



Sequoyah Nuclear Plant, Post Office Box 2000, Soddy Daisy, Tennessee 37384

April 25, 2022

10 CFR 50.4  
10 CFR 50.36a  
10 CFR 50, Appendix I  
10 CFR 72.44(d)(3)

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

Sequoyah Nuclear Plant, Units 1 and 2  
Renewed Facility Operating License Nos. DPR-77 and DPR-79  
NRC Docket Nos. 50-327, 50-328, and 72-034

Subject: **Annual Radioactive Effluent Release Report for 2021 Monitoring Period**


Enclosed is the Annual Radioactive Effluent Release Report (ARERR) for the period of January 1 to December 31, 2021. This report (enclosure) is being submitted in accordance with the respective Sequoyah Nuclear Plant (SQN), Units 1 and 2, Technical Specification (TS) 5.6.2 and Certificate of Compliance for Spent Fuel Storage Casks Nos. 1014 and 1032, Chapter 5.

Offsite Dose Calculation Manual (ODCM), Section 5.2 requires that a Radiological Impact Assessment be submitted with the ARERR for the same reporting period. The assessment is included in the report. There were no changes to the ODCM during the reporting period.

There are no new regulatory commitments contained in this letter. If you have any questions concerning this matter, please contact Mr. Jeffrey Sowa at (423) 843-8129.

Respectfully,

Marshall,  
Thomas B.

 Digitally signed by Marshall,  
Thomas B.  
Date: 2022.04.25 12:40:27  
-04'00'

Thomas Marshall  
Site Vice President  
Sequoyah Nuclear Plant

Enclosure: Annual Radioactive Effluent Release Report, Sequoyah Nuclear Plant, January - December 2021

U.S. Nuclear Regulatory Commission  
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cc (Enclosure):

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

**ENCLOSURE**

**ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

**SEQUOYAH NUCLEAR PLANT**

**JANUARY - DECEMBER 2021**

# Sequoyah Nuclear Power Plant

Tennessee Valley Authority

## Annual Radioactive Effluent Release Report

2021



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## I. Introduction

The Annual Radioactive Effluent Release Report covering the operation of both units is submitted pursuant to Sequoyah Nuclear Plant Technical Specification 5.6.2 and Offsite Dose Calculation Manual 5.2

## II. Supplemental Information

### A. Regulatory Limits

#### 1. Gaseous Effluents

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:

**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.

**Iodines, tritium and particulates with half-lives greater than eight days**

- Less than or equal to 1500 mrem/year to any organ.

**Dose to a member of the public due to Iodines, tritium and particulates with half-lives greater than eight days**

- Less than or equal to 7.5 mrem to any organ during any calendar quarter.
- Less than or equal to 15 mrem to any organ during any calendar year.

**Air dose due to noble gases**

- 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.
- 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.

#### 2. Liquid Effluents

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.

The dose or dose commitment to a member of the public from radioactivity in liquid effluents released to unrestricted areas shall be limited to less than or equal to 1.5 mrem to the total body during any calendar quarter, less than or equal to 5 mrem to any organ

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during any calendar quarter, less than or equal to 3 mrem to the total body during any calendar year and less than or equal to 10 mrem to any organ during any calendar year.

B. Limitation on Dose Rate

1. Gaseous Effluents

Concentration limits for gaseous releases are met through compliance with the maximum permissible dose rates for gaseous releases as defined in plant Offsite Dose Calculation Manual (ODCM). (These values are used as applicable limits for gaseous effluents.)

**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.

**Iodines, tritium and particulates with half-lives greater than eight days**

- Less than or equal to 1500 mrem/year to any organ.

2. Liquid Effluents

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 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 effluents.)

C. Average Energy

Sequoyah Nuclear Plant'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 rates 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.

D. Measurements & Approximations of Total Radioactivity

Radioactivity measurements performed in support of the Sequoyah Nuclear Plant ODCM meet the Lower Limit of Detection requirements given in ODCM Tables 2.2-1 and 2.2-2.

1. Gaseous Effluents

**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



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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.

**Iodines and Particulates in Gaseous Releases**

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 shield and auxiliary building exhausts once per 24 hours for 2 days following startup, shutdown, or a rated thermal power change exceeding 15 percent within one 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.

**Carbon-14 in Gaseous Releases**

The Carbon-14 production and effluent source term estimates were based on EPRI methodology provided in EPRI Report 1021106, "Estimation of Carbon-14 in Nuclear Power Plant Gaseous Effluents," dated December 2010. It was determined that 21.6 curies of Carbon-14 is generated annually at Sequoyah Nuclear Plant. However, only 98% is considered released as gas and only the carbon dioxide form (20%) of that is used in the gaseous dose calculations

2. 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.

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

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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 3 times a week. In addition to ODCM Table 2.2-1, tritium concentrations are determined 3 times a week, 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.

E. Batch Releases

1. Gaseous

Units	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
-------	-------------	-------------	-------------	-------------

**1. Gaseous**

1. Number of Batch Releases		29	29	30	25
2. Total duration of batch releases	minutes	2.09E+04	5.63E+04	1.63E+04	5.64E+04
3. Maximum batch release duration	minutes	9.76E+02	3.18E+04	8.13E+02	3.63E+04
4. Average batch release duration	minutes	7.20E+02	1.94E+03	5.42E+02	2.26E+03
5. Minimum batch release duration	minutes	2.50E+01	3.60E+01	7.70E+01	2.90E+01

2. Liquid

Units	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
-------	-------------	-------------	-------------	-------------

**1. Liquids**

1. Number of Batch Releases		29	49	40	48
2. Total duration of batch releases	minutes	4.90E+03	7.62E+03	6.45E+03	6.51E+03
3. Maximum batch release duration	minutes	1.98E+02	1.90E+02	1.93E+02	1.79E+02
4. Average batch release duration	minutes	1.69E+02	1.56E+02	1.61E+02	1.36E+02
5. Minimum batch release duration	minutes	1.20E+02	1.14E+02	1.10E+02	9.90E+01

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Release Type: Gaseous (Steam)

Release Point: Unit 1 Power Operated Relief Valves (PORV) 1, 2, 3, & 4

Date(s) of Release: 4/10/21 09:51 - 05/08/21 20:35

This evaluation is for the release to the environment that occurred from Unit 1 PORVs 1, 2, 3 and 4 during the U1R24 refueling outage. Following the reactor trip, the Steam Generator PORVs were open for periods of time during the outage. The following is data used to determine the curies and dose impacts as a result of the release:

- The evaluation assumed the release was continuous from PORVs 1, 2, 3, and 4.
- There have been no gamma emitting radionuclides identified in any Secondary Coolant samples during the previous cycle.

The volume of the steam generator was taken from Westinghouse Guidelines for Secondary Water Chemistry. The listed normal water level value of 3516 ft<sup>3</sup> was used as a conservative value. This calculation assumes that the total volume of the generators was released and that all the tritium present in that initial volume was released. The calculation for the total tritium activity released is as follows:

$$3516 \text{ ft}^3/\text{generator} * 2.832\text{E}+04 \text{ ml/ft}^3 * 4 \text{ generators} = 3.983\text{E}+08 \text{ ml}$$

$$9.49\text{E}-07 \text{ } \mu\text{Ci/ml} * 3.983\text{E}+08 \text{ ml} = 3.78\text{E}+02 \text{ } \mu\text{Ci of H3 or } 3.78\text{E}-04 \text{ Ci of H3}$$

The activity of 3.78E-04 Ci was added to the 2nd Quarter section of Table 1-A "Gaseous Effluents - Summation of All Releases" and Table 3-B "Doses from Airborne Effluents - 2nd Quarter."

**Individual Doses**

Pathway External	Dose	Quarterly Limit	Percent of Limit	Location Sector/Distance/Unit
Gamma Air	0.00E+01 mrad	5 mrad	<1	N/A
Beta Air	0.00E+01 mrad	10 mrad	<1	N/A
<b>Submersion</b>				
Total Body	0.00E+01 mrad	10 mrad	<1	N/A
Skin	0.00E+01 mrad	10 mrad	<1	N/A
<b>Organ Dose</b>				
Child/Thyroid	2.11E-07 mrad	7.5 mrem	<1	WSW/1152/meters
Child/Total Body	2.11E-07 mrad	7.5 mrem	<1	WSW/1152/meters

**Population Doses**

Total Body Dose    2.00E-06 man-rem  
 Maximum Organ Dose (organ)                      2.00E-06 man-rem(Thyroid, Liver, Bone, GIT, Lung, Kidney)

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Radiological Impact

Release Type: Gaseous (Steam)

Release Point: Unit 1 Power Operated Relief Valves (PORV) 1, 2, 3, & 4

Date(s) of Release: 8/5/21 23:19 - 08/08/21 12:00

This evaluation is for the release to the environment that occurred from Unit 1 PORVs 1, 2, 3 and 4 during the Unit 1 Planned Outage to repair Turbine Drain Line steam leak. Following the reactor trip, the Steam Generator PORVs were open for periods of time during the outage. The following is data used to determine the curies and dose impacts as a result of the release:

- The evaluation assumed the release was continuous from PORVs 1, 2, 3, and 4.
- There have been no gamma emitting radionuclides identified in any Secondary Coolant samples during the previous cycle.

The volume of the steam generator was taken from Westinghouse Guidelines for Secondary Water Chemistry. The listed normal water level value of 3516 ft<sup>3</sup> was used as a conservative value. This calculation assumes that the total volume of the generators was released and that all the tritium present in that initial volume was released. The calculation for the total tritium activity released is as follows:

$$3516 \text{ ft}^3/\text{generator} * 2.832\text{E}+04 \text{ ml/ft}^3 * 4 \text{ generators} = 3.983\text{E}+08 \text{ ml}$$

$$1.15\text{E}-06 \text{ } \mu\text{Ci/ml} * 3.983\text{E}+08 \text{ ml} = 4.60\text{E}+02 \text{ } \mu\text{Ci of H3 or } 4.60\text{E}-04 \text{ Ci of H3}$$

The activity of 4.60E-04 Ci was added to the 3rd Quarter section of Table 1-A “Gaseous Effluents - Summation of All Releases” and Table 3-C “Doses from Airborne Effluents – 3rd Quarter.”

**Individual Doses**

Pathway External	Dose	Quarterly Limit	Percent of Limit	Location Sector/Distance/Unit
Gamma Air	0.00E+01 mrad	5 mrad	<1	N/A
Beta Air	0.00E+01 mrad	10 mrad	<1	N/A
<b>Submersion</b>				
Total Body	0.00E+01 mrad	10 mrad	<1	N/A
Skin	0.00E+01 mrad	10 mrad	<1	N/A
<b>Organ Dose</b>				
Child/Thyroid	1.99E-07 mrad	7.5 mrem	<1	S/4010/meters
Child/Total Body	1.99E-07 mrad	7.5 mrem	<1	S/4010/meters

**Population Doses**

Total Body Dose 2.07E-06 man-rem  
 Maximum Organ Dose (organ) 2.07E-06 man-rem(Thyroid, Liver, Bone, GIT, Lung, Kidney)

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Release Type: Gaseous (Steam)

Release Point: Unit 2 Power Operated Relief Valves (PORV) 1, 2, 3, & 4

Date(s) of Release: 10/22/21 08:00 – 11/06/21 10:09

This evaluation is for the release to the environment that occurred from Unit 2 PORVs 1, 2, 3 and 4 during the U2R24 refueling outage. Following the reactor trip, the Steam Generator PORVs were open for periods of time during the outage. The following is data used to determine the curies and dose impacts as a result of the release:

- The evaluation assumed the release was continuous from PORVs 1, 2, 3, and 4.
- There have been no gamma emitting radionuclides identified in any Secondary Coolant samples during the previous cycle.

The volume of the steam generator was taken from Westinghouse Guidelines for Secondary Water Chemistry. The listed normal water level value of 3516 ft<sup>3</sup> was used as a conservative value. This calculation assumes that the total volume of the generators was released and that all the tritium present in that initial volume was released. The calculation for the total tritium activity released is as follows:

$$3516 \text{ ft}^3/\text{generator} * 2.832\text{E}+04 \text{ ml/ft}^3 * 4 \text{ generators} = 3.983\text{E}+08 \text{ ml}$$

$$1.20\text{E}-06 \text{ }\mu\text{Ci/ml} * 3.983\text{E}+08 \text{ ml} = 4.76\text{E}+02 \text{ }\mu\text{Ci of H3 or } 4.76\text{E}-04 \text{ Ci of H3}$$

The activity of 1.25E-03 Ci was added to the 4th Quarter section of Table 1-A “Gaseous Effluents - Summation of All Releases” and Table 3-D “Doses from Airborne Effluents – 4th Quarter.

**Individual Doses**

Pathway External	Dose	Quarterly Limit	Percent of Limit	Location Sector/Distance/Unit
Gamma Air	0.00E+01 mrad	5 mrad	<1	N/A
Beta Air	0.00E+01 mrad	10 mrad	<1	N/A
<b>Submersion</b>				
Total Body	0.00E+01 mrad	10 mrad	<1	N/A
Skin	0.00E+01 mrad	10 mrad	<1	N/A
<b>Organ Dose</b>				
Child/Thyroid	1.38E-07 mrad	7.5 mrem	<1	SSW/4363/meters
Child/Total Body	1.38E-07 mrad	7.5 mrem	<1	SSW/4363/meters

**Population Doses**

Total Body Dose                      2.08E-06 man-rem

Maximum Organ Dose (organ)    2.08E-06 man-rem(Thyroid, Liver, Bone, GIT, Lung, Kidney)

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F. Abnormal Releases

In calendar year 2021 there were no abnormal releases.

G. Non-routine, Planned Discharges

In calendar year 2021 there were no non-routine planned discharges.

H. Radioactive Waste System Treatment Changes

In calendar year 2021 there were no changes to the radwaste system or the process control program.

I. Land Use Census Changes

In calendar year 2021 there were no changes to the land use census.

J. Effluent Monitoring Instrument Inoperability > 30 Days

In calendar year 2021 there were no effluent monitoring instruments inoperable > 30 days.

K. Effluent Monitoring Equipment Sample Deviation

Date	Description of Deviation
5/6/2021 CR#1692579	<p>On 5/6/21 at 0941 Operations entered ODCM non-conformance 1.1.2 actions C, D, and L due to condenser vacuum pumps being started while bypassing the 1-RM-90-119 and 1-RM-90-99 rad monitors. OPS notified Chemistry and at 1515 had placed the ODCM actions in the LCO tracker in eSOMS. Due to plant conditions the rad monitors remain in bypass.</p> <p>On 5/7/21 at approximately 1230, Chemistry supervision discovered during log review that compensatory sampling had not been performed since the entry into the ODCM actions. The applicable action for Chemistry is action D in the ODCM which is to perform a noble gas sample once every 12 hours while in non-compliance. Upon discovery a sample was immediately obtained at 1245 and analyzed which makes a total of 2 missed ODCM samples since the non-conformance was declared.</p> <p>A Chemistry department standing order was issued to require shift technicians to validate and enter the status of radiation monitors in the eSOMS Chemistry logs and later reporting on the status of radiation monitors during the Operations turnover on a shiftly frequency.</p>

L. Offsite Dose Calculation Manual Changes

In calendar year 2021 there were no changes to the Offsite Dose Calculation Manual.

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M.Groundwater Monitoring and Program (NEI 07-07)

**Monitoring Wells**

Sequoyah Nuclear Plant started investigating 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 29 non-REMP monitoring wells to support monitoring the onsite groundwater plume and for the presence or increase of radioactivity. SQN updated the number of wells in 2019 to better monitor the onsite groundwater. These wells are sampled periodically for tritium.

The tritium concentrations obtained in 2021 from these non-REMP wells are listed below. Initial and follow up analyses for the semi-annual sampling procedure indicated no gamma activity. Tritium fluctuation in Well 47i continues to be observed (ref. CR#1677302) and is consistent with seasonal variation due to sources from previously documented legacy releases. No leaks to site groundwater are currently present.

Well ID	Date	Tritium (pC/L)	Date	Tritium (pC/L)
W9	1/12/2021 0:00	< 1.380E+02	4/6/2021 10:35	< 1.870E+02
	7/13/2021 0:00	< 1.660E+02	10/27/2021 11:20	< 2.470E+02
W10	1/14/2021 0:00	3.78E+03	3/4/2021 12:50	3.40E+03
	4/7/2021 13:20	3.98E+03	7/15/2021 15:20	1.80E+03
	10/28/2021 14:20	1.90E+03	---	---
W11	1/12/2021 0:00	< 1.360E+02	4/7/2021 12:45	< 2.060E+02
	7/13/2021 14:45	< 1.620E+02	10/26/2021 11:55	< 2.510E+02
W12	1/14/2021 0:00	1.17E+03	3/4/2021 11:50	8.67E+02
	4/7/2021 9:55	1.12E+03	7/14/2021 15:25	7.15E+02
	10/28/2021 14:50	8.77E+02	---	---
W13	1/12/2021 0:00	< 1.400E+02	4/7/2021 9:15	< 1.960E+02
	7/13/2021 13:50	< 1.980E+02	10/26/2021 10:40	< 2.500E+02
W15	1/13/2021 0:00	< 1.660E+02	3/4/2021 13:35	< 2.440E+02
	4/7/2021 14:05	< 2.070E+02	7/14/2021 14:50	2.45E+02
	10/28/2021 13:30	< 1.950E+02	---	---
W16	1/13/2021 0:00	Dry	3/4/2021 15:45	3.73E+02
	4/6/2021 9:50	6.26E+02	8/6/2021 11:05	6.54E+02
	10/27/2021 15:53	Dry	---	---
W18	1/13/2021 0:00	4.30E+02	4/6/2021 12:15	4.72E+02
	7/14/2021 11:45	3.98E+02	10/28/2021 12:05	3.73E+02
W24	4/5/2021 11:45	< 1.920E+02	10/28/2021 10:05	< 2.070E+02
W25	4/5/2021 12:20	< 1.960E+02	10/26/2021 15:55	< 2.450E+02
W26	4/5/2021 13:00	< 1.940E+02	10/26/2021 15:25	< 2.510E+02

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W27	4/7/2021 0:00	4.15E+02	10/27/2021 13:50	3.01E+02
W28	4/6/2021 15:05	< 1.950E+02	10/27/2021 12:10	< 2.480E+02
W36	1/12/2021 0:00	< 1.370E+02	4/7/2021 8:45	< 1.960E+02
	7/13/2021 13:10	< 1.610E+02	10/26/2021 12:20	< 2.490E+02
W37	4/5/2021 13:50	< 1.950E+02	10/26/2021 14:45	< 2.480E+02
W38	1/14/2021 0:00	3.00E+02	4/5/2021 15:15	3.45E+02
	7/15/2021 11:25	2.39E+02	10/27/2021 13:10	2.94E+02
W39	1/12/2021 0:00	< 1.370E+02	4/6/2021 9:10	< 1.880E+02
	7/13/2021 11:55	< 1.710E+02	10/27/2021 10:35	< 2.410E+02
W40	4/6/2021 13:40	< 1.870E+02	10/25/2021 13:40	< 2.480E+02
W41	4/6/2021 14:25	< 1.950E+02	10/25/2021 14:40	< 2.470E+02
W42	1/12/2021 0:00	< 1.400E+02	4/6/2021 13:00	< 1.940E+02
	7/14/2021 10:10	< 1.630E+02	10/25/2021 15:25	< 2.470E+02
W43	1/13/2021 0:00	< 1.320E+02	4/7/2021 14:40	< 2.020E+02
	7/14/2021 10:50	< 2.070E+02	10/26/2021 13:10	< 2.510E+02
W44	1/13/2021 0:00	< 2.660E+02	4/8/2021 9:10	< 2.060E+02
	7/15/2021 13:20	< 2.360E+02	10/27/2021 15:00	2.72E+02
W45i	1/13/2021 0:00	2.43E+02	4/8/2021 10:20	3.03E+02
	7/15/2021 12:40	3.81E+02	10/7/2021 14:30	< 1.970E+02
W45s	1/13/2021 0:00	9.26E+02	4/8/2021 9:45	1.65E+03
	7/15/2021 12:15	9.92E+02	10/27/2021 15:55	Dry
W46i	1/14/2021 0:00	7.04E+02	4/7/2021 11:10	5.58E+02
	7/14/2021 14:05	2.96E+02	10/28/2021 11:20	5.65E+02
W46s	1/14/2021 0:00	< 1.680E+02	4/7/2021 10:40	< 2.060E+02
	7/14/2021 13:30	1.45E+02	10/26/2021 13:45	< 2.480E+02
W47i	1/14/2021 0:00	2.21E+04	3/4/2021 15:20	1.86E+04
	4/8/2021 12:05	1.38E+04	7/15/2021 14:35	2.32E+04
	10/28/2021 15:45	2.15E+04	---	---
W47s	1/14/2021 0:00	8.68E+03	3/4/2021 14:35	9.80E+03
	4/8/2021 11:30	3.41E+03	7/15/2021 14:05	9.44E+03
	10/28/2021 15:25	1.48E+03	---	---
W48	1/13/2021 0:00	1.61E+03	4/6/2021 11:20	1.27E+03
	7/14/2021 12:45	1.26E+03	10/28/2021 12:50	1.20E+03



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**Doses from I-131 Water Ingestion Pathway**

The REMP requirements as specified in Table 3.12-1 from NUREG 1301, "Offsite Does Calculation Manual Guidance: Standard Radiological Effluent Controls for Pressurized Water Reactors," 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. 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 is calculated. The evaluation confirms 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.

	Units	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Total
I-131 Ci	0.00E+01	3.070E-06	0.00E+01	0.00E+01	0.00E+01	3.070E-06
Child / Thyroid (mrem)	0.00E+01	3.20E-07	0.00E+01	0.00E+01	0.00E+01	3.20E-07
Population / Thyroid (mrem)	0.00E+01	1.10E-05	0.00E+01	0.00E+01	0.00E+01	1.10E-05

N. Errata/Corrections to Previous ARERRs

No corrections needed to previous ARERRs.

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III. Gaseous Effluents

*Table 1-A Gaseous Effluents - Summation of all Releases*

Units	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Total	Error %
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**A. Fission and Activation Gases**

1. Total Release	Curies	1.63E-01	1.45E+00	1.98E-01	2.57E-01	2.06E+00	11%
2. Average Release Rate for Period	uCi/sec	2.10E-02	1.84E-01	2.49E-02	3.23E-02	--	
3. Percent of Technical Specification (TS) Limit	%	*	*	*	*	*	

**B. Iodines**

1. Total Release	Curies	0.00E+01	0.00E+01	0.00E+01	0.00E+01	0.00E+01	N/A***
2. Average Release Rate for Period	uCi/sec	0.00E+01**	0.00E+01	0.00E+01	0.00E+01	--	
3. Percent of TS Limit	%	*	*	*	*	*	

**C. Particulates**

1. Total Release	Curies	0.00E+01	0.00E+01	0.00E+01	0.00E+01	0.00E+01	N/A***
2. Average Release Rate for Period	uCi/sec	0.00E+01	0.00E+01	0.00E+01	0.00E+01	--	
3. Percent of TS Limit	%	*	*	*	*	*	

**D. Tritium**

1. Total Release	Curies	6.94E-01	2.25E+00	1.74E+00	4.29E+00	8.97E+00	15%
2. Average Release Rate for Period	uCi/sec	8.93E-02	2.86E-01	2.19E-01	5.39E-01	--	
3. Percent of Tech Spec Limit	%	*	*	*	*	*	

**E. Carbon-14**

1. Total Release	Curies	5.68E+00	4.50E+00	5.56E+00	4.54E+00	2.03E+01	
2. Average Release Rate for Period	uCi/sec	7.30E-01	5.72E-01	6.99E-01	5.71E-01	--	
3. Percent of Tech Spec Limit	%	*	*	*	*	*	

\* Applicable Limits are expressed in terms of dose. See Tables 3A-D.

\*\* 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.

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*Table 1-B Gaseous Effluents – Ground Level Releases (Batch)*

	Units	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Total
<b>1. Fission and Activation Gases</b>						
Ar-41	Ci	1.53E-01	7.33E-01	1.61E-01	2.37E-01	1.28E+00
Xe-131m	Ci	0.00E+01*	0.00E+01	1.83E-03	0.00E+01	1.83E-03
Xe-133	Ci	1.05E-02	6.86E-01	3.45E-02	2.02E-02	7.51E-01
Xe-135	Ci	0.00E+01	2.64E-02	5.10E-04	0.00E+01	2.69E-02
Total For Period	Ci	1.63E-01	1.45E+00	1.98E-01	2.57E-01	2.06E+00
<b>2. Iodines</b>						
Total For Period	Ci	0.00E+01	0.00E+01	0.00E+01	0.00E+01	0.00E+01
<b>3. Particulates</b>						
Total For Period	Ci	0.00E+01	0.00E+01	0.00E+01	0.00E+01	0.00E+01
<b>4. Gross Alpha</b>						
Gross Alpha	Ci	0.00E+01	0.00E+01	0.00E+01	0.00E+01	0.00E+01
<b>5. Tritium</b>						
H-3	Ci	7.86E-02	1.92E+00	7.05E-02	6.14E-01	2.68E+00
<b>6. Carbon-14</b>						
C-14	Ci	0.00E+01	0.00E+01	0.00E+01	0.00E+01	0.00E+01

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

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*Table 1-B Gaseous Effluents – Ground Level Releases (Continuous)*

	Units	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Total
<b>1. Fission and Activation Gases</b>						
Total For Period	Ci	0.00E+01*	0.00E+01	0.00E+01	0.00E+01	0.00E+01
<b>2. Iodines</b>						
Total For Period	Ci	0.00E+01	0.00E+01	0.00E+01	0.00E+01	0.00E+01
<b>3. Particulates</b>						
Total For Period	Ci	0.00E+01	0.00E+01	0.00E+01	0.00E+01	0.00E+01
<b>4. Gross Alpha</b>						
Gross Alpha	Ci	0.00E+01	0.00E+01	0.00E+01	0.00E+01	0.00E+01
<b>5. Tritium</b>						
H-3	Ci	6.15E-01	3.34E-01	1.67E+00	3.67E+00	6.29E+00
<b>6. Carbon-14</b>						
C-14	Ci	0.00E+01	0.00E+01	0.00E+01	0.00E+01	0.00E+01

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

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IV. Liquid Effluents

*Table 2-A Liquid Effluents - Summation of all Releases*

Units	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Annual	Error %
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**A. Fission and Activation Products**

1. Total Release	Curies	1.45E-03	8.69E-03	3.36E-03	4.51E-02	5.86E-02	18%
2. Average Diluted Concentration	uCi/mL	6.58E-10	3.30E-09	1.35E-09	1.79E-08	5.95E-09	
3. Percent of Tech Spec Limit	%	*	*	*	*		

**B. Tritium**

1. Total Release	Curies	6.43E+02	4.89E+02	6.21E+02	1.09E+02	1.86E+03	18%
2. Average Diluted Concentration	uCi/mL	2.92E-04	1.86E-04	2.49E-04	4.33E-05	1.89E-04	
3. Percent of Tech Spec Limit	%	*	*	*	*		

**C. Dissolved and Entrained Noble Gases**

1. Total Release	Curies	9.93E-04	1.10E-03	1.24E-03	9.34E-05	3.42E-03	39%
2. Average Diluted Concentration	uCi/mL	4.51E-10	4.17E-10	4.96E-10	3.71E-11	3.47E-10	
3. Percent of Tech Spec Limit	%	*	*	*	*		

**D. Gross Alpha Radioactivity**

1. Total Release	Curies	0.00E+01**	0.00E+01	0.00E+01	0.00E+01	0.00E+01	N/A***
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<b>E. Volume of Liquid Waste to Discharge Canal (prior to dilution)</b>	Liters	1.71E+06	2.60E+06	2.23E+06	2.13E+06	8.66E+06	4%
<b>F. Volume of Dilution Water for Period</b>	Liters	2.13E+09	2.53E+09	2.38E+09	2.43E+09	9.47E+09	N/A

\* Applicable Limits are expressed in terms of dose. See Tables 4A-D.

\*\* 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.

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*Table 2-B Liquid Effluents – Batch Mode*

	Units	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Total
<b>1. Fission and Activation Products</b>						
Cr-51	Ci	*0.00E+01	3.74E-03	2.44E-04	9.86E-03	1.39E-02
Mn-54	Ci	3.32E-05	5.63E-05	3.10E-05	9.25E-04	1.05E-03
Fe-55	Ci	1.52E-04	1.05E-04	5.05E-05	0.00E+01	3.07E-04
Co-58	Ci	9.81E-06	7.58E-04	2.63E-04	6.95E-03	7.98E-03
Fe-59	Ci	0.00E+01	1.54E-05	0.00E+01	1.22E-04	1.37E-04
Co-60	Ci	1.06E-03	1.73E-03	1.34E-03	1.32E-02	1.73E-02
Ni-63	Ci	1.30E-04	7.55E-04	1.12E-03	2.51E-03	4.52E-03
Zn-65	Ci	0.00E+01	0.00E+01	1.09E-05	1.83E-04	1.94E-04
Sr-91	Ci	0.00E+01	8.97E-06	0.00E+01	0.00E+01	8.97E-06
Zr-95	Ci	0.00E+01	2.41E-04	1.23E-05	1.40E-03	1.66E-03
Nb-95	Ci	0.00E+01	4.72E-04	2.84E-05	2.26E-03	2.76E-03
Nb-97	Ci	0.00E+01	1.64E-04	5.14E-05	7.96E-05	2.95E-04
Ag-110m	Ci	0.00E+01	1.82E-04	1.27E-05	0.00E+01	1.95E-04
Sn-113	Ci	0.00E+01	0.00E+01	0.00E+01	2.09E-05	2.09E-05
Sn-117m	Ci	0.00E+01	1.86E-05	0.00E+01	4.57E-06	2.32E-05
Sb-122	Ci	0.00E+01	1.83E-05	0.00E+01	0.00E+01	1.83E-05
Sb-124	Ci	0.00E+01	1.66E-04	1.95E-05	1.23E-03	1.41E-03
Sb-125	Ci	6.03E-05	2.32E-04	1.69E-04	4.87E-03	5.33E-03
Te-129m	Ci	0.00E+01	0.00E+01	0.00E+01	5.66E-04	5.66E-04
Te-131m	Ci	0.00E+01	8.68E-06	0.00E+01	0.00E+01	8.68E-06
I-131	Ci	3.07E-06	0.00E+01	0.00E+01	0.00E+01	3.07E-06
Te-132	Ci	0.00E+01	7.47E-06	0.00E+01	0.00E+01	7.47E-06
I-132	Ci	0.00E+01	6.90E-06	0.00E+01	0.00E+01	6.90E-06
Cs-136	Ci	0.00E+01	3.38E-06	0.00E+01	0.00E+01	3.38E-06
Cs-137	Ci	5.42E-06	0.00E+01	0.00E+01	9.73E-04	9.78E-04
Total For Period	Ci	1.45E-03	8.69E-03	3.36E-03	4.51E-02	5.86E-02
<b>2. Dissolved and Entrained Gases</b>						
Ar-41	Ci	0.00E+01	0.00E+01	6.36E-05	0.00E+01	6.36E-05
Xe-133	Ci	9.93E-04	1.06E-03	1.03E-03	8.88E-05	3.17E-03
Xe-135m	Ci	0.00E+01	0.00E+01	0.00E+01	4.60E-06	4.60E-06
Xe-135	Ci	0.00E+01	3.99E-05	1.40E-04	0.00E+01	1.80E-04
Total For Period	Ci	9.93E-04	1.10E-03	1.24E-03	9.34E-05	3.42E-03

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

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*Table 2-B Liquid Effluents – Continuous Mode*

	Units	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Total
<b>1. Fission and Activation Products</b>						
Total For Period	Ci	0.00E+01	0.00E+01	0.00E+01	0.00E+01	0.00E+01
<b>2. Dissolved and Entrained Gases</b>						
Total For Period	Ci	0.00E+01	0.00E+01	0.00E+01	0.00E+01	0.00E+01
<b>3. Tritium</b>						
Total For Period	Ci	6.16E-01	3.34E-01	1.67E+00	3.67E+00	6.29E+00
<b>4. Gross Alpha Activity</b>						
Total For Period	Ci	0.00E+01	0.00E+01	0.00E+01	0.00E+01	0.00E+01

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

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V. Solid Waste Storage and Shipment

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.	m3	5.50	+5.00E-01
	Ci	1.60E+01	+2.29E+01
b. Dry Active Waste, Compressible Waste Contaminated Equipment, etc.	m3	728	+1.00E+01
	Ci	4.56E+00	+2.29E+01
c. Irradiated Components, Control Rods, etc.	m3	0.00	+1.00E+01
	Ci	0.00E+00	+2.29E+01
d. Other: Glycol Sent for Processing	m3	102	+1.00E+01
	Ci	2.66E-02	+2.29E+01

The reported volume for “category a” waste is based on the volume of the disposal container. Waste volumes for categories b, c, and d are based on the net waste volume rather than the shipping container volume. During transit, the waste for category b may settle resulting in an overall reduced volume. The reduction in disposal volume is estimated to be 10 percent due to settling. Volume estimates for category b wastes were based on a visual inspection of the container’s contents and its percent full.

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 Curie evaluations, and “in-field” sampling techniques. The assigned values for these parameters were 20, 10, and 5 percent, respectively.

$$\text{Total error (\%)} = (0.202 + 0.102 + 0.052)^{1/2} \times 100 = 22.9\%$$



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2. Estimate of Major Nuclide Composition (by type of waste)  
a. Spent resins, filter sludges, evaporator bottoms, etc. (nuclides determined by measurement)

	<u>Nuclide</u>	<u>Curies</u>	<u>Percent</u>
1	Hydrogen-3	2.38E-02	0.02
2	Carbon-14	1.67E-01	0.14
3	Chromium-51	1.43E-03	0
4	Manganese-54	1.43E+00	1.22
5	Iron-55	1.21E+01	10.29
6	Iron-59	6.03E-04	0
7	Cobalt-57	1.88E-02	0.02
8	Cobalt-58	1.13E-01	0.1
9	Cobalt-60	5.27E+01	44.86
10	Nickel-59	6.78E-01	0.58
11	Nickel-63	4.58E+01	38.95
12	Zinc-65	2.55E-01	0.0022
13	Strontium-89	2.39E-05	0.01
14	Strontium-90	1.60E-02	0.07
15	Zirconium-95	7.82E-02	0.15
16	Niobium-95	1.71E-01	0.01
17	Technitium-99	9.89E-03	0.0001
18	Silver-110m	9.24E-04	0
19	Tin-113	5.35E-03	0
20	Antimony-124	3.15E-04	0
21	Antimony-125	2.44E-01	0.21
22	Cesium-134	5.67E-02	0.05
23	Cesium-137	3.55E+00	3.02
24	Cerium-144	4.62E-02	0.04
25	Plutonium-238	1.71E-04	0
26	Plutonium-239	5.54E-05	0
27	Plutonium-240	5.54E-05	0
28	Plutonium-241	5.46E-02	0.05
29	Americium-241	1.76E-04	0
30	Curium-242	4.51E-05	0
31	Curium-243	1.55E-04	0
32	Curium-244	1.43E-04	0

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

	<u>Nuclide</u>	<u>Curies</u>	<u>Percent</u>
1	Hydrogen-3	5.16E-02	0.08
2	Carbon-14	1.81E-02	0.03
3	Manganese-54	1.74E+00	2.54
4	Iron-55	5.28E+01	77.21
5	Cobalt-57	1.30E-02	0.02
6	Cobalt-58	8.96E-02	0.13
7	Cobalt-60	1.30E+01	19.01
8	Nickel-63	1.47E-02	0.02
9	Zinc-65	3.96E-01	0.58
10	Strontium-90	2.09E-03	0.00
11	Zirconium-95	4.54E-02	0.07
12	Niobium-95	8.74E-02	0.13
13	Antimony-124	6.90E-02	0.10
14	Cesium-137	1.88E-02	0.03
15	Cerium-144	4.15E-02	0.06

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c. Irradiated Components

	<u>Nuclide</u>	<u>Curies</u>	<u>Percent</u>
	N/A	N/A	N/A

d. Other

	<u>Nuclide</u>	<u>Curies</u>	<u>Percent</u>
1	Hydrogen-3	1.13E-02	42.31
2	Carbon-14	3.15E-06	0.01
3	Chromium-51	4.65E-18	5.49
4	Manganese-54	1.46E-03	1.13
5	Iron-55	3.01E-04	35.47
6	Cobalt-57	9.45E-03	0.01
7	Cobalt-58	2.50E-06	1.22
8	Cobalt-60	3.26E-04	8.61
9	Nickel-63	2.29E-03	0.01
10	Zinc-65	2.55E-06	0.66
11	Strontium-90	1.75E-04	0.01
12	Zirconium-95	2.77E-06	0.10
13	Niobium-95	2.56E-05	0.18
14	Silver-110m	4.70E-05	0.51
15	Tin-117m	1.37E-04	0.03
16	Antimony-124	7.57E-06	1.28
17	Antimony-125	3.41E-04	2.66
18	Cesium-137	7.08E-04	0.09
19	Cerium-144	2.49E-05	0.22

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3. Solid Waste Disposition

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

Number of Shipments	Type Quantity	Mode of Transportation	Destination
1	A - LSA II	Motor Freight	EnergySolutions Services, LLC Clive Disposal Site Treatment Facility Interstate 80, Exit 49 Clive, UT 84029
1	Type B	Motor Freight	Waste Control Specialist, LLC Compact Waste Disposal Facility 9998 W. State Hwy. 176 Andrews, TX 79714

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

Number of Shipments	Type Quantity	Mode of Transportation	Destination
8	A - LSA II	Motor Freight	TOXCO Inc. TOXCO Materials Management Center 109 Flint Rd. Oak Ridge, TN 37830
6	A - LSA II Limited Quantity	Motor Freight	TOXCO Inc. TOXCO Materials Management Center 109 Flint Rd. Oak Ridge, TN 37830
3	Limited Quantity	Motor Freight	TOXCO Inc. TOXCO Materials Management Center 109 Flint Rd. Oak Ridge, TN 37830
1	A - LSA II	Motor Freight	Energy Solutions Services, Inc. 1560 Bear Creek Rd. Oak Ridge, TN 37830

c. Irradiated components, control rods, etc.

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

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d. Other: Glycol for processing

Number of Shipments	Type Quantity	Mode of Transportation	Destination
3	Exempt Quantity	Motor Freight	Energy Solutions Services, Inc. 1560 Bear Creek Rd. Oak Ridge, TN 37830

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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

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## VI. Independent Spent Fuel Storage Installation

SQN implemented use of an independent spent fuel storage installation (ISFSI) on July 13, 2004. 10 CFR 72.214 Certificate of Compliance (CoC) Nos. 1014 and 1032 correspond to the two certificates of the spent fuel storage systems in use at the ISFSI. The ISFSI is located on site, within the protected area and is designed to hold 90 spent fuel storage canisters (SFSCs). CoC Nos. 1014 and 1032 Appendix A Chapter 5 requires an annual report in accordance with 10 CFR 72.44(d)(3). CoC Nos. 1014 and 1032 Chapter 5 also provides that the ISFSI operations may be considered part of plant operations for the purposes of the radiological environmental monitoring program.

CoC No. 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 SFSC.”

CoC No. 1032 Section 5.1a states, “The HI-STORM FW MPC Storage System does not create any radioactive materials 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 the SFSC.”

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 Nos. 1014 and 1032 provide that the HI-STORM 100 Cask System and HI-STORM FW MPC Storage System do 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.

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## VII. Radiological Impact to Man

### A. 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 river flow data. In this report, the doses resulting from releases are described and compared to limits established for SQN.

### B. 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
- 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
- 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,
- Less than or equal to 25 mrem per year to any other organ.

### C. 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



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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 3 and 4.

D. 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**

All releases from SQN are considered ground-level releases. The ground-level Joint Frequency Distribution (JFD) is derived from wind speeds and directions measured 10 meters above ground and from the vertical temperature difference between 10 and 46 meters, as presented for each quarter in Section VII Meteorological Data.

**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 JFDs are calculated for each release point using the appropriate levels of meteorological data. A JFD provides 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 non-calm wind directions less than 0.7 m/s (1.5 mph). Stability classes are determined from the vertical temperature difference between two measurement levels. This year, due to an issue during an alignment of a sonic sensor used to determine wind direction, the wind data for Q4 2021 was lost. This is reflected in CR# 1742782. Dose calculations for this period for gaseous releases reflect a 10 year average data calculated for 2009-2018, as this would most accurately reflect a theoretical model in the absence of empirical quarterly data.

**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**

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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 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 Table 3.

E. 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 Guide 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 assumes 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

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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 Table 4, 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.

F. Population Doses

Population doses for 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 3 and 4.

G. Offsite Direct Radiation Dose

External gamma radiation levels were measured by dosimeters deployed around SQN as part of the offsite REMP. The quarterly gamma radiation levels determined from these dosimeters during this reporting period averaged approximately 15.0 mrem/quarter at onsite (at or near the site boundary) stations and approximately 14.2 mrem/quarter at offsite stations, or approximately 0.8 mrem/quarter higher onsite than at offsite stations. This difference is consistent with levels measured for preoperational and construction phases of the TVA nuclear plant site where the average radiation levels onsite were generally 1-3 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 dosimeters 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.

H. Dose to a Member of the Public Inside the Site 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 boundary for an entire work year (2000 hours). Results from onsite dosimeter measurements for 2021 indicate that the highest onsite dosimeter reading was 20 mrem after subtraction of the annual background value of 49 mrem/year (from perimeter dosimeters around Sequoyah). Using this value and multiplying by the ratio of the

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occupancy times (2000/8760), the external dose was 4.57 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.

I. 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 5.

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J. Tables

*Table 3-A Doses from Airborne Effluents – 1<sup>st</sup> Quarter*

**Individual Doses**

<b>Pathway</b>	<b>Dose</b>	<b>Quarterly Limit</b>	<b>Percent of Limit</b>	<b>Location</b>
<b>External</b>				
Gamma Air	1.34E-04	5 mrad	<1%	SSW/1840/meters
Beta Air	4.84E-05	10 mrad	<1%	SSW/1840/meters
<b>Submersion</b>				
Total Body	1.00E-04	10 mrad	<1%	SSW/2129/meters
Skin	1.48E-04	10 mrad	<1%	SSW/2129/meters
<b>Organ Doses</b> (Iodine, Tritium, Particulates with >8-Day half-life)				
Child / Bone (Max)	2.99E-01	7.5 mrem	4.0%	NNE/3770/meters
Child / Thyroid	6.00E-02	7.5 mrem	<1%	NNE/3770/meters
Child / Total Body	6.00E-02	7.5 mrem	<1%	NNE/3770/meters

**Population Doses**

Total Body Dose	3.36E-01 man-rem
Maximum Organ Dose (Organ)	1.67E+00 man-rem (Bone)

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Radiological Impact  
*Table 3-B Doses from Airborne Effluents – 2<sup>nd</sup> Quarter*

**Individual Doses**

Pathway	Dose	Quarterly Limit	Percent of Limit	Location
<b>External</b>				
Gamma Air	1.29E-03	5 mrad	<1%	N/950/meters
Beta Air	5.95E-04	10 mrad	<1%	N/950/meters
<b>Submersion</b>				
Total Body	8.92E-04	10 mrad	<1%	NNW/864/meters
Skin	1.35E-03	10 mrad	<1%	NNW/864/meters
<b>Organ Doses</b> (Iodine, Tritium, Particulates with >8-Day half-life)				
Child / Bone (Max)	4.64E-01	7.5 mrem	6.2%	WSW/1152/meters
Child / Thyroid	9.41E-02	7.5 mrem	1.3%	WSW/1152/meters
Child / Total Body	9.41E-02	7.5 mrem	1.3%	WSW/1152/meters

**Population Doses**

Total Body Dose	4.61E-01 man-rem
Maximum Organ Dose (Organ)	2.26E+00 man-rem (Bone)

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*Table 3-C Doses from Airborne Effluents – 3<sup>rd</sup> Quarter*

**Individual Doses**

Pathway	Dose	Quarterly Limit	Percent of Limit	Location
<b>External</b>				
Gamma Air	2.88E-04	5 mrad	<1%	S/1570/meters
Beta Air	1.10E-04	10 mrad	<1%	S/1570/meters
<b>Submersion</b>				
Total Body	2.25E-04	10 mrad	<1%	S/1764/meters
Skin	3.33E-04	10 mrad	<1%	S/1764/meters
<b>Organ Doses</b> (Iodine, Tritium, Particulates with >8-Day half-life)				
Child / Bone (Max)	4.84E-01	7.5 mrem	6.5%	S/4010/meters
Child / Thyroid	9.73e-02	7.5 mrem	1.3%	S/4010/meters
Child / Total Body	9.73e-02	7.5 mrem	1.3%	S/4010/meters

**Population Doses**

Total Body Dose   4.78E-01 man-rem  
Maximum Organ Dose (Organ)                                   2.36E+00 man-rem (Bone)





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*Table 4-A Doses from Liquid Effluents – 1<sup>st</sup> Quarter*

**Individual Doses**

Age Group	Organ	Dose	Quarterly Limit	Percent of Limit
Child(Max)	Bone/GIT/Liver Kidney/Lung	1.40E-03	5 mrem	< 1 %
Child	Thyroid	1.40E-03	5 mrem	< 1 %
Child	Total Body	1.40E-03	1.5 mrem	< 1 %

Average Riverflow past SQN (cubic feet per second): 55,371

**Population Doses**

Total Body Dose 1.20E-01 man-rem  
Maximum Organ Dose (Organ) 1.20E-01 man-rem (Bone/GIT/Thyroid/Liver/Kidney/Lung)

*Table 4-B Doses from Liquid Effluents – 2<sup>nd</sup> Quarter*

**Individual Doses**

Age Group	Organ	Dose	Quarterly Limit	Percent of Limit
Child (Max)	Bone/GIT	2.00E-03	5 mrem	< 1 %
Child/Infant	Thyroid	1.90E-03	5 mrem	< 1 %
Child/Infant	Total Body	1.90E-03	1.5 mrem	< 1 %

Average Riverflow past SQN (cubic feet per second): 30,838

**Population Doses**

Total Body Dose 1.70E-01 man-rem  
Maximum Organ Dose (Organ) 1.70E-01 man-rem (Bone/GIT/Thyroid/Liver/Kidney/Lung)



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Radiological Impact  
*Table 5 Total Dose from Fuel Cycle*

Dose	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	
<b>Total Body or any Organ (except thyroid)</b>					
Total body air (submersion)	1.00E-04	8.92E-04	2.25E-04	1.83E-04	
Critical organ dose (airborne)	2.99E-01	4.64E-01	4.84E-01	2.69E-01	
Total body dose (liquid)	1.40E-03	1.90E-03	2.30E-03	8.10E-04	
Maximum organ dose (liquid)	1.40E-03	2.00E-03	2.30E-03	2.40E-03	
Direct Radiation Dose	0.00E+01	0.00E+01	0.00E+01	0.00E+01	
<b>Total</b>	3.02E-01	4.69E-01	4.89E-01	2.72E-01	
<b>Cumulative Total Dose (mrem)</b>					1.53
<b>Annual Dose Limit (mrem)</b>					25
<b>Percent of Limit</b>					6.13
<b>Thyroid</b>					
Total body air (submersion)	1.00E-04	8.92E-04	2.25E-04	1.83E-04	
Thyroid dose (airborne)	6.00e-02	9.41E-02	9.73e-02	5.48e-02	
Total body dose (liquid)	1.40E-03	1.90E-03	2.30E-03	8.10E-04	
Thyroid dose (liquid)	1.40E-03	1.90E-03	2.30E-03	7.30E-04	
<b>Total</b>	6.29E-02	9.88E-02	1.02E-01	5.65E-02	
<b>Cumulative Total Dose (mrem)</b>					3.20E-01
<b>Annual Dose Limit (mrem)</b>					75
<b>Percent of Limit</b>					<1

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Meteorological Data

VIII. 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, 2021 - MAR 31, 2021

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.60-1.40	1.41-3.40	3.41-5.40	5.41-7.40	7.41-12.40	12.41-18.40	18.41-24.40	>=24.41	
N	0.000	0.000	0.000	0.101	0.151	0.101	0.000	0.000	0.000	0.352
NNE	0.000	0.000	0.050	0.201	0.352	0.251	0.000	0.000	0.000	0.854
NE	0.000	0.000	0.000	0.151	0.302	0.050	0.000	0.000	0.000	0.503
ENE	0.000	0.000	0.000	0.101	0.000	0.000	0.000	0.000	0.000	0.101
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	0.000	0.151	0.000	0.000	0.000	0.151
SSW	0.000	0.000	0.000	0.050	0.050	0.251	0.000	0.000	0.000	0.352
SW	0.000	0.000	0.000	0.000	0.050	0.050	0.000	0.000	0.000	0.101
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	0.050	0.000	0.000	0.000	0.000	0.050
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	0.101	0.000	0.201	0.000	0.000	0.000	0.302
SUBTOTAL	0.000	0.000	0.050	0.704	0.955	1.055	0.000	0.000	0.000	2.764

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2155  
 TOTAL HOURS OF STABILITY CLASS A 57  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS A 55  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 1990  
 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: 2021/04/26

MEAN WIND SPEED = 6.97

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, 2021 - MAR 31, 2021

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.60-1.40	1.41-3.40	3.41-5.40	5.41-7.40	7.41-12.40	12.41-18.40	18.41-24.40	>=24.41	
N	0.000	0.000	0.000	0.050	0.302	0.201	0.000	0.000	0.000	0.553
NNE	0.000	0.000	0.000	0.402	0.452	0.402	0.000	0.000	0.000	1.256
NE	0.000	0.000	0.050	0.101	0.050	0.151	0.000	0.000	0.000	0.352
ENE	0.000	0.000	0.000	0.050	0.050	0.000	0.000	0.000	0.000	0.101
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	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.050
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	0.000	0.151	0.000	0.000	0.000	0.151
SSW	0.000	0.000	0.000	0.000	0.101	0.653	0.000	0.000	0.000	0.754
SW	0.000	0.000	0.000	0.050	0.050	0.201	0.000	0.000	0.000	0.302
WSW	0.000	0.000	0.000	0.000	0.050	0.101	0.000	0.000	0.000	0.151
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	0.050	0.000	0.000	0.000	0.000	0.050
NW	0.000	0.000	0.000	0.000	0.000	0.101	0.000	0.000	0.000	0.101
NNW	0.000	0.000	0.000	0.000	0.101	0.101	0.000	0.000	0.000	0.201
SUBTOTAL	0.000	0.000	0.101	0.653	1.206	2.060	0.000	0.000	0.000	4.020

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2155  
 TOTAL HOURS OF STABILITY CLASS B 85  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS B 80  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 1990  
 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: 2021/04/26

MEAN WIND SPEED = 7.25

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, 2021 - MAR 31, 2021

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.60-1.40	1.41-3.40	3.41-5.40	5.41-7.40	7.41-12.40	12.41-18.40	18.41-24.40	>=24.41	
N	0.000	0.000	0.101	0.000	0.302	0.151	0.000	0.000	0.000	0.553
NNE	0.000	0.000	0.050	0.302	0.402	0.452	0.050	0.000	0.000	1.256
NE	0.000	0.000	0.101	0.151	0.151	0.050	0.000	0.000	0.000	0.452
ENE	0.000	0.000	0.050	0.050	0.000	0.000	0.000	0.000	0.000	0.101
E	0.000	0.000	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.050
ESE	0.000	0.000	0.000	0.050	0.000	0.000	0.000	0.000	0.000	0.050
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	0.101	0.050	0.000	0.000	0.000	0.000	0.000	0.151
S	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SSW	0.000	0.000	0.050	0.101	0.201	0.251	0.000	0.000	0.000	0.603
SW	0.000	0.000	0.000	0.101	0.101	0.050	0.000	0.000	0.000	0.251
WSW	0.000	0.000	0.000	0.050	0.000	0.000	0.000	0.000	0.000	0.050
W	0.000	0.000	0.000	0.050	0.050	0.000	0.000	0.000	0.000	0.101
WNW	0.000	0.000	0.050	0.050	0.000	0.050	0.000	0.000	0.000	0.151
NW	0.000	0.000	0.000	0.101	0.101	0.151	0.000	0.000	0.000	0.352
NNW	0.000	0.000	0.000	0.050	0.050	0.151	0.000	0.000	0.000	0.251
SUBTOTAL	0.000	0.000	0.553	1.106	1.357	1.307	0.050	0.000	0.000	4.372

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2155  
 TOTAL HOURS OF STABILITY CLASS C 91  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS C 87  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 1990  
 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: 2021/04/26

MEAN WIND SPEED = 6.36

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

JAN 1, 2021 - MAR 31, 2021

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.60-1.40	1.41-3.40	3.41-5.40	5.41-7.40	7.41-12.40	12.41-18.40	18.41-24.40	>=24.41	
N	0.000	0.101	1.256	2.915	2.462	1.608	0.000	0.000	0.000	8.342
NNE	0.000	0.050	1.256	3.819	4.322	3.769	0.000	0.000	0.000	13.216
NE	0.000	0.000	0.704	0.352	0.101	0.050	0.000	0.000	0.000	1.206
ENE	0.000	0.000	0.402	0.101	0.000	0.000	0.000	0.000	0.000	0.503
E	0.000	0.000	0.151	0.050	0.000	0.000	0.000	0.000	0.000	0.201
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	0.151	0.000	0.000	0.000	0.000	0.000	0.000	0.151
SSE	0.000	0.000	0.251	0.050	0.050	0.000	0.000	0.000	0.000	0.352
S	0.000	0.000	0.201	0.754	0.151	0.553	0.050	0.000	0.000	1.709
SSW	0.000	0.000	1.055	2.362	1.910	0.804	0.000	0.000	0.000	6.131
SW	0.000	0.000	1.307	1.357	1.055	0.352	0.000	0.000	0.000	4.070
WSW	0.000	0.000	0.201	1.005	0.553	0.201	0.000	0.000	0.000	1.960
W	0.000	0.000	0.151	0.603	1.307	0.804	0.000	0.000	0.000	2.864
WNW	0.000	0.050	0.201	0.302	0.553	0.302	0.000	0.000	0.000	1.407
NW	0.000	0.000	0.201	0.553	0.854	0.352	0.000	0.000	0.000	1.960
NNW	0.000	0.000	0.352	0.704	1.457	1.357	0.000	0.000	0.000	3.869
SUBTOTAL	0.000	0.201	7.839	14.925	14.774	10.151	0.050	0.000	0.000	47.940

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2155  
 TOTAL HOURS OF STABILITY CLASS D 1009  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS D 954  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 1990  
 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: 2021/04/26

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

SEQUOYAH NUCLEAR PLANT

JAN 1, 2021 - MAR 31, 2021

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.60-1.40	1.41-3.40	3.41-5.40	5.41-7.40	7.41-12.40	12.41-18.40	18.41-24.40	>=24.41	
N	0.000	0.151	1.156	0.653	0.201	0.201	0.000	0.000	0.000	2.362
NNE	0.000	0.302	2.462	2.312	0.653	0.251	0.000	0.000	0.000	5.980
NE	0.000	0.151	0.402	0.101	0.000	0.000	0.000	0.000	0.000	0.653
ENE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
E	0.000	0.050	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.101
ESE	0.000	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.050
SE	0.000	0.000	0.101	0.000	0.000	0.000	0.000	0.000	0.000	0.101
SSE	0.000	0.101	0.101	0.000	0.050	0.000	0.000	0.000	0.000	0.251
S	0.000	0.050	0.503	0.251	0.251	1.055	0.000	0.000	0.000	2.111
SSW	0.000	0.000	1.960	1.658	1.106	0.201	0.000	0.000	0.000	4.925
SW	0.000	0.050	1.307	1.457	0.251	0.050	0.000	0.000	0.000	3.116
WSW	0.000	0.050	0.402	0.402	0.151	0.050	0.000	0.000	0.000	1.055
W	0.000	0.000	0.050	0.402	0.352	0.000	0.000	0.000	0.000	0.804
WNW	0.000	0.000	0.251	0.101	0.452	0.000	0.000	0.000	0.000	0.804
NW	0.000	0.000	0.452	0.352	0.302	0.000	0.000	0.000	0.000	1.106
NNW	0.000	0.151	0.653	0.754	0.101	0.000	0.000	0.000	0.000	1.658
SUBTOTAL	0.000	1.106	9.849	8.442	3.869	1.809	0.000	0.000	0.000	25.075

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2155  
 TOTAL HOURS OF STABILITY CLASS E 546  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS E 499  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 1990  
 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: 2021/04/26

MEAN WIND SPEED = 4.13

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, 2021 - MAR 31, 2021

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.60-1.40	1.41-3.40	3.41-5.40	5.41-7.40	7.41-12.40	12.41-18.40	18.41-24.40	>=24.41	
N	0.000	0.151	0.905	0.101	0.000	0.000	0.000	0.000	0.000	1.156
NNE	0.000	0.050	1.809	0.101	0.000	0.000	0.000	0.000	0.000	1.960
NE	0.000	0.352	0.653	0.000	0.000	0.000	0.000	0.000	0.000	1.005
ENE	0.000	0.101	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.151
E	0.000	0.101	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.101
ESE	0.000	0.101	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.101
SE	0.000	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.050
SSE	0.000	0.101	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.151
S	0.000	0.201	0.101	0.101	0.000	0.000	0.000	0.000	0.000	0.402
SSW	0.000	0.000	1.508	0.503	0.251	0.151	0.000	0.000	0.000	2.412
SW	0.000	0.000	1.457	0.503	0.151	0.050	0.000	0.000	0.000	2.161
WSW	0.000	0.050	0.402	0.000	0.000	0.000	0.000	0.000	0.000	0.452
W	0.000	0.000	0.101	0.050	0.050	0.000	0.000	0.000	0.000	0.201
WNW	0.000	0.000	0.101	0.000	0.000	0.000	0.000	0.000	0.000	0.101
NW	0.000	0.000	0.101	0.000	0.000	0.000	0.000	0.000	0.000	0.101
NNW	0.000	0.000	0.352	0.000	0.000	0.000	0.000	0.000	0.000	0.352
SUBTOTAL	0.000	1.256	7.588	1.357	0.452	0.201	0.000	0.000	0.000	10.854

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2155  
 TOTAL HOURS OF STABILITY CLASS F 244  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS F 216  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 1990  
 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: 2021/04/26

MEAN WIND SPEED = 2.70

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, 2021 - MAR 31, 2021

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.60-1.40	1.41-3.40	3.41-5.40	5.41-7.40	7.41-12.40	12.41-18.40	18.41-24.40	>=24.41	
N	0.001	0.000	0.101	0.000	0.000	0.000	0.000	0.000	0.000	0.102
NNE	0.007	0.101	0.402	0.000	0.000	0.000	0.000	0.000	0.000	0.509
NE	0.005	0.000	0.352	0.000	0.000	0.000	0.000	0.000	0.000	0.356
ENE	0.001	0.000	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.051
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	0.001	0.101	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.102
S	0.004	0.050	0.251	0.000	0.000	0.000	0.000	0.000	0.000	0.305
SSW	0.020	0.352	1.206	0.603	0.151	0.000	0.000	0.000	0.000	2.332
SW	0.007	0.000	0.503	0.101	0.000	0.000	0.000	0.000	0.000	0.610
WSW	0.001	0.000	0.050	0.050	0.000	0.000	0.000	0.000	0.000	0.101
W	0.001	0.000	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.051
WNW	0.001	0.000	0.050	0.151	0.000	0.000	0.000	0.000	0.000	0.202
NW	0.001	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.051
NNW	0.003	0.050	0.151	0.000	0.000	0.000	0.000	0.000	0.000	0.204
SUBTOTAL	0.050	0.704	3.166	0.905	0.151	0.000	0.000	0.000	0.000	4.975

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2155  
 TOTAL HOURS OF STABILITY CLASS G 123  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS G 99  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 1990  
 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: 2021/04/26

MEAN WIND SPEED = 2.44

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, 2021 - JUN 30, 2021

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.60-1.40	1.41-3.40	3.41-5.40	5.41-7.40	7.41-12.40	12.41-18.40	18.41-24.40	>=24.41	
N	0.000	0.000	0.000	0.000	0.276	0.414	0.000	0.000	0.000	0.690
NNE	0.000	0.000	0.000	0.506	0.506	0.460	0.000	0.000	0.000	1.472
NE	0.000	0.000	0.000	0.690	0.414	0.184	0.000	0.000	0.000	1.288
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	0.046	0.000	0.000	0.000	0.000	0.000	0.046
S	0.000	0.000	0.000	0.046	0.184	0.000	0.000	0.000	0.000	0.230
SSW	0.000	0.000	0.000	0.138	0.322	0.184	0.000	0.000	0.000	0.644
SW	0.000	0.000	0.000	0.368	0.092	0.000	0.000	0.000	0.000	0.460
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	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NW	0.000	0.000	0.000	0.000	0.000	0.046	0.000	0.000	0.000	0.046
NNW	0.000	0.000	0.000	0.000	0.230	0.276	0.000	0.000	0.000	0.506
SUBTOTAL	0.000	0.000	0.000	1.840	2.070	1.564	0.000	0.000	0.000	5.474

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2174  
 TOTAL HOURS OF STABILITY CLASS A 119  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS A 119  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2174  
 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: 2021/07/23

MEAN WIND SPEED = 6.56

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, 2021 - JUN 30, 2021

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.60-1.40	1.41-3.40	3.41-5.40	5.41-7.40	7.41-12.40	12.41-18.40	18.41-24.40	>=24.41	
N	0.000	0.000	0.000	0.138	0.138	0.184	0.046	0.000	0.000	0.506
NNE	0.000	0.000	0.000	0.736	0.230	0.046	0.000	0.000	0.000	1.012
NE	0.000	0.000	0.092	0.874	0.000	0.000	0.000	0.000	0.000	0.966
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	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.046
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	0.092	0.092	0.000	0.000	0.000	0.000	0.184
S	0.000	0.000	0.000	0.092	0.092	0.000	0.000	0.000	0.000	0.184
SSW	0.000	0.000	0.000	0.138	0.644	0.138	0.000	0.000	0.000	0.920
SW	0.000	0.000	0.000	0.368	0.138	0.046	0.000	0.000	0.000	0.552
WSW	0.000	0.000	0.046	0.046	0.000	0.000	0.000	0.000	0.000	0.092
W	0.000	0.000	0.000	0.046	0.092	0.000	0.000	0.000	0.000	0.138
WNW	0.000	0.000	0.000	0.000	0.046	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
NNW	0.000	0.000	0.046	0.000	0.046	0.322	0.000	0.000	0.000	0.414
SUBTOTAL	0.000	0.000	0.230	2.622	1.518	0.736	0.046	0.000	0.000	5.152

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2174  
 TOTAL HOURS OF STABILITY CLASS B 112  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS B 112  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2174  
 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: 2021/07/23

MEAN WIND SPEED = 5.51

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, 2021 - JUN 30, 2021

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.60-1.40	1.41-3.40	3.41-5.40	5.41-7.40	7.41-12.40	12.41-18.40	18.41-24.40	>=24.41	
N	0.000	0.000	0.046	0.092	0.000	0.138	0.000	0.000	0.000	0.276
NNE	0.000	0.000	0.046	0.506	0.184	0.046	0.000	0.000	0.000	0.782
NE	0.000	0.000	0.322	0.552	0.092	0.000	0.000	0.000	0.000	0.966
ENE	0.000	0.000	0.230	0.092	0.000	0.000	0.000	0.000	0.000	0.322
E	0.000	0.000	0.092	0.000	0.000	0.000	0.000	0.000	0.000	0.092
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	0.000	0.046	0.000	0.000	0.000	0.000	0.000	0.046
SSE	0.000	0.000	0.000	0.092	0.138	0.000	0.000	0.000	0.000	0.230
S	0.000	0.000	0.092	0.460	0.368	0.046	0.000	0.000	0.000	0.966
SSW	0.000	0.000	0.230	0.828	0.552	0.092	0.000	0.000	0.000	1.702
SW	0.000	0.000	0.138	0.276	0.230	0.046	0.000	0.000	0.000	0.690
WSW	0.000	0.000	0.046	0.000	0.046	0.000	0.000	0.000	0.000	0.092
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	0.000	0.000	0.000	0.000	0.092
NW	0.000	0.000	0.000	0.000	0.092	0.046	0.000	0.000	0.000	0.138
NNW	0.000	0.000	0.000	0.000	0.046	0.184	0.000	0.000	0.000	0.230
SUBTOTAL	0.000	0.000	1.288	2.990	1.794	0.598	0.000	0.000	0.000	6.670

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2174  
 TOTAL HOURS OF STABILITY CLASS C 145  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS C 145  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2174  
 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: 2021/07/23

MEAN WIND SPEED = 5.03

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, 2021 - JUN 30, 2021

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.60-1.40	1.41-3.40	3.41-5.40	5.41-7.40	7.41-12.40	12.41-18.40	18.41-24.40	>=24.41	
N	0.000	0.092	0.736	0.782	0.828	0.322	0.000	0.000	0.000	2.760
NNE	0.000	0.092	1.150	1.472	1.012	0.506	0.000	0.000	0.000	4.232
NE	0.000	0.046	1.242	0.598	0.184	0.000	0.000	0.000	0.000	2.070
ENE	0.000	0.092	0.368	0.000	0.000	0.000	0.000	0.000	0.000	0.460
E	0.000	0.046	0.276	0.184	0.000	0.000	0.000	0.000	0.000	0.506
ESE	0.000	0.000	0.368	0.000	0.000	0.000	0.000	0.000	0.000	0.368
SE	0.000	0.092	0.368	0.230	0.000	0.000	0.000	0.000	0.000	0.690
SSE	0.000	0.046	0.414	0.828	0.092	0.000	0.000	0.000	0.000	1.380
S	0.000	0.000	2.300	3.128	0.828	0.368	0.000	0.000	0.000	6.624
SSW	0.000	0.000	3.312	3.864	0.920	0.506	0.000	0.000	0.000	8.602
SW	0.000	0.000	1.748	2.346	0.414	0.138	0.000	0.000	0.000	4.646
WSW	0.000	0.000	0.460	0.276	0.138	0.046	0.000	0.000	0.000	0.920
W	0.000	0.000	0.276	0.046	0.000	0.000	0.000	0.000	0.000	0.322
WNW	0.000	0.046	0.046	0.092	0.092	0.000	0.000	0.000	0.000	0.276
NW	0.000	0.046	0.092	0.276	0.414	0.138	0.000	0.000	0.000	0.966
NNW	0.000	0.092	0.230	0.322	0.598	0.184	0.000	0.000	0.000	1.426
SUBTOTAL	0.000	0.690	13.385	14.443	5.520	2.208	0.000	0.000	0.000	36.247

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2174  
 TOTAL HOURS OF STABILITY CLASS D 788  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS D 788  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2174  
 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: 2021/07/23

MEAN WIND SPEED = 4.19

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, 2021 - JUN 30, 2021

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.60-1.40	1.41-3.40	3.41-5.40	5.41-7.40	7.41-12.40	12.41-18.40	18.41-24.40	>=24.41	
N	0.007	0.460	2.668	0.690	0.322	0.092	0.000	0.000	0.000	4.239
NNE	0.008	0.874	2.484	0.736	0.092	0.000	0.000	0.000	0.000	4.193
NE	0.001	0.000	0.230	0.046	0.000	0.000	0.000	0.000	0.000	0.277
ENE	0.001	0.276	0.230	0.000	0.000	0.000	0.000	0.000	0.000	0.507
E	0.001	0.138	0.138	0.000	0.000	0.000	0.000	0.000	0.000	0.277
ESE	0.001	0.138	0.184	0.000	0.000	0.000	0.000	0.000	0.000	0.323
SE	0.001	0.138	0.414	0.046	0.000	0.000	0.000	0.000	0.000	0.599
SSE	0.002	0.230	0.736	0.230	0.046	0.000	0.000	0.000	0.000	1.244
S	0.004	0.506	1.334	0.506	0.138	0.046	0.000	0.000	0.000	2.534
SSW	0.007	0.414	2.668	0.644	0.046	0.000	0.000	0.000	0.000	3.779
SW	0.006	0.230	2.392	0.736	0.138	0.000	0.000	0.000	0.000	3.502
WSW	0.002	0.046	0.690	0.184	0.000	0.000	0.000	0.000	0.000	0.922
W	0.001	0.184	0.414	0.046	0.046	0.000	0.000	0.000	0.000	0.691
WNW	0.001	0.046	0.230	0.230	0.046	0.046	0.000	0.000	0.000	0.599
NW	0.002	0.276	0.598	0.322	0.230	0.000	0.000	0.000	0.000	1.428
NNW	0.002	0.138	0.736	0.644	0.092	0.046	0.000	0.000	0.000	1.658
SUBTOTAL	0.046	4.094	16.145	5.060	1.196	0.230	0.000	0.000	0.000	26.771

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2174  
 TOTAL HOURS OF STABILITY CLASS E 582  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS E 582  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2174  
 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: 2021/07/23

MEAN WIND SPEED = 2.74

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, 2021 - JUN 30, 2021

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.60-1.40	1.41-3.40	3.41-5.40	5.41-7.40	7.41-12.40	12.41-18.40	18.41-24.40	>=24.41	
N	0.005	0.092	1.426	0.276	0.000	0.000	0.000	0.000	0.000	1.798
NNE	0.015	1.288	3.634	0.000	0.000	0.000	0.000	0.000	0.000	4.936
NE	0.008	1.196	1.472	0.000	0.000	0.000	0.000	0.000	0.000	2.676
ENE	0.002	0.598	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.600
E	0.001	0.184	0.092	0.000	0.000	0.000	0.000	0.000	0.000	0.277
ESE	0.001	0.230	0.092	0.000	0.000	0.000	0.000	0.000	0.000	0.323
SE	0.002	0.460	0.092	0.000	0.000	0.000	0.000	0.000	0.000	0.554
SSE	0.002	0.552	0.138	0.000	0.000	0.000	0.000	0.000	0.000	0.692
S	0.002	0.230	0.368	0.000	0.000	0.000	0.000	0.000	0.000	0.600
SSW	0.003	0.184	0.782	0.092	0.000	0.000	0.000	0.000	0.000	1.061
SW	0.004	0.046	1.196	0.000	0.000	0.000	0.000	0.000	0.000	1.246
WSW	0.001	0.092	0.276	0.000	0.000	0.000	0.000	0.000	0.000	0.369
W	0.000	0.000	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.046
WNW	0.000	0.000	0.092	0.000	0.000	0.000	0.000	0.000	0.000	0.092
NW	0.000	0.046	0.092	0.000	0.000	0.000	0.000	0.000	0.000	0.138
NNW	0.001	0.000	0.414	0.138	0.000	0.000	0.000	0.000	0.000	0.553
SUBTOTAL	0.046	5.198	10.212	0.506	0.000	0.000	0.000	0.000	0.000	15.961

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2174  
 TOTAL HOURS OF STABILITY CLASS F 347  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS F 347  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2174  
 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: 2021/07/23

MEAN WIND SPEED = 1.79

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, 2021 - JUN 30, 2021

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.60-1.40	1.41-3.40	3.41-5.40	5.41-7.40	7.41-12.40	12.41-18.40	18.41-24.40	>=24.41	
N	0.000	0.000	0.138	0.000	0.000	0.000	0.000	0.000	0.000	0.138
NNE	0.000	0.230	0.460	0.000	0.000	0.000	0.000	0.000	0.000	0.690
NE	0.000	0.230	0.276	0.000	0.000	0.000	0.000	0.000	0.000	0.506
ENE	0.000	0.276	0.092	0.000	0.000	0.000	0.000	0.000	0.000	0.368
E	0.000	0.092	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.092
ESE	0.000	0.230	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.230
SE	0.000	0.414	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.414
SSE	0.000	0.368	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.414
S	0.000	0.276	0.092	0.000	0.000	0.000	0.000	0.000	0.000	0.368
SSW	0.000	0.000	0.276	0.000	0.000	0.000	0.000	0.000	0.000	0.276
SW	0.000	0.046	0.184	0.000	0.000	0.000	0.000	0.000	0.000	0.230
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	2.162	1.564	0.000	0.000	0.000	0.000	0.000	0.000	3.726

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2174  
 TOTAL HOURS OF STABILITY CLASS G 81  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS G 81  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2174  
 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: 2021/07/23

MEAN WIND SPEED = 1.47

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, 2021 - SEP 30, 2021

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.60-1.40	1.41-3.40	3.41-5.40	5.41-7.40	7.41-12.40	12.41-18.40	18.41-24.40	>=24.41	
N	0.000	0.000	0.046	0.232	0.093	0.093	0.000	0.000	0.000	0.464
NNE	0.000	0.000	0.232	1.020	0.556	0.139	0.000	0.000	0.000	1.947
NE	0.000	0.000	0.139	0.278	0.046	0.000	0.000	0.000	0.000	0.464
ENE	0.000	0.000	0.000	0.046	0.046	0.000	0.000	0.000	0.000	0.093
E	0.000	0.000	0.046	0.046	0.000	0.000	0.000	0.000	0.000	0.093
ESE	0.000	0.000	0.046	0.000	0.046	0.000	0.000	0.000	0.000	0.093
SE	0.000	0.046	0.000	0.000	0.000	0.046	0.000	0.000	0.000	0.093
SSE	0.000	0.000	0.093	0.139	0.093	0.093	0.000	0.000	0.000	0.417
S	0.000	0.046	0.000	0.139	0.139	0.000	0.000	0.000	0.000	0.325
SSW	0.000	0.000	0.139	0.000	0.371	0.000	0.000	0.000	0.000	0.510
SW	0.000	0.000	0.000	0.232	0.000	0.000	0.000	0.000	0.000	0.232
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	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WNW	0.000	0.000	0.046	0.000	0.046	0.000	0.000	0.000	0.000	0.093
NW	0.000	0.046	0.000	0.000	0.046	0.000	0.000	0.000	0.000	0.093
NNW	0.000	0.000	0.000	0.000	0.046	0.000	0.000	0.000	0.000	0.046
SUBTOTAL	0.000	0.139	0.834	2.133	1.530	0.371	0.000	0.000	0.000	5.007

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2186  
 TOTAL HOURS OF STABILITY CLASS A 110  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS A 108  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2157  
 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: 2021/11/01

MEAN WIND SPEED = 4.82

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, 2021 - SEP 30, 2021

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.60-1.40	1.41-3.40	3.41-5.40	5.41-7.40	7.41-12.40	12.41-18.40	18.41-24.40	>=24.41	
N	0.000	0.000	0.139	0.232	0.000	0.046	0.000	0.000	0.000	0.417
NNE	0.000	0.000	0.093	0.742	0.232	0.046	0.000	0.000	0.000	1.113
NE	0.000	0.000	0.325	0.232	0.000	0.000	0.000	0.000	0.000	0.556
ENE	0.000	0.000	0.093	0.046	0.000	0.000	0.000	0.000	0.000	0.139
E	0.000	0.046	0.046	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	0.093	0.093	0.000	0.000	0.000	0.000	0.000	0.185
SSE	0.000	0.000	0.093	0.000	0.093	0.000	0.000	0.000	0.000	0.185
S	0.000	0.000	0.046	0.093	0.093	0.000	0.000	0.000	0.000	0.232
SSW	0.000	0.000	0.093	0.510	0.232	0.000	0.000	0.000	0.000	0.834
SW	0.000	0.000	0.093	0.325	0.000	0.046	0.000	0.000	0.000	0.464
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	0.046	0.093	0.046	0.000	0.000	0.000	0.185
SUBTOTAL	0.000	0.046	1.159	2.318	0.742	0.185	0.000	0.000	0.000	4.451

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2186  
 TOTAL HOURS OF STABILITY CLASS B 99  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS B 96  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2157  
 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: 2021/11/01

MEAN WIND SPEED = 4.52

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, 2021 - SEP 30, 2021

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.60-1.40	1.41-3.40	3.41-5.40	5.41-7.40	7.41-12.40	12.41-18.40	18.41-24.40	>=24.41	
N	0.000	0.000	0.093	0.278	0.185	0.000	0.000	0.000	0.000	0.556
NNE	0.000	0.000	0.371	0.834	0.046	0.046	0.000	0.000	0.000	1.298
NE	0.000	0.000	0.695	0.139	0.000	0.000	0.000	0.000	0.000	0.834
ENE	0.000	0.000	0.093	0.093	0.000	0.000	0.000	0.000	0.000	0.185
E	0.000	0.000	0.139	0.000	0.000	0.000	0.000	0.000	0.000	0.139
ESE	0.000	0.000	0.046	0.000	0.046	0.000	0.000	0.000	0.000	0.093
SE	0.000	0.000	0.093	0.139	0.000	0.000	0.000	0.000	0.000	0.232
SSE	0.000	0.000	0.093	0.185	0.000	0.000	0.000	0.000	0.000	0.278
S	0.000	0.046	0.139	0.232	0.093	0.000	0.000	0.000	0.000	0.510
SSW	0.000	0.000	0.417	1.623	0.139	0.000	0.000	0.000	0.000	2.179
SW	0.000	0.000	0.464	0.603	0.046	0.000	0.000	0.000	0.000	1.113
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	0.093	0.046	0.000	0.000	0.000	0.000	0.139
SUBTOTAL	0.000	0.046	2.643	4.219	0.603	0.046	0.000	0.000	0.000	7.557

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2186  
 TOTAL HOURS OF STABILITY CLASS C 165  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS C 163  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2157  
 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: 2021/11/01

MEAN WIND SPEED = 3.94

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, 2021 - SEP 30, 2021

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.60-1.40	1.41-3.40	3.41-5.40	5.41-7.40	7.41-12.40	12.41-18.40	18.41-24.40	>=24.41	
N	0.000	0.093	2.689	1.159	0.093	0.000	0.000	0.000	0.000	4.033
NNE	0.000	0.046	2.364	1.715	0.139	0.000	0.000	0.000	0.000	4.265
NE	0.000	0.000	0.881	0.232	0.000	0.000	0.000	0.000	0.000	1.113
ENE	0.000	0.093	0.371	0.046	0.000	0.000	0.000	0.000	0.000	0.510
E	0.000	0.093	0.510	0.000	0.000	0.000	0.000	0.000	0.000	0.603
ESE	0.000	0.000	0.417	0.093	0.000	0.000	0.000	0.000	0.000	0.510
SE	0.000	0.000	0.974	0.093	0.000	0.000	0.000	0.000	0.000	1.066
SSE	0.000	0.046	0.742	0.325	0.000	0.000	0.000	0.000	0.000	1.113
S	0.000	0.093	3.106	2.133	0.325	0.046	0.000	0.000	0.000	5.702
SSW	0.000	0.185	4.265	3.338	0.232	0.000	0.000	0.000	0.000	8.020
SW	0.000	0.046	2.179	0.834	0.232	0.000	0.000	0.000	0.000	3.292
WSW	0.000	0.093	1.020	0.325	0.000	0.000	0.000	0.000	0.000	1.437
W	0.000	0.046	0.278	0.185	0.046	0.000	0.000	0.000	0.000	0.556
WNW	0.000	0.046	0.093	0.139	0.046	0.000	0.000	0.000	0.000	0.325
NW	0.000	0.278	0.464	0.417	0.232	0.046	0.000	0.000	0.000	1.437
NNW	0.000	0.185	0.556	0.556	0.325	0.000	0.000	0.000	0.000	1.623
SUBTOTAL	0.000	1.344	20.909	11.590	1.669	0.093	0.000	0.000	0.000	35.605

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2186  
 TOTAL HOURS OF STABILITY CLASS D 770  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS D 768  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2157  
 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: 2021/11/01

MEAN WIND SPEED = 3.24

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, 2021 - SEP 30, 2021

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.60-1.40	1.41-3.40	3.41-5.40	5.41-7.40	7.41-12.40	12.41-18.40	18.41-24.40	>=24.41	
N	0.000	1.669	7.000	0.834	0.093	0.000	0.000	0.000	0.000	9.597
NNE	0.000	1.623	2.782	0.325	0.046	0.000	0.000	0.000	0.000	4.775
NE	0.000	0.371	0.325	0.000	0.000	0.000	0.000	0.000	0.000	0.695
ENE	0.000	0.139	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.139
E	0.000	0.185	0.139	0.000	0.000	0.000	0.000	0.000	0.000	0.325
ESE	0.000	0.278	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.325
SE	0.000	0.325	0.139	0.000	0.000	0.000	0.000	0.000	0.000	0.464
SSE	0.000	0.232	0.881	0.000	0.000	0.000	0.000	0.000	0.000	1.113
S	0.000	0.695	0.927	0.046	0.000	0.000	0.000	0.000	0.000	1.669
SSW	0.000	0.603	1.901	0.046	0.000	0.000	0.000	0.000	0.000	2.550
SW	0.000	0.417	2.689	0.510	0.046	0.000	0.000	0.000	0.000	3.662
WSW	0.000	0.278	1.484	0.325	0.000	0.000	0.000	0.000	0.000	2.086
W	0.000	0.695	0.834	0.139	0.000	0.000	0.000	0.000	0.000	1.669
WNW	0.000	0.649	0.556	0.046	0.046	0.000	0.000	0.000	0.000	1.298
NW	0.000	0.649	0.742	0.093	0.093	0.000	0.000	0.000	0.000	1.576
NNW	0.000	1.020	2.179	0.325	0.000	0.000	0.000	0.000	0.000	3.523
SUBTOTAL	0.000	9.828	22.624	2.689	0.325	0.000	0.000	0.000	0.000	35.466

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2186  
 TOTAL HOURS OF STABILITY CLASS E 776  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS E 765  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2157  
 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: 2021/11/01

MEAN WIND SPEED = 2.06

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, 2021 - SEP 30, 2021

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.60-1.40	1.41-3.40	3.41-5.40	5.41-7.40	7.41-12.40	12.41-18.40	18.41-24.40	>=24.41	
N	0.000	0.788	3.848	0.046	0.000	0.000	0.000	0.000	0.000	4.682
NNE	0.000	1.066	1.994	0.000	0.000	0.000	0.000	0.000	0.000	3.060
NE	0.000	0.510	0.093	0.000	0.000	0.000	0.000	0.000	0.000	0.603
ENE	0.000	0.139	0.093	0.000	0.000	0.000	0.000	0.000	0.000	0.232
E	0.000	0.185	0.093	0.000	0.000	0.000	0.000	0.000	0.000	0.278
ESE	0.000	0.278	0.093	0.000	0.000	0.000	0.000	0.000	0.000	0.371
SE	0.000	0.232	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.232
SSE	0.000	0.139	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.185
S	0.000	0.185	0.185	0.000	0.000	0.000	0.000	0.000	0.000	0.371
SSW	0.000	0.046	0.139	0.000	0.000	0.000	0.000	0.000	0.000	0.185
SW	0.000	0.093	0.093	0.000	0.000	0.000	0.000	0.000	0.000	0.185
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	0.093	0.000	0.000	0.000	0.000	0.000	0.000	0.093
WNW	0.000	0.000	0.185	0.000	0.000	0.000	0.000	0.000	0.000	0.185
NW	0.000	0.000	0.232	0.093	0.000	0.000	0.000	0.000	0.000	0.325
NNW	0.000	0.093	0.510	0.185	0.000	0.000	0.000	0.000	0.000	0.788
SUBTOTAL	0.000	3.755	7.742	0.325	0.000	0.000	0.000	0.000	0.000	11.822

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2186  
 TOTAL HOURS OF STABILITY CLASS F 264  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS F 255  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2157  
 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: 2021/11/01

MEAN WIND SPEED = 1.76

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, 2021 - SEP 30, 2021

WIND DIRECTION	WIND SPEED (MPH)									TOTAL	
	CALM	0.60-1.40	1.41-3.40	3.41-5.40	5.41-7.40	7.41-12.40	12.41-18.40	18.41-24.40	>=24.41		
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	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ENE	0.000	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	0.000
ESE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SE	0.000	0.046	0.000	0.000	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	0.000
S	0.000	0.000	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.046
SSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SW	0.000	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	0.000
W	0.000	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	0.000
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	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SUBTOTAL	0.000	0.046	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.093

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2186  
 TOTAL HOURS OF STABILITY CLASS G 2  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS G 2  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2157  
 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: 2021/11/01

MEAN WIND SPEED = 1.55

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

JAN 1, 2009 - DEC 31, 2018

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.60-1.40	1.41-3.40	3.41-5.40	5.41-7.40	7.41-12.40	12.41-18.40	18.41-24.40	>=24.41	
N	0.000	0.000	0.023	0.092	0.141	0.139	0.000	0.000	0.000	0.396
NNE	0.000	0.000	0.084	0.528	0.537	0.320	0.005	0.000	0.000	1.473
NE	0.000	0.001	0.136	0.404	0.256	0.092	0.001	0.000	0.000	0.890
ENE	0.000	0.001	0.049	0.087	0.005	0.000	0.000	0.000	0.000	0.143
E	0.000	0.000	0.017	0.023	0.001	0.000	0.000	0.000	0.000	0.041
ESE	0.000	0.000	0.015	0.030	0.002	0.000	0.000	0.000	0.000	0.047
SE	0.000	0.000	0.015	0.032	0.003	0.000	0.000	0.000	0.000	0.051
SSE	0.000	0.000	0.008	0.030	0.025	0.014	0.000	0.000	0.000	0.077
S	0.000	0.000	0.009	0.079	0.109	0.054	0.000	0.000	0.000	0.252
SSW	0.000	0.000	0.023	0.399	0.506	0.155	0.000	0.000	0.000	1.083
SW	0.000	0.000	0.025	0.434	0.269	0.066	0.000	0.000	0.000	0.793
WSW	0.000	0.000	0.005	0.033	0.037	0.016	0.000	0.000	0.000	0.091
W	0.000	0.000	0.003	0.009	0.048	0.049	0.005	0.000	0.000	0.115
WNW	0.000	0.000	0.000	0.013	0.045	0.063	0.000	0.000	0.000	0.121
NW	0.000	0.000	0.001	0.014	0.067	0.100	0.000	0.000	0.000	0.182
NNW	0.000	0.000	0.002	0.017	0.070	0.113	0.001	0.000	0.000	0.204
SUBTOTAL	0.000	0.002	0.416	2.224	2.123	1.181	0.011	0.000	0.000	5.958

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 87160  
 TOTAL HOURS OF STABILITY CLASS A 5183  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS A 5181  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 86963  
 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: 2020/07/17

MEAN WIND SPEED = 5.95

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, 2009 - DEC 31, 2018

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.60-1.40	1.41-3.40	3.41-5.40	5.41-7.40	7.41-12.40	12.41-18.40	18.41-24.40	>=24.41	
N	0.000	0.000	0.013	0.078	0.097	0.092	0.001	0.000	0.000	0.281
NNE	0.000	0.000	0.079	0.298	0.240	0.122	0.005	0.000	0.000	0.744
NE	0.000	0.000	0.131	0.195	0.060	0.026	0.000	0.000	0.000	0.413
ENE	0.000	0.002	0.052	0.029	0.000	0.000	0.000	0.000	0.000	0.083
E	0.000	0.000	0.030	0.013	0.001	0.000	0.000	0.000	0.000	0.044
ESE	0.000	0.000	0.032	0.013	0.000	0.000	0.000	0.000	0.000	0.045
SE	0.000	0.000	0.016	0.036	0.003	0.000	0.000	0.000	0.000	0.055
SSE	0.000	0.000	0.015	0.029	0.010	0.007	0.000	0.000	0.000	0.061
S	0.000	0.000	0.034	0.103	0.077	0.047	0.001	0.000	0.000	0.263
SSW	0.000	0.000	0.051	0.565	0.346	0.132	0.000	0.000	0.000	1.094
SW	0.000	0.000	0.056	0.367	0.162	0.030	0.001	0.000	0.000	0.616
WSW	0.000	0.001	0.015	0.036	0.021	0.014	0.002	0.000	0.000	0.089
W	0.000	0.000	0.000	0.007	0.022	0.031	0.000	0.000	0.000	0.060
WNW	0.000	0.000	0.001	0.021	0.028	0.030	0.003	0.000	0.000	0.083
NW	0.000	0.000	0.002	0.017	0.057	0.038	0.001	0.000	0.000	0.116
NNW	0.000	0.000	0.001	0.021	0.055	0.069	0.001	0.000	0.000	0.147
SUBTOTAL	0.000	0.003	0.529	1.826	1.180	0.638	0.016	0.000	0.000	4.193

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 87160  
 TOTAL HOURS OF STABILITY CLASS B 3655  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS B 3646  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 86963  
 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: 2020/07/17

MEAN WIND SPEED = 5.49

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, 2009 - DEC 31, 2018

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.60-1.40	1.41-3.40	3.41-5.40	5.41-7.40	7.41-12.40	12.41-18.40	18.41-24.40	>=24.41	
N	0.000	0.001	0.034	0.103	0.144	0.082	0.001	0.000	0.000	0.366
NNE	0.000	0.000	0.117	0.348	0.251	0.141	0.009	0.000	0.000	0.867
NE	0.000	0.001	0.225	0.199	0.064	0.024	0.000	0.000	0.000	0.514
ENE	0.000	0.000	0.086	0.024	0.003	0.000	0.000	0.000	0.000	0.114
E	0.000	0.000	0.068	0.014	0.001	0.000	0.000	0.000	0.000	0.083
ESE	0.000	0.000	0.054	0.021	0.000	0.000	0.000	0.000	0.000	0.075
SE	0.000	0.000	0.047	0.045	0.002	0.000	0.000	0.000	0.000	0.094
SSE	0.000	0.001	0.051	0.059	0.014	0.008	0.000	0.000	0.000	0.132
S	0.000	0.000	0.066	0.209	0.103	0.047	0.000	0.000	0.000	0.425
SSW	0.000	0.000	0.168	0.842	0.347	0.098	0.000	0.000	0.000	1.455
SW	0.000	0.001	0.166	0.452	0.193	0.038	0.000	0.000	0.000	0.850
WSW	0.000	0.000	0.037	0.052	0.031	0.017	0.000	0.000	0.000	0.137
W	0.000	0.000	0.007	0.026	0.038	0.028	0.000	0.000	0.000	0.099
WNW	0.000	0.000	0.007	0.018	0.036	0.038	0.003	0.000	0.000	0.102
NW	0.000	0.000	0.001	0.032	0.068	0.053	0.002	0.000	0.000	0.156
NNW	0.000	0.001	0.011	0.048	0.072	0.080	0.001	0.000	0.000	0.215
SUBTOTAL	0.000	0.006	1.145	2.493	1.368	0.654	0.017	0.000	0.000	5.684

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 87160  
 TOTAL HOURS OF STABILITY CLASS C 4950  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS C 4943  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 86963  
 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: 2020/07/17

MEAN WIND SPEED = 5.08

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, 2009 - DEC 31, 2018

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.60-1.40	1.41-3.40	3.41-5.40	5.41-7.40	7.41-12.40	12.41-18.40	18.41-24.40	>=24.41	
N	0.000	0.057	1.080	1.192	1.066	0.669	0.007	0.000	0.000	4.072
NNE	0.000	0.054	1.524	2.199	1.610	1.097	0.036	0.001	0.000	6.520
NE	0.000	0.056	0.961	0.430	0.114	0.059	0.002	0.000	0.000	1.623
ENE	0.000	0.028	0.340	0.044	0.002	0.000	0.000	0.000	0.000	0.414
E	0.000	0.017	0.233	0.031	0.001	0.000	0.000	0.000	0.000	0.283
ESE	0.000	0.016	0.216	0.017	0.005	0.001	0.000	0.000	0.000	0.255
SE	0.000	0.034	0.286	0.072	0.010	0.002	0.000	0.000	0.000	0.406
SSE	0.000	0.034	0.522	0.186	0.071	0.074	0.002	0.000	0.000	0.890
S	0.000	0.086	1.486	1.305	0.511	0.365	0.010	0.000	0.000	3.763
SSW	0.000	0.057	2.278	3.002	0.972	0.368	0.002	0.000	0.000	6.680
SW	0.000	0.061	1.452	1.458	0.538	0.175	0.003	0.000	0.000	3.688
WSW	0.000	0.059	0.396	0.273	0.176	0.136	0.005	0.000	0.000	1.043
W	0.000	0.045	0.205	0.246	0.182	0.174	0.008	0.000	0.000	0.859
WNW	0.000	0.033	0.166	0.197	0.214	0.191	0.003	0.000	0.000	0.804
NW	0.000	0.048	0.225	0.375	0.406	0.227	0.002	0.000	0.000	1.283
NNW	0.000	0.057	0.417	0.552	0.634	0.379	0.005	0.000	0.000	2.045
SUBTOTAL	0.001	0.745	11.788	11.580	6.511	3.915	0.086	0.001	0.000	34.627

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 87160  
 TOTAL HOURS OF STABILITY CLASS D 30159  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS D 30113  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 86963  
 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: 2020/07/17

MEAN WIND SPEED = 4.59

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, 2009 - DEC 31, 2018

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.60-1.40	1.41-3.40	3.41-5.40	5.41-7.40	7.41-12.40	12.41-18.40	18.41-24.40	>=24.41	
N	0.002	0.522	3.160	1.133	0.255	0.040	0.000	0.000	0.000	5.112
NNE	0.002	0.537	3.391	1.471	0.373	0.049	0.001	0.000	0.000	5.824
NE	0.001	0.324	0.639	0.125	0.014	0.002	0.000	0.000	0.000	1.106
ENE	0.000	0.167	0.137	0.006	0.000	0.000	0.000	0.000	0.000	0.309
E	0.000	0.139	0.106	0.008	0.000	0.000	0.000	0.000	0.000	0.253
ESE	0.000	0.124	0.124	0.008	0.001	0.000	0.000	0.000	0.000	0.258
SE	0.000	0.162	0.227	0.031	0.005	0.001	0.000	0.000	0.000	0.426
SSE	0.000	0.221	0.450	0.135	0.057	0.034	0.000	0.000	0.000	0.897
S	0.001	0.360	1.367	0.584	0.329	0.268	0.006	0.000	0.000	2.915
SSW	0.002	0.343	2.710	1.099	0.528	0.193	0.001	0.000	0.000	4.876
SW	0.002	0.299	2.595	1.015	0.247	0.092	0.000	0.000	0.000	4.251
WSW	0.001	0.206	1.044	0.269	0.078	0.036	0.001	0.000	0.000	1.635
W	0.000	0.204	0.527	0.155	0.048	0.024	0.002	0.000	0.000	0.961
WNW	0.000	0.155	0.407	0.136	0.071	0.016	0.000	0.000	0.000	0.786
NW	0.000	0.212	0.574	0.264	0.089	0.031	0.000	0.000	0.000	1.170
NNW	0.001	0.285	1.219	0.534	0.133	0.033	0.000	0.000	0.000	2.205
SUBTOTAL	0.013	4.259	18.677	6.973	2.229	0.821	0.011	0.000	0.000	32.983

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 87160  
 TOTAL HOURS OF STABILITY CLASS E 28777  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS E 28683  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 86963  
 TOTAL HOURS CALM 11

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: 2020/07/17

MEAN WIND SPEED = 3.02

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, 2009 - DEC 31, 2018

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.60-1.40	1.41-3.40	3.41-5.40	5.41-7.40	7.41-12.40	12.41-18.40	18.41-24.40	>=24.41	
N	0.002	0.267	1.709	0.149	0.002	0.001	0.000	0.000	0.000	2.131
NNE	0.004	0.528	3.319	0.155	0.007	0.000	0.000	0.000	0.000	4.013
NE	0.001	0.419	0.726	0.036	0.002	0.000	0.000	0.000	0.000	1.183
ENE	0.000	0.202	0.098	0.002	0.001	0.000	0.000	0.000	0.000	0.304
E	0.000	0.178	0.075	0.002	0.001	0.000	0.000	0.000	0.000	0.257
ESE	0.000	0.136	0.047	0.001	0.000	0.000	0.000	0.000	0.000	0.184
SE	0.000	0.191	0.070	0.001	0.000	0.000	0.000	0.000	0.000	0.262
SSE	0.000	0.207	0.146	0.006	0.001	0.000	0.000	0.000	0.000	0.360
S	0.001	0.250	0.394	0.028	0.006	0.003	0.000	0.000	0.000	0.681
SSW	0.001	0.170	0.960	0.129	0.011	0.001	0.000	0.000	0.000	1.273
SW	0.001	0.114	0.824	0.137	0.015	0.002	0.000	0.000	0.000	1.093
WSW	0.000	0.036	0.218	0.029	0.000	0.000	0.000	0.000	0.000	0.283
W	0.000	0.037	0.112	0.018	0.003	0.000	0.000	0.000	0.000	0.170
WNW	0.000	0.028	0.077	0.017	0.001	0.000	0.000	0.000	0.000	0.123
NW	0.000	0.040	0.145	0.038	0.001	0.000	0.000	0.000	0.000	0.224
NNW	0.001	0.074	0.377	0.089	0.008	0.000	0.000	0.000	0.000	0.548
SUBTOTAL	0.014	2.875	9.297	0.837	0.061	0.008	0.000	0.000	0.000	13.092

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 87160  
 TOTAL HOURS OF STABILITY CLASS F 11420  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS F 11385  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 86963  
 TOTAL HOURS CALM 12

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: 2020/07/17

MEAN WIND SPEED = 2.09

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, 2009 - DEC 31, 2018

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.60-1.40	1.41-3.40	3.41-5.40	5.41-7.40	7.41-12.40	12.41-18.40	18.41-24.40	>=24.41	
N	0.000	0.015	0.070	0.001	0.000	0.000	0.000	0.000	0.000	0.086
NNE	0.001	0.080	0.496	0.021	0.001	0.000	0.000	0.000	0.000	0.599
NE	0.001	0.159	0.397	0.014	0.000	0.000	0.000	0.000	0.000	0.570
ENE	0.000	0.123	0.057	0.000	0.000	0.000	0.000	0.000	0.000	0.181
E	0.000	0.103	0.023	0.000	0.000	0.000	0.000	0.000	0.000	0.127
ESE	0.000	0.100	0.028	0.000	0.000	0.000	0.000	0.000	0.000	0.128
SE	0.000	0.106	0.029	0.000	0.000	0.000	0.000	0.000	0.000	0.135
SSE	0.000	0.170	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.216
S	0.000	0.163	0.183	0.002	0.000	0.001	0.000	0.000	0.000	0.350
SSW	0.001	0.108	0.440	0.029	0.000	0.000	0.000	0.000	0.000	0.578
SW	0.000	0.031	0.299	0.032	0.000	0.000	0.000	0.000	0.000	0.363
WSW	0.000	0.017	0.025	0.003	0.000	0.000	0.000	0.000	0.000	0.046
W	0.000	0.009	0.008	0.006	0.000	0.000	0.000	0.000	0.000	0.023
WNW	0.000	0.006	0.005	0.001	0.000	0.001	0.000	0.000	0.000	0.013
NW	0.000	0.009	0.003	0.005	0.001	0.000	0.000	0.000	0.000	0.018
NNW	0.000	0.008	0.011	0.011	0.000	0.000	0.000	0.000	0.000	0.031
SUBTOTAL	0.005	1.209	2.120	0.125	0.002	0.002	0.000	0.000	0.000	3.464

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 87160  
 TOTAL HOURS OF STABILITY CLASS G 3016  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS G 3012  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 86963  
 TOTAL HOURS CALM 4

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: 2020/07/17

MEAN WIND SPEED = 1.86

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS