



Tennessee Valley Authority, 1101 Market Street, Chattanooga, Tennessee 37402

April 30, 2012

10 CFR 50.4

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

Sequoyah Nuclear Plant, Units 1 and 2
Facility Operating License Nos. DPR-77 and DPR-79
NRC Docket Nos. 50-327 and 50-328

Subject: **Annual Radioactive Effluent Release Report - 2011**

Enclosed is the subject Annual Radioactive Effluent Release Report (ARERR) for the period of January 1 to December 31, 2011. This report (Enclosure 1) is being submitted as required by the respective Sequoyah Nuclear Plant (SQN), Units 1 and 2, Technical Specification 6.9.1.8, which specifies that the report be submitted prior to May 1st of each year.

A Radiological Impact Assessment is being submitted for the same reporting period in accordance with Section 5.2 of the SQN Offsite Dose Calculation Manual. The assessment is provided in Enclosure 2.

There are no regulatory commitments in this submittal. If you have any questions concerning this matter, please telephone Rusty Proffitt at (423) 843-6651.

Respectfully,

J. W. Shea
Manager, Corporate Nuclear Licensing

Enclosures:

1. Annual Radioactive Effluent Release Report, Sequoyah Nuclear Plant, 2011
2. Radiological Impact Assessment Report, Sequoyah Nuclear Plant, 2011

cc (Enclosures):

NRC Regional Administrator - Region II
NRC Senior Resident Inspector - Sequoyah Nuclear Plant

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Enclosure 1

ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT

SEQUOYAH NUCLEAR PLANT

2011

2011
SEQUOYAH NUCLEAR PLANT (SQN)
EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT

I. REGULATORY LIMITS

A. Gaseous Effluents

1. Dose rates due to radioactivity released in gaseous effluents from the site to areas at and beyond the unrestricted area boundary shall be limited to the following:
 - a. Noble gases:
 - Less than or equal to 500 mrem/year to the total body.
 - Less than or equal to 3000 mrem/year to the skin.
 - b. Iodine-131 (I-131), Iodine-133 (I-133), tritium, and all radionuclides in particulate form with half-lives greater than eight days:
 - Less than or equal to 1500 mrem/year to any organ.
2. Air dose due to noble gases released in gaseous effluents to areas at and beyond the unrestricted area boundary shall be limited to the following:
 - a. Less than or equal to 5 mrad for gamma radiation and less than or equal to 10 mrad for beta radiation during any calendar quarter.
 - b. Less than or equal to 10 mrad for gamma radiation and less than or equal to 20 mrad for beta radiation during any calendar year.
3. Dose to a member of the public from Iodine-131, Iodine-133, tritium, and radionuclides in particulate form with half-lives greater than eight days in gaseous effluents released to areas at and beyond the unrestricted area boundary shall be limited to the following:
 - a. Less than or equal to 7.5 mrem to any organ during any calendar quarter.
 - b. Less than or equal to 15 mrem to any organ during any calendar year.

B. Liquid Effluents

1. The annual average concentration of radioactivity released in liquid effluents to unrestricted areas shall be limited to the concentrations specified in Title 10 of the Code of Federal Regulations (CFR), Part 20 (Standards for Protection Against Radiation), Appendix B, Table 2, Column 2, for radionuclides other than dissolved or entrained noble gases. For dissolved or entrained noble gases, the concentration shall be limited to 2.0E-04 microcuries/milliliter ($\mu\text{Ci/ml}$) total activity.

2. The dose or dose commitment to a member of the public from radioactivity in liquid effluents released to unrestricted areas shall be limited to:
 - a. Less than or equal to 1.5 mrem to the total body and less than or equal to 5 mrem to any organ during any calendar quarter.
 - b. Less than or equal to 3 mrem to the total body and less than or equal to 10 mrem to any organ during any calendar year.

II. EFFLUENT CONCENTRATION LIMITS

A. Liquids

- *1. The Effluent Concentration Limits (ECL) for liquids are those listed in 10 CFR 20, Appendix B, Table 2, Column 2. For dissolved and entrained gases, the ECL of 2.0E-04 $\mu\text{Ci/ml}$ is applied. This ECL is based on the Xenon-135 (Xe-135) concentration in air (submersion dose) converted to an equivalent concentration in water as discussed in the International Commission on Radiological Protection (ICRP), Publication 2.

*These values are used as applicable limits for liquid and gaseous effluents.

B. Gaseous

- *1. The maximum permissible dose rates for gaseous releases are defined in the plant Offsite Dose Calculation Manual (ODCM).
 - a. Noble gas dose rate at the unrestricted area boundary:
 - Less than or equal to 500 mrem/year to the total body.
 - Less than or equal to 3000 mrem/year to skin.
 - b. Iodine-131, Iodine-133, tritium, and particulates with half-lives greater than eight days dose rate at the unrestricted area boundary:
 - Less than or equal to 1500 mrem/year to any organ.

*These values are used as applicable limits for liquid and gaseous effluents.

III. AVERAGE ENERGY

SQN's ODCM limits the dose equivalent rates due to the release of noble gases to less than or equal to 500 mrem/year to the total body and less than or equal to 3000 mrem/year to the skin. The use of dose rate is in accordance with NUREG-0133, "Preparation of Radiological Effluent Technical Specifications for Nuclear Power Plants." Since the release rate is not used for effluent control, the average energy discussed in Regulatory Guide 1.21 (used for release rate control) is not included in this report.

IV. MEASUREMENTS AND APPROXIMATIONS OF TOTAL RADIOACTIVITY

NOTE: Every effort is made to ensure that effluent releases from SQN are conducted such that the ODCM Lower Limit of Detection (LLD) values are met. Whenever an analysis does not identify a radioisotope, a value of "0.00E-01 Ci" is recorded for the release. This does not necessarily mean that no activity was released for that particular radionuclide, but that the concentration was below the ODCM and analysis LLD. Refer to Tables A and B for estimates of these typical LLD values.

A. Fission and Activation Gases

Airborne effluent gaseous activity is continuously monitored and recorded. Additional grab samples from the shield building, auxiliary building, service building, and condenser vacuum exhausts are taken and analyzed at least monthly to determine the quantity of noble gas activity released for the month based on the average vent flow rates recorded for the sample period. Also, noble gas samples are collected and evaluated for the shield and auxiliary buildings following startup, shutdown, or rated thermal power change exceeding 15 percent within one hour (sampling is only required if the dose equivalent I-131 concentration in the primary coolant or the noble gas activity monitor shows that the containment activity has increased more than a factor of 3).

The quantity of noble gases released through the shield and auxiliary building exhausts due to purging or venting of containment and releases of waste gas decay tanks are also determined.

The total noble gas activity released for the month is then determined by summing of the activity released from each vent for the sampling periods.

B. Iodines and Particulates

Iodine and particulate activity is continuously sampled. Charcoal and particulate samples are taken from the shield and auxiliary building exhausts and analyzed at least weekly to determine the total activity released from the plant based on the average vent flow rates recorded for the sampling period.

Also, particulate and charcoal samples are taken from the auxiliary and shield building exhausts once per 24 hours for 2 days following startup, shutdown, or a rated thermal power change exceeding 15 percent within 1 hour. The quantity of iodine and particulate released from each vent during each sampling period is then determined using the average vent flow rates recorded for the sampling period and activity concentration.

The total particulate and iodine activity released for the month is then determined by summing all activity released from the shield and auxiliary building exhausts for the sampling periods.

C. Carbon-14 in Gaseous Releases

The Carbon-14 production and effluent source term estimates were based on Electric Power Institute methodology provided in EPRI Report 1021106, "Estimation of Carbon-14 in Nuclear Power Plant Gaseous Effluents," December 2010. It was determined that 19.8 curies of Carbon-14 is generated annually at SQN. However, only 98 percent is considered released as gas and only the carbon dioxide form (20 percent) of that is used in the gaseous dose calculations.

D. Liquid Effluents

Batch (Radwaste and during periods of primary to secondary leakage, condensate regenerants to cooling tower blowdown)

Total gamma isotopic activity concentrations are determined on each batch of liquid effluent prior to release. The total activity of a released batch is determined by summing each nuclide's concentration and multiplying by the total volume discharged. The total activity released during a month is then determined by summing the activity content of each batch discharged during the month.

There were no changes made to the radioactive waste systems and/or the Process Control Program (PCP) for this calendar year

Continuous Releases and Periodic Continuous Releases (Condensate regenerants, turbine building sump, and steam generator blowdown)

Total gamma isotopic activity and tritium concentrations are determined monthly on one composite sample each from the condensate system, and the turbine building sump. The tritium value is applied to releases over the month. Total gamma isotopic activity concentration for Units 1 and 2 steam generator blowdown is determined daily. In addition to ODCM Table 2.2-1, tritium concentrations are determined daily, averaged for the month, and applied to releases over the month. The total activity of the continuous release is determined by summing each nuclide's concentration and multiplying by the total volume discharged.

Monitoring Wells

SQN started conducting an investigation of tritium releases to the groundwater in 2003 due to identification of tritium in one of the on-site monitoring wells. This study involved pressure testing of the radwaste discharge line, installation and sampling of groundwater wells, visual inspection under the refueling water storage tanks (RWSTs) and inspection of drain lines. In addition to the one on-site Radiological Environmental Monitoring Program (REMP) groundwater monitoring well, SQN also has 18 non-REMP monitoring wells to support monitoring the onsite groundwater plume and for the presence or increase of radioactivity. These wells are sampled periodically for tritium. The tritium concentrations obtained in 2011 from these non-REMP wells are listed below. Initial and follow up analyses for the semi-annual sampling procedure indicated no gamma activity or Hard to Detect nuclides.

Well ID	Date	Activity in pCi/L	Date	Activity in pCi/L
Well-24	4/22/2011	<270	07/15/2011	N/A
Well-24	11/04/2011	N/A	12/21/2011	<239
Well-29	4/22/2011	364	07/15/2011	N/A
Well-29	11/04/2011	521	12/21/2011	<239
Well-31	4/22/2011	6716	07/15/2011	6732
Well-31	11/04/2011	4775	12/21/2011	5689
GP-7A	4/22/2011	<270	07/15/2011	N/A
GP-7A	11/04/2011	N/A	12/21/2011	287
GP-13	4/22/2011	5896	07/15/2011	5308
GP-13	11/04/2011	5244	12/21/2011	4618
GP-24	4/22/2011	<270	07/15/2011	N/A
GP-24	11/04/2011	284	12/21/2011	N/A
W-10	4/22/2011	N/A	07/15/2011	N/A
W-10	11/04/2011	22760	12/21/2011	22922

Doses from I-131 Water Ingestion Pathway

The REMP requirements as specified in Table 3.12-1 from NUREG 1301, "Offsite Dose Calculation Manual Guidance: Standard Radiological Effluent Controls for Pressurized Water Reactors," dated April 1991, requires an I-131 specific analysis for drinking water pathway samples if the annual dose from I-131 is greater than 1 mrem. In order to evaluate the need for implementation of this additional analysis, the drinking water pathway dose from I-131 to the maximum organ and age group was calculated. The results reported here confirm that the drinking water pathway dose from I-131 was less than the 1 mrem limit and that the performance of the I-131 specific analysis is not required for SQN REMP drinking water samples.

Quarter	1	2	3	4	Totals
I-131 Ci	0.00E+01	0.00E+01	0.00E+01	0.00E+01	0.00E+01
Infant/Thyroid (mrem)	0.00E+01	0.00E+01	0.00E+01	0.00E+01	0.00E+01
Population/Thyroid (mrem)	0.00E+01	0.00E+01	0.00E+01	0.00E+01	0.00E+01

There was no detectable I-131 released via this pathway during this reporting period.

V. BATCH RELEASES

	1st Half	Value		Units
		2nd Half		
1. <u>Liquid (Radwaste only)</u>				
a. Number of releases	72	66		Each
b. Total time period of releases	21751.00	11247.00		Minutes
c. Maximum time period of release	6540	248.00		Minutes
d. Average time period of releases	302.10	170.41		Minutes
e. Minimum time period of release	90.00	15.00		Minutes
f. Average dilution stream flow during release periods	38,373.0	36,276.0		CFS
2. <u>Gaseous (Batches only - containment purges, and waste gas decay tanks)</u>				
a. Number of releases	60	62		Each
b. Total time period of releases	35885.00	38429.00		Minutes
c. Maximum time period of release	1860.00	954.00		Minutes
d. Average time period of releases	598.08	619.82		Minutes
e. Minimum time period of release	26.00	29.00		Minutes

VI. ABNORMAL RELEASES

	1st Half	Value		Units
		2nd Half		
1. <u>Liquid</u>				
a. Number of releases	0	0		
b. Total activity released	0.00E-01	0.00E-01		Ci
2. <u>Gaseous</u>				
a. Number of releases	0	0		
b. Total activity released	0.00E-01	0.00E-01		Ci

Liquid Effluents-Summation of Releases
 During the Period
 Starting: 1-Jan-2011 Ending: 30-Jun-2011

Type Of Effluent	Units	Quarter 1	Quarter 2	Est. Total Error %
A. Fission & Activation Products				
1. Total Release (Not Including Tritium, Gases, Alpha)	Ci	1.52E-03	4.01E-03	18%
2. Average Diluted Concentration During Period	μCi/ml	8.80E-10	2.10E-09	
3. Percent Of Applicable Limit	%	*	*	
B. Tritium				
1. Total Release	Ci	3.66E+02	3.52E+02	18%
2. Average Diluted Concentration During Period	μCi/ml	2.12E-04	1.84E-04	
3. Percent Of Applicable Limit	%	*	*	
C. Dissolved And Entrained Gases				
1. Total Release	Ci	1.96E-04	8.35E-04	39%
2. Average Diluted Concentration During Period	μCi/ml	1.13E-10	4.38E-10	
3. Percent Of Applicable Limit	%	5.67E-04	2.19E-04	
D. Gross Alpha Radioactivity				
1. Total Release	Curies	0.00E+01**	0.00E+01	N/A***
E. Total Waste Volume Released (Pre-Dilution)				
	Liters	5.81E+07	4.81E+07	4%
F. Volume Of Dilution Water Used				
	Liters	1.67E+09	1.86E+09	4%
G. Radwaste Volume Released				
	Liters	1.27E+06	2.18E+06	N/A

* Applicable Limits are expressed in terms of dose. See Tables 5-8 of the 2011 Radiological Impact Assessment Report.

** Zeroes indicate that no radioactivity was present at detectable levels.

*** N/A - Errors in measurement are not reported for these values since none were identified during the reporting period.

Liquid Effluents-Summation of Releases
 During the Period
 Starting: 1-Jul-2011 Ending: 31-Dec-2011

Type Of Effluent	Units	Quarter 3	Quarter 4	Est. Total Error %
A. Fission & Activation Products				
1. Total Release (Not Including Tritium, Gases, Alpha)	Ci	6.92E-03	2.65E-03	18%
2. Average Diluted Concentration During Period	μCi/ml	3.50E-09	1.47E-09	
3. Percent Of Applicable Limit	%	*	*	
B. Tritium				
1. Total Release	Ci	3.65E+02	1.48E+02	18%
2. Average Diluted Concentration During Period	μCi/ml	1.85E-04	8.23E-05	
3. Percent Of Applicable Limit	%	*	*	
C. Dissolved And Entrained Gases				
1. Total Release	Ci	1.26E-04	6.62E-06	39%
2. Average Diluted Concentration During Period	μCi/ml	6.37E-11	3.68E-12	
3. Percent Of Applicable Limit	%	3.19E-05	1.84E-06	
D. Gross Alpha Radioactivity				
1. Total Release	Curies	0.00E+01**	0.00E+01	N/A***
E. Total Waste Volume Released (Pre-Dilution)				
	Liters	6.72E+07	5.85E+07	4%
F. Volume Of Dilution Water Used				
	Liters	1.91E+09	1.74E+09	4%
G. Radwaste Volume Released				
	Liters	2.09E+06	1.32E+06	N/A

* Applicable Limits are expressed in terms of dose. See Tables 5-8 of the 2011 Radiological Impact Assessment Report.

** Zeroes indicate that no radioactivity was present at detectable levels.

*** N/A - Errors in measurement are not reported for these values since none were identified during the reporting period.

Curies Released in Liquid Effluents
 During the period
 Starting: 1-Jan-2011 Ending 31-Mar-2011

	Continuous	Batch	Total
Tritium	1.25E-01	3.66E+02	3.66E+02
FISSION & ACTIVATION PRODUCTS			
Cobalt-58	0.00E+01	4.46E-04	4.46E-04
Cobalt-60	0.00E+01	2.40E-04	2.40E-04
Cesium-134	0.00E+01	1.57E-06	1.57E-06
Cesium-137	0.00E+01	9.61E-08	9.61E-08
Iron-55	0.00E+01	1.60E-04	1.60E-04
Manganese-54	0.00E+01	4.01E-06	4.01E-06
Sodium-24	0.00E+01	1.74E-06	1.74E-06
Antimony-124	0.00E+01	2.80E-04	2.80E-04
Antimony-125	0.00E+01	3.80E-04	3.80E-04
Zinc-65	0.00E+01	5.12E-06	5.12E-06
TOTALS	0.00E+01	1.52E-03	1.52E-03
DISSOLVED AND ENTRAINED GASES			
Krypton-87	0.00E+01	3.05E-06	3.05E-06
Xenon-133	0.00E+01	1.90E-04	1.90E-04
Xenon-135	0.00E+01	3.57E-06	3.57E-06
TOTALS	0.00E+01	1.96E-04	1.96E-04

*Zeroes indicate that no activity was present at detectable levels.

Curies Released in Liquid Effluents
 During the period
 Starting: 1-Apr-2011 Ending 30-Jun-2011

	Continuous	Batch	Total
Tritium	9.17E-02	3.52E+02	3.52E+02
FISSION & ACTIVATION PRODUCTS			
Cobalt-57	0.00E+01	1.31E-06	1.31E-06
Cobalt-58	0.00E+01	2.84E-03	2.84E-03
Cobalt-60	0.00E+01	6.28E-04	6.28E-04
Cesium-134	0.00E+01	1.30E-06	1.30E-06
Cesium-137	0.00E+01	3.75E-07	3.75E-07
Iron-55	0.00E+01	4.58E-04	4.58E-04
Manganese-54	0.00E+01	1.88E-05	1.88E-05
Niobium-95	0.00E+01	1.37E-05	1.37E-05
Antimony-124	0.00E+01	5.34E-06	5.34E-06
Antimony-125	0.00E+01	3.83E-05	3.83E-05
Zirconium-95	0.00E+01	4.30E-06	4.30E-06
TOTALS	0.00E+01	4.01E-03	4.01E-03
DISSOLVED AND ENTRAINED GASES			
Xenon-133	0.00E+01	8.26E-04	8.26E-04
Xenon-135	0.00E+01	9.53E-06	9.53E-06
TOTALS	0.00E+01	8.35E-04	8.35E-04

*Zeroes indicate that no activity was present at detectable levels.

Curies Released in Liquid Effluents
 During the period
 Starting: 1-Jul-2011 Ending 30-Sep-2011

	Continuous	Batch	Total
Tritium	1.39E-01	3.65E+02	3.65E+02
FISSION & ACTIVATION PRODUCTS			
Cobalt-58	0.00E+01	6.25E-03	6.25E-03
Cobalt-60	0.00E+01	5.07E-04	5.07E-04
Cesium-134	0.00E+01	1.91E-06	1.91E-06
Iron-55	0.00E+01	1.47E-04	1.47E-04
Antimony-125	0.00E+01	1.52E-05	1.52E-05
TOTALS	0.00E+01	6.92E-03	6.92E-03
DISSOLVED AND ENTRAINED GASES			
Krypton-85M	0.00E+01	1.25E-06	1.25E-06
Xenon-133	0.00E+01	1.24E-04	1.24E-04
TOTALS	0.00E+01	1.26E-04	1.26E-04

*Zeroes indicate that no activity was present at detectable levels.

Curies Released in Liquid Effluents
 During the period
 Starting: 1-Oct-2011 Ending 31-Dec-2011

	Continuous	Batch	Total
Tritium	1.46E-01	1.48E+02	1.48E+02
FISSION & ACTIVATION PRODUCTS			
Cobalt-57	0.00E+01	1.73E-05	1.73E-05
Cobalt-58	0.00E+01	1.67E-03	1.67E-03
Cobalt-60	0.00E+01	3.66E-04	3.66E-04
Cesium-137	0.00E+01	1.06E-05	1.06E-05
Iron-55	0.00E+01	2.08E-04	2.08E-04
Antimony-124	0.00E+01	3.82E-05	3.82E-05
Antimony-125	0.00E+01	3.42E-04	3.42E-04
TOTALS	0.00E+01	2.65E-03	2.65E-03
DISSOLVED AND ENTRAINED GASES			
Xenon-133	0.00E+01	6.62E-06	6.62E-06
TOTALS	0.00E+01	6.62E-06	6.62E-06

*Zeroes indicate that no activity was present at detectable levels.

TABLE A
LIQUID "TYPICAL LLD" EVALUATION⁽¹⁾

Nuclide	ODCM LLD	$\Delta t^{(2)}$		
		1 hr	8 hr	32 hr
Manganese-54	5.0E-07	3.36E-08	3.36E-08	3.37E-08
Cobalt-58	5.0E-07	2.53E-08	2.54E-08	2.56E-08
Iron-59	5.0E-07	5.26E-08	5.29E-08	5.37E-08
Cobalt-60	5.0E-07	4.63E-08	4.63E-08	4.64E-08
Zinc-65	5.0E-07	2.95E-08	2.95E-08	2.96E-08
Molybdenum-99	5.0E-07	1.55E-07	1.67E-07	2.15E-07
Cesium-134	5.0E-07	1.91E-08	1.91E-08	1.92E-08
Cesium-137	5.0E-07	3.87E-08	3.87E-08	3.87E-08
Cerium-141	5.0E-07	2.80E-08	2.81E-08	2.87E-08
Cerium-144	5.0E-06	1.11E-07	1.12E-07	1.12E-07
Iodine-131	1.0E-06	2.28E-08	2.34E-08	2.55E-08
Krypton-87	1.0E-05	1.16E-07	5.25E-07	(3)
Krypton-88	1.0E-05	9.95E-08	5.49E-07	(3)
Xenon-133	1.0E-05	4.19E-08	4.36E-08	4.98E-08
Xenon-133m	1.0E-05	1.42E-07	1.55E-07	2.13E-07
Xenon-135	1.0E-05	2.06E-08	3.50E-08	2.17E-07
Xenon-138	1.0E-05	8.37E-06	(3)	(3)

Nuclide	ODCM LLD	Typical LLD
Tritium	1.0E-05	1.2E-06
Gross Alpha	1.0E-07	2.0E-08
Strontium-89/90	5.0E-08	3.8E-08/1.4E-08
Iron-55	1.0E-06	1.3E-08

NOTES: (1) LLD values are in $\mu\text{Ci/ml}$.
(2) Δt is the time between sample collection and counting time.
(3) T $\frac{1}{2}$ too short.

Gaseous Effluents - Summation of Releases
 During the Period
 Starting: 1-Jan-2011 Ending: 30-Jun-2011

Type of Effluent	Units	Quarter 1	Quarter 2	Estimated Total Error %
A. Fission and Activation Products				
1. Total Release	Ci	6.74E-01	1.70E+00	11%
2. Average Release Rate For Period	μCi/sec	8.67E-02	2.21E-01	
3. Percent of Applicable Limit	%	*	*	
B. Radioiodines				
1. Total Iodine-131	Ci	2.22E-07	0.00+00	13%
2. Average Release Rate For Period	μCi/sec	2.86E-08	0.00+00	
3. Percent of Applicable Limit	%	*	*	
C. Particulates				
1. Particulates (Half-Lives > 8 Days)	Ci	1.22E-06	4.26E-07	16%
2. Average Release Rate For Period	μCi/sec	1.56E-07	5.41E-08	
3. Percent of Applicable Limit	%	*	*	
4. Gross Alpha Radioactivity	Ci	0.00E+01	0.00E+01	
D. Tritium				
1. Total Release	Ci	4.68E+00	7.96E+00	15%
2. Average Release Rate For Period	μCi/sec	6.01E-01	1.01E+00	
3. Percent of Applicable Limit	%	*	*	
E. Carbon-14				
1. Total Release	Ci	5.71E+00	4.57E+00	N/A
2. Average Release Rate For Period	μCi/sec	7.34E-01	5.81E-01	
3. Percent of Applicable Limit	%	*	*	

* Applicable Limits are expressed in terms of dose. See Tables 1-4 of the 2011 Radiological Impact Assessment Report.

** Zeroes indicate that no radioactivity was present at detectable levels.

*** N/A - Errors in measurement are not reported for these values since none were identified during the reporting period.

Gaseous Effluents - Summation of Releases
 During the Period
 Starting: 1-Jul-2011 Ending: 31-Dec2011

Type of Effluent	Units	Quarter 3	Quarter 4	Estimated Total Error %
A. Fission and Activation Products				
1. Total Release	Ci	4.73E-01	2.97E-01	11%
2. Average Release Rate For Period	μCi/sec	5.95E-02	3.74E-02	
3. Percent of Applicable Limit	%	*	*	
B. Radioiodines				
1. Total Iodine-131	Ci	0.00E+01	0.00E+01	N/A***
2. Average Release Rate For Period	μCi/sec	0.00E+01	0.00E+01	
3. Percent of Applicable Limit	%	*	*	
C. Particulates				
1. Particulates (Half-Lives > 8 Days)	Ci	1.28E-06	0.00E+00	16%
2. Average Release Rate For Period	μCi/sec	1.61E-07	0.00E+00	
3. Percent of Applicable Limit	%	*	*	
4. Gross Alpha Radioactivity	Ci	0.00E+01	0.00E+01	
D. Tritium				
1. Total Release	Ci	2.24E+00	8.65E+00	15%
2. Average Release Rate For Period	μCi/sec	2.81E-01	1.09E+00	
3. Percent of Applicable Limit	%	*	*	
E. Carbon-14				
1. Total Release	Ci	5.61E+00	5.87E+00	N/A
2. Average Release Rate For Period	μCi/sec	7.06E-01	7.38E-01	
3. Percent of Applicable Limit	%	*	*	

* Applicable Limits are expressed in terms of dose. See Tables 1-4 of the 2011 Radiological Impact Assessment Report.

** Zeroes indicate that no radioactivity was present at detectable levels.

*** N/A - Errors in measurement are not reported for these values since none were identified during the reporting period.

Curies released Gaseous Ground Level Releases
 During the period
 Starting: 1-Jan-2011 Ending: 31-Mar-2011

	CONTINUOUS	BATCH	TOTAL
<u>FISSION GASES</u>			
Xenon-133	0.00E+01	9.98E-02	9.98E-02
Xenon-135	0.00E+01	8.49E-03	8.49E-03
Argon-41	0.00E+01	5.66E-01	5.66E-01
TOTALS	0.00E+01	6.74E-01	6.74E-01
 <u>IODINES</u>			
Iodine-131	2.22E-07	0.00E+01	2.22E-07
TOTALS	2.22E-07	0.00E+01	2.22E-07
 <u>PARTICULATES</u>			
Cobalt-60	1.22E-06	0.00E+01	1.22E-06
TOTALS	1.22E-06	0.00E+01	1.22E-06
 <u>TRITIUM</u>			
Tritium	4.40E+00	2.77E-01	4.68E+00
 <u>CARBON-14</u>			
Carbon-14 (CO ₂ form)	1.12E+00	0.00E+00	1.12E+00
Carbon-14 (Total)	5.71E+00	0.00E+00	5.71E+00

*Zeros indicate that no radioactivity was present at detectable levels.

Curies released Gaseous Ground Level Releases
 During the period
 Starting: 1-Apr-2011 Ending: 30-Jun-2011

	CONTINUOUS	BATCH	TOTAL
<u>FISSION GASES</u>			
Xenon-133	0.00E+01	1.50E-01	1.50E-01
Xenon-135	0.00E+01	1.74E-03	1.74E-03
Argon-41	0.00E+01	1.59E+00	1.59E+00
TOTALS	0.00E+01	1.74E+00	1.74E+00
 <u>IODINES</u>			
TOTALS	0.00E+01	0.00E+01	0.00E+01
 <u>PARTICULATES</u>			
Colbalt-60	4.26E-07	0.00E+01	4.26E-07
TOTALS	4.26E-07	0.00E+01	4.26E-07
 <u>TRITIUM</u>			
Tritium	6.82E+00	1.14E+00	7.96E+00
 <u>CARBON-14</u>			
Carbon-14 (CO ₂ form)	8.95E-01	0.00E+00	8.95E-01
Carbon-14 (Total)	4.57E+00	0.00E+00	4.57E+00

*Zeros indicate that no radioactivity was present at detectable levels.

Curies released Gaseous Ground Level Releases
 During the period
 Starting: 1-July-2011 Ending: 30-Sep-2011

	CONTINUOUS	BATCH	TOTAL
<u>FISSION GASES</u>			
Xenon-131M	0.00E+01	2.77E-03	2.77E-03
Xenon-133	0.00E+01	5.41E-02	5.41E-02
Xenon-135	0.00E+01	4.36E-03	4.36E-03
Argon-41	0.00E+01	4.11E-01	4.11E-01
TOTALS	0.00E+01	4.73E-01	4.73E-01
 <u>IODINES</u>			
TOTALS	0.00E+01	0.00E+01	0.00E+01
 <u>PARTICULATES</u>			
Cobalt-60	1.28E-06	0.00E+01	1.28E-06
TOTALS	1.28E-06	0.00E+01	1.28E-06
 <u>TRITIUM</u>			
Tritium	1.97E+00	2.64E-01	2.23E+00
 <u>CARBON-14</u>			
Carbon-14 (CO ₂ form)	1.10E+00	0.00E+00	1.10E+00
Carbon-14 (Total)	5.61E+00	0.00E+00	5.61E+00

*Zeros indicate that no radioactivity was present at detectable levels.

Curies released Gaseous Ground Level Releases
 During the period
 Starting: 1-Oct-2011 Ending: 31-Dec-2011

	CONTINUOUS	BATCH	TOTAL
<u>FISSION GASES</u>			
Xenon-133	0.00E+01	4.74E-02	4.74E-02
Xenon-135	0.00E+01	3.43E-03	3.43E-03
Argon-41	0.00E+01	2.46E-01	2.46E-01
TOTALS	0.00E+01	2.97E-01	2.97E-01
 <u>IODINES</u>			
TOTALS	0.00E+01	0.00E+01	0.00E+01
 <u>PARTICULATES</u>			
TOTALS	0.00E+01	0.00E+01	0.00E+01
 <u>TRITIUM</u>			
Tritium	8.33E+00	3.21E-01	8.65E+00
 <u>CARBON-14</u>			
Carbon-14 (CO ₂ form)	1.15E+00	0.00E+00	1.15E+00
Carbon-14 (Total)	5.87E+00	0.00E+00	5.87E+00

*Zeros indicate that no radioactivity was present at detectable levels.

TABLE B
GASEOUS "TYPICAL" LLD EVALUATION⁽¹⁾

Noble Gas

<u>Nuclide</u>	<u>ODCM LLD</u>	$\Delta t^{(2)}$	
		<u>1 hr</u>	<u>1.5 hr</u>
Krypton-87	1.0E-04	2.08E-06	2.73E-06
Krypton-88	1.0E-04	1.61E-06	1.81E-06
Xenon-133	1.0E-04	6.61E-07	6.63E-07
Xenon-133m	1.0E-04	2.34E-06	2.35E-06
Xenon-135	1.0E-04	3.43E-07	3.56E-07
Xenon-138	1.0E-04	1.40E-04	6.10E-04

Particulate Sample⁽³⁾

		$\Delta t^{(2)}$		
		<u>1 hr</u>	<u>24 hr</u>	<u>7.0 day</u>
Manganese-54	1.0E-10	7.47E-12	3.12E-13	4.48E-14
Cobalt-58	1.0E-10	5.62E-12	2.35E-13	3.46E-14
Iron-59	1.0E-10	1.20E-11	5.02E-13	7.49E-14
Cobalt-60	1.0E-10	1.07E-11	4.46E-13	6.38E-14
Zinc-65	1.0E-10	6.71E-12	2.80E-13	4.03E-14
Molybdenum-99	1.0E-10	3.43E-11	1.61E-12	4.70E-13
Cesium-134	1.0E-10	4.25E-12	1.77E-13	2.54E-14
Cesium-137	1.0E-10	8.48E-12	3.54E-13	5.05E-14
Cerium-141	1.0E-10	5.10E-12	2.15E-13	3.26E-14
Cerium-144	1.0E-10	2.01E-11	8.33E-13	1.20E-13
Iodine-131	1.0E-10	4.76E-12	2.07E-13	3.77E-14

Charcoal Sample

Iodine-131	1.0E-11	7.25E-12	3.15E-13	5.74E-14
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Note:

(1) LLD values are in $\mu\text{Ci/ml}$.

(2) Δt is the time between sample collection and counting time.

(3) LLD based on sample time + 30 min. sample to analysis.

TABLE B
GASEOUS "TYPICAL" LLD EVALUATION⁽¹⁾ (continued)

<u>Nuclide</u>	<u>ODCM LLD</u>	<u>Typical LLD</u>
Tritium	1.0E-06	1.0E-11
Gross Alpha	1.0E-11	1.5E-14
Strontium-89	1.0E-11	1.0E-14
Strontium-90	1.0E-11	1.0E-15

NOTE:

(1) LLD values are in $\mu\text{Ci/cc}$.

SOLID WASTE (RADIOACTIVE SHIPMENTS)

Solid Waste Shipped Offsite for Burial or Disposal (not Irradiated Fuel)

<u>1. Type of Waste</u>	<u>Unit</u>	<u>12 Month Period</u>	<u>Est. Tot. Error %</u>
a. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m ³	6.93E+00	±1.00E+01
	Ci	8.27E+00	±2.29E+01
b. Dry Active Waste, Compressible Waste Contaminated Equipment, etc.	m ³	7.11E+01	±1.00E+01
	Ci	3.98E-01	±2.29E+01
c. Irradiated Components, Control Rods, etc.	m ³	None	N/A
	Ci	None	N/A
d. Other: Mechanical Filters	m ³	None	N/A
	Ci	None	N/A

The reported volume is based on the defined volume of the packaging. During transit, the waste may settle resulting in an overall reduced volume. The reduction in disposal volume is estimated to be 10 percent less than the package volume.

The estimated total error (percent) for the total Curies shipped is based on calculating the square root of the sum of the squares method. Three parameters were considered as important for estimating the error. The parameters were variances with sample preparation and counting geometry, survey instrument accuracy for dose to Currie evaluations, and "in-field" sampling techniques. The assigned values for these parameters were 20, 10, and 5 percent, respectively.

$$\text{Total error (\%)} = (0.20^2 + 0.10^2 + 0.05^2)^{1/2} \times 100 = 22.9\%$$

SOLID WASTE (RADIOACTIVE SHIPMENTS) (continued)

2. Estimate of Major Nuclide Composition (by type of waste)

a. Spent resins, filter sludges, evaporator bottoms, etc. (nuclides determined by measurement)

	<u>Curies</u>	<u>Percent</u>
1. Hydrogen-3	2.229E-01	2.695
2. Carbon-14	2.147E-04	0.003
3. Manganese-54	8.727E-02	1.055
4. Iron-55	1.139E+00	13.766
5. Cobalt-57	1.863E-02	0.225
6. Cobalt-58	3.319E-01	4.013
7. Cobalt-60	2.195E+00	26.542
8. Nickel-59	2.761E-02	0.334
9. Nickel-63	3.668E+00	44.339
10. Zinc-65	3.861E-01	4.667
11. Strontium-89	4.738E-06	0.000
12. Strontium-90	6.480E-04	0.008
13. Niobium-95	2.674E-04	0.003
14. Antimony-124	3.776E-04	0.005
15. Antimony-125	2.206E-02	0.267
16. Cesium-134	2.168E-02	0.262
17. Cesium-137	1.301E-01	1.573
18. Cerium-144	1.966E-02	0.238
19. Plutonium-238	4.908E-06	0.000
20. Plutonium-239	9.051E-07	0.000
21. Plutonium-240	9.051E-07	0.000
22. Plutonium-241	4.950E-04	0.006
23. Americium-241	3.208E-06	0.000

b. Dry active waste, compressible waste, contaminated equipment, etc. (nuclides determined by estimate)

	<u>Curies</u>	<u>Percent</u>
1. Chromium-51	1.387E-02	3.489
2. Manganese-54	2.388E-02	6.005
3. Iron-55	2.684E-01	67.505
4. Iron-59	2.877E-03	0.724
5. Cobalt-57	1.152E-04	0.029
6. Cobalt-58	2.015E-02	5.067
7. Cobalt-60	3.922E-02	9.864
8. Nickel-63	1.352E-02	3.401
9. Zinc-65	7.306E-03	1.837
10. Zirconium-95	1.868E-03	0.470
11. Niobium-95	5.532E-03	1.391
12. Cesium-134	1.905E-04	0.048
13. Cesium-137	4.107E-04	0.103
14. Cerium-144	2.645E-04	0.067

SOLID WASTE (RADIOACTIVE SHIPMENTS) (continued)

c. Irradiated Components
None Curies
N/A Percent
N/A

d. Other: Mechanical Filters
None Curies
N/A Percent
N/A

3. Solid Waste Disposition

a. Spent resins, filter sludges, evaporator bottoms, etc.

Number of Shipments	Type Quantity	Mode of Transportation	Destination
2	A-LSA II	Motor Freight	Duratek Processing Facility Kingston, TN

b. Dry active waste, compressible waste, contaminated equipment, etc.

Number of Shipments	Type Quantity	Mode of Transportation	Destination
8	A-LSA II	Motor Freight	Duratek Processing Facility Oak Ridge, TN
2	Limited Quantity	Motor Freight	Duratek Processing Facility Kingston, TN

c. Irradiated components, control rods, etc.

Number of Shipments	Type Quantity	Mode of Transportation	Destination
None	N/A	N/A	N/A

d. Other: Mechanical Filters

Number of Shipments	Type Quantity	Mode of Transportation	Destination
None	N/A	N/A	N/A

4. Irradiated Fuel Shipments (Disposition)

Number of Shipments	Type Quantity	Mode of Transportation	Destination
None	N/A	N/A	N/A

5. Solidification of Waste

Was solidification performed? No
If yes, solidification media: N/A

Independent Spent Fuel Storage Installation

SQN implemented use of an independent spent fuel storage installation (ISFSI) on July 13, 2004, utilizing 10 CFR 72.214 Certificate of Compliance (CoC number 1014). The ISFSI is located on site, within the protected area and is designed to hold 90 spent fuel canisters. CoC 1014 Appendix A Section 5.4 requires an annual report in accordance with 10 CFR 72.44(d)(3). A report has been submitted providing the results of any releases during this monitoring period. CoC 1014 Section 5.4 also provides that the ISFSI operations may be considered part of plant operations for the purposes of the radiological environmental monitoring program.

CoC 1014 Section 5.4a states “The HI-STORM 100 Cask System does not create any radioactive material or have any radioactive waste treatment systems. Therefore, specific operating procedures for the control of radioactive effluents are not required. Specification 3.1.1, Multi-Purpose Canister (MPC), provides assurance that there are not radioactive effluents from spent fuel storage canister.”

The Environmental Protection Agency limits for the total dose to the public in the vicinity of a nuclear power plant, established in the Environmental Dose Standard of 40 CFR 190, are as follows:

Total Body	≤25 mrem/year
Thyroid	≤75 mrem/year
Any other organ	≤25 mrem/year

Although CoC 1014 provides that the HI-STORM 100 Cask System does not create any radioactive material or have any radioactive waste treatment systems, for this report, total site releases include the SQN ISFSI as part of the SQN site and part of plant operations. These releases are within 40 CFR 190 limits and 10 CFR 72.104 limits.

ENCLOSURE 2

RADIOLOGICAL IMPACT ASSESSMENT REPORT

SEQUOYAH NUCLEAR PLANT

2011

2011
SEQUOYAH NUCLEAR PLANT
RADIOLOGICAL IMPACT ASSESSMENT REPORT

INTRODUCTION

Potential doses to maximum individuals and the population around Sequoyah Nuclear Plant (SQN) are calculated for each quarter as required in Section 5.2 of the Offsite Dose Calculation Manual (ODCM). Measured plant releases for the reporting period are used to estimate these doses. Dispersion of radioactive effluents in the environment is estimated using meteorological data and riverflow data measured during the period. In this report, the doses resulting from releases are described and compared to limits established for SQN.

DOSE LIMITS

The ODCM specifies limits for the release of radioactive effluents, as well as limits for doses to the general public from the release of radioactive effluents. These limits are set well below the technical specification limits which govern the concentrations of radioactivity and doses permissible in unrestricted areas. This ensures that radioactive effluent releases are "As Low As Reasonably Achievable."

The limits for doses in unrestricted areas from airborne noble gases released are:

Less than or equal to 5 mrad per quarter and
10 mrad per year (per reactor unit) for gamma radiation,
- and -
Less than or equal to 10 mrad per quarter and
20 mrad per year (per reactor unit) for beta radiation.

The limit for the dose to a member of the general public in an unrestricted area from iodines and particulates released in airborne effluents is:

Less than or equal to 7.5 mrem per quarter and
15 mrem per year (per reactor unit) to any organ.

The limits for doses to a member of the general public from radioactive material in liquid effluents released to unrestricted areas are:

Less than or equal to 1.5 mrem per quarter and
3 mrem per year (per reactor unit) to the total body,
- and -
Less than or equal to 5 mrem per quarter and
10 mrem per year (per reactor unit) to any organ

The Environmental Protection Agency limits for total dose to the public in the vicinity of a nuclear power plant, established in the Environmental Dose Standard of 40 CFR 190 are:

Less than or equal to 25 mrem per year to the total body,
Less than or equal to 75 mrem per year to the thyroid,
- and -
Less than or equal to 25 mrem per year to any other organ.

DOSE CALCULATIONS

Estimated doses to the public are determined using computer models: Gaseous Effluent Licensing Code (GELC), and the Quarterly Water Dose Assessment Code (QWATA). These models are based on guidance provided by the NRC (in Regulatory Guides 1.109, 1.111 and 1.113) for determining the potential dose to individuals and populations living in the vicinity of the plant. The area around the plant is analyzed to determine the pathways through which the public may receive a dose. The doses calculated are a representation of the dose to a "maximum exposed individual." Some of the factors used in these calculations (such as ingestion rates) are maximum values. Many of these factors are obtained from NUREG/CR-1004. The values chosen will tend to overestimate the dose to this "maximum" person. The expected dose to actual individuals is lower. The calculated doses are presented in Tables 1 through 9.

DOSES FROM AIRBORNE EFFLUENTS

For airborne effluents, the public can be exposed to radiation from several sources: direct radiation from the radioactivity in the air, direct radiation from radioactivity deposited on the ground, inhalation of airborne radioactivity, ingestion of vegetation which contains radioactivity deposited from the atmosphere, and ingestion of milk and beef which contains radioactivity deposited from the atmosphere onto vegetation and subsequently eaten by milk and beef animals.

Airborne Discharge Points

Releases from SQN are considered ground-level releases. The ground-level Joint Frequency Distribution (JFD) is derived from windspeeds and directions measured 10 meters above ground and from the vertical temperature difference between 10 and 46 meters, and are presented for each quarter in Attachment 1.0.

Meteorological Data

Meteorological variables at SQN are measured continuously. Measurements collected include wind speed, wind direction, and temperature at heights of 10, 46, and 91 meters above the ground. Quarterly joint frequency distributions (JFDs) are calculated for each release point using the appropriate levels of meteorological data. A JFD gives the percentage of the time in a quarter that the wind is blowing out of a particular upwind compass sector in a particular range of wind speeds for a given stability Class A through G. The wind speeds are divided into nine wind speed ranges. Calms are distributed by direction in proportion to the distribution of noncalm wind directions less than 0.7 m/s (1.5 mph). Stability classes are determined from the vertical temperature difference between two measurement levels.

External Exposure Dose

Dose estimates for maximum external air dose (gamma-air and beta-air doses) are made for points at and beyond the unrestricted area boundary as described in the SQN ODCM. The highest of these doses is then selected.

Submersion Dose

External doses to the skin and total body, due to submersion in a cloud of noble gases, are estimated for the nearest residence in each sector. The residence with the highest dose is then selected from all sectors.

Organ Dose

Doses to organs due to releases of airborne effluents are estimated for the inhalation, ground contamination, and ingestion pathways. The ingestion pathway is further divided into four possible contributing pathways: ingestion of cow/goat milk, ingestion of beef, and ingestion of vegetables. Doses from applicable pathways are calculated for each real receptor location identified in the most recent land use survey. To determine the maximum organ dose, the doses from the pathways are summed for each receptor. For the ingestion dose, however, only those pathways that exist for each receptor are considered in the sum, i.e., milk ingestion doses are included only for locations where milk is consumed without commercial preparation and vegetable ingestion is included only for those locations where a garden is identified. To conservatively account for beef ingestion, a beef ingestion dose equal to that for the highest unrestricted area boundary location is added to each identified receptor. For ground contamination, the dose added to the organ dose being calculated is the total body dose calculated for that location, i.e., it is assumed that the dose to an individual organ is equal to the total body dose.

Doses from airborne effluents are presented in Tables 1-4.

DOSES FROM LIQUID EFFLUENTS

For liquid effluents, the public can be exposed to radiation from three sources: the ingestion of water from the Tennessee River, the ingestion of fish caught in the Tennessee River, and direct exposure from radioactive material deposited on the river shoreline sediment (recreation).

The concentrations of radioactivity in the Tennessee River are estimated by a computer model which uses measured hydraulic data downstream of SQN. Parameters used to determine the doses are based on guidance given by the NRC (in Regulatory Guides 1.109) for maximum ingestion rates, exposure times, etc. Wherever possible, parameters used in the dose calculation are site specific use factors determined by TVA. The models that are used to estimate doses, as well as the parameters input to the models, are described in detail in the SQN ODCM.

Liquid Release Points and River Data

Radioactivity concentrations in the Tennessee River are calculated assuming that releases in liquid effluents are continuous. Routine liquid releases from SQN, located at Tennessee River Mile 484, are made through diffusers which extend into the Tennessee River. It is assumed that releases to the river through these diffusers will initially be entrained in one-fifth of the water which flows past the plant. The QWATA code makes the assumption that this mixing condition holds true until the water is completely mixed at the first downstream dam, at Tennessee River Mile 471.

Doses are calculated for locations within a 50-mile radius downstream of the plant site. The maximum potential recreation dose is calculated for a location immediately downstream from the plant outfall. The maximum individual dose from ingestion of fish is assumed to be that calculated for the consumption of fish caught anywhere between the plant and the first downstream dam (Chickamauga Dam). The maximum individual dose from drinking water is assumed to be that calculated at the nearest downstream public water supply (East Side Utilities). This could be interpreted as indicating that the maximum individual, as assumed for liquid releases from Sequoyah, is an individual who obtains all of his drinking water at East Side Utilities, consumes fish caught from the Tennessee River between SQN and Chickamauga Dam, and spends 500 hours per year on the shoreline just below the outfall from Sequoyah. Dose estimates for the maximum individual due to liquid effluents for each quarter in the period are presented in Tables 5-8, along with the average river flows past the plant site for the periods.

Population doses are calculated assuming that each individual consumes milk, vegetables, and meat produced within the sector annulus in which he resides. Doses from external pathways and inhalation are based on the 50-mile human population distribution.

POPULATION DOSES

Population doses for the highest exposed organ due to airborne effluents are calculated for an estimated 1,060,000 persons living within a 50-mile radius of the plant site. Doses from external pathways and inhalation are based on the 50-mile human population distribution.

Ingestion population doses for total body and the maximum exposed organ due to liquid effluents are calculated for the entire downstream Tennessee River population. Water ingestion population doses are calculated using actual population figures for downstream public water supplies. Fish ingestion population doses are calculated assuming that all sport fish caught in the Tennessee River are consumed by the Tennessee River population. Recreation population doses are calculated using actual recreational data on the number of shoreline visits at downstream locations.

Population dose estimates for airborne and liquid effluents are presented in Tables 1-4 and Tables 5-8.

DIRECT RADIATION

External gamma radiation levels were measured by thermoluminescent dosimeters (TLDs) deployed around SQN as part of the offsite REMP. The quarterly gamma radiation levels determined from these TLDs during this reporting period averaged approximately 17.0 mrem/quarter at onsite (at or near the site boundary) stations and approximately 15.25 mrem/quarter at offsite stations, or approximately 1.75 mrem/quarter higher at onsite than at offsite stations. This difference is consistent with levels measured for preoperation and construction phases of the TVA nuclear plant site where the average radiation levels onsite were generally 2-6 mrem/quarter higher than the levels offsite. This may be attributable to natural variations in environmental radiation levels, earth moving activities onsite, the mass of concrete employed in the construction of the plants, or other undetermined influences. Fluctuations in natural background dose rates and in TLD readings tend to mask any small increments which

may be due to plant operations. Thus, there was no identifiable increase in dose rate levels attributable to direct radiation from plant equipment and/or gaseous effluents.

DOSE TO A MEMBER OF THE PUBLIC INSIDE THE UNRESTRICTED AREA BOUNDARY

As stated in the SQN ODCM, an evaluation of the dose to a member of the public inside the unrestricted area boundary is performed for a hypothetical TVA employee who works just outside the restricted area fence for an entire work year (2000/8760 hours). Results from onsite TLD measurements for the calendar year in question indicate that the highest onsite TLD reading was 55 mrem. Using this value, and subtracting an annual background value of 0 mrem/year (from perimeter TLDs around Sequoyah from Area TLD posting data for the year), and multiplying by the ratio of the occupancy times (2000/8760), the external dose was 12.69 mrem. The doses due to radioactive effluents released to the atmosphere calculated in this report would not add a significant amount to this measured dose. This dose is well below the 10 CFR 20 annual limit of 100 mrem.

TOTAL DOSE

To determine compliance with 40 CFR 190, annual total dose contributions to the maximum individual from SQN radioactive effluents and other nearby uranium fuel cycle sources are considered.

The annual dose to any organ other than thyroid for the maximum individual is conservatively estimated by summing the following doses: the total body air submersion dose for each quarter, the critical organ dose (for any organ other than the thyroid) from airborne effluents for each quarter from ground contamination, inhalation and ingestion, the total body dose from liquid effluents for each quarter, the maximum organ dose (for any organ other than the thyroid) from liquid effluents for each quarter, and any identifiable increase in direct radiation dose levels as measured by the environmental monitoring program. This dose is compared to the 40 CFR 190 limit for total body or any organ dose (other than thyroid) to determine compliance.

The annual thyroid dose to the maximum individual is conservatively estimated by summing the following doses: the total body air submersion dose for each quarter, the thyroid dose from airborne effluents for each quarter, the total body dose from liquid effluents for each quarter, the thyroid dose from liquid effluents for each quarter, and any identifiable increase in direct radiation dose levels as measured by the environmental monitoring program. This dose is compared to the 40 CFR 190 limit for thyroid dose to determine compliance.

Cumulative annual total doses are presented in Table 9.

Tables 1 and 2
Doses from Airborne Effluents

First Quarter

Individual Doses

Pathway	Dose	Quarterly Limit	Percent of Limit	Location Sector/Distance/Unit
External				
Gamma Air	6.45E-04 mrad	5 mrad	<1%	N/950/meters
Beta Air	2.43E-04 mrad	10 mrad	<1%	N/950/meters
Submersion				
Total Body	4.00E-04 mrad	10 mrad	<1%	SSW/2314/meters
Skin	5.89E-04 mrad	10 mrad	<1%	SSW/2314/meters
Organ Doses¹				
(Max) Child/Bone	3.84E-01 mrem	7.5 mrem	5.12%	SSW3220/meters
Child/Thyroid	7.83E-02 mrem	7.5 mrem	1.04%	SSW3220/meters
Child/Total Body	7.83E-02 mrem	7.5 mrem	1.04%	SSW3220/meters

Population Doses

Total Body Dose 4.41E-01 man-rem
 Maximum Organ Dose (organ) 2.13E+00 man-rem (Bone)

Second Quarter

Individual Doses

Pathway	Dose	Quarterly Limit	Percent of Limit	Location Sector/Distance/Unit
External				
Gamma Air	2.31E-03 mrad	5 mrad	<1	N/950/meters
Beta Air	8.41E-04 mrad	10 mrad	<1	N/950/meters
Submersion				
Total Body	1.34E-03 mrad	10 mrad	<1	N/1295/meters
Skin	1.97E-03 mrad	10 mrad	<1	N/1295/meters
Organ Doses¹				
(Max) Child/Bone	3.55E-01 mrem	7.5 mrem	2.66%	SSW/3220/meters
Child/Thyroid	7.41E-02 mrem	7.5 mrem	0.99%	SSW/3220/meters
Child/Total Body	7.41E-02 mrem	7.5 mrem	0.99%	SSW/3220/meters

Population Doses

Total Body Dose 4.07E-01 man-rem
 Maximum Organ Dose (organ) 1.89E+00 man-rem (Bone)

Population doses can be compared to the natural background dose for the entire 50-mile population of about 95,400 man-rem/year (based on 90 mrem/year for natural background).

¹Organ Doses include contributions from Carbon-14 in the form of Carbon Dioxide.

Tables 3 and 4
Doses from Airborne Effluents

Third Quarter

Individual Doses

Pathway	Dose	Quarterly Limit	Percent of Limit	Location Sector/Distance/Unit
External				
Gamma Air	4.99E-04 mrad	5 mrad	<1	N/950/meters
Beta Air	1.85E-04 mrad	10 mrad	<1	N/950/meters
Submersion				
Total Body	3.18E-04 mrad	10 mrad	<1	S/1786/meters
Skin	4.67E-04 mrad	10 mrad	<1	S/1786/meters
Organ Doses¹				
(Max) Child/Bone	4.03E-01 mrem	7.5 mrem	5.37%	SSW/3220/meters
Child/Thyroid	8.13E-02 mrem	7.5 mrem	1.08%	SSW/3220/meters
Child/Total Body	8.13E-02 mrem	7.5 mrem	1.08%	SSW/3220/meters

Population Doses

Total Body Dose 4.38E-01 man-rem
Maximum Organ Dose (organ) 2.15E+00 man-rem (Bone)

Fourth Quarter

Individual Doses

Pathway	Dose	Quarterly Limit	Percent of Limit	Location Sector/Distance/Units
External				
Gamma Air	3.27E-04mrad	5 mrad	<1	N/950/meters
Beta Air	1.23E-04 mrad	10 mrad	<1	N/950/meters
Submersion				
Total Body	1.89E-04 mrad	10 mrad	<1	SSW/2134/meters
Skin	2.80E-04 mrad	10 mrad	<1	SSW/2134/meters
Organ Doses¹				
(Max) Child/Bone	4.41E-01mrem	7.5 mrem	5.88%	SSW/3220/meters
Child/Thyroid	9.10E-02 mrem	7.5 mrem	1.21%	SSW/3220/meters
Child/Total Body	9.10E-02 mrem	7.5 mrem	1.21%	SSW/3220/meters

Population Doses

Total Body Dose 5.07E-01 man-rem
Maximum Organ Dose (organ) 2.38E-00 man-rem (Bone)

Population doses can be compared to the natural background dose for the entire 50-mile population of about 95,400 man-rem/year (based on 90 mrem/year for natural background).

¹Organ Doses include contributions from Carbon-14 in the form of Carbon Dioxide.

Tables 5 and 6
Doses from Liquid Effluents

First Quarter

Individual Doses (mrem)

Age Group	Organ	Dose	Quarterly Limit	Percent of Limit
Child	Total Body	1.60E-03	1.5 mrem	< 1 %
Child	Liver	1.60E-03	5 mrem	< 1 %
Child	Thyroid	1.60E-03	5 mrem	< 1 %

Average Riverflow past SQN (cubic feet per second): 44,928

Population Doses

Total Body Dose 1.00E-01 man-rem
Maximum Organ Dose (organ) 1.00E-01 man-rem (GIT, Bone, Thyroid, Liver, Kidney, Lung)

Second Quarter

Individual Doses (mrem)

Age Group	Organ	Dose	Quarterly Limit	Percent of Limit
Child	Total Body	2.10E-03	1.5 mrem	< 1 %
Child	Liver	2.10E-03	5 mrem	< 1 %
Child	Thyroid	2.10E-03	5 mrem	< 1 %

Average Riverflow past SQN (cubic feet per second): 31,818

Population Doses

Total Body Dose 1.40E-01 man-rem
Maximum Organ Dose (organ) 1.40E-01 man-rem (Bone, Liver, GIT, Thyroid, Kidney, Lung)

Population doses can be compared to the natural background dose for the entire 50-mile population of about 95,400 man-rem/year (based on 90 mrem/year for natural background).

Tables 7 and 8
Doses from Liquid Effluents

Third Quarter

Individual Doses (mrem)

Age Group	Organ	Dose	Quarterly Limit	Percent of Limit
Child	Total Body	2.80E-03	1.5 mrem	< 1 %
Child	Liver	2.80E-03	5 mrem	< 1 %
Child	Thyroid	2.80E-03	5 mrem	< 1 %

Average Riverflow past SQN (cubic feet per second): 24,870

Population Doses

Total Body Dose 1.90E-01 man-rem
Maximum Organ Dose (organ) 1.90E-01 man-rem (Bone, Liver, GIT,
Thyroid, Kidney, Lung)

Fourth Quarter

Individual Doses (mrem)

Age Group	Organ	Dose	Quarterly Limit	Percent of Limit
Child	Total Body	6.10E-04	1.5 mrem	< 1 %
Child	Liver	6.10E-04	5 mrem	< 1 %
Child	Thyroid	6.10E-04	5 mrem	< 1 %

Average Riverflow past SQN (cubic feet per second): 47,682

Population Doses

Total Body Dose 4.00E-02 man-rem
Maximum Organ Dose (organ) 4.00E-02 man-rem (Bone, Liver, GIT,
Thyroid, Kidney, Lung)

Population doses can be compared to the natural background dose for the entire 50-mile population of about 95,400 man-rem/year (based on 90 mrem/year for natural background).

Table 9

Total Dose from Fuel Cycle

Dose	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	
Total Body or any Organ (except thyroid)					
Total body air submersion	4.00E-04	1.34E-03	3.18E-04	1.89E-04	
Critical organ dose (air)	3.84E-01	3.55E-01	4.03E-01	9.01E-02	
Total body dose (liquid)	1.60E-03	2.10E-03	2.80E-03	6.10E-04	
Maximum organ dose (liquid)	1.60E-03	2.10E-03	2.80E-03	6.10E-04	
Direct Radiation Dose	0.00E-00	0.00E-00	0.00E-00	0.00E-00	
Total	3.88E-01	3.61E-01	4.09E-01	9.15E-02	
Cumulative Total Dose (Total body or any other organ) mrem					1.25E+00
<i>Annual Dose Limit (mrem)</i>					25
Percent of Limit					5.00
Thyroid Dose (mrem)					
Total body air submersion	4.00E-04	1.34E-03	3.18E-04	1.89E-04	
Thyroid dose (airborne)	7.83E-02	7.41E-02	8.13E-02	4.41E-01	
Total body dose (liquid)	1.60E-03	2.10E-03	2.80E-03	6.10E-04	
Thyroid dose (liquid)	1.60E-03	2.10E-03	2.80E-03	6.10E-04	
Direct Radiation Dose	0.00E-00	0.00E-00	0.00E-00	0.00E-00	
Total	8.19E-02	7.96E-02	8.72E-02	4.42E-01	
Cumulative Total Dose (Thyroid) mrem					6.91E-01
<i>Annual Dose Limit (mrem)</i>					75
Percent of Limit					0.92

Attachment 1.0

Joint Frequency Distribution Tables

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS A (DELTA T<=-1.9 C/100 M) -

SEQUOYAH NUCLEAR PLANT

JAN 1, 2011 - MAR 31, 2011

WIND DIRECTION	WIND SPEED(MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.000	0.000	0.139	0.046	0.000	0.000	0.000	0.186
NNE	0.000	0.000	0.000	0.000	0.464	0.093	0.000	0.000	0.000	0.557
NE	0.000	0.000	0.000	0.046	0.046	0.093	0.000	0.000	0.000	0.186
ENE	0.000	0.000	0.000	0.046	0.000	0.000	0.000	0.000	0.000	0.046
E	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ESE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SE	0.000	0.000	0.000	0.046	0.000	0.000	0.000	0.000	0.000	0.046
SSE	0.000	0.000	0.000	0.000	0.000	0.046	0.000	0.000	0.000	0.046
S	0.000	0.000	0.000	0.000	0.000	0.093	0.000	0.000	0.000	0.093
SSW	0.000	0.000	0.000	0.000	0.186	0.325	0.000	0.000	0.000	0.511
SW	0.000	0.000	0.000	0.046	0.046	0.279	0.000	0.000	0.000	0.372
WSW	0.000	0.000	0.000	0.000	0.046	0.000	0.000	0.000	0.000	0.046
W	0.000	0.000	0.000	0.000	0.093	0.093	0.000	0.000	0.000	0.186
WNW	0.000	0.000	0.000	0.093	0.000	0.046	0.000	0.000	0.000	0.139
NW	0.000	0.000	0.000	0.000	0.000	0.186	0.000	0.000	0.000	0.186
NNW	0.000	0.000	0.000	0.000	0.139	0.186	0.000	0.000	0.000	0.325
SUBTOTAL	0.000	0.000	0.000	0.279	1.161	1.486	0.000	0.000	0.000	2.926

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2156
 TOTAL HOURS OF STABILITY CLASS A 63
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS A 63
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2153
 TOTAL HOURS CALM 0

METEOROLOGICAL FACILITY: SEQUOYAH NUCLEAR PLANT
 STABILITY BASED ON DELTA-T BETWEEN 9.25 AND 45.99 METERS
 WIND SPEED AND DIRECTION MEASURED AT 9.73 METER LEVEL

DATE PRINTED: 2011/05/05

MEAN WIND SPEED = 7.43

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS B (-1.9 < DELTA T <= -1.7 C/100 M)

SEQUOYAH NUCLEAR PLANT

JAN 1, 2011 - MAR 31, 2011

WIND DIRECTION	CALM	WIND SPEED (MPH)								TOTAL
		0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.000	0.000	0.186	0.046	0.000	0.000	0.000	0.232
NNE	0.000	0.000	0.000	0.186	0.325	0.232	0.000	0.000	0.000	0.743
NE	0.000	0.000	0.186	0.093	0.093	0.046	0.000	0.000	0.000	0.418
ENE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
E	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ESE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SSE	0.000	0.000	0.000	0.000	0.000	0.046	0.000	0.000	0.000	0.046
S	0.000	0.000	0.000	0.000	0.000	0.139	0.000	0.000	0.000	0.139
SSW	0.000	0.000	0.000	0.046	0.325	0.511	0.000	0.000	0.000	0.882
SW	0.000	0.000	0.000	0.000	0.279	0.232	0.000	0.000	0.000	0.511
WSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
W	0.000	0.000	0.000	0.000	0.046	0.000	0.000	0.000	0.000	0.046
WNW	0.000	0.000	0.000	0.046	0.046	0.046	0.000	0.000	0.000	0.139
NW	0.000	0.000	0.000	0.093	0.093	0.093	0.000	0.000	0.000	0.279
NNW	0.000	0.000	0.000	0.046	0.186	0.186	0.000	0.000	0.000	0.418
SUBTOTAL	0.000	0.000	0.186	0.511	1.579	1.579	0.000	0.000	0.000	3.855

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2156
 TOTAL HOURS OF STABILITY CLASS B 83
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS B 83
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2153
 TOTAL HOURS CALM 0

METEOROLOGICAL FACILITY: SEQUOYAH NUCLEAR PLANT
 STABILITY BASED ON DELTA-T BETWEEN 9.25 AND 45.99 METERS
 WIND SPEED AND DIRECTION MEASURED AT 9.73 METER LEVEL

DATE PRINTED: 2011/05/05

MEAN WIND SPEED = 7.00

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS C (-1.7 < DELTA T <= -1.5 C/100 M)

SEQUOYAH NUCLEAR PLANT

JAN 1, 2011 - MAR 31, 2011

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.000	0.093	0.139	0.000	0.000	0.000	0.000	0.232
NNE	0.000	0.000	0.000	0.139	0.650	0.511	0.000	0.000	0.000	1.301
NE	0.000	0.000	0.046	0.372	0.093	0.093	0.000	0.000	0.000	0.604
ENE	0.000	0.000	0.046	0.000	0.046	0.000	0.000	0.000	0.000	0.093
E	0.000	0.000	0.093	0.000	0.000	0.000	0.000	0.000	0.000	0.093
ESE	0.000	0.000	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.046
SE	0.000	0.000	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.046
SSE	0.000	0.000	0.000	0.093	0.000	0.000	0.000	0.000	0.000	0.093
S	0.000	0.000	0.000	0.000	0.093	0.186	0.000	0.000	0.000	0.279
SSW	0.000	0.000	0.046	0.093	0.604	0.279	0.000	0.000	0.000	1.022
SW	0.000	0.000	0.000	0.232	0.372	0.139	0.000	0.000	0.000	0.743
WSW	0.000	0.000	0.000	0.000	0.046	0.000	0.000	0.000	0.000	0.046
W	0.000	0.000	0.000	0.093	0.139	0.000	0.000	0.000	0.000	0.232
WNW	0.000	0.000	0.000	0.046	0.186	0.000	0.000	0.000	0.000	0.232
NW	0.000	0.000	0.000	0.046	0.000	0.279	0.000	0.000	0.000	0.325
NNW	0.000	0.000	0.000	0.000	0.093	0.093	0.000	0.000	0.000	0.186
SUBTOTAL	0.000	0.000	0.325	1.208	2.462	1.579	0.000	0.000	0.000	5.574

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2156
TOTAL HOURS OF STABILITY CLASS C	120
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS C	120
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2153
TOTAL HOURS CALM	0

METEOROLOGICAL FACILITY: SEQUOYAH NUCLEAR PLANT
 STABILITY BASED ON DELTA-T BETWEEN 9.25 AND 45.99 METERS
 WIND SPEED AND DIRECTION MEASURED AT 9.73 METER LEVEL

DATE PRINTED: 2011/05/05

MEAN WIND SPEED = 6.43

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS D (-1.5< DELTA T<=-0.5 C/100 M)

SEQUOYAH NUCLEAR PLANT

JAN 1, 2011 - MAR 31, 2011

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	1.208	2.601	2.462	1.254	0.000	0.000	0.000	7.524
NNE	0.000	0.000	1.440	3.112	2.880	2.044	0.000	0.000	0.000	9.475
NE	0.000	0.046	0.975	0.372	0.372	0.232	0.000	0.000	0.000	1.997
ENE	0.000	0.000	0.279	0.000	0.000	0.000	0.000	0.000	0.000	0.279
E	0.000	0.000	0.093	0.000	0.000	0.000	0.000	0.000	0.000	0.093
ESE	0.000	0.000	0.093	0.000	0.000	0.000	0.000	0.000	0.000	0.093
SE	0.000	0.000	0.139	0.000	0.000	0.000	0.000	0.000	0.000	0.139
SSE	0.000	0.000	0.139	0.046	0.000	0.093	0.000	0.000	0.000	0.279
S	0.000	0.093	0.325	0.650	0.372	0.418	0.000	0.000	0.000	1.858
SSW	0.000	0.046	1.022	1.440	1.719	0.882	0.000	0.000	0.000	5.109
SW	0.000	0.000	1.068	1.858	0.929	0.511	0.000	0.000	0.000	4.366
WSW	0.000	0.000	0.279	0.372	0.325	0.232	0.000	0.000	0.000	1.208
W	0.000	0.000	0.464	0.232	0.279	0.511	0.000	0.000	0.000	1.486
WNW	0.000	0.046	0.139	0.186	0.650	0.697	0.000	0.000	0.000	1.719
NW	0.000	0.000	0.279	0.790	0.836	0.604	0.000	0.000	0.000	2.508
NNW	0.000	0.093	0.604	0.975	1.440	0.325	0.000	0.000	0.000	3.437
SUBTOTAL	0.000	0.325	8.546	12.634	12.262	7.803	0.000	0.000	0.000	41.570

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2156
 TOTAL HOURS OF STABILITY CLASS D 898
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS D 895
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2153
 TOTAL HOURS CALM 0

METEOROLOGICAL FACILITY: SEQUOYAH NUCLEAR PLANT
 STABILITY BASED ON DELTA-T BETWEEN 9.25 AND 45.99 METERS
 WIND SPEED AND DIRECTION MEASURED AT 9.73 METER LEVEL

DATE PRINTED: 2011/05/05

MEAN WIND SPEED = 5.39

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS E (-0.5< DELTA T<= 1.5 C/100 M)

SEQUOYAH NUCLEAR PLANT

JAN 1, 2011 - MAR 31, 2011

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.186	1.533	1.022	0.093	0.139	0.000	0.000	0.000	2.973
NNE	0.000	0.139	2.601	2.183	0.743	0.139	0.000	0.000	0.000	5.806
NE	0.000	0.093	0.743	0.046	0.046	0.000	0.000	0.000	0.000	0.929
ENE	0.000	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.046
E	0.000	0.000	0.093	0.000	0.000	0.000	0.000	0.000	0.000	0.093
ESE	0.000	0.000	0.093	0.000	0.000	0.000	0.000	0.000	0.000	0.093
SE	0.000	0.046	0.279	0.046	0.000	0.000	0.000	0.000	0.000	0.372
SSE	0.000	0.046	0.139	0.093	0.325	0.000	0.000	0.000	0.000	0.604
S	0.000	0.372	0.464	0.604	0.511	0.650	0.000	0.000	0.000	2.601
SSW	0.000	0.186	1.393	1.161	1.533	0.697	0.046	0.000	0.000	5.016
SW	0.000	0.139	2.276	1.765	1.161	0.418	0.000	0.000	0.000	5.759
WSW	0.000	0.093	0.790	0.325	0.046	0.093	0.000	0.000	0.000	1.347
W	0.000	0.093	0.232	0.325	0.139	0.046	0.000	0.000	0.000	0.836
WNW	0.000	0.093	0.139	0.232	0.232	0.000	0.000	0.000	0.000	0.697
NW	0.000	0.093	0.372	0.186	0.186	0.046	0.000	0.000	0.000	0.882
NNW	0.000	0.046	0.697	0.279	0.186	0.046	0.000	0.000	0.000	1.254
SUBTOTAL	0.000	1.672	11.844	8.268	5.202	2.276	0.046	0.000	0.000	29.308

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2156
 TOTAL HOURS OF STABILITY CLASS E 631
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS E 631
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2153
 TOTAL HOURS CALM 0

METEOROLOGICAL FACILITY: SEQUOYAH NUCLEAR PLANT
 STABILITY BASED ON DELTA-T BETWEEN 9.25 AND 45.99 METERS
 WIND SPEED AND DIRECTION MEASURED AT 9.73 METER LEVEL

DATE PRINTED: 2011/05/05

MEAN WIND SPEED = 4.08

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS F (1.5< DELTA T<= 4.0 C/100 M)

SEQUOYAH NUCLEAR PLANT

JAN 1, 2011 - MAR 31, 2011

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.004	0.279	0.464	0.000	0.046	0.000	0.000	0.000	0.000	0.794
NNE	0.010	0.511	1.301	0.093	0.000	0.000	0.000	0.000	0.000	1.915
NE	0.005	0.232	0.557	0.139	0.000	0.000	0.000	0.000	0.000	0.933
ENE	0.001	0.046	0.093	0.000	0.000	0.000	0.000	0.000	0.000	0.140
E	0.001	0.046	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.093
ESE	0.000	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.047
SE	0.001	0.186	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.187
SSE	0.002	0.232	0.186	0.000	0.000	0.000	0.000	0.000	0.000	0.420
S	0.003	0.279	0.186	0.046	0.000	0.000	0.000	0.000	0.000	0.514
SSW	0.008	0.232	1.161	0.511	0.000	0.000	0.000	0.000	0.000	1.912
SW	0.009	0.000	1.579	0.325	0.000	0.046	0.000	0.000	0.000	1.960
WSW	0.001	0.000	0.093	0.093	0.000	0.000	0.000	0.000	0.000	0.186
W	0.001	0.093	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.140
WNW	0.000	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.047
NW	0.000	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.047
NNW	0.001	0.000	0.093	0.000	0.000	0.000	0.000	0.000	0.000	0.093
SUBTOTAL	0.046	2.276	5.806	1.208	0.046	0.046	0.000	0.000	0.000	9.429

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2156
 TOTAL HOURS OF STABILITY CLASS F 203
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS F 203
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2153
 TOTAL HOURS CALM 1

METEOROLOGICAL FACILITY: SEQUOYAH NUCLEAR PLANT
 STABILITY BASED ON DELTA-T BETWEEN 9.25 AND 45.99 METERS
 WIND SPEED AND DIRECTION MEASURED AT 9.73 METER LEVEL

DATE PRINTED: 2011/05/05

MEAN WIND SPEED = 2.25

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS G (DELTA T > 4.0 C/100 M)

SEQUOYAH NUCLEAR PLANT

JAN 1, 2011 - MAR 31, 2011

WIND DIRECTION	WIND SPEED (MPH)									TOTAL	
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5		
N	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NNE	0.000	0.139	0.790	0.464	0.000	0.000	0.000	0.000	0.000	0.000	1.393
NE	0.000	0.511	0.464	0.279	0.000	0.000	0.000	0.000	0.000	0.000	1.254
ENE	0.000	0.279	0.186	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.464
E	0.000	0.139	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.139
ESE	0.000	0.232	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.232
SE	0.000	0.139	0.093	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.232
SSE	0.000	0.139	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.139
S	0.000	0.418	0.139	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.557
SSW	0.000	0.232	0.836	0.046	0.000	0.000	0.000	0.000	0.000	0.000	1.115
SW	0.000	0.093	0.975	0.372	0.000	0.000	0.000	0.000	0.000	0.000	1.440
WSW	0.000	0.000	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.046
W	0.000	0.139	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.139
WNW	0.000	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.046
NW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NNW	0.000	0.046	0.093	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.139
SUBTOTAL	0.000	2.555	3.623	1.161	0.000	0.000	0.000	0.000	0.000	0.000	7.339

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2156
 TOTAL HOURS OF STABILITY CLASS G 158
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS G 158
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2153
 TOTAL HOURS CALM 0

METEOROLOGICAL FACILITY: SEQUOYAH NUCLEAR PLANT
 STABILITY BASED ON DELTA-T BETWEEN 9.25 AND 45.99 METERS
 WIND SPEED AND DIRECTION MEASURED AT 9.73 METER LEVEL

DATE PRINTED: 2011/05/05

MEAN WIND SPEED = 2.05

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR
 STABILITY CLASS A (DELTA T<=-1.9 C/100 M)

SEQUOYAH NUCLEAR PLANT

APR 1, 2011 - JUN 30, 2011

WIND DIRECTION	WIND SPEED(MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.000	0.092	0.046	0.000	0.000	0.000	0.000	0.138
NNE	0.000	0.000	0.000	0.322	0.046	0.046	0.000	0.000	0.000	0.414
NE	0.000	0.000	0.000	0.506	0.138	0.000	0.000	0.000	0.000	0.644
ENE	0.000	0.000	0.000	0.046	0.000	0.000	0.000	0.000	0.000	0.046
E	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ESE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SSE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
S	0.000	0.000	0.000	0.000	0.184	0.000	0.000	0.000	0.000	0.184
SSW	0.000	0.000	0.000	0.506	0.414	0.414	0.000	0.000	0.000	1.333
SW	0.000	0.000	0.000	0.828	0.092	0.184	0.000	0.000	0.000	1.103
WSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
W	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WNW	0.000	0.000	0.000	0.000	0.000	0.368	0.000	0.000	0.000	0.368
NW	0.000	0.000	0.000	0.000	0.000	0.046	0.000	0.000	0.000	0.046
NNW	0.000	0.000	0.000	0.000	0.046	0.138	0.000	0.000	0.000	0.184
SUBTOTAL	0.000	0.000	0.000	2.299	0.966	1.195	0.000	0.000	0.000	4.460

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2175
 TOTAL HOURS OF STABILITY CLASS A 97
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS A 97
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2175
 TOTAL HOURS CALM 0

METEOROLOGICAL FACILITY: SEQUOYAH NUCLEAR PLANT
 STABILITY BASED ON DELTA-T BETWEEN 9.25 AND 45.99 METERS
 WIND SPEED AND DIRECTION MEASURED AT 9.73 METER LEVEL

DATE PRINTED: 2011/07/26

MEAN WIND SPEED = 6.09

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS B (-1.9< DELTA T<=-1.7 C/100 M)

SEQUOYAH NUCLEAR PLANT

APR 1, 2011 - JUN 30, 2011

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.000	0.092	0.092	0.046	0.000	0.000	0.000	0.230
NNE	0.000	0.000	0.046	0.322	0.184	0.000	0.000	0.000	0.000	0.552
NE	0.000	0.000	0.092	0.276	0.000	0.000	0.000	0.000	0.000	0.368
ENE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
E	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ESE	0.000	0.000	0.000	0.046	0.000	0.000	0.000	0.000	0.000	0.046
SE	0.000	0.000	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.046
SSE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
S	0.000	0.000	0.000	0.092	0.230	0.046	0.000	0.000	0.000	0.368
SSW	0.000	0.000	0.000	0.782	0.828	0.598	0.000	0.000	0.000	2.207
SW	0.000	0.000	0.046	0.460	0.230	0.046	0.000	0.000	0.000	0.782
WSW	0.000	0.000	0.000	0.046	0.000	0.000	0.000	0.000	0.000	0.046
W	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WNW	0.000	0.000	0.000	0.046	0.046	0.092	0.000	0.000	0.000	0.184
NW	0.000	0.000	0.000	0.000	0.046	0.092	0.000	0.000	0.000	0.138
NNW	0.000	0.000	0.000	0.000	0.092	0.138	0.000	0.000	0.000	0.230
SUBTOTAL	0.000	0.000	0.230	2.161	1.747	1.057	0.000	0.000	0.000	5.195

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2175
 TOTAL HOURS OF STABILITY CLASS B 113
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS B 113
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2175
 TOTAL HOURS CALM 0

METEOROLOGICAL FACILITY: SEQUOYAH NUCLEAR PLANT
 STABILITY BASED ON DELTA-T BETWEEN 9.25 AND 45.99 METERS
 WIND SPEED AND DIRECTION MEASURED AT 9.73 METER LEVEL

DATE PRINTED: 2011/07/26

MEAN WIND SPEED = 5.99

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS C (-1.7< DELTA T<=-1.5 C/100 M)

SEQUOYAH NUCLEAR PLANT

APR 1, 2011 - JUN 30, 2011

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.000	0.092	0.046	0.046	0.000	0.000	0.000	0.184
NNE	0.000	0.000	0.046	0.460	0.138	0.000	0.046	0.000	0.000	0.690
NE	0.000	0.000	0.138	0.276	0.000	0.000	0.000	0.000	0.000	0.414
ENE	0.000	0.000	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.046
E	0.000	0.000	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.046
ESE	0.000	0.000	0.000	0.046	0.000	0.000	0.000	0.000	0.000	0.046
SE	0.000	0.000	0.000	0.046	0.000	0.000	0.000	0.000	0.000	0.046
SSE	0.000	0.000	0.000	0.046	0.000	0.000	0.000	0.000	0.000	0.046
S	0.000	0.000	0.046	0.230	0.138	0.138	0.000	0.000	0.000	0.552
SSW	0.000	0.000	0.184	1.563	0.782	0.368	0.000	0.000	0.000	2.897
SW	0.000	0.000	0.138	0.690	0.276	0.046	0.000	0.000	0.000	1.149
WSW	0.000	0.000	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.046
W	0.000	0.000	0.000	0.046	0.000	0.000	0.000	0.000	0.000	0.046
WNW	0.000	0.000	0.000	0.000	0.138	0.046	0.046	0.000	0.000	0.230
NW	0.000	0.000	0.000	0.092	0.230	0.046	0.000	0.000	0.000	0.368
NNW	0.000	0.000	0.000	0.000	0.046	0.000	0.000	0.000	0.000	0.046
SUBTOTAL	0.000	0.000	0.690	3.586	1.793	0.690	0.092	0.000	0.000	6.851

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2175
 TOTAL HOURS OF STABILITY CLASS C 149
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS C 149
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2175
 TOTAL HOURS CALM 0

METEOROLOGICAL FACILITY: SEQUOYAH NUCLEAR PLANT
 STABILITY BASED ON DELTA-T BETWEEN 9.25 AND 45.99 METERS
 WIND SPEED AND DIRECTION MEASURED AT 9.73 METER LEVEL

DATE PRINTED: 2011/07/26

MEAN WIND SPEED = 5.36

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS D (-1.5< DELTA T<=-0.5 C/100 M)

SEQUOYAH NUCLEAR PLANT

APR 1, 2011 - JUN 30, 2011

WIND DIRECTION	WIND SPEED(MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.598	0.690	0.506	0.414	0.000	0.000	0.000	2.207
NNE	0.000	0.092	0.966	1.195	0.322	0.230	0.000	0.000	0.000	2.805
NE	0.000	0.046	1.241	0.230	0.046	0.046	0.000	0.000	0.000	1.609
ENE	0.000	0.000	0.368	0.046	0.000	0.000	0.000	0.000	0.000	0.414
E	0.000	0.000	0.230	0.046	0.000	0.000	0.000	0.000	0.000	0.276
ESE	0.000	0.000	0.230	0.046	0.000	0.000	0.000	0.000	0.000	0.276
SE	0.000	0.000	0.276	0.000	0.000	0.000	0.000	0.000	0.000	0.276
SSE	0.000	0.000	0.690	0.046	0.000	0.230	0.000	0.000	0.000	0.966
S	0.000	0.000	1.103	1.655	1.057	0.874	0.000	0.000	0.000	4.690
SSW	0.000	0.000	1.931	4.368	1.885	0.552	0.000	0.000	0.000	8.736
SW	0.000	0.000	1.701	1.885	0.874	0.460	0.000	0.000	0.000	4.920
WSW	0.000	0.000	0.184	0.322	0.230	0.368	0.000	0.000	0.000	1.103
W	0.000	0.000	0.368	0.690	0.276	0.138	0.000	0.000	0.000	1.471
WNW	0.000	0.000	0.460	0.230	0.276	0.230	0.000	0.000	0.000	1.195
NW	0.000	0.092	0.276	0.414	0.230	0.138	0.046	0.000	0.000	1.195
NNW	0.000	0.046	0.138	0.322	0.506	0.092	0.000	0.000	0.000	1.103
SUBTOTAL	0.000	0.276	10.759	12.184	6.207	3.770	0.046	0.000	0.000	33.241

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2175
 TOTAL HOURS OF STABILITY CLASS D 723
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS D 723
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2175
 TOTAL HOURS CALM 0

METEOROLOGICAL FACILITY: SEQUOYAH NUCLEAR PLANT
 STABILITY BASED ON DELTA-T BETWEEN 9.25 AND 45.99 METERS
 WIND SPEED AND DIRECTION MEASURED AT 9.73 METER LEVEL

DATE PRINTED: 2011/07/26

MEAN WIND SPEED = 4.62

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS E (-0.5< DELTA T<= 1.5 C/100 M)

SEQUOYAH NUCLEAR PLANT

APR 1, 2011 - JUN 30, 2011

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.368	2.253	0.644	0.138	0.000	0.000	0.000	0.000	3.402
NNE	0.000	0.644	2.529	0.460	0.046	0.000	0.000	0.000	0.000	3.678
NE	0.000	0.322	0.414	0.000	0.000	0.000	0.000	0.000	0.000	0.736
ENE	0.000	0.092	0.184	0.000	0.000	0.000	0.000	0.000	0.000	0.276
E	0.000	0.230	0.092	0.046	0.000	0.000	0.000	0.000	0.000	0.368
ESE	0.000	0.092	0.092	0.046	0.000	0.000	0.000	0.000	0.000	0.230
SE	0.000	0.138	0.276	0.000	0.000	0.000	0.000	0.000	0.000	0.414
SSE	0.000	0.046	0.276	0.184	0.092	0.138	0.000	0.000	0.000	0.736
S	0.000	0.368	1.103	0.828	0.506	0.322	0.000	0.000	0.000	3.126
SSW	0.000	0.138	2.115	1.655	1.057	0.506	0.000	0.000	0.000	5.471
SW	0.000	0.276	2.759	1.241	0.368	0.138	0.000	0.000	0.000	4.782
WSW	0.000	0.046	0.966	0.230	0.230	0.184	0.000	0.000	0.000	1.655
W	0.000	0.092	0.598	0.230	0.046	0.046	0.000	0.000	0.000	1.011
WNW	0.000	0.092	0.184	0.138	0.000	0.000	0.000	0.000	0.000	0.414
NW	0.000	0.046	0.414	0.230	0.092	0.046	0.000	0.000	0.000	0.828
NNW	0.000	0.138	0.828	0.322	0.046	0.046	0.000	0.000	0.000	1.379
SUBTOTAL	0.000	3.126	15.080	6.253	2.621	1.425	0.000	0.000	0.000	28.506

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2175
 TOTAL HOURS OF STABILITY CLASS E 620
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS E 620
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2175
 TOTAL HOURS CALM 0

METEOROLOGICAL FACILITY: SEQUOYAH NUCLEAR PLANT
 STABILITY BASED ON DELTA-T BETWEEN 9.25 AND 45.99 METERS
 WIND SPEED AND DIRECTION MEASURED AT 9.73 METER LEVEL

DATE PRINTED: 2011/07/26

MEAN WIND SPEED = 3.32

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS F (1.5< DELTA T<= 4.0 C/100 M)

SEQUOYAH NUCLEAR PLANT

APR 1, 2011 - JUN 30, 2011

WIND DIRECTION	WIND SPEED(MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.414	2.023	0.000	0.000	0.000	0.000	0.000	0.000	2.437
NNE	0.000	0.552	4.690	0.046	0.000	0.000	0.000	0.000	0.000	5.287
NE	0.000	0.690	0.966	0.000	0.000	0.000	0.000	0.000	0.000	1.655
ENE	0.000	0.184	0.092	0.000	0.000	0.000	0.000	0.000	0.000	0.276
E	0.000	0.230	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.230
ESE	0.000	0.184	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.230
SE	0.000	0.322	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.368
SSE	0.000	0.460	0.230	0.000	0.046	0.000	0.000	0.000	0.000	0.736
S	0.000	0.230	0.828	0.046	0.046	0.000	0.000	0.000	0.000	1.149
SSW	0.000	0.046	1.425	0.276	0.046	0.046	0.000	0.000	0.000	1.839
SW	0.000	0.138	1.287	0.184	0.046	0.000	0.000	0.000	0.000	1.655
WSW	0.000	0.046	0.460	0.000	0.000	0.000	0.000	0.000	0.000	0.506
W	0.000	0.046	0.230	0.000	0.046	0.000	0.000	0.000	0.000	0.322
WNW	0.000	0.000	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.046
NW	0.000	0.092	0.092	0.138	0.000	0.000	0.000	0.000	0.000	0.322
NNW	0.000	0.000	0.690	0.000	0.000	0.000	0.000	0.000	0.000	0.690
SUBTOTAL	0.000	3.632	13.149	0.690	0.230	0.046	0.000	0.000	0.000	17.747

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2175
TOTAL HOURS OF STABILITY CLASS F	386
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS F	386
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2175
TOTAL HOURS CALM	0

METEOROLOGICAL FACILITY: SEQUOYAH NUCLEAR PLANT
 STABILITY BASED ON DELTA-T BETWEEN 9.25 AND 45.99 METERS
 WIND SPEED AND DIRECTION MEASURED AT 9.73 METER LEVEL

DATE PRINTED: 2011/07/26

MEAN WIND SPEED = 2.04

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS G (DELTA T > 4.0 C/100 M)

SEQUOYAH NUCLEAR PLANT

APR 1, 2011 - JUN 30, 2011

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NNE	0.000	0.138	0.414	0.000	0.000	0.000	0.000	0.000	0.000	0.552
NE	0.000	0.230	0.230	0.000	0.000	0.000	0.000	0.000	0.000	0.460
ENE	0.000	0.046	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.092
E	0.000	0.092	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.092
ESE	0.000	0.092	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.092
SE	0.000	0.184	0.092	0.000	0.000	0.000	0.000	0.000	0.000	0.276
SSE	0.000	0.184	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.230
S	0.000	0.046	0.460	0.000	0.000	0.000	0.000	0.000	0.000	0.506
SSW	0.000	0.046	0.828	0.000	0.000	0.000	0.000	0.000	0.000	0.874
SW	0.000	0.000	0.552	0.000	0.000	0.000	0.000	0.000	0.000	0.552
WSW	0.000	0.092	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.138
W	0.000	0.092	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.092
WNW	0.000	0.000	0.000	0.000	0.000	0.046	0.000	0.000	0.000	0.046
NW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SUBTOTAL	0.000	1.241	2.713	0.000	0.000	0.046	0.000	0.000	0.000	4.000

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2175
 TOTAL HOURS OF STABILITY CLASS G 87
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS G 87
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2175
 TOTAL HOURS CALM 0

METEOROLOGICAL FACILITY: SEQUOYAH NUCLEAR PLANT
 STABILITY BASED ON DELTA-T BETWEEN 9.25 AND 45.99 METERS
 WIND SPEED AND DIRECTION MEASURED AT 9.73 METER LEVEL

DATE PRINTED: 2011/07/26

MEAN WIND SPEED = 1.91

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS A (DELTA T<=-1.9 C/100 M)

SEQUOYAH NUCLEAR PLANT

JUL 1, 2011 - SEP 30, 2011

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.000	0.091	0.000	0.045	0.000	0.000	0.000	0.136
NNE	0.000	0.000	0.000	0.181	0.952	0.136	0.000	0.000	0.000	1.270
NE	0.000	0.000	0.000	0.363	0.363	0.045	0.000	0.000	0.000	0.771
ENE	0.000	0.000	0.045	0.091	0.000	0.000	0.000	0.000	0.000	0.136
E	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ESE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SSE	0.000	0.000	0.000	0.045	0.000	0.000	0.000	0.000	0.000	0.045
S	0.000	0.000	0.000	0.091	0.045	0.000	0.000	0.000	0.000	0.136
SSW	0.000	0.000	0.000	0.272	1.270	0.045	0.000	0.000	0.000	1.587
SW	0.000	0.000	0.000	1.134	1.134	0.045	0.000	0.000	0.000	2.313
WSW	0.000	0.000	0.000	0.091	0.091	0.000	0.000	0.000	0.000	0.181
W	0.000	0.000	0.000	0.000	0.000	0.091	0.000	0.000	0.000	0.091
WNW	0.000	0.000	0.000	0.000	0.181	0.091	0.000	0.000	0.000	0.272
NW	0.000	0.000	0.000	0.000	0.045	0.000	0.000	0.000	0.000	0.045
NNW	0.000	0.000	0.000	0.000	0.136	0.091	0.000	0.000	0.000	0.227
SUBTOTAL	0.000	0.000	0.045	2.358	4.218	0.590	0.000	0.000	0.000	7.211

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2205
 TOTAL HOURS OF STABILITY CLASS A 159
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS A 159
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2205
 TOTAL HOURS CALM 0

METEOROLOGICAL FACILITY: SEQUOYAH NUCLEAR PLANT
 STABILITY BASED ON DELTA-T BETWEEN 9.25 AND 45.99 METERS
 WIND SPEED AND DIRECTION MEASURED AT 9.73 METER LEVEL

DATE PRINTED: 2011/11/21

MEAN WIND SPEED = 5.91

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS B (-1.9< DELTA T<=-1.7 C/100 M)

SEQUOYAH NUCLEAR PLANT

JUL 1, 2011 - SEP 30, 2011

WIND DIRECTION	WIND SPEED(MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.045	0.000	0.045	0.000	0.000	0.000	0.000	0.091
NNE	0.000	0.000	0.091	0.272	0.000	0.136	0.000	0.000	0.000	0.499
NE	0.000	0.000	0.000	0.091	0.045	0.000	0.000	0.000	0.000	0.136
ENE	0.000	0.000	0.091	0.045	0.000	0.000	0.000	0.000	0.000	0.136
E	0.000	0.000	0.045	0.045	0.000	0.000	0.000	0.000	0.000	0.091
ESE	0.000	0.000	0.000	0.045	0.000	0.000	0.000	0.000	0.000	0.045
SE	0.000	0.000	0.045	0.045	0.000	0.000	0.000	0.000	0.000	0.091
SSE	0.000	0.000	0.000	0.045	0.045	0.000	0.000	0.000	0.000	0.091
S	0.000	0.000	0.000	0.136	0.091	0.000	0.000	0.000	0.000	0.227
SSW	0.000	0.000	0.045	0.317	0.771	0.000	0.000	0.000	0.000	1.134
SW	0.000	0.000	0.000	0.635	0.227	0.000	0.000	0.000	0.000	0.862
WSW	0.000	0.000	0.000	0.045	0.045	0.000	0.000	0.000	0.000	0.091
W	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WNW	0.000	0.000	0.000	0.045	0.045	0.000	0.000	0.000	0.000	0.091
NW	0.000	0.000	0.000	0.045	0.000	0.045	0.000	0.000	0.000	0.091
NNW	0.000	0.000	0.000	0.045	0.000	0.091	0.000	0.000	0.000	0.136
SUBTOTAL	0.000	0.000	0.363	1.859	1.315	0.272	0.000	0.000	0.000	3.810

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2205
 TOTAL HOURS OF STABILITY CLASS B 84
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS B 84
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2205
 TOTAL HOURS CALM 0

METEOROLOGICAL FACILITY: SEQUOYAH NUCLEAR PLANT
 STABILITY BASED ON DELTA-T BETWEEN 9.25 AND 45.99 METERS
 WIND SPEED AND DIRECTION MEASURED AT 9.73 METER LEVEL

DATE PRINTED: 2011/11/21

MEAN WIND SPEED = 5.30

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS C (-1.7< DELTA T<=-1.5 C/100 M)

SEQUOYAH NUCLEAR PLANT

JUL 1, 2011 - SEP 30, 2011

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.000	0.045	0.136	0.045	0.000	0.000	0.000	0.227
NNE	0.000	0.000	0.091	0.680	0.181	0.045	0.000	0.000	0.000	0.998
NE	0.000	0.000	0.136	0.272	0.091	0.000	0.000	0.000	0.000	0.499
ENE	0.000	0.000	0.091	0.000	0.000	0.000	0.000	0.000	0.000	0.091
E	0.000	0.000	0.045	0.000	0.000	0.000	0.000	0.000	0.000	0.045
ESE	0.000	0.000	0.045	0.000	0.000	0.000	0.000	0.000	0.000	0.045
SE	0.000	0.000	0.136	0.227	0.000	0.000	0.000	0.000	0.000	0.363
SSE	0.000	0.000	0.136	0.136	0.000	0.000	0.000	0.000	0.000	0.272
S	0.000	0.000	0.045	0.272	0.136	0.000	0.000	0.000	0.000	0.454
SSW	0.000	0.000	0.045	1.361	0.408	0.000	0.000	0.000	0.000	1.814
SW	0.000	0.000	0.045	0.816	0.136	0.000	0.000	0.000	0.000	0.998
WSW	0.000	0.000	0.000	0.045	0.091	0.000	0.000	0.000	0.000	0.136
W	0.000	0.000	0.000	0.000	0.045	0.000	0.000	0.000	0.000	0.045
WNW	0.000	0.000	0.045	0.000	0.000	0.000	0.000	0.000	0.000	0.045
NW	0.000	0.000	0.000	0.045	0.000	0.045	0.000	0.000	0.000	0.091
NNW	0.000	0.000	0.000	0.000	0.136	0.091	0.000	0.000	0.000	0.227
SUBTOTAL	0.000	0.000	0.862	3.900	1.361	0.227	0.000	0.000	0.000	6.349

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2205
 TOTAL HOURS OF STABILITY CLASS C 140
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS C 140
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2205
 TOTAL HOURS CALM 0

METEOROLOGICAL FACILITY: SEQUOYAH NUCLEAR PLANT
 STABILITY BASED ON DELTA-T BETWEEN 9.25 AND 45.99 METERS
 WIND SPEED AND DIRECTION MEASURED AT 9.73 METER LEVEL

DATE PRINTED: 2011/11/21

MEAN WIND SPEED = 4.75

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS D (-1.5< DELTA T<=-0.5 C/100 M)

SEQUOYAH NUCLEAR PLANT

JUL 1, 2011 - SEP 30, 2011

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	1.134	0.635	0.454	0.227	0.000	0.000	0.000	2.449
NNE	0.000	0.045	1.814	1.723	0.907	1.179	0.227	0.000	0.000	5.896
NE	0.000	0.045	1.361	0.227	0.045	0.045	0.000	0.000	0.000	1.723
ENE	0.000	0.000	0.499	0.091	0.000	0.000	0.000	0.000	0.000	0.590
E	0.000	0.000	0.454	0.000	0.000	0.000	0.000	0.000	0.000	0.454
ESE	0.000	0.000	0.363	0.136	0.000	0.000	0.000	0.000	0.000	0.499
SE	0.000	0.000	0.181	0.181	0.000	0.000	0.000	0.000	0.000	0.363
SSE	0.000	0.045	0.862	0.317	0.045	0.000	0.000	0.000	0.000	1.270
S	0.000	0.045	1.723	1.633	0.590	0.045	0.000	0.000	0.000	4.036
SSW	0.000	0.045	3.129	5.079	0.454	0.000	0.000	0.000	0.000	8.707
SW	0.000	0.000	2.222	1.224	0.454	0.000	0.000	0.000	0.000	3.900
WSW	0.000	0.045	0.454	0.454	0.091	0.045	0.000	0.000	0.000	1.088
W	0.000	0.045	0.363	0.227	0.045	0.000	0.000	0.000	0.000	0.680
WNW	0.000	0.000	0.091	0.181	0.045	0.045	0.000	0.000	0.000	0.363
NW	0.000	0.045	0.227	0.680	0.045	0.091	0.000	0.000	0.000	1.088
NNW	0.000	0.000	0.272	0.635	0.227	0.227	0.000	0.000	0.000	1.361
SUBTOTAL	0.000	0.363	15.147	13.424	3.401	1.905	0.227	0.000	0.000	34.467

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2205
 TOTAL HOURS OF STABILITY CLASS D 760
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS D 760
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2205
 TOTAL HOURS CALM 0

METEOROLOGICAL FACILITY: SEQUOYAH NUCLEAR PLANT
 STABILITY BASED ON DELTA-T BETWEEN 9.25 AND 45.99 METERS
 WIND SPEED AND DIRECTION MEASURED AT 9.73 METER LEVEL

DATE PRINTED: 2011/11/21

MEAN WIND SPEED = 4.03

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS E (-0.5< DELTA T<= 1.5 C/100 M)

SEQUOYAH NUCLEAR PLANT

JUL 1, 2011 - SEP 30, 2011

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.007	0.726	3.991	1.043	0.045	0.000	0.000	0.000	0.000	5.812
NNE	0.006	0.544	3.265	1.406	0.227	0.000	0.000	0.000	0.000	5.448
NE	0.001	0.317	0.408	0.045	0.000	0.000	0.000	0.000	0.000	0.772
ENE	0.000	0.181	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.182
E	0.001	0.227	0.181	0.000	0.000	0.000	0.000	0.000	0.000	0.409
ESE	0.000	0.045	0.091	0.000	0.000	0.000	0.000	0.000	0.000	0.136
SE	0.001	0.272	0.227	0.045	0.000	0.000	0.000	0.000	0.000	0.545
SSE	0.001	0.045	0.544	0.091	0.000	0.000	0.000	0.000	0.000	0.681
S	0.003	0.272	1.723	0.227	0.045	0.000	0.000	0.000	0.000	2.271
SSW	0.005	0.317	2.902	0.680	0.000	0.000	0.000	0.000	0.000	3.905
SW	0.006	0.136	3.492	0.680	0.000	0.000	0.000	0.000	0.000	4.314
WSW	0.003	0.408	1.769	0.408	0.000	0.000	0.000	0.000	0.000	2.588
W	0.001	0.272	0.635	0.000	0.000	0.000	0.000	0.000	0.000	0.908
WNW	0.001	0.227	0.726	0.045	0.000	0.000	0.000	0.000	0.000	0.999
NW	0.003	0.408	1.451	0.091	0.045	0.000	0.000	0.000	0.000	1.998
NNW	0.005	0.499	2.494	0.363	0.136	0.000	0.000	0.000	0.000	3.497
SUBTOTAL	0.045	4.898	23.900	5.125	0.499	0.000	0.000	0.000	0.000	34.467

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2205
 TOTAL HOURS OF STABILITY CLASS E 760
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS E 760
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2205
 TOTAL HOURS CALM 1

METEOROLOGICAL FACILITY: SEQUOYAH NUCLEAR PLANT
 STABILITY BASED ON DELTA-T BETWEEN 9.25 AND 45.99 METERS
 WIND SPEED AND DIRECTION MEASURED AT 9.73 METER LEVEL

DATE PRINTED: 2011/11/21

MEAN WIND SPEED = 2.43

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS F (1.5< DELTA T<= 4.0 C/100 M)

SEQUOYAH NUCLEAR PLANT

JUL 1, 2011 - SEP 30, 2011

WIND DIRECTION	WIND SPEED(MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.454	2.086	0.136	0.000	0.000	0.000	0.000	0.000	2.676
NNE	0.000	0.635	3.311	0.000	0.000	0.000	0.000	0.000	0.000	3.946
NE	0.000	0.408	0.635	0.000	0.000	0.000	0.000	0.000	0.000	1.043
ENE	0.000	0.454	0.136	0.000	0.000	0.000	0.000	0.000	0.000	0.590
E	0.000	0.181	0.045	0.000	0.000	0.000	0.000	0.000	0.000	0.227
ESE	0.000	0.091	0.045	0.045	0.000	0.000	0.000	0.000	0.000	0.181
SE	0.000	0.091	0.045	0.000	0.000	0.000	0.000	0.000	0.000	0.136
SSE	0.000	0.181	0.091	0.000	0.000	0.000	0.000	0.000	0.000	0.272
S	0.000	0.363	0.363	0.045	0.000	0.000	0.000	0.000	0.000	0.771
SSW	0.000	0.000	0.590	0.000	0.045	0.000	0.000	0.000	0.000	0.635
SW	0.000	0.136	0.317	0.000	0.000	0.000	0.000	0.000	0.000	0.454
WSW	0.000	0.045	0.317	0.000	0.000	0.000	0.000	0.000	0.000	0.363
W	0.000	0.000	0.091	0.000	0.000	0.000	0.000	0.000	0.000	0.091
WNW	0.000	0.091	0.000	0.045	0.000	0.000	0.000	0.000	0.000	0.136
NW	0.000	0.045	0.227	0.000	0.000	0.000	0.000	0.000	0.000	0.272
NNW	0.000	0.227	0.680	0.227	0.000	0.000	0.000	0.000	0.000	1.134
SUBTOTAL	0.000	3.401	8.980	0.499	0.045	0.000	0.000	0.000	0.000	12.925

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2205
 TOTAL HOURS OF STABILITY CLASS F 285
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS F 285
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2205
 TOTAL HOURS CALM 0

METEOROLOGICAL FACILITY: SEQUOYAH NUCLEAR PLANT
 STABILITY BASED ON DELTA-T BETWEEN 9.25 AND 45.99 METERS
 WIND SPEED AND DIRECTION MEASURED AT 9.73 METER LEVEL

DATE PRINTED: 2011/11/21

MEAN WIND SPEED = 1.95

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS G (DELTA T > 4.0 C/100 M)

SEQUOYAH NUCLEAR PLANT

JUL 1, 2011 - SEP 30, 2011

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NNE	0.000	0.091	0.091	0.000	0.000	0.000	0.000	0.000	0.000	0.181
NE	0.000	0.000	0.091	0.000	0.000	0.000	0.000	0.000	0.000	0.091
ENE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
E	0.000	0.000	0.045	0.000	0.000	0.000	0.000	0.000	0.000	0.045
ESE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SE	0.000	0.091	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.091
SSE	0.000	0.091	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.091
S	0.000	0.000	0.000	0.000	0.000	0.045	0.000	0.000	0.000	0.045
SSW	0.000	0.000	0.181	0.045	0.000	0.000	0.000	0.000	0.000	0.227
SW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
W	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SUBTOTAL	0.000	0.272	0.408	0.045	0.000	0.045	0.000	0.000	0.000	0.771

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2205
 TOTAL HOURS OF STABILITY CLASS G 17
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS G 17
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2205
 TOTAL HOURS CALM 0

METEOROLOGICAL FACILITY: SEQUOYAH NUCLEAR PLANT
 STABILITY BASED ON DELTA-T BETWEEN 9.25 AND 45.99 METERS
 WIND SPEED AND DIRECTION MEASURED AT 9.73 METER LEVEL

DATE PRINTED: 2011/11/21

MEAN WIND SPEED = 2.36

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS A (DELTA T<=-1.9 C/100 M)

SEQUOYAH NUCLEAR PLANT

OCT 1, 2011 - DEC 31, 2011

WIND DIRECTION	WIND SPEED(MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.000	0.000	0.091	0.136	0.000	0.000	0.000	0.227
NNE	0.000	0.000	0.000	0.045	0.227	0.091	0.000	0.000	0.000	0.363
NE	0.000	0.000	0.045	0.091	0.000	0.000	0.000	0.000	0.000	0.136
ENE	0.000	0.000	0.045	0.045	0.000	0.000	0.000	0.000	0.000	0.091
E	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ESE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SSE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
S	0.000	0.000	0.045	0.091	0.000	0.000	0.000	0.000	0.000	0.136
SSW	0.000	0.000	0.000	0.045	0.227	0.000	0.000	0.000	0.000	0.273
SW	0.000	0.000	0.000	0.091	0.182	0.000	0.000	0.000	0.000	0.273
WSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
W	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NNW	0.000	0.000	0.045	0.000	0.000	0.000	0.000	0.000	0.000	0.045
SUBTOTAL	0.000	0.000	0.182	0.409	0.727	0.227	0.000	0.000	0.000	1.545

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2201
 TOTAL HOURS OF STABILITY CLASS A 34
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS A 34
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2201
 TOTAL HOURS CALM 0

METEOROLOGICAL FACILITY: SEQUOYAH NUCLEAR PLANT
 STABILITY BASED ON DELTA-T BETWEEN 9.25 AND 45.99 METERS
 WIND SPEED AND DIRECTION MEASURED AT 9.73 METER LEVEL

DATE PRINTED: 2012/02/16

MEAN WIND SPEED = 5.62

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS B (-1.9< DELTA T<=-1.7 C/100 M)

SEQUOYAH NUCLEAR PLANT

OCT 1, 2011 - DEC 31, 2011

WIND DIRECTION	WIND SPEED(MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.000	0.091	0.136	0.182	0.000	0.000	0.000	0.409
NNE	0.000	0.000	0.000	0.363	0.182	0.000	0.000	0.000	0.000	0.545
NE	0.000	0.000	0.045	0.136	0.000	0.000	0.000	0.000	0.000	0.182
ENE	0.000	0.000	0.000	0.091	0.000	0.000	0.000	0.000	0.000	0.091
E	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ESE	0.000	0.000	0.045	0.000	0.000	0.000	0.000	0.000	0.000	0.045
SE	0.000	0.000	0.000	0.045	0.000	0.000	0.000	0.000	0.000	0.045
SSE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
S	0.000	0.000	0.045	0.091	0.136	0.000	0.000	0.000	0.000	0.273
SSW	0.000	0.000	0.000	0.182	0.500	0.045	0.000	0.000	0.000	0.727
SW	0.000	0.000	0.000	0.318	0.136	0.000	0.000	0.000	0.000	0.454
WSW	0.000	0.000	0.000	0.091	0.000	0.045	0.000	0.000	0.000	0.136
W	0.000	0.000	0.000	0.000	0.000	0.091	0.000	0.000	0.000	0.091
WNW	0.000	0.000	0.000	0.045	0.000	0.000	0.000	0.000	0.000	0.045
NW	0.000	0.000	0.000	0.045	0.000	0.045	0.000	0.000	0.000	0.091
NNW	0.000	0.000	0.000	0.000	0.136	0.091	0.000	0.000	0.000	0.227
SUBTOTAL	0.000	0.000	0.136	1.499	1.227	0.500	0.000	0.000	0.000	3.362

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2201
 TOTAL HOURS OF STABILITY CLASS B 74
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS B 74
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2201
 TOTAL HOURS CALM 0

METEOROLOGICAL FACILITY: SEQUOYAH NUCLEAR PLANT
 STABILITY BASED ON DELTA-T BETWEEN 9.25 AND 45.99 METERS
 WIND SPEED AND DIRECTION MEASURED AT 9.73 METER LEVEL

DATE PRINTED: 2012/02/16

MEAN WIND SPEED = 5.73

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS C (-1.7 < DELTA T <= -1.5 C/100 M)

SEQUOYAH NUCLEAR PLANT

OCT 1, 2011 - DEC 31, 2011

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.000	0.273	0.454	0.045	0.000	0.000	0.000	0.772
NNE	0.000	0.000	0.091	0.318	0.227	0.091	0.000	0.000	0.000	0.727
NE	0.000	0.000	0.273	0.227	0.091	0.045	0.000	0.000	0.000	0.636
ENE	0.000	0.000	0.091	0.000	0.000	0.000	0.000	0.000	0.000	0.091
E	0.000	0.000	0.000	0.045	0.000	0.000	0.000	0.000	0.000	0.045
ESE	0.000	0.000	0.091	0.000	0.000	0.000	0.000	0.000	0.000	0.091
SE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SSE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
S	0.000	0.000	0.000	0.318	0.136	0.091	0.000	0.000	0.000	0.545
SSW	0.000	0.000	0.000	0.318	0.227	0.045	0.000	0.000	0.000	0.591
SW	0.000	0.000	0.000	0.182	0.182	0.000	0.000	0.000	0.000	0.363
WSW	0.000	0.000	0.045	0.000	0.045	0.045	0.000	0.000	0.000	0.136
W	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NW	0.000	0.000	0.000	0.045	0.000	0.045	0.000	0.000	0.000	0.091
NNW	0.000	0.000	0.045	0.000	0.000	0.000	0.000	0.000	0.000	0.045
SUBTOTAL	0.000	0.000	0.636	1.726	1.363	0.409	0.000	0.000	0.000	4.134

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2201
 TOTAL HOURS OF STABILITY CLASS C 91
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS C 91
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2201
 TOTAL HOURS CALM 0

METEOROLOGICAL FACILITY: SEQUOYAH NUCLEAR PLANT
 STABILITY BASED ON DELTA-T BETWEEN 9.25 AND 45.99 METERS
 WIND SPEED AND DIRECTION MEASURED AT 9.73 METER LEVEL

DATE PRINTED: 2012/02/16

MEAN WIND SPEED = 5.29

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS D (-1.5< DELTA T<=-0.5 C/100 M)

SEQUOYAH NUCLEAR PLANT

OCT 1, 2011 - DEC 31, 2011

WIND DIRECTION	WIND SPEED(MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	1.181	1.681	1.181	0.545	0.000	0.000	0.000	4.589
NNE	0.000	0.045	2.045	2.135	1.681	0.454	0.000	0.000	0.000	6.361
NE	0.000	0.000	0.818	0.363	0.000	0.000	0.000	0.000	0.000	1.181
ENE	0.000	0.045	0.454	0.136	0.000	0.000	0.000	0.000	0.000	0.636
E	0.000	0.000	0.045	0.000	0.000	0.000	0.000	0.000	0.000	0.045
ESE	0.000	0.045	0.182	0.045	0.000	0.000	0.000	0.000	0.000	0.273
SE	0.000	0.091	0.273	0.000	0.000	0.000	0.000	0.000	0.000	0.363
SSE	0.000	0.045	0.182	0.091	0.000	0.091	0.000	0.000	0.000	0.409
S	0.000	0.045	0.591	1.408	0.863	1.090	0.000	0.000	0.000	3.998
SSW	0.000	0.000	1.045	2.090	1.090	0.636	0.000	0.000	0.000	4.861
SW	0.000	0.045	1.136	1.772	0.954	0.136	0.000	0.000	0.000	4.044
WSW	0.000	0.000	0.363	0.363	0.909	0.318	0.000	0.000	0.000	1.954
W	0.000	0.045	0.091	0.182	0.227	0.227	0.000	0.000	0.000	0.772
WNW	0.000	0.000	0.273	0.091	0.318	0.000	0.000	0.000	0.000	0.682
NW	0.000	0.045	0.227	0.636	0.318	0.045	0.000	0.000	0.000	1.272
NNW	0.000	0.045	0.318	1.090	0.772	0.227	0.000	0.000	0.000	2.453
SUBTOTAL	0.000	0.500	9.223	12.085	8.314	3.771	0.000	0.000	0.000	33.894

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2201
 TOTAL HOURS OF STABILITY CLASS D 746
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS D 746
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2201
 TOTAL HOURS CALM 0

METEOROLOGICAL FACILITY: SEQUOYAH NUCLEAR PLANT
 STABILITY BASED ON DELTA-T BETWEEN 9.25 AND 45.99 METERS
 WIND SPEED AND DIRECTION MEASURED AT 9.73 METER LEVEL

DATE PRINTED: 2012/02/16

MEAN WIND SPEED = 4.85

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS E (-0.5 < DELTA T <= 1.5 C/100 M)

SEQUOYAH NUCLEAR PLANT

OCT 1, 2011 - DEC 31, 2011

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.136	3.135	1.090	0.273	0.000	0.000	0.000	0.000	4.634
NNE	0.000	0.136	2.499	2.317	0.545	0.000	0.000	0.000	0.000	5.498
NE	0.000	0.363	0.545	0.000	0.000	0.000	0.000	0.000	0.000	0.909
ENE	0.000	0.318	0.182	0.000	0.000	0.000	0.000	0.000	0.000	0.500
E	0.000	0.091	0.091	0.000	0.000	0.000	0.000	0.000	0.000	0.182
ESE	0.000	0.091	0.091	0.000	0.000	0.000	0.000	0.000	0.000	0.182
SE	0.000	0.000	0.091	0.000	0.000	0.000	0.000	0.000	0.000	0.091
SSE	0.000	0.045	0.545	0.045	0.000	0.000	0.000	0.000	0.000	0.636
S	0.000	0.273	1.136	1.227	0.409	0.636	0.000	0.000	0.000	3.680
SSW	0.000	0.227	2.590	3.317	0.863	0.227	0.000	0.000	0.000	7.224
SW	0.000	0.273	2.317	1.363	0.227	0.091	0.000	0.000	0.000	4.271
WSW	0.000	0.091	1.090	0.863	0.182	0.000	0.000	0.000	0.000	2.226
W	0.000	0.182	0.591	0.045	0.045	0.000	0.000	0.000	0.000	0.863
WNW	0.000	0.000	0.545	0.227	0.045	0.136	0.000	0.000	0.000	0.954
NW	0.000	0.045	0.682	0.363	0.136	0.091	0.000	0.000	0.000	1.318
NNW	0.000	0.045	1.499	0.863	0.273	0.000	0.000	0.000	0.000	2.681
SUBTOTAL	0.000	2.317	17.628	11.722	2.999	1.181	0.000	0.000	0.000	35.847

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2201
TOTAL HOURS OF STABILITY CLASS E	789
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS E	789
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2201
TOTAL HOURS CALM	0

METEOROLOGICAL FACILITY: SEQUOYAH NUCLEAR PLANT
 STABILITY BASED ON DELTA-T BETWEEN 9.25 AND 45.99 METERS
 WIND SPEED AND DIRECTION MEASURED AT 9.73 METER LEVEL

DATE PRINTED: 2012/02/16

MEAN WIND SPEED = 3.51

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS F (1.5< DELTA T<= 4.0 C/100 M)

SEQUOYAH NUCLEAR PLANT

OCT 1, 2011 - DEC 31, 2011

WIND DIRECTION	WIND SPEED(MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.136	2.635	0.136	0.000	0.000	0.000	0.000	0.000	2.908
NNE	0.000	0.545	3.816	0.045	0.045	0.000	0.000	0.000	0.000	4.453
NE	0.000	0.409	0.727	0.000	0.000	0.000	0.000	0.000	0.000	1.136
ENE	0.000	0.136	0.091	0.000	0.000	0.000	0.000	0.000	0.000	0.227
E	0.000	0.136	0.182	0.000	0.000	0.000	0.000	0.000	0.000	0.318
ESE	0.000	0.045	0.045	0.000	0.000	0.000	0.000	0.000	0.000	0.091
SE	0.000	0.182	0.227	0.000	0.000	0.000	0.000	0.000	0.000	0.409
SSE	0.000	0.045	0.227	0.000	0.000	0.000	0.000	0.000	0.000	0.273
S	0.000	0.182	0.682	0.000	0.000	0.000	0.000	0.000	0.000	0.863
SSW	0.000	0.227	1.499	0.318	0.000	0.000	0.000	0.000	0.000	2.045
SW	0.000	0.091	1.181	0.227	0.000	0.000	0.000	0.000	0.000	1.499
WSW	0.000	0.045	0.545	0.091	0.000	0.000	0.000	0.000	0.000	0.682
W	0.000	0.045	0.182	0.091	0.000	0.000	0.000	0.000	0.000	0.318
WNW	0.000	0.136	0.091	0.091	0.000	0.000	0.000	0.000	0.000	0.318
NW	0.000	0.045	0.227	0.091	0.000	0.000	0.000	0.000	0.000	0.363
NNW	0.000	0.045	1.090	0.182	0.000	0.000	0.000	0.000	0.000	1.318
SUBTOTAL	0.000	2.453	13.448	1.272	0.045	0.000	0.000	0.000	0.000	17.219

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2201
 TOTAL HOURS OF STABILITY CLASS F 379
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS F 379
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2201
 TOTAL HOURS CALM 0

METEOROLOGICAL FACILITY: SEQUOYAH NUCLEAR PLANT
 STABILITY BASED ON DELTA-T BETWEEN 9.25 AND 45.99 METERS
 WIND SPEED AND DIRECTION MEASURED AT 9.73 METER LEVEL

DATE PRINTED: 2012/02/16

MEAN WIND SPEED = 2.27

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS G (DELTA T > 4.0 C/100 M)

SEQUOYAH NUCLEAR PLANT

OCT 1, 2011 - DEC 31, 2011

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.227	0.000	0.000	0.000	0.000	0.000	0.000	0.227
NNE	0.000	0.000	0.682	0.000	0.000	0.000	0.000	0.000	0.000	0.682
NE	0.000	0.182	0.318	0.045	0.000	0.000	0.000	0.000	0.000	0.545
ENE	0.000	0.045	0.091	0.000	0.000	0.000	0.000	0.000	0.000	0.136
E	0.000	0.091	0.091	0.000	0.000	0.000	0.000	0.000	0.000	0.182
ESE	0.000	0.045	0.045	0.000	0.000	0.000	0.000	0.000	0.000	0.091
SE	0.000	0.045	0.136	0.000	0.000	0.000	0.000	0.000	0.000	0.182
SSE	0.000	0.136	0.045	0.000	0.000	0.000	0.000	0.000	0.000	0.182
S	0.000	0.136	0.273	0.000	0.000	0.000	0.000	0.000	0.000	0.409
SSW	0.000	0.136	0.727	0.091	0.000	0.000	0.000	0.000	0.000	0.954
SW	0.000	0.000	0.227	0.000	0.000	0.000	0.000	0.000	0.000	0.227
WSW	0.000	0.045	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.045
W	0.000	0.000	0.045	0.000	0.000	0.000	0.000	0.000	0.000	0.045
WNW	0.000	0.000	0.045	0.000	0.000	0.000	0.000	0.000	0.000	0.045
NW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NNW	0.000	0.000	0.045	0.000	0.000	0.000	0.000	0.000	0.000	0.045
SUBTOTAL	0.000	0.863	2.999	0.136	0.000	0.000	0.000	0.000	0.000	3.998

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2201
 TOTAL HOURS OF STABILITY CLASS G 88
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS G 88
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2201
 TOTAL HOURS CALM 0

METEOROLOGICAL FACILITY: SEQUOYAH NUCLEAR PLANT
 STABILITY BASED ON DELTA-T BETWEEN 9.25 AND 45.99 METERS
 WIND SPEED AND DIRECTION MEASURED AT 9.73 METER LEVEL

DATE PRINTED: 2012/02/16

MEAN WIND SPEED ≈ 2.00

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

Attachment 2.0

Deviations from ODCM Controls/Surveillance Requirements

Date	ODCM Requirement	Description of Deviation
June 10, 2011	1/2 1.2 2.1.2 Table 1.1-2 Item 4b & c,	During the performance of Chemistry Technical Instruction 0-TI-CEM-090-016.3, Sampling Methods - Auxiliary Building Exhaust Radiation Monitor, Chemistry personnel incorrectly installed the back-up sampler on radiation monitor 0-RM-90-101. The filter assembly was reversed so that flow went the wrong way through the charcoal filter, and then through the particulate filter. A rotometer that measured liters per minute was installed instead of a cubic feet per minute rotometer so that inadequate flow was flowing through the monitor. PER 385249.

Attachment 3.0

Radiation Monitors Inoperable for Greater than 30 days

Date	Description of Inoperability
July 26, 2011	Unit 1 Upper Containment Radiation Monitor, 1-RM-90-112, was declared inoperable on July 26, 2011. It had been removed from service to perform scheduled maintenance. The instrument failed its leak check on return to service and was made inoperable. Engineering contacted the vendor for assistance and parts. It was returned to operability on January 26, 2012.

Attachment 4.0

Addendum

Annual Report	Description of Addendum
2009	<p>Unit 2 Shield Building Radiation Monitor, 2-RM-90-400 had been reported inoperable from June 4, 2009 until July 24, 2009 in the 2009 Annual Radioactive Effluent Release Report. Actual inoperability for the radiation monitor was from June 1, 2009 until July 24, 2009. The flow instrumentation had been erratic. Instrumentation and Controls had to call the vendor several times for assistance in troubleshooting and repair. This is to report and correct this error in the 2009 Annual Radioactive Effluent Release Report. This does not affect the reported dose.</p>
2010	<p>The following Condensate Demin Flow Instrumentation has been or is still inoperable: Flow recorder 0-FR-15-456 went inoperable March 24, 2010, and was returned to service December 7, 2011. Flow Recorders 0-FR-14-185 and 0-FR-14-192 went inoperable March 24, 2010 and are scheduled to be fixed May 8, 2012. This equipment is obsolete, and is being replaced under an Engineering Design Change EDC 22602. This is to report inoperability of these instruments for greater than 30 days in 2011 and correct the omission in the 2010 Annual Radioactive Effluent Release Report. This does not affect the reported dose.</p>