

PSEG NUCLEAR LLC

2009 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT

FOR

THE SALEM AND HOPE CREEK

GENERATING STATIONS

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SALEM AND HOPE CREEK GENERATING STATIONS

RADIOACTIVE EFFLUENT RELEASE REPORT: JANUARY - DECEMBER 2009

INTRODUCTION

This report, SGS-RERR-58/HCGS-RERR-32, summarizes information pertaining to the releases of radioactive materials in liquid, gaseous and solid form from the Salem Generating Stations (SGS) and the Hope Creek Generating Station (HCGS) for the period January 1, 2009, to December 31, 2009.

Salem Unit 1 is a Westinghouse Pressurized Water Reactor that has a licensed core thermal power of 3459 MWt and an approximate net electrical output of 1180 MWe. Salem Unit 1 achieved initial criticality on December 11, 1976, and went into commercial operation on June 30, 1977.

Salem Unit 2 is a Westinghouse Pressurized Water Reactor that has a licensed core thermal power of 3459 MWt and an approximate net electrical output of 1177 MWe. Salem Unit 2 achieved initial criticality on August 2, 1980, and went into commercial operation on October 13, 1981.

The Hope Creek Generating Station (HCGS) is a General Electric (GE) Boiling Water Reactor has an up rated core thermal power of 3840 MWt and an approximate net electrical output of 1213 MWe. The HCGS achieved initial criticality on June 28, 1986 and went into commercial operation on December 20, 1986.

The electrical energy (net) output for 2009 was as follows:

10,245,952 megawatt-hours of electrical energy (net) were generated by Salem Unit 1, 9,467,241 megawatt-hours of electrical energy (net) were generated by Salem Unit 2, and 9,735,713 megawatt-hours of electrical energy (net) were generated by Hope Creek Generating Station.

This report is prepared in the format of Regulatory Guide 1.21, Appendix B, as required by Control 6.9.1.8 of the Salem Units 1 and 2 Offsite Dose Calculation Manual (ODCM) and Control 6.9.1.7 of the Hope Creek ODCM. Our responses to parts A-F of the "Supplemental Information" section of Regulatory Guide 1.21, Appendix B, are included in the following pages.

As required by Regulatory Guide 1.21, the ODCM limits are described in detail within this report. In addition, summaries describing methods for measuring and determining associated approximations of total radioactivity are included in this report.

PART A. SUPPLEMENTAL INFORMATION

1.0 REGULATORY LIMITS

1.1 Fission and Activation Gas Release Limits

The dose rate due to radioactive materials released *in gaseous effluents* from the site (i.e. Salem Units 1 and 2, and Hope Creek) to areas at and beyond the site boundary, shall be limited to the following:

For noble gases: Less than or equal to 500 mrem/yr to the total body and less than or equal to 3000 mrem/yr to the skin.

In addition, the air dose due to noble gases released *in gaseous effluents* from each reactor unit (i.e. Salem Units 1 and 2, or Hope Creek) to areas at and beyond the site boundary, shall be limited to the following:

During any calendar quarter: Less than or equal to 5 mrad for gamma radiation and less than or equal to 10 mrad for beta radiation and,

During any calendar year: Less than or equal to 10 mrad for gamma radiation and less than or equal to 20 mrad for beta radiation.

1.2 Iodine, Particulates, and Tritium

The dose rate due to radioactive materials released *in gaseous effluents* from the site to areas at and beyond the site boundary shall be limited to the following:

For iodine-131, iodine-133, tritium and all radionuclides in particulate form with half-lives greater than 8 days: Less than or equal to 1500 mrem/yr to any organ.

In addition, the dose to a member of the public from iodine-131, iodine-133, tritium, and all radionuclides in particulate form with half-lives greater than 8 days in gaseous effluents released, from each reactor unit, to areas at and beyond the site boundary, shall be limited to the following:

During any calendar quarter: Less than or equal to 7.5 mrem to any organ and,

During any calendar year: Less than or equal to 15 mrem to any organ.

1.3 Liquid Effluents Release Limits

The concentration of radioactive material released *in liquid effluents* to unrestricted areas shall be limited to the concentrations specified in 10CFR20, Appendix B, Table II, Column 2 for radionuclides other than dissolved or entrained noble gases. For dissolved or entrained noble gases, the concentration shall be limited to 2E-04 microcurie per milliliter.

In addition, the dose or dose commitment to a member of the public from radioactive materials *in liquid effluents* released to unrestricted areas shall be limited to:

During any calendar quarter: Less than or equal to 1.5 mrem to the total body, and less than or equal to 5 mrem to any organ, and

During any calendar year: Less than or equal to 3 mrem to the total body, and less than or equal to 10 mrem to any organ.

1.4 Total Dose Limit

The annual (calendar year) dose or dose commitment to any member of the public, due to releases of radioactivity and radiation, from uranium fuel cycle sources shall be limited to less than or equal to 25 mrem to the total body or any organ (except the thyroid, which shall be limited to less than or equal to 75 mrem).

2.0 MAXIMUM PERMISSIBLE CONCENTRATIONS (MPC)

Regulatory Guide 1.21 requires that the licensee provide the MPCs used in determining allowable release rates or concentrations for radioactive releases.

- a. MPC values are not used for gaseous releases. Determination of maximum release rates for noble gases, Iodine-131, Iodine-133, tritium, and for all radionuclides in particulate form (with half-lives >8 days), are based on dose rate calculations as specified in the ODCM.
- b. According to current Technical Specifications, MPC values as stated in 10CFR20, Appendix B, Table II, Column 2 are to be used for liquid effluents. Since the MPC values were removed from 10CFR20 effective 1/1/94, the MPC values are now contained in the ODCM. These MPC values are added as Appendix B of this report.
- c. The MPC value used for dissolved or entrained noble gases *in liquid effluents* is 2E-04 microcurie per milliliter.

3.0 AVERAGE ENERGY

Regulatory Guide 1.21 requires that the licensee provide the average energy of the radionuclide mixture in releases of fission and activation gases, if applicable. Release limits for the Salem and Hope Creek Generating Stations are not based upon average energy. Therefore this section is not applicable to the Salem and Hope Creek Generating Stations.

4.0 MEASUREMENTS AND APPROXIMATIONS OF TOTAL RADIOACTIVITY

4.1 Liquid Effluents

Liquid effluents are monitored in accordance with Table 4.11-1 of the Salem ODCM and Table 4.11.1.1.1-1 of the Hope Creek ODCM.

During the period of record, all batch liquid wastes were routed to the sampling tanks for monitoring prior to release. The ODCM requires these tanks to be uniformly mixed for sampling and analysis before being released.

Batch releases are defined as:

- For Hope Creek, releases from the Equipment Sample Tanks, Floor Drain Sample tanks, Detergent Drain Tanks, and the Condensate Storage Tank.

- For Salem, FRAC Tank releases from the Groundwater Remediation Project, releases from the Service Water Drums, which are collected and disposed via the Chemical Waste Basin, and the Chemical Volume Control System (CVCS) Monitor Tanks. During the period of record, all batch liquid wastes from the Chemical Drain Tank and Laundry and Hot Shower Tanks were routed to Waste Monitor Holdup Tanks for monitoring prior to release. For process flexibility of liquid effluents, the Salem Unit 1 and 2 Liquid Radwaste System is cross-connected.

Continuous releases are defined as:

- For Hope Creek, a continuous liquid effluent release path exists through the Circulating Water Dewatering Sump Discharge.
- For Salem, continuous liquid release pathways include condensate releases for blow-down of the Steam Generators, and through the Chemical Waste Basin.

Representative samples were obtained in accordance with Table 4.11-1 of the Salem ODCM for the Salem Generating Stations and Table 4.11.1.1.1-1 of the Hope Creek ODCM for Hope Creek Generating Station. The total liquid activity discharged is determined by multiplying specific activities from the analyses by the volume of effluent discharged to the environment.

The detection requirements of Table 4.11-1 (SGS) and Table 4.11.1.1.1-1 (HCGS) of the ODCM are achieved. Radionuclides that are measured at concentrations below the ODCM-specified lower limit of detection (LLD) are considered present. A radionuclide for which no activity was detected while meeting the required LLD is considered absent.

4.2 Gaseous Effluents

Salem Units 1 and 2:

Gaseous effluent streams at Salem Generating Stations are monitored and sampled in accordance with Table 4.11-2 of the ODCM. The plant vent is the final release point for planned gaseous effluent releases and is continuously monitored by installed radiation monitors. The vent is also continuously sampled for iodine and particulates with a charcoal cartridge and filter paper. The filter and charcoal are normally changed weekly, and analyzed on a multi-channel analyzer.

Sampling is also performed on all gas decay tanks and the containment atmosphere prior to release to the environment. The plant vent is normally sampled weekly for noble gases, particulates, radioiodine, and tritium.

The detection requirements of Table 4.11-2 of the ODCM are achieved or exceeded. A radionuclide detected at a concentration below the ODCM LLD is considered present. A radionuclide for which no activity was detected while meeting the required LLD is considered absent.

Continuous Mode gaseous releases are quantified by routine sampling and isotopic analyses of the plant vent, as required by the ODCM. Specific activities for detected

isotopes are multiplied by the total vent flow volume for the entire sampling period in order to determine the normal continuous release of radioactivity through the plant vent.

Batch Mode noble gas releases are quantified by sampling each decay tank or containment atmosphere prior to release. The total activity in a batch release was determined by multiplying the specific activities for detected isotopes by the total volume of the discharged gas in that batch release.

Elevated plant vent radiation monitoring system readings while the channel is in an alarm state are treated as batch mode releases. If specific activity data from grab samples are not available, then the release is quantified by the use of the plant vent radiation monitors. The monitor response is converted to "specific activity" using historical efficiency factors. The total activity discharged is determined by multiplying the "specific activity" by the volume of effluent discharged while the channel was in an alarm state.

Hope Creek:

Gaseous effluent streams at Hope Creek Generating Station are monitored and sampled in accordance with Table 4.11.2.1.2-1 of the ODCM. The North Plant Vent (NPV) and South Plant Vent (SPV) are the final release points for most planned gaseous effluent releases. The NPV and SPV are continuously monitored for iodine, particulates and noble gases. These monitors have moving particulate and fixed charcoal filters. The particulate filters and charcoal cartridges are normally replaced and analyzed weekly. These analyses are performed on a multi-channel analyzer. The NPV and SPV are also normally sampled weekly for noble gases and tritium.

A small quantity of gaseous effluent is released via the Filtration, Recirculation, and Ventilation System (FRVS) vent during FRVS testing periods. The FRVS is continuously monitored for noble gases when in service, and has fixed particulate and charcoal filters. When the system is in vent mode for greater than two hours, samples are collected at the end of the release period. During periods of extended runs, samples are normally taken weekly.

The detection requirements of Tables 4.11.2.1.2-1 of the ODCM are achieved or exceeded. A radionuclide detected at a concentration below the ODCM detection limit (LLD) is considered present. A radionuclide for which no activity was detected while meeting the required LLD is considered absent.

Batch Mode noble gas releases (i.e. primary containment purge) are quantified by pre-release sampling and isotopic analysis. The total radioactivity released was estimated by multiplying the specific activities for detected isotopes by the containment volume.

4.3 Estimated Total Error

The estimated total error of reported liquid and solid releases is within 25%.

The estimated total error of the reported continuous gaseous releases is within 50% for the Salem Generating Stations and 25% for the Hope Creek Generating Station when concentrations exceed detectable levels. These errors are primarily due to variability of waste stream flow rates and changes in isotopic distributions of waste streams between

sampling periods. The estimated total error of the reported batch gaseous releases is within 10%.

Error estimates for releases where sample activity is below the detectable concentration levels are not included because error estimates at the LLD are not defined.

5.0 BATCH RELEASES

Summaries of batch releases of gaseous and liquid effluents are provided in Tables 4A and 4B.

6.0 UNPLANNED RELEASES

In May 2009, tritium (H-3) contamination (no gamma) was identified in routine monthly samples from the Safety Auxiliary Cooling System (SACS) and Reactor Auxiliary Cooling System (RACS) (Notification 20412874) at Hope Creek. As a result of an expanded sampling effort by Chemistry, radioactive contamination was also identified in the Turbine Building chill water, service water drain tank and in the emergency diesel generator jacket water systems. Response actions to the initial identification of the tritium contamination consisted of implementation of procedure NC.CH-AP.ZZ-8010, Implementation of NRC Inspection and Enforcement Bulletin 80-10, formation of Failure Mode Causal Table (FMCT) team to investigate the cause of the tritium contamination, continued sampling of the systems, a dose assessment and evaluation of the SWDT as a radiological effluent release point by Chemistry, an effort to identify systems similar to the SWDT that should be considered for sampling, and decontamination (flushing) of the contaminated systems. The source of the contamination for all these systems was determined to be a "single event from a relatively clean source of water such as condensate transfer" that was spread through the Demineralized Water System.

The non-radioactive systems involved in these events did not result in an unmonitored discharge to the environment or new release pathways being incorporated into the ODCM. All systems identified above have undergone the decontamination process. The station has incorporated a routine sampling and analysis program for the SWDT which is governed by the station procedure HC.CH-TI.ZZ-0012 rev. 59. The station's Chemistry department performed a dose calculation for the SWDT water that was discharged, the result of that calculation was a total body dose of 4.9E-10 mrem (1.6E-8% of the annual total body dose limit), no ODCM controls were exceeded by this event.

7.0 ELEVATED RADIATION MONITOR RESPONSES

During this reporting period, there was no abnormal liquid or gaseous release from the Salem Units 1 and 2 or from the Hope Creek Generating Station. In addition, none of the effluent radiation monitors elicited an elevated response during the discharge of liquid and gaseous effluent from either of the Salem Units 1 and 2 or from the Hope Creek Generating Station.

8.0 MODIFICATION TO PREVIOUS RADIOACTIVE EFFLUENT RELEASE REPORTS

No modifications were made to previous Radioactive Effluent Release Reports.

PART B. GASEOUS EFFLUENTS

See Summary Tables 1A through 1C.

PART C. LIQUID EFFLUENTS

See Summary Tables 2A through 2B.

PART D. SOLID WASTE

See Summary in Tables 3A and 3B.

PART E. RADIOLOGICAL IMPACT ON MAN**1.0 LIQUID AND GASEOUS EFFLUENT DOSES:**

The calculated individual doses in this section are based on the controlling dose pathways and age groups as described in the Salem and Hope Creek ODCMs. The estimated doses from liquid and gaseous effluent represent the maximum potential radiation dose for a member of the general public. The total body and organ doses from liquid and gaseous effluent were calculated using methods described in Part II of the Salem and Hope Creek ODCMs, which are consistent with the methods described in Regulatory Guide 1.109. For gaseous effluent releases, quarterly doses were calculated using the average quarterly meteorological dispersion factors determined from site meteorological data recorded during 2009.

The doses presented in the tables below represent calculations for the 12-month reporting interval. The radiological impacts from liquid and gaseous effluent discharges from the Salem Unit 1 and 2 and the Hope Creek Generating Station are presented in Tables 5A and 5B, respectively, and demonstrate compliance with applicable regulatory limits. Dose limit values presented in **bold** font are regulatory limits. The quarterly doses must not exceed the quarterly limit in any quarter and the summation of two or more quarterly doses must not exceed the annual dose limit.

Table 5A: Doses from Liquid Effluent

Salem Unit 1					
Liquid Effluent Parameter	1Q2009	2Q2009	3Q2009	4Q2009	Annual
Total Body Dose Limit (mrem)	1.50E+00	1.50E+00	1.50E+00	1.50E+00	3.00E+00
Maximum Total Body Dose (mrem)	2.19E-06	6.72E-06	9.82E-06	1.35E-05	3.22E-05
% Dose Limit	1.46E-04	4.48E-04	6.55E-04	9.01E-04	1.07E-03
Organ Dose Limit (mrem)	5.00E+00	5.00E+00	5.00E+00	5.00E+00	1.00E+01
Maximum Organ Dose (mrem)	5.45E-06	8.72E-06	3.32E-05	3.86E-05	8.60E-05
% Dose Limit	1.09E-04	1.74E-04	6.64E-04	7.72E-04	8.60E-04
Salem Unit 2					
Liquid Effluent Parameter	1Q2009	2Q2009	3Q2009	4Q2009	Annual
Total Body Dose Limit (mrem)	1.50E+00	1.50E+00	1.50E+00	1.50E+00	3.00E+00
Total Body Dose (mrem)	1.49E-06	4.34E-06	3.70E-06	1.77E-05	2.72E-05
% Dose Limit	9.94E-05	2.90E-04	2.47E-04	1.18E-03	9.07E-04
Organ Dose Limit (mrem)	5.00E+00	5.00E+00	5.00E+00	5.00E+00	1.00E+01
Maximum Organ Dose (mrem)	1.85E-06	8.80E-06	6.92E-06	7.13E-05	8.89E-05
% Dose Limit	3.71E-05	1.76E-04	1.38E-05	1.43E-03	8.89E-04
Hope Creek Generating Station					
Liquid Effluent Parameter	1Q2009	2Q2009	3Q2009	4Q2009	Annual
Total Body Dose Limit (mrem)	1.50E+00	1.50E+00	1.50E+00	1.50E+00	3.00E+00
Maximum Total Body Dose (mrem)	4.26E-05	3.70E-05	1.72E-06	1.86E-06	8.32E-05
% Dose Limit	2.84E-03	2.47E-03	1.15E-04	1.24E-04	2.77E-03
Organ Dose Limit (mrem)	5.00E+00	5.00E+00	5.00E+00	5.00E+00	1.00E+01
Maximum Organ Dose (mrem)	1.77E-04	1.16E-04	5.71E-06	6.12E-06	3.05E-04
% Dose Limit	3.55E-03	2.32E-03	1.14E-04	1.22E-04	3.05E-03

Salem-Hope Creek Site Total					
Liquid Effluent Parameter	1Q2009	2Q2009	3Q2009	4Q2009	Annual
Total Body Dose Limit (mrem)	1.50E+00	1.50E+00	1.50E+00	1.50E+00	3.00E+00
Maximum Total Body Dose (mrem)	4.63E-05	4.81E-05	1.52E-05	3.31E-05	1.43E-04
% Dose Limit	3.09E-03	3.20E-03	1.02E-03	2.20E-03	4.75E-03
Organ Dose Limit (mrem)	5.00E+00	5.00E+00	5.00E+00	5.00E+00	1.00E+01
Maximum Organ Dose (mrem)	1.84E-04	1.34E-04	4.58E-05	1.16E-04	4.80E-04
% Dose Limit	3.69E-03	2.67E-03	9.17E-04	2.32E-03	4.80E-03

The population dose impact from liquid effluents is based on a summation of the calculated maximum total body doses resulting from the discharge of liquid effluent from each unit, which was conservatively applied to the population within 50 miles of the Salem-Hope Creek site to obtain a maximum population dose from all liquid effluent discharged from the site. The maximum total body dose resulting from liquid effluent discharged from Salem Units 1 and 2 and Hope Creek Generating Station was 1.43E-04 mrem, which yields a maximum population dose equal to 6.44E-01 person-rem.

Table 5B: Doses from Gaseous Effluent

Salem Unit 1					
Gaseous Effluent Parameter	1Q2009	2Q2009	3Q2009	4Q2009	Annual
Gamma Air Dose (mrad) from Noble Gases - Limit	5.00E+00	5.00E+00	5.00E+00	5.00E+00	1.00E+01
Maximum Gamma Air Dose (mrad)	1.07E-05	1.06E-04	4.32E-06	7.10E-06	1.28E-04
% Dose Limit	2.15E-04	2.11E-03	8.64E-05	1.42E-04	1.28E-03
Beta Air Dose (mrad) for Noble Gases - Limit	1.00E+01	1.00E+01	1.00E+01	1.00E+01	2.00E+01
Maximum Beta Air Dose (mrad)	4.13E-06	3.01E-04	3.03E-06	5.86E-06	3.14E-04
% Dose Limit	4.13E-05	3.01E-03	3.03E-05	5.86E-05	1.57E-03
Organ Dose (mrem) from I-131, I-133, Tritium, and particulate nuclides (>8 days half-life) - Limit	7.50E+00	7.50E+00	7.50E+00	7.50E+00	1.50E+01
Organ Dose (mrem) from I-131, I-133, Tritium, and particulate nuclides (>8 days half-life) - Site Boundary (0.8 mile N)	9.49E-04	6.45E-04	5.88E-04	5.22E-04	2.70E-03
% Dose Limit	1.26E-02	8.60E-03	7.84E-03	6.96E-03	1.80E-02
Organ Dose (mrem) from I-131, I-133, Tritium, and particulate nuclides (>8 days half-life) - Resident/Dairy (4.9 mile W)	1.82E-05	3.01E-05	2.51E-05	3.03E-05	1.04E-04
% Dose Limit	2.43E-04	4.02E-04	3.35E-04	4.04E-04	6.92E-04

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Salem Unit 2					
Gaseous Effluent Parameter	1Q2009	2Q2009	3Q2009	4Q2009	Annual
Gamma Air Dose (mrad) from Noble Gases - Limit	5.00E+00	5.00E+00	5.00E+00	5.00E+00	1.00E+01
Maximum Gamma Air Dose (mrad)	1.13E-05	5.31E-06	5.95E-06	2.21E-06	2.74E-05
% Dose Limit	2.27E-04	1.06E-04	1.19E-04	4.43E-05	2.47E-04
Beta Air Dose (mrad) for Noble Gases - Limit	1.00E+01	1.00E+01	1.00E+01	1.00E+01	2.00E+01
Maximum Beta Air Dose (mrad)	4.87E-06	1.97E-06	5.82E-06	1.92E-06	1.46E-05
% Dose Limit	4.87E-05	1.97E-05	5.82E-05	1.92E-05	7.28E-05
Organ Dose (mrem) from I-131, I-133, Tritium, and particulate nuclides (>8 days half-life) – Limit	7.50E+00	7.50E+00	7.50E+00	7.50E+00	1.50E+01
Organ Dose (mrem) from I-131, I-133, Tritium, and particulate nuclides (>8 days half-life) – Site Boundary (0.8 mile N)	1.38E-03	6.45E-05	6.57E-05	1.34E-04	1.65E-03
% Dose Limit	1.84E-02	8.61E-04	8.76E-04	1.79E-03	1.10E-02
Organ Dose (mrem) from I-131, I-133, Tritium, and particulate nuclides (>8 days half-life) – Resident/Dairy (4.9 mile W)	2.66E-05	3.70E-06	2.81E-06	7.77E-06	4.08E-05
% Dose Limit	3.54E-04	4.93E-05	3.75E-05	1.04E-04	2.72E-04
Hope Creek Generating Station					
Gaseous Effluent Parameter	1Q2009	2Q2009	3Q2009	4Q2009	Annual
Gamma Air Dose (mrad) from Noble Gases - Limit	5.00E+00	5.00E+00	5.00E+00	5.00E+00	1.00E+01
Maximum Gamma Air Dose (mrad)	1.91E-04	4.92E-04	3.73E-06	4.29E-05	7.29E-04
% Dose Limit	3.82E-03	9.83E-03	7.47E-05	8.58E-04	7.29E-03
Beta Air Dose (mrad) for Noble Gases - Limit	1.00E+01	1.00E+01	1.00E+01	1.00E+01	2.00E+01
Maximum Beta Air Dose (mrad)	2.45E-04	3.94E-04	1.06E-05	8.54E-05	7.34E-04
% Dose Limit	2.45E-03	3.94E-03	1.06E-04	8.54E-04	3.67E-03
Organ Dose (mrem) from I-131, I-133, Tritium, and particulate nuclides (>8 days half-life) – Limit	7.50E+00	7.50E+00	7.50E+00	7.50E+00	1.50E+01
Organ Dose (mrem) from I-131, I-133, Tritium, and particulate nuclides (>8 days half-life) – Site Boundary (0.5 mile N)	1.00E-02	4.63E-03	2.05E-03	3.06E-03	1.97E-02
% Dose Limit	1.33E-01	6.18E-02	2.73E-02	4.08E-02	1.32E-01
Organ Dose (mrem) from I-131, I-133, Tritium, and particulate nuclides (>8 days half-life) – Resident/Dairy (4.9 mile W)	3.15E-04	1.41E-04	9.33E-05	1.02E-04	6.51E-04
% Dose Limit	4.20E-03	1.88E-03	1.24E-03	1.35E-03	4.34E-03

Salem-Hope Creek Site Total					
Gaseous Effluent Parameter	1Q2009	2Q2009	3Q2009	4Q2009	Annual
Gamma Air Dose (mrad) from Noble Gases - Limit	5.00E+00	5.00E+00	5.00E+00	5.00E+00	1.00E+01
Maximum Gamma Air Dose (mrad)	2.13E-04	6.03E-04	1.40E-05	5.22E-05	8.83E-04
% Dose Limit	4.26E-03	1.21E-02	2.80E-04	1.04E-03	8.83E-03
Beta Air Dose (mrad) for Noble Gases - Limit	1.00E+01	1.00E+01	1.00E+01	1.00E+01	2.00E+01
Maximum Beta Air Dose (mrad)	2.54E-04	6.96E-04	1.95E-05	9.32E-05	1.06E-03
% Dose Limit	2.54E-03	6.96E-03	1.95E-04	9.31E-04	5.31E-03
Organ Dose (mrem) from I-131, I-133, Tritium, and particulate nuclides (>8 days half-life) – Limit	7.50E+00	7.50E+00	7.50E+00	7.50E+00	1.50E+01
Organ Dose (mrem) from I-131, I-133, Tritium, and particulate nuclides (>8 days half-life) – Site Boundary (N Sector)	1.23E-02	5.34E-03	2.70E-03	3.72E-03	2.41E-02
% Dose Limit	1.64E-01	7.12E-02	3.60E-02	4.96E-02	1.61E-01
Organ Dose (mrem) from I-131, I-133, Tritium, and particulate nuclides (>8 days half-life) – Resident/Dairy (4.9 mile W)	3.60E-04	1.75E-04	1.21E-04	1.40E-04	7.95E-04
% Dose Limit	4.80E-03	2.33E-03	1.62E-03	1.86E-03	5.30E-03

Total body and skin doses resulting from noble gases present in gaseous effluent discharged from the Salem - Hope Creek site were determined for the controlling site boundary location in the north sector. These doses (presented below) were calculated using methods described in the Salem and Hope Creek ODCMs, which are consistent with the methods described in Regulatory Guide 1.109.

The population dose from gaseous effluent is based on (i) a summation of effluent discharges from the three units, (ii) the assumptions and site-specific data (i.e., food production, milk production, feed for milk animals and seafood production) as described in the Salem and Hope Creek ODCMs, (iii) age group fractions from Appendix D to Regulatory Guide 1.109, and (iv) the annual meteorological dispersion factors and wind frequencies determined from site meteorological data recorded during 2009. A total body dose for each sector was determined using methods described in the Salem and Hope Creek ODCMs, which are consistent with the methods described in Regulatory Guide 1.109. The sector total body doses were used to obtain an average dose to members of the population and a population dose, both of which are presented below.

<u>Dose Parameter</u>	<u>Annual Dose</u>
Total Body Dose from Noble Gases – Site Boundary	8.19E-04 mrem
Skin Dose from Noble Gases – Site Boundary	1.99E-03 mrem
Average Dose from Gaseous Effluent to Population	6.69E-06 mrem
Population Dose from Gaseous Effluent	3.01E-02 person-rem

1.1 Total Dose Resulting from Radioactive Effluent Releases and Radiation from Uranium Fuel Cycle Sources

An annual dose to a member of the public due to effluent releases and all other uranium fuel cycle sources presented on site was calculated as required by section 3.11.4 of the Salem and Hope Creek ODCMs. This calculation was performed to demonstrate compliance with radiation limits established in 40CFR190 and 10CFR72.104.

Doses from radioactive effluent releases were calculated as described previously. The direct radiation dose from sources present onsite, such as operation of the Independent Spent Fuel Storage Installation (ISFSI), was estimated using environmental thermoluminescent dosimeter (TLD) measurements. The ISFSI is a closed system and the only exposure is direct radiation, which would be measured by the site TLDs. The spent fuel is stored in a sealed unit and no radioactive materials were released. Therefore, there is no dose from effluents from the facility.

Three TLD locations close to unrestricted areas were used to determine the direct radiation dose. Each TLD location represents limited accessibility for a member of the public. However, use of the data collected from these three TLD locations provides a conservative approach for demonstrating compliance with 10CFR72.104 requirements for a dose assessment to any "real person." The average annual dose determined from the 2009 TLD measurements was compared with the annual dose based on 1972-1976 pre-operational TLD data (i.e., 55 mrem/year).

TLD data for the 2009 reporting period is given below:

<u>TLD Location</u>	<u>Basis for Selection</u>	<u>Average Reading (mrem/month)</u>	<u>Annual Dose (mrem)</u>
16S1	Located on road near fuel oil storage tank and ISFSI	4.71	56.51
5S1	Close to Security Check Point in E Sector	3.95	47.35
11S1	At Shore Line in SW Sector	4.02	48.29
		Average:	50.72

The 2009 TLD data are interpreted as representing a dose from natural background radioactivity because the average annual dose determined from the data is less than the annual dose based on 1972-1976 pre-operational TLD data.

40CFR190 and 10CFR72.104 restrict the total dose to members of the public due to radioactivity and radiation from uranium fuel cycle sources (including the ISFSI facility). Because the TLD data indicated that there was no contribution via direct radiation from the site in 2009, compliance with the regulatory requirements for total dose was demonstrated by summing the total body dose contributions and the thyroid dose contributions from liquid effluent and gaseous effluent from the Salem Units 1 and 2 and the Hope Creek Generating Station, and evaluating those sums against the respective regulatory dose limits. The total body and thyroid doses to members of the public due to radioactivity and radiation from uranium fuel cycle sources are presented in Table 6.

Table 6: Total Dose to a Member of the Public

Parameter	Annual Dose
40CFR190/10CFR72.104 Dose Limit:	
Total Body or Any Organ (mrem)	2.50E+01
Thyroid (mrem)	7.50E+01
Total Body(mrem)	7.26E-03
% Total Body	2.91E-02
Organ Dose (mrem)	2.54E-02
% Organ Dose Limit	1.02E-01
Thyroid (mrem)	2.41E-02
% Thyroid Limit	3.22E-02

1.2 Dose to Members of the Public Due to Activities Inside the Site Boundary

Dose to members of the public is limited to 100 mrem total effective dose equivalent (TEDE) in a year in accordance with 10CFR20.1301. The dose to a member of the public performing activities inside the site boundary was calculated in accordance with the requirements of ODCM 6.9.1.8 (SGS) and 6.9.1.7 (HCGS). For the purpose of these dose calculations, a member of the public was assumed to be a full-time employee whose assigned duties do not involve exposure to radiation or to radioactive material (i.e., an unmonitored employee working 2000 hours in a year).

For the 12-month reporting period, January 1, 2009 to December 31, 2009 the calculated dose and percent of limit are:

Parameter	
Total Body Dose to Member of the Public Inside Site Boundary	1.96E-02 mrem
% Limit	1.96E-02

1.3 Assessment

Liquids:

Liquid effluents released from the Salem and Hope Creek Generating Stations resulted in doses to a hypothetical maximally exposed individual that were within all applicable regulatory limits (Salem Unit 1: $1.07E-03$ % of the Total Body Limit, Salem Unit 2: $9.07E-04$ % of the Total Body Limit, and Hope Creek: $2.77E-03$ % of the Total Body Limit).

When compared to releases in the previous reporting period, the Salem and Hope Creek fission & activation product activity in the liquid effluents increased slightly. Nonetheless, liquid effluent releases from the Salem Units 1 and 2 and the Hope Creek Generating Station continue to remain well within Federal limits and compare favorably to other nuclear utilities.

Gaseous:

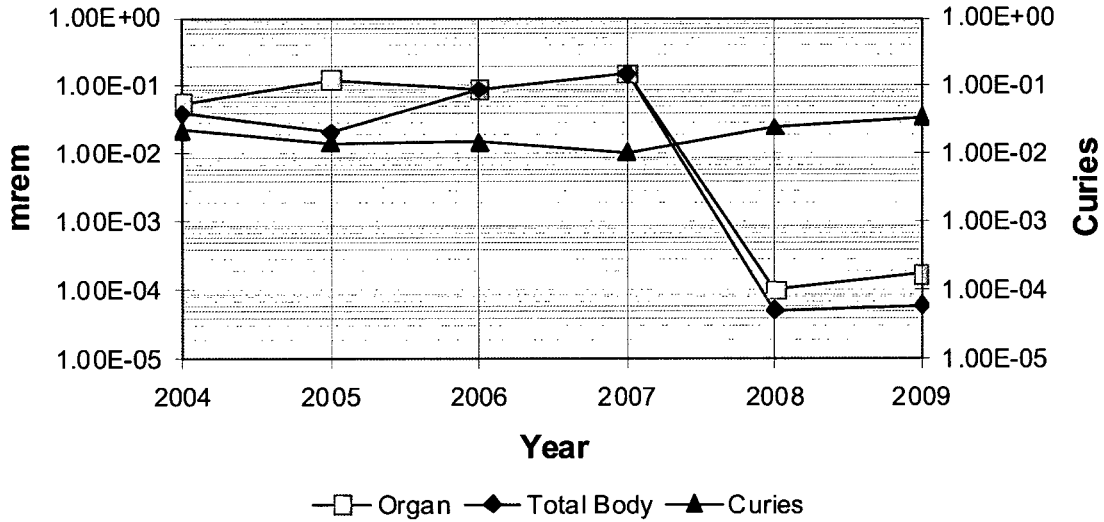
Gaseous effluents released from the Salem and Hope Creek Generating Stations resulted in doses to a hypothetical maximally exposed individual that were within all applicable regulatory limits. The doses for the 12-month period were small fractions of all applicable limits (Salem Unit 1: $1.80E-02$ % of the annual organ (including total body) dose limit, Salem Unit 2: $1.10E-02$ % of the annual organ (including total body) dose limit, and Hope Creek: $1.32E-01$ % of the annual organ (including total body) dose limit).

When compared to releases in the previous reporting period, the Salem and Hope Creek Generating Stations noble gas effluent activity increased. Gaseous effluent releases for the Site continue to remain well within Federal limits and are comparable to other nuclear utilities. Fuel integrity and gaseous effluent processing equipment continue to be maintained in order to ensure that all releases of gaseous radioactivity are As-Low-As-Reasonably-Achievable (ALARA).

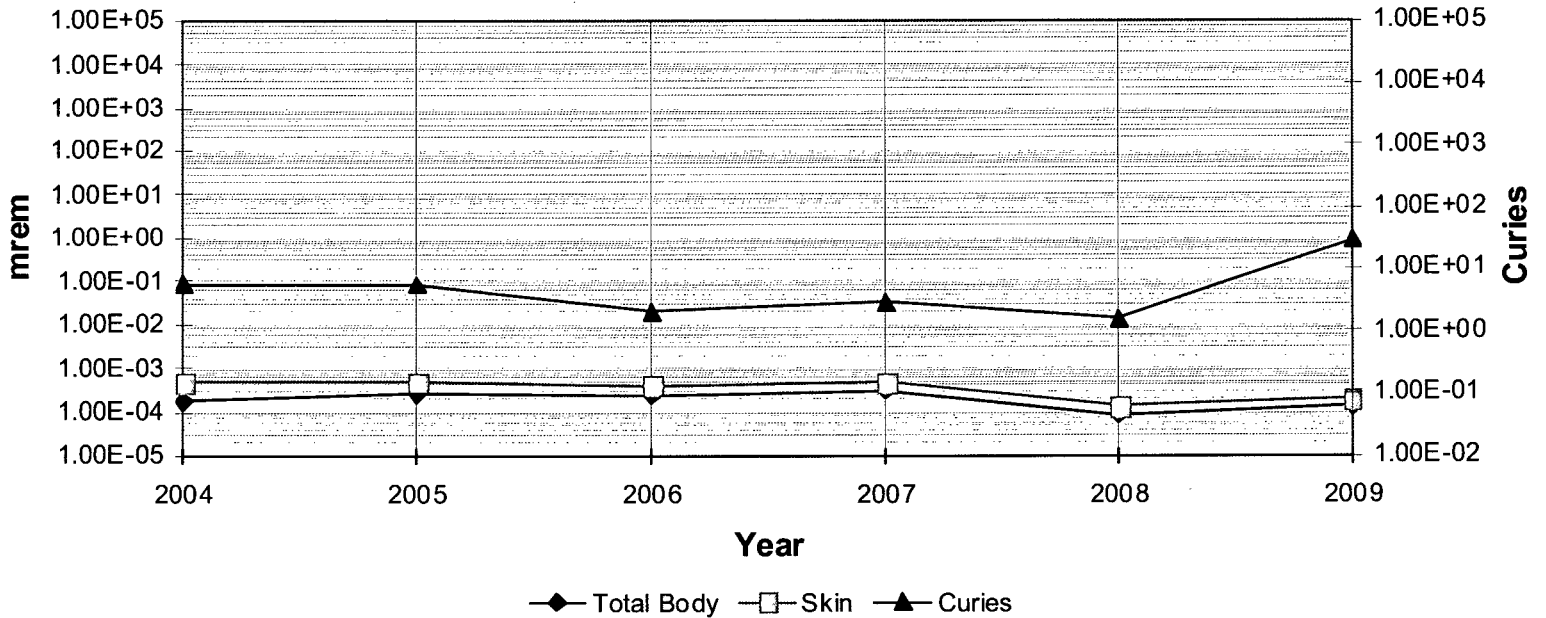
1.4 Trends

The following two trend graphs show the total curies of liquid and gaseous effluents released for Salem from 2004 through 2009. Calculated doses in the graphs are to the hypothetical maximum exposed individual.

Liquid Releases (SGS) Fission & Activation Products Curies Released and Calculated Doses

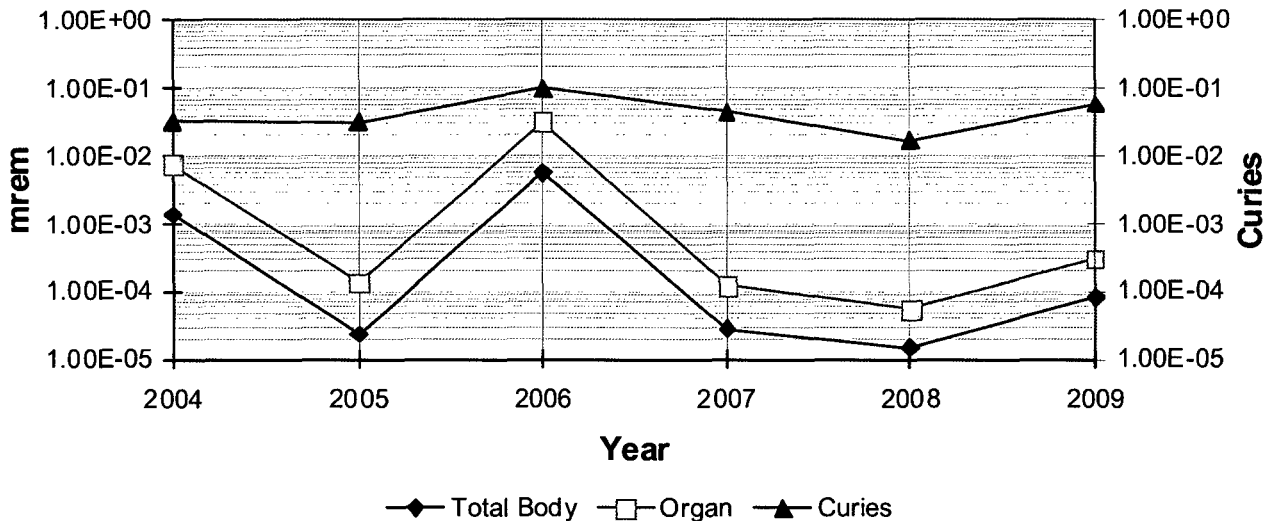


Gaseous Releases (SGS) Curies of Noble Gases Released and Calculated Doses

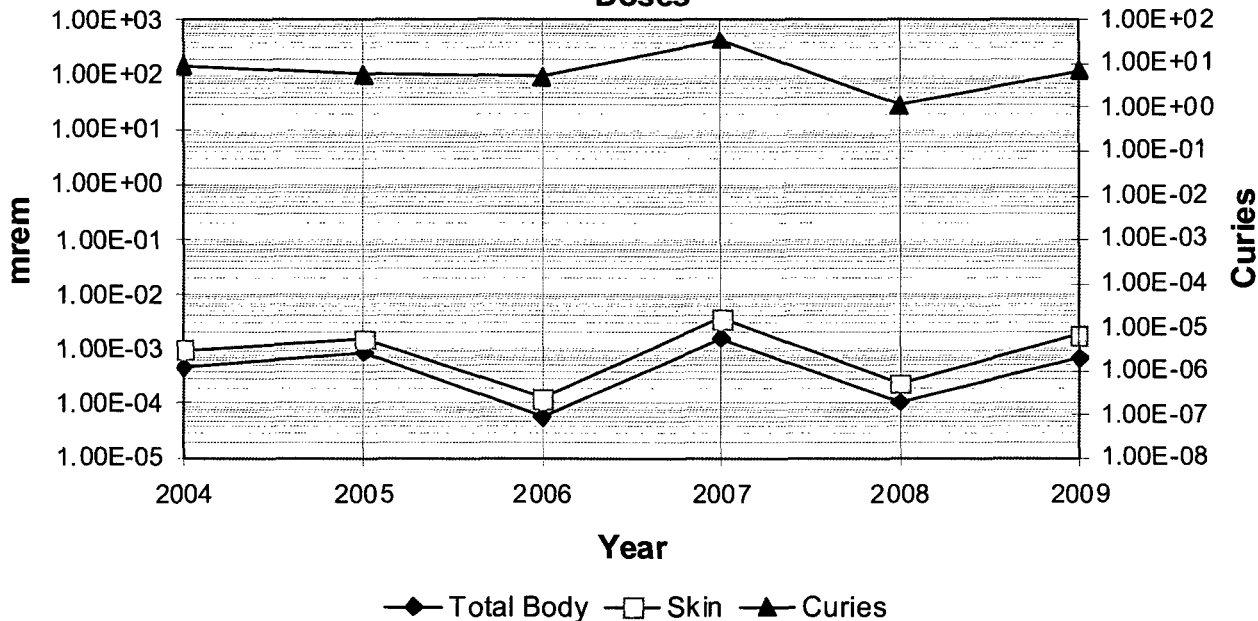


The following two trend graphs show the total curies of liquid and gaseous effluents released for Hope Creek from 2004 through 2009. Calculated doses in the graphs are to the hypothetical maximum exposed individual.

Liquid Releases (HCGS) Fission & Activation Products Curies Released and Calculated Doses



Gaseous Releases Curies of Noble Gases Released and Calculated Doses



PART F. METEOROLOGICAL DATA

Cumulative joint wind frequency distributions by atmospheric stability class for the reporting period are provided in Appendix A.

PART G. OFFSITE DOSE CALCULATION MANUAL CHANGES

Salem

The Salem ODCM was revised during the reporting period. A copy of the Salem ODCM revisions 22, 23 and 24 are provided within Attachment 1.

**Salem ODCM Revision 22:
Revision Summary**

1. Revised the 1R13 Radiation monitor configuration in the following:

Table 3.3-12, item 2.a., Section 3/4..3 Instrumentation, Bases, Unit 1, item 2.a., Part II- Calculational Methodologies, Section 1.0 Liquid Effluents, 1.1 Radiation Monitoring Instrumentation and Controls, item 2), Figure 1-1: Liquid Release Flowpath Unit 1, Table 1-1.1: Parameters for Liquid Alarm Setpoint Determinations- Unit 1.

Justification:

This change is based on DCP 80059610.

2. Part II- Calculational Methodologies, Table 1-1.2 Parameters for Liquid Alarm Setpoint Determinations-Unit 2, foot note** Added R13.

Justification:

Editorial Change: The removal of this monitor from the foot note was an error.

**Salem ODCM Revision 23:
Revision Summary**

1. Revised the definitions 1.15 and 1.16 for MEMBER(S) OF THE PUBLIC to be consistent with the definitions in 10CFR20 and 40CFR190. A member of the public is defined in 10CFR20 as “any individual except when that individual is receiving an occupational dose.” A member of the public is defined in 40CFR190 as “any individual that can receive a radiation dose in the general environment, whether he may or may not also be exposed to radiation in an occupation associated with a nuclear fuel cycle. However, an individual is not considered a member of the public during any period in which the individual is engaged in carrying out any operation which is part of a nuclear fuel cycle.”

Justification:

The Salem ODCM definitions 1.15 and 1.16 for member of the public were revised to be consistent with the definitions in 10CFR20, 40CFR190 and revision 2 of Regulatory Guide 4.1 Program or Monitoring Radioactivity in the Environment that was recently published in June 2009.

2009 RETS FASA 70096339- 0110.

2. Revised the definition 1.29 for SITE BOUNDARY by adding the words “or property” after “land”.

Justification:

This change is based on the new definitions for site boundary in revision 2 of Regulatory Guide 4.1 Program or Monitoring Radioactivity in the Environment that was recently published in June 2009. This definition allows for the inclusion of “property” such as structures and transmission towers to be part of the site boundary if they are located on the property line.

2009 RETS FASA 70096339-0120.

3. The following sentence was added to the end of footnote 2 in Table 3.12.1-1 “Sector 7 does not have a direct radiation monitoring station in the outer ring due to inaccessibility.” Added an explanation for not having a TLD in the outer ring (5 - 11 km) of sector 7 (SE) as required by Table 3.12.1-1 item 1. Item 1 states that “An outer ring of stations, one in each land-based meteorological sector in the 5 to 11-km range from the site (not bounded by or over water)”. The footnote identifies that no direct radiation monitoring station are located in the outer ring in sector 8, but fails to mention that no TLD is collected in Sector 7.

Justification:

This change was made to accurately reflect the fact that two sectors do not have direct radiation monitoring station located in the outer ring. Sector 7 is located in marsh land and no roads are available to provide access to this sector location. NUREG 1301 Offsite Dose Calculation Manual Guidance allows Table 3.12.1 Table Notation (2) third sentence states: “The number of direct radiation monitoring stations may be reduced according to geographical limitations; e.g., at an ocean site, some sectors will be over water so that the number of dosimeters may be reduced accordingly.” Therefore, no TLD location in Sector 7 should be considered acceptable by the NRC since this sector location is surrounded by water. 2009 REMP FASA; 70089372-0250.

4. Deleted the words “centerline of one reactor” in first sentence of the third paragraph section 6.9.1.7 since it was inaccurate. It was replaced with “midpoint of a line between the center of the Salem Units 1 and 2 containment domes”. The same change was made to Table 3.12.1-1 Table Notation 1 first sentence. The words “from the centerline of one reactor” were replaced with “midpoint of a line between the center of the Salem Units 1 and 2 containment domes.”

Justification:

This change was made to correct the location that was copied from NUREG 1301 Offsite Dose Calculation Manual Guidance, Table 3.12.1, Table Notation (1) namely, “centerline of one reactor.” This guidance is for a single reactor site. The reference location for Salem 1 and 2 is the midpoint of a line between the center of the Salem Units 1 and 2 containment domes. This reference point was used by PSEG drafting to determine the distance and direction to each sampling/monitoring location (see Table E-1).

2009 REMP FASA 70089372-0240.

5. Appendix E Radiological Environmental Monitoring Program Table E-1 REMP Sample Locations: Deleted the words “of vent” after the direction specified for each Station Location.).

Added some descriptions to Sample Stations 2S4, 4S1, 15S1, 16S1, 11E2 and 2F3. Added the following alternate sampling locations for surface water locations on the Delaware River 11A1a, 12C1a, 7E1a, and 1F2.

Justification: The reference point for Salem vent was changed because it was inaccurate (see 4. above). The additional descriptions were added to some locations for clarification. The alternate surface water locations allow safer access to these locations on the river during the winter months. These alternate locations are in the general vicinity of the primary location and would have the same distance and direction listed in Table E-1. 2009 REMP FASA 70089372-220

6. Appendix E Radiological Environmental Monitoring Program: Add a footnote to the Station Location which reads” *All distances and directions for the Station Locations are referenced to the midpoint between the two Salem units’ containments. The WGS 84 coordinates for this site center point location are: Latitude N 39° - 27’ – 46.5” and Longitude W 75° - 32’ – 10.6”. This footnote more accurately explains the reference point that was used for determining distances and directions to the sample/monitoring locations (see 4 above).

Justification: The reference point for Salem 1 and 2 was changed because it was inaccurate (see 4. above).
2009 REMP FASA 70089372-0240

7. Revise the location of the 5S1 air sampling station from “1.0 miles E of vent, site access road” to “0.95 miles E, site access road”. The movement of the air sampling station was IAW DCP 80088766.

Justification: This change was implemented to provide a more reliable power source to the air sampling station. Air sampling station 5S1 has experiencing several missed air samples per year as a result of unplanned power outages. This new feed has a back-up diesel generator which will supply power in the unlikely event of a loss of power. DCP 80088766 and Notifications 20426132 and 20426221

8. Added clarification to TABLE 3.3-12: RADIOACTIVE LIQUID EFFLUENT MONITORING INSTRUMENTATION Table Notations Action 28, item b and c, added the words “inside containment”

Justification: This change was implemented to satisfy order 70088866. Which requested clarification as to what is meant by service water leakage on the containment fan coil unit and to clarify when increased sampling should take place.

9. Revise Section 2.5.2: to add to the first sentence; “for the resident/dairy location” after the words “dose assessment”.

Justification: This clarification was made to this dose assessment methodology to better align it with the derivation and justification of the simplified dose calculation described in Appendix D. 2009 RETS FASA 70096339-0140.

10. Revise Section 3.1: to align with the new definition of a “member of the public” (see 4. above). Also, identify the assumptions employed in current year dose calculation (for a member of the public inside the site boundary) to better align with the Requirements of section 6.9.1.8 Annual Radiological Effluent Release Report.

Justification: This change was in response to a Program Improvement that was recommended in the 2009 RETS FASA 70096339-0150. To better align with the revised definition of “member of the public” and requirements of section 6.9.1.8 Annual Radiological Effluent Release Report 2009 RETS FASA 70096339-0150.

11. Editorial Change: Table 3.3-12, Action 28a, removed (Unit2).

Justification: Editorial change that corresponds to DCP 80059610, for the Salem Unit 1 (1R13) radiation monitors. Both units now have the same radiation monitors.

Salem ODCM Revision 24 Revision Summary

1. Table E-1 section A. Direct Radiation Monitoring Locations was revised due to the relocation of a TLD station. TLD station code 2S4 was changed from 0.60 mi. NNE; N of equipment laydown area to 0.42mi. NNE; in the equipment laydown area.

Justification: TLD station 2S4 was moved because the direct radiation emitted from the Hope Creek Turbine Building was being shielded by the Cooling Tower. It was moved about 1,232 feet south to be in direct line of sight with the Hope Creek Turbine Building. This will provide a more representative measurement of the direct radiation dose to a member of the public at this location. 2009 REMP FASA Order 70100559.

2. Table E-1 section A. Direct Radiation Monitoring Locations was revised due to the relocation of a TLD station. TLD station code 14F2 was changed from 6.6 mi. WNW; Boyds Corner to 6.7 mi. WNW; Rt 13 and Boyds Corner Rd.

Justification: TLD station 14F2 was moved 2,041 feet WSW because a Town road widening project resulted in the telephone pole that the TLD was posted on being removed. Salem Order 70103092.

3. Updated Figures E-1 On-site Sampling Locations and E-2 Off-site Sampling Locations to update the new sampling locations.

Justification: The maps were updated to be consistent with the REMP station locations listed in Table E-1.

4. Verified that the formulas for the dose calculations and radioactive effluent monitor alarm set points listed in this revision are correct. Notification 20427924 reported that

some of the dose calculation formulas printed from the copy in DCRMS were illegible. The Microsoft Word version of the Salem ODCM Rev 24 was used to print the pages for all equations. These equations were compared to those in Revision 21. All equations were found to be exactly the same.

Justification: The equations in this revision of the Salem ODCM were verified to be accurate. Salem Order 70101376.

Hope Creek

The Hope Creek ODCM was revised during the reporting period. A copy of the Hope Creek ODCM revisions 23 and 24 are provided in Appendix C.

Hope Creek ODCM Revision 23

Revision Summary

1. Revised the definitions 1.24 for MEMBER(S) OF THE PUBLIC to be consistent with the definitions in 10CFR20 and 40CFR190. A member of the public is defined in 10CFR20 as “any individual except when that individual is receiving an occupational dose.” A member of the public is defined in 40CFR190 as “any individual that can receive a radiation dose in the general environment, whether he may or may not also be exposed to radiation in an occupation associated with a nuclear fuel cycle. However, an individual is not considered a member of the public during any period in which the individual is engaged in carrying out any operation which is part of a nuclear fuel cycle.”

Justification:

The Salem ODCM definitions 1.24 for member of the public were revised to be consistent with the definitions in 10CFR20, 40CFR190 and revision 2 of Regulatory Guide 4.1 Program or Monitoring Radioactivity in the Environment that was recently published in June 2009.

2009 RETS FASA 70096339- 0110.

2. Revised the definition 1.41 for SITE BOUNDARY by adding the words “or property” after “land”.

Justification:

This change is based on the new definitions for site boundary in revision 2 of Regulatory Guide 4.1 Program or Monitoring Radioactivity in the Environment that was recently published in June 2009. This definition allows for the inclusion of “property” such as structures and transmission towers to be part of the site boundary if they are located on the property line.

2009 RETS FASA 70096339- 0120.

3. The following sentence was added to the end of footnote 2 in Table 3.12.1-1 “Sector 7 does not have a direct radiation monitoring station in the outer ring due to inaccessibility.”

Added an explanation for not having a TLD in the outer ring (5 - 11 km) of sector 7 (SE) as required by Table 3.12.1-1 item 1. Item 1 states that “An outer ring of stations, one in each land-based meteorological sector in the 5 to 11-km range from the site (not bounded by or

over water)”. The footnote identifies that no direct radiation monitoring station are located in the outer ring in sector 8, but fails to mention that no TLD is collected in Sector 7.

Justification:

This change was made to accurately reflect the fact that two sectors do not have direct radiation monitoring station located in the outer ring. Sector 7 is located in marsh land and no roads are available to provide access to this sector location. NUREG 1302 Offsite Dose Calculation Manual Guidance allows Table 3.12.1 Table Notation (2) third sentence states: “The number of direct radiation monitoring stations may be reduced according to geographical limitations; e.g., at an ocean site, some sectors will be over water so that the number of dosimeters may be reduced accordingly.” Therefore, no TLD location in Sector 7 should be considered acceptable by the NRC since this sector location is surrounded by water. 2009 REMP FASA 70089372-0250

4. Deleted the words “centerline of one reactor” in first sentence of the third paragraph section 6.9.1.7 since it was inaccurate. It was replaced with “midpoint of a line between the center of the Salem units 1 & 2 containment domes”. The same change was made to Table 3.12.1-1 Table Notation 1 first sentence. The words “from the centerline of one reactor” were replaced with “midpoint of a line between the center of the Salem units 1 & 2 containment domes.”

Justification:

This change was made to correct the location that was copied from NUREG 1302 Offsite Dose Calculation Manual Guidance, Table 3.12.1, Table Notation (1) namely, “centerline of one reactor.” This guidance is for a single reactor site. The reference location for Salem 1 and 2 is the midpoint of a line between the center of the Salem units 1 & 2 containment domes. This reference point was used by PSEG drafting to determine the distance and direction to each sampling/monitoring location (see Table E-1). 2009 REMP FASA 70089372-0240

5. Appendix E Radiological Environmental Monitoring Program Table E-1 REMP Sample Locations: Deleted the words “of vent” after the direction specified for each Station Location.). Added some descriptions to Sample Stations 2S4, 4S1, 15S1, 16S1, 11E2 and 2F3. Added the following alternate sampling locations for surface water locations on the Delaware River 11A1a, 12C1a, 7E1a, and 1F2.

Justification: The reference point for Salem vent was changed because it was inaccurate (see 4. above). The additional descriptions were added to some locations for clarification. The alternate surface water locations allow safer access to these locations on the river during the winter months. These alternate locations are in the general vicinity of the primary location and would have the same distance and direction listed in Table E-1. 2009 REMP FASA 70089372-0220

6. Appendix E Radiological Environmental Monitoring Program: Add a footnote to the Station Location which reads” *All distances and directions for the Station Locations are referenced to the midpoint between the two Salem units’ containments. The WGS 84 coordinates for this site center point location are: Latitude N 39° - 27’ - 46.5” and

Longitude W 75° - 32' - 10.6". This footnote more accurately explains the reference point that was used for determining distances and directions to the sample/monitoring locations (see 4 above).

Justification: The reference point for Salem 1 and 2 was changed because it was inaccurate (see 4. above).

2009 REMP FASA 70089372-0240

7. Revise the location of the 5S1 air sampling station from "1.0 miles E of vent, site access road" to "0.95 miles E, site access road". The movement of the air sampling station was IAW DCP 80088766.

Justification: This change was implemented to provide a more reliable power source to the air sampling station. Air sampling station 5S1 has experiencing several missed air samples per year as a result of unplanned power outages. This new feed has a back-up diesel generator which will supply power in the unlikely event of a loss of power. DCP 80088766 and Notifications 20426132 and 20426221

8. Revise Section 2.5.2: to add to the first sentence; "for the resident/dairy location" after the words "dose assessment".

Justification: This clarification was made to this dose assessment methodology to better align it with the derivation and justification of the simplified dose calculation described in Appendix D. 2009 RETS FASA 70096339-0140.

9. Revise Section 3.1: to align with the new definition of a "member of the public" (see 4. above). Also, identify the assumptions employed in current year dose calculation (for a member of the public inside the site boundary) to better align with the Requirements of section 6.9.1.8 Annual Radiological Effluent Release Report.

Justification: This change was in response to a Program Improvement that was recommended in the 2009 RETS FASA 70096339-0150. To better align with the revised definition of "member of the public" and requirements of section 6.9.1.8 Annual Radiological Effluent Release Report 2009 RETS FASA 70096339-0150.

Hope Creek ODCM Revision 24

Revision Summary

1. Table E-1 section A. Direct Radiation Monitoring Locations was revised due to the relocation of a TLD station. TLD station code 2S4 was changed from 0.60 mi. NNE; N of equipment laydown area to 0.42mi. NNE; in the equipment laydown area.

Justification: TLD station 2S4 was moved because the direct radiation emitted from the Hope Creek Turbine Building was being shielded by the Cooling Tower. It was moved about 1,232 feet south to be in direct line of sight with the Hope Creek Turbine Building. This will provide a

more representative measurement of the direct radiation dose to a member of the public at this location. 2009 REMP FASA Order 70100559.

2. Table E-1 section A. Direct Radiation Monitoring Locations was revised due to the relocation of a TLD station. TLD station code 14F2 was changed from 6.6 mi. WNW; Boyds Corner to 6.7 mi. WNW; Rt 13 and Boyds Corner Rd.

Justification: TLD station 14F2 was moved 2,041 feet WSW because a Town road widening project resulted in the telephone pole that the TLD was posted on being removed. Hope Creek Order 70103092.

3. Updated Figures E-1 On-site Sampling Locations and E-2 Off-site Sampling Locations to update the new sampling locations.

Justification: The maps were updated to be consistent with the REMP station locations listed in Table E-1.

4. Verified that the formulas for the dose calculations and radioactive effluent monitor alarm set points listed in this revision are correct. Notification 20427922 reported that some of the dose calculation formulas were illegible. The Microsoft Word version of the Hope Creek ODCM Rev 24 was used to print the pages for all equations. These equations were compared to those in Revision 22. All equations were found to be exactly the same.

Justification: The equations in this revision of the Hope Creek ODCM were verified to be accurate. Hope Creek Order 70101269.

PART H. INOPERABLE MONITORS

During this reporting period, the following effluent radiation monitors were inoperable for greater than 30 days:

Salem Unit 1: Liquid Radwaste Effluent Line (1R18). This Radiation Monitoring System was inoperable for greater than 30 days due to equipment failure which could not be controlled by the station. The cause was a catastrophic failure of a capacitor within the 1R18 ratemeter I/O circuit is considered premature and the result of an internal short circuit. Likely factors most impacting the capacitor are not within the control of the end user (the Station). As a result of the capacitor failure the station was required to order necessary parts for repairs. The lead time to acquire these parts from the vendor was long, delaying the radiation monitoring system's return to service, within 30 days. During the period of inoperability the station utilized the sampling and analysis controls established by the ODCM to monitor the effluent stream.

Salem Unit 2: Steam Generator Blowdown Line (2R19C). This Radiation Monitoring System was inoperable for greater than 30 days the cause was a low sample flow reading on the monitor. The monitor was repaired, but could not be tested and returned to service within 30 days because the station was in a refueling outage. The

Station was required to be on-line to perform the necessary checks to return this monitor to service.

PART I. PROCESS CONTROL PROGRAM (PCP) CHANGES

During the reporting period, there were no changes to either the Salem or Hope Creek PCPs.

PART J. ENVIRONMENTAL MONITORING LOCATION CHANGES

During the reporting period, there were minor changes to environmental monitoring locations as currently described in the Salem and Hope Creek ODCMs.

- For the Air Sampling Station at the site boundary, 5S1, the station has moved slightly closer to the station to provide the unit with more reliable power sources (Current Power Source and backup power from a diesel generator) Air sampling station 5S1 has experiencing several missed air samples per year as a result of unplanned power outages. This new feed has a back-up diesel generator which will supply power in the unlikely event of a loss of power. DCP 80088766 and Notifications 20426132 and 20426221.
- Two TLDs were moved during the reporting year. TLD station 2S4 was moved because the direct radiation emitted from the Hope Creek Turbine Building was being shielded by the Cooling Tower. It was moved about 1,232 feet south to be in direct line of sight with the Hope Creek Turbine Building. This will provide a more representative measurement of the direct radiation dose to a member of the public at this location. 2009 REMP FASA Order 70100559. The other TLD station 14F2 was moved 2,041 feet WSW because a Town road widening project resulted in the telephone pole that the TLD was posted on being removed. Hope Creek Order 70103092.
- The station added to the ODCM, the alternate sampling locations for surface water which support the Radiological Environmental Monitoring Program.

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

TABLE 1A-1
SALEM GENERATING STATION - UNIT 1
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT
JANUARY – JUNE 2009
GASEOUS EFFLUENTS – SUMMATION OF ALL RELEASES

		Units	1 st Quarter	2 nd Quarter	Est. Total Error ¹
A.	Fission and Activation Gases				
1.	Total Release	Ci	8.72E-02	2.74E+01	50%
2.	Average Release Rate For Period	µCi/sec	1.22E-02	3.48E+00	
3.	Percent of Technical Specification Limit (ODCM 3.11.2.2(a))	%	2.15E-04	2.11E-03	
B.	Iodine				
1.	Total Iodine-131	Ci	0.00E+00	5.68E-14	50%
2.	Average Release Rate For Period	µCi/sec	0.00E+00	7.23E-15	
3.	Percent of Technical Specification Limit ² (ODCM 3.11.2.3(a))	%	0.00E+00	8.60E-03	
C.	Particulates				
1.	Particulates With Half-lives >8 days	Ci	0.00E+00	8.77E-07	50%
2.	Average Release Rate For Period	µCi/sec	0.00E+00	1.12E-07	
3.	Percent of Technical Specification Limit ² (ODCM 3.11.2.3(a))	%	0.00E+00	8.60E-03	
4.	Gross Alpha	Ci	0.00E+00	0.00E+00	
D.	Tritium				
1.	Total Release	Ci	5.57E+01	6.24E+01	50%
2.	Average Release Rate For Period	µCi/sec	7.16E+00	7.94E+00	
3.	Percent of Technical Specification Limit ² (ODCM 3.11.2.3(a))	%	1.26E-02	8.60E-03	

1. For batch releases, the estimated overall error is 10%.
2. Iodine, Tritium, and Particulates are treated as a group. The percent TS Limit is based on most limiting nuclide and Organ dose

TABLE 1A-2
SALEM GENERATING STATION - UNIT 2
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT
JANUARY – JUNE 2009
GASEOUS EFFLUENTS – SUMMATION OF ALL RELEASES

		Units	1 st Quarter	2 nd Quarter	Est. Total Error ¹
A.	Fission and Activation Gases				
1.	Total Release	Ci	1.22E-01	6.42E-02	50%
2.	Average Release Rate For Period	μCi/sec	1.57E-02	8.16E-03	
3.	Percent of Technical Specification Limit (ODCM 3.11.2.2(a))	%	2.25E-04	1.06E-04	
B.	Iodine				
1.	Total Iodine-131	Ci	0.00E+00	0.00E+00	50%
2.	Average Release Rate For Period	μCi/sec	0.00E+00	0.00E+00	
3.	Percent of Technical Specification Limit ² (ODCM 3.11.2.3(a))	%	0.00E+00	0.00E+00	
C.	Particulates				
1.	Particulates With Half-Lives >8 days	Ci	4.95E-07	1.79E-05	50%
2.	Average Release Rate For Period	μC/sec	6.37E-08	2.72E-06	
3.	Percent of Technical Specification Limit ² (ODCM 3.11.2.3(a))	%	1.84E-02	8.61E-04	
4.	Gross Alpha	Ci	0.00E+00	0.00E+00	
D.	Tritium				
1.	Total Release	Ci	8.12E+01	6.21E+00	50%
2.	Average Release Rate For Period	μCi/sec	1.04E+01	7.90E-01	
3.	Percent of Technical Specification Limit ² (ODCM 3.11.2.3(a))	%	1.84E-02	8.61E-04	

1. For batch releases, the estimated overall error is 10%.
2. Iodine, Tritium, and Particulates are treated as a group. The percent TS Limit is based on most limiting nuclide and Organ dose

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

TABLE 1A-3
HOPE CREEK GENERATING STATION
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT
JANUARY – JUNE 2009
GASEOUS EFFLUENTS – SUMMATION OF ALL RELEASES

		Units	1 st Quarter	2 nd Quarter	Est. Total Error ¹
A.	Fission and Activation Gases				
1.	Total Release	Ci	2.23E+00	4.03E+00	25%
2.	Average Release Rate For Period	μCi/sec	2.87E-01	5.13E-01	
3.	Percent of Technical Specification Limit (ODCM 3.11.2.2(a))	%	3.82E-03	9.83E-03	
B.	Iodine				
1.	Total Iodine-131	Ci	3.40E-03	2.03E-03	25%
2.	Average Release Rate For Period	μCi/sec	4.37E-04	2.59E-04	
3.	Percent of Technical Specification Limit ² (ODCM 3.11.2.3(a))	%	1.33E-01	6.18E-02	
C.	Particulates				
1.	Particulates With Half-Lives >8 days	Ci	1.41E-03	2.53E-04	25%
2.	Average Release Rate For Period	μCi/sec	1.81E-04	3.21E-05	
3.	Percent of Technical Specification Limit ² (ODCM 3.11.2.3(a))	%	1.33E-01	6.18E-02	
4.	Gross Alpha	Ci	0.00E+00	0.00E+00	
D.	Tritium				
1.	Total Release	Ci	0.00E+00	8.11E+00	25%
2.	Average Release Rate For Period	μCi/sec	0.00E+00	1.03E+00	
3.	Percent of Technical Specification Limit ² (ODCM 3.11.2.3(a))	%	0.00E+00	6.18E-02	

1. For batch releases, the estimated overall error is 10%.
2. Iodine, Tritium, and Particulates are treated as a group. The percent TS Limit is based on most limiting nuclide and Organ dose

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

TABLE 1A-4
SALEM GENERATING STATION - UNIT 1
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT
JULY – DECEMBER 2009
GASEOUS EFFLUENTS – SUMMATION OF ALL RELEASES

		Units	3 rd Quarter	4 th Quarter	Est. Total Error ¹
A.	Fission and Activation Gases				
1.	Total Release	Ci	2.13E-01	4.51E-01	50%
2.	Average Release Rate For Period	μCi/sec	2.68E-02	5.67E-02	
3.	Percent of Technical Specification Limit (ODCM 3.11.2.2(a))	%	8.64E-05	1.42E-04	
B.	Iodine				
1.	Total Iodine-131	Ci	0.00E+00	0.00E+00	50%
2.	Average Release Rate For Period	μCi/sec	0.00E+00	0.00E+00	
3.	Percent of Technical Specification Limit ² (ODCM 3.11.2.3(a))	%	0.00E+00	0.00E+00	
C.	Particulates				
1.	Particulates With Half-Lives >8 days	Ci	3.10E-06	0.00E+00	50%
2.	Average Release Rate For Period	μCi/sec	3.90E-07	0.00E+00	
3.	Percent of Technical Specification Limit ² (ODCM 3.11.2.3(a))	%	7.84E-03	0.00E+00	
4.	Gross Alpha	Ci	0.00E+00	0.00E+00	
D.	Tritium				
1.	Total Release	Ci	6.17E+01	5.61E+01	50%
2.	Average Release Rate For Period	μCi/sec	7.77E+00	7.06E+00	
3.	Percent of Technical Specification Limit ² (ODCM 3.11.2.3(a))	%	7.84E-03	6.96E-03	

1. For batch releases, the estimated overall error is 10%.
2. Iodine, Tritium, and Particulates are treated as a group. The percent TS Limit is based on most limiting nuclide and Organ dose

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

TABLE 1A-5
SALEM GENERATING STATION - UNIT 2
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT
JULY – DECEMBER 2009
GASEOUS EFFLUENTS – SUMMATION OF ALL RELEASES

		Units	3 rd Quarter	4 th Quarter	Est. Total Error ¹
A.	Fission and Activation Gases				
1.	Total Release	Ci	4.70E-01	1.48E-01	50%
2.	Average Release Rate For Period	µCi/sec	5.91E-02	1.86E-02	
3.	Percent of Technical Specification Limit (ODCM 3.11.2.2(a))	%	1.19E-04	4.43E-05	
B.	Iodine				
1.	Total Iodine-131	Ci	0.00E+00	2.53E-06	50%
2.	Average Release Rate For Period	µCi/sec	0.00E+00	3.19E-07	
3.	Percent of Technical Specification Limit ² (ODCM 3.11.2.3(a))	%	0.00E+00	1.79E-03	
C.	Particulates				
1.	Particulates With Half-Lives >8 days	Ci	0.00E+00	0.00E+00	50%
2.	Average Release Rate For Period	µCi/sec	0.00E+00	0.00E+00	
3.	Percent of Technical Specification Limit ² (ODCM 3.11.2.3(a))	%	0.00E+00	0.00E+00	
4.	Gross Alpha	Ci	0.00E+00	0.00E+00	
D.	Tritium				
1.	Total Release	Ci	6.87E+00	1.44E+01	50%
2.	Average Release Rate For Period	µCi/sec	8.64E-01	1.81E+00	
3.	Percent of Technical Specification Limit ² (ODCM 3.11.2.3(a))	%	8.76E-04	1.79E-03	

1. For batch releases, the estimated overall error is 10%.
2. Iodine, Tritium, and Particulates are treated as a group. The percent TS Limit is based on most limiting nuclide and Organ dose

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

TABLE 1A-6
HOPE CREEK GENERATING STATION
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT
JULY – DECEMBER 2009
GASEOUS EFFLUENTS – SUMMATION OF ALL RELEASES

		Units	3 rd Quarter	4 th Quarter	Est. Total Error ¹
A.	Fission and Activation Gases				
1.	Total Release	Ci	1.96E-01	1.63E+01	25%
2.	Average Release Rate For Period	µCi/sec	2.46E-02	2.05E+00	
3.	Percent of Technical Specification Limit (ODCM 3.11.2.2(a))	%	7.47E-05	8.58E-04	
B.	Iodine				
1.	Total Iodine-131	Ci	7.52E-04	8.81E-04	25%
2.	Average Release Rate For Period	µCi/sec	9.47E-05	1.11E-04	
3.	Percent of Technical Specification Limit ¹ (ODCM 3.11.2.3(a))	%	2.73E-02	4.08E-02	
C.	Particulates				
1.	Particulates With Half-lives > 8 days	Ci	2.57E-04	6.43E-05	25%
2.	Average Release Rate For Period	µCi/sec	3.23E-05	8.09E-06	
3.	Percent of Technical Specification Limit ¹ (ODCM 3.11.2.3(a))	%	2.73E-02	4.08E-02	
4.	Gross Alpha	Ci	0.00E+00	0.00E+00	
D.	Tritium				
1.	Total Release	Ci	0.00E+00	8.31E+00	25%
2.	Average Release Rate For Period	µCi/sec	0.00E+00	1.05E+00	
3.	Percent of Technical Specification Limit ¹ (ODCM 3.11.2.3(a))	%	0.00E+00	4.08E-02	

1. For batch releases, the estimated overall error is 10%.
2. Iodine, Tritium, and Particulates are treated as a group. The percent TS Limit is based on most limiting nuclide and Organ dose

TABLE 1B
SALEM AND HOPE CREEK GENERATING STATION
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT
JANUARY – DECEMBER 2009
GASEOUS EFFLUENTS – ELEVATED RELEASES

Salem and Hope Creek Generating Stations have no elevated release points.

TABLE 1C-1
SALEM GENERATING STATION - UNIT 1
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT
JANUARY – JUNE 2009
GASEOUS EFFLUENTS – GROUND LEVEL RELEASES

<u>Nuclides Released</u>	<u>Units</u>	<u>Continuous Mode</u>		<u>Batch Mode</u>	
		<u>1st Quarter</u>	<u>2nd Quarter</u>	<u>1st Quarter</u>	<u>2nd Quarter</u>
1. Fission Gases					
Argon-41	Ci	0.00E+00	0.00E+00	6.59E-02	5.21E-02
Xenon-133	Ci	0.00E+00	2.73E+01	2.13E-02	1.97E-02
Total	Ci	0.00E+00	2.73E+01	8.72E-02	7.18E-02
2. Iodine					
Iodine-131	Ci	0.00E+00	5.68E-14	0.00E+00	0.00E+00
Total	Ci	0.00E+00	5.68E-14	0.00E+00	0.00E+00
3. Particulates					
Cesium-134	Ci	0.00E+00	1.14E-13	0.00E+00	0.00E+00
Cobalt-60	Ci	0.00E+00	2.27E-13	0.00E+00	0.00E+00
Manganese-54	Ci	0.00E+00	2.27E-13	0.00E+00	0.00E+00
Cesium-137	Ci	0.00E+00	8.77E-07	0.00E+00	0.00E+00
Total	Ci	0.00E+00	8.77E-07	0.00E+00	0.00E+00
4. Tritium	Ci	5.55E+01	6.17E+01	2.05E-01	7.33E-01

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

TABLE 1C-2
SALEM GENERATING STATION - UNIT 2
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT
JANUARY – JUNE 2009
GASEOUS EFFLUENTS – GROUND LEVEL RELEASES

<u>Nuclides Released</u>	<u>Units</u>	<u>Continuous Mode</u>		<u>Batch Mode</u>	
		<u>1st Quarter</u>	<u>2nd Quarter</u>	<u>1st Quarter</u>	<u>2nd Quarter</u>
1. Fission Gases					
Xenon-135	Ci	0.00E+00	0.00E+00	3.77E-05	0.00E+00
Krypton-85m	Ci	0.00E+00	0.00E+00	0.00E+00	3.09E-05
Xenon-133	Ci	0.00E+00	0.00E+00	5.45E-02	9.76E-03
Argon-41	Ci	0.00E+00	0.00E+00	6.83E-02	5.44E-02
Total	Ci	0.00E+00	0.00E+00	1.23E-01	6.42E-02
2. Iodine					
Iodine-131	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3. Particulates					
Cobalt-57	Ci	4.95E-07	0.00E+00	0.00E+00	0.00E+00
Tin-117m	Ci	0.00E+00	2.12E-07	0.00E+00	0.00E+00
Cerium-141	Ci	0.00E+00	9.42E-07	0.00E+00	0.00E+00
Cesium-134	Ci	0.00E+00	3.28E-06	0.00E+00	0.00E+00
Cobalt-60	Ci	0.00E+00	4.11E-06	0.00E+00	0.00E+00
Manganese-54	Ci	0.00E+00	4.42E-06	0.00E+00	0.00E+00
Cesium-137	Ci	0.00E+00	4.89E-06	0.00E+00	0.00E+00
Total	Ci	4.95E-07	1.79E-05	0.00E+00	0.00E+00
4. Tritium	Ci	8.11E+01	6.01E+00	9.11E-02	2.02E-01

TABLE 1C-3
HOPE CREEK GENERATING STATION
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT
JANUARY – JUNE 2009
GASEOUS EFFLUENTS – GROUND LEVEL RELEASES

<u>Nuclides Released</u>	<u>Units</u>	<u>Continuous Mode</u>		<u>Batch Mode</u>	
		<u>1st Quarter</u>	<u>2nd Quarter</u>	<u>1st Quarter</u>	<u>2nd Quarter</u>
1. Fission Gases	Ci				
Argon-41	Ci	0.00E+00	4.15E-01	0.00E+00	0.00E+00
Xenon-135M	Ci	0.00E+00	5.15E-01	0.00E+00	0.00E+00
Xenon-133	Ci	0.00E+00	8.06E-01	0.00E+00	0.00E+00
Xenon-135	Ci	2.23E+00	2.29E+00	0.00E+00	5.68E-05
Total	Ci	2.23E+00	4.03E+00	0.00E+00	5.68E-05
2. Iodine					
Iodine-131	Ci	3.40E-03	2.03E-03	0.00E+00	0.00E+00
Iodine-133	Ci	4.98E-02	1.68E-02	0.00E+00	0.00E+00
Total	Ci	5.32E-02	1.88E-02	0.00E+00	0.00E+00
3. Particulates					
Zinc-65	Ci	2.44E-05	0.00E+00	0.00E+00	0.00E+00
Strontium 91		1.99E-02	0.00E+00	0.00E+00	0.00E+00
Cerium-141		6.77E-05	6.97E-06	0.00E+00	0.00E+00
Manganese-54		0.00E+00	1.39E-05	0.00E+00	0.00E+00
Molybdenum-99	Ci	7.63E-05	1.48E-05	0.00E+00	0.00E+00
Technicium-99M	Ci	7.77E-05	1.51E-05	0.00E+00	0.00E+00
Cobalt-60	Ci	1.07E-04	5.15E-05	0.00E+00	0.00E+00
Lanthanum-140	Ci	6.40E-04	1.27E-04	0.00E+00	0.00E+00
Barium-140	Ci	1.21E-03	1.80E-04	0.00E+00	0.00E+00
Barium-139	Ci	1.28E-02	5.68E-02	0.00E+00	0.00E+00
Total		3.50E-02	5.72E-02	0.00E+00	0.00E+00
4. Tritium	Ci	0.00E+00	8.11E+00	0.00E+00	1.86E-03

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

TABLE 1C-4
SALEM GENERATING STATION - UNIT 1
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT
JULY – DECEMBER 2009
GASEOUS EFFLUENTS – GROUND LEVEL RELEASES

<u>Nuclides Released</u>	<u>Units</u>	<u>Continuous Mode</u>		<u>Batch Mode</u>	
		<u>3rd Quarter</u>	<u>4th Quarter</u>	<u>3rd Quarter</u>	<u>4th Quarter</u>
1. Fission Gases					
Argon-41	Ci	0.00E+00	0.00E+00	4.22E-02	6.62E-02
Xenon-133	Ci	0.00E+00	0.00E+00	1.71E-01	3.84E-01
Total	Ci	0.00E+00	0.00E+00	2.13E-01	4.51E-01
2. Iodine					
Iodine-131	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3. Particulates					
Tin-117m	Ci	4.09E-07	0.00E+00	0.00E+00	0.00E+00
Cesium-137	Ci	2.69E-06	0.00E+00	0.00E+00	0.00E+00
Total	Ci	3.10E-06	0.00E+00	0.00E+00	0.00E+00
4. Tritium	Ci	6.01E+01	5.52E+01	1.65E+00	9.22E-01

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

TABLE 1C-5
SALEM GENERATING STATION - UNIT 2
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT
JULY – DECEMBER 2009
GASEOUS EFFLUENTS – GROUND LEVEL RELEASES

<u>Nuclides Released</u>	<u>Units</u>	<u>Continuous Mode</u>		<u>Batch Mode</u>	
		<u>3rd Quarter</u>	<u>4th Quarter</u>	<u>3rd Quarter</u>	<u>4th Quarter</u>
1. Fission Gases					
Xenon-131m	Ci	0.00E+00	0.00E+00	8.48E-03	0.00E+00
Xenon-135	Ci	0.00E+00	0.00E+00	4.20E-04	1.48E-03
Xenon-133m	Ci	0.00E+00	0.00E+00	2.74E-03	1.51E-03
Argon-41	Ci	0.00E+00	0.00E+00	5.13E-02	2.01E-02
Xenon-133	Ci	0.00E+00	0.00E+00	4.07E-01	1.25E-01
Total	Ci	0.00E+00	0.00E+00	4.70E-01	1.48E-01
2. Iodine	Ci				
Iodine-131	Ci	0.00E+00	2.53E-06	0.00E+00	0.00E+00
Total	Ci	0.00E+00	2.53E-06	0.00E+00	0.00E+00
3. Particulates	Ci				
Niobium-97	Ci	6.51E-06	0.00E+00	0.00E+00	0.00E+00
Total	Ci	6.51E-06	0.00E+00	0.00E+00	0.00E+00
4. Tritium	Ci	6.56E+00	1.42E+01	3.13E-01	2.43E-01

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

TABLE 1C-6
HOPE CREEK GENERATING STATION
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT
JULY – DECEMBER 2009
GASEOUS EFFLUENTS – GROUND LEVEL RELEASES

	<u>Nuclides Released</u>	<u>Units</u>	<u>Continuous Mode</u>		<u>Batch Mode</u>	
			<u>3rd Quarter</u>	<u>4th Quarter</u>	<u>3rd Quarter</u>	<u>4th Quarter</u>
1.	Fission Gases					
	Xenon-131m	Ci	1.60E-01	0.00E+00	0.00E+00	0.00E+00
	Xenon-135	Ci	3.53E-02	0.00E+00	0.00E+00	0.00E+00
	Krypton-87	Ci	0.00E+00	6.01E-02	0.00E+00	0.00E+00
	Krypton-85m	Ci	0.00E+00	3.88E-01	0.00E+00	0.00E+00
	Krypton-85	Ci	0.00E+00	1.59E-01	0.00E+00	0.00E+00
	Total	Ci	1.96E-01	1.63E-01	0.00E+00	0.00E+00
2.	Iodine					
	Iodine-131	Ci	7.52E-04	8.81E-04	0.00E+00	0.00E+00
	Iodine-133	Ci	1.14E-02	1.13E-02	0.00E+00	0.00E+00
	Total	Ci	1.22E-02	1.22E-02	0.00E+00	0.00E+00
3.	Particulates					
	Lanthanum-140	Ci	4.43E-05	0.00E+00	0.00E+00	0.00E+00
	Cobalt-57	Ci	0.00E+00	2.58E-07	0.00E+00	0.00E+00
	Cerium-141	Ci	8.67E-07	4.49E-07	0.00E+00	0.00E+00
	Cobalt-60	Ci	0.00E+00	4.82E-06	0.00E+00	0.00E+00
	Barium-140	Ci	2.56E-04	5.88E-05	0.00E+00	0.00E+00
	Barium-139	Ci	0.00E+00	1.79E-01	0.00E+00	0.00E+00
	Total	Ci	3.01E-04	1.79E-01	0.00E+00	0.00E+00
4.	Tritium	Ci	0.00E+00	8.31E+00	0.00E+00	0.00E+00

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

**TABLE 2A-1
SALEM GENERATING STATION - UNIT 1
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT
JANUARY – JUNE 2009
LIQUID EFFLUENTS – SUMMATION OF ALL RELEASES**

		Units	1 st Quarter	2 nd Quarter	Est. Total Error
A.	Fission and Activation Products				
1.	Total Release	Ci	2.33E-03	1.88E-03	25%
2.	Average Diluted Concentration	µCi/ml	4.63E-12	3.63E-12	
3.	Percent of Technical Specification Limit (ODCM 3.11.1.2(a))	%	1.46E-04	4.48E-04	
B.	Tritium				
1.	Total Release	Ci	5.25E+01	1.88E+02	25%
2.	Average Diluted Concentration	µCi/ml	1.05E-07	3.61E-07	
3.	Percent of Technical Specification Limit (ODCM 3.11.1.1)	%	3.5E-03	1.20E-02	
C.	Dissolved and Entrained Noble Gases				
1.	Total Release	Ci	0.00E+00	4.36E-05	25%
2.	Average Diluted Concentration	µCi/ml	0.00E+00	8.39E-14	
3.	Percent of Technical Specification Limit (ODCM 3.11.1.1)	%	0.00E+00	4.20E-08	
D.	Gross Alpha Total Release	Ci	0.00E+00	0.00E+00	25%
E.	Volume of Waste Release (Prior to Dilution)	Liters	5.30E-07	5.55E+07	
F.	Volume of Dilution Water Used During Entire Period	Liters	5.01E+11	5.20+11	

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

TABLE 2A-2
SALEM GENERATING STATION - UNIT 2
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT
JANUARY – JUNE 2009
LIQUID EFFLUENTS – SUMMATION OF ALL RELEASES

	Units	1 st Quarter	2 nd Quarter	Est. Total Error
A. Fission and Activation Products				
1. Total Release	Ci	5.58E-04	2.40E-03	25%
2. Average Diluted Concentration	µCi/ml	6.07E-13	2.55E-12	
3. Percent of Technical Specification Limit (ODCM 3.11.1.2(a))	%	9.94E-05	2.90E-04	
B. Tritium				
1. Total Release	Ci	5.32E+01	1.56E+02	25%
2. Average Diluted Concentration	µCi/ml	5.81E-08	1.65E-07	
3. Percent of Technical Specification Limit (ODCM 3.11.1.1)	%	1.94E-03	5.50E-03	
C. Dissolved and Entrained Noble Gases				
1. Total Release	Ci	0.00E+00	6.76E-06	25%
2. Average Diluted Concentration	µCi/ml	0.00E+00	7.18E-15	
3. Percent of Technical Specification Limit (ODCM 3.11.1.1)	%	0.00E+00	3.59E-09	
D. Gross Alpha Total Release	Ci	0.00E+00	0.00E+00	25%
E. Volume of Waste Release (Prior to Dilution)	Liters	4.90E+07	5.03E+07	
F. Volume of Dilution Water Used During Entire Period	Liters	9.15E+11	9.41E+11	

TABLE 2A-3
HOPE CREEK GENERATING STATION
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT
JANUARY – JUNE 2009
LIQUID EFFLUENTS – SUMMATION OF ALL RELEASES

		Units	1 st Quarter	2 nd Quarter	Est. Total Error
A.	Fission and Activation Products				
1.	Total Release	Ci	1.50E-02	3.17E-02	25%
2.	Average Diluted Concentration	µCi/ml	1.24E-09	1.95E-09	
3.	Percent of Technical Specification Limit (ODCM 3.11.1.2(a))	%	2.84E-03	2.47E-03	
B.	Tritium				
1.	Total Release	Ci	1.31E+0	4.81E+00	25%
2.	Average Diluted Concentration	µCi/ml	1.08E-07	2.96E-07	
3.	Percent of Technical Specification Limit (ODCM 3.11.1.1)	%	3.60E-03	9.87E-03	
C.	Dissolved and Entrained Noble Gases				
1.	Total Release	Ci	4.50E-06	5.60E-04	25%
2.	Average Diluted Concentration	µCi/ml	3.71E-13	3.45E-11	
3.	Percent of Technical Specification Limit (ODCM 3.11.1.1)	%	1.86E-07	1.73E-05	
D.	Gross Alpha				
	Total Release	Ci	0.00E+00	0.00E+00	25%
E.	Volume of Waste Release (Prior to Dilution)	Liters	4.43E+07	4.41E+07	
F.	Volume of Dilution Water Used During Entire Period	Liters	1.21E+10	1.63E+10	

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

TABLE 2A-4
SALEM GENERATING STATION - UNIT 1
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT
JULY – DECEMBER 2009
LIQUID EFFLUENTS – SUMMATION OF ALL RELEASES

	Units	3 rd Quarter	4 th Quarter	Est. Total Error
A. Fission and Activation Products				
1. Total Release	Ci	4.68E-03	9.25E-03	25%
2. Average Diluted Concentration	µCi/ml	8.58E-12	1.71E-11	
3. Percent of Technical Specification Limit (ODCM 3.11.1.2(a))	%	6.55E-04	9.01E-04	
B. Tritium				
1. Total Release	Ci	1.86E+02	1.97E+02	25%
2. Average Diluted Concentration	µCi/ml	3.38E-07	3.64E-07	
3. Percent of Technical Specification Limit (ODCM 3.11.1.1)	%	1.13E-02	1.21E-02	
C. Dissolved and Entrained Noble Gases				
1. Total Release	Ci	2.38E-04	2.34E-04	25%
2. Average Diluted Concentration	µCi/ml	4.36E-13	4.33E-13	
3. Percent of Technical Specification Limit (ODCM 3.11.1.1)	%	2.18E-07	2.17E-07	
D. Gross Alpha				
Total Release	Ci	0.00E+00	0.00E+00	25%
E. Volume of Waste Release (Prior to Dilution)	Liters	5.73E+07	5.33E+07	
F. Volume of Dilution Water Used During Entire Period	Liters	5.45E+11	5.42E+11	

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

TABLE 2A-5
SALEM GENERATING STATION - UNIT 2
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT
JULY – DECEMBER 2009
LIQUID EFFLUENTS – SUMMATION OF ALL RELEASES

	Units	3 rd Quarter	4 th Quarter	Est. Total Error
A. Fission and Activation Products				
1. Total Release	Ci	5.58E-04	2.40E-03	25%
2. Average Diluted Concentration	µCi/ml	6.10E-13	2.55E-12	
3. Percent of Technical Specification Limit (ODCM 3.11.1.2(a))	%	2.47E-04	1.18E-03	
B. Tritium				
1. Total Release	Ci	5.32E+01	1.56E+02	25%
2. Average Diluted Concentration	µCi/ml	5.81E-08	1.65E-07	
3. Percent of Technical Specification Limit (ODCM 3.11.1.1)	%	1.94E-03	5.5E-03	
C. Dissolved and Entrained Noble Gases				
1. Total Release	Ci	0.00E+00	6.75E-06	25%
2. Average Diluted Concentration	µCi/ml	0.00E+00	7.18E-15	
3. Percent of Technical Specification Limit (ODCM 3.11.1.1)	%	0.00E+00	3.59E-09	
D. Gross Alpha				
Total Release	Ci	0.00E+00	0.00E+00	25%
E. Volume of Waste Release (Prior to Dilution)	Liters	4.90E+07	5.03E+07	
F. Volume of Dilution Water Used During Entire Period	Liters	9.15E+11	9.41E+11	

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

TABLE 2A-6
HOPE CREEK GENERATING STATION
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT
JULY – DECEMBER 2009
LIQUID EFFLUENTS – SUMMATION OF ALL RELEASES

	Units	3 rd Quarter	4 th Quarter	Est. Total Error
A. Fission and Activation Products				
1. Total Release	Ci	5.43E-03	5.36E-03	25%
2. Average Diluted Concentration	µCi/ml	2.78E-10	3.85E-10	
3. Percent of Technical Specification Limit (ODCM 3.11.1.2(a))	%	1.15E-04	1.24E-04	
B. Tritium				
1. Total Release	Ci	1.39E+00	1.77E+00	25%
2. Average Diluted Concentration	µCi/ml	7.10E-08	1.27E-07	
3. Percent of Technical Specification Limit (ODCM 3.11.1.1)	%	2.37E-03	4.23E-03	
C. Dissolved and Entrained Noble Gases				
1. Total Release	Ci	6.53E-05	6.12E+06	25%
2. Average Diluted Concentration	µCi/ml	3.34E-12	4.39E-13	
3. Percent of Technical Specification Limit (ODCM 3.11.1.1)	%	1.67E-06	2.20E-07	
D. Gross Alpha Total Release	Ci	0.00E+00	0.00E+00	25%
E. Volume of Waste Release (Prior to Dilution)	Liters	5.11E+07	5.06E+07	
F. Volume of Dilution Water Used During Entire Period	Liters	1.95E+10	1.39E+10	

TABLE 2B-1
SALEM GENERATING STATION - UNIT 1
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT
JANUARY – JUNE 2009
LIQUID EFFLUENTS

<u>Nuclides Released</u>	<u>Units</u>	<u>Continuous Mode</u>		<u>Batch Mode</u>	
		<u>1st Quarter</u>	<u>2nd Quarter</u>	<u>1st Quarter</u>	<u>2nd Quarter</u>
1. Fission and Activation Products					
Cobalt-58	Ci	0.00E+00	0.00E+00	9.14E-04	1.14E-03
Cobalt-60	Ci	0.00E+00	0.00E+00	1.03E-03	4.56E-04
Cesium-134	Ci	0.00E+00	0.00E+00	3.06E-06	1.23E-05
Cesium-137	Ci	0.00E+00	0.00E+00	2.74E-04	2.41E-04
Niobium-97	Ci	0.00E+00	0.00E+00	0.00E+00	3.89E-06
Silver-110m	Ci	0.00E+00	0.00E+00	2.20 E-05	0.00E+00
Cerillium-143	Ci	0.00E+00	0.00E+00	0.00E+00	7.81E-06
Cobalt-57	Ci	0.00E+00	0.00E+00	0.00E+00	3.76E-06
Managanese-54	Ci	0.00E+00	0.00E+00	0.00E+00	4.80E-06
Ruthenium-105	Ci	0.00E+00	0.00E+00	4.30E-05	0.00E+00
Antimony-125	Ci	0.00E+00	0.00E+00	3.70E-05	1.89E-05
Total	Ci	0.00E+00	0.00E+00	2.32E-03	1.88E-03
2. Tritium	Ci	6.63E-01	8.01E-01	5.19E+01	1.87E+02
3. Dissolved and Entrained Noble Gases					
Xenon-133	Ci	0.00E+00	0.00E+00	0.00E+00	3.04E-05
Xenon-135m	Ci	0.00E+00	0.00E+00	0.00E+00	1.32E-05
Total	Ci	0.00E+00	0.00E+00	0.00E+00	4.36E-05
4. Gross Alpha		0.00E+00	0.00E+00	0.00E+00	0.00E+00

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

TABLE 2B-2
SALEM GENERATING STATION - UNIT 2
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT
JANUARY – JUNE 2009
LIQUID EFFLUENTS

<u>Nuclides Released</u>	<u>Units</u>	<u>Continuous Mode</u>		<u>Batch Mode</u>	
		<u>1st Quarter</u>	<u>2nd Quarter</u>	<u>1st Quarter</u>	<u>2nd Quarter</u>
1. Fission and Activation Products					
Silver-110m	Ci	0.00E+00	0.00E+00	0.00E+00	3.15E-05
Cerium-144	Ci	0.00E+00	0.00E+00	0.00E+00	2.86E-05
Cobalt-57	Ci	0.00E+00	0.00E+00	0.00E+00	5.67E-06
Cobalt-58	Ci	0.00E+00	0.00E+00	5.35E-04	1.04E-03
Cobalt-60	Ci	0.00E+00	0.00E+00	1.24E-05	5.13E-04
Chromium-51	Ci	0.00E+00	0.00E+00	0.00E+00	2.45E-05
Cesium-134	Ci	0.00E+00	0.00E+00	0.00E+00	4.50E-05
Cesium-137	Ci	0.00E+00	0.00E+00	1.06E-05	5.03E-04
Maganese-54	Ci	0.00E+00	0.00E+00	0.00E+00	1.09E-05
Niobium-97	Ci	0.00E+00	0.00E+00	0.00E+00	4.91E-06
Ruthenium-105	Ci	0.00E+00	0.00E+00	0.00E+00	2.23E-05
Antimony-125	Ci	0.00E+00	0.00E+00	0.00E+00	1.59E-04
Technetium-101	Ci	0.00E+00	0.00E+00	0.00E+00	9.42E-06
Total	Ci	0.00E+00	0.00E+00	5.58E-04	2.40E-03
2. Tritium	Ci	7.39E-01	5.67E-01	5.24E+01	1.55E+02
3. Dissolved and Entrained Noble Gases					
Xenon-133	Ci	0.00E+00	0.00E+00	0.00E+00	6.67E-06
Total	Ci	0.00E+00	0.00E+00	0.00E+00	6.67E-06
4. Gross Alpha	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

TABLE 2B-3
HOPE CREEK GENERATING STATION
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT
JANUARY – JUNE 2009
LIQUID EFFLUENTS

<u>Nuclides Released</u>	<u>Units</u>	<u>Continuous Mode</u>		<u>Batch Mode</u>	
		<u>1st Quarter</u>	<u>2nd Quarter</u>	<u>1st Quarter</u>	<u>2nd Quarter</u>
1. Fission and Activation Products					
Barium-140	Ci	2.57E-05	0.00E+00	1.22E-04	4.62E-07
Cerium-141	Ci	9.96E-06	0.00E+00	5.95E-06	3.20E-05
Cobalt-57	Ci	0.00E+00	0.00E+00	0.00E+00	6.46E-06
Cobalt-58	Ci	2.77E-06	0.00E+00	2.88E-04	3.50E-03
Cobalt-60	Ci	1.25E-05	0.00E+00	4.36E-03	8.94E-03
Chromium-51	Ci	0.00E+00	0.00E+00	0.00E+00	1.79E-03
Cesium-134	Ci	0.00E+00	0.00E+00	2.77E-03	5.90E-05
Cesium-136	Ci	0.00E+00	0.00E+00	1.85E-05	0.00E+00
Cesium-137	Ci	0.00E+00	0.00E+00	4.62E-03	1.25E-04
Iron-55	Ci	0.00E+00	0.00E+00	0.00E+00	5.19E-03
Iron-59	Ci	0.00E+00	0.00E+00	0.00E+00	2.86E-04
Iodine-131	Ci	0.00E+00	0.00E+00	0.00E+00	7.82E-08
Lanthium-140	Ci	2.39E-04	0.00E+00	6.41E-05	5.37E-05
Manganese-54	Ci	0.00E+00	0.00E+00	2.22E-03	1.03E-02
Molybdenum-99	Ci	0.00E+00	0.00E+00	0.00E+00	1.49E-05
Niobium-97	Ci	0.00E+00	0.00E+00	0.00E+00	2.19E-06
Technicium-99m	Ci	0.00E+00	0.00E+00	0.00E+00	1.51E-05
Zinc-65	Ci	1.57E-05	0.00E+00	2.56E-04	1.45E-03
Total	Ci	3.05E-04	0.00E+00	1.47E-02	3.17E-02
2. Tritium	Ci	7.89E-02	1.92E-01	1.24E+00	4.62E+00
3. Dissolved and Entrained Noble Gases					
Xenon-133	Ci	0.00E+00	0.00E+00	3.35E-06	4.48E-04
Xenon-133m	Ci	0.00E+00	0.00E+00	0.00E+00	1.00E-05
Xenon-135	Ci	0.00E+00	0.00E+00	1.14E-06	1.03E-04
Total	Ci	0.00E+00	0.00E+00	4.50E-06	5.60E-04
4. Gross Alpha	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

TABLE 2B-4
SALEM GENERATING STATION - UNIT 1
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT
JULY - DECEMBER 2009
LIQUID EFFLUENTS

<u>Nuclides Released</u>	<u>Units</u>	<u>Continuous Mode</u>		<u>Batch Mode</u>	
		<u>3rd Quarter</u>	<u>4th Quarter</u>	<u>3rd Quarter</u>	<u>4th Quarter</u>
1. Fission and Activation Products					
Silver-110m	Ci			1.08E-04	7.51E-05
Cobalt-57	Ci	0.00E+00	0.00E+00	2.83E-05	2.84E-05
Cobalt-58	Ci	0.00E+00	0.00E+00	1.37E-03	5.49E-03
Cobalt-60	Ci	0.00E+00	0.00E+00	2.41E-03	1.67E-03
Chromium-51	Ci	0.00E+00	0.00E+00	0.00E+00	3.10E-05
Cesium-134	Ci	0.00E+00	0.00E+00	0.00E+00	8.63E-05
Cesium-137	Ci	0.00E+00	0.00E+00	3.51E-04	1.29E-03
Iron-59	Ci	0.00E+00	0.00E+00	4.23E-05	1.08E-05
Manganese-54	Ci	0.00E+00	0.00E+00	7.02E-05	1.46E-05
Niobium-95	Ci	0.00E+00	0.00E+00	1.14E-05	0.00E+00
Niobium-97	Ci	0.00E+00	0.00E+00	0.00E+00	1.67E-05
Antimony-124	Ci	0.00E+00	0.00E+00	0.00E+00	3.88E-06
Antimony-125	Ci	0.00E+00	0.00E+00	2.89E-04	4.97E-04
Tin-117m	Ci	0.00E+00	0.00E+00	0.00E+00	1.28E-05
Zirconium-97	Ci	0.00E+00	0.00E+00	0.00E+00	2.83E-06
Total	Ci	0.00E+00	0.00E+00	4.68E-03	9.25E-03
2. Tritium	Ci	1.70E+00	7.93E-01	1.83E+02	1.97E+02
3. Dissolved and Entrained Noble Gases					
Xenon-133	Ci	0.00E+00	0.00E+00	2.35E-04	2.34E-04
Xenon-135	Ci	0.00E+00	0.00E+00	2.99E-06	0.00E+00
Total	Ci	0.00E+00	0.00E+00	2.38E-04	2.34E-04
4. Gross Alpha	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00

TABLE 2B-5
SALEM GENERATING STATION - UNIT 2
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT
JULY - DECEMBER 2009
LIQUID EFFLUENTS

<u>Nuclides Released</u>	<u>Units</u>	<u>Continuous Mode</u>		<u>Batch Mode</u>	
		<u>3rd Quarter</u>	<u>4th Quarter</u>	<u>3rd Quarter</u>	<u>4th Quarter</u>
1. Fission and Activation Products					
Silver-110m	Ci	0.00E+00	0.00E+00	1.72E-05	1.30E-04
Bromine-84	Ci	0.00E+00	0.00E+00	1.86E-05	0.00E+00
Cobalt-57	Ci	0.00E+00	0.00E+00	9.77E-06	5.54E-06
Cobalt-58	Ci	0.00E+00	0.00E+00	1.08E-03	6.43E-03
Cobalt-60	Ci	0.00E+00	0.00E+00	5.72E-04	2.32E-03
Chromium-51	Ci	0.00E+00	0.00E+00	0.00E+00	4.51E-05
Cesium-134	Ci	0.00E+00	0.00E+00	0.00E+00	1.96E-04
Cesium-137	Ci	0.00E+00	0.00E+00	5.61E-05	2.26E-03
Iron-59	Ci	0.00E+00	0.00E+00	0.00E+00	6.01E-05
Manganese-54	Ci	0.00E+00	0.00E+00	0.00E+00	7.34E-05
Niobium-97	Ci	0.00E+00	0.00E+00	1.07E-05	0.00E+00
Antimony-125	Ci	0.00E+00	0.00E+00	1.99E-04	8.78E-04
Tin-117m	Ci	0.00E+00	0.00E+00	0.00E+00	3.92E-05
Tellurium-132	Ci	0.00E+00	0.00E+00	0.00E+00	5.54E-06
Zirconium-97	Ci	0.00E+00	0.00E+00	0.00E+00	6.95E-06
Total	Ci	0.00E+00	0.00E+00	1.96E-03	1.24E-02
2. Tritium	Ci	1.81E-01	2.20E-01	1.38E+02	1.45E+02
3. Dissolved and Entrained Noble Gases					
Krypton-87	Ci	0.00E+00	0.00E+00	5.72E-06	0.00E+00
Xenon-133	Ci	0.00E+00	0.00E+00	9.52E-05	3.06E-04
Xenon-135	Ci	0.00E+00	0.00E+00	6.26E-06	0.00E+00
Total	Ci	0.00E+00	0.00E+00	1.07E-04	3.06E-04
4. Gross Alpha	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00

TABLE 2B-6
HOPE CREEK GENERATING STATION
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT
JULY – DECEMBER 2009
LIQUID EFFLUENTS

<u>Nuclides Released</u>	<u>Units</u>	<u>Continuous Mode</u>		<u>Batch Mode</u>	
		<u>3rd Quarter</u>	<u>4th Quarter</u>	<u>3rd Quarter</u>	<u>4th Quarter</u>
1. Fission and Activation Products					
Silver-110m	Ci	0.00E+00	0.00E+00	0.00E+00	1.65E-05
Cerium-141	Ci	0.00E+00	0.00E+00	0.00E+00	7.07E-06
Cobalt-58	Ci	0.00E+00	0.00E+00	2.36E-05	6.35E-05
Cobalt-60	Ci	0.00E+00	0.00E+00	2.30E-03	2.44E-03
Chromium-51	Ci	0.00E+00	0.00E+00	9.29E-06	3.15E-05
Cesium-137	Ci	0.00E+00	0.00E+00	2.13E-07	1.46E-05
Iron-55	Ci	0.00E+00	0.00E+00	2.12E-03	1.20E-03
Lanthanum-140	Ci	0.00E+00	0.00E+00	0.00E+00	4.66E-05
Manganese-54	Ci	0.00E+00	0.00E+00	9.51E-04	1.43E-03
Niobium-95	Ci	0.00E+00	0.00E+00	0.00E+00	2.01E-06
Niobium-97	Ci	0.00E+00	0.00E+00	2.49E-05	1.95E-05
Tungsten-187	Ci	0.00E+00	0.00E+00	0.00E+00	3.77E-06
Yttrium-91m	Ci	0.00E+00	0.00E+00	0.00E+00	2.49E-05
Zinc-65	Ci	0.00E+00	0.00E+00	9.57E-06	6.83E-05
Total	Ci	0.00E+00	0.00E+00	5.43E-03	5.36E-03
2. Tritium	Ci	3.04E-01	2.82E-01	108E+00	1.49E+00
3. Dissolved and Entrained Noble Gases					
Xenon-133	Ci	0.00E+00	0.00E+00	2.24E-05	2.32E-06
Xenon-135	Ci	0.00E+00	0.00E+00	4.28E-05	3.80E-06
Total	Ci	0.00E+00	0.00E+00	6.53E-05	6.12E-06
4. Gross Alpha	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

TABLE 3A-1
SALEM GENERATING STATION – UNITS 1 AND 2
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT
JANUARY – JUNE 2009
SOLID WASTE AND IRRADIATED FUEL SHIPMENTS
SOLID RADWASTE SHIPPED OFFSITE FOR BURIAL OR DISPOSAL
 (Not Irradiated Fuel)

SGS			
1A. Type of Waste (Class A)	Units¹	6-Month Period	Est. Total Error
a. Resins, Filters, & Evap Bottoms	m ³	3.93E+01	25%
	Ci	1.47E+01	
b. Dry Active Waste – DAW-U-NA	m ³	2.45E+02	25%
	Ci	2.05E-01	
c. Irradiated Components	m ³	0.00E+00	25%
	Ci	0.00E+00	
d. Other Waste	m ³	0.00E+00	25%
	Ci	0.00E+00	
SGS			
1B. Type of Waste (Class B)			
a. Resins, Filters, & Evap Bottoms	m ³	8.50E+00	25%
	Ci	1.70E+02	25%
b. Dry Active Waste – DAW-U-NA	m ³	0.00E+00	25%
	Ci	0.00E+00	25%
c. Irradiated Components	m ³	0.00E+00	25%
	Ci	0.00E+00	25%
d. Other Waste	m ³	0.00E+00	25%
	Ci	0.00E+00	25%

¹ Volumes are measured, activities are estimated

2A. Estimate of Major Nuclide Composition (>1%) (Class A) – SGS

<u>Nuclides</u>	<u>Resins, Filters, Evaporator Bottoms</u>		<u>Dry Active Waste</u>	
	<u>%</u>	<u>Ci</u>	<u>%</u>	<u>Ci</u>
Tritium	5.53	8.12E-01	2.86	5.87E-03
Manganese-54	---	---	1.11	2.27E-03
Carbon-14	5.44	7.99E-01	---	---
Iron-55	12.22	1.79E+00	51.17	1.05E-01
Cobalt-58	6.43	9.45E-01	7.37	1.51E-02
Cobalt-60	13.54	1.99E+00	7.02	1.44E-02
Nickel-63	36.72	5.39E+00	23.37	4.79E-02
Cesium-134	1.35	1.98E-01	1.192	2.44E-03
Cesuim-137	15.06	2.21E+00	4.75	9.74E-03
Cerium-144	2.12	3.12E-01	---	---

2B. Estimate of Major Nuclide Composition (>1%) (Class B) – SGS

<u>Nuclides</u>	<u>Resins, Filters, Evaporator Bottoms</u>		<u>Dry Active Waste</u>	
	<u>%</u>	<u>Ci</u>	<u>%</u>	<u>Ci</u>
Iron-55	18.68	3.18E+01	---	---
Cobalt-60	8.96	1.53E+01	---	---
Nickel-63	66.23	1.13E+01	---	---
Cesuim-137	3.72	6.34E+00	---	---

3A. Solid Waste Disposal– SGS

<u>Number of Shipments</u>	<u>Mode of Transportation</u>	<u>Destination</u>	<u>Type of Containers</u>
5	Truck	Barnwell, SC	HIC
6	Truck	Barnwell, SC	HIC
3	Truck	Memphis, TN	Seavan
2	Truck	Memphis, TN	Seavan

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

TABLE 3A-2
SALEM GENERATING STATION – UNITS 1 AND 2
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT
JULY – DECEMBER 2009
SOLID WASTE AND IRRADIATED FUEL SHIPMENTS
SOLID RADWASTE SHIPPED OFFSITE FOR BURIAL OR DISPOSAL
 (Not Irradiated Fuel)

SGS		6-Month	Est. Total
1A. Type of Waste (Class A)	Units ¹	Period	Error
a. Resins, Filters, Evaporator Bottoms	m ³	0.00E+00	25%
	Ci	0.00E+00	
b. Dry Active Waste- DAW-U-NA	m ³	4.89E+02	25%
	Ci	1.37E+00	
c. Irradiated Components	m ³	0.00E+00	25%
	Ci	0.00E+00	
d. Other Waste	m ³	0.00E+00	25%
	Ci	0.00E+00	
SGS			
1B. Type of Waste (Class B)			
a. Resins, Filters, Evaporator Bottoms	m ³	8.13E+00	25%
	Ci	3.76E+02	
b. Dry Active Waste- DAW-U-NA	m ³	0.00E+00	25%
	Ci	0.00E+00	
c. Irradiated Components	m ³	0.00E+00	25%
	Ci	0.00E+00	
d. Other Waste	m ³	0.00E+00	25%
	Ci	0.00E+00	
SGS			
1C. Type of Waste (Class C)			
a. Resins, Filters, Evaporator Bottoms	m ³	2.83E+00	25%
	Ci	2.39E+02	
b. Dry Active Waste- DAW-U-NA	m ³	0.00E+00	25%
	Ci	0.00E+00	
c. Irradiated Components	m ³	0.00E+00	25%
	Ci	0.00E+00	
d. Other Waste	m ³	0.00E+00	25%
	Ci	0.00E+00	

¹ Volumes are measured, activities are estimated

2A. Estimate of Major Nuclide Composition (>1%) (Class A) – SGS

<u>Nuclides</u>	<u>Resins, Filters, Evaporator Bottoms</u>		<u>Dry Active Waste</u>	
	<u>%</u>	<u>Ci</u>	<u>%</u>	<u>Ci</u>
Tritium	---	---	2.84	3.89E-02
Manganese-54	---	---	1.12	1.53E-02
Iron-55	---	---	50.94	6.99E-01
Cobalt-58	---	---	7.88	1.08E-01
Cobalt-60	---	---	6.97	9.56E-02
Nickel-63	---	---	23.13	3.17E-01
Cesium-134	---	---	1.19	1.63E-02
Cesium-137	---	---	4.71	6.45E-02

2B. Estimate of Major Nuclide Composition (>1%) (Class B) – SGS

<u>Nuclides</u>	<u>Resins, Filters, Evaporator Bottoms</u>		<u>Dry Active Waste</u>	
	<u>%</u>	<u>Ci</u>	<u>%</u>	<u>Ci</u>
Iron-55	14.61	5.50E+01	---	---
Cobalt-60	9.45	3.55E+01	---	---
Nickel-63	67.98	2.56E+02	---	---
Cesium-137	6.46	2.43E+01	---	---

2C. Estimate of Major Nuclide Composition (>1%) (Class C) – SGS

<u>Nuclides</u>	<u>Resins, Filters, Evaporator Bottoms</u>		<u>Dry Active Waste</u>	
	<u>%</u>	<u>Ci</u>	<u>%</u>	<u>Ci</u>
Iron-55	2.07	4.95E+00	---	---
Cobalt-60	4.36	1.04E+01	---	---
Nickel-63	82.31	1.96E+02	---	---
Cesium-134	1.21	2.88E+00	---	---
Cesium-137	9.49	2.27E+01	---	---

3A. Solid Waste Disposal– SGS

<u>Number of Shipments</u>	<u>Mode of Transportation</u>	<u>Destination</u>	<u>Type of Containers</u>
4	Truck	Barnwell, SC	HIC
10	Truck	Memphis, TN	Seavan

TABLE 3B-1
HOPE CREEK GENERATING STATION
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT
JANUARY – JUNE 2009
SOLID WASTE AND IRRADIATED FUEL SHIPMENTS
SOLID RADWASTE SHIPPED OFFSITE FOR BURIAL OR DISPOSAL
 (Not Irradiated Fuel)

HCGS		Units¹	6-Month Period	Est. Total Error
1A. Type of Waste (Class A)				
a. Resins, Filters, Evaporator Bottoms	m ³		2.14E+01	25%
	Ci		1.10E+02	
b. Dry Active Waste – scrap metal	m ³		2.83E+02	25%
	Ci		7.22E-01	
c. Irradiated Components	m ³		0.00E+00	25%
	Ci		0.00E+00	
d. Other Waste	m ³		2.55E+00	25%
	Ci		3.38E-02	

¹ Volumes are measured, activities are estimated

2A. Estimate of Major Nuclide Composition (>1%) (Class A) – HCGS

<u>Nuclides</u>	Resins, Filters and Evaporator Bottoms		Dry Active Waste	
	%	Ci	%	Ci
Chromium-51	---	---	3.17	2.29E-02
Manganese-54	6.22	6.84E+00	2.35	1.70E-02
Iron-55	69.24	7.62E+01	83.19	6.01E-01
Iron-59	---	---	2.33	1.68E-02
Cobalt-60	19.05	2.10E+01	6.95	5.02E-02
Nickle-63	1.08	1.18E+00	---	---
Zinc-65	1.17	1.29E+00	---	---
Cesium-134	1.07	1.18E+00	---	---
Cesium-137	1.75	1.92E+00	---	---

2A. Estimate of Major Nuclide Composition (>1%) (Class A) – HCGS

<u>Nuclides</u>	Other Wastes			
	%	Ci	%	Ci
Manganese-54	2.79	9.44E-04		
Iron-55	70.85	2.40E-02		
Cobalt-60	23.28	7.88E-03		
Cesium-137	1.74	5.90E-04		

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

3A. Solid Waste Disposal– HCGS

<u>Number of Shipments</u>	<u>Mode of Transportation</u>	<u>Destination</u>	<u>Type of Containers</u>
4	Truck	Barnwell, SC	HIC
4	Truck	Barnwell, SC	HIC
1	Truck	Erwin, TN	Sea van
5	Truck	Memphis, TN	Seavan

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

TABLE 3B-2
HOPE CREEK GENERATING STATION
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT
JULY – DECEMBER 2009
SOLID WASTE AND IRRADIATED FUEL SHIPMENTS
SOLID RADWASTE SHIPPED OFFSITE FOR BURIAL OR DISPOSAL
 (Not Irradiated Fuel)

HCGS		6-Month	Est. Total
1A. Type of Waste (Class A)	Units ¹	Period	Error
a. Resins, Filters, Evaporator Bottoms	m ³	1.07E+01	25%
	Ci	2.50E+01	
b. Dry Active Waste	m ³	1.70E+02	25%
	Ci	4.62E+01	
c. Irradiated Components	m ³	0.00E+00	25%
	Ci	0.00E+00	
d. Other Waste	m ³	2.78E+01	25%
	Ci	5.88E-05	

¹ Volumes are measured, activities are estimated

2A. Estimate of Major Nuclide Composition (>1%) (Class A) – HCGS

<u>Nuclides</u>	Resins, Filters, Evap Bottoms		Dry Active Waste	
	%	Ci	%	Ci
Manganese-54	5.31	1.33E+00	2.53	1.17E-02
Iron-55	68.56	1.71E+01	86.07	3.97E-01
Cobalt-60	19.53	4.89E+00	7.65	3.53E-02
Zinc-65	1.14	2.85E-01	---	---
Cesium-134	1.37	3.42E-01	---	---
Cesium-137	2.40	5.99E-01	---	---
<u>Nuclides</u>	Other Waste			
	%	Ci		
Manganese-54	3.20	1.88E-06		
Iron-55	85.30	5.02E-05		
Cobalt-60	9.23	5.43E-06		
Cerium-144	1.97	1.16E-06		

3A. Solid Waste Disposal– HCGS

<u>Number of Shipments</u>	<u>Mode of Transportation</u>	<u>Destination</u>	<u>Type of Containers</u>
4	Truck	Barnwell, SC	HIC
2	Truck	Kingston, TN	Metal Box
3	Truck	Memphis, TN	Seavan

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

TABLE 4A-1
SALEM GENERATING STATION - UNIT 1
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT
JANUARY – JUNE 2009
SUMMARY SHEET FOR RADIOACTIVE EFFLUENTS RELEASED
IN A BATCH MODE

BATCH RELEASES ONLY

1. Dates:	January 1, 2009 - March 31, 2009	
2. Type of release:	Gaseous	
3. Number of releases during quarter:	197	
4. Total time duration for all releases of type listed above:	1.59E+04	Min.
5. Maximum duration for release of type listed above:	1.32E+02	Min.
6. Average duration for release of type listed above:	8.07E+01	Min.
7. Minimum duration for release of type listed above:	2.50E+01	Min.
8. Average stream flow (dilution flow) during period of release:	N/A	

BATCH RELEASES ONLY

1. Dates:	April 1, 2009 - June 30, 2009	
2. Type of release:	Gaseous	
3. Number of releases during quarter:	190	
4. Total time duration for all releases of type listed above:	1.57E+04	Min.
5. Maximum duration for release of type listed above:	1.53E+03	Min.
6. Average duration for release of type listed above:	8.28E+01	Min.
7. Minimum duration for release of type listed above:	3.50E+01	Min.
8. Average stream flow (dilution flow) during period of release:	N/A	

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

TABLE 4A-1 (continued)
SALEM GENERATING STATION - UNIT 1
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT
JULY – SEPTEMBER 2009
SUMMARY SHEET FOR RADIOACTIVE EFFLUENTS RELEASED
IN A BATCH MODE

BATCH RELEASES ONLY

1. Dates:	July 1, 2009 - September 30, 2009	
2. Type of release:	Gaseous	
3. Number of releases during quarter:	184	
4. Total time duration for all releases of type listed above:	1.45E+04	Min.
5. Maximum duration for release of type listed above:	1.90E+02	Min.
6. Average duration for release of type listed above:	7.86E+01	Min.
7. Minimum duration for release of type listed above:	3.10E+01	Min.
8. Average stream flow (dilution flow) during period of release:	N/A	

BATCH RELEASES ONLY

1. Dates:	October 1, 2009 – December 31, 2009	
2. Type of release:	Gaseous	
3. Number of releases during quarter:	187	
4. Total time duration for all releases of type listed above:	1.42E+04	Min.
5. Maximum duration for release of type listed above:	1.44E+03	Min.
6. Average duration for release of type listed above:	7.6E+01	Min.
7. Minimum duration for release of type listed above:	4.50E+01	Min.
8. Average stream flow (dilution flow) during period of release:	N/A	

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

TABLE 4A-2
SALEM GENERATING STATION - UNIT 2
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT
JANUARY – JUNE 2009
SUMMARY SHEET FOR RADIOACTIVE EFFLUENTS RELEASED
IN A BATCH MODE

BATCH RELEASES ONLY

1. Dates:	January 1, 2009 – March 31, 2009		
2. Type of release:	Gaseous		
3. Number of releases during quarter:	122		
4. Total time duration for all releases of type listed above:	8.51E+03	Min.	
5. Maximum duration for release of type listed above:	1.22E+02	Min.	
6. Average duration for release of type listed above:	6.97E+01	Min.	
7. Minimum duration for release of type listed above:	45.00	Min.	
8. Average stream flow (dilution flow) during period of release:	N/A		

BATCH RELEASES ONLY

1. Dates:	April 1, 2009 – June 30, 2009		
2. Type of release:	Gaseous		
3. Number of releases during quarter:	109		
4. Total time duration for all releases of type listed above:	6.92E+03	Min.	
5. Maximum duration for release of type listed above:	1.15E+02	Min.	
6. Average duration for release of type listed above:	6.34E+01	Min.	
7. Minimum duration for release of type listed above:	4.40E+01	Min.	
8. Average stream flow (dilution flow) during period of release:	N/A		

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

TABLE 4A-2 (continued)
SALEM GENERATING STATION - UNIT 2
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT
JANUARY – DECEMBER 2009
SUMMARY SHEET FOR RADIOACTIVE EFFLUENTS RELEASED
IN A BATCH MODE

BATCH RELEASES ONLY

1. Dates:	July 1, 2009 – September 30, 2009		
2. Type of release:	Gaseous		
3. Number of releases during quarter:	106		
4. Total time duration for all releases of type listed above:	6.91E+03	Min.	
5. Maximum duration for release of type listed above:	1.67E+02	Min.	
6. Average duration for release of type listed above:	6.52E+01	Min.	
7. Minimum duration for release of type listed above:	4.30E+01	Min.	
8. Average stream flow (dilution flow) during period of release:	N/A		

BATCH RELEASES ONLY

1. Dates:	October 1, 2009 – December 31, 2009		
2. Type of release:	Gaseous		
3. Number of releases during quarter:	76		
4. Total time duration for all releases of type listed above:	9.63E+03	Min.	
5. Maximum duration for release of type listed above:	4.35E+03	Min.	
6. Average duration for release of type listed above:	1.27E+01	Min.	
7. Minimum duration for release of type listed above:	1.60E+01	Min.	
8. Average stream flow (dilution flow) during period of release:	N/A		

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

TABLE 4A-3
HOPE CREEK GENERATING STATION
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT
JANUARY – JUNE 2009
SUMMARY SHEET FOR RADIOACTIVE EFFLUENTS RELEASED
IN A BATCH MODE

BATCH RELEASES ONLY

1. Dates:	January 1, 2009 – March 31, 2009	
2. Type of release:	Gaseous	
3. Number of releases during quarter:	0	
4. Total time duration for all releases of type listed above:	0.00E+00	Min.
5. Maximum duration for release of type listed above:	0.00E+00	Min.
6. Average duration for release of type listed above:	0.00E+00	Min.
7. Minimum duration for release of type listed above:	0.00E+00	Min.
8. Average stream flow (dilution flow) during period of release:	N/A	

BATCH RELEASES ONLY

1. Dates:	April 1, 2009 – June 30, 2009	
2. Type of release:	Gaseous	
3. Number of releases during quarter:	3	
4. Total time duration for all releases of type listed above:	5.71E+03	Min.
5. Maximum duration for release of type listed above:	3.20E+03	Min.
6. Average duration for release of type listed above:	1.90E+03	Min.
7. Minimum duration for release of type listed above:	1.88E+02	Min.
8. Average stream flow (dilution flow) during period of release:	N/A	

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

BATCH RELEASES ONLY

1. Dates:	July 1, 2009 – September 30, 2009		
2. Type of release:	Gaseous		
3. Number of releases during quarter:	0		
4. Total time duration for all releases of type listed above:	0.00E+00	Min.	
5. Maximum duration for release of type listed above:	0.00E+00	Min.	
6. Average duration for release of type listed above:	0.00E+00	Min.	
7. Minimum duration for release of type listed above:	0.00E+00	Min.	
8. Average stream flow (dilution flow) during period of release:	N/A		

BATCH RELEASES ONLY

1. Dates:	October 1, 2009 – December 31, 2009		
2. Type of release:	Gaseous		
3. Number of releases during quarter:	0		
4. Total time duration for all releases of type listed above:	0.00E+00	Min.	
5. Maximum duration for release of type listed above:	0.00E+00	Min.	
6. Average duration for release of type listed above:	0.00E+00	Min.	
7. Minimum duration for release of type listed above:	0.00E+00	Min.	
8. Average stream flow (dilution flow) during period of release:	N/A		

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

TABLE 4B-1
SALEM GENERATING STATION - UNIT 1
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT
JANUARY – JUNE 2009
SUMMARY SHEET FOR RADIOACTIVE EFFLUENTS RELEASED
IN A BATCH MODE

BATCH RELEASES ONLY

1. Dates:	January 1, 2009 – March 31, 2009		
2. Type of release:	Liquid		
3. Number of releases during quarter:	13		
4. Total time duration for all releases of type listed above:	3.60E+03	Min.	
5. Maximum duration for release of type listed above:	4.55E+02	Min.	
6. Average duration for release of type listed above:	2.77E+02	Min.	
7. Minimum duration for release of type listed above:	1.37E+02	Min.	
8. Average stream flow (dilution flow) during period of release:	1.01E+06	GPM	

BATCH RELEASES ONLY

1. Dates:	April 1, 2009 – June 30, 2009		
2. Type of release:	Liquid		
3. Number of releases during quarter:	19		
4. Total time duration for all releases of type listed above:	4.71E+03	Min.	
5. Maximum duration for release of type listed above:	4.40E+02	Min.	
6. Average duration for release of type listed above:	2.48E+02	Min.	
7. Minimum duration for release of type listed above:	8.30E-01	Min.	
8. Average stream flow (dilution flow) during period of release:	1.05E+06	GPM	

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

TABLE 4B-1 (continued)
SALEM GENERATING STATION - UNIT 1
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT
JULY – DECEMBER 2009
SUMMARY SHEET FOR RADIOACTIVE EFFLUENTS RELEASED
IN A BATCH MODE

BATCH RELEASES ONLY

1. Dates:	July 1, 2009 – September 30, 2009		
2. Type of release:	Liquid		
3. Number of releases during quarter:	27		
4. Total time duration for all releases of type listed above:	6.23E+03	Min.	
5. Maximum duration for release of type listed above:	6.44E+02	Min.	
6. Average duration for release of type listed above:	2.30E+02	Min.	
7. Minimum duration for release of type listed above:	5.00E-02	Min.	
8. Average stream flow (dilution flow) during period of release:	1.10E+06	GPM	

BATCH RELEASES ONLY

1. Dates:	October 1, 2009 – December 31, 2009		
2. Type of release:	Liquid		
3. Number of releases during quarter:	33		
4. Total time duration for all releases of type listed above:	8.11E+03	Min.	
5. Maximum duration for release of type listed above:	5.33E+02	Min.	
6. Average duration for release of type listed above:	2.45E+02	Min.	
7. Minimum duration for release of type listed above:	3.00E-02	Min.	
8. Average stream flow (dilution flow) during period of release:	1.10E+06	GPM	

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

TABLE 4B-2
SALEM GENERATING STATION - UNIT 2
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT
JANUARY – JUNE 2009
SUMMARY SHEET FOR RADIOACTIVE EFFLUENTS RELEASED
IN A BATCH MODE

BATCH RELEASES ONLY

1. Dates:	January 1, 2009 – March 31, 2009	
2. Type of release:	Liquid	
3. Number of releases during quarter:	8	
4. Total time duration for all releases of type listed above:	2.84E+03	Min.
5. Maximum duration for release of type listed above:	4.41E+02	Min.
6. Average duration for release of type listed above:	3.55E+02	Min.
7. Minimum duration for release of type listed above:	3.03E+02	Min.
8. Average stream flow (dilution flow) during period of release:	1.85E+06	GPM

BATCH RELEASES ONLY

1. Dates:	April 1, 2009 – June 30, 2009	
2. Type of release:	Liquid	
3. Number of releases during quarter:	11	
4. Total time duration for all releases of type listed above:	3.98E+03	Min.
5. Maximum duration for release of type listed above:	4.73E+02	Min.
6. Average duration for release of type listed above:	3.62E+02	Min.
7. Minimum duration for release of type listed above:	2.56E+02	Min.
8. Average stream flow (dilution flow) during period of release:	1.90E+06	GPM

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

TABLE 4B-2 (continued)
SALEM GENERATING STATION - UNIT 2
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT
JULY – DECEMBER 2009
SUMMARY SHEET FOR RADIOACTIVE EFFLUENTS RELEASED
IN A BATCH MODE

BATCH RELEASES ONLY

1. Dates:	July 1, 2009 – September 30, 2009		
2. Type of release:	Liquid		
3. Number of releases during quarter:	12		
4. Total time duration for all releases of type listed above:	4.38E+03	Min.	
5. Maximum duration for release of type listed above:	5.80E+02	Min.	
6. Average duration for release of type listed above:	3.65E+02	Min.	
7. Minimum duration for release of type listed above:	3.05E+02	Min.	
8. Average stream flow (dilution flow) during period of release:	2.05E+06	GPM	

BATCH RELEASES ONLY

1. Dates:	October 1, 2009 – December 31, 2009		
2. Type of release:	Liquid		
3. Number of releases during quarter:	25		
4. Total time duration for all releases of type listed above:	8.51E+03	Min.	
5. Maximum duration for release of type listed above:	5.92E+02	Min.	
6. Average duration for release of type listed above:	3.40E+02	Min.	
7. Minimum duration for release of type listed above:	2.35E+02	Min.	
8. Average stream flow (dilution flow) during period of release:	1.76E+06	GPM	

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

TABLE 4B-3
HOPE CREEK GENERATING STATION
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT
JANUARY – DECEMBER 2009
SUMMARY SHEET FOR RADIOACTIVE EFFLUENTS RELEASED
IN A BATCH MODE

BATCH RELEASES ONLY

1. Dates:	January 1, 2009 – March 31, 2009	
2. Type of release:	Liquids ODCM Table Heavy Haul	
3. Number of releases during quarter:	18	
4. Total time duration for all releases of type listed above:	1.19E+03	Min.
5. Maximum duration for release of type listed above:	8.14E+01	Min.
6. Average duration for release of type listed above:	6.60E+01	Min.
7. Minimum duration for release of type listed above:	3.25E+01	Min.
8. Average stream flow (dilution flow) during period of release:	2.43E+04	GPM

BATCH RELEASES ONLY

1. Dates:	April 1, 2009 – June 30, 2009	
2. Type of release:	Liquid	
3. Number of releases during quarter:	110	
4. Total time duration for all releases of type listed above:	7.84E+03	Min.
5. Maximum duration for release of type listed above:	9.03E+01	Min.
6. Average duration for release of type listed above:	7.13E+01	Min.
7. Minimum duration for release of type listed above:	1.80E+01	Min.
8. Average stream flow (dilution flow) during period of release:	3.26E+04	GPM

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

BATCH RELEASES ONLY

1. Dates:	July 1, 2009 – September 30, 2009		
2. Type of release:	Liquid		
3. Number of releases during quarter:	22		
4. Total time duration for all releases of type listed above:	1.66E+03	Min.	
5. Maximum duration for release of type listed above:	8.52E+01	Min.	
6. Average duration for release of type listed above:	7.54E+01	Min.	
7. Minimum duration for release of type listed above:	4.92E+01	Min.	
8. Average stream flow (dilution flow) during period of release:	3.92E+04	GPM	

BATCH RELEASES ONLY

1. Dates:	October 1, 2009 – December 31, 2009		
2. Type of release:	Liquid		
3. Number of releases during quarter:	15		
4. Total time duration for all releases of type listed above:	1.05E+03	Min.	
5. Maximum duration for release of type listed above:	8.01E+01	Min.	
6. Average duration for release of type listed above:	7.02E+01	Min.	
7. Minimum duration for release of type listed above:	4.60E+01	Min.	
8. Average stream flow (dilution flow) during period of release:	2.80E+04	GPM	

APPENDIX A

METEOROLOGICAL DATA

Lapse Rate
Wind Distributions
300 – 33 foot

1/2009 – 3/2009

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 01/09-03/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
 BY ATMOSPHERIC STABILITY CLASS
 WIND: 33 FT
 DELTA T: (300-33FT)

LAPSE RATE: LE -1.90 DEG C/100M
 CLASS A

DIRECTION	WIND SPEED GROUPS (MPH)														SUM PERCENT	
	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	SUM PERCENT
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	0	0.0	0	0.0	6	0.3	0	0.0	0	0.0	0	0.0	6	0.3
NNE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
NE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
ENE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
E	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
ESE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SE	0	0.0	0	0.0	0	0.0	5	0.2	3	0.1	0	0.0	0	0.0	8	0.4
SSE	0	0.0	0	0.0	1	0.0	3	0.1	0	0.0	0	0.0	0	0.0	4	0.2
S	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
SSW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SW	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
WSW	0	0.0	0	0.0	3	0.1	9	0.4	0	0.0	0	0.0	0	0.0	12	0.6
W	0	0.0	0	0.0	1	0.0	5	0.2	2	0.1	5	0.2	0	0.0	13	0.6
WNW	0	0.0	0	0.0	1	0.0	4	0.2	3	0.1	3	0.1	0	0.0	11	0.5
NW	0	0.0	0	0.0	1	0.0	15	0.7	34	1.6	3	0.1	0	0.0	53	2.5
NNW	0	0.0	0	0.0	0	0.0	11	0.5	7	0.3	2	0.1	0	0.0	20	0.9
	0	0.0	0	0.0	9	0.4	58	2.7	49	2.3	13	0.6	0	0.0	129	6.0

MEAN WIND SPEED: 13.0
 MISSING: 0

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 01/09-03/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS
WIND: 33 FT
DELTA T: (300-33FT)

LAPSE RATE: -1.89 TO -1.70 DEG C/100M
CLASS B

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	0	0.0	0	0.0	4	0.2	6	0.3	0	0.0	0	0.0	10	0.5
NNE	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	1	0.0
NE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
ENE	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
E	0	0.0	0	0.0	2	0.1	0	0.0	0	0.0	0	0.0	0	0.0	2	0.1
ESE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SE	0	0.0	0	0.0	0	0.0	2	0.1	1	0.0	0	0.0	0	0.0	3	0.1
SSE	0	0.0	0	0.0	1	0.0	3	0.1	0	0.0	0	0.0	0	0.0	4	0.2
S	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
SSW	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	1	0.0
SW	0	0.0	0	0.0	2	0.1	1	0.0	0	0.0	0	0.0	0	0.0	3	0.1
WSW	0	0.0	0	0.0	5	0.2	4	0.2	0	0.0	0	0.0	0	0.0	9	0.4
W	0	0.0	0	0.0	3	0.1	2	0.1	1	0.0	1	0.0	0	0.0	7	0.3
WNW	0	0.0	0	0.0	2	0.1	6	0.3	1	0.0	1	0.0	1	0.0	11	0.5
NW	0	0.0	0	0.0	0	0.0	10	0.5	12	0.6	1	0.0	0	0.0	23	1.1
NNW	0	0.0	0	0.0	2	0.1	6	0.3	8	0.4	1	0.0	0	0.0	17	0.8
	0	0.0	0	0.0	19	0.9	40	1.9	29	1.3	4	0.2	1	0.0	93	4.3

MEAN WIND SPEED: 11.3
MISSING: 0

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 01/09-03/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
 BY ATMOSPHERIC STABILITY CLASS
 WIND: 33 FT
 DELTA T: (300-33FT)

LAPSE RATE: -1.69 TO -1.50 DEG C/100M
 CLASS C

DIRECTION	WIND SPEED GROUPS (MPH)														SUM PERCENT	
	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	SUM PERCENT
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	0	0.0	5	0.2	3	0.1	1	0.0	0	0.0	0	0.0	9	0.4
NNE	0	0.0	0	0.0	1	0.0	3	0.1	0	0.0	0	0.0	0	0.0	4	0.2
NE	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
ENE	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	1	0.0
E	0	0.0	0	0.0	3	0.1	0	0.0	0	0.0	0	0.0	0	0.0	3	0.1
ESE	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
SE	0	0.0	0	0.0	0	0.0	1	0.0	2	0.1	0	0.0	0	0.0	3	0.1
SSE	0	0.0	0	0.0	3	0.1	2	0.1	1	0.0	0	0.0	0	0.0	6	0.3
S	0	0.0	0	0.0	2	0.1	0	0.0	0	0.0	0	0.0	0	0.0	2	0.1
SSW	0	0.0	0	0.0	0	0.0	2	0.1	0	0.0	0	0.0	0	0.0	2	0.1
SW	0	0.0	0	0.0	3	0.1	0	0.0	0	0.0	0	0.0	0	0.0	3	0.1
WSW	0	0.0	0	0.0	3	0.1	0	0.0	0	0.0	0	0.0	0	0.0	3	0.1
W	0	0.0	0	0.0	1	0.0	3	0.1	3	0.1	1	0.0	2	0.1	10	0.5
WNW	0	0.0	0	0.0	4	0.2	3	0.1	6	0.3	1	0.0	0	0.0	14	0.6
NW	0	0.0	0	0.0	3	0.1	5	0.2	12	0.6	0	0.0	0	0.0	20	0.9
NNW	0	0.0	0	0.0	1	0.0	1	0.0	6	0.3	2	0.1	0	0.0	10	0.5
	0	0.0	0	0.0	31	1.4	24	1.1	31	1.4	4	0.2	2	0.1	92	4.3

MEAN WIND SPEED: 11.1

MISSING: 0

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 01/09-03/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS
WIND: 33 FT
DELTA T: (300-33FT)

LAPSE RATE: -1.49 TO -0.50 DEG C/100M
CLASS D

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	6	0.3	14	0.6	21	1.0	12	0.6	4	0.2	0	0.0	57	2.6
NNE	0	0.0	1	0.0	23	1.1	30	1.4	6	0.3	1	0.0	0	0.0	61	2.8
NE	0	0.0	2	0.1	30	1.4	19	0.9	0	0.0	0	0.0	0	0.0	51	2.4
ENE	0	0.0	6	0.3	14	0.6	4	0.2	0	0.0	0	0.0	0	0.0	24	1.1
E	0	0.0	7	0.3	13	0.6	0	0.0	0	0.0	0	0.0	0	0.0	20	0.9
ESE	0	0.0	3	0.1	2	0.1	1	0.0	0	0.0	0	0.0	0	0.0	6	0.3
SE	0	0.0	3	0.1	11	0.5	26	1.2	22	1.0	0	0.0	0	0.0	62	2.9
SSE	0	0.0	1	0.0	20	0.9	22	1.0	26	1.2	10	0.5	0	0.0	79	3.7
S	0	0.0	5	0.2	9	0.4	11	0.5	16	0.7	0	0.0	0	0.0	41	1.9
SSW	0	0.0	2	0.1	13	0.6	3	0.1	0	0.0	0	0.0	0	0.0	18	0.8
SW	0	0.0	5	0.2	9	0.4	8	0.4	0	0.0	0	0.0	0	0.0	22	1.0
WSW	0	0.0	3	0.1	17	0.8	9	0.4	1	0.0	0	0.0	0	0.0	30	1.4
W	0	0.0	1	0.0	6	0.3	23	1.1	16	0.7	2	0.1	2	0.1	50	2.3
WNW	0	0.0	3	0.1	19	0.9	31	1.4	39	1.8	4	0.2	1	0.0	97	4.5
NW	0	0.0	3	0.1	9	0.4	57	2.6	80	3.7	4	0.2	0	0.0	153	7.1
NNW	0	0.0	6	0.3	10	0.5	37	1.7	16	0.7	5	0.2	0	0.0	74	3.4
	0	0.0	57	2.6	219	10.2	302	14.0	234	10.8	30	1.4	3	0.1	845	39.2

MEAN WIND SPEED: 10.2
MISSING: 0

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 01/09-03/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
 BY ATMOSPHERIC STABILITY CLASS
 WIND: 33 FT
 DELTA T: (300-33FT)

LAPSE RATE: -0.49 TO 1.50 DEG C/100M
 CLASS E

DIRECTION	WIND SPEED GROUPS (MPH)															
	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	7	0.3	30	1.4	23	1.1	6	0.3	0	0.0	0	0.0	66	3.1
NNE	0	0.0	4	0.2	16	0.7	0	0.0	1	0.0	0	0.0	0	0.0	21	1.0
NE	0	0.0	5	0.2	11	0.5	0	0.0	0	0.0	0	0.0	0	0.0	16	0.7
ENE	0	0.0	6	0.3	2	0.1	0	0.0	0	0.0	0	0.0	0	0.0	8	0.4
E	0	0.0	6	0.3	7	0.3	0	0.0	0	0.0	0	0.0	0	0.0	13	0.6
ESE	0	0.0	2	0.1	7	0.3	1	0.0	0	0.0	0	0.0	0	0.0	10	0.5
SE	0	0.0	6	0.3	10	0.5	35	1.6	3	0.1	0	0.0	0	0.0	54	2.5
SSE	0	0.0	3	0.1	25	1.2	22	1.0	5	0.2	0	0.0	0	0.0	55	2.5
S	0	0.0	3	0.1	7	0.3	13	0.6	6	0.3	0	0.0	0	0.0	29	1.3
SSW	0	0.0	1	0.0	18	0.8	8	0.4	0	0.0	2	0.1	0	0.0	29	1.3
SW	0	0.0	6	0.3	23	1.1	13	0.6	3	0.1	0	0.0	0	0.0	45	2.1
WSW	0	0.0	7	0.3	21	1.0	7	0.3	3	0.1	0	0.0	0	0.0	38	1.8
W	0	0.0	7	0.3	18	0.8	13	0.6	2	0.1	1	0.0	0	0.0	41	1.9
WNW	0	0.0	5	0.2	26	1.2	18	0.8	8	0.4	0	0.0	0	0.0	57	2.6
NW	0	0.0	8	0.4	34	1.6	78	3.6	16	0.7	0	0.0	0	0.0	136	6.3
NNW	0	0.0	6	0.3	35	1.6	47	2.2	6	0.3	0	0.0	0	0.0	94	4.4
	0	0.0	82	3.8	290	13.4	278	12.9	59	2.7	3	0.1	0	0.0	712	33.0

MEAN WIND SPEED: 7.7
 MISSING: 0

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 01/09-03/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED

BY ATMOSPHERIC STABILITY CLASS

WIND: 33 FT

DELTA T: (300-33FT)

LAPSE RATE: 1.51 TO 4.00 DEG C/100M
CLASS F

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	2	0.1	7	0.3	2	0.1	0	0.0	0	0.0	0	0.0	11	0.5
NNE	0	0.0	0	0.0	10	0.5	0	0.0	0	0.0	0	0.0	0	0.0	10	0.5
NE	0	0.0	0	0.0	2	0.1	0	0.0	0	0.0	0	0.0	0	0.0	2	0.1
ENE	0	0.0	4	0.2	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	4	0.2
E	0	0.0	5	0.2	6	0.3	0	0.0	0	0.0	0	0.0	0	0.0	11	0.5
ESE	0	0.0	2	0.1	11	0.5	0	0.0	0	0.0	0	0.0	0	0.0	13	0.6
SE	0	0.0	2	0.1	15	0.7	16	0.7	3	0.1	0	0.0	0	0.0	36	1.7
SSE	0	0.0	0	0.0	7	0.3	8	0.4	0	0.0	0	0.0	0	0.0	15	0.7
S	0	0.0	2	0.1	3	0.1	4	0.2	7	0.3	4	0.2	0	0.0	20	0.9
SSW	0	0.0	1	0.0	6	0.3	9	0.4	3	0.1	1	0.0	0	0.0	20	0.9
SW	0	0.0	2	0.1	8	0.4	6	0.3	3	0.1	0	0.0	0	0.0	19	0.9
WSW	0	0.0	0	0.0	8	0.4	6	0.3	0	0.0	0	0.0	0	0.0	14	0.6
W	0	0.0	0	0.0	6	0.3	0	0.0	0	0.0	0	0.0	0	0.0	6	0.3
WNW	0	0.0	2	0.1	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	3	0.1
NW	0	0.0	1	0.0	4	0.2	2	0.1	0	0.0	0	0.0	0	0.0	7	0.3
NNW	0	0.0	0	0.0	4	0.2	3	0.1	0	0.0	0	0.0	0	0.0	7	0.3
	0	0.0	23	1.1	97	4.5	57	2.6	16	0.7	5	0.2	0	0.0	198	9.2

MEAN WIND SPEED: 7.6
MISSING: 0

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 01/09-03/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS

WIND: 33 FT
DELTA T: (300-33FT)

LAPSE RATE:

GT 4.00 DEG C/100M
CLASS G

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT
N	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
NNE	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
NE	0	0.0	1	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	0.1
ENE	0	0.0	3	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	3	0.1
E	0	0.0	1	0.0	3	0.1	0	0.0	0	0.0	0	0.0	0	0.0	4	0.2
ESE	0	0.0	0	0.0	4	0.2	1	0.0	0	0.0	0	0.0	0	0.0	5	0.2
SE	0	0.0	2	0.1	14	0.6	19	0.9	8	0.4	0	0.0	0	0.0	43	2.0
SSE	0	0.0	0	0.0	3	0.1	7	0.3	1	0.0	0	0.0	0	0.0	11	0.5
S	0	0.0	0	0.0	1	0.0	6	0.3	1	0.0	0	0.0	0	0.0	8	0.4
SSW	0	0.0	3	0.1	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	4	0.2
SW	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
WSW	0	0.0	0	0.0	2	0.1	1	0.0	0	0.0	0	0.0	0	0.0	3	0.1
W	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
WNW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
NW	0	0.0	2	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	0.1
NNW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	0	0.0	15	0.7	28	1.3	35	1.6	10	0.5	0	0.0	0	0.0	88	4.1

MEAN WIND SPEED: 7.7
MISSING: 0

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 01/09-03/09

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS
WIND: 33 FT
DELTA T: (300-33FT)

ALL STABILITY CLASSES

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	15	0.7	56	2.6	59	2.7	25	1.2	4	0.2	0	0.0	159	7.4
NNE	0	0.0	6	0.3	50	2.3	34	1.6	7	0.3	1	0.0	0	0.0	98	4.5
NE	0	0.0	8	0.4	45	2.1	19	0.9	0	0.0	0	0.0	0	0.0	72	3.3
ENE	0	0.0	19	0.9	17	0.8	5	0.2	0	0.0	0	0.0	0	0.0	41	1.9
E	0	0.0	19	0.9	34	1.6	0	0.0	0	0.0	0	0.0	0	0.0	53	2.5
ESE	0	0.0	7	0.3	25	1.2	3	0.1	0	0.0	0	0.0	0	0.0	35	1.6
SE	0	0.0	13	0.6	50	2.3	104	4.8	42	1.9	0	0.0	0	0.0	209	9.7
SSE	0	0.0	4	0.2	60	2.8	67	3.1	33	1.5	10	0.5	0	0.0	174	8.1
S	0	0.0	10	0.5	24	1.1	34	1.6	30	1.4	4	0.2	0	0.0	102	4.7
SSW	0	0.0	7	0.3	37	1.7	24	1.1	3	0.1	3	0.1	0	0.0	74	3.4
SW	0	0.0	14	0.6	46	2.1	28	1.3	6	0.3	0	0.0	0	0.0	94	4.4
WSW	0	0.0	10	0.5	59	2.7	36	1.7	4	0.2	0	0.0	0	0.0	109	5.1
W	0	0.0	9	0.4	35	1.6	46	2.1	24	1.1	10	0.5	4	0.2	128	5.9
WNW	0	0.0	10	0.5	52	2.4	63	2.9	57	2.6	9	0.4	2	0.1	193	8.9
NW	0	0.0	14	0.6	51	2.4	167	7.7	154	7.1	8	0.4	0	0.0	394	18.3
NNW	0	0.0	12	0.6	52	2.4	105	4.9	43	2.0	10	0.5	0	0.0	222	10.3
	0	0.0	177	8.2	693	32.1	794	36.8	428	19.8	59	2.7	6	0.3	2157	100.0

MISSING HOURS: 3

MEAN WIND SPEED: 9.3

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 01/09-03/09

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED
 BY ATMOSPHERIC STABILITY CLASS
 WIND: 33 FT
 DELTA T: (300-33FT)

DIRECTION VS SPEED ONLY

DIRECTION	WIND SPEED GROUPS (MPH)														SUM PERCENT	
	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6			
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT
N	0	0.0	15	0.7	56	2.6	59	2.7	27	1.2	4	0.2	0	0.0	161	7.5
NNE	0	0.0	6	0.3	50	2.3	34	1.6	7	0.3	1	0.0	0	0.0	98	4.5
NE	0	0.0	8	0.4	45	2.1	19	0.9	0	0.0	0	0.0	0	0.0	72	3.3
ENE	0	0.0	19	0.9	17	0.8	5	0.2	0	0.0	0	0.0	0	0.0	41	1.9
E	0	0.0	19	0.9	34	1.6	0	0.0	0	0.0	0	0.0	0	0.0	53	2.5
ESE	0	0.0	7	0.3	25	1.2	3	0.1	0	0.0	0	0.0	0	0.0	35	1.6
SE	0	0.0	13	0.6	50	2.3	104	4.8	42	1.9	0	0.0	0	0.0	209	9.7
SSE	0	0.0	4	0.2	60	2.8	67	3.1	33	1.5	10	0.5	0	0.0	174	8.1
S	0	0.0	10	0.5	24	1.1	34	1.6	30	1.4	4	0.2	0	0.0	102	4.7
SSW	0	0.0	7	0.3	37	1.7	24	1.1	3	0.1	3	0.1	0	0.0	74	3.4
SW	0	0.0	14	0.6	46	2.1	28	1.3	6	0.3	0	0.0	0	0.0	94	4.4
WSW	0	0.0	10	0.5	59	2.7	36	1.7	4	0.2	0	0.0	0	0.0	109	5.0
W	0	0.0	9	0.4	35	1.6	46	2.1	24	1.1	10	0.5	4	0.2	128	5.9
WNW	0	0.0	10	0.5	52	2.4	63	2.9	57	2.6	9	0.4	2	0.1	193	8.9
NW	0	0.0	14	0.6	51	2.4	167	7.7	154	7.1	8	0.4	0	0.0	394	18.2
NNW	0	0.0	12	0.6	52	2.4	106	4.9	43	2.0	10	0.5	0	0.0	223	10.3
	0	0.0	177	8.2	693	32.1	795	36.8	430	19.9	59	2.7	6	0.3	2160	100.0
MISSING HOURS:	0															
MEAN WIND SPEED:	9.3															

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 01/09-03/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS

WIND: 150 FT
DELTA T: (300-33FT)

LAPSE RATE: LE -1.90 DEG C/100M
CLASS A

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	0	0.0	0	0.0	4	0.2	5	0.2	0	0.0	1	0.0	10	0.5
NNE	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	1	0.0
NE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
ENE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
E	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
ESE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SE	0	0.0	0	0.0	0	0.0	0	0.0	5	0.2	1	0.0	0	0.0	6	0.3
SSE	0	0.0	0	0.0	0	0.0	2	0.1	3	0.1	0	0.0	0	0.0	5	0.2
S	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	1	0.0
SSW	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
SW	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
WSW	0	0.0	0	0.0	0	0.0	8	0.4	3	0.1	0	0.0	0	0.0	11	0.5
W	0	0.0	0	0.0	0	0.0	4	0.2	1	0.0	1	0.0	5	0.2	11	0.5
WNW	0	0.0	0	0.0	0	0.0	3	0.1	2	0.1	3	0.1	2	0.1	10	0.5
NW	0	0.0	0	0.0	0	0.0	1	0.0	21	1.0	16	0.7	4	0.2	42	1.9
NNW	0	0.0	0	0.0	0	0.0	2	0.1	18	0.8	9	0.4	1	0.0	30	1.4
	0	0.0	0	0.0	2	0.1	26	1.2	58	2.7	30	1.4	13	0.6	129	6.0

MEAN WIND SPEED: 16.9
MISSING: 0

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 01/09-03/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS

WIND: 150 FT
DELTA T: (300-33FT)

LAPSE RATE: -1.89 TO -1.70 DEG C/100M
CLASS B

DIRECTION	WIND SPEED GROUPS (MPH)														SUM PERCENT	
	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6			
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT
N	0	0.0	0	0.0	0	0.0	3	0.1	3	0.1	5	0.2	0	0.0	11	0.5
NNE	0	0.0	0	0.0	0	0.0	2	0.1	1	0.0	0	0.0	0	0.0	3	0.1
NE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
ENE	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	1	0.0
E	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	1	0.0
ESE	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
SE	0	0.0	0	0.0	0	0.0	1	0.0	1	0.0	0	0.0	0	0.0	2	0.1
SSE	0	0.0	0	0.0	1	0.0	2	0.1	2	0.1	0	0.0	0	0.0	5	0.2
S	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	1	0.0
SSW	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	1	0.0
SW	0	0.0	0	0.0	1	0.0	1	0.0	0	0.0	0	0.0	0	0.0	2	0.1
WSW	0	0.0	0	0.0	5	0.2	1	0.0	3	0.1	0	0.0	0	0.0	9	0.4
W	0	0.0	0	0.0	3	0.1	0	0.0	2	0.1	0	0.0	1	0.0	6	0.3
WNW	0	0.0	0	0.0	3	0.1	3	0.1	1	0.0	1	0.0	3	0.1	11	0.5
NW	0	0.0	0	0.0	0	0.0	5	0.2	7	0.3	7	0.3	1	0.0	20	0.9
NNW	0	0.0	0	0.0	1	0.0	3	0.1	6	0.3	8	0.4	1	0.0	19	0.9
	0	0.0	0	0.0	15	0.7	25	1.2	26	1.2	21	1.0	6	0.3	93	4.3

MEAN WIND SPEED: 14.8

MISSING: 0

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 01/09-03/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
 BY ATMOSPHERIC STABILITY CLASS
 WIND: 150 FT
 DELTA T: (300-33FT)

LAPSE RATE: -1.69 TO -1.50 DEG C/100M
 CLASS C

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	0	0.0	5	0.2	0	0.0	3	0.1	1	0.0	0	0.0	9	0.4
NNE	0	0.0	0	0.0	0	0.0	1	0.0	2	0.1	0	0.0	0	0.0	3	0.1
NE	0	0.0	0	0.0	2	0.1	1	0.0	0	0.0	0	0.0	0	0.0	3	0.1
ENE	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	1	0.0
E	0	0.0	0	0.0	1	0.0	1	0.0	0	0.0	0	0.0	0	0.0	2	0.1
ESE	0	0.0	0	0.0	1	0.0	1	0.0	0	0.0	0	0.0	0	0.0	2	0.1
SE	0	0.0	0	0.0	1	0.0	1	0.0	0	0.0	1	0.0	0	0.0	3	0.1
SSE	0	0.0	0	0.0	0	0.0	2	0.1	2	0.1	1	0.0	0	0.0	5	0.2
S	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
SSW	0	0.0	0	0.0	2	0.1	1	0.0	0	0.0	0	0.0	0	0.0	3	0.1
SW	0	0.0	0	0.0	2	0.1	1	0.0	0	0.0	0	0.0	0	0.0	3	0.1
WSW	0	0.0	0	0.0	2	0.1	0	0.0	0	0.0	0	0.0	0	0.0	2	0.1
W	0	0.0	0	0.0	2	0.1	0	0.0	0	0.0	2	0.1	3	0.1	7	0.3
WNW	0	0.0	0	0.0	3	0.1	4	0.2	3	0.1	6	0.3	2	0.1	18	0.8
NW	0	0.0	0	0.0	1	0.0	1	0.0	2	0.1	6	0.3	0	0.0	10	0.5
NNW	0	0.0	0	0.0	0	0.0	2	0.1	4	0.2	11	0.5	3	0.1	20	0.9
	0	0.0	0	0.0	23	1.1	17	0.8	16	0.7	28	1.3	8	0.4	92	4.3

MEAN WIND SPEED: 14.9
 MISSING: 0

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 01/09-03/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS

WIND: 150 FT
DELTA T: (300-33FT)

LAPSE RATE: -1.49 TO -0.50 DEG C/100M
CLASS D

DIRECTION	WIND SPEED GROUPS (MPH)														SUM PERCENT	
	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6			
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT
N	0	0.0	6	0.3	7	0.3	12	0.6	19	0.9	13	0.6	4	0.2	61	2.8
NNE	0	0.0	2	0.1	8	0.4	21	1.0	21	1.0	6	0.3	1	0.0	59	2.7
NE	0	0.0	1	0.0	6	0.3	27	1.3	13	0.6	0	0.0	0	0.0	47	2.2
ENE	0	0.0	0	0.0	9	0.4	16	0.7	6	0.3	0	0.0	0	0.0	31	1.4
E	0	0.0	1	0.0	12	0.6	8	0.4	0	0.0	0	0.0	0	0.0	21	1.0
ESE	0	0.0	2	0.1	8	0.4	5	0.2	0	0.0	0	0.0	0	0.0	15	0.7
SE	0	0.0	2	0.1	13	0.6	9	0.4	13	0.6	12	0.6	0	0.0	49	2.3
SSE	0	0.0	1	0.0	8	0.4	13	0.6	30	1.4	25	1.2	5	0.2	82	3.8
S	0	0.0	3	0.1	10	0.5	13	0.6	12	0.6	12	0.6	0	0.0	50	2.3
SSW	0	0.0	3	0.1	8	0.4	6	0.3	5	0.2	0	0.0	0	0.0	22	1.0
SW	0	0.0	0	0.0	12	0.6	5	0.2	6	0.3	1	0.0	0	0.0	24	1.1
WSW	0	0.0	2	0.1	6	0.3	9	0.4	7	0.3	1	0.0	0	0.0	25	1.2
W	0	0.0	1	0.0	9	0.4	7	0.3	17	0.8	10	0.5	7	0.3	51	2.4
WNW	0	0.0	0	0.0	6	0.3	12	0.6	26	1.2	32	1.5	10	0.5	86	4.0
NW	0	0.0	1	0.0	3	0.1	13	0.6	61	2.8	53	2.5	12	0.6	143	6.6
NNW	0	0.0	1	0.0	5	0.2	9	0.4	28	1.3	28	1.3	8	0.4	79	3.7
	0	0.0	26	1.2	130	6.0	185	8.6	264	12.2	193	8.9	47	2.2	845	39.2

MEAN WIND SPEED: 14.4
MISSING: 0

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 01/09-03/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS

WIND: 150 FT
DELTA T: (300-33FT)

LAPSE RATE: -0.49 TO 1.50 DEG C/100M
CLASS E

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	2	0.1	13	0.6	15	0.7	25	1.2	13	0.6	0	0.0	68	3.2
NNE	0	0.0	1	0.0	8	0.4	6	0.3	0	0.0	1	0.0	0	0.0	16	0.7
NE	0	0.0	8	0.4	6	0.3	8	0.4	0	0.0	0	0.0	0	0.0	22	1.0
ENE	0	0.0	0	0.0	7	0.3	5	0.2	0	0.0	0	0.0	0	0.0	12	0.6
E	0	0.0	0	0.0	11	0.5	0	0.0	0	0.0	0	0.0	0	0.0	11	0.5
ESE	0	0.0	2	0.1	2	0.1	3	0.1	1	0.0	0	0.0	0	0.0	8	0.4
SE	0	0.0	1	0.0	5	0.2	10	0.5	18	0.8	1	0.0	0	0.0	35	1.6
SSE	0	0.0	1	0.0	9	0.4	17	0.8	16	0.7	3	0.1	0	0.0	46	2.1
S	0	0.0	0	0.0	3	0.1	25	1.2	15	0.7	8	0.4	0	0.0	51	2.4
SSW	0	0.0	0	0.0	9	0.4	15	0.7	12	0.6	0	0.0	2	0.1	38	1.8
SW	0	0.0	4	0.2	15	0.7	13	0.6	14	0.6	5	0.2	0	0.0	51	2.4
WSW	0	0.0	1	0.0	8	0.4	16	0.7	7	0.3	1	0.0	2	0.1	35	1.6
W	0	0.0	1	0.0	5	0.2	11	0.5	10	0.5	4	0.2	2	0.1	33	1.5
WNW	0	0.0	0	0.0	11	0.5	26	1.2	11	0.5	5	0.2	4	0.2	57	2.6
NW	0	0.0	2	0.1	12	0.6	32	1.5	55	2.5	22	1.0	2	0.1	125	5.8
NNW	0	0.0	1	0.0	3	0.1	24	1.1	47	2.2	29	1.3	0	0.0	104	4.8
	0	0.0	24	1.1	127	5.9	226	10.5	231	10.7	92	4.3	12	0.6	712	33.0

MEAN WIND SPEED: 12.4
MISSING: 0

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 01/09-03/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
 BY ATMOSPHERIC STABILITY CLASS
 WIND: 150 FT
 DELTA T: (300-33FT)

LAPSE RATE: 1.51 TO 4.00 DEG C/100M
 CLASS F

DIRECTION	WIND SPEED GROUPS (MPH)														SUM PERCENT	
	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6			
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT
N	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	1	0.0
NNE	0	0.0	0	0.0	2	0.1	6	0.3	2	0.1	0	0.0	0	0.0	10	0.5
NE	0	0.0	0	0.0	2	0.1	0	0.0	0	0.0	0	0.0	0	0.0	2	0.1
ENE	0	0.0	0	0.0	3	0.1	2	0.1	0	0.0	0	0.0	0	0.0	5	0.2
E	0	0.0	1	0.0	4	0.2	1	0.0	0	0.0	0	0.0	0	0.0	6	0.3
ESE	0	0.0	1	0.0	2	0.1	3	0.1	0	0.0	0	0.0	0	0.0	6	0.3
SE	0	0.0	0	0.0	2	0.1	8	0.4	8	0.4	3	0.1	2	0.1	23	1.1
SSE	0	0.0	0	0.0	3	0.1	9	0.4	12	0.6	2	0.1	0	0.0	26	1.2
S	0	0.0	0	0.0	3	0.1	4	0.2	13	0.6	2	0.1	2	0.1	24	1.1
SSW	0	0.0	1	0.0	1	0.0	5	0.2	9	0.4	10	0.5	5	0.2	31	1.4
SW	0	0.0	0	0.0	3	0.1	7	0.3	8	0.4	4	0.2	1	0.0	23	1.1
WSW	0	0.0	0	0.0	1	0.0	3	0.1	12	0.6	2	0.1	1	0.0	19	0.9
W	0	0.0	1	0.0	1	0.0	1	0.0	3	0.1	0	0.0	0	0.0	6	0.3
WNW	0	0.0	0	0.0	3	0.1	0	0.0	1	0.0	0	0.0	0	0.0	4	0.2
NW	0	0.0	0	0.0	0	0.0	4	0.2	2	0.1	0	0.0	0	0.0	6	0.3
NNW	0	0.0	0	0.0	0	0.0	2	0.1	4	0.2	0	0.0	0	0.0	6	0.3
	0	0.0	4	0.2	30	1.4	56	2.6	74	3.4	23	1.1	11	0.5	198	9.2

MEAN WIND SPEED: 13.7
 MISSING: 0

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 01/09-03/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS
WIND: 150 FT
DELTA T: (300-33FT)

LAPSE RATE: GT 4.00 DEG C/100M
CLASS G

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
NNE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
NE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
ENE	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
E	0	0.0	1	0.0	3	0.1	0	0.0	0	0.0	0	0.0	0	0.0	4	0.2
ESE	0	0.0	0	0.0	1	0.0	2	0.1	2	0.1	0	0.0	0	0.0	5	0.2
SE	0	0.0	0	0.0	3	0.1	1	0.0	1	0.0	1	0.0	0	0.0	6	0.3
SSE	0	0.0	0	0.0	2	0.1	4	0.2	6	0.3	10	0.5	1	0.0	23	1.1
S	0	0.0	0	0.0	0	0.0	3	0.1	11	0.5	11	0.5	1	0.0	26	1.2
SSW	0	0.0	1	0.0	3	0.1	5	0.2	5	0.2	3	0.1	0	0.0	17	0.8
SW	0	0.0	0	0.0	2	0.1	0	0.0	0	0.0	1	0.0	0	0.0	3	0.1
WSW	0	0.0	0	0.0	0	0.0	1	0.0	1	0.0	1	0.0	0	0.0	3	0.1
W	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
WNW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
NW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
NNW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	0	0.0	2	0.1	15	0.7	16	0.7	26	1.2	27	1.3	2	0.1	88	4.1

MEAN WIND SPEED: 14.5
MISSING: 0

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 01/09-03/09

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED
 BY ATMOSPHERIC STABILITY CLASS
 WIND: 150 FT
 DELTA T: (300-33FT)

ALL STABILITY CLASSES

DIRECTION	WIND SPEED GROUPS (MPH)														SUM PERCENT	
	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
SUM PERCENT	SUM PERCENT	SUM PERCENT	SUM PERCENT	SUM PERCENT	SUM PERCENT	SUM PERCENT	SUM PERCENT	SUM PERCENT	SUM PERCENT	SUM PERCENT	SUM PERCENT	SUM PERCENT	SUM PERCENT			
N	0	0.0	8	0.4	25	1.2	35	1.6	55	2.5	32	1.5	5	0.2	160	7.4
NNE	0	0.0	3	0.1	18	0.8	37	1.7	26	1.2	7	0.3	1	0.0	92	4.3
NE	0	0.0	9	0.4	16	0.7	36	1.7	13	0.6	0	0.0	0	0.0	74	3.4
ENE	0	0.0	0	0.0	20	0.9	25	1.2	6	0.3	0	0.0	0	0.0	51	2.4
E	0	0.0	3	0.1	31	1.4	11	0.5	0	0.0	0	0.0	0	0.0	45	2.1
ESE	0	0.0	5	0.2	15	0.7	14	0.6	3	0.1	0	0.0	0	0.0	37	1.7
SE	0	0.0	3	0.1	24	1.1	30	1.4	46	2.1	19	0.9	2	0.1	124	5.7
SSE	0	0.0	2	0.1	23	1.1	49	2.3	71	3.3	41	1.9	6	0.3	192	8.9
S	0	0.0	3	0.1	17	0.8	47	2.2	51	2.4	33	1.5	3	0.1	154	7.1
SSW	0	0.0	5	0.2	24	1.1	33	1.5	31	1.4	13	0.6	7	0.3	113	5.2
SW	0	0.0	4	0.2	36	1.7	27	1.3	28	1.3	11	0.5	1	0.0	107	5.0
WSW	0	0.0	3	0.1	22	1.0	38	1.8	33	1.5	5	0.2	3	0.1	104	4.8
W	0	0.0	3	0.1	20	0.9	23	1.1	33	1.5	17	0.8	18	0.8	114	5.3
WNW	0	0.0	0	0.0	26	1.2	48	2.2	44	2.0	47	2.2	21	1.0	186	8.6
NW	0	0.0	3	0.1	16	0.7	56	2.6	148	6.9	104	4.8	19	0.9	346	16.0
NNW	0	0.0	2	0.1	9	0.4	42	1.9	107	5.0	85	3.9	13	0.6	258	12.0
	0	0.0	56	2.6	342	15.9	551	25.5	695	32.2	414	19.2	99	4.6	2157	100.0

MISSING HOURS: 3

MEAN WIND SPEED: 13.9

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 01/09-03/09

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED
 BY ATMOSPHERIC STABILITY CLASS
 WIND: 150 FT
 DELTA T: (300-33FT)

DIRECTION VS SPEED ONLY

DIRECTION	WIND SPEED GROUPS (MPH)														SUM PERCENT	
	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6			
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	8	0.4	25	1.2	35	1.6	57	2.6	32	1.5	5	0.2	162	7.5
NNE	0	0.0	3	0.1	18	0.8	37	1.7	26	1.2	7	0.3	1	0.0	92	4.3
NE	0	0.0	9	0.4	16	0.7	36	1.7	13	0.6	0	0.0	0	0.0	74	3.4
ENE	0	0.0	0	0.0	20	0.9	25	1.2	6	0.3	0	0.0	0	0.0	51	2.4
E	0	0.0	3	0.1	31	1.4	11	0.5	0	0.0	0	0.0	0	0.0	45	2.1
ESE	0	0.0	5	0.2	15	0.7	14	0.6	3	0.1	0	0.0	0	0.0	37	1.7
SE	0	0.0	3	0.1	24	1.1	30	1.4	46	2.1	19	0.9	2	0.1	124	5.7
SSE	0	0.0	2	0.1	23	1.1	49	2.3	71	3.3	41	1.9	6	0.3	192	8.9
S	0	0.0	3	0.1	17	0.8	47	2.2	51	2.4	33	1.5	3	0.1	154	7.1
SSW	0	0.0	5	0.2	24	1.1	33	1.5	31	1.4	13	0.6	7	0.3	113	5.2
SW	0	0.0	4	0.2	36	1.7	27	1.2	28	1.3	11	0.5	1	0.0	107	5.0
WSW	0	0.0	3	0.1	22	1.0	38	1.8	33	1.5	5	0.2	3	0.1	104	4.8
W	0	0.0	3	0.1	20	0.9	23	1.1	33	1.5	17	0.8	18	0.8	114	5.3
WNW	0	0.0	0	0.0	26	1.2	48	2.2	44	2.0	47	2.2	21	1.0	186	8.6
NW	0	0.0	3	0.1	16	0.7	56	2.6	148	6.9	104	4.8	19	0.9	346	16.0
NNW	0	0.0	2	0.1	9	0.4	42	1.9	108	5.0	85	3.9	13	0.6	259	12.0
	0	0.0	56	2.6	342	15.8	551	25.5	698	32.3	414	19.2	99	4.6	2160	100.0

MISSING HOURS: 0

MEAN WIND SPEED: 13.9

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 01/09-03/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS

WIND: 197 FT
DELTA T: (300-33FT)

LAPSE RATE: LE -1.90 DEG C/100M
CLASS A

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	0	0.0	0	0.0	5	0.2	2	0.1	0	0.0	0	0.0	7	0.3
NNE	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	1	0.0
NE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
ENE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
E	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
ESE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SE	0	0.0	0	0.0	0	0.0	1	0.0	5	0.2	1	0.0	0	0.0	7	0.3
SSE	0	0.0	0	0.0	0	0.0	3	0.1	2	0.1	0	0.0	0	0.0	5	0.2
S	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SSW	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
SW	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
WSW	0	0.0	0	0.0	0	0.0	6	0.3	4	0.2	0	0.0	0	0.0	10	0.5
W	0	0.0	0	0.0	0	0.0	5	0.2	2	0.1	1	0.0	5	0.2	13	0.6
WNW	0	0.0	0	0.0	0	0.0	3	0.1	5	0.2	0	0.0	5	0.2	13	0.6
NW	0	0.0	0	0.0	0	0.0	3	0.1	24	1.1	17	0.8	6	0.3	50	2.3
NNW	0	0.0	0	0.0	0	0.0	2	0.1	15	0.7	2	0.1	2	0.1	21	1.0
	0	0.0	0	0.0	2	0.1	29	1.3	59	2.7	21	1.0	18	0.8	129	6.0

MEAN WIND SPEED: 16.8
MISSING: 0

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 01/09-03/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
 BY ATMOSPHERIC STABILITY CLASS
 WIND: 197 FT
 DELTA T: (300-33FT)

LAPSE RATE: -1.89 TO -1.70 DEG C/100M
 CLASS B

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	0	0.0	0	0.0	3	0.1	6	0.3	3	0.1	0	0.0	12	0.6
NNE	0	0.0	0	0.0	0	0.0	1	0.0	1	0.0	0	0.0	0	0.0	2	0.1
NE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
ENE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
E	0	0.0	0	0.0	1	0.0	2	0.1	0	0.0	0	0.0	0	0.0	3	0.1
ESE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SE	0	0.0	0	0.0	0	0.0	1	0.0	1	0.0	0	0.0	0	0.0	2	0.1
SSE	0	0.0	0	0.0	1	0.0	1	0.0	3	0.1	0	0.0	0	0.0	5	0.2
S	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	1	0.0
SSW	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	1	0.0
SW	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
WSW	0	0.0	0	0.0	6	0.3	1	0.0	3	0.1	0	0.0	0	0.0	10	0.5
W	0	0.0	0	0.0	3	0.1	0	0.0	2	0.1	0	0.0	1	0.0	6	0.3
WNW	0	0.0	0	0.0	2	0.1	5	0.2	2	0.1	2	0.1	3	0.1	14	0.6
NW	0	0.0	0	0.0	0	0.0	3	0.1	8	0.4	9	0.4	1	0.0	21	1.0
NNW	0	0.0	0	0.0	1	0.0	3	0.1	7	0.3	2	0.1	2	0.1	15	0.7
	0	0.0	0	0.0	15	0.7	22	1.0	33	1.5	16	0.7	7	0.3	93	4.3

MEAN WIND SPEED: 14.6
 MISSING: 0

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 01/09-03/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
 BY ATMOSPHERIC STABILITY CLASS
 WIND: 197 FT
 DELTA T: (300-33FT)

LAPSE RATE: -1.69 TO -1.50 DEG C/100M
 CLASS C

DIRECTION	WIND SPEED GROUPS (MPH)														SUM PERCENT	
	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6			
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	0	0.0	4	0.2	1	0.0	4	0.2	0	0.0	0	0.0	9	0.4
NNE	0	0.0	0	0.0	1	0.0	0	0.0	2	0.1	0	0.0	0	0.0	3	0.1
NE	0	0.0	0	0.0	1	0.0	1	0.0	0	0.0	0	0.0	0	0.0	2	0.1
ENE	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	1	0.0
E	0	0.0	0	0.0	2	0.1	2	0.1	0	0.0	0	0.0	0	0.0	4	0.2
ESE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SE	0	0.0	0	0.0	1	0.0	1	0.0	0	0.0	1	0.0	0	0.0	3	0.1
SSE	0	0.0	0	0.0	0	0.0	2	0.1	2	0.1	1	0.0	0	0.0	5	0.2
S	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
SSW	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	1	0.0
SW	0	0.0	0	0.0	4	0.2	1	0.0	0	0.0	0	0.0	0	0.0	5	0.2
WSW	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
W	0	0.0	0	0.0	3	0.1	0	0.0	1	0.0	2	0.1	4	0.2	10	0.5
WNW	0	0.0	0	0.0	4	0.2	4	0.2	2	0.1	5	0.2	3	0.1	18	0.8
NW	0	0.0	0	0.0	1	0.0	0	0.0	5	0.2	11	0.5	0	0.0	17	0.8
NNW	0	0.0	0	0.0	1	0.0	2	0.1	5	0.2	2	0.1	2	0.1	12	0.6
	0	0.0	0	0.0	24	1.1	16	0.7	21	1.0	22	1.0	9	0.4	92	4.3

MEAN WIND SPEED: 14.8
 MISSING: 0

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 01/09-03/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS

WIND: 197 FT
DELTA T: (300-33FT)

LAPSE RATE: -1.49 TO -0.50 DEG C/100M
CLASS D

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	7	0.3	6	0.3	11	0.5	18	0.8	11	0.5	4	0.2	57	2.6
NNE	0	0.0	0	0.0	11	0.5	19	0.9	25	1.2	7	0.3	1	0.0	63	2.9
NE	0	0.0	2	0.1	8	0.4	17	0.8	22	1.0	0	0.0	0	0.0	49	2.3
ENE	0	0.0	0	0.0	5	0.2	21	1.0	9	0.4	0	0.0	0	0.0	35	1.6
E	0	0.0	1	0.0	13	0.6	3	0.1	0	0.0	0	0.0	0	0.0	17	0.8
ESE	0	0.0	1	0.0	7	0.3	4	0.2	0	0.0	0	0.0	0	0.0	12	0.6
SE	0	0.0	2	0.1	11	0.5	10	0.5	18	0.8	13	0.6	0	0.0	54	2.5
SSE	0	0.0	2	0.1	7	0.3	10	0.5	31	1.4	24	1.1	2	0.1	76	3.5
S	0	0.0	2	0.1	10	0.5	11	0.5	19	0.9	2	0.1	0	0.0	44	2.0
SSW	0	0.0	4	0.2	6	0.3	8	0.4	2	0.1	0	0.0	0	0.0	20	0.9
SW	0	0.0	1	0.0	10	0.5	5	0.2	6	0.3	1	0.0	0	0.0	23	1.1
WSW	0	0.0	3	0.1	6	0.3	9	0.4	6	0.3	2	0.1	0	0.0	26	1.2
W	0	0.0	2	0.1	5	0.2	8	0.4	19	0.9	8	0.4	11	0.5	53	2.5
WNW	0	0.0	3	0.1	8	0.4	13	0.6	34	1.6	28	1.3	17	0.8	103	4.8
NW	0	0.0	2	0.1	3	0.1	12	0.6	49	2.3	61	2.8	20	0.9	147	6.8
NNW	0	0.0	1	0.0	5	0.2	15	0.7	27	1.3	11	0.5	7	0.3	66	3.1
	0	0.0	33	1.5	121	5.6	176	8.2	285	13.2	168	7.8	62	2.9	845	39.2

MEAN WIND SPEED: 14.4
MISSING: 0

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 01/09-03/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS

WIND: 197 FT
DELTA T: (300-33FT)

LAPSE RATE: -0.49 TO 1.50 DEG C/100M
CLASS E

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	2	0.1	7	0.3	14	0.6	22	1.0	14	0.6	1	0.0	60	2.8
NNE	0	0.0	5	0.2	10	0.5	9	0.4	1	0.0	1	0.0	0	0.0	26	1.2
NE	0	0.0	4	0.2	5	0.2	9	0.4	0	0.0	0	0.0	0	0.0	18	0.8
ENE	0	0.0	0	0.0	9	0.4	5	0.2	1	0.0	0	0.0	0	0.0	15	0.7
E	0	0.0	1	0.0	5	0.2	1	0.0	0	0.0	0	0.0	0	0.0	7	0.3
ESE	0	0.0	3	0.1	4	0.2	5	0.2	2	0.1	0	0.0	0	0.0	14	0.6
SE	0	0.0	2	0.1	7	0.3	4	0.2	14	0.6	5	0.2	0	0.0	32	1.5
SSE	0	0.0	0	0.0	6	0.3	17	0.8	16	0.7	3	0.1	0	0.0	42	1.9
S	0	0.0	1	0.0	13	0.6	16	0.7	15	0.7	2	0.1	0	0.0	47	2.2
SSW	0	0.0	0	0.0	9	0.4	18	0.8	11	0.5	0	0.0	2	0.1	40	1.9
SW	0	0.0	4	0.2	13	0.6	16	0.7	13	0.6	6	0.3	0	0.0	52	2.4
WSW	0	0.0	0	0.0	7	0.3	15	0.7	12	0.6	2	0.1	3	0.1	39	1.8
W	0	0.0	0	0.0	5	0.2	7	0.3	12	0.6	4	0.2	4	0.2	32	1.5
WNW	0	0.0	0	0.0	11	0.5	28	1.3	9	0.4	5	0.2	5	0.2	58	2.7
NW	0	0.0	0	0.0	12	0.6	23	1.1	80	3.7	22	1.0	5	0.2	142	6.6
NNW	0	0.0	1	0.0	7	0.3	26	1.2	38	1.8	15	0.7	1	0.0	88	4.1
	0	0.0	23	1.1	130	6.0	213	9.9	246	11.4	79	3.7	21	1.0	712	33.0

MEAN WIND SPEED: 12.7

MISSING: 0

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 01/09-03/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED

BY ATMOSPHERIC STABILITY CLASS

WIND: 197 FT

DELTA T: (300-33FT)

LAPSE RATE: 1.51 TO 4.00 DEG C/100M

CLASS F

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	1	0.0
NNE	0	0.0	0	0.0	3	0.1	2	0.1	5	0.2	0	0.0	0	0.0	10	0.5
NE	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	1	0.0
ENE	0	0.0	1	0.0	6	0.3	0	0.0	0	0.0	0	0.0	0	0.0	7	0.3
E	0	0.0	0	0.0	5	0.2	1	0.0	0	0.0	0	0.0	0	0.0	6	0.3
ESE	0	0.0	1	0.0	1	0.0	2	0.1	1	0.0	0	0.0	0	0.0	5	0.2
SE	0	0.0	0	0.0	2	0.1	6	0.3	6	0.3	4	0.2	1	0.0	19	0.9
SSE	0	0.0	0	0.0	4	0.2	12	0.6	8	0.4	1	0.0	1	0.0	26	1.2
S	0	0.0	0	0.0	4	0.2	2	0.1	12	0.6	4	0.2	5	0.2	27	1.3
SSW	0	0.0	0	0.0	3	0.1	7	0.3	8	0.4	9	0.4	5	0.2	32	1.5
SW	0	0.0	0	0.0	0	0.0	2	0.1	14	0.6	2	0.1	4	0.2	22	1.0
WSW	0	0.0	0	0.0	0	0.0	3	0.1	14	0.6	4	0.2	0	0.0	21	1.0
W	0	0.0	1	0.0	3	0.1	0	0.0	1	0.0	0	0.0	0	0.0	5	0.2
WNW	0	0.0	1	0.0	2	0.1	0	0.0	1	0.0	0	0.0	0	0.0	4	0.2
NW	0	0.0	0	0.0	0	0.0	2	0.1	3	0.1	0	0.0	0	0.0	5	0.2
NNW	0	0.0	0	0.0	0	0.0	2	0.1	4	0.2	1	0.0	0	0.0	7	0.3
	0	0.0	4	0.2	33	1.5	42	1.9	78	3.6	25	1.2	16	0.7	198	9.2

MEAN WIND SPEED: 14.0

MISSING: 0

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 01/09-03/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS

WIND: 197 FT
DELTA T: (300-33FT)

LAPSE RATE: GT 4.00 DEG C/100M
CLASS G

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT
N	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
NNE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
NE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
ENE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
E	0	0.0	0	0.0	5	0.2	0	0.0	0	0.0	0	0.0	0	0.0	5	0.2
ESE	0	0.0	1	0.0	0	0.0	2	0.1	2	0.1	0	0.0	0	0.0	5	0.2
SE	0	0.0	0	0.0	1	0.0	2	0.1	0	0.0	0	0.0	0	0.0	3	0.1
SSE	0	0.0	0	0.0	0	0.0	7	0.3	9	0.4	2	0.1	2	0.1	20	0.9
S	0	0.0	0	0.0	2	0.1	2	0.1	8	0.4	14	0.6	1	0.0	27	1.3
SSW	0	0.0	0	0.0	1	0.0	6	0.3	7	0.3	3	0.1	0	0.0	17	0.8
SW	0	0.0	1	0.0	0	0.0	1	0.0	1	0.0	0	0.0	1	0.0	4	0.2
WSW	0	0.0	0	0.0	3	0.1	1	0.0	0	0.0	1	0.0	0	0.0	5	0.2
W	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	1	0.0
WNW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
NW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
NNW	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
	0	0.0	3	0.1	12	0.6	21	1.0	28	1.3	20	0.9	4	0.2	88	4.1

MEAN WIND SPEED: 14.2

MISSING: 0

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 01/09-03/09

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS
WIND: 197 FT
DELTA T: (300-33FT)

ALL STABILITY CLASSES

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	9	0.4	17	0.8	34	1.6	53	2.5	28	1.3	5	0.2	146	6.8
NNE	0	0.0	5	0.2	25	1.2	32	1.5	34	1.6	8	0.4	1	0.0	105	4.9
NE	0	0.0	6	0.3	14	0.6	28	1.3	22	1.0	0	0.0	0	0.0	70	3.2
ENE	0	0.0	1	0.0	20	0.9	27	1.3	10	0.5	0	0.0	0	0.0	58	2.7
E	0	0.0	2	0.1	31	1.4	9	0.4	0	0.0	0	0.0	0	0.0	42	1.9
ESE	0	0.0	6	0.3	12	0.6	13	0.6	5	0.2	0	0.0	0	0.0	36	1.7
SE	0	0.0	4	0.2	22	1.0	25	1.2	44	2.0	24	1.1	1	0.0	120	5.6
SSE	0	0.0	2	0.1	18	0.8	52	2.4	71	3.3	31	1.4	5	0.2	179	8.3
S	0	0.0	3	0.1	30	1.4	32	1.5	54	2.5	22	1.0	6	0.3	147	6.8
SSW	0	0.0	4	0.2	20	0.9	41	1.9	28	1.3	12	0.6	7	0.3	112	5.2
SW	0	0.0	6	0.3	29	1.3	25	1.2	34	1.6	9	0.4	5	0.2	108	5.0
WSW	0	0.0	3	0.1	23	1.1	35	1.6	39	1.8	9	0.4	3	0.1	112	5.2
W	0	0.0	3	0.1	19	0.9	20	0.9	38	1.8	15	0.7	25	1.2	120	5.6
WNW	0	0.0	4	0.2	27	1.3	53	2.5	53	2.5	40	1.9	33	1.5	210	9.7
NW	0	0.0	2	0.1	16	0.7	43	2.0	169	7.8	120	5.6	32	1.5	382	17.7
NNW	0	0.0	3	0.1	14	0.6	50	2.3	96	4.5	33	1.5	14	0.6	210	9.7
	0	0.0	63	2.9	337	15.6	519	24.1	750	34.8	351	16.3	137	6.4	2157	100.0

MISSING HOURS: 3

MEAN WIND SPEED: 14.0

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 01/09-03/09

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED
 BY ATMOSPHERIC STABILITY CLASS
 WIND: 197 FT
 DELTA T: (300-33FT)

DIRECTION VS SPEED ONLY

DIRECTION	WIND SPEED GROUPS (MPH)														SUM PERCENT	
	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT			
N	0	0.0	9	0.4	17	0.8	34	1.6	55	2.5	28	1.3	5	0.2	148	6.9
NNE	0	0.0	5	0.2	25	1.2	32	1.5	34	1.6	8	0.4	1	0.0	105	4.9
NE	0	0.0	6	0.3	14	0.6	28	1.3	22	1.0	0	0.0	0	0.0	70	3.2
ENE	0	0.0	1	0.0	20	0.9	27	1.2	10	0.5	0	0.0	0	0.0	58	2.7
E	0	0.0	2	0.1	31	1.4	9	0.4	0	0.0	0	0.0	0	0.0	42	1.9
ESE	0	0.0	6	0.3	12	0.6	13	0.6	5	0.2	0	0.0	0	0.0	36	1.7
SE	0	0.0	4	0.2	22	1.0	25	1.2	44	2.0	24	1.1	1	0.0	120	5.6
SSE	0	0.0	2	0.1	18	0.8	52	2.4	71	3.3	31	1.4	5	0.2	179	8.3
S	0	0.0	3	0.1	30	1.4	32	1.5	54	2.5	22	1.0	6	0.3	147	6.8
SSW	0	0.0	4	0.2	20	0.9	41	1.9	28	1.3	12	0.6	7	0.3	112	5.2
SW	0	0.0	6	0.3	29	1.3	25	1.2	34	1.6	9	0.4	5	0.2	108	5.0
WSW	0	0.0	3	0.1	23	1.1	35	1.6	39	1.8	9	0.4	3	0.1	112	5.2
W	0	0.0	3	0.1	19	0.9	20	0.9	38	1.8	15	0.7	25	1.2	120	5.6
WNW	0	0.0	4	0.2	27	1.2	53	2.5	53	2.5	40	1.9	33	1.5	210	9.7
NW	0	0.0	2	0.1	16	0.7	43	2.0	169	7.8	120	5.6	32	1.5	382	17.7
NNW	0	0.0	3	0.1	14	0.6	50	2.3	97	4.5	33	1.5	14	0.6	211	9.8
	0	0.0	63	2.9	337	15.6	519	24.0	753	34.9	351	16.2	137	6.3	2160	100.0
MISSING HOURS:	0															
MEAN WIND SPEED:	14.0															

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 01/09-03/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS
WIND: 300 FT
DELTA T: (300-33FT)

LAPSE RATE: LE -1.90 DEG C/100M
CLASS A

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	0	0.0	0	0.0	3	0.1	4	0.2	1	0.0	1	0.0	9	0.4
NNE	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	1	0.0
NE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
ENE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
E	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
ESE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SE	0	0.0	0	0.0	0	0.0	2	0.1	4	0.2	1	0.0	0	0.0	7	0.3
SSE	0	0.0	0	0.0	0	0.0	2	0.1	1	0.0	0	0.0	0	0.0	3	0.1
S	0	0.0	0	0.0	1	0.0	1	0.0	1	0.0	0	0.0	0	0.0	3	0.1
SSW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
WSW	0	0.0	0	0.0	1	0.0	4	0.2	4	0.2	0	0.0	0	0.0	9	0.4
W	0	0.0	0	0.0	0	0.0	7	0.3	1	0.0	1	0.0	6	0.3	15	0.7
WNW	0	0.0	0	0.0	0	0.0	3	0.1	4	0.2	1	0.0	5	0.2	13	0.6
NW	0	0.0	0	0.0	0	0.0	2	0.1	22	1.0	20	0.9	6	0.3	50	2.3
NNW	0	0.0	0	0.0	0	0.0	2	0.1	14	0.6	1	0.0	2	0.1	19	0.9
	0	0.0	0	0.0	2	0.1	27	1.3	55	2.5	25	1.2	20	0.9	129	6.0

MEAN WIND SPEED: 17.7
MISSING: 0

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 01/09-03/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
 BY ATMOSPHERIC STABILITY CLASS
 WIND: 300 FT
 DELTA T: (300-33FT)

LAPSE RATE: -1.89 TO -1.70 DEG C/100M
 CLASS B

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	0	0.0	0	0.0	3	0.1	6	0.3	3	0.1	0	0.0	12	0.6
NNE	0	0.0	0	0.0	0	0.0	1	0.0	1	0.0	0	0.0	0	0.0	2	0.1
NE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
ENE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
E	0	0.0	0	0.0	1	0.0	2	0.1	0	0.0	0	0.0	0	0.0	3	0.1
ESE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SE	0	0.0	0	0.0	0	0.0	1	0.0	1	0.0	0	0.0	0	0.0	2	0.1
SSE	0	0.0	0	0.0	1	0.0	1	0.0	3	0.1	0	0.0	0	0.0	5	0.2
S	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	1	0.0
SSW	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	1	0.0
SW	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
WSW	0	0.0	0	0.0	6	0.3	1	0.0	3	0.1	0	0.0	0	0.0	10	0.5
W	0	0.0	0	0.0	3	0.1	0	0.0	0	0.0	2	0.1	1	0.0	6	0.3
WNW	0	0.0	0	0.0	2	0.1	3	0.1	4	0.2	1	0.0	4	0.2	14	0.6
NW	0	0.0	0	0.0	0	0.0	3	0.1	8	0.4	8	0.4	2	0.1	21	1.0
NNW	0	0.0	0	0.0	0	0.0	4	0.2	6	0.3	1	0.0	4	0.2	15	0.7
	0	0.0	0	0.0	14	0.6	20	0.9	33	1.5	15	0.7	11	0.5	93	4.3

MEAN WIND SPEED: 15.5
 MISSING: 0

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 01/09-03/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
 BY ATMOSPHERIC STABILITY CLASS
 WIND: 300 FT
 DELTA T: (300-33FT)

LAPSE RATE: -1.69 TO -1.50 DEG C/100M
 CLASS C

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	0	0.0	4	0.2	1	0.0	4	0.2	0	0.0	0	0.0	9	0.4
NNE	0	0.0	0	0.0	0	0.0	1	0.0	2	0.1	0	0.0	0	0.0	3	0.1
NE	0	0.0	0	0.0	1	0.0	1	0.0	0	0.0	0	0.0	0	0.0	2	0.1
ENE	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	1	0.0
E	0	0.0	0	0.0	1	0.0	3	0.1	0	0.0	0	0.0	0	0.0	4	0.2
ESE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SE	0	0.0	0	0.0	1	0.0	1	0.0	0	0.0	1	0.0	0	0.0	3	0.1
SSE	0	0.0	0	0.0	0	0.0	2	0.1	2	0.1	1	0.0	0	0.0	5	0.2
S	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SSW	0	0.0	0	0.0	2	0.1	0	0.0	1	0.0	0	0.0	0	0.0	3	0.1
SW	0	0.0	0	0.0	2	0.1	1	0.0	0	0.0	0	0.0	0	0.0	3	0.1
WSW	0	0.0	0	0.0	2	0.1	0	0.0	0	0.0	0	0.0	0	0.0	2	0.1
W	0	0.0	0	0.0	3	0.1	0	0.0	0	0.0	3	0.1	4	0.2	10	0.5
WNW	0	0.0	0	0.0	3	0.1	4	0.2	3	0.1	1	0.0	7	0.3	18	0.8
NW	0	0.0	0	0.0	1	0.0	0	0.0	3	0.1	10	0.5	1	0.0	15	0.7
NNW	0	0.0	0	0.0	1	0.0	2	0.1	2	0.1	7	0.3	2	0.1	14	0.6
	0	0.0	0	0.0	21	1.0	17	0.8	17	0.8	23	1.1	14	0.6	92	4.3

MEAN WIND SPEED: 15.8
 MISSING: 0

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 01/09-03/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
 BY ATMOSPHERIC STABILITY CLASS
 WIND: 300 FT
 DELTA T: (300-33FT)

LAPSE RATE: -1.49 TO -0.50 DEG C/100M
 CLASS D

DIRECTION	WIND SPEED GROUPS (MPH)														SUM PERCENT	
	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	SUM PERCENT
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	3	0.1	8	0.4	13	0.6	19	0.9	14	0.6	6	0.3	63	2.9
NNE	0	0.0	3	0.1	6	0.3	14	0.6	22	1.0	12	0.6	2	0.1	59	2.7
NE	0	0.0	3	0.1	7	0.3	17	0.8	23	1.1	0	0.0	0	0.0	50	2.3
ENE	0	0.0	1	0.0	5	0.2	24	1.1	7	0.3	0	0.0	0	0.0	37	1.7
E	0	0.0	1	0.0	8	0.4	6	0.3	0	0.0	0	0.0	0	0.0	15	0.7
ESE	0	0.0	0	0.0	7	0.3	3	0.1	3	0.1	0	0.0	0	0.0	13	0.6
SE	0	0.0	2	0.1	9	0.4	9	0.4	10	0.5	17	0.8	0	0.0	47	2.2
SSE	0	0.0	2	0.1	7	0.3	10	0.5	30	1.4	25	1.2	3	0.1	77	3.6
S	0	0.0	2	0.1	7	0.3	9	0.4	20	0.9	7	0.3	0	0.0	45	2.1
SSW	0	0.0	3	0.1	5	0.2	9	0.4	5	0.2	0	0.0	0	0.0	22	1.0
SW	0	0.0	1	0.0	6	0.3	5	0.2	6	0.3	2	0.1	0	0.0	20	0.9
WSW	0	0.0	1	0.0	10	0.5	10	0.5	8	0.4	2	0.1	0	0.0	31	1.4
W	0	0.0	1	0.0	8	0.4	8	0.4	7	0.3	11	0.5	15	0.7	50	2.3
WNW	0	0.0	2	0.1	9	0.4	9	0.4	26	1.2	36	1.7	28	1.3	110	5.1
NW	0	0.0	1	0.0	2	0.1	7	0.3	44	2.0	58	2.7	31	1.4	143	6.6
NNW	0	0.0	0	0.0	4	0.2	9	0.4	28	1.3	10	0.5	12	0.6	63	2.9
	0	0.0	26	1.2	108	5.0	162	7.5	258	12.0	194	9.0	97	4.5	845	39.2

MEAN WIND SPEED: 15.6
 MISSING: 0

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 01/09-03/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS
WIND: 300 FT
DELTA T: (300-33FT)

LAPSE RATE: -0.49 TO 1.50 DEG C/100M
CLASS E

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	2	0.1	5	0.2	17	0.8	21	1.0	16	0.7	2	0.1	63	2.9
NNE	0	0.0	0	0.0	7	0.3	5	0.2	1	0.0	1	0.0	0	0.0	14	0.6
NE	0	0.0	1	0.0	9	0.4	8	0.4	2	0.1	0	0.0	0	0.0	20	0.9
ENE	0	0.0	1	0.0	7	0.3	4	0.2	0	0.0	0	0.0	0	0.0	12	0.6
E	0	0.0	5	0.2	4	0.2	7	0.3	0	0.0	0	0.0	0	0.0	16	0.7
ESE	0	0.0	1	0.0	2	0.1	3	0.1	1	0.0	1	0.0	0	0.0	8	0.4
SE	0	0.0	0	0.0	5	0.2	5	0.2	2	0.1	6	0.3	0	0.0	18	0.8
SSE	0	0.0	1	0.0	8	0.4	1	0.0	16	0.7	15	0.7	0	0.0	41	1.9
S	0	0.0	1	0.0	6	0.3	11	0.5	16	0.7	8	0.4	1	0.0	43	2.0
SSW	0	0.0	0	0.0	13	0.6	13	0.6	19	0.9	5	0.2	2	0.1	52	2.4
SW	0	0.0	0	0.0	9	0.4	12	0.6	27	1.3	5	0.2	2	0.1	55	2.5
WSW	0	0.0	0	0.0	6	0.3	10	0.5	15	0.7	5	0.2	2	0.1	38	1.8
W	0	0.0	3	0.1	6	0.3	6	0.3	12	0.6	5	0.2	7	0.3	39	1.8
WNW	0	0.0	0	0.0	4	0.2	27	1.3	11	0.5	7	0.3	7	0.3	56	2.6
NW	0	0.0	1	0.0	10	0.5	14	0.6	64	3.0	35	1.6	14	0.6	138	6.4
NNW	0	0.0	2	0.1	7	0.3	16	0.7	39	1.8	29	1.3	6	0.3	99	4.6
	0	0.0	18	0.8	108	5.0	159	7.4	246	11.4	138	6.4	43	2.0	712	33.0

MEAN WIND SPEED: 14.4
MISSING: 0

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 01/09-03/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
 BY ATMOSPHERIC STABILITY CLASS
 WIND: 300 FT
 DELTA T: (300-33FT)

LAPSE RATE: 1.51 TO 4.00 DEG C/100M
 CLASS F

DIRECTION	WIND SPEED GROUPS (MPH)														SUM PERCENT	
	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6			
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	1	0.0
NNE	0	0.0	0	0.0	0	0.0	0	0.0	7	0.3	0	0.0	0	0.0	7	0.3
NE	0	0.0	0	0.0	1	0.0	1	0.0	1	0.0	0	0.0	0	0.0	3	0.1
ENE	0	0.0	0	0.0	6	0.3	0	0.0	0	0.0	0	0.0	0	0.0	6	0.3
E	0	0.0	1	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	2	0.1
ESE	0	0.0	0	0.0	2	0.1	2	0.1	3	0.1	0	0.0	0	0.0	7	0.3
SE	0	0.0	1	0.0	2	0.1	5	0.2	3	0.1	2	0.1	0	0.0	13	0.6
SSE	0	0.0	0	0.0	3	0.1	6	0.3	6	0.3	5	0.2	1	0.0	21	1.0
S	0	0.0	0	0.0	0	0.0	9	0.4	7	0.3	7	0.3	3	0.1	26	1.2
SSW	0	0.0	0	0.0	1	0.0	6	0.3	16	0.7	11	0.5	9	0.4	43	2.0
SW	0	0.0	0	0.0	2	0.1	2	0.1	7	0.3	9	0.4	4	0.2	24	1.1
WSW	0	0.0	0	0.0	2	0.1	1	0.0	7	0.3	13	0.6	1	0.0	24	1.1
W	0	0.0	0	0.0	1	0.0	1	0.0	1	0.0	3	0.1	0	0.0	6	0.3
WNW	0	0.0	1	0.0	0	0.0	2	0.1	0	0.0	1	0.0	0	0.0	4	0.2
NW	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
NNW	0	0.0	0	0.0	0	0.0	1	0.0	8	0.4	1	0.0	0	0.0	10	0.5
	0	0.0	3	0.1	21	1.0	37	1.7	67	3.1	52	2.4	18	0.8	198	9.2

MEAN WIND SPEED: 16.0
 MISSING: 0

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 01/09-03/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS
WIND: 300 FT
DELTA T: (300-33FT)

LAPSE RATE: GT 4.00 DEG C/100M
CLASS G

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
NNE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
NE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
ENE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
E	0	0.0	2	0.1	3	0.1	0	0.0	0	0.0	0	0.0	0	0.0	5	0.2
ESE	0	0.0	0	0.0	1	0.0	0	0.0	3	0.1	0	0.0	0	0.0	4	0.2
SE	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
SSE	0	0.0	0	0.0	1	0.0	3	0.1	3	0.1	0	0.0	0	0.0	7	0.3
S	0	0.0	0	0.0	1	0.0	3	0.1	7	0.3	8	0.4	7	0.3	26	1.2
SSW	0	0.0	1	0.0	0	0.0	1	0.0	8	0.4	15	0.7	2	0.1	27	1.3
SW	0	0.0	0	0.0	1	0.0	2	0.1	5	0.2	2	0.1	1	0.0	11	0.5
WSW	0	0.0	0	0.0	1	0.0	1	0.0	1	0.0	1	0.0	0	0.0	4	0.2
W	0	0.0	0	0.0	1	0.0	1	0.0	1	0.0	0	0.0	0	0.0	3	0.1
WNW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
NW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
NNW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	0	0.0	3	0.1	10	0.5	11	0.5	28	1.3	26	1.2	10	0.5	88	4.1

MEAN WIND SPEED: 16.2
MISSING: 0

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 01/09-03/09

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED
 BY ATMOSPHERIC STABILITY CLASS
 WIND: 300 FT
 DELTA T: (300-33FT)

ALL STABILITY CLASSES

DIRECTION	WIND SPEED GROUPS (MPH)														SUM PERCENT	
	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6			
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT
N	0	0.0	5	0.2	17	0.8	37	1.7	55	2.5	34	1.6	9	0.4	157	7.3
NNE	0	0.0	3	0.1	13	0.6	22	1.0	33	1.5	13	0.6	2	0.1	86	4.0
NE	0	0.0	4	0.2	18	0.8	27	1.3	26	1.2	0	0.0	0	0.0	75	3.5
ENE	0	0.0	2	0.1	18	0.8	29	1.3	7	0.3	0	0.0	0	0.0	56	2.6
E	0	0.0	9	0.4	17	0.8	19	0.9	0	0.0	0	0.0	0	0.0	45	2.1
ESE	0	0.0	1	0.0	12	0.6	8	0.4	10	0.5	1	0.0	0	0.0	32	1.5
SE	0	0.0	3	0.1	18	0.8	23	1.1	20	0.9	27	1.3	0	0.0	91	4.2
SSE	0	0.0	3	0.1	20	0.9	25	1.2	61	2.8	46	2.1	4	0.2	159	7.4
S	0	0.0	3	0.1	15	0.7	34	1.6	51	2.4	30	1.4	11	0.5	144	6.7
SSW	0	0.0	4	0.2	21	1.0	29	1.3	50	2.3	31	1.4	13	0.6	148	6.9
SW	0	0.0	1	0.0	21	1.0	22	1.0	45	2.1	18	0.8	7	0.3	114	5.3
WSW	0	0.0	1	0.0	28	1.3	27	1.3	38	1.8	21	1.0	3	0.1	118	5.5
W	0	0.0	4	0.2	22	1.0	23	1.1	22	1.0	25	1.2	33	1.5	129	6.0
WNW	0	0.0	3	0.1	18	0.8	48	2.2	48	2.2	47	2.2	51	2.4	215	10.0
NW	0	0.0	2	0.1	14	0.6	26	1.2	141	6.5	131	6.1	54	2.5	368	17.1
NNW	0	0.0	2	0.1	12	0.6	34	1.6	97	4.5	49	2.3	26	1.2	220	10.2
	0	0.0	50	2.3	284	13.2	433	20.1	704	32.6	473	21.9	213	9.9	2157	100.0
MISSING HOURS:	3															
MEAN WIND SPEED:	15.4															

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 01/09-03/09

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS
WIND: 300 FT
DELTA T: (300-33FT)

DIRECTION VS SPEED ONLY

DIRECTION	WIND SPEED GROUPS (MPH)														SUM PERCENT	
	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6			SUM PERCENT
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	5	0.2	17	0.8	37	1.7	56	2.6	35	1.6	9	0.4	159	7.4
NNE	0	0.0	3	0.1	13	0.6	22	1.0	33	1.5	13	0.6	2	0.1	86	4.0
NE	0	0.0	4	0.2	18	0.8	27	1.2	26	1.2	0	0.0	0	0.0	75	3.5
ENE	0	0.0	2	0.1	18	0.8	29	1.3	7	0.3	0	0.0	0	0.0	56	2.6
E	0	0.0	9	0.4	17	0.8	19	0.9	0	0.0	0	0.0	0	0.0	45	2.1
ESE	0	0.0	1	0.0	12	0.6	8	0.4	10	0.5	1	0.0	0	0.0	32	1.5
SE	0	0.0	3	0.1	18	0.8	23	1.1	20	0.9	27	1.2	0	0.0	91	4.2
SSE	0	0.0	3	0.1	20	0.9	25	1.2	61	2.8	46	2.1	4	0.2	159	7.4
S	0	0.0	3	0.1	15	0.7	34	1.6	51	2.4	30	1.4	11	0.5	144	6.7
SSW	0	0.0	4	0.2	21	1.0	29	1.3	50	2.3	31	1.4	13	0.6	148	6.9
SW	0	0.0	1	0.0	21	1.0	22	1.0	45	2.1	18	0.8	7	0.3	114	5.3
WSW	0	0.0	1	0.0	28	1.3	27	1.2	38	1.8	21	1.0	3	0.1	118	5.5
W	0	0.0	4	0.2	22	1.0	23	1.1	22	1.0	25	1.2	33	1.5	129	6.0
WNW	0	0.0	3	0.1	18	0.8	48	2.2	48	2.2	47	2.2	51	2.4	215	10.0
NW	0	0.0	2	0.1	14	0.6	26	1.2	141	6.5	131	6.1	54	2.5	368	17.0
NNW	0	0.0	2	0.1	12	0.6	34	1.6	98	4.5	49	2.3	26	1.2	221	10.2
	0	0.0	50	2.3	284	13.1	433	20.0	706	32.7	474	21.9	213	9.9	2160	100.0

MISSING HOURS: 0

MEAN WIND SPEED: 15.4

Lapse Rate
Wind Distributions
300 – 33 foot

4/2009 – 6/2009

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 04/09-06/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS

WIND: 33 FT
DELTA T: (300-33FT)

LAPSE RATE: LE -1.90 DEG C/100M
CLASS A

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT
N	0	0.0	0	0.0	0	0.0	5	0.2	0	0.0	0	0.0	0	0.0	5	0.2
NNE	0	0.0	0	0.0	1	0.0	6	0.3	0	0.0	0	0.0	0	0.0	7	0.3
NE	0	0.0	0	0.0	2	0.1	2	0.1	0	0.0	0	0.0	0	0.0	4	0.2
ENE	0	0.0	0	0.0	1	0.0	2	0.1	0	0.0	0	0.0	0	0.0	3	0.1
E	0	0.0	0	0.0	2	0.1	0	0.0	1	0.0	0	0.0	0	0.0	3	0.1
ESE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SE	0	0.0	0	0.0	1	0.0	14	0.6	18	0.8	0	0.0	0	0.0	33	1.5
SSE	0	0.0	0	0.0	3	0.1	7	0.3	1	0.0	1	0.0	0	0.0	12	0.6
S	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
SSW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SW	0	0.0	0	0.0	6	0.3	1	0.0	0	0.0	0	0.0	0	0.0	7	0.3
WSW	0	0.0	0	0.0	3	0.1	18	0.8	7	0.3	0	0.0	0	0.0	28	1.3
W	0	0.0	0	0.0	0	0.0	5	0.2	7	0.3	6	0.3	0	0.0	18	0.8
WNW	0	0.0	0	0.0	1	0.0	4	0.2	11	0.5	1	0.0	0	0.0	17	0.8
NW	0	0.0	0	0.0	0	0.0	4	0.2	8	0.4	0	0.0	0	0.0	12	0.6
NNW	0	0.0	0	0.0	2	0.1	2	0.1	3	0.1	0	0.0	0	0.0	7	0.3
	0	0.0	0	0.0	23	1.1	70	3.2	56	2.6	8	0.4	0	0.0	157	7.2

MEAN WIND SPEED: 11.7

MISSING: 1

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 04/09-06/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS

WIND: 33 FT
DELTA T: (300-33FT)

LAPSE RATE: -1.89 TO -1.70 DEG C/100M
CLASS B

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT
N	0	0.0	0	0.0	4	0.2	1	0.0	0	0.0	0	0.0	0	0.0	5	0.2
NNE	0	0.0	0	0.0	3	0.1	0	0.0	0	0.0	0	0.0	0	0.0	3	0.1
NE	0	0.0	1	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	0.1
ENE	0	0.0	0	0.0	0	0.0	2	0.1	0	0.0	0	0.0	0	0.0	2	0.1
E	0	0.0	0	0.0	2	0.1	0	0.0	0	0.0	0	0.0	0	0.0	2	0.1
ESE	0	0.0	0	0.0	3	0.1	0	0.0	0	0.0	0	0.0	0	0.0	3	0.1
SE	0	0.0	0	0.0	0	0.0	2	0.1	7	0.3	0	0.0	0	0.0	9	0.4
SSE	0	0.0	0	0.0	4	0.2	0	0.0	0	0.0	1	0.0	1	0.0	6	0.3
S	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
SSW	0	0.0	1	0.0	6	0.3	0	0.0	0	0.0	0	0.0	0	0.0	7	0.3
SW	0	0.0	0	0.0	9	0.4	0	0.0	0	0.0	0	0.0	0	0.0	9	0.4
WSW	0	0.0	0	0.0	6	0.3	4	0.2	0	0.0	0	0.0	0	0.0	10	0.5
W	0	0.0	0	0.0	1	0.0	5	0.2	0	0.0	1	0.0	0	0.0	7	0.3
WNW	0	0.0	0	0.0	1	0.0	2	0.1	3	0.1	0	0.0	0	0.0	6	0.3
NW	0	0.0	0	0.0	0	0.0	3	0.1	2	0.1	0	0.0	0	0.0	5	0.2
NNW	0	0.0	1	0.0	4	0.2	6	0.3	0	0.0	0	0.0	0	0.0	11	0.5
	0	0.0	3	0.1	45	2.1	25	1.2	12	0.6	2	0.1	1	0.0	88	4.1

MEAN WIND SPEED: 8.7

MISSING: 0

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 04/09-06/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
 BY ATMOSPHERIC STABILITY CLASS
 WIND: 33 FT
 DELTA T: (300-33FT)

LAPSE RATE: -1.69 TO -1.50 DEG C/100M
 CLASS C

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	0	0.0	2	0.1	3	0.1	1	0.0	0	0.0	0	0.0	6	0.3
NNE	0	0.0	0	0.0	2	0.1	4	0.2	0	0.0	0	0.0	0	0.0	6	0.3
NE	0	0.0	0	0.0	2	0.1	2	0.1	0	0.0	0	0.0	0	0.0	4	0.2
ENE	0	0.0	2	0.1	4	0.2	0	0.0	0	0.0	0	0.0	0	0.0	6	0.3
E	0	0.0	0	0.0	3	0.1	2	0.1	0	0.0	0	0.0	0	0.0	5	0.2
ESE	0	0.0	0	0.0	0	0.0	4	0.2	0	0.0	0	0.0	0	0.0	4	0.2
SE	0	0.0	0	0.0	3	0.1	4	0.2	10	0.5	4	0.2	1	0.0	22	1.0
SSE	0	0.0	0	0.0	4	0.2	0	0.0	1	0.0	2	0.1	0	0.0	7	0.3
S	0	0.0	1	0.0	5	0.2	0	0.0	0	0.0	0	0.0	0	0.0	6	0.3
SSW	0	0.0	0	0.0	6	0.3	0	0.0	0	0.0	0	0.0	0	0.0	6	0.3
SW	0	0.0	0	0.0	7	0.3	0	0.0	0	0.0	0	0.0	0	0.0	7	0.3
WSW	0	0.0	1	0.0	6	0.3	2	0.1	0	0.0	0	0.0	0	0.0	9	0.4
W	0	0.0	0	0.0	4	0.2	3	0.1	4	0.2	0	0.0	0	0.0	11	0.5
WNW	0	0.0	0	0.0	3	0.1	1	0.0	2	0.1	0	0.0	0	0.0	6	0.3
NW	0	0.0	0	0.0	6	0.3	4	0.2	1	0.0	0	0.0	0	0.0	11	0.5
NNW	0	0.0	0	0.0	4	0.2	4	0.2	2	0.1	0	0.0	0	0.0	10	0.5
	0	0.0	4	0.2	61	2.8	33	1.5	21	1.0	6	0.3	1	0.0	126	5.8

MEAN WIND SPEED: 8.9
 MISSING: 0

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 04/09-06/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS

WIND: 33 FT
DELTA T: (300-33FT)

LAPSE RATE: -1.49 TO -0.50 DEG C/100M
CLASS D

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	1	0.0	29	1.3	18	0.8	10	0.5	0	0.0	0	0.0	58	2.7
NNE	0	0.0	3	0.1	30	1.4	23	1.1	6	0.3	0	0.0	0	0.0	62	2.9
NE	0	0.0	3	0.1	53	2.4	28	1.3	13	0.6	0	0.0	0	0.0	97	4.5
ENE	0	0.0	5	0.2	54	2.5	18	0.8	2	0.1	0	0.0	1	0.0	80	3.7
E	0	0.0	10	0.5	33	1.5	12	0.6	2	0.1	0	0.0	0	0.0	57	2.6
ESE	0	0.0	3	0.1	27	1.2	27	1.2	2	0.1	0	0.0	0	0.0	59	2.7
SE	0	0.0	1	0.0	16	0.7	50	2.3	35	1.6	5	0.2	0	0.0	107	4.9
SSE	0	0.0	2	0.1	19	0.9	22	1.0	23	1.1	5	0.2	0	0.0	71	3.3
S	0	0.0	4	0.2	19	0.9	9	0.4	4	0.2	4	0.2	0	0.0	40	1.8
SSW	0	0.0	4	0.2	30	1.4	4	0.2	6	0.3	0	0.0	0	0.0	44	2.0
SW	0	0.0	4	0.2	27	1.2	28	1.3	4	0.2	0	0.0	0	0.0	63	2.9
WSW	0	0.0	2	0.1	21	1.0	15	0.7	9	0.4	0	0.0	0	0.0	47	2.2
W	0	0.0	1	0.0	8	0.4	21	1.0	10	0.5	4	0.2	0	0.0	44	2.0
WNW	0	0.0	1	0.0	15	0.7	9	0.4	9	0.4	0	0.0	0	0.0	34	1.6
NW	0	0.0	1	0.0	19	0.9	9	0.4	6	0.3	0	0.0	0	0.0	35	1.6
NNW	0	0.0	2	0.1	16	0.7	15	0.7	5	0.2	0	0.0	0	0.0	38	1.7
	0	0.0	47	2.2	416	19.2	308	14.2	146	6.7	18	0.8	1	0.0	936	43.1

MEAN WIND SPEED: 8.6

MISSING: 5

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 04/09-06/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
 BY ATMOSPHERIC STABILITY CLASS
 WIND: 33 FT
 DELTA T: (300-33FT)

LAPSE RATE: -0.49 TO 1.50 DEG C/100M
 CLASS E

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT
N	0	0.0	1	0.0	21	1.0	19	0.9	4	0.2	1	0.0	0	0.0	46	2.1
NNE	0	0.0	2	0.1	9	0.4	3	0.1	0	0.0	0	0.0	0	0.0	14	0.6
NE	0	0.0	5	0.2	18	0.8	1	0.0	0	0.0	0	0.0	0	0.0	24	1.1
ENE	0	0.0	8	0.4	8	0.4	1	0.0	0	0.0	0	0.0	0	0.0	17	0.8
E	0	0.0	11	0.5	10	0.5	5	0.2	0	0.0	0	0.0	0	0.0	26	1.2
ESE	0	0.0	10	0.5	17	0.8	14	0.6	4	0.2	0	0.0	0	0.0	45	2.1
SE	0	0.0	3	0.1	10	0.5	38	1.7	17	0.8	2	0.1	0	0.0	70	3.2
SSE	0	0.0	4	0.2	10	0.5	10	0.5	6	0.3	1	0.0	0	0.0	31	1.4
S	0	0.0	6	0.3	10	0.5	6	0.3	2	0.1	1	0.0	0	0.0	25	1.2
SSW	0	0.0	1	0.0	30	1.4	18	0.8	0	0.0	0	0.0	0	0.0	49	2.3
SW	0	0.0	2	0.1	44	2.0	21	1.0	6	0.3	0	0.0	0	0.0	73	3.4
WSW	0	0.0	4	0.2	26	1.2	12	0.6	2	0.1	0	0.0	0	0.0	44	2.0
W	0	0.0	4	0.2	15	0.7	5	0.2	7	0.3	1	0.0	0	0.0	32	1.5
WNW	0	0.0	6	0.3	22	1.0	15	0.7	6	0.3	0	0.0	0	0.0	49	2.3
NW	0	0.0	9	0.4	15	0.7	25	1.2	3	0.1	0	0.0	0	0.0	52	2.4
NNW	0	0.0	6	0.3	25	1.2	17	0.8	3	0.1	0	0.0	0	0.0	51	2.3
	0	0.0	82	3.8	290	13.4	210	9.7	60	2.8	6	0.3	0	0.0	648	29.8

MEAN WIND SPEED: 7.5
 MISSING: 1

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 04/09-06/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS

WIND: 33 FT
DELTA T: (300-33FT)

LAPSE RATE: 1.51 TO 4.00 DEG C/100M
CLASS F

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	0	0.0	7	0.3	2	0.1	0	0.0	0	0.0	0	0.0	9	0.4
NNE	0	0.0	1	0.0	9	0.4	0	0.0	0	0.0	0	0.0	0	0.0	10	0.5
NE	0	0.0	2	0.1	6	0.3	0	0.0	0	0.0	0	0.0	0	0.0	8	0.4
ENE	0	0.0	5	0.2	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	6	0.3
E	0	0.0	1	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	0.1
ESE	0	0.0	2	0.1	10	0.5	1	0.0	0	0.0	0	0.0	0	0.0	13	0.6
SE	0	0.0	1	0.0	6	0.3	16	0.7	3	0.1	0	0.0	0	0.0	26	1.2
SSE	0	0.0	1	0.0	8	0.4	5	0.2	0	0.0	0	0.0	0	0.0	14	0.6
S	0	0.0	1	0.0	7	0.3	2	0.1	0	0.0	0	0.0	0	0.0	10	0.5
SSW	0	0.0	1	0.0	5	0.2	5	0.2	0	0.0	0	0.0	0	0.0	11	0.5
SW	0	0.0	1	0.0	10	0.5	4	0.2	0	0.0	0	0.0	0	0.0	15	0.7
WSW	0	0.0	2	0.1	10	0.5	1	0.0	0	0.0	0	0.0	0	0.0	13	0.6
W	0	0.0	2	0.1	4	0.2	0	0.0	0	0.0	0	0.0	0	0.0	6	0.3
WNW	0	0.0	0	0.0	6	0.3	0	0.0	0	0.0	0	0.0	0	0.0	6	0.3
NW	0	0.0	0	0.0	5	0.2	0	0.0	0	0.0	0	0.0	0	0.0	5	0.2
NNW	0	0.0	0	0.0	5	0.2	1	0.0	0	0.0	0	0.0	0	0.0	6	0.3
	0	0.0	20	0.9	100	4.6	37	1.7	3	0.1	0	0.0	0	0.0	160	7.4

MEAN WIND SPEED: 6.3
MISSING: 0

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 04/09-06/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS

WIND: 33 FT
DELTA T: (300-33FT)

LAPSE RATE: GT 4.00 DEG C/100M
CLASS G

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
NNE	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
NE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
ENE	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
E	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
ESE	0	0.0	0	0.0	5	0.2	0	0.0	0	0.0	0	0.0	0	0.0	5	0.2
SE	0	0.0	2	0.1	15	0.7	10	0.5	1	0.0	0	0.0	0	0.0	28	1.3
SSE	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
S	0	0.0	1	0.0	1	0.0	2	0.1	0	0.0	0	0.0	0	0.0	4	0.2
SSW	0	0.0	0	0.0	2	0.1	0	0.0	0	0.0	0	0.0	0	0.0	2	0.1
SW	0	0.0	0	0.0	1	0.0	2	0.1	0	0.0	0	0.0	0	0.0	3	0.1
WSW	0	0.0	0	0.0	3	0.1	2	0.1	0	0.0	0	0.0	0	0.0	5	0.2
W	0	0.0	1	0.0	2	0.1	1	0.0	0	0.0	0	0.0	0	0.0	4	0.2
WNW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
NW	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
NNW	0	0.0	0	0.0	2	0.1	0	0.0	0	0.0	0	0.0	0	0.0	2	0.1
	0	0.0	5	0.2	34	1.6	17	0.8	1	0.0	0	0.0	0	0.0	57	2.6

MEAN WIND SPEED: 6.9
MISSING: 0

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 04/09-06/09

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED
 BY ATMOSPHERIC STABILITY CLASS
 WIND: 33 FT
 DELTA T: (300-33FT)

ALL STABILITY CLASSES

DIRECTION	WIND SPEED GROUPS (MPH)														SUM PERCENT	
	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM	PERCENT
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	2	0.1	63	2.9	48	2.2	15	0.7	1	0.0	0	0.0	129	5.9
NNE	0	0.0	6	0.3	55	2.5	36	1.7	6	0.3	0	0.0	0	0.0	103	4.7
NE	0	0.0	11	0.5	82	3.8	33	1.5	13	0.6	0	0.0	0	0.0	139	6.4
ENE	0	0.0	21	1.0	68	3.1	23	1.1	2	0.1	0	0.0	1	0.0	115	5.3
E	0	0.0	22	1.0	51	2.3	19	0.9	3	0.1	0	0.0	0	0.0	95	4.4
ESE	0	0.0	15	0.7	62	2.9	46	2.1	6	0.3	0	0.0	0	0.0	129	5.9
SE	0	0.0	7	0.3	51	2.3	134	6.2	91	4.2	11	0.5	1	0.0	295	13.6
SSE	0	0.0	7	0.3	49	2.3	44	2.0	31	1.4	10	0.5	1	0.0	142	6.5
S	0	0.0	13	0.6	44	2.0	19	0.9	6	0.3	5	0.2	0	0.0	87	4.0
SSW	0	0.0	7	0.3	79	3.6	27	1.2	6	0.3	0	0.0	0	0.0	119	5.5
SW	0	0.0	7	0.3	104	4.8	56	2.6	10	0.5	0	0.0	0	0.0	177	8.1
WSW	0	0.0	9	0.4	75	3.5	54	2.5	18	0.8	0	0.0	0	0.0	156	7.2
W	0	0.0	8	0.4	34	1.6	40	1.8	28	1.3	12	0.6	0	0.0	122	5.6
WNW	0	0.0	7	0.3	48	2.2	31	1.4	31	1.4	1	0.0	0	0.0	118	5.4
NW	0	0.0	10	0.5	46	2.1	45	2.1	20	0.9	0	0.0	0	0.0	121	5.6
NNW	0	0.0	9	0.4	58	2.7	45	2.1	13	0.6	0	0.0	0	0.0	125	5.8
	0	0.0	161	7.4	969	44.6	700	32.2	299	13.8	40	1.8	3	0.1	2172	100.0
MISSING HOURS:	12															
MEAN WIND SPEED:	8.3															

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 04/09-06/09

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS
WIND: 33 FT
DELTA T: (300-33FT)

DIRECTION VS SPEED ONLY

DIRECTION	WIND SPEED GROUPS (MPH)														SUM PERCENT	
	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6			
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	2	0.1	63	2.9	48	2.2	16	0.7	1	0.0	0	0.0	130	6.0
NNE	0	0.0	6	0.3	55	2.5	36	1.7	6	0.3	0	0.0	0	0.0	103	4.7
NE	0	0.0	11	0.5	82	3.8	33	1.5	13	0.6	0	0.0	0	0.0	139	6.4
ENE	0	0.0	21	1.0	68	3.1	23	1.1	2	0.1	0	0.0	1	0.0	115	5.3
E	0	0.0	22	1.0	51	2.3	19	0.9	3	0.1	0	0.0	0	0.0	95	4.4
ESE	0	0.0	15	0.7	62	2.8	46	2.1	6	0.3	0	0.0	0	0.0	129	5.9
SE	0	0.0	7	0.3	51	2.3	134	6.2	91	4.2	11	0.5	1	0.0	295	13.6
SSE	0	0.0	7	0.3	49	2.3	44	2.0	31	1.4	10	0.5	1	0.0	142	6.5
S	0	0.0	13	0.6	44	2.0	19	0.9	6	0.3	5	0.2	0	0.0	87	4.0
SSW	0	0.0	7	0.3	79	3.6	27	1.2	6	0.3	0	0.0	0	0.0	119	5.5
SW	0	0.0	7	0.3	104	4.8	56	2.6	10	0.5	0	0.0	0	0.0	177	8.1
WSW	0	0.0	9	0.4	75	3.4	54	2.5	18	0.8	0	0.0	0	0.0	156	7.2
W	0	0.0	8	0.4	34	1.6	40	1.8	28	1.3	12	0.6	0	0.0	122	5.6
WNW	0	0.0	7	0.3	48	2.2	31	1.4	31	1.4	1	0.0	0	0.0	118	5.4
NW	0	0.0	10	0.5	46	2.1	45	2.1	20	0.9	0	0.0	0	0.0	121	5.6
NNW	0	0.0	9	0.4	58	2.7	47	2.2	15	0.7	0	0.0	0	0.0	129	5.9
	0	0.0	161	7.4	969	44.5	702	32.2	302	13.9	40	1.8	3	0.1	2177	100.0

MISSING HOURS: 7

MEAN WIND SPEED: 8.3

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 04/09-06/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS

WIND: 150 FT
DELTA T: (300-33FT)

LAPSE RATE: LE -1.90 DEG C/100M
CLASS A

DIRECTION	WIND SPEED GROUPS (MPH)														SUM PERCENT	
	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6			
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT
N	0	0.0	0	0.0	1	0.0	2	0.1	4	0.2	0	0.0	0	0.0	7	0.3
NNE	0	0.0	0	0.0	0	0.0	4	0.2	0	0.0	0	0.0	0	0.0	4	0.2
NE	0	0.0	0	0.0	0	0.0	5	0.2	2	0.1	0	0.0	0	0.0	7	0.3
ENE	0	0.0	0	0.0	0	0.0	2	0.1	0	0.0	0	0.0	0	0.0	2	0.1
E	0	0.0	0	0.0	1	0.0	2	0.1	0	0.0	0	0.0	0	0.0	3	0.1
ESE	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	1	0.0
SE	0	0.0	0	0.0	0	0.0	4	0.2	9	0.4	12	0.6	0	0.0	25	1.1
SSE	0	0.0	0	0.0	2	0.1	9	0.4	6	0.3	2	0.1	1	0.0	20	0.9
S	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SSW	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
SW	0	0.0	0	0.0	1	0.0	3	0.1	0	0.0	0	0.0	0	0.0	4	0.2
WSW	0	0.0	0	0.0	3	0.1	12	0.6	6	0.3	6	0.3	0	0.0	27	1.2
W	0	0.0	0	0.0	0	0.0	5	0.2	3	0.1	5	0.2	5	0.2	18	0.8
WNW	0	0.0	0	0.0	0	0.0	3	0.1	6	0.3	7	0.3	2	0.1	18	0.8
NW	0	0.0	0	0.0	0	0.0	3	0.1	3	0.1	8	0.4	0	0.0	14	0.6
NNW	0	0.0	0	0.0	0	0.0	3	0.1	1	0.0	3	0.1	0	0.0	7	0.3
	0	0.0	0	0.0	9	0.4	57	2.6	41	1.9	43	2.0	8	0.4	158	7.3

MEAN WIND SPEED: 15.1
MISSING: 0

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 04/09-06/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS

WIND: 150 FT
DELTA T: (300-33FT)

LAPSE RATE: -1.89 TO -1.70 DEG C/100M
CLASS B

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	0	0.0	3	0.1	3	0.1	0	0.0	0	0.0	0	0.0	6	0.3
NNE	0	0.0	0	0.0	3	0.1	2	0.1	0	0.0	0	0.0	0	0.0	5	0.2
NE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
ENE	0	0.0	0	0.0	1	0.0	1	0.0	1	0.0	0	0.0	0	0.0	3	0.1
E	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	1	0.0
ESE	0	0.0	0	0.0	3	0.1	1	0.0	0	0.0	0	0.0	0	0.0	4	0.2
SE	0	0.0	0	0.0	0	0.0	1	0.0	4	0.2	2	0.1	0	0.0	7	0.3
SSE	0	0.0	0	0.0	2	0.1	1	0.0	2	0.1	0	0.0	2	0.1	7	0.3
S	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
SSW	0	0.0	1	0.0	3	0.1	2	0.1	0	0.0	0	0.0	0	0.0	6	0.3
SW	0	0.0	0	0.0	5	0.2	2	0.1	0	0.0	0	0.0	0	0.0	7	0.3
WSW	0	0.0	0	0.0	5	0.2	4	0.2	4	0.2	0	0.0	0	0.0	13	0.6
W	0	0.0	0	0.0	1	0.0	2	0.1	2	0.1	0	0.0	1	0.0	6	0.3
WNW	0	0.0	0	0.0	1	0.0	3	0.1	0	0.0	2	0.1	0	0.0	6	0.3
NW	0	0.0	0	0.0	0	0.0	4	0.2	0	0.0	3	0.1	0	0.0	7	0.3
NNW	0	0.0	1	0.0	0	0.0	8	0.4	0	0.0	0	0.0	0	0.0	9	0.4
	0	0.0	2	0.1	28	1.3	35	1.6	13	0.6	7	0.3	3	0.1	88	4.0

MEAN WIND SPEED: 11.0
MISSING: 0

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 04/09-06/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
 BY ATMOSPHERIC STABILITY CLASS
 WIND: 150 FT
 DELTA T: (300-33FT)

LAPSE RATE: -1.69 TO -1.50 DEG C/100M
 CLASS C

DIRECTION	WIND SPEED GROUPS (MPH)														SUM PERCENT	
	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6			
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	0	0.0	1	0.0	5	0.2	3	0.1	1	0.0	0	0.0	10	0.5
NNE	0	0.0	0	0.0	0	0.0	3	0.1	1	0.0	0	0.0	0	0.0	4	0.2
NE	0	0.0	0	0.0	2	0.1	2	0.1	2	0.1	0	0.0	0	0.0	6	0.3
ENE	0	0.0	1	0.0	5	0.2	0	0.0	0	0.0	0	0.0	0	0.0	6	0.3
E	0	0.0	0	0.0	2	0.1	2	0.1	1	0.0	0	0.0	0	0.0	5	0.2
ESE	0	0.0	0	0.0	0	0.0	2	0.1	1	0.0	0	0.0	0	0.0	3	0.1
SE	0	0.0	0	0.0	2	0.1	4	0.2	1	0.0	6	0.3	2	0.1	15	0.7
SSE	0	0.0	0	0.0	2	0.1	0	0.0	5	0.2	4	0.2	2	0.1	13	0.6
S	0	0.0	0	0.0	6	0.3	0	0.0	0	0.0	0	0.0	0	0.0	6	0.3
SSW	0	0.0	0	0.0	5	0.2	0	0.0	0	0.0	0	0.0	0	0.0	5	0.2
SW	0	0.0	1	0.0	4	0.2	3	0.1	0	0.0	0	0.0	0	0.0	8	0.4
WSW	0	0.0	0	0.0	3	0.1	0	0.0	2	0.1	0	0.0	0	0.0	5	0.2
W	0	0.0	1	0.0	6	0.3	1	0.0	3	0.1	3	0.1	1	0.0	15	0.7
WNW	0	0.0	0	0.0	1	0.0	0	0.0	1	0.0	2	0.1	0	0.0	4	0.2
NW	0	0.0	0	0.0	5	0.2	4	0.2	3	0.1	0	0.0	0	0.0	12	0.6
NNW	0	0.0	0	0.0	1	0.0	6	0.3	2	0.1	0	0.0	0	0.0	9	0.4
	0	0.0	3	0.1	45	2.1	32	1.5	25	1.1	16	0.7	5	0.2	126	5.8

MEAN WIND SPEED: 11.5
 MISSING: 0

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 04/09-06/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
 BY ATMOSPHERIC STABILITY CLASS
 WIND: 150 FT
 DELTA T: (300-33FT)

LAPSE RATE: -1.49 TO -0.50 DEG C/100M
 CLASS D

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	0	0.0	9	0.4	30	1.4	8	0.4	10	0.5	0	0.0	57	2.6
NNE	0	0.0	1	0.0	13	0.6	21	1.0	14	0.6	5	0.2	0	0.0	54	2.5
NE	0	0.0	1	0.0	19	0.9	38	1.7	32	1.5	15	0.7	3	0.1	108	5.0
ENE	0	0.0	1	0.0	25	1.1	47	2.2	13	0.6	4	0.2	0	0.0	90	4.1
E	0	0.0	1	0.0	26	1.2	19	0.9	6	0.3	2	0.1	1	0.0	55	2.5
ESE	0	0.0	1	0.0	11	0.5	27	1.2	16	0.7	1	0.0	0	0.0	56	2.6
SE	0	0.0	0	0.0	6	0.3	22	1.0	42	1.9	18	0.8	6	0.3	94	4.3
SSE	0	0.0	2	0.1	14	0.6	13	0.6	27	1.2	20	0.9	1	0.0	77	3.5
S	0	0.0	2	0.1	15	0.7	13	0.6	11	0.5	4	0.2	4	0.2	49	2.2
SSW	0	0.0	1	0.0	20	0.9	12	0.6	0	0.0	4	0.2	0	0.0	37	1.7
SW	0	0.0	4	0.2	17	0.8	18	0.8	18	0.8	9	0.4	0	0.0	66	3.0
WSW	0	0.0	3	0.1	13	0.6	14	0.6	10	0.5	5	0.2	2	0.1	47	2.2
W	0	0.0	0	0.0	5	0.2	9	0.4	16	0.7	6	0.3	6	0.3	42	1.9
WNW	0	0.0	1	0.0	6	0.3	10	0.5	12	0.6	7	0.3	1	0.0	37	1.7
NW	0	0.0	0	0.0	9	0.4	17	0.8	7	0.3	3	0.1	1	0.0	37	1.7
NNW	0	0.0	0	0.0	10	0.5	11	0.5	10	0.5	4	0.2	0	0.0	35	1.6
	0	0.0	18	0.8	218	10.0	321	14.7	242	11.1	117	5.4	25	1.1	941	43.2

MEAN WIND SPEED: 12.1
 MISSING: 0

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 04/09-06/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS

WIND: 150 FT
DELTA T: (300-33FT)

LAPSE RATE: -0.49 TO 1.50 DEG C/100M
CLASS E

DIRECTION	WIND SPEED GROUPS (MPH)														SUM PERCENT	
	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6			
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT
N	0	0.0	2	0.1	9	0.4	9	0.4	21	1.0	6	0.3	3	0.1	50	2.3
NNE	0	0.0	0	0.0	5	0.2	8	0.4	8	0.4	0	0.0	0	0.0	21	1.0
NE	0	0.0	1	0.0	3	0.1	14	0.6	0	0.0	0	0.0	0	0.0	18	0.8
ENE	0	0.0	0	0.0	7	0.3	9	0.4	1	0.0	0	0.0	0	0.0	17	0.8
E	0	0.0	5	0.2	12	0.6	4	0.2	1	0.0	0	0.0	0	0.0	22	1.0
ESE	0	0.0	0	0.0	1	0.0	17	0.8	8	0.4	3	0.1	0	0.0	29	1.3
SE	0	0.0	2	0.1	13	0.6	16	0.7	21	1.0	25	1.1	3	0.1	80	3.7
SSE	0	0.0	2	0.1	9	0.4	7	0.3	12	0.6	3	0.1	0	0.0	33	1.5
S	0	0.0	0	0.0	7	0.3	5	0.2	4	0.2	3	0.1	5	0.2	24	1.1
SSW	0	0.0	2	0.1	9	0.4	25	1.1	8	0.4	3	0.1	0	0.0	47	2.2
SW	0	0.0	1	0.0	18	0.8	32	1.5	21	1.0	7	0.3	1	0.0	80	3.7
WSW	0	0.0	5	0.2	22	1.0	15	0.7	10	0.5	2	0.1	2	0.1	56	2.6
W	0	0.0	0	0.0	4	0.2	9	0.4	9	0.4	3	0.1	4	0.2	29	1.3
WNW	0	0.0	1	0.0	11	0.5	16	0.7	11	0.5	4	0.2	0	0.0	43	2.0
NW	0	0.0	0	0.0	7	0.3	13	0.6	19	0.9	6	0.3	0	0.0	45	2.1
NNW	0	0.0	0	0.0	8	0.4	17	0.8	27	1.2	3	0.1	0	0.0	55	2.5
	0	0.0	21	1.0	145	6.7	216	9.9	181	8.3	68	3.1	18	0.8	649	29.8

MEAN WIND SPEED: 11.8

MISSING: 0

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 04/09-06/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
 BY ATMOSPHERIC STABILITY CLASS
 WIND: 150 FT
 DELTA T: (300-33FT)

LAPSE RATE: 1.51 TO 4.00 DEG C/100M
 CLASS F

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT
N	0	0.0	0	0.0	2	0.1	2	0.1	3	0.1	0	0.0	0	0.0	7	0.3
NNE	0	0.0	0	0.0	3	0.1	4	0.2	2	0.1	0	0.0	0	0.0	9	0.4
NE	0	0.0	0	0.0	5	0.2	1	0.0	0	0.0	0	0.0	0	0.0	6	0.3
ENE	0	0.0	2	0.1	3	0.1	0	0.0	1	0.0	0	0.0	0	0.0	6	0.3
E	0	0.0	0	0.0	3	0.1	0	0.0	0	0.0	0	0.0	0	0.0	3	0.1
ESE	0	0.0	0	0.0	2	0.1	4	0.2	0	0.0	0	0.0	0	0.0	6	0.3
SE	0	0.0	1	0.0	6	0.3	6	0.3	8	0.4	4	0.2	0	0.0	25	1.1
SSE	0	0.0	0	0.0	2	0.1	4	0.2	8	0.4	2	0.1	0	0.0	16	0.7
S	0	0.0	0	0.0	0	0.0	2	0.1	2	0.1	2	0.1	0	0.0	6	0.3
SSW	0	0.0	1	0.0	1	0.0	5	0.2	9	0.4	1	0.0	0	0.0	17	0.8
SW	0	0.0	0	0.0	4	0.2	1	0.0	14	0.6	1	0.0	0	0.0	20	0.9
WSW	0	0.0	0	0.0	8	0.4	5	0.2	1	0.0	0	0.0	0	0.0	14	0.6
W	0	0.0	1	0.0	4	0.2	2	0.1	0	0.0	0	0.0	0	0.0	7	0.3
WNW	0	0.0	0	0.0	3	0.1	3	0.1	1	0.0	0	0.0	0	0.0	7	0.3
NW	0	0.0	0	0.0	1	0.0	2	0.1	2	0.1	0	0.0	0	0.0	5	0.2
NNW	0	0.0	0	0.0	3	0.1	2	0.1	1	0.0	0	0.0	0	0.0	6	0.3
	0	0.0	5	0.2	50	2.3	43	2.0	52	2.4	10	0.5	0	0.0	160	7.3

MEAN WIND SPEED: 10.7
 MISSING: 0

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 04/09-06/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
 BY ATMOSPHERIC STABILITY CLASS
 WIND: 150 FT
 DELTA T: (300-33FT)

LAPSE RATE: GT 4.00 DEG C/100M
 CLASS G

DIRECTION	WIND SPEED GROUPS (MPH)														SUM PERCENT	
	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6			
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
NNE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
NE	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
ENE	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
E	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
ESE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SE	0	0.0	0	0.0	0	0.0	1	0.0	3	0.1	0	0.0	0	0.0	4	0.2
SSE	0	0.0	0	0.0	0	0.0	8	0.4	3	0.1	2	0.1	0	0.0	13	0.6
S	0	0.0	0	0.0	0	0.0	6	0.3	1	0.0	1	0.0	0	0.0	8	0.4
SSW	0	0.0	0	0.0	1	0.0	6	0.3	7	0.3	0	0.0	0	0.0	14	0.6
SW	0	0.0	0	0.0	0	0.0	1	0.0	2	0.1	3	0.1	0	0.0	6	0.3
WSW	0	0.0	0	0.0	0	0.0	0	0.0	4	0.2	0	0.0	0	0.0	4	0.2
W	0	0.0	0	0.0	0	0.0	0	0.0	2	0.1	0	0.0	0	0.0	2	0.1
WNW	0	0.0	0	0.0	0	0.0	2	0.1	0	0.0	0	0.0	0	0.0	2	0.1
NW	0	0.0	0	0.0	2	0.1	0	0.0	0	0.0	0	0.0	0	0.0	2	0.1
NNW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	0	0.0	1	0.0	4	0.2	24	1.1	22	1.0	6	0.3	0	0.0	57	2.6

MEAN WIND SPEED: 12.6
 MISSING: 0

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 04/09-06/09

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS
WIND: 150 FT
DELTA T: (300-33FT)

ALL STABILITY CLASSES

DIRECTION	WIND SPEED GROUPS (MPH)														SUM PERCENT	
	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
SUM PERCENT	SUM PERCENT	SUM PERCENT	SUM PERCENT	SUM PERCENT	SUM PERCENT	SUM PERCENT	SUM PERCENT	SUM PERCENT	SUM PERCENT	SUM PERCENT	SUM PERCENT	SUM PERCENT	SUM PERCENT			
N	0	0.0	2	0.1	25	1.1	51	2.3	39	1.8	17	0.8	3	0.1	137	6.3
NNE	0	0.0	1	0.0	24	1.1	42	1.9	25	1.1	5	0.2	0	0.0	97	4.5
NE	0	0.0	2	0.1	30	1.4	60	2.8	36	1.7	15	0.7	3	0.1	146	6.7
ENE	0	0.0	5	0.2	41	1.9	59	2.7	16	0.7	4	0.2	0	0.0	125	5.7
E	0	0.0	6	0.3	44	2.0	28	1.3	8	0.4	2	0.1	1	0.0	89	4.1
ESE	0	0.0	1	0.0	17	0.8	51	2.3	26	1.2	4	0.2	0	0.0	99	4.5
SE	0	0.0	3	0.1	27	1.2	54	2.5	88	4.0	67	3.1	11	0.5	250	11.5
SSE	0	0.0	4	0.2	31	1.4	42	1.9	63	2.9	33	1.5	6	0.3	179	8.2
S	0	0.0	2	0.1	29	1.3	26	1.2	18	0.8	10	0.5	9	0.4	94	4.3
SSW	0	0.0	5	0.2	40	1.8	50	2.3	24	1.1	8	0.4	0	0.0	127	5.8
SW	0	0.0	6	0.3	49	2.2	60	2.8	55	2.5	20	0.9	1	0.0	191	8.8
WSW	0	0.0	8	0.4	54	2.5	50	2.3	37	1.7	13	0.6	4	0.2	166	7.6
W	0	0.0	2	0.1	20	0.9	28	1.3	35	1.6	17	0.8	17	0.8	119	5.5
WNW	0	0.0	2	0.1	22	1.0	37	1.7	31	1.4	22	1.0	3	0.1	117	5.4
NW	0	0.0	0	0.0	24	1.1	43	2.0	34	1.6	20	0.9	1	0.0	122	5.6
NNW	0	0.0	1	0.0	22	1.0	47	2.2	41	1.9	10	0.5	0	0.0	121	5.6
	0	0.0	50	2.3	499	22.9	728	33.4	576	26.4	267	12.3	59	2.7	2179	100.0

MISSING HOURS: 5

MEAN WIND SPEED: 12.1

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 04/09-06/09

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED
 BY ATMOSPHERIC STABILITY CLASS
 WIND: 150 FT
 DELTA T: (300-33FT)

DIRECTION VS SPEED ONLY

DIRECTION	WIND SPEED GROUPS (MPH)														SUM PERCENT	
	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	SUM PERCENT
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	2	0.1	25	1.1	51	2.3	42	1.9	17	0.8	3	0.1	140	6.4
NNE	0	0.0	1	0.0	24	1.1	42	1.9	25	1.1	5	0.2	0	0.0	97	4.4
NE	0	0.0	2	0.1	30	1.4	60	2.7	36	1.6	15	0.7	3	0.1	146	6.7
ENE	0	0.0	5	0.2	41	1.9	59	2.7	16	0.7	4	0.2	0	0.0	125	5.7
E	0	0.0	6	0.3	44	2.0	28	1.3	8	0.4	2	0.1	1	0.0	89	4.1
ESE	0	0.0	1	0.0	17	0.8	51	2.3	26	1.2	4	0.2	0	0.0	99	4.5
SE	0	0.0	3	0.1	27	1.2	54	2.5	88	4.0	67	3.1	11	0.5	250	11.5
SSE	0	0.0	4	0.2	31	1.4	42	1.9	63	2.9	33	1.5	6	0.3	179	8.2
S	0	0.0	2	0.1	29	1.3	26	1.2	18	0.8	10	0.5	9	0.4	94	4.3
SSW	0	0.0	5	0.2	40	1.8	50	2.3	24	1.1	8	0.4	0	0.0	127	5.8
SW	0	0.0	6	0.3	49	2.2	60	2.7	55	2.5	20	0.9	1	0.0	191	8.7
WSW	0	0.0	8	0.4	54	2.5	50	2.3	37	1.7	13	0.6	4	0.2	166	7.6
W	0	0.0	2	0.1	20	0.9	28	1.3	35	1.6	17	0.8	17	0.8	119	5.5
WNN	0	0.0	2	0.1	22	1.0	37	1.7	31	1.4	22	1.0	3	0.1	117	5.4
NW	0	0.0	0	0.0	24	1.1	43	2.0	34	1.6	20	0.9	1	0.0	122	5.6
NNW	0	0.0	1	0.0	22	1.0	47	2.2	42	1.9	10	0.5	0	0.0	122	5.6
	0	0.0	50	2.3	499	22.9	728	33.3	580	26.6	267	12.2	59	2.7	2183	100.0

MISSING HOURS: 1

MEAN WIND SPEED: 12.1

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 04/09-06/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS
WIND: 197 FT
DELTA T: (300-33FT)

LAPSE RATE: LE -1.90 DEG C/100M
CLASS A

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	0	0.0	1	0.0	3	0.1	3	0.1	0	0.0	0	0.0	7	0.3
NNE	0	0.0	0	0.0	0	0.0	5	0.2	0	0.0	0	0.0	0	0.0	5	0.2
NE	0	0.0	0	0.0	0	0.0	4	0.2	2	0.1	0	0.0	0	0.0	6	0.3
ENE	0	0.0	0	0.0	0	0.0	1	0.0	1	0.0	0	0.0	0	0.0	2	0.1
E	0	0.0	0	0.0	1	0.0	2	0.1	0	0.0	0	0.0	0	0.0	3	0.1
ESE	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	1	0.0
SE	0	0.0	0	0.0	0	0.0	4	0.2	9	0.4	11	0.5	0	0.0	24	1.1
SSE	0	0.0	0	0.0	2	0.1	8	0.4	8	0.4	2	0.1	1	0.0	21	1.0
S	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SSW	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
SW	0	0.0	0	0.0	1	0.0	3	0.1	0	0.0	0	0.0	0	0.0	4	0.2
WSW	0	0.0	0	0.0	0	0.0	12	0.6	6	0.3	7	0.3	0	0.0	25	1.1
W	0	0.0	0	0.0	2	0.1	3	0.1	5	0.2	6	0.3	5	0.2	21	1.0
WNW	0	0.0	0	0.0	0	0.0	3	0.1	5	0.2	7	0.3	2	0.1	17	0.8
NW	0	0.0	0	0.0	0	0.0	2	0.1	3	0.1	10	0.5	0	0.0	15	0.7
NNW	0	0.0	0	0.0	0	0.0	3	0.1	1	0.0	2	0.1	0	0.0	6	0.3
	0	0.0	0	0.0	8	0.4	53	2.4	44	2.0	45	2.1	8	0.4	158	7.3

MEAN WIND SPEED: 15.6
MISSING: 0

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 04/09-06/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
 BY ATMOSPHERIC STABILITY CLASS
 WIND: 197 FT
 DELTA T: (300-33FT)

LAPSE RATE: -1.89 TO -1.70 DEG C/100M
 CLASS B

DIRECTION	WIND SPEED GROUPS (MPH)														SUM PERCENT	
	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6			
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	0	0.0	4	0.2	3	0.1	0	0.0	0	0.0	0	0.0	7	0.3
NNE	0	0.0	0	0.0	1	0.0	3	0.1	0	0.0	0	0.0	0	0.0	4	0.2
NE	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
ENE	0	0.0	0	0.0	0	0.0	0	0.0	2	0.1	0	0.0	0	0.0	2	0.1
E	0	0.0	0	0.0	1	0.0	1	0.0	0	0.0	0	0.0	0	0.0	2	0.1
ESE	0	0.0	0	0.0	2	0.1	0	0.0	0	0.0	0	0.0	0	0.0	2	0.1
SE	0	0.0	0	0.0	1	0.0	1	0.0	4	0.2	1	0.0	0	0.0	7	0.3
SSE	0	0.0	0	0.0	4	0.2	0	0.0	2	0.1	1	0.0	2	0.1	9	0.4
S	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SSW	0	0.0	1	0.0	1	0.0	1	0.0	0	0.0	0	0.0	0	0.0	3	0.1
SW	0	0.0	0	0.0	5	0.2	3	0.1	0	0.0	0	0.0	0	0.0	8	0.4
WSW	0	0.0	0	0.0	6	0.3	5	0.2	3	0.1	0	0.0	0	0.0	14	0.6
W	0	0.0	0	0.0	1	0.0	0	0.0	3	0.1	2	0.1	1	0.0	7	0.3
WNW	0	0.0	0	0.0	1	0.0	2	0.1	1	0.0	2	0.1	0	0.0	6	0.3
NW	0	0.0	0	0.0	0	0.0	3	0.1	1	0.0	3	0.1	0	0.0	7	0.3
NNW	0	0.0	0	0.0	1	0.0	8	0.4	0	0.0	0	0.0	0	0.0	9	0.4
	0	0.0	1	0.0	29	1.3	30	1.4	16	0.7	9	0.4	3	0.1	88	4.0

MEAN WIND SPEED: 11.4
 MISSING: 0

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 04/09-06/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
 BY ATMOSPHERIC STABILITY CLASS
 WIND: 197 FT
 DELTA T: (300-33FT)

LAPSE RATE: -1.69 TO -1.50 DEG C/100M
 CLASS C

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	0	0.0	1	0.0	5	0.2	2	0.1	1	0.0	0	0.0	9	0.4
NNE	0	0.0	0	0.0	0	0.0	3	0.1	1	0.0	0	0.0	0	0.0	4	0.2
NE	0	0.0	0	0.0	3	0.1	1	0.0	2	0.1	0	0.0	0	0.0	6	0.3
ENE	0	0.0	1	0.0	5	0.2	0	0.0	0	0.0	0	0.0	0	0.0	6	0.3
E	0	0.0	0	0.0	1	0.0	3	0.1	1	0.0	0	0.0	0	0.0	5	0.2
ESE	0	0.0	0	0.0	0	0.0	2	0.1	1	0.0	0	0.0	0	0.0	3	0.1
SE	0	0.0	0	0.0	2	0.1	2	0.1	5	0.2	6	0.3	2	0.1	17	0.8
SSE	0	0.0	0	0.0	2	0.1	0	0.0	3	0.1	4	0.2	2	0.1	11	0.5
S	0	0.0	0	0.0	6	0.3	0	0.0	0	0.0	0	0.0	0	0.0	6	0.3
SSW	0	0.0	1	0.0	4	0.2	0	0.0	0	0.0	0	0.0	0	0.0	5	0.2
SW	0	0.0	0	0.0	1	0.0	4	0.2	0	0.0	0	0.0	0	0.0	5	0.2
WSW	0	0.0	1	0.0	5	0.2	0	0.0	2	0.1	0	0.0	0	0.0	8	0.4
W	0	0.0	1	0.0	5	0.2	1	0.0	2	0.1	3	0.1	2	0.1	14	0.6
WNW	0	0.0	0	0.0	1	0.0	1	0.0	1	0.0	1	0.0	1	0.0	5	0.2
NW	0	0.0	0	0.0	4	0.2	4	0.2	4	0.2	0	0.0	0	0.0	12	0.6
NNW	0	0.0	0	0.0	1	0.0	6	0.3	3	0.1	0	0.0	0	0.0	10	0.5
	0	0.0	4	0.2	41	1.9	32	1.5	27	1.2	15	0.7	7	0.3	126	5.8

MEAN WIND SPEED: 11.7
 MISSING: 0

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 04/09-06/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS

WIND: 197 FT
DELTA T: (300-33FT)

LAPSE RATE: -1.49 TO -0.50 DEG C/100M
CLASS D

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	0	0.0	8	0.4	27	1.2	12	0.6	9	0.4	2	0.1	58	2.7
NNE	0	0.0	2	0.1	13	0.6	20	0.9	19	0.9	5	0.2	1	0.0	60	2.8
NE	0	0.0	0	0.0	17	0.8	27	1.2	22	1.0	12	0.6	6	0.3	84	3.9
ENE	0	0.0	2	0.1	25	1.1	49	2.2	17	0.8	3	0.1	0	0.0	96	4.4
E	0	0.0	1	0.0	22	1.0	26	1.2	12	0.6	2	0.1	0	0.0	63	2.9
ESE	0	0.0	1	0.0	11	0.5	25	1.1	20	0.9	4	0.2	0	0.0	61	2.8
SE	0	0.0	0	0.0	6	0.3	22	1.0	40	1.8	17	0.8	9	0.4	94	4.3
SSE	0	0.0	1	0.0	11	0.5	12	0.6	25	1.1	20	0.9	0	0.0	69	3.2
S	0	0.0	4	0.2	9	0.4	14	0.6	11	0.5	4	0.2	5	0.2	47	2.2
SSW	0	0.0	4	0.2	18	0.8	13	0.6	2	0.1	4	0.2	1	0.0	42	1.9
SW	0	0.0	0	0.0	16	0.7	19	0.9	17	0.8	9	0.4	0	0.0	61	2.8
WSW	0	0.0	3	0.1	13	0.6	17	0.8	7	0.3	8	0.4	1	0.0	49	2.2
W	0	0.0	1	0.0	5	0.2	4	0.2	21	1.0	5	0.2	7	0.3	43	2.0
WNW	0	0.0	1	0.0	8	0.4	9	0.4	7	0.3	13	0.6	2	0.1	40	1.8
NW	0	0.0	0	0.0	7	0.3	19	0.9	6	0.3	4	0.2	1	0.0	37	1.7
NNW	0	0.0	0	0.0	8	0.4	12	0.6	10	0.5	6	0.3	1	0.0	37	1.7
	0	0.0	20	0.9	197	9.0	315	14.5	248	11.4	125	5.7	36	1.7	941	43.2

MEAN WIND SPEED: 12.6

MISSING: 0

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 04/09-06/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
 BY ATMOSPHERIC STABILITY CLASS
 WIND: 197 FT
 DELTA T: (300-33FT)

LAPSE RATE: -0.49 TO 1.50 DEG C/100M
 CLASS E

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	1	0.0	7	0.3	9	0.4	19	0.9	11	0.5	3	0.1	50	2.3
NNE	0	0.0	0	0.0	5	0.2	9	0.4	8	0.4	1	0.0	0	0.0	23	1.1
NE	0	0.0	1	0.0	2	0.1	11	0.5	3	0.1	0	0.0	0	0.0	17	0.8
ENE	0	0.0	0	0.0	7	0.3	7	0.3	1	0.0	0	0.0	0	0.0	15	0.7
E	0	0.0	2	0.1	10	0.5	3	0.1	3	0.1	0	0.0	0	0.0	18	0.8
ESE	0	0.0	2	0.1	2	0.1	16	0.7	11	0.5	3	0.1	0	0.0	34	1.6
SE	0	0.0	1	0.0	9	0.4	12	0.6	23	1.1	21	1.0	4	0.2	70	3.2
SSE	0	0.0	1	0.0	9	0.4	7	0.3	12	0.6	5	0.2	1	0.0	35	1.6
S	0	0.0	1	0.0	11	0.5	4	0.2	7	0.3	3	0.1	5	0.2	31	1.4
SSW	0	0.0	0	0.0	7	0.3	17	0.8	15	0.7	4	0.2	0	0.0	43	2.0
SW	0	0.0	3	0.1	12	0.6	25	1.1	26	1.2	11	0.5	1	0.0	78	3.6
WSW	0	0.0	2	0.1	21	1.0	20	0.9	11	0.5	2	0.1	2	0.1	58	2.7
W	0	0.0	1	0.0	8	0.4	6	0.3	9	0.4	4	0.2	5	0.2	33	1.5
WNW	0	0.0	0	0.0	10	0.5	15	0.7	11	0.5	7	0.3	1	0.0	44	2.0
NW	0	0.0	0	0.0	6	0.3	12	0.6	18	0.8	9	0.4	2	0.1	47	2.2
NNW	0	0.0	0	0.0	8	0.4	11	0.5	26	1.2	6	0.3	2	0.1	53	2.4
	0	0.0	15	0.7	134	6.1	184	8.4	203	9.3	87	4.0	26	1.2	649	29.8

MEAN WIND SPEED: 12.8
 MISSING: 0

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 04/09-06/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
 BY ATMOSPHERIC STABILITY CLASS
 WIND: 197 FT
 DELTA T: (300-33FT)

LAPSE RATE: 1.51 TO 4.00 DEG C/100M
 CLASS F

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	0	0.0	4	0.2	0	0.0	5	0.2	1	0.0	0	0.0	10	0.5
NNE	0	0.0	1	0.0	3	0.1	3	0.1	2	0.1	0	0.0	0	0.0	9	0.4
NE	0	0.0	0	0.0	1	0.0	2	0.1	0	0.0	0	0.0	0	0.0	3	0.1
ENE	0	0.0	0	0.0	3	0.1	0	0.0	1	0.0	0	0.0	0	0.0	4	0.2
E	0	0.0	2	0.1	4	0.2	0	0.0	0	0.0	0	0.0	0	0.0	6	0.3
ESE	0	0.0	0	0.0	2	0.1	4	0.2	1	0.0	0	0.0	0	0.0	7	0.3
SE	0	0.0	0	0.0	5	0.2	5	0.2	6	0.3	6	0.3	0	0.0	22	1.0
SSE	0	0.0	0	0.0	1	0.0	3	0.1	8	0.4	3	0.1	0	0.0	15	0.7
S	0	0.0	2	0.1	1	0.0	3	0.1	2	0.1	4	0.2	0	0.0	12	0.6
SSW	0	0.0	0	0.0	0	0.0	5	0.2	5	0.2	4	0.2	0	0.0	14	0.6
SW	0	0.0	0	0.0	2	0.1	4	0.2	11	0.5	5	0.2	0	0.0	22	1.0
WSW	0	0.0	0	0.0	4	0.2	6	0.3	2	0.1	0	0.0	0	0.0	12	0.6
W	0	0.0	0	0.0	6	0.3	3	0.1	0	0.0	0	0.0	0	0.0	9	0.4
WNW	0	0.0	0	0.0	3	0.1	2	0.1	1	0.0	0	0.0	0	0.0	6	0.3
NW	0	0.0	0	0.0	1	0.0	1	0.0	3	0.1	0	0.0	0	0.0	5	0.2
NNW	0	0.0	0	0.0	1	0.0	2	0.1	1	0.0	0	0.0	0	0.0	4	0.2
	0	0.0	5	0.2	41	1.9	43	2.0	48	2.2	23	1.1	0	0.0	160	7.3

MEAN WIND SPEED: 11.5
 MISSING: 0

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 04/09-06/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS

WIND: 197 FT
DELTA T: (300-33FT)

LAPSE RATE:

GT 4.00 DEG C/100M
CLASS G

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
NNE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
NE	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
ENE	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
E	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
ESE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SE	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	1	0.0	0	0.0	2	0.1
SSE	0	0.0	0	0.0	1	0.0	3	0.1	4	0.2	2	0.1	0	0.0	10	0.5
S	0	0.0	0	0.0	0	0.0	6	0.3	2	0.1	1	0.0	0	0.0	9	0.4
SSW	0	0.0	0	0.0	1	0.0	6	0.3	8	0.4	2	0.1	0	0.0	17	0.8
SW	0	0.0	0	0.0	0	0.0	2	0.1	1	0.0	4	0.2	0	0.0	7	0.3
WSW	0	0.0	0	0.0	0	0.0	0	0.0	4	0.2	1	0.0	0	0.0	5	0.2
W	0	0.0	0	0.0	0	0.0	1	0.0	1	0.0	0	0.0	0	0.0	2	0.1
WNW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
NW	0	0.0	0	0.0	0	0.0	3	0.1	0	0.0	0	0.0	0	0.0	3	0.1
NNW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	0	0.0	1	0.0	3	0.1	22	1.0	20	0.9	11	0.5	0	0.0	57	2.6

MEAN WIND SPEED: 13.7
MISSING: 0

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 04/09-06/09

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED
 BY ATMOSPHERIC STABILITY CLASS
 WIND: 197 FT
 DELTA T: (300-33FT)

ALL STABILITY CLASSES

DIRECTION	WIND SPEED GROUPS (MPH)														SUM PERCENT	
	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6			
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	1	0.0	25	1.1	47	2.2	41	1.9	22	1.0	5	0.2	141	6.5
NNE	0	0.0	3	0.1	22	1.0	43	2.0	30	1.4	6	0.3	1	0.0	105	4.8
NE	0	0.0	1	0.0	25	1.1	45	2.1	29	1.3	12	0.6	6	0.3	118	5.4
ENE	0	0.0	4	0.2	40	1.8	57	2.6	22	1.0	3	0.1	0	0.0	126	5.8
E	0	0.0	5	0.2	39	1.8	35	1.6	16	0.7	2	0.1	0	0.0	97	4.5
ESE	0	0.0	3	0.1	17	0.8	47	2.2	34	1.6	7	0.3	0	0.0	108	5.0
SE	0	0.0	1	0.0	23	1.1	47	2.2	87	4.0	63	2.9	15	0.7	236	10.8
SSE	0	0.0	2	0.1	30	1.4	33	1.5	62	2.8	37	1.7	6	0.3	170	7.8
S	0	0.0	7	0.3	27	1.2	27	1.2	22	1.0	12	0.6	10	0.5	105	4.8
SSW	0	0.0	6	0.3	32	1.5	42	1.9	30	1.4	14	0.6	1	0.0	125	5.7
SW	0	0.0	3	0.1	37	1.7	60	2.8	55	2.5	29	1.3	1	0.0	185	8.5
WSW	0	0.0	6	0.3	49	2.2	60	2.8	35	1.6	18	0.8	3	0.1	171	7.8
W	0	0.0	3	0.1	27	1.2	18	0.8	41	1.9	20	0.9	20	0.9	129	5.9
WNW	0	0.0	1	0.0	23	1.1	32	1.5	26	1.2	30	1.4	6	0.3	118	5.4
NW	0	0.0	0	0.0	18	0.8	44	2.0	35	1.6	26	1.2	3	0.1	126	5.8
NNW	0	0.0	0	0.0	19	0.9	42	1.9	41	1.9	14	0.6	3	0.1	119	5.5
	0	0.0	46	2.1	453	20.8	679	31.2	606	27.8	315	14.5	80	3.7	2179	100.0

MISSING HOURS: 5

MEAN WIND SPEED: 12.7

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 04/09-06/09

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS
WIND: 197 FT
DELTA T: (300-33FT)

DIRECTION VS SPEED ONLY

DIRECTION	WIND SPEED GROUPS (MPH)															
	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT
N	0	0.0	1	0.0	25	1.1	47	2.2	42	1.9	22	1.0	5	0.2	142	6.5
NNE	0	0.0	3	0.1	22	1.0	43	2.0	30	1.4	6	0.3	1	0.0	105	4.8
NE	0	0.0	1	0.0	25	1.1	45	2.1	29	1.3	12	0.5	6	0.3	118	5.4
ENE	0	0.0	4	0.2	40	1.8	57	2.6	22	1.0	3	0.1	0	0.0	126	5.8
E	0	0.0	5	0.2	39	1.8	35	1.6	16	0.7	2	0.1	0	0.0	97	4.4
ESE	0	0.0	3	0.1	17	0.8	47	2.2	34	1.6	7	0.3	0	0.0	108	4.9
SE	0	0.0	1	0.0	23	1.1	47	2.2	87	4.0	63	2.9	15	0.7	236	10.8
SSE	0	0.0	2	0.1	30	1.4	33	1.5	62	2.8	37	1.7	6	0.3	170	7.8
S	0	0.0	7	0.3	27	1.2	27	1.2	22	1.0	12	0.5	10	0.5	105	4.8
SSW	0	0.0	6	0.3	32	1.5	42	1.9	30	1.4	14	0.6	1	0.0	125	5.7
SW	0	0.0	3	0.1	37	1.7	60	2.7	55	2.5	29	1.3	1	0.0	185	8.5
WSW	0	0.0	6	0.3	49	2.2	60	2.7	35	1.6	18	0.8	3	0.1	171	7.8
W	0	0.0	3	0.1	27	1.2	18	0.8	41	1.9	20	0.9	20	0.9	129	5.9
WNW	0	0.0	1	0.0	23	1.1	32	1.5	26	1.2	30	1.4	6	0.3	118	5.4
NW	0	0.0	0	0.0	18	0.8	44	2.0	35	1.6	26	1.2	3	0.1	126	5.8
NNW	0	0.0	0	0.0	19	0.9	42	1.9	44	2.0	14	0.6	3	0.1	122	5.6
	0	0.0	46	2.1	453	20.8	679	31.1	610	27.9	315	14.4	80	3.7	2183	100.0
MISSING HOURS:	1															
MEAN WIND SPEED:	12.7															

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 04/09-06/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS

WIND: 300 FT
DELTA T: (300-33FT)

LAPSE RATE: LE -1.90 DEG C/100M
CLASS A

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	0	0.0	1	0.0	3	0.1	3	0.1	0	0.0	0	0.0	7	0.3
NNE	0	0.0	0	0.0	0	0.0	5	0.2	0	0.0	0	0.0	0	0.0	5	0.2
NE	0	0.0	0	0.0	0	0.0	4	0.2	2	0.1	0	0.0	0	0.0	6	0.3
ENE	0	0.0	0	0.0	0	0.0	2	0.1	0	0.0	0	0.0	0	0.0	2	0.1
E	0	0.0	0	0.0	1	0.0	2	0.1	0	0.0	0	0.0	0	0.0	3	0.1
ESE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	1	0.0
SE	0	0.0	0	0.0	0	0.0	4	0.2	6	0.3	11	0.5	1	0.0	22	1.0
SSE	0	0.0	0	0.0	2	0.1	10	0.5	9	0.4	1	0.0	1	0.0	23	1.1
S	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SSW	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
SW	0	0.0	0	0.0	1	0.0	3	0.1	0	0.0	0	0.0	0	0.0	4	0.2
WSW	0	0.0	0	0.0	0	0.0	8	0.4	7	0.3	4	0.2	3	0.1	22	1.0
W	0	0.0	0	0.0	0	0.0	7	0.3	6	0.3	2	0.1	7	0.3	22	1.0
WNW	0	0.0	0	0.0	0	0.0	3	0.1	2	0.1	11	0.5	3	0.1	19	0.9
NW	0	0.0	0	0.0	0	0.0	1	0.0	4	0.2	6	0.3	3	0.1	14	0.6
NNW	0	0.0	0	0.0	0	0.0	3	0.1	1	0.0	3	0.1	0	0.0	7	0.3
	0	0.0	0	0.0	6	0.3	55	2.5	40	1.8	39	1.8	18	0.8	158	7.3

MEAN WIND SPEED: 16.2
MISSING: 0

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 04/09-06/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
 BY ATMOSPHERIC STABILITY CLASS
 WIND: 300 FT
 DELTA T: (300-33FT)

LAPSE RATE: -1.89 TO -1.70 DEG C/100M
 CLASS B

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	0	0.0	3	0.1	2	0.1	0	0.0	0	0.0	0	0.0	5	0.2
NNE	0	0.0	0	0.0	1	0.0	3	0.1	0	0.0	0	0.0	0	0.0	4	0.2
NE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
ENE	0	0.0	0	0.0	0	0.0	1	0.0	1	0.0	0	0.0	0	0.0	2	0.1
E	0	0.0	1	0.0	1	0.0	1	0.0	0	0.0	0	0.0	0	0.0	3	0.1
ESE	0	0.0	0	0.0	2	0.1	1	0.0	0	0.0	0	0.0	0	0.0	3	0.1
SE	0	0.0	0	0.0	0	0.0	0	0.0	4	0.2	1	0.0	0	0.0	5	0.2
SSE	0	0.0	0	0.0	3	0.1	1	0.0	2	0.1	1	0.0	2	0.1	9	0.4
S	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
SSW	0	0.0	1	0.0	1	0.0	1	0.0	0	0.0	0	0.0	0	0.0	3	0.1
SW	0	0.0	0	0.0	4	0.2	3	0.1	0	0.0	0	0.0	0	0.0	7	0.3
WSW	0	0.0	0	0.0	5	0.2	5	0.2	2	0.1	0	0.0	0	0.0	12	0.6
W	0	0.0	0	0.0	2	0.1	0	0.0	4	0.2	2	0.1	1	0.0	9	0.4
WNW	0	0.0	0	0.0	2	0.1	2	0.1	1	0.0	2	0.1	0	0.0	7	0.3
NW	0	0.0	0	0.0	0	0.0	2	0.1	2	0.1	2	0.1	1	0.0	7	0.3
NNW	0	0.0	0	0.0	1	0.0	9	0.4	1	0.0	0	0.0	0	0.0	11	0.5
	0	0.0	2	0.1	26	1.2	31	1.4	17	0.8	8	0.4	4	0.2	88	4.0

MEAN WIND SPEED: 11.6
 MISSING: 0

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 04/09-06/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS

WIND: 300 FT
DELTA T: (300-33FT)

LAPSE RATE: -1.69 TO -1.50 DEG C/100M
CLASS C

DIRECTION	WIND SPEED GROUPS (MPH)														SUM PERCENT			
	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6					
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	0	0.0	1	0.0	3	0.1	1	0.0	2	0.1	0	0.0	7	0.3		
NNE	0	0.0	0	0.0	0	0.0	3	0.1	1	0.0	0	0.0	0	0.0	4	0.2		
NE	0	0.0	0	0.0	4	0.2	1	0.0	2	0.1	0	0.0	0	0.0	7	0.3		
ENE	0	0.0	2	0.1	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	3	0.1		
E	0	0.0	0	0.0	2	0.1	4	0.2	0	0.0	1	0.0	0	0.0	7	0.3		
ESE	0	0.0	0	0.0	0	0.0	2	0.1	1	0.0	0	0.0	0	0.0	3	0.1		
SE	0	0.0	0	0.0	2	0.1	2	0.1	6	0.3	5	0.2	3	0.1	18	0.8		
SSE	0	0.0	0	0.0	2	0.1	0	0.0	2	0.1	4	0.2	2	0.1	10	0.5		
S	0	0.0	1	0.0	4	0.2	0	0.0	0	0.0	0	0.0	0	0.0	5	0.2		
SSW	0	0.0	2	0.1	4	0.2	0	0.0	0	0.0	0	0.0	0	0.0	6	0.3		
SW	0	0.0	0	0.0	1	0.0	4	0.2	0	0.0	0	0.0	0	0.0	5	0.2		
WSW	0	0.0	0	0.0	3	0.1	2	0.1	2	0.1	0	0.0	0	0.0	7	0.3		
W	0	0.0	2	0.1	5	0.2	1	0.0	2	0.1	2	0.1	2	0.1	14	0.6		
WNW	0	0.0	0	0.0	1	0.0	1	0.0	0	0.0	2	0.1	2	0.1	6	0.3		
NW	0	0.0	0	0.0	4	0.2	4	0.2	3	0.1	1	0.0	0	0.0	12	0.6		
NNW	0	0.0	0	0.0	1	0.0	8	0.4	2	0.1	1	0.0	0	0.0	12	0.6		
	0	0.0	7	0.3	35	1.6	35	1.6	22	1.0	18	0.8	9	0.4	126	5.8		

MEAN WIND SPEED: 12.1

MISSING: 0

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 04/09-06/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS

WIND: 300 FT
DELTA T: (300-33FT)

LAPSE RATE: -1.49 TO -0.50 DEG C/100M
CLASS D

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	1	0.0	5	0.2	33	1.5	6	0.3	10	0.5	3	0.1	58	2.7
NNE	0	0.0	0	0.0	9	0.4	20	0.9	19	0.9	5	0.2	1	0.0	54	2.5
NE	0	0.0	0	0.0	11	0.5	35	1.6	25	1.1	22	1.0	9	0.4	102	4.7
ENE	0	0.0	4	0.2	28	1.3	36	1.7	12	0.6	3	0.1	0	0.0	83	3.8
E	0	0.0	0	0.0	17	0.8	29	1.3	10	0.5	5	0.2	2	0.1	63	2.9
ESE	0	0.0	2	0.1	8	0.4	20	0.9	17	0.8	3	0.1	3	0.1	53	2.4
SE	0	0.0	2	0.1	6	0.3	23	1.1	39	1.8	18	0.8	10	0.5	98	4.5
SSE	0	0.0	1	0.0	8	0.4	8	0.4	26	1.2	19	0.9	4	0.2	66	3.0
S	0	0.0	4	0.2	5	0.2	13	0.6	15	0.7	5	0.2	5	0.2	47	2.2
SSW	0	0.0	2	0.1	15	0.7	13	0.6	5	0.2	2	0.1	2	0.1	39	1.8
SW	0	0.0	1	0.0	10	0.5	25	1.1	18	0.8	10	0.5	1	0.0	65	3.0
WSW	0	0.0	1	0.0	13	0.6	14	0.6	11	0.5	9	0.4	1	0.0	49	2.2
W	0	0.0	3	0.1	9	0.4	6	0.3	15	0.7	9	0.4	8	0.4	50	2.3
WNW	0	0.0	0	0.0	5	0.2	10	0.5	7	0.3	13	0.6	4	0.2	39	1.8
NW	0	0.0	1	0.0	5	0.2	18	0.8	5	0.2	4	0.2	3	0.1	36	1.7
NNW	0	0.0	0	0.0	10	0.5	12	0.6	7	0.3	9	0.4	1	0.0	39	1.8
	0	0.0	22	1.0	164	7.5	315	14.5	237	10.9	146	6.7	57	2.6	941	43.2

MEAN WIND SPEED: 13.3
MISSING: 0

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 04/09-06/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS

WIND: 300 FT
DELTA T: (300-33FT)

LAPSE RATE: -0.49 TO 1.50 DEG C/100M
CLASS E

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	0	0.0	4	0.2	7	0.3	16	0.7	14	0.6	4	0.2	45	2.1
NNE	0	0.0	0	0.0	1	0.0	9	0.4	15	0.7	1	0.0	0	0.0	26	1.2
NE	0	0.0	1	0.0	1	0.0	10	0.5	5	0.2	0	0.0	0	0.0	17	0.8
ENE	0	0.0	1	0.0	8	0.4	4	0.2	0	0.0	0	0.0	0	0.0	13	0.6
E	0	0.0	2	0.1	9	0.4	1	0.0	0	0.0	3	0.1	0	0.0	15	0.7
ESE	0	0.0	3	0.1	3	0.1	14	0.6	9	0.4	6	0.3	3	0.1	38	1.7
SE	0	0.0	1	0.0	1	0.0	11	0.5	14	0.6	17	0.8	9	0.4	53	2.4
SSE	0	0.0	1	0.0	10	0.5	10	0.5	13	0.6	8	0.4	1	0.0	43	2.0
S	0	0.0	2	0.1	6	0.3	7	0.3	7	0.3	3	0.1	5	0.2	30	1.4
SSW	0	0.0	0	0.0	6	0.3	7	0.3	15	0.7	8	0.4	1	0.0	37	1.7
SW	0	0.0	2	0.1	7	0.3	24	1.1	41	1.9	16	0.7	2	0.1	92	4.2
WSW	0	0.0	2	0.1	11	0.5	18	0.8	13	0.6	4	0.2	3	0.1	51	2.3
W	0	0.0	1	0.0	8	0.4	15	0.7	6	0.3	6	0.3	7	0.3	43	2.0
WNW	0	0.0	0	0.0	6	0.3	11	0.5	12	0.6	11	0.5	2	0.1	42	1.9
NW	0	0.0	0	0.0	4	0.2	15	0.7	15	0.7	15	0.7	3	0.1	52	2.4
NNW	0	0.0	0	0.0	6	0.3	9	0.4	24	1.1	12	0.6	1	0.0	52	2.4
	0	0.0	16	0.7	91	4.2	172	7.9	205	9.4	124	5.7	41	1.9	649	29.8

MEAN WIND SPEED: 14.2
MISSING: 0

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 04/09-06/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
 BY ATMOSPHERIC STABILITY CLASS
 WIND: 300 FT
 DELTA T: (300-33FT)

LAPSE RATE: 1.51 TO 4.00 DEG C/100M
 CLASS F

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	0	0.0	3	0.1	0	0.0	5	0.2	1	0.0	0	0.0	9	0.4
NNE	0	0.0	0	0.0	3	0.1	3	0.1	0	0.0	1	0.0	0	0.0	7	0.3
NE	0	0.0	0	0.0	1	0.0	3	0.1	1	0.0	0	0.0	0	0.0	5	0.2
ENE	0	0.0	1	0.0	2	0.1	2	0.1	1	0.0	0	0.0	0	0.0	6	0.3
E	0	0.0	0	0.0	3	0.1	0	0.0	0	0.0	0	0.0	0	0.0	3	0.1
ESE	0	0.0	0	0.0	3	0.1	1	0.0	2	0.1	0	0.0	0	0.0	6	0.3
SE	0	0.0	0	0.0	4	0.2	3	0.1	4	0.2	2	0.1	1	0.0	14	0.6
SSE	0	0.0	1	0.0	0	0.0	5	0.2	5	0.2	5	0.2	0	0.0	16	0.7
S	0	0.0	0	0.0	0	0.0	4	0.2	7	0.3	3	0.1	0	0.0	14	0.6
SSW	0	0.0	1	0.0	0	0.0	2	0.1	3	0.1	7	0.3	0	0.0	13	0.6
SW	0	0.0	0	0.0	4	0.2	1	0.0	9	0.4	11	0.5	0	0.0	25	1.1
WSW	0	0.0	0	0.0	1	0.0	1	0.0	5	0.2	1	0.0	0	0.0	8	0.4
W	0	0.0	1	0.0	3	0.1	5	0.2	2	0.1	0	0.0	0	0.0	11	0.5
WNW	0	0.0	0	0.0	6	0.3	1	0.0	0	0.0	0	0.0	0	0.0	7	0.3
NW	0	0.0	1	0.0	3	0.1	3	0.1	4	0.2	1	0.0	0	0.0	12	0.6
NNW	0	0.0	0	0.0	1	0.0	0	0.0	2	0.1	1	0.0	0	0.0	4	0.2
	0	0.0	5	0.2	37	1.7	34	1.6	50	2.3	33	1.5	1	0.0	160	7.3

MEAN WIND SPEED: 12.8
 MISSING: 0

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 04/09-06/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
 BY ATMOSPHERIC STABILITY CLASS
 WIND: 300 FT
 DELTA T: (300-33FT)

LAPSE RATE: GT 4.00 DEG C/100M
 CLASS G

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT
N	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
NNE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
NE	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
ENE	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
E	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
ESE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	1	0.0
SSE	0	0.0	0	0.0	0	0.0	1	0.0	2	0.1	1	0.0	0	0.0	4	0.2
S	0	0.0	0	0.0	2	0.1	3	0.1	4	0.2	2	0.1	0	0.0	11	0.5
SSW	0	0.0	0	0.0	1	0.0	4	0.2	7	0.3	6	0.3	0	0.0	18	0.8
SW	0	0.0	0	0.0	1	0.0	1	0.0	4	0.2	2	0.1	2	0.1	10	0.5
WSW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	5	0.2	0	0.0	5	0.2
W	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	0.1	0	0.0	2	0.1
WNW	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	1	0.0
NW	0	0.0	0	0.0	0	0.0	1	0.0	1	0.0	0	0.0	0	0.0	2	0.1
NNW	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	1	0.0
	0	0.0	0	0.0	6	0.3	11	0.5	19	0.9	19	0.9	2	0.1	57	2.6

MEAN WIND SPEED: 15.9
 MISSING: 0

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 04/09-06/09

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED
 BY ATMOSPHERIC STABILITY CLASS
 WIND: 300 FT
 DELTA T: (300-33FT)

ALL STABILITY CLASSES

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	1	0.0	17	0.8	48	2.2	31	1.4	27	1.2	7	0.3	131	6.0
NNE	0	0.0	0	0.0	14	0.6	43	2.0	35	1.6	7	0.3	1	0.0	100	4.6
NE	0	0.0	1	0.0	18	0.8	53	2.4	35	1.6	22	1.0	9	0.4	138	6.3
ENE	0	0.0	8	0.4	40	1.8	45	2.1	14	0.6	3	0.1	0	0.0	110	5.0
E	0	0.0	3	0.1	33	1.5	37	1.7	10	0.5	9	0.4	2	0.1	94	4.3
ESE	0	0.0	5	0.2	16	0.7	38	1.7	29	1.3	10	0.5	6	0.3	104	4.8
SE	0	0.0	3	0.1	13	0.6	43	2.0	73	3.4	55	2.5	24	1.1	211	9.7
SSE	0	0.0	3	0.1	25	1.1	35	1.6	59	2.7	39	1.8	10	0.5	171	7.8
S	0	0.0	7	0.3	18	0.8	27	1.2	33	1.5	13	0.6	10	0.5	108	5.0
SSW	0	0.0	6	0.3	28	1.3	27	1.2	30	1.4	23	1.1	3	0.1	117	5.4
SW	0	0.0	3	0.1	28	1.3	61	2.8	72	3.3	39	1.8	5	0.2	208	9.5
WSW	0	0.0	3	0.1	33	1.5	48	2.2	40	1.8	23	1.1	7	0.3	154	7.1
W	0	0.0	7	0.3	27	1.2	34	1.6	35	1.6	23	1.1	25	1.1	151	6.9
WNW	0	0.0	0	0.0	20	0.9	28	1.3	23	1.1	39	1.8	11	0.5	121	5.6
NW	0	0.0	2	0.1	16	0.7	44	2.0	34	1.6	29	1.3	10	0.5	135	6.2
NNW	0	0.0	0	0.0	19	0.9	42	1.9	37	1.7	26	1.2	2	0.1	126	5.8
	0	0.0	52	2.4	365	16.8	653	30.0	590	27.1	387	17.8	132	6.1	2179	100.0

MISSING HOURS: 5

MEAN WIND SPEED: 13.7

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 04/09-06/09

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED
 BY ATMOSPHERIC STABILITY CLASS
 WIND: 300 FT
 DELTA T: (300-33FT)

DIRECTION VS SPEED ONLY

DIRECTION	WIND SPEED GROUPS (MPH)														SUM PERCENT	
	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6			
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	1	0.0	17	0.8	48	2.2	32	1.5	27	1.2	7	0.3	132	6.0
NNE	0	0.0	0	0.0	14	0.6	43	2.0	35	1.6	7	0.3	1	0.0	100	4.6
NE	0	0.0	1	0.0	18	0.8	53	2.4	35	1.6	22	1.0	9	0.4	138	6.3
ENE	0	0.0	8	0.4	40	1.8	45	2.1	14	0.6	3	0.1	0	0.0	110	5.0
E	0	0.0	3	0.1	33	1.5	37	1.7	10	0.5	9	0.4	2	0.1	94	4.3
ESE	0	0.0	5	0.2	16	0.7	38	1.7	29	1.3	10	0.5	6	0.3	104	4.8
SE	0	0.0	3	0.1	13	0.6	43	2.0	73	3.3	55	2.5	24	1.1	211	9.7
SSE	0	0.0	3	0.1	25	1.1	35	1.6	59	2.7	39	1.8	10	0.5	171	7.8
S	0	0.0	7	0.3	18	0.8	27	1.2	33	1.5	13	0.6	10	0.5	108	4.9
SSW	0	0.0	6	0.3	28	1.3	27	1.2	30	1.4	23	1.1	3	0.1	117	5.4
SW	0	0.0	3	0.1	28	1.3	61	2.8	72	3.3	39	1.8	5	0.2	208	9.5
WSW	0	0.0	3	0.1	33	1.5	48	2.2	40	1.8	23	1.1	7	0.3	154	7.1
W	0	0.0	7	0.3	27	1.2	34	1.6	35	1.6	23	1.1	25	1.1	151	6.9
WNW	0	0.0	0	0.0	20	0.9	28	1.3	23	1.1	39	1.8	11	0.5	121	5.5
NW	0	0.0	2	0.1	16	0.7	44	2.0	34	1.6	29	1.3	10	0.5	135	6.2
NNW	0	0.0	0	0.0	19	0.9	42	1.9	39	1.8	27	1.2	2	0.1	129	5.9
	0	0.0	52	2.4	365	16.7	653	29.9	593	27.2	388	17.8	132	6.0	2183	100.0

MISSING HOURS: 1
 MEAN WIND SPEED: 13.7

Lapse Rate
Wind Distributions
300 – 33 foot

7/2009 – 9/2009

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 07/09-09/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS

WIND: 33 FT
DELTA T: (300-33FT)

LAPSE RATE: LE -1.90 DEG C/100M
CLASS A

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	0	0.0	3	0.1	7	0.3	0	0.0	0	0.0	0	0.0	10	0.5
NNE	0	0.0	0	0.0	2	0.1	6	0.3	1	0.0	0	0.0	0	0.0	9	0.4
NE	0	0.0	1	0.0	7	0.3	4	0.2	0	0.0	0	0.0	0	0.0	12	0.5
ENE	0	0.0	2	0.1	3	0.1	1	0.0	0	0.0	0	0.0	0	0.0	6	0.3
E	0	0.0	0	0.0	4	0.2	1	0.0	0	0.0	0	0.0	0	0.0	5	0.2
ESE	0	0.0	0	0.0	3	0.1	1	0.0	0	0.0	0	0.0	0	0.0	4	0.2
SE	0	0.0	0	0.0	0	0.0	14	0.6	6	0.3	0	0.0	0	0.0	20	0.9
SSE	0	0.0	0	0.0	2	0.1	5	0.2	3	0.1	0	0.0	0	0.0	10	0.5
S	0	0.0	0	0.0	5	0.2	1	0.0	0	0.0	1	0.0	0	0.0	7	0.3
SSW	0	0.0	0	0.0	1	0.0	2	0.1	0	0.0	1	0.0	0	0.0	4	0.2
SW	0	0.0	1	0.0	1	0.0	3	0.1	0	0.0	0	0.0	0	0.0	5	0.2
WSW	0	0.0	0	0.0	1	0.0	1	0.0	1	0.0	0	0.0	0	0.0	3	0.1
W	0	0.0	0	0.0	0	0.0	5	0.2	1	0.0	0	0.0	0	0.0	6	0.3
WNW	0	0.0	1	0.0	0	0.0	2	0.1	0	0.0	0	0.0	0	0.0	3	0.1
NW	0	0.0	0	0.0	3	0.1	1	0.0	0	0.0	0	0.0	0	0.0	4	0.2
NNW	0	0.0	0	0.0	4	0.2	3	0.1	0	0.0	0	0.0	0	0.0	7	0.3
	0	0.0	5	0.2	39	1.8	57	2.6	12	0.5	2	0.1	0	0.0	115	5.3

MEAN WIND SPEED: 8.7

MISSING: 1

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 07/09-09/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS

WIND: 33 FT
DELTA T: (300-33FT)

LAPSE RATE: -1.89 TO -1.70 DEG C/100M
CLASS B

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	1	0.0	5	0.2	4	0.2	0	0.0	0	0.0	0	0.0	10	0.5
NNE	0	0.0	0	0.0	1	0.0	0	0.0	2	0.1	0	0.0	0	0.0	3	0.1
NE	0	0.0	0	0.0	3	0.1	3	0.1	1	0.0	0	0.0	0	0.0	7	0.3
ENE	0	0.0	0	0.0	2	0.1	2	0.1	0	0.0	0	0.0	0	0.0	4	0.2
E	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
ESE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SE	0	0.0	0	0.0	4	0.2	7	0.3	9	0.4	0	0.0	0	0.0	20	0.9
SSE	0	0.0	0	0.0	5	0.2	3	0.1	0	0.0	0	0.0	0	0.0	8	0.4
S	0	0.0	0	0.0	3	0.1	1	0.0	1	0.0	0	0.0	0	0.0	5	0.2
SSW	0	0.0	1	0.0	7	0.3	5	0.2	0	0.0	0	0.0	0	0.0	13	0.6
SW	0	0.0	0	0.0	4	0.2	4	0.2	0	0.0	0	0.0	0	0.0	8	0.4
WSW	0	0.0	0	0.0	2	0.1	6	0.3	1	0.0	0	0.0	0	0.0	9	0.4
W	0	0.0	0	0.0	2	0.1	6	0.3	5	0.2	0	0.0	0	0.0	13	0.6
WNW	0	0.0	0	0.0	0	0.0	4	0.2	1	0.0	0	0.0	0	0.0	5	0.2
NW	0	0.0	0	0.0	0	0.0	5	0.2	0	0.0	0	0.0	0	0.0	5	0.2
NNW	0	0.0	0	0.0	6	0.3	9	0.4	0	0.0	0	0.0	0	0.0	15	0.7
	0	0.0	2	0.1	45	2.1	59	2.7	20	0.9	0	0.0	0	0.0	126	5.8

MEAN WIND SPEED: 9.0
MISSING: 0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 07/09-09/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
 BY ATMOSPHERIC STABILITY CLASS
 WIND: 33 FT
 DELTA T: (300-33FT)

LAPSE RATE: -1.69 TO -1.50 DEG C/100M
 CLASS C

DIRECTION	WIND SPEED GROUPS (MPH)														SUM PERCENT	
	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6			
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	0	0.0	7	0.3	1	0.0	0	0.0	0	0.0	0	0.0	8	0.4
NNE	0	0.0	2	0.1	5	0.2	6	0.3	0	0.0	0	0.0	0	0.0	13	0.6
NE	0	0.0	1	0.0	3	0.1	4	0.2	3	0.1	0	0.0	0	0.0	11	0.5
ENE	0	0.0	0	0.0	4	0.2	1	0.0	0	0.0	0	0.0	0	0.0	5	0.2
E	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
ESE	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	1	0.0
SE	0	0.0	0	0.0	11	0.5	3	0.1	7	0.3	0	0.0	0	0.0	21	1.0
SSE	0	0.0	0	0.0	12	0.5	0	0.0	3	0.1	0	0.0	0	0.0	15	0.7
S	0	0.0	0	0.0	6	0.3	2	0.1	0	0.0	0	0.0	0	0.0	8	0.4
SSW	0	0.0	1	0.0	9	0.4	1	0.0	0	0.0	0	0.0	0	0.0	11	0.5
SW	0	0.0	0	0.0	6	0.3	2	0.1	0	0.0	0	0.0	0	0.0	8	0.4
WSW	0	0.0	0	0.0	8	0.4	9	0.4	1	0.0	0	0.0	0	0.0	18	0.8
W	0	0.0	1	0.0	10	0.5	7	0.3	3	0.1	0	0.0	0	0.0	21	1.0
WNW	0	0.0	0	0.0	6	0.3	5	0.2	0	0.0	0	0.0	0	0.0	11	0.5
NW	0	0.0	0	0.0	11	0.5	10	0.5	0	0.0	0	0.0	0	0.0	21	1.0
NNW	0	0.0	0	0.0	16	0.7	3	0.1	0	0.0	0	0.0	0	0.0	19	0.9
	0	0.0	5	0.2	115	5.3	55	2.5	17	0.8	0	0.0	0	0.0	192	8.8

MEAN WIND SPEED: 7.4

MISSING: 3

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 07/09-09/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS

WIND: 33 FT
DELTA T: (300-33FT)

LAPSE RATE: -1.49 TO -0.50 DEG C/100M
CLASS D

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	6	0.3	14	0.6	5	0.2	0	0.0	1	0.0	0	0.0	26	1.2
NNE	0	0.0	5	0.2	29	1.3	19	0.9	10	0.5	7	0.3	0	0.0	70	3.2
NE	0	0.0	6	0.3	33	1.5	39	1.8	6	0.3	0	0.0	0	0.0	84	3.8
ENE	0	0.0	5	0.2	22	1.0	10	0.5	0	0.0	0	0.0	0	0.0	37	1.7
E	0	0.0	1	0.0	12	0.5	1	0.0	0	0.0	0	0.0	0	0.0	14	0.6
ESE	0	0.0	4	0.2	8	0.4	7	0.3	0	0.0	0	0.0	0	0.0	19	0.9
SE	0	0.0	2	0.1	9	0.4	35	1.6	31	1.4	0	0.0	0	0.0	77	3.5
SSE	0	0.0	2	0.1	13	0.6	24	1.1	9	0.4	0	0.0	0	0.0	48	2.2
S	0	0.0	2	0.1	26	1.2	44	2.0	12	0.5	0	0.0	0	0.0	84	3.8
SSW	0	0.0	6	0.3	25	1.1	24	1.1	4	0.2	1	0.0	0	0.0	60	2.7
SW	0	0.0	3	0.1	22	1.0	19	0.9	2	0.1	0	0.0	0	0.0	46	2.1
WSW	0	0.0	1	0.0	28	1.3	22	1.0	1	0.0	0	0.0	0	0.0	52	2.4
W	0	0.0	2	0.1	27	1.2	28	1.3	7	0.3	0	0.0	0	0.0	64	2.9
WNW	0	0.0	3	0.1	18	0.8	15	0.7	0	0.0	0	0.0	0	0.0	36	1.6
NW	0	0.0	5	0.2	20	0.9	18	0.8	0	0.0	0	0.0	0	0.0	43	2.0
NNW	0	0.0	2	0.1	30	1.4	13	0.6	0	0.0	0	0.0	0	0.0	45	2.1
	0	0.0	55	2.5	336	15.4	323	14.8	82	3.8	9	0.4	0	0.0	805	36.8

MEAN WIND SPEED: 8.1
MISSING: 14

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 07/09-09/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS

WIND: 33 FT
DELTA T: (300-33FT)

LAPSE RATE: -0.49 TO 1.50 DEG C/100M
CLASS E

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	7	0.3	52	2.4	6	0.3	0	0.0	0	0.0	0	0.0	65	3.0
NNE	0	0.0	7	0.3	51	2.3	10	0.5	0	0.0	0	0.0	0	0.0	68	3.1
NE	0	0.0	13	0.6	32	1.5	6	0.3	0	0.0	0	0.0	0	0.0	51	2.3
ENE	0	0.0	12	0.5	31	1.4	4	0.2	0	0.0	0	0.0	0	0.0	47	2.2
E	0	0.0	19	0.9	22	1.0	0	0.0	0	0.0	0	0.0	0	0.0	41	1.9
ESE	0	0.0	6	0.3	21	1.0	6	0.3	0	0.0	0	0.0	0	0.0	33	1.5
SE	0	0.0	5	0.2	8	0.4	14	0.6	0	0.0	0	0.0	0	0.0	27	1.2
SSE	0	0.0	1	0.0	3	0.1	9	0.4	0	0.0	0	0.0	0	0.0	13	0.6
S	0	0.0	3	0.1	6	0.3	16	0.7	1	0.0	0	0.0	0	0.0	26	1.2
SSW	0	0.0	2	0.1	24	1.1	9	0.4	1	0.0	0	0.0	0	0.0	36	1.6
SW	0	0.0	3	0.1	35	1.6	19	0.9	0	0.0	0	0.0	0	0.0	57	2.6
WSW	0	0.0	7	0.3	30	1.4	12	0.5	0	0.0	0	0.0	0	0.0	49	2.2
W	0	0.0	11	0.5	26	1.2	9	0.4	0	0.0	0	0.0	0	0.0	46	2.1
WNW	0	0.0	8	0.4	32	1.5	16	0.7	0	0.0	0	0.0	0	0.0	56	2.6
NW	0	0.0	6	0.3	53	2.4	13	0.6	0	0.0	0	0.0	0	0.0	72	3.3
NNW	0	0.0	8	0.4	45	2.1	9	0.4	0	0.0	0	0.0	0	0.0	62	2.8
	0	0.0	118	5.4	471	21.6	158	7.2	2	0.1	0	0.0	0	0.0	749	34.3

MEAN WIND SPEED: 5.8
MISSING: 1

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 07/09-09/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED

BY ATMOSPHERIC STABILITY CLASS

WIND: 33 FT

DELTA T: (300-33FT)

LAPSE RATE: 1.51 TO 4.00 DEG C/100M

CLASS F

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	3	0.1	25	1.1	4	0.2	0	0.0	0	0.0	0	0.0	32	1.5
NNE	0	0.0	0	0.0	20	0.9	1	0.0	0	0.0	0	0.0	0	0.0	21	1.0
NE	0	0.0	6	0.3	14	0.6	0	0.0	0	0.0	0	0.0	0	0.0	20	0.9
ENE	0	0.0	7	0.3	11	0.5	0	0.0	0	0.0	0	0.0	0	0.0	18	0.8
E	0	0.0	7	0.3	2	0.1	0	0.0	0	0.0	0	0.0	0	0.0	9	0.4
ESE	0	0.0	1	0.0	7	0.3	0	0.0	0	0.0	0	0.0	0	0.0	8	0.4
SE	0	0.0	0	0.0	2	0.1	1	0.0	0	0.0	0	0.0	0	0.0	3	0.1
SSE	0	0.0	0	0.0	2	0.1	0	0.0	0	0.0	0	0.0	0	0.0	2	0.1
S	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
SSW	0	0.0	0	0.0	4	0.2	1	0.0	0	0.0	0	0.0	0	0.0	5	0.2
SW	0	0.0	1	0.0	5	0.2	0	0.0	0	0.0	0	0.0	0	0.0	6	0.3
WSW	0	0.0	1	0.0	9	0.4	0	0.0	0	0.0	0	0.0	0	0.0	10	0.5
W	0	0.0	1	0.0	4	0.2	0	0.0	0	0.0	0	0.0	0	0.0	5	0.2
WNW	0	0.0	4	0.2	3	0.1	1	0.0	0	0.0	0	0.0	0	0.0	8	0.4
NW	0	0.0	1	0.0	20	0.9	0	0.0	0	0.0	0	0.0	0	0.0	21	1.0
NNW	0	0.0	2	0.1	17	0.8	3	0.1	0	0.0	0	0.0	0	0.0	22	1.0
	0	0.0	34	1.6	146	6.7	11	0.5	0	0.0	0	0.0	0	0.0	191	8.7

MEAN WIND SPEED: 5.2

MISSING: 0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 07/09-09/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS

WIND: 33 FT
DELTA T: (300-33FT)

LAPSE RATE: GT 4.00 DEG C/100M
CLASS G

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
NNE	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
NE	0	0.0	0	0.0	4	0.2	0	0.0	0	0.0	0	0.0	0	0.0	4	0.2
ENE	0	0.0	0	0.0	2	0.1	0	0.0	0	0.0	0	0.0	0	0.0	2	0.1
E	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
ESE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SSE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
S	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SSW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
WSW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
W	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
WNW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
NW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
NNW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	0	0.0	0	0.0	7	0.3	0	0.0	0	0.0	0	0.0	0	0.0	7	0.3

MEAN WIND SPEED: 6.0
MISSING: 0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 07/09-09/09

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED
 BY ATMOSPHERIC STABILITY CLASS
 WIND: 33 FT
 DELTA T: (300-33FT)

ALL STABILITY CLASSES

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	17	0.8	106	4.9	27	1.2	0	0.0	1	0.0	0	0.0	151	6.9
NNE	0	0.0	14	0.6	109	5.0	42	1.9	13	0.6	7	0.3	0	0.0	185	8.5
NE	0	0.0	27	1.2	96	4.4	56	2.6	10	0.5	0	0.0	0	0.0	189	8.6
ENE	0	0.0	26	1.2	75	3.4	18	0.8	0	0.0	0	0.0	0	0.0	119	5.4
E	0	0.0	27	1.2	42	1.9	2	0.1	0	0.0	0	0.0	0	0.0	71	3.2
ESE	0	0.0	11	0.5	39	1.8	15	0.7	0	0.0	0	0.0	0	0.0	65	3.0
SE	0	0.0	7	0.3	34	1.6	74	3.4	53	2.4	0	0.0	0	0.0	168	7.7
SSE	0	0.0	3	0.1	37	1.7	41	1.9	15	0.7	0	0.0	0	0.0	96	4.4
S	0	0.0	5	0.2	47	2.2	64	2.9	14	0.6	1	0.0	0	0.0	131	6.0
SSW	0	0.0	10	0.5	70	3.2	42	1.9	5	0.2	2	0.1	0	0.0	129	5.9
SW	0	0.0	8	0.4	73	3.3	47	2.2	2	0.1	0	0.0	0	0.0	130	5.9
WSW	0	0.0	9	0.4	78	3.6	50	2.3	4	0.2	0	0.0	0	0.0	141	6.5
W	0	0.0	15	0.7	69	3.2	55	2.5	16	0.7	0	0.0	0	0.0	155	7.1
WNW	0	0.0	16	0.7	59	2.7	43	2.0	1	0.0	0	0.0	0	0.0	119	5.4
NW	0	0.0	12	0.5	107	4.9	47	2.2	0	0.0	0	0.0	0	0.0	166	7.6
NNW	0	0.0	12	0.5	118	5.4	40	1.8	0	0.0	0	0.0	0	0.0	170	7.8
	0	0.0	219	10.0	1159	53.0	663	30.3	133	6.1	11	0.5	0	0.0	2185	100.0

MISSING HOURS: 23

MEAN WIND SPEED: 7.1

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 07/09-09/09

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED
 BY ATMOSPHERIC STABILITY CLASS
 WIND: 33 FT
 DELTA T: (300-33FT)

DIRECTION VS SPEED ONLY

DIRECTION	WIND SPEED GROUPS (MPH)														SUM PERCENT	
	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6			
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	17	0.8	106	4.8	27	1.2	0	0.0	1	0.0	0	0.0	151	6.9
NNE	0	0.0	14	0.6	109	5.0	42	1.9	13	0.6	7	0.3	0	0.0	185	8.5
NE	0	0.0	27	1.2	96	4.4	56	2.6	10	0.5	0	0.0	0	0.0	189	8.6
ENE	0	0.0	26	1.2	75	3.4	18	0.8	0	0.0	0	0.0	0	0.0	119	5.4
E	0	0.0	27	1.2	42	1.9	2	0.1	0	0.0	0	0.0	0	0.0	71	3.2
ESE	0	0.0	11	0.5	39	1.8	15	0.7	0	0.0	0	0.0	0	0.0	65	3.0
SE	0	0.0	7	0.3	34	1.6	74	3.4	53	2.4	0	0.0	0	0.0	168	7.7
SSE	0	0.0	3	0.1	37	1.7	41	1.9	15	0.7	0	0.0	0	0.0	96	4.4
S	0	0.0	5	0.2	47	2.1	64	2.9	14	0.6	1	0.0	0	0.0	131	6.0
SSW	0	0.0	10	0.5	70	3.2	42	1.9	5	0.2	2	0.1	0	0.0	129	5.9
SW	0	0.0	8	0.4	73	3.3	47	2.1	2	0.1	0	0.0	0	0.0	130	5.9
WSW	0	0.0	9	0.4	78	3.6	50	2.3	4	0.2	0	0.0	0	0.0	141	6.4
W	0	0.0	15	0.7	69	3.2	55	2.5	16	0.7	0	0.0	0	0.0	155	7.1
WNW	0	0.0	16	0.7	59	2.7	43	2.0	1	0.0	0	0.0	0	0.0	119	5.4
NW	0	0.0	12	0.5	107	4.9	48	2.2	0	0.0	0	0.0	0	0.0	167	7.6
NNW	0	0.0	12	0.5	120	5.5	40	1.8	0	0.0	0	0.0	0	0.0	172	7.9
	0	0.0	219	10.0	1161	53.1	664	30.3	133	6.1	11	0.5	0	0.0	2188	100.0
MISSING HOURS:	20															
MEAN WIND SPEED:	7.1															

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 07/09-09/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS

WIND: 150 FT
DELTA T: (300-33FT)

LAPSE RATE: LE -1.90 DEG C/100M
CLASS A

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	0	0.0	1	0.0	4	0.2	6	0.3	0	0.0	0	0.0	11	0.5
NNE	0	0.0	0	0.0	1	0.0	6	0.3	1	0.0	0	0.0	0	0.0	8	0.4
NE	0	0.0	1	0.0	1	0.0	8	0.4	1	0.0	0	0.0	0	0.0	11	0.5
ENE	0	0.0	0	0.0	5	0.2	1	0.0	1	0.0	0	0.0	0	0.0	7	0.3
E	0	0.0	0	0.0	6	0.3	1	0.0	0	0.0	0	0.0	0	0.0	7	0.3
ESE	0	0.0	0	0.0	1	0.0	3	0.1	1	0.0	0	0.0	0	0.0	5	0.2
SE	0	0.0	0	0.0	0	0.0	4	0.2	11	0.5	2	0.1	0	0.0	17	0.8
SSE	0	0.0	0	0.0	0	0.0	7	0.3	6	0.3	0	0.0	0	0.0	13	0.6
S	0	0.0	0	0.0	3	0.1	2	0.1	0	0.0	0	0.0	1	0.0	6	0.3
SSW	0	0.0	0	0.0	2	0.1	1	0.0	1	0.0	0	0.0	1	0.0	5	0.2
SW	0	0.0	1	0.0	1	0.0	3	0.1	0	0.0	0	0.0	0	0.0	5	0.2
WSW	0	0.0	0	0.0	0	0.0	1	0.0	2	0.1	0	0.0	1	0.0	4	0.2
W	0	0.0	0	0.0	0	0.0	3	0.1	1	0.0	1	0.0	0	0.0	5	0.2
WNW	0	0.0	0	0.0	1	0.0	0	0.0	2	0.1	0	0.0	0	0.0	3	0.1
NW	0	0.0	0	0.0	3	0.1	2	0.1	0	0.0	0	0.0	0	0.0	5	0.2
NNW	0	0.0	0	0.0	1	0.0	3	0.1	0	0.0	0	0.0	0	0.0	4	0.2
	0	0.0	2	0.1	26	1.2	49	2.2	33	1.5	3	0.1	3	0.1	116	5.3

MEAN WIND SPEED: 11.3
MISSING: 0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 07/09-09/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
 BY ATMOSPHERIC STABILITY CLASS
 WIND: 150 FT
 DELTA T: (300-33FT)

LAPSE RATE: -1.89 TO -1.70 DEG C/100M
 CLASS B

DIRECTION	WIND SPEED GROUPS (MPH)														SUM PERCENT	
	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6			
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT
N	0	0.0	0	0.0	1	0.0	9	0.4	2	0.1	0	0.0	0	0.0	12	0.5
NNE	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	1	0.0	0	0.0	2	0.1
NE	0	0.0	0	0.0	1	0.0	4	0.2	1	0.0	1	0.0	0	0.0	7	0.3
ENE	0	0.0	0	0.0	0	0.0	3	0.1	1	0.0	1	0.0	0	0.0	5	0.2
E	0	0.0	0	0.0	1	0.0	1	0.0	0	0.0	0	0.0	0	0.0	2	0.1
ESE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SE	0	0.0	0	0.0	1	0.0	6	0.3	4	0.2	4	0.2	0	0.0	15	0.7
SSE	0	0.0	0	0.0	3	0.1	6	0.3	2	0.1	1	0.0	0	0.0	12	0.5
S	0	0.0	0	0.0	3	0.1	0	0.0	0	0.0	1	0.0	0	0.0	4	0.2
SSW	0	0.0	0	0.0	4	0.2	3	0.1	5	0.2	0	0.0	0	0.0	12	0.5
SW	0	0.0	0	0.0	4	0.2	2	0.1	2	0.1	0	0.0	0	0.0	8	0.4
WSW	0	0.0	0	0.0	1	0.0	5	0.2	3	0.1	0	0.0	1	0.0	10	0.5
W	0	0.0	0	0.0	1	0.0	5	0.2	6	0.3	2	0.1	0	0.0	14	0.6
WNW	0	0.0	0	0.0	0	0.0	4	0.2	2	0.1	0	0.0	0	0.0	6	0.3
NW	0	0.0	0	0.0	1	0.0	4	0.2	1	0.0	0	0.0	0	0.0	6	0.3
NNW	0	0.0	0	0.0	0	0.0	9	0.4	2	0.1	0	0.0	0	0.0	11	0.5
	0	0.0	0	0.0	21	1.0	62	2.8	31	1.4	11	0.5	1	0.0	126	5.7

MEAN WIND SPEED: 11.6
 MISSING: 0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 07/09-09/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
 BY ATMOSPHERIC STABILITY CLASS
 WIND: 150 FT
 DELTA T: (300-33FT)

LAPSE RATE: -1.69 TO -1.50 DEG C/100M
 CLASS C

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	0	0.0	5	0.2	3	0.1	0	0.0	0	0.0	0	0.0	8	0.4
NNE	0	0.0	1	0.0	3	0.1	5	0.2	0	0.0	0	0.0	0	0.0	9	0.4
NE	0	0.0	0	0.0	5	0.2	5	0.2	5	0.2	2	0.1	0	0.0	17	0.8
ENE	0	0.0	0	0.0	2	0.1	4	0.2	0	0.0	0	0.0	0	0.0	6	0.3
E	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
ESE	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	1	0.0
SE	0	0.0	0	0.0	5	0.2	3	0.1	3	0.1	5	0.2	0	0.0	16	0.7
SSE	0	0.0	0	0.0	11	0.5	1	0.0	2	0.1	3	0.1	0	0.0	17	0.8
S	0	0.0	0	0.0	9	0.4	1	0.0	1	0.0	0	0.0	0	0.0	11	0.5
SSW	0	0.0	0	0.0	8	0.4	2	0.1	1	0.0	0	0.0	0	0.0	11	0.5
SW	0	0.0	0	0.0	2	0.1	2	0.1	0	0.0	0	0.0	0	0.0	4	0.2
WSW	0	0.0	0	0.0	8	0.4	5	0.2	3	0.1	1	0.0	0	0.0	17	0.8
W	0	0.0	0	0.0	7	0.3	10	0.5	4	0.2	1	0.0	0	0.0	22	1.0
WNW	0	0.0	0	0.0	2	0.1	10	0.5	3	0.1	0	0.0	0	0.0	15	0.7
NW	0	0.0	0	0.0	4	0.2	11	0.5	3	0.1	0	0.0	0	0.0	18	0.8
NNW	0	0.0	0	0.0	13	0.6	8	0.4	0	0.0	0	0.0	0	0.0	21	1.0
	0	0.0	1	0.0	85	3.9	70	3.2	26	1.2	12	0.5	0	0.0	194	8.8

MEAN WIND SPEED: 9.4
 MISSING: 1

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 07/09-09/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS

WIND: 150 FT
DELTA T: (300-33FT)

LAPSE RATE: -1.49 TO -0.50 DEG C/100M
CLASS D

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	2	0.1	15	0.7	16	0.7	2	0.1	0	0.0	0	0.0	35	1.6
NNE	0	0.0	5	0.2	10	0.5	21	1.0	9	0.4	5	0.2	12	0.5	62	2.8
NE	0	0.0	3	0.1	13	0.6	47	2.1	22	1.0	6	0.3	0	0.0	91	4.1
ENE	0	0.0	2	0.1	7	0.3	24	1.1	10	0.5	1	0.0	1	0.0	45	2.0
E	0	0.0	4	0.2	7	0.3	8	0.4	0	0.0	0	0.0	0	0.0	19	0.9
ESE	0	0.0	0	0.0	4	0.2	7	0.3	4	0.2	0	0.0	0	0.0	15	0.7
SE	0	0.0	2	0.1	7	0.3	12	0.5	29	1.3	15	0.7	0	0.0	65	3.0
SSE	0	0.0	0	0.0	5	0.2	22	1.0	29	1.3	3	0.1	0	0.0	59	2.7
S	0	0.0	3	0.1	10	0.5	31	1.4	31	1.4	6	0.3	0	0.0	81	3.7
SSW	0	0.0	2	0.1	14	0.6	23	1.0	18	0.8	5	0.2	1	0.0	63	2.9
SW	0	0.0	2	0.1	13	0.6	25	1.1	10	0.5	2	0.1	0	0.0	52	2.4
WSW	0	0.0	0	0.0	17	0.8	22	1.0	10	0.5	1	0.0	0	0.0	50	2.3
W	0	0.0	1	0.0	10	0.5	33	1.5	11	0.5	6	0.3	0	0.0	61	2.8
WNW	0	0.0	1	0.0	10	0.5	25	1.1	5	0.2	0	0.0	0	0.0	41	1.9
NW	0	0.0	3	0.1	9	0.4	18	0.8	9	0.4	0	0.0	0	0.0	39	1.8
NNW	0	0.0	1	0.0	11	0.5	20	0.9	3	0.1	0	0.0	0	0.0	35	1.6
	0	0.0	31	1.4	162	7.4	354	16.1	202	9.2	50	2.3	14	0.6	813	37.0

MEAN WIND SPEED: 11.1
MISSING: 6

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 07/09-09/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS

WIND: 150 FT
DELTA T: (300-33FT)

LAPSE RATE: -0.49 TO 1.50 DEG C/100M
CLASS E

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	1	0.0	13	0.6	22	1.0	19	0.9	0	0.0	0	0.0	55	2.5
NNE	0	0.0	1	0.0	5	0.2	33	1.5	15	0.7	0	0.0	0	0.0	54	2.5
NE	0	0.0	1	0.0	13	0.6	39	1.8	11	0.5	0	0.0	0	0.0	64	2.9
ENE	0	0.0	2	0.1	21	1.0	12	0.5	8	0.4	0	0.0	0	0.0	43	2.0
E	0	0.0	4	0.2	21	1.0	7	0.3	0	0.0	0	0.0	0	0.0	32	1.5
ESE	0	0.0	2	0.1	9	0.4	15	0.7	8	0.4	0	0.0	0	0.0	34	1.5
SE	0	0.0	1	0.0	11	0.5	13	0.6	8	0.4	0	0.0	0	0.0	33	1.5
SSE	0	0.0	1	0.0	3	0.1	6	0.3	6	0.3	0	0.0	0	0.0	16	0.7
S	0	0.0	2	0.1	9	0.4	8	0.4	12	0.5	0	0.0	0	0.0	31	1.4
SSW	0	0.0	6	0.3	6	0.3	24	1.1	9	0.4	1	0.0	0	0.0	46	2.1
SW	0	0.0	0	0.0	14	0.6	28	1.3	11	0.5	0	0.0	0	0.0	53	2.4
WSW	0	0.0	3	0.1	20	0.9	24	1.1	11	0.5	0	0.0	0	0.0	58	2.6
W	0	0.0	2	0.1	20	0.9	16	0.7	9	0.4	0	0.0	0	0.0	47	2.1
WNW	0	0.0	1	0.0	15	0.7	36	1.6	5	0.2	0	0.0	0	0.0	57	2.6
NW	0	0.0	1	0.0	19	0.9	29	1.3	10	0.5	0	0.0	0	0.0	59	2.7
NNW	0	0.0	2	0.1	11	0.5	39	1.8	16	0.7	0	0.0	0	0.0	68	3.1
	0	0.0	30	1.4	210	9.6	351	16.0	158	7.2	1	0.0	0	0.0	750	34.1

MEAN WIND SPEED: 9.5
MISSING: 0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 07/09-09/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
 BY ATMOSPHERIC STABILITY CLASS
 WIND: 150 FT
 DELTA T: (300-33FT)

LAPSE RATE: 1.51 TO 4.00 DEG C/100M
 CLASS F

DIRECTION	WIND SPEED GROUPS (MPH)														SUM PERCENT	
	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6			
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	0	0.0	1	0.0	10	0.5	6	0.3	0	0.0	0	0.0	17	0.8
NNE	0	0.0	2	0.1	0	0.0	13	0.6	18	0.8	0	0.0	0	0.0	33	1.5
NE	0	0.0	0	0.0	5	0.2	7	0.3	2	0.1	0	0.0	0	0.0	14	0.6
ENE	0	0.0	0	0.0	6	0.3	6	0.3	1	0.0	0	0.0	0	0.0	13	0.6
E	0	0.0	5	0.2	7	0.3	2	0.1	0	0.0	0	0.0	0	0.0	14	0.6
ESE	0	0.0	1	0.0	5	0.2	1	0.0	0	0.0	0	0.0	0	0.0	7	0.3
SE	0	0.0	0	0.0	2	0.1	6	0.3	1	0.0	0	0.0	0	0.0	9	0.4
SSE	0	0.0	1	0.0	2	0.1	1	0.0	1	0.0	0	0.0	0	0.0	5	0.2
S	0	0.0	0	0.0	1	0.0	1	0.0	0	0.0	0	0.0	0	0.0	2	0.1
SSW	0	0.0	0	0.0	1	0.0	4	0.2	0	0.0	0	0.0	0	0.0	5	0.2
SW	0	0.0	0	0.0	0	0.0	4	0.2	1	0.0	0	0.0	0	0.0	5	0.2
WSW	0	0.0	0	0.0	3	0.1	10	0.5	0	0.0	0	0.0	0	0.0	13	0.6
W	0	0.0	1	0.0	4	0.2	5	0.2	0	0.0	0	0.0	0	0.0	10	0.5
WNW	0	0.0	1	0.0	3	0.1	0	0.0	0	0.0	0	0.0	0	0.0	4	0.2
NW	0	0.0	0	0.0	3	0.1	8	0.4	1	0.0	0	0.0	0	0.0	12	0.5
NNW	0	0.0	0	0.0	3	0.1	21	1.0	4	0.2	0	0.0	0	0.0	28	1.3
	0	0.0	11	0.5	46	2.1	99	4.5	35	1.6	0	0.0	0	0.0	191	8.7

MEAN WIND SPEED: 9.3
 MISSING: 0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 07/09-09/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS
WIND: 150 FT
DELTA T: (300-33FT)

LAPSE RATE: GT 4.00 DEG C/100M
CLASS G

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
NNE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
NE	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	1	0.0
ENE	0	0.0	0	0.0	0	0.0	3	0.1	2	0.1	0	0.0	0	0.0	5	0.2
E	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
ESE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SSE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
S	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SSW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
WSW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
W	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
WNW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
NW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
NNW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	0	0.0	0	0.0	1	0.0	4	0.2	2	0.1	0	0.0	0	0.0	7	0.3

MEAN WIND SPEED: 11.3
MISSING: 0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 07/09-09/09

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS
WIND: 150 FT
DELTA T: (300-33FT)

ALL STABILITY CLASSES

DIRECTION	WIND SPEED GROUPS (MPH)														SUM PERCENT	
	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6			
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT
N	0	0.0	3	0.1	36	1.6	64	2.9	35	1.6	0	0.0	0	0.0	138	6.3
NNE	0	0.0	9	0.4	19	0.9	79	3.6	43	2.0	6	0.3	12	0.5	168	7.6
NE	0	0.0	5	0.2	38	1.7	111	5.1	42	1.9	9	0.4	0	0.0	205	9.3
ENE	0	0.0	4	0.2	41	1.9	53	2.4	23	1.0	2	0.1	1	0.0	124	5.6
E	0	0.0	13	0.6	44	2.0	19	0.9	0	0.0	0	0.0	0	0.0	76	3.5
ESE	0	0.0	3	0.1	19	0.9	26	1.2	14	0.6	0	0.0	0	0.0	62	2.8
SE	0	0.0	3	0.1	26	1.2	44	2.0	56	2.5	26	1.2	0	0.0	155	7.1
SSE	0	0.0	2	0.1	24	1.1	43	2.0	46	2.1	7	0.3	0	0.0	122	5.6
S	0	0.0	5	0.2	35	1.6	43	2.0	44	2.0	7	0.3	1	0.0	135	6.1
SSW	0	0.0	8	0.4	35	1.6	57	2.6	34	1.5	6	0.3	2	0.1	142	6.5
SW	0	0.0	3	0.1	34	1.5	64	2.9	24	1.1	2	0.1	0	0.0	127	5.8
WSW	0	0.0	3	0.1	49	2.2	67	3.0	29	1.3	2	0.1	2	0.1	152	6.9
W	0	0.0	4	0.2	42	1.9	72	3.3	31	1.4	10	0.5	0	0.0	159	7.2
WNW	0	0.0	3	0.1	31	1.4	75	3.4	17	0.8	0	0.0	0	0.0	126	5.7
NW	0	0.0	4	0.2	39	1.8	72	3.3	24	1.1	0	0.0	0	0.0	139	6.3
NNW	0	0.0	3	0.1	39	1.8	100	4.6	25	1.1	0	0.0	0	0.0	167	7.6
	0	0.0	75	3.4	551	25.1	989	45.0	487	22.2	77	3.5	18	0.8	2197	100.0
MISSING HOURS:	11															
MEAN WIND SPEED:	10.3															

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 07/09-09/09

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED
 BY ATMOSPHERIC STABILITY CLASS
 WIND: 150 FT
 DELTA T: (300-33FT)

DIRECTION VS SPEED ONLY

DIRECTION	WIND SPEED GROUPS (MPH)														SUM PERCENT	
	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6			
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT
N	0	0.0	3	0.1	36	1.6	64	2.9	35	1.6	0	0.0	0	0.0	138	6.3
NNE	0	0.0	9	0.4	19	0.9	79	3.6	43	2.0	6	0.3	12	0.5	168	7.6
NE	0	0.0	5	0.2	38	1.7	111	5.0	42	1.9	9	0.4	0	0.0	205	9.3
ENE	0	0.0	4	0.2	41	1.9	53	2.4	23	1.0	2	0.1	1	0.0	124	5.6
E	0	0.0	13	0.6	44	2.0	19	0.9	0	0.0	0	0.0	0	0.0	76	3.5
ESE	0	0.0	3	0.1	19	0.9	26	1.2	14	0.6	0	0.0	0	0.0	62	2.8
SE	0	0.0	3	0.1	26	1.2	44	2.0	56	2.5	26	1.2	0	0.0	155	7.0
SSE	0	0.0	2	0.1	24	1.1	43	2.0	46	2.1	7	0.3	0	0.0	122	5.5
S	0	0.0	5	0.2	35	1.6	43	2.0	44	2.0	7	0.3	1	0.0	135	6.1
SSW	0	0.0	8	0.4	35	1.6	57	2.6	34	1.5	6	0.3	2	0.1	142	6.5
SW	0	0.0	3	0.1	34	1.5	64	2.9	24	1.1	2	0.1	0	0.0	127	5.8
WSW	0	0.0	3	0.1	49	2.2	67	3.0	29	1.3	2	0.1	2	0.1	152	6.9
W	0	0.0	4	0.2	42	1.9	72	3.3	31	1.4	10	0.5	0	0.0	159	7.2
WNW	0	0.0	3	0.1	31	1.4	75	3.4	17	0.8	0	0.0	0	0.0	126	5.7
NW	0	0.0	4	0.2	39	1.8	73	3.3	24	1.1	0	0.0	0	0.0	140	6.4
NNW	0	0.0	3	0.1	40	1.8	101	4.6	25	1.1	0	0.0	0	0.0	169	7.7
	0	0.0	75	3.4	552	25.1	991	45.0	487	22.1	77	3.5	18	0.8	2200	100.0

MISSING HOURS: 8

MEAN WIND SPEED: 10.3

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 07/09-09/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS

WIND: 197 FT
DELTA T: (300-33FT)

LAPSE RATE: LE -1.90 DEG C/100M
CLASS A

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	0	0.0	0	0.0	7	0.3	4	0.2	0	0.0	0	0.0	11	0.5
NNE	0	0.0	0	0.0	1	0.0	7	0.3	2	0.1	0	0.0	0	0.0	10	0.5
NE	0	0.0	1	0.0	1	0.0	6	0.3	0	0.0	0	0.0	0	0.0	8	0.4
ENE	0	0.0	0	0.0	3	0.1	3	0.1	1	0.0	0	0.0	0	0.0	7	0.3
E	0	0.0	0	0.0	3	0.1	4	0.2	1	0.0	0	0.0	0	0.0	8	0.4
ESE	0	0.0	0	0.0	1	0.0	2	0.1	2	0.1	0	0.0	0	0.0	5	0.2
SE	0	0.0	0	0.0	0	0.0	4	0.2	10	0.5	3	0.1	0	0.0	17	0.8
SSE	0	0.0	0	0.0	1	0.0	6	0.3	6	0.3	0	0.0	0	0.0	13	0.6
S	0	0.0	0	0.0	3	0.1	2	0.1	0	0.0	0	0.0	1	0.0	6	0.3
SSW	0	0.0	0	0.0	2	0.1	1	0.0	1	0.0	0	0.0	1	0.0	5	0.2
SW	0	0.0	0	0.0	1	0.0	2	0.1	1	0.0	0	0.0	0	0.0	4	0.2
WSW	0	0.0	0	0.0	1	0.0	0	0.0	2	0.1	0	0.0	1	0.0	4	0.2
W	0	0.0	0	0.0	0	0.0	1	0.0	4	0.2	0	0.0	1	0.0	6	0.3
WNW	0	0.0	0	0.0	1	0.0	0	0.0	2	0.1	0	0.0	0	0.0	3	0.1
NW	0	0.0	0	0.0	3	0.1	2	0.1	0	0.0	0	0.0	0	0.0	5	0.2
NNW	0	0.0	0	0.0	1	0.0	3	0.1	0	0.0	0	0.0	0	0.0	4	0.2
	0	0.0	1	0.0	22	1.0	50	2.3	36	1.6	3	0.1	4	0.2	116	5.3

MEAN WIND SPEED: 11.8
MISSING: 0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 07/09-09/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS
WIND: 197 FT
DELTA T: (300-33FT)

LAPSE RATE: -1.89 TO -1.70 DEG C/100M
CLASS B

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	0	0.0	1	0.0	11	0.5	0	0.0	0	0.0	0	0.0	12	0.5
NNE	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	1	0.0	0	0.0	2	0.1
NE	0	0.0	0	0.0	1	0.0	4	0.2	1	0.0	1	0.0	0	0.0	7	0.3
ENE	0	0.0	0	0.0	0	0.0	3	0.1	1	0.0	1	0.0	0	0.0	5	0.2
E	0	0.0	0	0.0	1	0.0	0	0.0	1	0.0	0	0.0	0	0.0	2	0.1
ESE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SE	0	0.0	0	0.0	1	0.0	4	0.2	4	0.2	3	0.1	1	0.0	13	0.6
SSE	0	0.0	0	0.0	3	0.1	7	0.3	3	0.1	1	0.0	0	0.0	14	0.6
S	0	0.0	0	0.0	3	0.1	0	0.0	0	0.0	1	0.0	0	0.0	4	0.2
SSW	0	0.0	0	0.0	4	0.2	3	0.1	5	0.2	0	0.0	0	0.0	12	0.5
SW	0	0.0	0	0.0	4	0.2	2	0.1	2	0.1	0	0.0	0	0.0	8	0.4
WSW	0	0.0	0	0.0	0	0.0	5	0.2	4	0.2	0	0.0	1	0.0	10	0.5
W	0	0.0	0	0.0	1	0.0	2	0.1	6	0.3	4	0.2	1	0.0	14	0.6
WNW	0	0.0	0	0.0	0	0.0	3	0.1	2	0.1	1	0.0	0	0.0	6	0.3
NW	0	0.0	0	0.0	1	0.0	3	0.1	2	0.1	0	0.0	0	0.0	6	0.3
NNW	0	0.0	0	0.0	0	0.0	10	0.5	1	0.0	0	0.0	0	0.0	11	0.5
	0	0.0	0	0.0	20	0.9	58	2.6	32	1.5	13	0.6	3	0.1	126	5.7

MEAN WIND SPEED: 12.2
MISSING: 0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 07/09-09/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
 BY ATMOSPHERIC STABILITY CLASS
 WIND: 197 FT
 DELTA T: (300-33FT)

LAPSE RATE: -1.69 TO -1.50 DEG C/100M
 CLASS C

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	0	0.0	4	0.2	5	0.2	0	0.0	0	0.0	0	0.0	9	0.4
NNE	0	0.0	1	0.0	3	0.1	2	0.1	2	0.1	0	0.0	0	0.0	8	0.4
NE	0	0.0	0	0.0	5	0.2	5	0.2	4	0.2	2	0.1	0	0.0	16	0.7
ENE	0	0.0	0	0.0	2	0.1	3	0.1	1	0.0	0	0.0	0	0.0	6	0.3
E	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
ESE	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	1	0.0
SE	0	0.0	0	0.0	5	0.2	2	0.1	4	0.2	5	0.2	0	0.0	16	0.7
SSE	0	0.0	1	0.0	9	0.4	1	0.0	2	0.1	3	0.1	0	0.0	16	0.7
S	0	0.0	0	0.0	9	0.4	0	0.0	2	0.1	0	0.0	0	0.0	11	0.5
SSW	0	0.0	1	0.0	8	0.4	3	0.1	1	0.0	0	0.0	0	0.0	13	0.6
SW	0	0.0	0	0.0	2	0.1	2	0.1	0	0.0	0	0.0	0	0.0	4	0.2
WSW	0	0.0	0	0.0	7	0.3	3	0.1	5	0.2	2	0.1	0	0.0	17	0.8
W	0	0.0	0	0.0	6	0.3	5	0.2	9	0.4	3	0.1	1	0.0	24	1.1
WNW	0	0.0	0	0.0	1	0.0	8	0.4	4	0.2	0	0.0	0	0.0	13	0.6
NW	0	0.0	0	0.0	5	0.2	8	0.4	6	0.3	0	0.0	0	0.0	19	0.9
NNW	0	0.0	0	0.0	13	0.6	8	0.4	0	0.0	0	0.0	0	0.0	21	1.0
	0	0.0	3	0.1	80	3.6	55	2.5	41	1.9	15	0.7	1	0.0	195	8.8

MEAN WIND SPEED: 10.0
 MISSING: 0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 07/09-09/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS

WIND: 197 FT
DELTA T: (300-33FT)

LAPSE RATE: -1.49 TO -0.50 DEG C/100M
CLASS D

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	4	0.2	16	0.7	17	0.8	5	0.2	0	0.0	0	0.0	42	1.9
NNE	0	0.0	4	0.2	10	0.5	18	0.8	7	0.3	8	0.4	12	0.5	59	2.7
NE	0	0.0	3	0.1	14	0.6	43	2.0	23	1.0	4	0.2	0	0.0	87	3.9
ENE	0	0.0	3	0.1	4	0.2	26	1.2	11	0.5	1	0.0	1	0.0	46	2.1
E	0	0.0	1	0.0	6	0.3	7	0.3	1	0.0	0	0.0	0	0.0	15	0.7
ESE	0	0.0	1	0.0	3	0.1	8	0.4	4	0.2	0	0.0	0	0.0	16	0.7
SE	0	0.0	2	0.1	8	0.4	11	0.5	24	1.1	23	1.0	0	0.0	68	3.1
SSE	0	0.0	0	0.0	3	0.1	22	1.0	28	1.3	3	0.1	0	0.0	56	2.5
S	0	0.0	2	0.1	10	0.5	24	1.1	35	1.6	8	0.4	0	0.0	79	3.6
SSW	0	0.0	3	0.1	12	0.5	20	0.9	19	0.9	5	0.2	2	0.1	61	2.8
SW	0	0.0	1	0.0	16	0.7	29	1.3	7	0.3	4	0.2	0	0.0	57	2.6
WSW	0	0.0	0	0.0	13	0.6	16	0.7	17	0.8	1	0.0	0	0.0	47	2.1
W	0	0.0	1	0.0	4	0.2	32	1.5	22	1.0	8	0.4	1	0.0	68	3.1
WNW	0	0.0	2	0.1	8	0.4	20	0.9	12	0.5	2	0.1	0	0.0	44	2.0
NW	0	0.0	1	0.0	11	0.5	16	0.7	12	0.5	1	0.0	0	0.0	41	1.9
NNW	0	0.0	1	0.0	8	0.4	20	0.9	4	0.2	0	0.0	0	0.0	33	1.5
	0	0.0	29	1.3	146	6.6	329	14.9	231	10.5	68	3.1	16	0.7	819	37.2

MEAN WIND SPEED: 11.7
MISSING: 0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 07/09-09/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS

WIND: 197 FT
DELTA T: (300-33FT)

LAPSE RATE: -0.49 TO 1.50 DEG C/100M
CLASS E

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	1	0.0	5	0.2	20	0.9	27	1.2	3	0.1	0	0.0	56	2.5
NNE	0	0.0	0	0.0	4	0.2	27	1.2	26	1.2	0	0.0	0	0.0	57	2.6
NE	0	0.0	0	0.0	9	0.4	39	1.8	13	0.6	0	0.0	0	0.0	61	2.8
ENE	0	0.0	3	0.1	8	0.4	16	0.7	6	0.3	0	0.0	0	0.0	33	1.5
E	0	0.0	3	0.1	18	0.8	12	0.5	0	0.0	0	0.0	0	0.0	33	1.5
ESE	0	0.0	0	0.0	8	0.4	9	0.4	14	0.6	0	0.0	0	0.0	31	1.4
SE	0	0.0	2	0.1	13	0.6	12	0.5	10	0.5	0	0.0	0	0.0	37	1.7
SSE	0	0.0	1	0.0	6	0.3	6	0.3	9	0.4	0	0.0	0	0.0	22	1.0
S	0	0.0	1	0.0	6	0.3	5	0.2	15	0.7	1	0.0	0	0.0	28	1.3
SSW	0	0.0	4	0.2	9	0.4	20	0.9	12	0.5	1	0.0	0	0.0	46	2.1
SW	0	0.0	1	0.0	9	0.4	26	1.2	14	0.6	2	0.1	0	0.0	52	2.4
WSW	0	0.0	1	0.0	19	0.9	26	1.2	13	0.6	0	0.0	0	0.0	59	2.7
W	0	0.0	1	0.0	15	0.7	16	0.7	18	0.8	1	0.0	0	0.0	51	2.3
WNW	0	0.0	0	0.0	11	0.5	28	1.3	16	0.7	0	0.0	0	0.0	55	2.5
NW	0	0.0	3	0.1	15	0.7	28	1.3	15	0.7	0	0.0	0	0.0	61	2.8
NNW	0	0.0	1	0.0	9	0.4	38	1.7	20	0.9	0	0.0	0	0.0	68	3.1
	0	0.0	22	1.0	164	7.4	328	14.9	228	10.3	8	0.4	0	0.0	750	34.0

MEAN WIND SPEED: 10.3

MISSING: 0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 07/09-09/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS

WIND: 197 FT
DELTA T: (300-33FT)

LAPSE RATE: 1.51 TO 4.00 DEG C/100M
CLASS F

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	1	0.0	1	0.0	11	0.5	13	0.6	0	0.0	0	0.0	26	1.2
NNE	0	0.0	0	0.0	1	0.0	5	0.2	22	1.0	0	0.0	0	0.0	28	1.3
NE	0	0.0	0	0.0	3	0.1	5	0.2	2	0.1	0	0.0	0	0.0	10	0.5
ENE	0	0.0	0	0.0	3	0.1	9	0.4	0	0.0	0	0.0	0	0.0	12	0.5
E	0	0.0	5	0.2	5	0.2	4	0.2	0	0.0	0	0.0	0	0.0	14	0.6
ESE	0	0.0	0	0.0	6	0.3	2	0.1	1	0.0	0	0.0	0	0.0	9	0.4
SE	0	0.0	0	0.0	3	0.1	3	0.1	2	0.1	0	0.0	0	0.0	8	0.4
SSE	0	0.0	0	0.0	0	0.0	4	0.2	1	0.0	0	0.0	0	0.0	5	0.2
S	0	0.0	0	0.0	2	0.1	2	0.1	0	0.0	0	0.0	0	0.0	4	0.2
SSW	0	0.0	0	0.0	1	0.0	3	0.1	1	0.0	0	0.0	0	0.0	5	0.2
SW	0	0.0	1	0.0	0	0.0	1	0.0	2	0.1	0	0.0	0	0.0	4	0.2
WSW	0	0.0	1	0.0	0	0.0	11	0.5	1	0.0	0	0.0	0	0.0	13	0.6
W	0	0.0	2	0.1	2	0.1	4	0.2	4	0.2	0	0.0	0	0.0	12	0.5
WNW	0	0.0	0	0.0	4	0.2	2	0.1	0	0.0	0	0.0	0	0.0	6	0.3
NW	0	0.0	0	0.0	1	0.0	5	0.2	3	0.1	0	0.0	0	0.0	9	0.4
NNW	0	0.0	0	0.0	0	0.0	23	1.0	3	0.1	0	0.0	0	0.0	26	1.2
	0	0.0	10	0.5	32	1.5	94	4.3	55	2.5	0	0.0	0	0.0	191	8.7

MEAN WIND SPEED: 10.3
MISSING: 0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 07/09-09/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
 BY ATMOSPHERIC STABILITY CLASS
 WIND: 197 FT
 DELTA T: (300-33FT)

LAPSE RATE: GT 4.00 DEG C/100M
 CLASS G

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
NNE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
NE	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	1	0.0
ENE	0	0.0	0	0.0	0	0.0	4	0.2	0	0.0	0	0.0	0	0.0	4	0.2
E	0	0.0	0	0.0	0	0.0	1	0.0	1	0.0	0	0.0	0	0.0	2	0.1
ESE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SSE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
S	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SSW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
WSW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
W	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
WNW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
NW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
NNW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	0	0.0	0	0.0	0	0.0	6	0.3	1	0.0	0	0.0	0	0.0	7	0.3

MEAN WIND SPEED: 11.2
 MISSING: 0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 07/09-09/09

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED
 BY ATMOSPHERIC STABILITY CLASS
 WIND: 197 FT
 DELTA T: (300-33FT)

ALL STABILITY CLASSES

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	6	0.3	27	1.2	71	3.2	49	2.2	3	0.1	0	0.0	156	7.1
NNE	0	0.0	5	0.2	19	0.9	60	2.7	59	2.7	9	0.4	12	0.5	164	7.4
NE	0	0.0	4	0.2	33	1.5	103	4.7	43	2.0	7	0.3	0	0.0	190	8.6
ENE	0	0.0	6	0.3	20	0.9	64	2.9	20	0.9	2	0.1	1	0.0	113	5.1
E	0	0.0	9	0.4	34	1.5	28	1.3	4	0.2	0	0.0	0	0.0	75	3.4
ESE	0	0.0	1	0.0	18	0.8	21	1.0	22	1.0	0	0.0	0	0.0	62	2.8
SE	0	0.0	4	0.2	30	1.4	36	1.6	54	2.5	34	1.5	1	0.0	159	7.2
SSE	0	0.0	2	0.1	22	1.0	46	2.1	49	2.2	7	0.3	0	0.0	126	5.7
S	0	0.0	3	0.1	33	1.5	33	1.5	52	2.4	10	0.5	1	0.0	132	6.0
SSW	0	0.0	8	0.4	36	1.6	50	2.3	39	1.8	6	0.3	3	0.1	142	6.4
SW	0	0.0	3	0.1	32	1.5	62	2.8	26	1.2	6	0.3	0	0.0	129	5.9
WSW	0	0.0	2	0.1	40	1.8	61	2.8	42	1.9	3	0.1	2	0.1	150	6.8
W	0	0.0	4	0.2	28	1.3	60	2.7	63	2.9	16	0.7	4	0.2	175	7.9
WNW	0	0.0	2	0.1	25	1.1	61	2.8	36	1.6	3	0.1	0	0.0	127	5.8
NW	0	0.0	4	0.2	36	1.6	62	2.8	38	1.7	1	0.0	0	0.0	141	6.4
NNW	0	0.0	2	0.1	31	1.4	102	4.6	28	1.3	0	0.0	0	0.0	163	7.4
	0	0.0	65	2.9	464	21.1	920	41.7	624	28.3	107	4.9	24	1.1	2204	100.0

MISSING HOURS: 4

MEAN WIND SPEED: 11.0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 07/09-09/09

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED
 BY ATMOSPHERIC STABILITY CLASS
 WIND: 197 FT
 DELTA T: (300-33FT)

DIRECTION VS SPEED ONLY

DIRECTION	WIND SPEED GROUPS (MPH)														SUM PERCENT	
	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6			
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	6	0.3	27	1.2	71	3.2	49	2.2	3	0.1	0	0.0	156	7.1
NNE	0	0.0	5	0.2	19	0.9	60	2.7	59	2.7	9	0.4	12	0.5	164	7.4
NE	0	0.0	4	0.2	33	1.5	103	4.7	43	1.9	7	0.3	0	0.0	190	8.6
ENE	0	0.0	6	0.3	20	0.9	64	2.9	20	0.9	2	0.1	1	0.0	113	5.1
E	0	0.0	9	0.4	34	1.5	28	1.3	4	0.2	0	0.0	0	0.0	75	3.4
ESE	0	0.0	1	0.0	18	0.8	21	1.0	22	1.0	0	0.0	0	0.0	62	2.8
SE	0	0.0	4	0.2	30	1.4	36	1.6	54	2.4	34	1.5	1	0.0	159	7.2
SSE	0	0.0	2	0.1	22	1.0	46	2.1	49	2.2	7	0.3	0	0.0	126	5.7
S	0	0.0	3	0.1	33	1.5	33	1.5	52	2.4	10	0.5	1	0.0	132	6.0
SSW	0	0.0	8	0.4	36	1.6	50	2.3	39	1.8	6	0.3	3	0.1	142	6.4
SW	0	0.0	3	0.1	32	1.4	62	2.8	26	1.2	6	0.3	0	0.0	129	5.8
WSW	0	0.0	2	0.1	40	1.8	61	2.8	42	1.9	3	0.1	2	0.1	150	6.8
W	0	0.0	4	0.2	28	1.3	60	2.7	63	2.9	16	0.7	4	0.2	175	7.9
WNW	0	0.0	2	0.1	25	1.1	61	2.8	36	1.6	3	0.1	0	0.0	127	5.8
NW	0	0.0	4	0.2	37	1.7	62	2.8	38	1.7	1	0.0	0	0.0	142	6.4
NNW	0	0.0	2	0.1	31	1.4	104	4.7	28	1.3	0	0.0	0	0.0	165	7.5
	0	0.0	65	2.9	465	21.1	922	41.8	624	28.3	107	4.8	24	1.1	2207	100.0

MISSING HOURS: 1

MEAN WIND SPEED: 11.0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 07/09-09/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
 BY ATMOSPHERIC STABILITY CLASS
 WIND: 300 FT
 DELTA T: (300-33FT)

LAPSE RATE: LE -1.90 DEG C/100M
 CLASS A

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	0	0.0	0	0.0	5	0.2	3	0.1	0	0.0	0	0.0	8	0.4
NNE	0	0.0	0	0.0	0	0.0	4	0.2	1	0.0	0	0.0	0	0.0	5	0.2
NE	0	0.0	1	0.0	2	0.1	8	0.4	0	0.0	0	0.0	0	0.0	11	0.5
ENE	0	0.0	0	0.0	4	0.2	0	0.0	1	0.0	0	0.0	0	0.0	5	0.2
E	0	0.0	0	0.0	1	0.0	4	0.2	2	0.1	0	0.0	0	0.0	7	0.3
ESE	0	0.0	0	0.0	0	0.0	3	0.1	5	0.2	0	0.0	0	0.0	8	0.4
SE	0	0.0	0	0.0	0	0.0	3	0.1	9	0.4	4	0.2	0	0.0	16	0.7
SSE	0	0.0	0	0.0	1	0.0	7	0.3	6	0.3	0	0.0	0	0.0	14	0.7
S	0	0.0	0	0.0	2	0.1	2	0.1	0	0.0	0	0.0	1	0.0	5	0.2
SSW	0	0.0	0	0.0	2	0.1	2	0.1	1	0.0	0	0.0	1	0.0	6	0.3
SW	0	0.0	0	0.0	1	0.0	2	0.1	1	0.0	0	0.0	0	0.0	4	0.2
WSW	0	0.0	0	0.0	1	0.0	0	0.0	2	0.1	0	0.0	0	0.0	3	0.1
W	0	0.0	0	0.0	0	0.0	2	0.1	3	0.1	0	0.0	0	0.0	5	0.2
WNW	0	0.0	0	0.0	1	0.0	1	0.0	2	0.1	0	0.0	0	0.0	4	0.2
NW	0	0.0	0	0.0	3	0.1	0	0.0	1	0.0	0	0.0	0	0.0	4	0.2
NNW	0	0.0	0	0.0	1	0.0	5	0.2	3	0.1	0	0.0	0	0.0	9	0.4
	0	0.0	1	0.0	19	0.9	48	2.2	40	1.9	4	0.2	2	0.1	114	5.3

MEAN WIND SPEED: 11.7
 MISSING: 2

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 07/09-09/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
 BY ATMOSPHERIC STABILITY CLASS
 WIND: 300 FT
 DELTA T: (300-33FT)

LAPSE RATE: -1.89 TO -1.70 DEG C/100M
 CLASS B

DIRECTION	WIND SPEED GROUPS (MPH)														SUM PERCENT	
	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6			
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	0	0.0	1	0.0	8	0.4	0	0.0	0	0.0	0	0.0	9	0.4
NNE	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	2	0.1	0	0.0	3	0.1
NE	0	0.0	0	0.0	1	0.0	4	0.2	0	0.0	0	0.0	0	0.0	5	0.2
ENE	0	0.0	0	0.0	0	0.0	3	0.1	1	0.0	1	0.0	0	0.0	5	0.2
E	0	0.0	0	0.0	1	0.0	1	0.0	0	0.0	0	0.0	0	0.0	2	0.1
ESE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SE	0	0.0	0	0.0	0	0.0	4	0.2	3	0.1	4	0.2	0	0.0	11	0.5
SSE	0	0.0	0	0.0	7	0.3	2	0.1	5	0.2	1	0.0	0	0.0	15	0.7
S	0	0.0	0	0.0	2	0.1	1	0.0	0	0.0	1	0.0	0	0.0	4	0.2
SSW	0	0.0	0	0.0	3	0.1	3	0.1	5	0.2	0	0.0	0	0.0	11	0.5
SW	0	0.0	0	0.0	3	0.1	1	0.0	3	0.1	0	0.0	0	0.0	7	0.3
WSW	0	0.0	0	0.0	3	0.1	5	0.2	4	0.2	0	0.0	0	0.0	12	0.6
W	0	0.0	0	0.0	1	0.0	3	0.1	5	0.2	3	0.1	0	0.0	12	0.6
WNW	0	0.0	0	0.0	0	0.0	3	0.1	2	0.1	1	0.0	0	0.0	6	0.3
NW	0	0.0	0	0.0	1	0.0	2	0.1	3	0.1	0	0.0	0	0.0	6	0.3
NNW	0	0.0	0	0.0	0	0.0	12	0.6	2	0.1	0	0.0	0	0.0	14	0.7
	0	0.0	0	0.0	23	1.1	53	2.5	33	1.5	13	0.6	0	0.0	122	5.7

MEAN WIND SPEED: 11.8
 MISSING: 4

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 07/09-09/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
 BY ATMOSPHERIC STABILITY CLASS
 WIND: 300 FT
 DELTA T: (300-33FT)

LAPSE RATE: -1.69 TO -1.50 DEG C/100M
 CLASS C

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	0	0.0	3	0.1	5	0.2	0	0.0	0	0.0	0	0.0	8	0.4
NNE	0	0.0	0	0.0	2	0.1	3	0.1	3	0.1	0	0.0	0	0.0	8	0.4
NE	0	0.0	1	0.0	6	0.3	5	0.2	4	0.2	1	0.0	0	0.0	17	0.8
ENE	0	0.0	0	0.0	4	0.2	1	0.0	0	0.0	0	0.0	0	0.0	5	0.2
E	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
ESE	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	1	0.0
SE	0	0.0	1	0.0	4	0.2	2	0.1	3	0.1	5	0.2	0	0.0	15	0.7
SSE	0	0.0	1	0.0	7	0.3	1	0.0	2	0.1	3	0.1	0	0.0	14	0.7
S	0	0.0	1	0.0	10	0.5	0	0.0	1	0.0	0	0.0	0	0.0	12	0.6
SSW	0	0.0	0	0.0	6	0.3	2	0.1	1	0.0	1	0.0	0	0.0	10	0.5
SW	0	0.0	1	0.0	5	0.2	3	0.1	0	0.0	0	0.0	0	0.0	9	0.4
WSW	0	0.0	0	0.0	5	0.2	3	0.1	5	0.2	1	0.0	0	0.0	14	0.7
W	0	0.0	0	0.0	7	0.3	8	0.4	8	0.4	2	0.1	0	0.0	25	1.2
WNW	0	0.0	0	0.0	2	0.1	8	0.4	4	0.2	0	0.0	0	0.0	14	0.7
NW	0	0.0	0	0.0	6	0.3	7	0.3	4	0.2	0	0.0	0	0.0	17	0.8
NNW	0	0.0	0	0.0	10	0.5	8	0.4	2	0.1	0	0.0	0	0.0	20	0.9
	0	0.0	5	0.2	78	3.6	56	2.6	38	1.8	13	0.6	0	0.0	190	8.8

MEAN WIND SPEED: 9.7
 MISSING: 5

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 07/09-09/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS

WIND: 300 FT
DELTA T: (300-33FT)

LAPSE RATE: -1.49 TO -0.50 DEG C/100M
CLASS D

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	2	0.1	13	0.6	18	0.8	4	0.2	0	0.0	0	0.0	37	1.7
NNE	0	0.0	3	0.1	9	0.4	17	0.8	9	0.4	9	0.4	12	0.6	59	2.7
NE	0	0.0	5	0.2	13	0.6	40	1.9	24	1.1	5	0.2	0	0.0	87	4.1
ENE	0	0.0	1	0.0	11	0.5	22	1.0	9	0.4	0	0.0	1	0.0	44	2.0
E	0	0.0	1	0.0	5	0.2	5	0.2	3	0.1	0	0.0	0	0.0	14	0.7
ESE	0	0.0	3	0.1	4	0.2	7	0.3	6	0.3	0	0.0	0	0.0	20	0.9
SE	0	0.0	0	0.0	4	0.2	10	0.5	23	1.1	20	0.9	0	0.0	57	2.7
SSE	0	0.0	3	0.1	5	0.2	22	1.0	29	1.4	4	0.2	0	0.0	63	2.9
S	0	0.0	1	0.0	8	0.4	18	0.8	29	1.4	13	0.6	0	0.0	69	3.2
SSW	0	0.0	4	0.2	8	0.4	25	1.2	21	1.0	8	0.4	2	0.1	68	3.2
SW	0	0.0	0	0.0	15	0.7	25	1.2	15	0.7	5	0.2	0	0.0	60	2.8
WSW	0	0.0	0	0.0	10	0.5	20	0.9	10	0.5	0	0.0	1	0.0	41	1.9
W	0	0.0	2	0.1	7	0.3	35	1.6	16	0.7	3	0.1	0	0.0	63	2.9
WNW	0	0.0	1	0.0	5	0.2	19	0.9	9	0.4	3	0.1	0	0.0	37	1.7
NW	0	0.0	1	0.0	13	0.6	19	0.9	9	0.4	1	0.0	0	0.0	43	2.0
NNW	0	0.0	2	0.1	6	0.3	19	0.9	5	0.2	0	0.0	0	0.0	32	1.5
	0	0.0	29	1.4	136	6.3	321	15.0	221	10.3	71	3.3	16	0.7	794	37.0

MEAN WIND SPEED: 11.9

MISSING: 25

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 07/09-09/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED

BY ATMOSPHERIC STABILITY CLASS

WIND: 300 FT

DELTA T: (300-33FT)

LAPSE RATE: -0.49 TO 1.50 DEG C/100M

CLASS E

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	1	0.0	2	0.1	19	0.9	28	1.3	2	0.1	0	0.0	52	2.4
NNE	0	0.0	0	0.0	3	0.1	13	0.6	37	1.7	1	0.0	0	0.0	54	2.5
NE	0	0.0	0	0.0	5	0.2	25	1.2	24	1.1	0	0.0	0	0.0	54	2.5
ENE	0	0.0	3	0.1	12	0.6	15	0.7	7	0.3	0	0.0	0	0.0	37	1.7
E	0	0.0	0	0.0	10	0.5	14	0.7	2	0.1	0	0.0	0	0.0	26	1.2
ESE	0	0.0	1	0.0	9	0.4	6	0.3	18	0.8	0	0.0	0	0.0	34	1.6
SE	0	0.0	2	0.1	1	0.0	16	0.7	12	0.6	1	0.0	0	0.0	32	1.5
SSE	0	0.0	3	0.1	9	0.4	11	0.5	8	0.4	0	0.0	0	0.0	31	1.4
S	0	0.0	1	0.0	7	0.3	5	0.2	9	0.4	5	0.2	0	0.0	27	1.3
SSW	0	0.0	2	0.1	11	0.5	15	0.7	23	1.1	1	0.0	1	0.0	53	2.5
SW	0	0.0	0	0.0	4	0.2	14	0.7	24	1.1	5	0.2	0	0.0	47	2.2
WSW	0	0.0	0	0.0	15	0.7	26	1.2	16	0.7	1	0.0	0	0.0	58	2.7
W	0	0.0	2	0.1	13	0.6	19	0.9	16	0.7	4	0.2	0	0.0	54	2.5
WNW	0	0.0	1	0.0	9	0.4	23	1.1	24	1.1	2	0.1	0	0.0	59	2.7
NW	0	0.0	0	0.0	10	0.5	18	0.8	21	1.0	0	0.0	0	0.0	49	2.3
NNW	0	0.0	0	0.0	8	0.4	36	1.7	27	1.3	1	0.0	0	0.0	72	3.4
	0	0.0	16	0.7	128	6.0	275	12.8	296	13.8	23	1.1	1	0.0	739	34.4

MEAN WIND SPEED: 11.5

MISSING: 11

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 07/09-09/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS

WIND: 300 FT
DELTA T: (300-33FT)

LAPSE RATE: 1.51 TO 4.00 DEG C/100M
CLASS F

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	0	0.0	0	0.0	5	0.2	12	0.6	2	0.1	0	0.0	19	0.9
NNE	0	0.0	0	0.0	2	0.1	4	0.2	15	0.7	2	0.1	0	0.0	23	1.1
NE	0	0.0	1	0.0	1	0.0	6	0.3	7	0.3	0	0.0	0	0.0	15	0.7
ENE	0	0.0	2	0.1	3	0.1	3	0.1	1	0.0	0	0.0	0	0.0	9	0.4
E	0	0.0	3	0.1	2	0.1	3	0.1	2	0.1	0	0.0	0	0.0	10	0.5
ESE	0	0.0	0	0.0	6	0.3	2	0.1	3	0.1	0	0.0	0	0.0	11	0.5
SE	0	0.0	1	0.0	3	0.1	0	0.0	2	0.1	0	0.0	0	0.0	6	0.3
SSE	0	0.0	0	0.0	0	0.0	4	0.2	3	0.1	0	0.0	0	0.0	7	0.3
S	0	0.0	1	0.0	1	0.0	4	0.2	0	0.0	0	0.0	0	0.0	6	0.3
SSW	0	0.0	0	0.0	2	0.1	2	0.1	2	0.1	0	0.0	0	0.0	6	0.3
SW	0	0.0	1	0.0	1	0.0	0	0.0	2	0.1	0	0.0	0	0.0	4	0.2
WSW	0	0.0	2	0.1	0	0.0	4	0.2	7	0.3	0	0.0	0	0.0	13	0.6
W	0	0.0	0	0.0	3	0.1	6	0.3	4	0.2	2	0.1	0	0.0	15	0.7
WNW	0	0.0	1	0.0	3	0.1	0	0.0	1	0.0	0	0.0	0	0.0	5	0.2
NW	0	0.0	0	0.0	0	0.0	4	0.2	2	0.1	1	0.0	0	0.0	7	0.3
NNW	0	0.0	1	0.0	0	0.0	16	0.7	8	0.4	0	0.0	0	0.0	25	1.2
	0	0.0	13	0.6	27	1.3	63	2.9	71	3.3	7	0.3	0	0.0	181	8.4

MEAN WIND SPEED: 11.3
MISSING: 10

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 07/09-09/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
 BY ATMOSPHERIC STABILITY CLASS
 WIND: 300 FT
 DELTA T: (300-33FT)

LAPSE RATE: GT 4.00 DEG C/100M
 CLASS G

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
NNE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
NE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
ENE	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	1	0.0
E	0	0.0	0	0.0	0	0.0	2	0.1	3	0.1	0	0.0	0	0.0	5	0.2
ESE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	1	0.0
SE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SSE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
S	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SSW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
WSW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
W	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
WNW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
NW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
NNW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	0	0.0	0	0.0	0	0.0	3	0.1	3	0.1	1	0.0	0	0.0	7	0.3

MEAN WIND SPEED: 14.0
 MISSING: 0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 07/09-09/09

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED
 BY ATMOSPHERIC STABILITY CLASS
 WIND: 300 FT
 DELTA T: (300-33FT)

ALL STABILITY CLASSES

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	3	0.1	19	0.9	60	2.8	47	2.2	4	0.2	0	0.0	133	6.2
NNE	0	0.0	3	0.1	16	0.7	42	2.0	65	3.0	14	0.7	12	0.6	152	7.1
NE	0	0.0	8	0.4	28	1.3	88	4.1	59	2.7	6	0.3	0	0.0	189	8.8
ENE	0	0.0	6	0.3	34	1.6	45	2.1	19	0.9	1	0.0	1	0.0	106	4.9
E	0	0.0	4	0.2	20	0.9	29	1.4	12	0.6	0	0.0	0	0.0	65	3.0
ESE	0	0.0	4	0.2	19	0.9	18	0.8	33	1.5	1	0.0	0	0.0	75	3.5
SE	0	0.0	4	0.2	12	0.6	35	1.6	52	2.4	34	1.6	0	0.0	137	6.4
SSE	0	0.0	7	0.3	29	1.4	47	2.2	53	2.5	8	0.4	0	0.0	144	6.7
S	0	0.0	4	0.2	30	1.4	30	1.4	39	1.8	19	0.9	1	0.0	123	5.7
SSW	0	0.0	6	0.3	32	1.5	49	2.3	53	2.5	10	0.5	4	0.2	154	7.2
SW	0	0.0	2	0.1	29	1.4	45	2.1	45	2.1	10	0.5	0	0.0	131	6.1
WSW	0	0.0	2	0.1	34	1.6	58	2.7	44	2.0	2	0.1	1	0.0	141	6.6
W	0	0.0	4	0.2	31	1.4	73	3.4	52	2.4	14	0.7	0	0.0	174	8.1
WNW	0	0.0	3	0.1	20	0.9	54	2.5	42	2.0	6	0.3	0	0.0	125	5.8
NW	0	0.0	1	0.0	33	1.5	50	2.3	40	1.9	2	0.1	0	0.0	126	5.9
NNW	0	0.0	3	0.1	25	1.2	96	4.5	47	2.2	1	0.0	0	0.0	172	8.0
	0	0.0	64	3.0	411	19.1	819	38.1	702	32.7	132	6.1	19	0.9	2147	100.0

MISSING HOURS: 61

MEAN WIND SPEED: 11.5

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 07/09-09/09

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED
 BY ATMOSPHERIC STABILITY CLASS
 WIND: 300 FT
 DELTA T: (300-33FT)

DIRECTION VS SPEED ONLY

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	3	0.1	19	0.9	60	2.8	47	2.2	4	0.2	0	0.0	133	6.2
NNE	0	0.0	3	0.1	16	0.7	42	2.0	65	3.0	14	0.7	12	0.6	152	7.1
NE	0	0.0	8	0.4	28	1.3	88	4.1	59	2.7	6	0.3	0	0.0	189	8.8
ENE	0	0.0	6	0.3	34	1.6	45	2.1	19	0.9	1	0.0	1	0.0	106	4.9
E	0	0.0	4	0.2	20	0.9	29	1.3	12	0.6	0	0.0	0	0.0	65	3.0
ESE	0	0.0	4	0.2	19	0.9	18	0.8	33	1.5	1	0.0	0	0.0	75	3.5
SE	0	0.0	4	0.2	12	0.6	35	1.6	52	2.4	34	1.6	0	0.0	137	6.4
SSE	0	0.0	7	0.3	29	1.3	47	2.2	53	2.5	8	0.4	0	0.0	144	6.7
S	0	0.0	4	0.2	30	1.4	30	1.4	39	1.8	19	0.9	1	0.0	123	5.7
SSW	0	0.0	6	0.3	32	1.5	49	2.3	53	2.5	10	0.5	4	0.2	154	7.2
SW	0	0.0	2	0.1	29	1.3	45	2.1	45	2.1	10	0.5	0	0.0	131	6.1
WSW	0	0.0	2	0.1	34	1.6	58	2.7	44	2.0	2	0.1	1	0.0	141	6.6
W	0	0.0	4	0.2	31	1.4	73	3.4	52	2.4	14	0.7	0	0.0	174	8.1
WNW	0	0.0	3	0.1	20	0.9	54	2.5	42	2.0	6	0.3	0	0.0	125	5.8
NW	0	0.0	1	0.0	34	1.6	50	2.3	40	1.9	2	0.1	0	0.0	127	5.9
NNW	0	0.0	3	0.1	26	1.2	97	4.5	47	2.2	1	0.0	0	0.0	174	8.1
	0	0.0	64	3.0	413	19.2	820	38.1	702	32.7	132	6.1	19	0.9	2150	100.0

MISSING HOURS: 58

MEAN WIND SPEED: 11.5

Lapse Rate
Wind Distributions
300 – 33 foot

10/2009 – 12/2009

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 10/09-12/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS

WIND: 33 FT
DELTA T: (300-33FT)

LAPSE RATE: LE -1.90 DEG C/100M
CLASS A

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	1	0.0
NNE	0	0.0	0	0.0	0	0.0	1	0.0	5	0.2	0	0.0	0	0.0	6	0.3
NE	0	0.0	0	0.0	0	0.0	5	0.2	3	0.1	0	0.0	0	0.0	8	0.4
ENE	0	0.0	0	0.0	1	0.0	1	0.0	0	0.0	0	0.0	0	0.0	2	0.1
E	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
ESE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SE	0	0.0	0	0.0	0	0.0	0	0.0	2	0.1	5	0.2	0	0.0	7	0.3
SSE	0	0.0	0	0.0	0	0.0	2	0.1	6	0.3	2	0.1	0	0.0	10	0.5
S	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	1	0.0
SSW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SW	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	1	0.0
WSW	0	0.0	0	0.0	2	0.1	1	0.0	0	0.0	0	0.0	0	0.0	3	0.1
W	0	0.0	0	0.0	1	0.0	10	0.5	1	0.0	1	0.0	2	0.1	15	0.7
WNW	0	0.0	0	0.0	3	0.1	11	0.5	3	0.1	3	0.1	0	0.0	20	0.9
NW	0	0.0	0	0.0	1	0.0	9	0.4	1	0.0	0	0.0	0	0.0	11	0.5
NNW	0	0.0	0	0.0	1	0.0	8	0.4	3	0.1	0	0.0	0	0.0	12	0.5
	0	0.0	0	0.0	10	0.5	51	2.3	24	1.1	11	0.5	2	0.1	98	4.4

MEAN WIND SPEED: 12.3
MISSING: 0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 10/09-12/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
 BY ATMOSPHERIC STABILITY CLASS
 WIND: 33 FT
 DELTA T: (300-33FT)

LAPSE RATE: -1.89 TO -1.70 DEG C/100M
 CLASS B

DIRECTION	WIND SPEED GROUPS (MPH)														SUM PERCENT	
	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6			
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT
N	0	0.0	0	0.0	2	0.1	0	0.0	0	0.0	0	0.0	0	0.0	2	0.1
NNE	0	0.0	0	0.0	0	0.0	2	0.1	2	0.1	0	0.0	0	0.0	4	0.2
NE	0	0.0	0	0.0	0	0.0	3	0.1	0	0.0	0	0.0	0	0.0	3	0.1
ENE	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	1	0.0
E	0	0.0	0	0.0	3	0.1	1	0.0	0	0.0	0	0.0	0	0.0	4	0.2
ESE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SE	0	0.0	0	0.0	1	0.0	1	0.0	0	0.0	1	0.0	0	0.0	3	0.1
SSE	0	0.0	0	0.0	1	0.0	0	0.0	1	0.0	1	0.0	0	0.0	3	0.1
S	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	1	0.0
SSW	0	0.0	0	0.0	1	0.0	1	0.0	0	0.0	0	0.0	0	0.0	2	0.1
SW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
WSW	0	0.0	0	0.0	1	0.0	2	0.1	0	0.0	0	0.0	0	0.0	3	0.1
W	0	0.0	0	0.0	2	0.1	8	0.4	3	0.1	2	0.1	0	0.0	15	0.7
WNW	0	0.0	0	0.0	1	0.0	4	0.2	4	0.2	0	0.0	0	0.0	9	0.4
NW	0	0.0	0	0.0	2	0.1	7	0.3	6	0.3	4	0.2	0	0.0	19	0.9
NNW	0	0.0	0	0.0	0	0.0	2	0.1	2	0.1	0	0.0	0	0.0	4	0.2
	0	0.0	0	0.0	14	0.6	33	1.5	18	0.8	8	0.4	0	0.0	73	3.3

MEAN WIND SPEED: 11.6
 MISSING: 0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 10/09-12/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS

WIND: 33 FT
DELTA T: (300-33FT)

LAPSE RATE: -1.69 TO -1.50 DEG C/100M
CLASS C

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	0	0.0	2	0.1	0	0.0	0	0.0	0	0.0	0	0.0	2	0.1
NNE	0	0.0	0	0.0	2	0.1	8	0.4	9	0.4	1	0.0	0	0.0	20	0.9
NE	0	0.0	0	0.0	1	0.0	3	0.1	0	0.0	0	0.0	0	0.0	4	0.2
ENE	0	0.0	0	0.0	1	0.0	1	0.0	0	0.0	0	0.0	0	0.0	2	0.1
E	0	0.0	0	0.0	1	0.0	2	0.1	0	0.0	0	0.0	0	0.0	3	0.1
ESE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SE	0	0.0	0	0.0	2	0.1	3	0.1	0	0.0	1	0.0	0	0.0	6	0.3
SSE	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
S	0	0.0	0	0.0	1	0.0	3	0.1	0	0.0	0	0.0	0	0.0	4	0.2
SSW	0	0.0	0	0.0	2	0.1	1	0.0	0	0.0	0	0.0	0	0.0	3	0.1
SW	0	0.0	0	0.0	4	0.2	0	0.0	0	0.0	0	0.0	0	0.0	4	0.2
WSW	0	0.0	0	0.0	2	0.1	2	0.1	0	0.0	0	0.0	0	0.0	4	0.2
W	0	0.0	0	0.0	2	0.1	7	0.3	8	0.4	1	0.0	0	0.0	18	0.8
WNW	0	0.0	0	0.0	2	0.1	4	0.2	1	0.0	0	0.0	0	0.0	7	0.3
NW	0	0.0	0	0.0	2	0.1	15	0.7	3	0.1	1	0.0	0	0.0	21	1.0
NNW	0	0.0	0	0.0	7	0.3	2	0.1	2	0.1	0	0.0	0	0.0	11	0.5
	0	0.0	0	0.0	32	1.5	51	2.3	23	1.0	4	0.2	0	0.0	110	5.0

MEAN WIND SPEED: 10.4
MISSING: 0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 10/09-12/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
 BY ATMOSPHERIC STABILITY CLASS
 WIND: 33 FT
 DELTA T: (300-33FT)

LAPSE RATE: -1.49 TO -0.50 DEG C/100M
 CLASS D

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT
N	0	0.0	4	0.2	14	0.6	7	0.3	31	1.4	0	0.0	0	0.0	56	2.5
NNE	0	0.0	6	0.3	26	1.2	45	2.0	45	2.0	19	0.9	0	0.0	141	6.4
NE	0	0.0	5	0.2	32	1.5	53	2.4	4	0.2	0	0.0	0	0.0	94	4.3
ENE	0	0.0	8	0.4	14	0.6	8	0.4	0	0.0	0	0.0	0	0.0	30	1.4
E	0	0.0	3	0.1	10	0.5	8	0.4	4	0.2	0	0.0	0	0.0	25	1.1
ESE	0	0.0	0	0.0	9	0.4	5	0.2	0	0.0	0	0.0	0	0.0	14	0.6
SE	0	0.0	3	0.1	12	0.5	6	0.3	6	0.3	0	0.0	0	0.0	27	1.2
SSE	0	0.0	2	0.1	13	0.6	22	1.0	6	0.3	0	0.0	0	0.0	43	2.0
S	0	0.0	2	0.1	9	0.4	19	0.9	0	0.0	0	0.0	0	0.0	30	1.4
SSW	0	0.0	0	0.0	6	0.3	10	0.5	1	0.0	0	0.0	0	0.0	17	0.8
SW	0	0.0	1	0.0	16	0.7	6	0.3	4	0.2	0	0.0	0	0.0	27	1.2
WSW	0	0.0	1	0.0	15	0.7	12	0.5	2	0.1	0	0.0	0	0.0	30	1.4
W	0	0.0	2	0.1	12	0.5	28	1.3	42	1.9	5	0.2	0	0.0	89	4.0
WNW	0	0.0	1	0.0	15	0.7	32	1.5	23	1.0	1	0.0	0	0.0	72	3.3
NW	0	0.0	3	0.1	14	0.6	43	2.0	37	1.7	5	0.2	1	0.0	103	4.7
NNW	0	0.0	8	0.4	11	0.5	9	0.4	9	0.4	0	0.0	0	0.0	37	1.7
	0	0.0	49	2.2	228	10.3	313	14.2	214	9.7	30	1.4	1	0.0	835	37.9

MEAN WIND SPEED: 10.1
 MISSING: 0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 10/09-12/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
 BY ATMOSPHERIC STABILITY CLASS
 WIND: 33 FT
 DELTA T: (300-33FT)

LAPSE RATE: -0.49 TO 1.50 DEG C/100M
 CLASS E

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	10	0.5	38	1.7	10	0.5	0	0.0	0	0.0	0	0.0	58	2.6
NNE	0	0.0	6	0.3	36	1.6	15	0.7	1	0.0	0	0.0	0	0.0	58	2.6
NE	0	0.0	7	0.3	30	1.4	17	0.8	1	0.0	0	0.0	0	0.0	55	2.5
ENE	0	0.0	14	0.6	25	1.1	13	0.6	0	0.0	0	0.0	0	0.0	52	2.4
E	0	0.0	8	0.4	8	0.4	1	0.0	5	0.2	0	0.0	0	0.0	22	1.0
ESE	0	0.0	4	0.2	4	0.2	5	0.2	1	0.0	1	0.0	0	0.0	15	0.7
SE	0	0.0	0	0.0	14	0.6	18	0.8	6	0.3	4	0.2	0	0.0	42	1.9
SSE	0	0.0	0	0.0	13	0.6	15	0.7	1	0.0	0	0.0	0	0.0	29	1.3
S	0	0.0	8	0.4	16	0.7	21	1.0	8	0.4	1	0.0	0	0.0	54	2.5
SSW	0	0.0	5	0.2	13	0.6	10	0.5	4	0.2	1	0.0	0	0.0	33	1.5
SW	0	0.0	2	0.1	19	0.9	5	0.2	5	0.2	4	0.2	0	0.0	35	1.6
WSW	0	0.0	5	0.2	16	0.7	10	0.5	1	0.0	0	0.0	0	0.0	32	1.5
W	0	0.0	8	0.4	21	1.0	32	1.5	1	0.0	0	0.0	0	0.0	62	2.8
WNN	0	0.0	2	0.1	40	1.8	44	2.0	1	0.0	0	0.0	0	0.0	87	3.9
NW	0	0.0	2	0.1	56	2.5	58	2.6	2	0.1	0	0.0	0	0.0	118	5.4
NNW	0	0.0	7	0.3	28	1.3	14	0.6	1	0.0	0	0.0	0	0.0	50	2.3
	0	0.0	88	4.0	377	17.1	288	13.1	38	1.7	11	0.5	0	0.0	802	36.4

MEAN WIND SPEED: 7.4
 MISSING: 0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 10/09-12/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
 BY ATMOSPHERIC STABILITY CLASS
 WIND: 33 FT
 DELTA T: (300-33FT)

LAPSE RATE: 1.51 TO 4.00 DEG C/100M
 CLASS F

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	6	0.3	31	1.4	2	0.1	0	0.0	0	0.0	0	0.0	39	1.8
NNE	0	0.0	6	0.3	24	1.1	1	0.0	0	0.0	0	0.0	0	0.0	31	1.4
NE	0	0.0	6	0.3	8	0.4	0	0.0	0	0.0	0	0.0	0	0.0	14	0.6
ENE	0	0.0	10	0.5	6	0.3	0	0.0	0	0.0	0	0.0	0	0.0	16	0.7
E	0	0.0	7	0.3	5	0.2	0	0.0	0	0.0	0	0.0	0	0.0	12	0.5
ESE	0	0.0	4	0.2	6	0.3	0	0.0	0	0.0	0	0.0	0	0.0	10	0.5
SE	0	0.0	3	0.1	10	0.5	5	0.2	5	0.2	1	0.0	0	0.0	24	1.1
SSE	0	0.0	4	0.2	6	0.3	1	0.0	2	0.1	0	0.0	0	0.0	13	0.6
S	0	0.0	1	0.0	6	0.3	1	0.0	1	0.0	0	0.0	0	0.0	9	0.4
SSW	0	0.0	0	0.0	4	0.2	1	0.0	1	0.0	0	0.0	0	0.0	6	0.3
SW	0	0.0	3	0.1	9	0.4	0	0.0	0	0.0	0	0.0	0	0.0	12	0.5
WSW	0	0.0	2	0.1	6	0.3	0	0.0	0	0.0	0	0.0	0	0.0	8	0.4
W	0	0.0	1	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	0.1
WNW	0	0.0	3	0.1	8	0.4	0	0.0	0	0.0	0	0.0	0	0.0	11	0.5
NW	0	0.0	1	0.0	20	0.9	0	0.0	0	0.0	0	0.0	0	0.0	21	1.0
NNW	0	0.0	6	0.3	10	0.5	1	0.0	0	0.0	0	0.0	0	0.0	17	0.8
	0	0.0	63	2.9	160	7.3	12	0.5	9	0.4	1	0.0	0	0.0	245	11.1

MEAN WIND SPEED: 5.5
 MISSING: 0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 10/09-12/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS

WIND: 33 FT
DELTA T: (300-33FT)

LAPSE RATE:

GT 4.00 DEG C/100M
CLASS G

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	0	0.0	3	0.1	0	0.0	0	0.0	0	0.0	0	0.0	3	0.1
NNE	0	0.0	0	0.0	2	0.1	0	0.0	0	0.0	0	0.0	0	0.0	2	0.1
NE	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
ENE	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
E	0	0.0	4	0.2	2	0.1	0	0.0	0	0.0	0	0.0	0	0.0	6	0.3
ESE	0	0.0	4	0.2	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	4	0.2
SE	0	0.0	1	0.0	3	0.1	3	0.1	3	0.1	0	0.0	0	0.0	10	0.5
SSE	0	0.0	2	0.1	5	0.2	0	0.0	0	0.0	0	0.0	0	0.0	7	0.3
S	0	0.0	1	0.0	2	0.1	0	0.0	0	0.0	0	0.0	0	0.0	3	0.1
SSW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
WSW	0	0.0	1	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	0.1
W	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
WNW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
NW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
NNW	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
	0	0.0	14	0.6	20	0.9	3	0.1	3	0.1	0	0.0	0	0.0	40	1.8

MEAN WIND SPEED: 5.2
MISSING: 0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 10/09-12/09

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS
WIND: 33 FT
DELTA T: (300-33FT)

ALL STABILITY CLASSES

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	20	0.9	90	4.1	20	0.9	31	1.4	0	0.0	0	0.0	161	7.3
NNE	0	0.0	18	0.8	90	4.1	72	3.3	62	2.8	20	0.9	0	0.0	262	11.9
NE	0	0.0	19	0.9	71	3.2	81	3.7	8	0.4	0	0.0	0	0.0	179	8.1
ENE	0	0.0	32	1.5	48	2.2	24	1.1	0	0.0	0	0.0	0	0.0	104	4.7
E	0	0.0	22	1.0	30	1.4	12	0.5	9	0.4	0	0.0	0	0.0	73	3.3
ESE	0	0.0	12	0.5	19	0.9	10	0.5	1	0.0	1	0.0	0	0.0	43	2.0
SE	0	0.0	7	0.3	42	1.9	36	1.6	22	1.0	12	0.5	0	0.0	119	5.4
SSE	0	0.0	8	0.4	39	1.8	40	1.8	16	0.7	3	0.1	0	0.0	106	4.8
S	0	0.0	12	0.5	34	1.5	46	2.1	9	0.4	1	0.0	0	0.0	102	4.6
SSW	0	0.0	5	0.2	26	1.2	23	1.0	6	0.3	1	0.0	0	0.0	61	2.8
SW	0	0.0	6	0.3	48	2.2	12	0.5	9	0.4	4	0.2	0	0.0	79	3.6
WSW	0	0.0	9	0.4	43	2.0	27	1.2	3	0.1	0	0.0	0	0.0	82	3.7
W	0	0.0	11	0.5	39	1.8	85	3.9	55	2.5	9	0.4	2	0.1	201	9.1
WNW	0	0.0	6	0.3	69	3.1	95	4.3	32	1.5	4	0.2	0	0.0	206	9.4
NW	0	0.0	6	0.3	95	4.3	132	6.0	49	2.2	10	0.5	1	0.0	293	13.3
NNW	0	0.0	21	1.0	58	2.6	36	1.6	17	0.8	0	0.0	0	0.0	132	6.0
	0	0.0	214	9.7	841	38.2	751	34.1	329	14.9	65	3.0	3	0.1	2203	100.0

MISSING HOURS: 5

MEAN WIND SPEED: 8.7

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 10/09-12/09

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED
 BY ATMOSPHERIC STABILITY CLASS
 WIND: 33 FT
 DELTA T: (300-33FT)

DIRECTION VS SPEED ONLY

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	20	0.9	90	4.1	20	0.9	31	1.4	0	0.0	0	0.0	161	7.3
NNE	0	0.0	18	0.8	91	4.1	73	3.3	62	2.8	20	0.9	0	0.0	264	12.0
NE	0	0.0	19	0.9	74	3.4	81	3.7	8	0.4	0	0.0	0	0.0	182	8.2
ENE	0	0.0	32	1.4	48	2.2	24	1.1	0	0.0	0	0.0	0	0.0	104	4.7
E	0	0.0	22	1.0	30	1.4	12	0.5	9	0.4	0	0.0	0	0.0	73	3.3
ESE	0	0.0	12	0.5	19	0.9	10	0.5	1	0.0	1	0.0	0	0.0	43	1.9
SE	0	0.0	7	0.3	42	1.9	36	1.6	22	1.0	12	0.5	0	0.0	119	5.4
SSE	0	0.0	8	0.4	39	1.8	40	1.8	16	0.7	3	0.1	0	0.0	106	4.8
S	0	0.0	12	0.5	34	1.5	46	2.1	9	0.4	1	0.0	0	0.0	102	4.6
SSW	0	0.0	5	0.2	26	1.2	23	1.0	6	0.3	1	0.0	0	0.0	61	2.8
SW	0	0.0	6	0.3	48	2.2	12	0.5	9	0.4	4	0.2	0	0.0	79	3.6
WSW	0	0.0	9	0.4	43	1.9	27	1.2	3	0.1	0	0.0	0	0.0	82	3.7
W	0	0.0	11	0.5	39	1.8	85	3.8	55	2.5	9	0.4	2	0.1	201	9.1
WNW	0	0.0	6	0.3	69	3.1	95	4.3	32	1.4	4	0.2	0	0.0	206	9.3
NW	0	0.0	6	0.3	95	4.3	132	6.0	49	2.2	10	0.5	1	0.0	293	13.3
NNW	0	0.0	21	1.0	58	2.6	36	1.6	17	0.8	0	0.0	0	0.0	132	6.0
	0	0.0	214	9.7	845	38.3	752	34.1	329	14.9	65	2.9	3	0.1	2208	100.0

MISSING HOURS: 0

MEAN WIND SPEED: 8.7

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 10/09-12/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
 BY ATMOSPHERIC STABILITY CLASS
 WIND: 150 FT
 DELTA T: (300-33FT)

LAPSE RATE: LE -1.90 DEG C/100M
 CLASS A

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	0	0.0	0	0.0	2	0.1	2	0.1	0	0.0	0	0.0	4	0.2
NNE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
NE	0	0.0	0	0.0	0	0.0	1	0.0	1	0.0	11	0.5	0	0.0	13	0.6
ENE	0	0.0	0	0.0	1	0.0	1	0.0	1	0.0	0	0.0	0	0.0	3	0.1
E	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	1	0.0
ESE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0	6	0.3	7	0.3
SSE	0	0.0	0	0.0	0	0.0	0	0.0	2	0.1	4	0.2	0	0.0	6	0.3
S	0	0.0	0	0.0	0	0.0	0	0.0	3	0.1	2	0.1	0	0.0	5	0.2
SSW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
WSW	0	0.0	0	0.0	0	0.0	2	0.1	0	0.0	0	0.0	0	0.0	2	0.1
W	0	0.0	0	0.0	1	0.0	4	0.2	2	0.1	0	0.0	2	0.1	9	0.4
WNW	0	0.0	0	0.0	0	0.0	13	0.6	5	0.2	3	0.1	4	0.2	25	1.1
NW	0	0.0	0	0.0	1	0.0	7	0.3	1	0.0	0	0.0	1	0.0	10	0.5
NNW	0	0.0	0	0.0	1	0.0	1	0.0	7	0.3	4	0.2	0	0.0	13	0.6
	0	0.0	0	0.0	4	0.2	32	1.5	24	1.1	25	1.1	13	0.6	98	4.4

MEAN WIND SPEED: 16.7
 MISSING: 0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 10/09-12/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS
WIND: 150 FT
DELTA T: (300-33FT)

LAPSE RATE: -1.89 TO -1.70 DEG C/100M
CLASS B

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	0	0.0	0	0.0	2	0.1	0	0.0	0	0.0	1	0.0	3	0.1
NNE	0	0.0	0	0.0	0	0.0	0	0.0	2	0.1	2	0.1	0	0.0	4	0.2
NE	0	0.0	0	0.0	0	0.0	0	0.0	3	0.1	0	0.0	0	0.0	3	0.1
ENE	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	1	0.0
E	0	0.0	0	0.0	0	0.0	3	0.1	1	0.0	0	0.0	0	0.0	4	0.2
ESE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SE	0	0.0	0	0.0	1	0.0	1	0.0	0	0.0	0	0.0	0	0.0	2	0.1
SSE	0	0.0	0	0.0	1	0.0	0	0.0	1	0.0	1	0.0	1	0.0	4	0.2
S	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	1	0.0
SSW	0	0.0	0	0.0	0	0.0	2	0.1	0	0.0	0	0.0	0	0.0	2	0.1
SW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
WSW	0	0.0	0	0.0	1	0.0	0	0.0	1	0.0	0	0.0	0	0.0	2	0.1
W	0	0.0	0	0.0	0	0.0	4	0.2	3	0.1	0	0.0	3	0.1	10	0.5
WNW	0	0.0	0	0.0	1	0.0	2	0.1	4	0.2	5	0.2	0	0.0	12	0.5
NW	0	0.0	0	0.0	1	0.0	5	0.2	7	0.3	3	0.1	3	0.1	19	0.9
NNW	0	0.0	0	0.0	0	0.0	2	0.1	1	0.0	2	0.1	1	0.0	6	0.3
	0	0.0	0	0.0	5	0.2	22	1.0	24	1.1	13	0.6	9	0.4	73	3.3

MEAN WIND SPEED: 15.8
MISSING: 0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 10/09-12/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS

WIND: 150 FT
DELTA T: (300-33FT)

LAPSE RATE: -1.69 TO -1.50 DEG C/100M
CLASS C

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	0	0.0	1	0.0	2	0.1	1	0.0	0	0.0	1	0.0	5	0.2
NNE	0	0.0	0	0.0	0	0.0	2	0.1	4	0.2	4	0.2	1	0.0	11	0.5
NE	0	0.0	0	0.0	0	0.0	5	0.2	3	0.1	2	0.1	3	0.1	13	0.6
ENE	0	0.0	0	0.0	2	0.1	0	0.0	1	0.0	0	0.0	0	0.0	3	0.1
E	0	0.0	0	0.0	1	0.0	0	0.0	2	0.1	0	0.0	0	0.0	3	0.1
ESE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SE	0	0.0	0	0.0	1	0.0	3	0.1	1	0.0	0	0.0	0	0.0	5	0.2
SSE	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	1	0.0	0	0.0	2	0.1
S	0	0.0	0	0.0	1	0.0	2	0.1	1	0.0	0	0.0	0	0.0	4	0.2
SSW	0	0.0	0	0.0	1	0.0	1	0.0	0	0.0	0	0.0	0	0.0	2	0.1
SW	0	0.0	0	0.0	2	0.1	3	0.1	0	0.0	0	0.0	0	0.0	5	0.2
WSW	0	0.0	0	0.0	0	0.0	4	0.2	0	0.0	0	0.0	0	0.0	4	0.2
W	0	0.0	0	0.0	1	0.0	3	0.1	2	0.1	5	0.2	2	0.1	13	0.6
WNW	0	0.0	0	0.0	0	0.0	2	0.1	5	0.2	3	0.1	0	0.0	10	0.5
NW	0	0.0	0	0.0	1	0.0	9	0.4	5	0.2	3	0.1	1	0.0	19	0.9
NNW	0	0.0	0	0.0	2	0.1	5	0.2	3	0.1	0	0.0	1	0.0	11	0.5
	0	0.0	0	0.0	13	0.6	42	1.9	28	1.3	18	0.8	9	0.4	110	5.0

MEAN WIND SPEED: 14.3

MISSING: 0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 10/09-12/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS
WIND: 150 FT
DELTA T: (300-33FT)

LAPSE RATE: -1.49 TO -0.50 DEG C/100M
CLASS D

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	8	0.4	10	0.5	10	0.5	0	0.0	13	0.6	18	0.8	59	2.7
NNE	0	0.0	0	0.0	11	0.5	12	0.5	25	1.1	21	1.0	26	1.2	95	4.3
NE	0	0.0	2	0.1	17	0.8	30	1.4	51	2.3	16	0.7	19	0.9	135	6.1
ENE	0	0.0	3	0.1	9	0.4	14	0.6	20	0.9	0	0.0	0	0.0	46	2.1
E	0	0.0	1	0.0	10	0.5	9	0.4	6	0.3	4	0.2	0	0.0	30	1.4
ESE	0	0.0	1	0.0	3	0.1	5	0.2	3	0.1	2	0.1	0	0.0	14	0.6
SE	0	0.0	0	0.0	5	0.2	6	0.3	7	0.3	2	0.1	3	0.1	23	1.0
SSE	0	0.0	2	0.1	5	0.2	17	0.8	14	0.6	3	0.1	0	0.0	41	1.9
S	0	0.0	1	0.0	8	0.4	17	0.8	9	0.4	0	0.0	0	0.0	35	1.6
SSW	0	0.0	0	0.0	0	0.0	8	0.4	4	0.2	1	0.0	0	0.0	13	0.6
SW	0	0.0	0	0.0	6	0.3	7	0.3	5	0.2	3	0.1	0	0.0	21	1.0
WSW	0	0.0	0	0.0	10	0.5	13	0.6	7	0.3	3	0.1	0	0.0	33	1.5
W	0	0.0	2	0.1	3	0.1	10	0.5	23	1.0	19	0.9	10	0.5	67	3.0
WNW	0	0.0	1	0.0	4	0.2	15	0.7	23	1.0	30	1.4	10	0.5	83	3.8
NW	0	0.0	2	0.1	6	0.3	13	0.6	45	2.0	29	1.3	10	0.5	105	4.8
NNW	0	0.0	1	0.0	3	0.1	13	0.6	9	0.4	8	0.4	1	0.0	35	1.6
	0	0.0	24	1.1	110	5.0	199	9.0	251	11.4	154	7.0	97	4.4	835	37.9

MEAN WIND SPEED: 15.0
MISSING: 0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 10/09-12/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
 BY ATMOSPHERIC STABILITY CLASS
 WIND: 150 FT
 DELTA T: (300-33FT)

LAPSE RATE: -0.49 TO 1.50 DEG C/100M
 CLASS E

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	1	0.0	9	0.4	11	0.5	9	0.4	2	0.1	0	0.0	32	1.5
NNE	0	0.0	0	0.0	7	0.3	32	1.5	18	0.8	0	0.0	0	0.0	57	2.6
NE	0	0.0	2	0.1	6	0.3	25	1.1	18	0.8	2	0.1	2	0.1	55	2.5
ENE	0	0.0	2	0.1	11	0.5	24	1.1	21	1.0	7	0.3	0	0.0	65	3.0
E	0	0.0	1	0.0	10	0.5	8	0.4	6	0.3	5	0.2	0	0.0	30	1.4
ESE	0	0.0	2	0.1	7	0.3	4	0.2	4	0.2	2	0.1	2	0.1	21	1.0
SE	0	0.0	1	0.0	3	0.1	10	0.5	12	0.5	9	0.4	7	0.3	42	1.9
SSE	0	0.0	0	0.0	6	0.3	5	0.2	11	0.5	0	0.0	0	0.0	22	1.0
S	0	0.0	1	0.0	8	0.4	21	1.0	14	0.6	0	0.0	2	0.1	46	2.1
SSW	0	0.0	0	0.0	5	0.2	11	0.5	10	0.5	5	0.2	5	0.2	36	1.6
SW	0	0.0	2	0.1	13	0.6	10	0.5	6	0.3	5	0.2	4	0.2	40	1.8
WSW	0	0.0	2	0.1	10	0.5	14	0.6	8	0.4	2	0.1	1	0.0	37	1.7
W	0	0.0	4	0.2	9	0.4	13	0.6	27	1.2	2	0.1	0	0.0	55	2.5
WNW	0	0.0	6	0.3	6	0.3	42	1.9	25	1.1	1	0.0	0	0.0	80	3.6
NW	0	0.0	1	0.0	11	0.5	44	2.0	60	2.7	4	0.2	0	0.0	120	5.4
NNW	0	0.0	0	0.0	4	0.2	28	1.3	30	1.4	2	0.1	0	0.0	64	2.9
	0	0.0	25	1.1	125	5.7	302	13.7	279	12.7	48	2.2	23	1.0	802	36.4

MEAN WIND SPEED: 12.3
 MISSING: 0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 10/09-12/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS
WIND: 150 FT
DELTA T: (300-33FT)

LAPSE RATE: 1.51 TO 4.00 DEG C/100M
CLASS F

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	0	0.0	0	0.0	5	0.2	3	0.1	0	0.0	0	0.0	8	0.4
NNE	0	0.0	4	0.2	3	0.1	12	0.5	20	0.9	0	0.0	0	0.0	39	1.8
NE	0	0.0	1	0.0	3	0.1	12	0.5	11	0.5	0	0.0	0	0.0	27	1.2
ENE	0	0.0	1	0.0	9	0.4	4	0.2	1	0.0	0	0.0	0	0.0	15	0.7
E	0	0.0	2	0.1	6	0.3	3	0.1	0	0.0	0	0.0	0	0.0	11	0.5
ESE	0	0.0	0	0.0	2	0.1	4	0.2	4	0.2	0	0.0	0	0.0	10	0.5
SE	0	0.0	1	0.0	0	0.0	0	0.0	3	0.1	3	0.1	2	0.1	9	0.4
SSE	0	0.0	1	0.0	5	0.2	6	0.3	2	0.1	1	0.0	1	0.0	16	0.7
S	0	0.0	0	0.0	8	0.4	3	0.1	3	0.1	1	0.0	2	0.1	17	0.8
SSW	0	0.0	1	0.0	3	0.1	6	0.3	3	0.1	1	0.0	0	0.0	14	0.6
SW	0	0.0	3	0.1	3	0.1	3	0.1	4	0.2	0	0.0	0	0.0	13	0.6
WSW	0	0.0	1	0.0	4	0.2	7	0.3	1	0.0	0	0.0	0	0.0	13	0.6
W	0	0.0	2	0.1	4	0.2	0	0.0	0	0.0	0	0.0	0	0.0	6	0.3
WNW	0	0.0	2	0.1	3	0.1	0	0.0	0	0.0	0	0.0	0	0.0	5	0.2
NW	0	0.0	1	0.0	2	0.1	10	0.5	9	0.4	0	0.0	0	0.0	22	1.0
NNW	0	0.0	1	0.0	2	0.1	14	0.6	3	0.1	0	0.0	0	0.0	20	0.9
	0	0.0	21	1.0	57	2.6	89	4.0	67	3.0	6	0.3	5	0.2	245	11.1

MEAN WIND SPEED: 10.1
MISSING: 0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 10/09-12/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS

WIND: 150 FT
DELTA T: (300-33FT)

LAPSE RATE:

GT 4.00 DEG C/100M
CLASS G

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT
N	0	0.0	0	0.0	1	0.0	1	0.0	0	0.0	0	0.0	0	0.0	2	0.1
NNE	0	0.0	0	0.0	0	0.0	2	0.1	0	0.0	0	0.0	0	0.0	2	0.1
NE	0	0.0	0	0.0	0	0.0	0	0.0	2	0.1	0	0.0	0	0.0	2	0.1
ENE	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
E	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
ESE	0	0.0	1	0.0	1	0.0	1	0.0	1	0.0	0	0.0	0	0.0	4	0.2
SE	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	2	0.1	3	0.1
SSE	0	0.0	1	0.0	3	0.1	0	0.0	1	0.0	2	0.1	0	0.0	7	0.3
S	0	0.0	0	0.0	3	0.1	3	0.1	1	0.0	1	0.0	0	0.0	8	0.4
SSW	0	0.0	1	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	0.1
SW	0	0.0	1	0.0	4	0.2	0	0.0	0	0.0	0	0.0	0	0.0	5	0.2
WSW	0	0.0	1	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	0.1
W	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
WNW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
NW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
NNW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	0	0.0	5	0.2	18	0.8	7	0.3	5	0.2	3	0.1	2	0.1	40	1.8

MEAN WIND SPEED: 9.4
MISSING: 0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 10/09-12/09

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED
 BY ATMOSPHERIC STABILITY CLASS
 WIND: 150 FT
 DELTA T: (300-33FT)

ALL STABILITY CLASSES

DIRECTION	WIND SPEED GROUPS (MPH)														SUM PERCENT	
	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6			
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	9	0.4	21	1.0	33	1.5	15	0.7	15	0.7	20	0.9	113	5.1
NNE	0	0.0	4	0.2	21	1.0	60	2.7	69	3.1	27	1.2	27	1.2	208	9.4
NE	0	0.0	5	0.2	26	1.2	73	3.3	89	4.0	31	1.4	24	1.1	248	11.3
ENE	0	0.0	6	0.3	33	1.5	44	2.0	44	2.0	7	0.3	0	0.0	134	6.1
E	0	0.0	4	0.2	28	1.3	24	1.1	15	0.7	9	0.4	0	0.0	80	3.6
ESE	0	0.0	4	0.2	13	0.6	14	0.6	12	0.5	4	0.2	2	0.1	49	2.2
SE	0	0.0	2	0.1	11	0.5	20	0.9	23	1.0	15	0.7	20	0.9	91	4.1
SSE	0	0.0	4	0.2	20	0.9	29	1.3	31	1.4	12	0.5	2	0.1	98	4.4
S	0	0.0	2	0.1	28	1.3	46	2.1	32	1.5	4	0.2	4	0.2	116	5.3
SSW	0	0.0	2	0.1	10	0.5	28	1.3	17	0.8	7	0.3	5	0.2	69	3.1
SW	0	0.0	6	0.3	28	1.3	23	1.0	15	0.7	8	0.4	4	0.2	84	3.8
WSW	0	0.0	4	0.2	26	1.2	40	1.8	17	0.8	5	0.2	1	0.0	93	4.2
W	0	0.0	8	0.4	19	0.9	34	1.5	57	2.6	26	1.2	17	0.8	161	7.3
WNW	0	0.0	9	0.4	14	0.6	74	3.4	62	2.8	42	1.9	14	0.6	215	9.8
NW	0	0.0	4	0.2	22	1.0	88	4.0	127	5.8	39	1.8	15	0.7	295	13.4
NNW	0	0.0	2	0.1	12	0.5	63	2.9	53	2.4	16	0.7	3	0.1	149	6.8
	0	0.0	75	3.4	332	15.1	693	31.5	678	30.8	267	12.1	158	7.2	2203	100.0

MISSING HOURS: 5

MEAN WIND SPEED: 13.4

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 10/09-12/09

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED
 BY ATMOSPHERIC STABILITY CLASS
 WIND: 150 FT
 DELTA T: (300-33FT)

DIRECTION VS SPEED ONLY

DIRECTION	WIND SPEED GROUPS (MPH)														SUM PERCENT	
	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6			SUM PERCENT
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	9	0.4	21	1.0	33	1.5	15	0.7	15	0.7	20	0.9	113	5.1
NNE	0	0.0	4	0.2	21	1.0	60	2.7	69	3.1	27	1.2	27	1.2	208	9.4
NE	0	0.0	5	0.2	26	1.2	76	3.4	90	4.1	31	1.4	24	1.1	252	11.4
ENE	0	0.0	6	0.3	33	1.5	45	2.0	44	2.0	7	0.3	0	0.0	135	6.1
E	0	0.0	4	0.2	28	1.3	24	1.1	15	0.7	9	0.4	0	0.0	80	3.6
ESE	0	0.0	4	0.2	13	0.6	14	0.6	12	0.5	4	0.2	2	0.1	49	2.2
SE	0	0.0	2	0.1	11	0.5	20	0.9	23	1.0	15	0.7	20	0.9	91	4.1
SSE	0	0.0	4	0.2	20	0.9	29	1.3	31	1.4	12	0.5	2	0.1	98	4.4
S	0	0.0	2	0.1	28	1.3	46	2.1	32	1.4	4	0.2	4	0.2	116	5.3
SSW	0	0.0	2	0.1	10	0.5	28	1.3	17	0.8	7	0.3	5	0.2	69	3.1
SW	0	0.0	6	0.3	28	1.3	23	1.0	15	0.7	8	0.4	4	0.2	84	3.8
WSW	0	0.0	4	0.2	26	1.2	40	1.8	17	0.8	5	0.2	1	0.0	93	4.2
W	0	0.0	8	0.4	19	0.9	34	1.5	57	2.6	26	1.2	17	0.8	161	7.3
WNN	0	0.0	9	0.4	14	0.6	74	3.4	62	2.8	42	1.9	14	0.6	215	9.7
NW	0	0.0	4	0.2	22	1.0	88	4.0	127	5.8	39	1.8	15	0.7	295	13.4
NNW	0	0.0	2	0.1	12	0.5	63	2.9	53	2.4	16	0.7	3	0.1	149	6.7
	0	0.0	75	3.4	332	15.0	697	31.6	679	30.8	267	12.1	158	7.2	2208	100.0

MISSING HOURS: 0
 MEAN WIND SPEED: 13.4

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 10/09-12/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS
WIND: 197 FT
DELTA T: (300-33FT)

LAPSE RATE: LE -1.90 DEG C/100M
CLASS A

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM PERCENT		SUM PERCENT		SUM PERCENT		SUM PERCENT		SUM PERCENT		SUM PERCENT		SUM PERCENT			
N	0	0.0	0	0.0	0	0.0	1	0.0	3	0.1	0	0.0	0	0.0	4	0.2
NNE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	1	0.0
NE	0	0.0	0	0.0	0	0.0	0	0.0	3	0.1	9	0.4	0	0.0	12	0.5
ENE	0	0.0	0	0.0	1	0.0	3	0.1	0	0.0	0	0.0	0	0.0	4	0.2
E	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
ESE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0	6	0.3	7	0.3
SSE	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0	4	0.2	0	0.0	5	0.2
S	0	0.0	0	0.0	0	0.0	0	0.0	4	0.2	2	0.1	0	0.0	6	0.3
SSW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
WSW	0	0.0	0	0.0	0	0.0	2	0.1	0	0.0	0	0.0	0	0.0	2	0.1
W	0	0.0	0	0.0	0	0.0	3	0.1	4	0.2	0	0.0	2	0.1	9	0.4
WNW	0	0.0	0	0.0	0	0.0	10	0.5	8	0.4	1	0.0	6	0.3	25	1.1
NW	0	0.0	0	0.0	1	0.0	7	0.3	1	0.0	1	0.0	1	0.0	11	0.5
NNW	0	0.0	0	0.0	1	0.0	0	0.0	6	0.3	4	0.2	1	0.0	12	0.5
	0	0.0	0	0.0	3	0.1	26	1.2	30	1.4	23	1.0	16	0.7	98	4.4

MEAN WIND SPEED: 17.6
MISSING: 0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 10/09-12/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
 BY ATMOSPHERIC STABILITY CLASS
 WIND: 197 FT
 DELTA T: (300-33FT)

LAPSE RATE: -1.89 TO -1.70 DEG C/100M
 CLASS B

DIRECTION	WIND SPEED GROUPS (MPH)														SUM PERCENT	
	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	SUM PERCENT
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	1	0.0	2	0.1
NNE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	3	0.1	0	0.0	3	0.1
NE	0	0.0	0	0.0	0	0.0	0	0.0	3	0.1	1	0.0	0	0.0	4	0.2
ENE	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	1	0.0
E	0	0.0	0	0.0	0	0.0	3	0.1	0	0.0	1	0.0	0	0.0	4	0.2
ESE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SE	0	0.0	0	0.0	1	0.0	1	0.0	0	0.0	0	0.0	0	0.0	2	0.1
SSE	0	0.0	0	0.0	1	0.0	0	0.0	1	0.0	0	0.0	2	0.1	4	0.2
S	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	1	0.0
SSW	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	1	0.0
SW	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	1	0.0
WSW	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	1	0.0
W	0	0.0	0	0.0	1	0.0	3	0.1	4	0.2	0	0.0	3	0.1	11	0.5
WNW	0	0.0	0	0.0	1	0.0	1	0.0	5	0.2	4	0.2	1	0.0	12	0.5
NW	0	0.0	0	0.0	1	0.0	4	0.2	3	0.1	6	0.3	2	0.1	16	0.7
NNW	0	0.0	0	0.0	0	0.0	3	0.1	1	0.0	3	0.1	3	0.1	10	0.5
	0	0.0	0	0.0	5	0.2	19	0.9	19	0.9	18	0.8	12	0.5	73	3.3

MEAN WIND SPEED: 16.9
 MISSING: 0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 10/09-12/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
 BY ATMOSPHERIC STABILITY CLASS
 WIND: 197 FT
 DELTA T: (300-33FT)

LAPSE RATE: -1.69 TO -1.50 DEG C/100M
 CLASS C

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	0	0.0	0	0.0	3	0.1	1	0.0	0	0.0	1	0.0	5	0.2
NNE	0	0.0	0	0.0	0	0.0	4	0.2	4	0.2	5	0.2	1	0.0	14	0.6
NE	0	0.0	0	0.0	1	0.0	3	0.1	2	0.1	2	0.1	3	0.1	11	0.5
ENE	0	0.0	0	0.0	1	0.0	1	0.0	1	0.0	0	0.0	0	0.0	3	0.1
E	0	0.0	0	0.0	0	0.0	0	0.0	2	0.1	0	0.0	0	0.0	2	0.1
ESE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SE	0	0.0	0	0.0	1	0.0	3	0.1	0	0.0	0	0.0	0	0.0	4	0.2
SSE	0	0.0	0	0.0	0	0.0	1	0.0	1	0.0	0	0.0	1	0.0	3	0.1
S	0	0.0	0	0.0	1	0.0	0	0.0	3	0.1	0	0.0	0	0.0	4	0.2
SSW	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	1	0.0
SW	0	0.0	0	0.0	3	0.1	2	0.1	0	0.0	0	0.0	0	0.0	5	0.2
WSW	0	0.0	0	0.0	0	0.0	5	0.2	0	0.0	0	0.0	0	0.0	5	0.2
W	0	0.0	0	0.0	1	0.0	1	0.0	2	0.1	5	0.2	1	0.0	10	0.5
WNW	0	0.0	0	0.0	1	0.0	1	0.0	7	0.3	1	0.0	4	0.2	14	0.6
NW	0	0.0	0	0.0	0	0.0	7	0.3	7	0.3	4	0.2	1	0.0	19	0.9
NNW	0	0.0	0	0.0	1	0.0	4	0.2	2	0.1	2	0.1	1	0.0	10	0.5
	0	0.0	0	0.0	10	0.5	36	1.6	32	1.5	19	0.9	13	0.6	110	5.0

MEAN WIND SPEED: 15.2
 MISSING: 0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 10/09-12/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
 BY ATMOSPHERIC STABILITY CLASS
 WIND: 197 FT
 DELTA T: (300-33FT)

LAPSE RATE: -1.49 TO -0.50 DEG C/100M
 CLASS D

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	1	0.0	11	0.5	11	0.5	2	0.1	12	0.5	20	0.9	57	2.6
NNE	0	0.0	0	0.0	9	0.4	14	0.6	27	1.2	27	1.2	25	1.1	102	4.6
NE	0	0.0	4	0.2	19	0.9	21	1.0	49	2.2	14	0.6	19	0.9	126	5.7
ENE	0	0.0	0	0.0	12	0.5	9	0.4	15	0.7	0	0.0	0	0.0	36	1.6
E	0	0.0	2	0.1	9	0.4	9	0.4	9	0.4	2	0.1	1	0.0	32	1.5
ESE	0	0.0	1	0.0	1	0.0	7	0.3	1	0.0	4	0.2	0	0.0	14	0.6
SE	0	0.0	0	0.0	5	0.2	8	0.4	5	0.2	3	0.1	3	0.1	24	1.1
SSE	0	0.0	2	0.1	3	0.1	15	0.7	10	0.5	3	0.1	0	0.0	33	1.5
S	0	0.0	1	0.0	3	0.1	13	0.6	23	1.0	0	0.0	0	0.0	40	1.8
SSW	0	0.0	1	0.0	4	0.2	6	0.3	8	0.4	1	0.0	0	0.0	20	0.9
SW	0	0.0	0	0.0	4	0.2	7	0.3	5	0.2	3	0.1	0	0.0	19	0.9
WSW	0	0.0	0	0.0	5	0.2	14	0.6	6	0.3	2	0.1	0	0.0	27	1.2
W	0	0.0	2	0.1	5	0.2	10	0.5	16	0.7	19	0.9	8	0.4	60	2.7
WNW	0	0.0	1	0.0	2	0.1	13	0.6	28	1.3	22	1.0	27	1.2	93	4.2
NW	0	0.0	0	0.0	5	0.2	13	0.6	32	1.5	33	1.5	18	0.8	101	4.6
NNW	0	0.0	5	0.2	8	0.4	6	0.3	12	0.5	16	0.7	4	0.2	51	2.3
	0	0.0	20	0.9	105	4.8	176	8.0	248	11.3	161	7.3	125	5.7	835	37.9

MEAN WIND SPEED: 15.8
 MISSING: 0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 10/09-12/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS

WIND: 197 FT
DELTA T: (300-33FT)

LAPSE RATE: -0.49 TO 1.50 DEG C/100M
CLASS E

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	0	0.0	4	0.2	9	0.4	20	0.9	6	0.3	0	0.0	39	1.8
NNE	0	0.0	0	0.0	4	0.2	25	1.1	24	1.1	2	0.1	0	0.0	55	2.5
NE	0	0.0	1	0.0	4	0.2	17	0.8	18	0.8	2	0.1	2	0.1	44	2.0
ENE	0	0.0	0	0.0	11	0.5	18	0.8	18	0.8	4	0.2	0	0.0	51	2.3
E	0	0.0	2	0.1	11	0.5	11	0.5	8	0.4	3	0.1	3	0.1	38	1.7
ESE	0	0.0	1	0.0	14	0.6	6	0.3	3	0.1	3	0.1	1	0.0	28	1.3
SE	0	0.0	1	0.0	1	0.0	8	0.4	4	0.2	7	0.3	8	0.4	29	1.3
SSE	0	0.0	1	0.0	3	0.1	4	0.2	16	0.7	5	0.2	1	0.0	30	1.4
S	0	0.0	0	0.0	5	0.2	11	0.5	19	0.9	1	0.0	2	0.1	38	1.7
SSW	0	0.0	1	0.0	4	0.2	12	0.5	16	0.7	6	0.3	7	0.3	46	2.1
SW	0	0.0	0	0.0	7	0.3	16	0.7	5	0.2	7	0.3	4	0.2	39	1.8
WSW	0	0.0	0	0.0	10	0.5	12	0.5	9	0.4	1	0.0	2	0.1	34	1.5
W	0	0.0	2	0.1	10	0.5	9	0.4	27	1.2	6	0.3	0	0.0	54	2.5
WNW	0	0.0	2	0.1	10	0.5	25	1.1	45	2.0	2	0.1	0	0.0	84	3.8
NW	0	0.0	2	0.1	7	0.3	28	1.3	62	2.8	19	0.9	0	0.0	118	5.4
NNW	0	0.0	1	0.0	7	0.3	22	1.0	28	1.3	17	0.8	0	0.0	75	3.4
	0	0.0	14	0.6	112	5.1	233	10.6	322	14.6	91	4.1	30	1.4	802	36.4

MEAN WIND SPEED: 13.5
MISSING: 0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 10/09-12/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
 BY ATMOSPHERIC STABILITY CLASS
 WIND: 197 FT
 DELTA T: (300-33FT)

LAPSE RATE: 1.51 TO 4.00 DEG C/100M
 CLASS F

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	0	0.0	1	0.0	5	0.2	9	0.4	1	0.0	0	0.0	16	0.7
NNE	0	0.0	1	0.0	0	0.0	9	0.4	25	1.1	0	0.0	0	0.0	35	1.6
NE	0	0.0	0	0.0	1	0.0	10	0.5	9	0.4	0	0.0	0	0.0	20	0.9
ENE	0	0.0	0	0.0	4	0.2	5	0.2	0	0.0	0	0.0	0	0.0	9	0.4
E	0	0.0	1	0.0	7	0.3	5	0.2	0	0.0	0	0.0	0	0.0	13	0.6
ESE	0	0.0	1	0.0	0	0.0	4	0.2	3	0.1	0	0.0	0	0.0	8	0.4
SE	0	0.0	0	0.0	1	0.0	3	0.1	4	0.2	1	0.0	0	0.0	9	0.4
SSE	0	0.0	0	0.0	0	0.0	5	0.2	2	0.1	3	0.1	3	0.1	13	0.6
S	0	0.0	0	0.0	5	0.2	4	0.2	2	0.1	1	0.0	2	0.1	14	0.6
SSW	0	0.0	1	0.0	2	0.1	6	0.3	7	0.3	0	0.0	1	0.0	17	0.8
SW	0	0.0	4	0.2	7	0.3	3	0.1	5	0.2	0	0.0	0	0.0	19	0.9
WSW	0	0.0	2	0.1	3	0.1	8	0.4	3	0.1	0	0.0	0	0.0	16	0.7
W	0	0.0	2	0.1	6	0.3	2	0.1	0	0.0	0	0.0	0	0.0	10	0.5
WNW	0	0.0	0	0.0	2	0.1	0	0.0	0	0.0	0	0.0	0	0.0	2	0.1
NW	0	0.0	1	0.0	5	0.2	1	0.0	15	0.7	0	0.0	0	0.0	22	1.0
NNW	0	0.0	3	0.1	1	0.0	6	0.3	12	0.5	0	0.0	0	0.0	22	1.0
	0	0.0	16	0.7	45	2.0	76	3.4	96	4.4	6	0.3	6	0.3	245	11.1

MEAN WIND SPEED: 11.1
 MISSING: 0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 10/09-12/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS

WIND: 197 FT
DELTA T: (300-33FT)

LAPSE RATE: GT 4.00 DEG C/100M
CLASS G

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT
N	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	1	0.0
NNE	0	0.0	0	0.0	1	0.0	0	0.0	2	0.1	0	0.0	0	0.0	3	0.1
NE	0	0.0	0	0.0	0	0.0	0	0.0	2	0.1	0	0.0	0	0.0	2	0.1
ENE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
E	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
ESE	0	0.0	0	0.0	0	0.0	2	0.1	0	0.0	0	0.0	0	0.0	2	0.1
SE	0	0.0	1	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	0.1
SSE	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	2	0.1	2	0.1	5	0.2
S	0	0.0	1	0.0	2	0.1	2	0.1	2	0.1	1	0.0	0	0.0	8	0.4
SSW	0	0.0	0	0.0	2	0.1	2	0.1	0	0.0	0	0.0	0	0.0	4	0.2
SW	0	0.0	0	0.0	3	0.1	3	0.1	0	0.0	0	0.0	0	0.0	6	0.3
WSW	0	0.0	0	0.0	1	0.0	1	0.0	0	0.0	0	0.0	0	0.0	2	0.1
W	0	0.0	1	0.0	1	0.0	1	0.0	0	0.0	0	0.0	0	0.0	3	0.1
WNW	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
NW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
NNW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	0	0.0	4	0.2	13	0.6	12	0.5	6	0.3	3	0.1	2	0.1	40	1.8

MEAN WIND SPEED: 10.1
MISSING: 0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 10/09-12/09

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED
 BY ATMOSPHERIC STABILITY CLASS
 WIND: 197 FT
 DELTA T: (300-33FT)

ALL STABILITY CLASSES

DIRECTION	WIND SPEED GROUPS (MPH)														SUM PERCENT	
	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6			
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	1	0.0	16	0.7	31	1.4	35	1.6	19	0.9	22	1.0	124	5.6
NNE	0	0.0	1	0.0	14	0.6	52	2.4	82	3.7	38	1.7	26	1.2	213	9.7
NE	0	0.0	5	0.2	25	1.1	51	2.3	86	3.9	28	1.3	24	1.1	219	9.9
ENE	0	0.0	0	0.0	29	1.3	37	1.7	34	1.5	4	0.2	0	0.0	104	4.7
E	0	0.0	5	0.2	28	1.3	28	1.3	19	0.9	6	0.3	4	0.2	90	4.1
ESE	0	0.0	3	0.1	15	0.7	19	0.9	7	0.3	7	0.3	1	0.0	52	2.4
SE	0	0.0	2	0.1	10	0.5	23	1.0	13	0.6	12	0.5	17	0.8	77	3.5
SSE	0	0.0	3	0.1	8	0.4	25	1.1	31	1.4	17	0.8	9	0.4	93	4.2
S	0	0.0	2	0.1	16	0.7	30	1.4	54	2.5	5	0.2	4	0.2	111	5.0
SSW	0	0.0	3	0.1	12	0.5	28	1.3	31	1.4	7	0.3	8	0.4	89	4.0
SW	0	0.0	4	0.2	24	1.1	32	1.5	15	0.7	10	0.5	4	0.2	89	4.0
WSW	0	0.0	2	0.1	19	0.9	42	1.9	19	0.9	3	0.1	2	0.1	87	3.9
W	0	0.0	7	0.3	24	1.1	29	1.3	53	2.4	30	1.4	14	0.6	157	7.1
WNW	0	0.0	4	0.2	16	0.7	50	2.3	93	4.2	30	1.4	38	1.7	231	10.5
NW	0	0.0	3	0.1	19	0.9	60	2.7	120	5.4	63	2.9	22	1.0	287	13.0
NNW	0	0.0	9	0.4	18	0.8	41	1.9	61	2.8	42	1.9	9	0.4	180	8.2
	0	0.0	54	2.5	293	13.3	578	26.2	753	34.2	321	14.6	204	9.3	2203	100.0

MISSING HOURS: 5

MEAN WIND SPEED: 14.4

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 10/09-12/09

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS
WIND: 197 FT
DELTA T: (300-33FT)

DIRECTION VS SPEED ONLY

DIRECTION	WIND SPEED GROUPS (MPH)														SUM PERCENT	
	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6			SUM PERCENT
	SUM PERCENT		SUM PERCENT		SUM PERCENT		SUM PERCENT		SUM PERCENT		SUM PERCENT		SUM PERCENT			
N	0	0.0	1	0.0	16	0.7	31	1.4	35	1.6	19	0.9	22	1.0	124	5.6
NNE	0	0.0	1	0.0	14	0.6	52	2.4	82	3.7	38	1.7	26	1.2	213	9.6
NE	0	0.0	5	0.2	25	1.1	56	2.5	86	3.9	28	1.3	24	1.1	224	10.1
ENE	0	0.0	0	0.0	29	1.3	37	1.7	34	1.5	4	0.2	0	0.0	104	4.7
E	0	0.0	5	0.2	28	1.3	28	1.3	19	0.9	6	0.3	4	0.2	90	4.1
ESE	0	0.0	3	0.1	15	0.7	19	0.9	7	0.3	7	0.3	1	0.0	52	2.4
SE	0	0.0	2	0.1	10	0.5	23	1.0	13	0.6	12	0.5	17	0.8	77	3.5
SSE	0	0.0	3	0.1	8	0.4	25	1.1	31	1.4	17	0.8	9	0.4	93	4.2
S	0	0.0	2	0.1	16	0.7	30	1.4	54	2.4	5	0.2	4	0.2	111	5.0
SSW	0	0.0	3	0.1	12	0.5	28	1.3	31	1.4	7	0.3	8	0.4	89	4.0
SW	0	0.0	4	0.2	24	1.1	32	1.4	15	0.7	10	0.5	4	0.2	89	4.0
WSW	0	0.0	2	0.1	19	0.9	42	1.9	19	0.9	3	0.1	2	0.1	87	3.9
W	0	0.0	7	0.3	24	1.1	29	1.3	53	2.4	30	1.4	14	0.6	157	7.1
WNW	0	0.0	4	0.2	16	0.7	50	2.3	93	4.2	30	1.4	38	1.7	231	10.5
NW	0	0.0	3	0.1	19	0.9	60	2.7	120	5.4	63	2.9	22	1.0	287	13.0
NNW	0	0.0	9	0.4	18	0.8	41	1.9	61	2.8	42	1.9	9	0.4	180	8.2
	0	0.0	54	2.4	293	13.3	583	26.4	753	34.1	321	14.5	204	9.2	2208	100.0
MISSING HOURS:	0															
MEAN WIND SPEED:	14.4															

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 10/09-12/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS

WIND: 300 FT
DELTA T: (300-33FT)

LAPSE RATE: LE -1.90 DEG C/100M
CLASS A

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT
N	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	1	0.0
NNE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	0.1	0	0.0	2	0.1
NE	0	0.0	0	0.0	0	0.0	1	0.0	3	0.1	8	0.4	0	0.0	12	0.6
ENE	0	0.0	0	0.0	2	0.1	1	0.0	0	0.0	0	0.0	0	0.0	3	0.1
E	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
ESE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	1	0.0
SSE	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	1	0.0
S	0	0.0	0	0.0	0	0.0	0	0.0	2	0.1	0	0.0	0	0.0	2	0.1
SSW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
WSW	0	0.0	0	0.0	0	0.0	2	0.1	0	0.0	0	0.0	0	0.0	2	0.1
W	0	0.0	0	0.0	0	0.0	3	0.1	1	0.0	0	0.0	0	0.0	4	0.2
WNW	0	0.0	0	0.0	0	0.0	5	0.2	2	0.1	0	0.0	1	0.0	8	0.4
NW	0	0.0	0	0.0	0	0.0	3	0.1	3	0.1	1	0.0	0	0.0	7	0.3
NNW	0	0.0	0	0.0	2	0.1	1	0.0	9	0.4	3	0.1	1	0.0	16	0.8
	0	0.0	0	0.0	4	0.2	17	0.8	21	1.0	15	0.7	2	0.1	59	2.9

MEAN WIND SPEED: 15.1
MISSING: 39

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 10/09-12/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED

BY ATMOSPHERIC STABILITY CLASS

WIND: 300 FT

DELTA T: (300-33FT)

LAPSE RATE: -1.89 TO -1.70 DEG C/100M

CLASS B

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM PERCENT		SUM PERCENT		SUM PERCENT		SUM PERCENT		SUM PERCENT		SUM PERCENT		SUM PERCENT			
N	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0	1	0.0
NNE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	4	0.2	0	0.0	4	0.2
NE	0	0.0	0	0.0	0	0.0	0	0.0	3	0.1	0	0.0	0	0.0	3	0.1
ENE	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	1	0.0
E	0	0.0	0	0.0	0	0.0	3	0.1	0	0.0	1	0.0	0	0.0	4	0.2
ESE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SE	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	1	0.0
SSE	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
S	0	0.0	0	0.0	0	0.0	0	0.0	2	0.1	0	0.0	0	0.0	2	0.1
SSW	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	1	0.0
SW	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	1	0.0
WSW	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	1	0.0
W	0	0.0	0	0.0	1	0.0	3	0.1	4	0.2	0	0.0	2	0.1	10	0.5
WNW	0	0.0	0	0.0	0	0.0	1	0.0	3	0.1	3	0.1	2	0.1	9	0.4
NW	0	0.0	0	0.0	1	0.0	2	0.1	2	0.1	6	0.3	2	0.1	13	0.6
NNW	0	0.0	0	0.0	0	0.0	4	0.2	1	0.0	3	0.1	3	0.1	11	0.5
	0	0.0	0	0.0	3	0.1	17	0.8	16	0.8	17	0.8	10	0.5	63	3.1

MEAN WIND SPEED: 17.5

MISSING: 10

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 10/09-12/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
 BY ATMOSPHERIC STABILITY CLASS
 WIND: 300 FT
 DELTA T: (300-33FT)

LAPSE RATE: -1.69 TO -1.50 DEG C/100M
 CLASS C

DIRECTION	WIND SPEED GROUPS (MPH)														SUM PERCENT	
	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	SUM PERCENT
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	0	0.0	0	0.0	3	0.1	1	0.0	0	0.0	1	0.0	5	0.2
NNE	0	0.0	0	0.0	0	0.0	4	0.2	3	0.1	5	0.2	4	0.2	16	0.8
NE	0	0.0	0	0.0	0	0.0	3	0.1	1	0.0	3	0.1	1	0.0	8	0.4
ENE	0	0.0	0	0.0	2	0.1	0	0.0	1	0.0	0	0.0	0	0.0	3	0.1
E	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	2	0.1	0	0.0	3	0.1
ESE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SE	0	0.0	0	0.0	0	0.0	2	0.1	0	0.0	0	0.0	0	0.0	2	0.1
SSE	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	1	0.0
S	0	0.0	0	0.0	0	0.0	0	0.0	2	0.1	1	0.0	0	0.0	3	0.1
SSW	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	1	0.0
SW	0	0.0	0	0.0	2	0.1	2	0.1	0	0.0	0	0.0	0	0.0	4	0.2
WSW	0	0.0	0	0.0	0	0.0	5	0.2	0	0.0	0	0.0	0	0.0	5	0.2
W	0	0.0	0	0.0	0	0.0	3	0.1	1	0.0	4	0.2	0	0.0	8	0.4
WNW	0	0.0	0	0.0	0	0.0	0	0.0	5	0.2	0	0.0	6	0.3	11	0.5
NW	0	0.0	0	0.0	0	0.0	6	0.3	7	0.3	3	0.1	1	0.0	17	0.8
NNW	0	0.0	0	0.0	1	0.0	4	0.2	2	0.1	2	0.1	1	0.0	10	0.5
	0	0.0	0	0.0	5	0.2	34	1.7	24	1.2	20	1.0	14	0.7	97	4.8

MEAN WIND SPEED: 16.2
 MISSING: 13

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 10/09-12/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
 BY ATMOSPHERIC STABILITY CLASS
 WIND: 300 FT
 DELTA T: (300-33FT)

LAPSE RATE: -1.49 TO -0.50 DEG C/100M
 CLASS D

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT
N	0	0.0	3	0.1	9	0.4	9	0.4	3	0.1	11	0.5	21	1.0	56	2.8
NNE	0	0.0	0	0.0	9	0.4	8	0.4	19	0.9	23	1.1	45	2.2	104	5.1
NE	0	0.0	3	0.1	15	0.7	24	1.2	40	2.0	29	1.4	10	0.5	121	6.0
ENE	0	0.0	1	0.0	13	0.6	13	0.6	15	0.7	0	0.0	0	0.0	42	2.1
E	0	0.0	1	0.0	6	0.3	9	0.4	5	0.2	4	0.2	3	0.1	28	1.4
ESE	0	0.0	1	0.0	1	0.0	7	0.3	1	0.0	2	0.1	3	0.1	15	0.7
SE	0	0.0	0	0.0	3	0.1	7	0.3	4	0.2	2	0.1	2	0.1	18	0.9
SSE	0	0.0	1	0.0	1	0.0	10	0.5	11	0.5	0	0.0	0	0.0	23	1.1
S	0	0.0	1	0.0	6	0.3	11	0.5	21	1.0	4	0.2	0	0.0	43	2.1
SSW	0	0.0	0	0.0	1	0.0	7	0.3	6	0.3	1	0.0	0	0.0	15	0.7
SW	0	0.0	0	0.0	1	0.0	9	0.4	5	0.2	1	0.0	0	0.0	16	0.8
WSW	0	0.0	0	0.0	5	0.2	13	0.6	5	0.2	3	0.1	0	0.0	26	1.3
W	0	0.0	0	0.0	8	0.4	6	0.3	16	0.8	16	0.8	8	0.4	54	2.7
WNW	0	0.0	2	0.1	3	0.1	7	0.3	27	1.3	19	0.9	34	1.7	92	4.6
NW	0	0.0	1	0.0	4	0.2	11	0.5	29	1.4	36	1.8	26	1.3	107	5.3
NNW	0	0.0	3	0.1	7	0.3	8	0.4	9	0.4	12	0.6	4	0.2	43	2.1
	0	0.0	17	0.8	92	4.6	159	7.9	216	10.7	163	8.1	156	7.7	803	39.7

MEAN WIND SPEED: 16.8
 MISSING: 32

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 10/09-12/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS

WIND: 300 FT
DELTA T: (300-33FT)

LAPSE RATE: -0.49 TO 1.50 DEG C/100M
CLASS E

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	0	0.0	4	0.2	9	0.4	18	0.9	9	0.4	0	0.0	40	2.0
NNE	0	0.0	0	0.0	0	0.0	14	0.7	24	1.2	9	0.4	1	0.0	48	2.4
NE	0	0.0	1	0.0	5	0.2	12	0.6	17	0.8	7	0.3	1	0.0	43	2.1
ENE	0	0.0	1	0.0	10	0.5	18	0.9	17	0.8	6	0.3	0	0.0	52	2.6
E	0	0.0	4	0.2	6	0.3	13	0.6	9	0.4	1	0.0	4	0.2	37	1.8
ESE	0	0.0	1	0.0	6	0.3	7	0.3	4	0.2	1	0.0	4	0.2	23	1.1
SE	0	0.0	0	0.0	1	0.0	3	0.1	0	0.0	5	0.2	7	0.3	16	0.8
SSE	0	0.0	1	0.0	4	0.2	5	0.2	8	0.4	10	0.5	6	0.3	34	1.7
S	0	0.0	0	0.0	5	0.2	4	0.2	12	0.6	2	0.1	1	0.0	24	1.2
SSW	0	0.0	0	0.0	3	0.1	8	0.4	27	1.3	7	0.3	8	0.4	53	2.6
SW	0	0.0	1	0.0	5	0.2	14	0.7	14	0.7	8	0.4	5	0.2	47	2.3
WSW	0	0.0	1	0.0	1	0.0	14	0.7	9	0.4	2	0.1	3	0.1	30	1.5
W	0	0.0	1	0.0	9	0.4	7	0.3	17	0.8	14	0.7	1	0.0	49	2.4
WNW	0	0.0	3	0.1	5	0.2	12	0.6	31	1.5	11	0.5	0	0.0	62	3.1
NW	0	0.0	1	0.0	4	0.2	17	0.8	56	2.8	37	1.8	2	0.1	117	5.8
NNW	0	0.0	2	0.1	4	0.2	11	0.5	40	2.0	16	0.8	1	0.0	74	3.7
	0	0.0	17	0.8	72	3.6	168	8.3	303	15.0	145	7.2	44	2.2	749	37.1

MEAN WIND SPEED: 14.9

MISSING: 53

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 10/09-12/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS

WIND: 300 FT
DELTA T: (300-33FT)

LAPSE RATE: 1.51 TO 4.00 DEG C/100M
CLASS F

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	0	0.0	0	0.0	4	0.2	7	0.3	2	0.1	0	0.0	13	0.6
NNE	0	0.0	0	0.0	0	0.0	3	0.1	25	1.2	2	0.1	0	0.0	30	1.5
NE	0	0.0	0	0.0	0	0.0	5	0.2	5	0.2	6	0.3	0	0.0	16	0.8
ENE	0	0.0	0	0.0	6	0.3	5	0.2	1	0.0	0	0.0	0	0.0	12	0.6
E	0	0.0	0	0.0	4	0.2	6	0.3	1	0.0	0	0.0	0	0.0	11	0.5
ESE	0	0.0	1	0.0	0	0.0	2	0.1	1	0.0	0	0.0	0	0.0	4	0.2
SE	0	0.0	0	0.0	1	0.0	2	0.1	1	0.0	0	0.0	0	0.0	4	0.2
SSE	0	0.0	0	0.0	0	0.0	2	0.1	3	0.1	2	0.1	2	0.1	9	0.4
S	0	0.0	1	0.0	4	0.2	4	0.2	1	0.0	1	0.0	4	0.2	15	0.7
SSW	0	0.0	1	0.0	0	0.0	5	0.2	11	0.5	1	0.0	1	0.0	19	0.9
SW	0	0.0	0	0.0	1	0.0	6	0.3	4	0.2	3	0.1	0	0.0	14	0.7
WSW	0	0.0	2	0.1	6	0.3	6	0.3	7	0.3	0	0.0	0	0.0	21	1.0
W	0	0.0	0	0.0	1	0.0	2	0.1	1	0.0	0	0.0	0	0.0	4	0.2
WNW	0	0.0	1	0.0	4	0.2	1	0.0	0	0.0	0	0.0	0	0.0	6	0.3
NW	0	0.0	2	0.1	3	0.1	0	0.0	8	0.4	1	0.0	0	0.0	14	0.7
NNW	0	0.0	0	0.0	1	0.0	2	0.1	18	0.9	1	0.0	0	0.0	22	1.1
	0	0.0	8	0.4	31	1.5	55	2.7	94	4.7	19	0.9	7	0.3	214	10.6

MEAN WIND SPEED: 13.3
MISSING: 31

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 10/09-12/09

JOINT FREQUENCY DISTRIBUTION OF WIND DIRECTION AND SPEED
 BY ATMOSPHERIC STABILITY CLASS
 WIND: 300 FT
 DELTA T: (300-33FT)

LAPSE RATE: GT 4.00 DEG C/100M
 CLASS G

DIRECTION	WIND SPEED GROUPS (MPH)														SUM PERCENT	
	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM	PERCENT
SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	PERCENT		
N	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
NNE	0	0.0	0	0.0	0	0.0	0	0.0	2	0.1	0	0.0	0	0.0	2	0.1
NE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	0.1	0	0.0	2	0.1
ENE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
E	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	1	0.0
ESE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SE	0	0.0	0	0.0	2	0.1	0	0.0	0	0.0	0	0.0	0	0.0	2	0.1
SSE	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	2	0.1	3	0.1
S	0	0.0	0	0.0	2	0.1	1	0.0	0	0.0	3	0.1	1	0.0	7	0.3
SSW	0	0.0	0	0.0	3	0.1	1	0.0	1	0.0	0	0.0	0	0.0	5	0.2
SW	0	0.0	0	0.0	1	0.0	4	0.2	3	0.1	0	0.0	0	0.0	8	0.4
WSW	0	0.0	0	0.0	1	0.0	3	0.1	0	0.0	0	0.0	0	0.0	4	0.2
W	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
WNW	0	0.0	0	0.0	2	0.1	0	0.0	0	0.0	0	0.0	0	0.0	2	0.1
NW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
NNW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	0	0.0	0	0.0	12	0.6	10	0.5	6	0.3	5	0.2	3	0.1	36	1.8

MEAN WIND SPEED: 12.2
 MISSING: 4

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 10/09-12/09

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS
WIND: 300 FT
DELTA T: (300-33FT)

ALL STABILITY CLASSES

DIRECTION	WIND SPEED GROUPS (MPH)														SUM PERCENT	
	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6			
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	3	0.1	13	0.6	26	1.3	29	1.4	22	1.1	23	1.1	116	5.7
NNE	0	0.0	0	0.0	9	0.4	29	1.4	73	3.6	45	2.2	50	2.5	206	10.2
NE	0	0.0	4	0.2	20	1.0	45	2.2	69	3.4	55	2.7	12	0.6	205	10.1
ENE	0	0.0	2	0.1	33	1.6	38	1.9	34	1.7	6	0.3	0	0.0	113	5.6
E	0	0.0	5	0.2	16	0.8	33	1.6	15	0.7	8	0.4	7	0.3	84	4.2
ESE	0	0.0	3	0.1	7	0.3	16	0.8	6	0.3	3	0.1	7	0.3	42	2.1
SE	0	0.0	0	0.0	7	0.3	15	0.7	5	0.2	8	0.4	9	0.4	44	2.2
SSE	0	0.0	2	0.1	7	0.3	18	0.9	23	1.1	12	0.6	10	0.5	72	3.6
S	0	0.0	2	0.1	17	0.8	20	1.0	40	2.0	11	0.5	6	0.3	96	4.8
SSW	0	0.0	1	0.0	7	0.3	22	1.1	46	2.3	9	0.4	9	0.4	94	4.7
SW	0	0.0	1	0.0	10	0.5	36	1.8	26	1.3	12	0.6	5	0.2	90	4.5
WSW	0	0.0	3	0.1	13	0.6	43	2.1	22	1.1	5	0.2	3	0.1	89	4.4
W	0	0.0	1	0.0	19	0.9	24	1.2	40	2.0	34	1.7	11	0.5	129	6.4
WNW	0	0.0	6	0.3	14	0.7	26	1.3	68	3.4	33	1.6	43	2.1	190	9.4
NW	0	0.0	4	0.2	12	0.6	39	1.9	105	5.2	84	4.2	31	1.5	275	13.6
NNW	0	0.0	5	0.2	15	0.7	30	1.5	79	3.9	37	1.8	10	0.5	176	8.7
	0	0.0	42	2.1	219	10.8	460	22.8	680	33.6	384	19.0	236	11.7	2021	100.0

MISSING HOURS: 187

MEAN WIND SPEED: 15.6

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

SALEM/HOPE CREEK 10/09-12/09

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED
 BY ATMOSPHERIC STABILITY CLASS
 WIND: 300 FT
 DELTA T: (300-33FT)

DIRECTION VS SPEED ONLY

DIRECTION	WIND SPEED GROUPS (MPH)														SUM PERCENT	
	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6			
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	3	0.1	13	0.6	26	1.3	29	1.4	22	1.1	23	1.1	116	5.7
NNE	0	0.0	0	0.0	9	0.4	30	1.5	73	3.6	45	2.2	50	2.5	207	10.2
NE	0	0.0	4	0.2	20	1.0	48	2.4	69	3.4	55	2.7	12	0.6	208	10.3
ENE	0	0.0	2	0.1	33	1.6	39	1.9	34	1.7	6	0.3	0	0.0	114	5.6
E	0	0.0	5	0.2	16	0.8	33	1.6	15	0.7	8	0.4	7	0.3	84	4.1
ESE	0	0.0	3	0.1	7	0.3	16	0.8	6	0.3	3	0.1	7	0.3	42	2.1
SE	0	0.0	0	0.0	7	0.3	15	0.7	5	0.2	8	0.4	9	0.4	44	2.2
SSE	0	0.0	2	0.1	7	0.3	18	0.9	23	1.1	12	0.6	10	0.5	72	3.6
S	0	0.0	2	0.1	17	0.8	20	1.0	40	2.0	11	0.5	6	0.3	96	4.7
SSW	0	0.0	1	0.0	7	0.3	22	1.1	46	2.3	9	0.4	9	0.4	94	4.6
SW	0	0.0	1	0.0	10	0.5	36	1.8	26	1.3	12	0.6	5	0.2	90	4.4
WSW	0	0.0	3	0.1	13	0.6	43	2.1	22	1.1	5	0.2	3	0.1	89	4.4
W	0	0.0	1	0.0	19	0.9	24	1.2	40	2.0	34	1.7	11	0.5	129	6.4
WNW	0	0.0	6	0.3	14	0.7	26	1.3	68	3.4	33	1.6	43	2.1	190	9.4
NW	0	0.0	4	0.2	12	0.6	39	1.9	105	5.2	84	4.1	31	1.5	275	13.6
NNW	0	0.0	5	0.2	15	0.7	30	1.5	79	3.9	37	1.8	10	0.5	176	8.7
	0	0.0	42	2.1	219	10.8	465	23.0	680	33.6	384	19.0	236	11.6	2026	100.0
MISSING HOURS:	182															
MEAN WIND SPEED:	15.6															

APPENDIX B

MPC Data

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

The following radionuclide concentrations were obtained from 10 CFR 20 Appendix B, Table II, Column 2 as revised January 1, 1991.

Maximum Permissible Concentrations

Element	Isotope	Soluble Conc ($\mu\text{Ci/ml}$)	Insoluble Conc. ($\mu\text{Ci/ml}$)
Actinium (89)	Ac-227	2E-6	3E-4
	Ac-228	9E-5	9E-5
Americium (95)	Am-241	4E-6	3E-5
	Am-242m	4E-6	9E-5
	Am-242	1E-4	1E-4
	Am-243	4E-6	3E-5
	Am-244	5E-3	5E-3
Antimony (51)	Sb-122	3E-5	3E-5
	Sb-124	2E-5	2E-5
	Sb-125	1E-4	1E-4
	Sb-126	3E-6	3E-6
Arsenic (33)	As-73	5E-4	5E-4
	As-74	5E-5	5E-5
	As-76	2E-5	2E-5
	As-77	8E-5	8E-5
Astatine (85)	At-211	2E-6	7E-5
Barium (56)	Ba-131	2E-4	2E-4
	Ba-140	3E-5	2E-5
Berkelium (97)	Bk-249	6E-4	6E-4
	Bk-250	2E-4	2E-4
Beryllium (4)	Be-7	2E-3	2E-3
Bismuth (83)	Bi-206	4E-5	4E-5
	Bi-207	6E-5	6E-5
	Bi-210	4E-5	4E-5
	Bi-212	4E-4	4E-4
Bromine (35)	Br-82	3E-4	4E-5
	Br-83	3E-6	3E-6
Cadmium (48)	Cd-109	2E-4	2E-4
	Cd-115m	3E-5	3E-5
	Cd-115	3E-5	4E-5
Calcium (20)	Ca-45	9E-6	2E-4
	Ca-47	5E-5	3E-5
Californium (98)	Cf-249	4E-6	2E-5
	Cf-250	1E-5	3E-5
	Cf-251	4E-6	3E-5
	Cf-252	7E-6	7E-6
	Cf-253	1E-4	1E-4
	Cf-254	1E-7	1E-7

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

Element	Isotope	Soluble Conc. ($\mu\text{Ci/ml}$)	Insoluble Conc. ($\mu\text{Ci/ml}$)
Carbon (6)	C-14	8E-4	-----
Cerium (58)	Ce-141	9E-5	9E-5
	Ce-143	4E-5	4E-5
	Ce-144	1E-5	1E-5
Cesium (55)	Cs-131	2E-3	9E-4
	Cs-134m	6E-3	1E-3
	Cs-134	9E-6	4E-5
	Cs-135	1E-4	2E-4
	Cs-136	9E-5	6E-5
Chlorine (17)	Cs-137	2E-5	4E-5
	Cl-36	8E-5	6E-5
Chromium (24)	Cl-38	4E-4	4E-4
	Cr-51	2E-3	2E-3
Cobalt (27)	Co-57	5E-4	4E-4
	Co-58m	3E-3	2E-3
	Co-58	1E-4	9E-5
Copper (29)	Co-60	5E-5	3E-5
	Cu-64	3E-4	2E-4
Curium (96)	Cm-242	2E-5	2E-5
	Cm-243	5E-6	2E-5
	Cm-244	7E-6	3E-5
	Cm-245	4E-6	3E-5
	Cm-246	4E-6	3E-5
	Cm-247	4E-6	2E-5
	Cm-248	4E-7	1E-6
	Cm-249	2E-3	2E-3
Dysprosium (66)	Dy-165	4E-4	4E-4
	Dy-166	4E-5	4E-5
Einsteinium (99)	Es-253	2E-5	2E-5
	Es-254m	2E-5	2E-5
	Es-254	1E-5	1E-5
Erbium (68)	Es-255	3E-5	3E-5
	Er-169	9E-5	9E-5
	Er-171	1E-4	1E-4
Europium (63)	Eu-152 (9.2 hrs)	6E-5	6E-5
	Eu-152 (13 yrs)	8E-5	8E-5
	Eu-154	2E-5	2E-5
Fermium (100)	Eu-155	2E-4	2E-4
	Fm-254	1E-4	1E-4
	Fm-255	3E-5	3E-5
	Fm-256	9E-7	9E-7

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

Element	Isotope	Soluble Conc. ($\mu\text{Ci/ml}$)	Insoluble Conc. ($\mu\text{Ci/ml}$)
Fluorine (9)	F-18	8E-4	5E-4
Gadolinium (64)	Gd-153	2E-4	2E-4
	Gd-159	8E-5	8E-5
Gallium (31)	Ga-72	4E-5	4E-5
Germanium (32)	Ge-71	2E-3	2E-3
Gold (79)	Au-196	2E-4	1E-4
	Au-198	5E-5	5E-5
	Au-199	2E-4	2E-4
Hafnium (72)	Hf-181	7E-5	7E-5
Holmium (67)	Ho-166	3E-5	3E-5
Hydrogen (3)	H-3	3E-3	3E-3
Indium (49)	In-113m	1E-3	1E-3
	In-114m	2E-5	2E-5
	In-115m	4E-4	4E-4
	In-115	9E-5	9E-5
Iodine (53)	I-125	2E-7	2E-4
	I-126	3E-7	9E-5
	I-129	6E-8	2E-4
	I-130	3E-6	3E-6
	I-131	3E-7	6E-5
	I-132	8E-6	2E-4
	I-133	1E-6	4E-5
	I-134	2E-5	6E-4
Iridium (77)	Ir-190	2E-4	2E-4
	Ir-192	4E-5	4E-5
	Ir-194	3E-5	3E-5
	Iron (26)	Fe-55	8E-4
	Fe-59	6E-5	5E-5
Lanthanum (57)	La-140	2E-5	2E-5
Lead (82)	Pb-203	4E-4	4E-4
	Pb-210	1E-7	2E-4
	Pb-212	2E-5	2E-5
Lutetium (71)	Lu-177	1E-4	1E-4
Manganese (25)	Mn-52	3E-5	3E-5
	Mn-54	1E-4	1E-4
	Mn-56	1E-4	1E-4
Mercury (80)	Hg-197m	2E-4	2E-4
	Hg-197	3E-4	5E-4
	Hg-203	2E-5	1E-4
Molybdenum (42)	Mo-99	2E-4	4E-5

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

Element	Isotope	Soluble Conc. ($\mu\text{Ci/ml}$)	Insoluble Conc. ($\mu\text{Ci/ml}$)
Neodymium (60)	Nd-144	7E-5	8E-5
	Nd-147	6E-5	6E-5
	Nd-149	3E-4	3E-4
Neptunium (93)	Np-237	3E-6	3E-5
	Np-239	1E-4	1E-4
Nickel (28)	Ni-59	2E-4	2E-3
	Ni-63	3E-5	7E-4
	Ni-65	1E-4	1E-4
Niobium (41)	Nb-93m	4E-4	4E-4
	Nb-95	1E-4	1E-4
	Nb-97	9E-4	9E-4
Osmium (76)	Os-185	7E-5	7E-5
	Os-191m	3E-3	2E-3
	Os-191	2E-4	2E-4
	Os-193	6E-5	5E-5
Palladium (46)	Pd-103	3E-4	3E-4
	Pd-109	9E-5	7E-5
Phosphorus (15)	P-32	2E-5	2E-5
Platinum (78)	Pt-191	1E-4	1E-4
	Pt-193m	1E-3	1E-3
	Pt-193	9E-4	2E-3
	Pt-197m	1E-3	9E-4
	Pt-197	1E-4	1E-4
Plutonium (94)	Pu-238	5E-6	3E-5
	Pu-239	5E-6	3E-5
	Pu-240	5E-6	3E-5
	Pu-241	2E-4	1E-3
	Pu-242	5E-6	3E-5
	Pu-243	3E-4	3E-4
Polonium (84)	Po-210	7E-7	3E-5
Potassium (19)	K-42	3E-4	2E-5
Praseodymium(59)	Pr-142	3E-5	3E-5
	Pr-143	5E-5	5E-5
Promethium (61)	Pm-147	2E-4	2E-4
	Pm-149	4E-5	4E-5
Protactinium(91)	Pa-230	2E-4	2E-4
	Pa-231	9E-7	2E-5
	Pa-233	1E-4	1E-4

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

Element	Isotope	Soluble Conc. ($\mu\text{Ci/ml}$)	Insoluble Conc. ($\mu\text{Ci/ml}$)
Radium (88)	Ra-223	7E-7	4E-6
	Ra-224	2E-6	5E-6
	Ra-226	3E-8	3E-5
	Ra-228	3E-8	3E-5
Rhenium (75)	Re-183	6E-4	3E-4
	Re-186	9E-5	5E-5
	Re-187	3E-3	2E-3
	Re-188	6E-5	3E-5
Rhodium (45)	Rh-103m	1E-2	1E-2
	Rh-105	1E-4	1E-4
Rubidium (37)	Rb-86	7E-5	2E-5
	Rb-87	1E-4	2E-4
Ruthenium (44)	Ru-97	4E-4	3E-4
	Ru-103	8E-5	8E-5
	Ru-103m	3E-6	3E-6
	Ru-105	1E-4	1E-4
	Ru-106	1E-5	1E-5
Samarium (62)	Sm-147	6E-5	7E-5
	Sm-151	4E-4	4E-4
	Sm-153	8E-5	8E-5
Scandium (21)	Sc-46	4E-5	4E-5
	Sc-47	9E-5	9E-5
	Sc-48	3E-5	3E-5
Selenium (34)	Se-75	3E-4	3E-4
Silicon (14)	Si-31	9E-4	2E-4
Silver (47)	Ag-105	1E-4	1E-4
	Ag-110m	3E-5	3E-5
	Ag-111	4E-5	4E-5
Sodium (11)	Na-22	4E-5	3E-5
	Na-24	2E-4	3E-5
Strontium (38)	Sr-85m	7E-3	7E-3
	Sr-85	1E-4	2E-4
	Sr-89	3E-6	3E-5
	Sr-90	3E-7	4E-5
	Sr-91	7E-5	5E-5
	Sr-92	7E-5	6E-5
Sulfur (16)	S-35	6E-5	3E-4
Tantalum (73)	Ta-182	4E-5	4E-5

2009 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

Element	Isotope	Soluble Conc. ($\mu\text{Ci/ml}$)	Insoluble Conc. ($\mu\text{Ci/ml}$)
Technetium (43)	Tc-96m	1E-2	1E-2
	Tc-96	1E-4	5E-5
	Tc-97m	4E-4	2E-4
	Tc-97	2E-3	8E-4
	Tc-99m	6E-3	3E-3
	Tc-99	3E-4	2E-4
Tellurium (52)	Te-125m	2E-4	1E-4
	Te-127m	6E-5	5E-5
	Te-127	3E-4	2E-4
	Te-129m	3E-5	2E-5
	Te-129	8E-4	8E-4
	Te-131m	6E-5	4E-5
	Te-132	3E-5	2E-5
Terbium (65)	Tb-160	4E-5	4E-5
Thallium (81)	Tl-200	4E-4	2E-4
	Tl-201	3E-4	2E-4
	Tl-202	1E-4	7E-5
	Tl-204	1E-4	6E-5
Thorium (90)	Th-227	2E-5	2E-5
	Th-228	7E-6	1E-5
	Th-230	2E-6	3E-5
	Th-231	2E-4	2E-4
	Th-232	2E-6	4E-5
	Th-natural	2E-6	2E-5
	Th-234	2E-5	2E-5
Thulium (69)	Tm-170	5E-5	5E-5
	Tm-171	5E-4	5E-4
Tin (50)	Sn-113	9E-5	8E-5
	Sn-124	2E-5	2E-5
Tungsten (74)	W-181	4E-4	3E-4
	W-185	1E-4	1E-4
	W-187	7E-5	6E-5
Uranium (92)	U-230	5E-6	5E-6
	U-232	3E-5	3E-5
	U-233	3E-5	3E-5
	U-234	3E-5	3E-5
	U-235	3E-5	3E-5
	U-236	3E-5	3E-5
	U-238	4E-5	4E-5
	U-240	3E-5	3E-5
	U-natural	3E-5	3E-5

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Element	Isotope	Soluble Conc. ($\mu\text{Ci/ml}$)	Insoluble Conc. ($\mu\text{Ci/ml}$)
Vanadium (23)	V-48	3E-5	3E-5
Ytterbium (70)	Yb-175	1E-4	1E-4
Yttrium	Y-90	2E-5	2E-5
	Y-91m	3E-3	3E-3
	Y-91	3E-5	3E-5
	Y-92	6E-5	6E-5
	Y-93	3E-5	3E-5
Zinc (30)	Zn-65	1E-4	2E-4
	Zn-69m	7E-5	6E-5
	Zn-69	2E-3	2E-3
Zirconium (40)	Zr-93	8E-4	8E-4
	Zr-95	6E-5	6E-5
	Zr-97	2E-5	2E-5
Any single radionuclide not listed above with decay mode other than alpha emission or spontaneous fission and with radioactive half-life greater than 2 hours		3E-6	3E-6
Any single radionuclide not listed above, which decays by alpha emission or spontaneous fission.		3E-8	3E-8

Notes:

1. If the identity of any radionuclide is not known, the limiting values for purposes of this table shall be: $3\text{E-}8 \mu\text{Ci/ml}$.
2. If the identity and concentration of each radionuclide are known, the limiting values should be derived as follows: Determine, for each radionuclide in the mixture, the ratio between the quantity present in the mixture and the limit otherwise established in Appendix B for the specific radionuclide not in a mixture. The sum of such ratios for all the radionuclides in the mixture may not exceed "1" (i.e. "unity").

ATTACHMENT 1

SALEM OFFSITE DOSE CALCULATION MANUAL

Revisions 22, 23, and 24

And

HOPE CREEK OFFSITE DOSE CALCULATION

MANUAL

Revisions 23 and 24

(Separate Documents)