodine Spectrum	Weekly Sample[e]	(I-133) <1E-10 µCi/cc[j] (I-131) <1E-12 µCi/cc[j]
		b.	Particulate		
		i.	Ce-144 and Mo-99	Weekly Composite[e]	<5E-10 µCi/cc[j][k]
		ii.	Other Principle Gamma Emitters[d]	Weekly Composite[e]	<1E-11 µCi/cc[j]
		iii.	Gross Alpha Activity	Monthly, using composite samples of one week	<1E-11 µCi/cc
		iv.	Radiochemical Analysis Sr-89, Sr-90	Quarterly Composite	<1E-11 µCi/cc
		c.	Gases by Principle Gamma Emitters	NA	NA
		d.	Tritium	NA	NA
9.	Interim Radwaste Building Ventilation	a.	Iodine Spectrum	Weekly sample[e]	(I-133) <1E-10 µCi/cc[j] (I-131) <1E-12 µCi/cc[j]
		b.	Particulate		
		i.	Ce-144 and Mo-99	Weekly Composite[e]	<5E-10 µCi/cc[j]
		ii.	Other Principle Gamma Emitters[d]	Weekly Composite[e]	<1E-11 µCi/cc[j]
		iii.	Gross Alpha Activity	Monthly, using composite samples of one week	<1E-11 µCi/cc
		iv.	Radiochemical Analysis Sr-89, Sr-90	Quarterly Composite	<1E-11 µCi/cc
		c.	Gases by Principle Gamma[d] Emitters	Weekly Grab Sample	<1E-04 µCi/cc
		d.	Tritium	Weekly Grab Sample	<1E-06 µCi/cc

(a) Samples shall be changed at least once per 7 days and analyses shall be completed within 48 hours after changing, or after removal from sampler. Sampling shall also be performed at least once per 24 hours for at least 7 days following each shutdown, startup, or THERMAL POWER change exceeding 15% of RATED THERMAL POWER within a 1-hour period and analyses shall be completed within 48 hours of changing. When samples collected for 24 hours are analyzed, the corresponding LLDs may be increased by a factor of 10. This requirement does not apply if (1) analyses show that the DOSE EQUIVALENT I-131 concentration in the reactor coolant has not increased more than a factor of 3; and (2) the noble gas monitor shows that effluent activity has not increased more than a factor of 3.

(b) The LLD is defined for purposes of these commitments as the smallest concentration of radioactive material in a sample that would be detected with 95% probability with 5% probability of falsely concluding that a blank observation represents a "real" signal.

For a particular measurement system (which may include radiochemical separation) :

$$LLD = \frac{(2.71 / T) + 4.65\, s_b}{E \times V \times 2.22E06 \times Y \times \exp(-\lambda \Delta t)}$$

Where:

LLD is the "a priori" lower limit of detection as defined above (as micro Curies per unit mass or volume),

s_b is the standard deviation of the background counting rate or of the counting rate of a blank sample as appropriate (as counts per minute),

E is the counting efficiency (as counts per disintegration),

V is the sample size (in units of mass or volume),

2.22E06 is the number of disintegrations per minute per micro Curie,

Y is the fractional radiochemical yield (when applicable),

λ is the radioactive decay constant for the particular nuclide

Δ t is the elapsed time between midpoint of sample collection and time of counting (for plant effluents, not environmental samples). NOTE: This assumes decay correction is applied (at the time of analysis) for the duration of sample collection, for the time between collection and analysis, and for the duration of the counting. Additionally, it does not apply to isolated systems such as Waste Gas Decay Tanks and Waste Monitor Tanks.

T is the sample counting time in minutes

Typical values of E, V, Y and Δ t should be used in the calculation.

It should be recognized that the LLD is an a priori (before the fact) limit representing the capability of a measurement system and not an a posteriori (after the fact) limit for a particular measurement.

(c) The principal gamma emitters for which the LLD control applies include the following radionuclides: Mn-54. Fe-59, Co-58, Co-60. Zn-65, Mo-99, Cs-134, Cs-137. and Ce-141. Ce-144 shall also be measured, but with a LLD of 5E-06 µCi/ml. This list does not mean that only these nuclides are to be considered. 0ther gamma peaks that are identifiable, together with the above nuclides shall also be analyzed and reported in the Annual Radioactive Effluent Release Report.

(d) The principal gamma emitters for which the LLD commitment applies exclusively are the following radionuclides: Kr-87. Kr-88, Xe-133. Xe-133m, Xe-135. and Xe-138 for gaseous emissions and Mn-54, Fe-59. Co-58, Co-60, Zn-65. Mo-99, Cs-134, Cs-137, Ce-141, and Ce-144 for particulates. This list does not mean that only these nuclides are to be detected and reported. 0ther peaks which are measurable and identifiable, together with the above nuclides shall also be identified and reported.

(e) The ratio of the sample flow rate to the sampled stream flow rate shall be known for the time period covered by each dose or dose rate calculation made in accordance with SLC 16.11.2.a, SLC 16.11.2.b.1, and SLC 16.11.2.b.2.

(f) A composite sample is one in which the quantity of liquid sampled is proportional to the quantity of liquid waste discharged and in which the method of sampling employed results in a specimen which is representative of the liquids released.

(g) To be representative of the quantities and concentrations of radioactive materials in liquid effluents, samples shall be collected continuously in proportion to the rate of flow of the effluent stream. Prior to analysis, all samples taken for the composite shall be thoroughly mixed in order for the composite sample to be representative of the effluent release.

(h) A batch release is the discharge of liquid wastes of a discrete volume. Prior to sampling for analysis, each batch shall be isolated, and then thoroughly mixed, to assure representative sampling.

(i) A continuous release is the discharge of liquid wastes of a non-discrete volume, e.g., from a volume of a system that has an input flow during the continuous release. Samples shall be analyzed within 48 hours after changing (on or after removal from sampler).

(j) When samples collected for 24 hours are analyzed, the corresponding LLDs may be increased by a factor of 10. Samples shall be analyzed within 48 hours after changing (on or after removal from sampler).

(k) Ce-144 and Mo-99 LLD as approved by NRC SER dated January 16, 1984 (Reference 1).

BASES

N/A

REFERENCES:

1. Safety Evaluation Report dated January 16, 1984, supporting Amendment Nos. 125, 125, and 122 for Oconee Nuclear Station to revise Technical Specifications to incorporate changes to the Radiological Effluent Technical Specifications (RETS) in order to bring them into compliance with Appendix I of 10 CFR Part 50.

Attachment 8

Revisions to the Radioactive Waste Process Control Program Manual

(4 pages, including this cover sheet, and Compact Disc)

March 11, 2015

CJ Wasik
Manager Regulatory Affairs
Oconee Nuclear Organizational Effectiveness

Attention: J. E. Smith

Subject: Oconee Nuclear Station
2014 Annual Radioactive Effluent Release Report
Process Control Program Changes
File: GS-764.25, OS-215.06

Enclosed are CD copies of the PDF file of the Radioactive Waste Process Control Program Manual to be included in the NRC distribution of the Annual Radioactive Effluent Release Report for Oconee Nuclear Station for the period of January 1, 2014 through December 31, 2014. This version of the Manual contains all the changes implemented during 2014 and is designated on the CD cover as the "2014 ARERR, 2015 Submittal, Radioactive Waste Process Control Program Manual".

The PCP Manual is revised using the review and approval process in APPENDIX F of the PCP Manual, "Administration of the PCP and Support Documents" prior to publication on the NEDL Portal.

The attachment summarizes the scope of the changes during 2014.

The PDF file "DEC 2014-15 PCP Manual.pdf" on the CDs was reviewed and verified against the control copies of the PCP Manual published on the NEDL Portal. Two CD copies are for internal distribution, one is for SC DHEC and four CDs are for the NRC as follows:

DUKE
1. ELL
2. Master File

SC STATE
3. DHEC primary contact Russell Keown

NRC
4. NRC Document Control Desk
5. Oconee NRC Project Manager
6. Oconee Senior Resident Inspector
7. NRC Regional Administrator

If you have any questions, please call David Vaught @ 980-373-5302.

James A. Mockridge
Supervising Scientist
Nuclear Chemistry

David D Vaught

by: David L Vaught
Lead Engineer
Nuclear Chemistry - Radwaste

ATTACHMENT: Appendix L - ARERR Attachment 8

Appendix L – ARERR ATTACHMENT 8
Revisions to the Radioactive Waste Process Control Program Manual

A brief summary of the 2014 changes to the Duke Energy Radioactive Waste PCP Manual is found below. These are described in more detail in APPENDIX H "Revision Summary - Licensee Initiated Changes". The Duke Energy Carolinas (DEC) PCP Manual is a Corporate document used by the 3 DEC sites. The Duke Energy Progress (DEP) site PCPs have not been incorporated into this PCP Manual and they have their own individual PCPs that will be submitted in their ARERRs.

SUMMARY OF PCP MANUAL CHANGES

The PCP Manual revisions described in this summary were implemented as a result of the project to transfer of the Chemistry department operating programs to the Operations department. PIP G-14-00619 describes the PCP Manual changes and documents the reviews and approvals. These revisions also reflect the organizational and program/ process changes from the Duke Energy & Progress Energy merger .

PCP MANUAL SECTIONS CHANGED

APPENDIX A: "ONS PCP" Rev 16

APPENDIX B: "MNS PCP" Rev 19

APPENDIX C: "CNS PCP" Rev 13

APPENDIX E: "PCP Manual Review and Approval Requirements" Rev 3

DESCRIPTION OF CHANGES BY SECTION

APPENDICES A, B & C Summary of changes

The Site PCP Sections Appendix A, B & C were all changed in the following manner:

1. Added the new Operations PCP implementing procedures developed from the Radwaste Chemistry procedures (both are listed to support the transition)
2. Changes in the management approvals: replaced site Station Manager with Nuclear AOM Shift approval (Manager over Operations Radwaste Core Team)
3. Chemistry Manager Approval remains in place since Chemistry will provide technical support to the PCP

METHODOLOGY

During the transfer of the Chemistry department operating programs to the Operations department, the PCP implementing procedures that were used by Chemistry Radwaste will be superseded by the new Operations procedures as the new procedure implementation requirements are completed.

Appendix L – ARERR ATTACHMENT 8
Revisions to the Radioactive Waste Process Control Program Manual

These revisions to the site PCP sections of the PCP Manual change the organization of the site PCP sections to address the transitional conditions of the step-wise process used in training, qualification and procedure validation that the transition to the new procedures requires. This format allows the following methodology to be used:

- Both procedures are listed in the site PCP section for this revision so either may be used when needed by the site.
- As each new Operations procedure is implemented, the Chemistry procedure will be no longer available in NEDL.

APPENDIX E: "PCP Manual Review and Approval Requirements" Rev 3

Changed the technical reviews and management approvals designated for each section of the PCP Manual affected by the project to move operating functions from Chemistry to Operations.

Table E-1: Revision Review and Approval

1. Corporate PCP Section;
    - Changed to specify DEC Station Managers approvals since the PCP Manual has not yet been revised to incorporate the DEP Sites
    - Added the DEC Nuclear AOM Shift approval (Manager over Ops Radwaste Core Team)
    - Specified DEC Chemistry Managers Approvals
    - Changed Technical review from Station Chemistry Staff to Station Radwaste Staff
2. Site Specific PCP Sections: Appendix A, B & C
    - Changed site technical review from Chemistry to Radwaste
    - Added the DEC Nuclear AOM Shift approval (Manager over Ops Radwaste Core Team)

Table E-2: Minor Change Review and Approval

Changed technical review from Chemistry to Radwaste

Attachment 9

Information to Support the Nuclear Energy Institute (NEI) Groundwater Protection Initiative

(4 pages, including this cover sheet)

Oconee 2014 ARERR - Ground Water Well Tritium Data

Duke Energy implemented a Ground Water Protection program in 2007. This initiative was developed to ensure timely and effective management of situations involving inadvertent releases of licensed material to ground water. As part of this program, Oconee Nuclear Station monitored 67 wells in 2014. Tritium activity in wells GM-7R and GM-7DR was reported according to NEI 07-07, Industry Ground Water Protection Initiative, in February 2010. The probable source of this activity was determined to be discharges from the turbine building sumps to Chemical Treatment Pond #3 through the east yard drain. Discharges from the turbine building sump through this pathway were discontinued in 2008. Installation of a recovery well, currently RW-1, in 2011 has resulted in decreased tritium concentrations in well GM-7DR to below MDA.

Wells are typically sampled quarterly or semi-annually. The recovery well discharge composite was collected weekly through 3/3/2014, then monthly thereafter. The decisions to decrease recovery well analysis was based on long term trending showing consistent tritium concentrations. Ground water samples are regularly analyzed for tritium and gamma emitters, with select wells being analyzed for difficult-to-detect radionuclides. No gamma or difficult-to-detect radionuclides, other than naturally occurring radionuclides, were identified in well samples during 2014. Results from sampling during 2014 confirmed existing knowledge of tritium concentrations in site ground water.

On 5/28/2014, it was discovered samples from monitoring wells A-1, A-10, A-11 and A-13 for the April 2014 timeframe were not shipped to a South Carolina (SC) certified laboratory, as required, for gamma and tritium analyses due to personnel oversight. This was documented in Corrective Action Program (CAP) entry PIP G-14-1208. Upon discovery, samples were immediately analyzed for gamma and tritium by Duke Energy EnRad laboratory and then shipped to SC certified laboratory for tritium analysis. The SC certified laboratory was unable to meet the gamma lower limits of detection for ground water due to long decay time. Monitoring wells A-1, A-10, A-11 and A-13 were resampled on 6/5/2014 and sent to SC certified laboratory for immediate gamma and tritium analyses. All analyses exhibited typical values. Results obtained from resampling on 6/5/2014 are included in table below.

One event meeting the criteria for voluntary notification per NEI 07-07 occurred at Oconee in 2014 as documented in CAP entry PIP O-14-5180. On 5/6/2014, while transferring water from Chemical Treatment Pond-1 (CTP-1) to CTP-3, water was observed seeping from the ground at a location near the transfer piping between the ponds. The transfer was terminated and the ground seepage subsided. The leakage path was identified as a 3 inch hole drilled in the side of the Yard Drain catch basin. The hole had been drilled over two years earlier per an Engineering Change for the installation of security cables. The as found orientation of the catch basin lid contributed to the amount of leakage that occurred. The 3 inch hole was repaired and the catch basin lid was reoriented. Tritium concentration in CTP-1 at the time was approximately 4E+03 picocuries per liter. Total estimated tritium activity released over the lifetime of the leak was 2.4E-06 Curies and represents a small fraction of total tritium activity released in liquid effluents shown in Oconee 2014 ARERR Attachment 1. Monitoring wells A-13 and A-14 are down gradient from the leak location. The wells were sampled on 5/15/2014 to detect any changes to the tritium concentration in ground water. The results did not indicate any significant changes to tritium concentration in ground water, as both wells exhibited typical values.

Results from sampling during 2014 are shown in the tables below.

Oconee 2014 ARERR - Ground Water Well Tritium Data

Well Name	Location / Description	Tritium Concentration (pCi/l)				# of Samples
		1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	
A-1	ONS GWPI / A-1 / CTP 1/2	<MDA	<MDA	<MDA	<MDA	4
A-10	ONS GWPI / A-10 / CTP 3	3.87E+02	3.37E+02	2.74E+02	3.03E+02	4
A-11	ONS GWPI / A-11 / CTP 3	<MDA	<MDA	<MDA	<MDA	4
A-12	ONS GWPI / A-12 / CTP 3	<MDA	<MDA	<MDA	<MDA	4
A-13	ONS GWPI / A-13 / CTP 1/2	3.72E+02	6.48E+02	7.65E+02	9.30E+02	4
A-14	ONS GWPI / A-14 / CTP 1/2	2.63E+02	<MDA	2.10E+02	<MDA	4
A-17	ONS GWPI / A-17 / CTP 1/2	1.78E+02	<MDA	<MDA	<MDA	4
A-18	ONS GWPI / A-18 / CTP 1/2	1.60E+02	<MDA	<MDA	<MDA	4
A-2	ONS GWPI / A-2 / CTP 1/2	<MDA	<MDA	<MDA	<MDA	4
A-9	ONS GWPI / A-9 / CTP 1/2	1.79E+02	<MDA	<MDA	NS	3
BG-4	ONS GWPI / BG-4 / Ball Field	<MDA	<MDA	<MDA	<MDA	4
GM-10	ONS GWPI / GM-10 / 525 kv Sw Yard	NS	<MDA	NS	<MDA	2
GM-10R	ONS GWPI / GM-10R / 525 kv Sw Yard	NS	<MDA	NS	<MDA	2
GM-11	ONS GWPI / GM-11 / ONS Garage	NS	<MDA	NS	<MDA	2
GM-11R	ONS GWPI / GM-11R / ONS Garage	NS	<MDA	NS	<MDA	2
GM-12	ONS GWPI / GM-12 / E of Access Rd.	NS	<MDA	NS	<MDA	2
GM-12R	ONS GWPI / GM-12R / E of Access Rd.	NS	<MDA	NS	<MDA	2
GM-13	ONS GWPI / GM-13 / 525 kv Sw Yard	NS	<MDA	NS	<MDA	2
GM-13R	ONS GWPI / GM-13R / 525 kv Sw Yard	NS	<MDA	NS	<MDA	2
GM-14	ONS GWPI / GM-14 / Mnt. Trg. Facility	NS	<MDA	NS	<MDA	2
GM-14R	ONS GWPI / GM-14R / Mnt. Trg. Facility	NS	<MDA	NS	<MDA	2
GM-15	ONS GWPI / GM-15	<MDA	<MDA	<MDA	<MDA	4
GM-15R	ONS GWPI / GM-15R	<MDA	<MDA	<MDA	<MDA	4
GM-16DDR	ONS GWPI / GM-16DDR	3.37E+02	2.79E+02	3.91E+02	NS	3
GM-16DR	ONS GWPI / GM-16DR	7.86E+03	8.05E+03	8.53E+03	NS	3
GM-16R	ONS GWPI / GM-16R	1.31E+03	1.23E+03	1.50E+03	NS	3
GM-17DR	ONS GWPI / GM-17DR	2.62E+03	2.61E+03	2.66E+03	2.51E+03	4
GM-17R	ONS GWPI / GM-17R	1.36E+03	1.13E+03	1.45E+03	1.07E+03	4
GM-18R	ONS GWPI / GM-18R	7.44E+03	6.69E+03	6.98E+03	6.66E+03	4
GM-19	ONS GWPI / GM-19	1.28E+03	1.31E+03	1.47E+03	1.72E+03	4
GM-19R	ONS GWPI / GM-19R	4.60E+02	3.42E+02	4.73E+02	6.02E+02	4
GM-1R	ONS GWPI / GM-1R / CTP 1/2	<MDA	<MDA	<MDA	<MDA	4
GM-20	ONS GWPI / GM-20	<MDA	<MDA	<MDA	<MDA	4
GM-20R	ONS GWPI / GM-20R	<MDA	<MDA	<MDA	<MDA	4
GM-21	ONS GWPI / GM-21	NS	<MDA	NS	<MDA	2
GM-22	ONS GWPI / GM-22	NS	<MDA	NS	<MDA	2
GM-23	ONS GWPI / GM-23	2.98E+02	2.46E+02	3.72E+02	4.10E+02	4
GM-24R	ONS GWPI / GM-24R	1.59E+03	1.04E+03	1.17E+03	NS	3
GM-25R	ONS GWPI / GM-25R	3.03E+02	2.64E+02	3.86E+02	3.50E+02	4
GM-2DR	ONS GWPI / GM-2DR / U-1/2 SFP	2.15E+02	2.22E+02	2.82E+02	3.66E+02	4
GM-2R	ONS GWPI / GM-2R / U-1/2 SFP	4.43E+02	5.99E+02	4.19E+02	5.14E+02	4
GM-3DR	ONS GWPI / GM-3DR / U-3 SFP	1.91E+02	<MDA	2.46E+02	4.68E+02	4
GM-3R	ONS GWPI / GM-3R / U-3 SFP	2.60E+02	<MDA	3.20E+02	4.38E+02	4
GM-4	ONS GWPI / GM-4 / Rad. Mat. WH	5.24E+02	4.57E+02	4.92E+02	5.66E+02	4
GM-5	ONS GWPI / GM-5 / Rdwst. Bldg.	1.94E+02	<MDA	<MDA	NS	3
GM-5R	ONS GWPI / GM-5R / Rdwst. Bldg.	<MDA	<MDA	<MDA	NS	3
GM-6	ONS GWPI / GM-6 / Outflow to CTP-3	<MDA	<MDA	<MDA	<MDA	4
GM-6R	ONS GWPI / GM-6R / Outflow to CTP-3	<MDA	<MDA	<MDA	<MDA	4
GM-7	ONS GWPI / GM-7 / 525 kv Sw Yard	3.02E+02	<MDA	3.54E+02	3.74E+02	4
GM-7DR	ONS GWPI / GM-7DR	<MDA	<MDA	<MDA	<MDA	4

Oconee 2014 ARERR - Ground Water Well Tritium Data

Well Name	Location / Description	Tritium Concentration (pCi/l) 1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	# of Samples
GM-7R	ONS GWPI / GM-7R / 525 kv Sw Yard	4.96E+03	4.68E+03	3.80E+03	3.12E+03	4
GM-8	ONS GWPI / GM-8 / E of U-3 TB	2.46E+02	2.43E+02	2.75E+02	2.24E+02	4
GM-8R	ONS GWPI / GM-8R / E of U-3 TB	<MDA	2.13E+02	3.08E+02	<MDA	4
GM-9	ONS GWPI / GM-9 / E of U-2 TB	2.87E+02	3.60E+02	4.12E+02	2.21E+02	4
GM-9R	ONS GWPI / GM-9R / E of U-2 TB	<MDA	<MDA	1.87E+02	<MDA	4
MW-11	ONS GWPI / MW-11 / Landfill	<MDA	NS	<MDA	NS	2
MW-11D	ONS GWPI / MW-11D / Landfill	<MDA	NS	<MDA	NS	2
MW-13	ONS GWPI / MW-13 / Landfill	<MDA	NS	<MDA	NS	2
MW-16	ONS GWPI / MW-16 / Landfill	<MDA	NS	<MDA	NS	2
MW-3	ONS GWPI / MW-3 / Landfill	<MDA	NS	<MDA	NS	2
MW-RP01	ONS GWPI / MW-RP01 / Landfarm/Burial	NS	<MDA	NS	NS	1
MW-RP02	ONS GWPI / MW-RP02 / Landfarm/Burial	NS	<MDA	NS	NS	1
MW-RP03	ONS GWPI / MW-RP03 / Landfarm/Burial	NS	<MDA	NS	NS	1

Well Name	Location / Description	Tritium Concentration (pCi/l) 1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	# of Samples
011	ONS / 011 / Ball Field	<MDA	<MDA	<MDA	<MDA	4
013	ONS / 013 / WH 5	<MDA	<MDA	<MDA	<MDA	4
015	ONS / 015 / Brown's Bottom	<MDA	<MDA	<MDA	<MDA	4

Well Name	Location / Description	Tritium Concentration (pCi/l) Minimum	Average	Maximum	# of Samples
RW-1[1]	525 kv Sw. Yard	1.45E+03	1.73E+03	1.99E+03	19

(1) Weekly sampling 12/30/2013 - 3/3/2014, monthly thereafter. Sampling through 12/8/2014 indicated.

Key to above tables.

NS	-	Not scheduled to be sampled or not sampled due to insufficient volume in well or well inaccessible during outage.
pCi/l	-	picocuries per liter.
< MDA	-	less than minimum detectable activity, typically 250 pCi/l.
20,000 pCi/l	-	the Environmental Protection Agency drinking water standard for tritium. This standard applies only to water used for drinking.
1,000,000 pCi/l	-	the 10CFR20, Appendix B, Table 2, Column 2, Effluent Concentration Limit for tritium.

Attachment 10
Inoperable Equipment

The Oconee Nuclear Station Radwaste Control Room "low flow annunciator" associated with 4RIA-45 (Radwaste Facility Ventilation System gaseous effluent discharge monitor) was declared out of service on 4/14/2014 and remained out of service until 6/17/2014. The annunciator was not returned to service within 30 days as specified in Selected Licensee Commitment (SLC) 16.11.3, Condition "C" Required Action "C.2". Troubleshooting indicated that the interposing relay contacts of the flow relay were not consistently changing state to the closed position once the relay was de-energized. Therefore, the low flow annunciator did not actuate in all circumstances as required by procedure. Inability to locate a replacement flow relay in a timely manner caused the failure to return the low flow annunciator to service within 30 days. A replacement relay was eventually located and installed in the 4RIA-45 flow switch assembly. Once replaced, the relay consistently operated as expected on an intentionally-imposed loss of flow condition. The radiation monitor and associated particulate and iodine samplers were unaffected and were considered operable during the subject time frame.

Attachment 11

Radioactive Waste Systems Changes

This attachment documents the changes made to the radioactive waste systems at the Oconee Nuclear Station during the period January 1, 2014 to December 31, 2014.

There were no changes made to the radioactive waste systems during 2014 at the Oconee Nuclear Station. However the Spent Fuel Reverse Osmosis unit does create a new input to the Waste Stream.
Reverse Osmosis Unit EC. # 100744
The Reverse Osmosis Unit (RO Unit) removes dissolved silica from the SFPs and the BWSTs. Suction is taken directly from the SFPs and from the purification loop for the BWSTs. Discharge from the RO Unit goes back into the system after the last filter of the purification loop. The water is recirculated with the source being purified under a number of limitations needed to prevent undesirable effects, since the RO Unit removes boron along with the silica and has a waste stream of water from the source being purified. A separate antimony filter/resin partially removes antimony from the waste stream.

Enclosure

2014 Offsite Dose Calculation Manual
Compact Disc