

PSEG NUCLEAR LLC
2008 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 2008

INTRODUCTION

This report, SGS-RERR-57/HCGS-RERR-31, 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, 2008 to December 31, 2008.

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 1169 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 1155 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 1268 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 2008 was as follows:

9,333,862 megawatt-hours of electrical energy (net) were generated by Salem Unit 1, 8,221,999 megawatt-hours of electrical energy (net) were generated by Salem Unit 2, and 10,006,265 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, Waste Monitor Holdup Tanks 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 intermittent 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

There were no unplanned releases from Salem Units 1 and 2 or from the Hope Creek Generating Station during this reporting period.

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 2008.

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	1Q2008	2Q2008	3Q2008	4Q2008	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)	1.09E-05	7.13E-06	5.84E-06	1.64E-05	4.03E-05
% Dose Limit	7.27E-04	4.75E-04	3.89E-04	1.09E-03	1.34E-03
Organ Dose Limit (mrem)	5.00E+00	5.00E+00	5.00E+00	5.00E+00	1.00E+01
Maximum Organ Dose (mrem)	2.02E-05	1.57E-05	1.29E-05	2.88E-05	7.76E-05
% Dose Limit	4.04E-04	3.14E-04	2.58E-04	5.76E-04	7.76E-04
Salem Unit 2					
Liquid Effluent Parameter	1Q2008	2Q2008	3Q2008	4Q2008	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)	1.99E-06	1.65E-06	2.74E-06	5.10E-06	1.15E-05
% Dose Limit	1.33E-04	1.10E-04	1.83E-04	3.40E-04	3.83E-04
Organ Dose Limit (mrem)	5.00E+00	5.00E+00	5.00E+00	5.00E+00	1.00E+01
Maximum Organ Dose (mrem)	6.20E-06	4.52E-06	4.57E-06	9.62E-06	2.49E-05
% Dose Limit	1.24E-04	9.04E-05	9.14E-05	1.92E-04	2.49E-04
Hope Creek Generating Station					
Liquid Effluent Parameter	1Q2008	2Q2008	3Q2008	4Q2008	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)	1.16E-06	1.62E-06	1.18E-05	4.73E-07	1.51E-05
% Dose Limit	7.73E-05	1.08E-04	7.87E-04	3.15E-05	5.02E-04
Organ Dose Limit (mrem)	5.00E+00	5.00E+00	5.00E+00	5.00E+00	1.00E+01
Maximum Organ Dose (mrem)	5.06E-06	6.02E-06	4.38E-05	8.14E-07	5.57E-05
% Dose Limit	1.01E-04	1.20E-04	8.76E-04	1.63E-05	5.57E-04

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Salem-Hope Creek Site Total					
Liquid Effluent Parameter	1Q2008	2Q2008	3Q2008	4Q2008	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)	1.41E-05	1.04E-05	2.04E-05	2.20E-05	6.69E-05
% Dose Limit	9.37E-04	6.93E-04	1.36E-03	1.46E-03	2.23E-03
Organ Dose Limit (mrem)	5.00E+00	5.00E+00	5.00E+00	5.00E+00	1.00E+01
Maximum Organ Dose (mrem)	3.15E-05	2.62E-05	6.13E-05	3.92E-05	1.58E-04
% Dose Limit	6.29E-04	5.25E-04	1.23E-03	7.85E-04	1.58E-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 6.69E-05 mrem, which yields a maximum population dose equal to 3.01E-01 person-rem.

Table 5B: Doses from Gaseous Effluent

Salem Unit 1					
Gaseous Effluent Parameter	1Q2008	2Q2008	3Q2008	4Q2008	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)	1.68E-05	9.72E-06	8.63E-06	8.37E-06	4.35E-05
% Dose Limit	3.36E-04	1.94E-04	1.73E-04	1.67E-04	4.35E-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)	6.85E-06	4.05E-06	3.51E-06	5.87E-06	2.03E-05
% Dose Limit	6.85E-05	4.05E-05	3.51E-05	5.87E-05	1.01E-04
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)	1.41E-03	2.92E-04	7.23E-04	1.04E-03	3.46E-03
% Dose Limit	1.88E-02	3.89E-03	9.64E-03	1.38E-02	2.31E-02
Organ Dose (mrem) from I-131, I-133, Tritium, and particulate nuclides (>8 days half-life) - Resident/Dairy (4.9 mile W)	3.18E-05	9.15E-06	4.15E-05	1.07E-05	9.32E-05
% Dose Limit	4.24E-04	1.22E-04	5.53E-04	1.43E-04	6.21E-04

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Salem Unit 2					
Gaseous Effluent Parameter	1Q2008	2Q2008	3Q2008	4Q2008	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)	3.12E-05	6.14E-07	5.25E-06	1.02E-05	4.73E-05
% Dose Limit	6.24E-04	1.23E-05	1.05E-04	2.04E-04	4.73E-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)	2.34E-05	5.24E-07	2.45E-06	3.62E-06	3.00E-05
% Dose Limit	2.34E-04	5.24E-06	2.45E-05	3.62E-05	1.50E-04
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)	3.95E-04	9.20E-05	2.99E-04	1.08E-04	8.95E-04
% Dose Limit	5.27E-03	1.23E-03	3.99E-03	1.44E-03	5.96E-03
Organ Dose (mrem) from I-131, I-133, Tritium, and particulate nuclides (>8 days half-life) - Resident/Dairy (4.9 mile W)	8.96E-6	3.06E-06	1.72E-05	1.12E-06	3.03E-05
% Dose Limit	1.19E-04	4.08E-05	2.29E-04	1.49E-05	2.02E-04
Hope Creek Generating Station					
Gaseous Effluent Parameter	1Q2008	2Q2008	3Q2008	4Q2008	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)	5.84E-05	4.43E-05	7.57E-06	0.0E+00	1.10E-04
% Dose Limit	1.17E-03	8.86E-04	1.51E-04	0.0E+00	1.10E-03
Beta Air Dose (mrad) for Noble Gases - Limit	1.00E+01	1.00E+00	1.00E+01	1.00E+00	2.00E+01
Maximum Beta Air Dose (mrad)	7.49E-05	5.67E-05	1.23E-05	0.0E+00	1.44E-04
% Dose Limit	7.49E-04	5.67E-04	1.23E-04	0.0E+00	7.19E-04
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)	2.08E-03	4.20E-03	4.48E-03	5.32E-03	1.61E-02
% Dose Limit	2.77E-02	5.60E-02	5.97E-02	7.09E-02	1.07E-01
Organ Dose (mrem) from I-131, I-133, Tritium, and particulate nuclides (>8 days half-life) - Resident/Dairy (4.9 mile W)	6.86E-05	1.07E-04	1.75E-04	1.52E-04	5.03E-04
% Dose Limit	9.15E-04	1.43E-03	2.33E-03	2.03E-03	3.35E-03

Salem-Hope Creek Site Total					
Gaseous Effluent Parameter	1Q2008	2Q2008	3Q2008	4Q2008	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)	1.06E-04	5.46E-05	2.15E-05	1.86E-05	2.01E-04
% Dose Limit	2.13E-03	1.09E-03	4.29E-04	3.72E-04	2.01E-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)	1.05E-04	6.13E-05	1.83E-05	9.49E-06	1.94E-04
% Dose Limit	1.05E-03	6.13E-04	1.83E-04	9.49E-05	9.72E-04
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)	3.89E-03	4.58E-03	5.50E-03	6.47E-03	2.04E-02
% Dose Limit	5.18E-02	6.11E-02	7.34E-02	8.62E-02	1.36E-01
Organ Dose (mrem) from I-131, I-133, Tritium, and particulate nuclides (>8 days half-life) – Resident/Dairy (4.9 mile W)	1.09E-04	1.19E-04	2.34E-04	1.64E-04	6.26E-04
% Dose Limit	1.46E-03	1.59E-03	3.12E-03	2.18E-03	4.17E-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 2008. 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	1.89E-04 mrem
Skin Dose from Noble Gases – Site Boundary	3.63E-04 mrem
Average Dose from Gaseous Effluent to Population	3.18E-06 mrem
Population Dose from Gaseous Effluent	1.43E-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 2008 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 2008 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>
1S1	Identified as the Site Boundary location in N Sector	4.77	57.2
5S1	Close to Security Check Point in E Sector	3.56	42.7
11S1	At Shore Line in SW Sector	3.43	41.2
		Average:	47.0

The 2008 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 2008, 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 or Any Organ Dose (mrem)	5.36E-03
% Total Body or Any Organ Limit	2.14E-02
Thyroid (mrem)	2.04E-02
% Thyroid Limit	2.72E-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, 2008 to December 31, 2008 the calculated dose and percent of limit are:

Parameter	
Total Body Dose to Member of the Public Inside Site Boundary	1.01E-02 mrem
% Limit	1.01E-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: $1.34\text{E-}03$ % of the Total Body Limit, Salem Unit 2: $3.83\text{E-}04$ % of the Total Body Limit, and Hope Creek: $5.02\text{E-}04$ % of the Total Body Limit).

When compared to releases in the previous reporting period, the Salem fission & activation product activity in the liquid effluents increased slightly, whereas, the Hope Creek fission & activation products activity decreased 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:

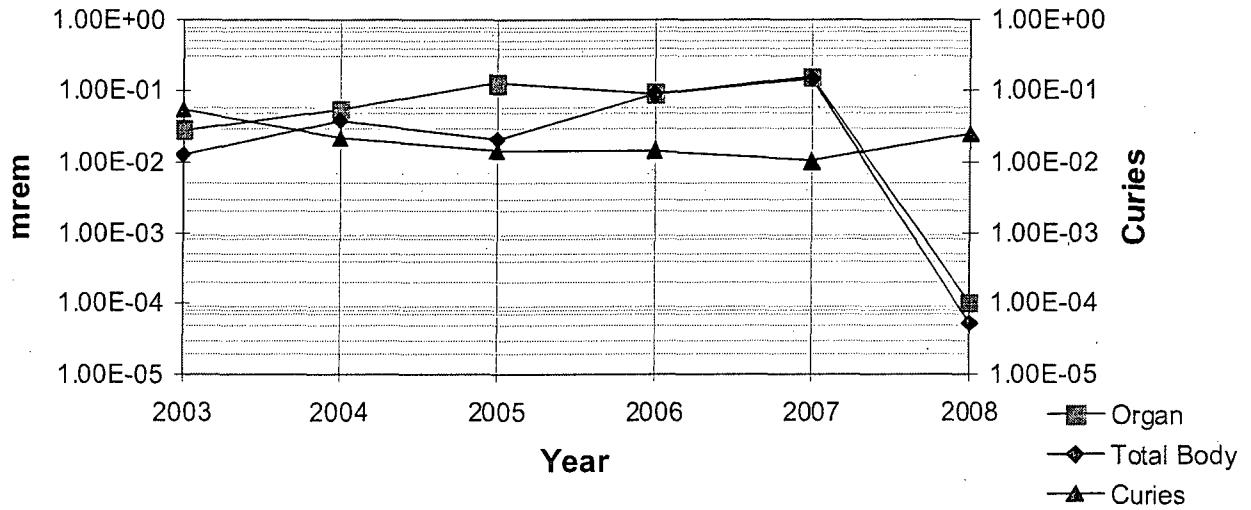
Gaseous effluents released from the Salem and Hope Creek Generating Stations resulted in doses to a hypothetical maximally exposed individual that were within all applicable regulatory limits. The doses for the 12-month period were small fractions of all applicable limits (Salem Unit 1: $2.31\text{E-}02$ % of the annual organ (including total body) dose limit, Salem Unit 2: $5.97\text{E-}03$ % of the annual organ (including total body) dose limit, and Hope Creek: $1.07\text{E-}01$ % 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 decreased. 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).

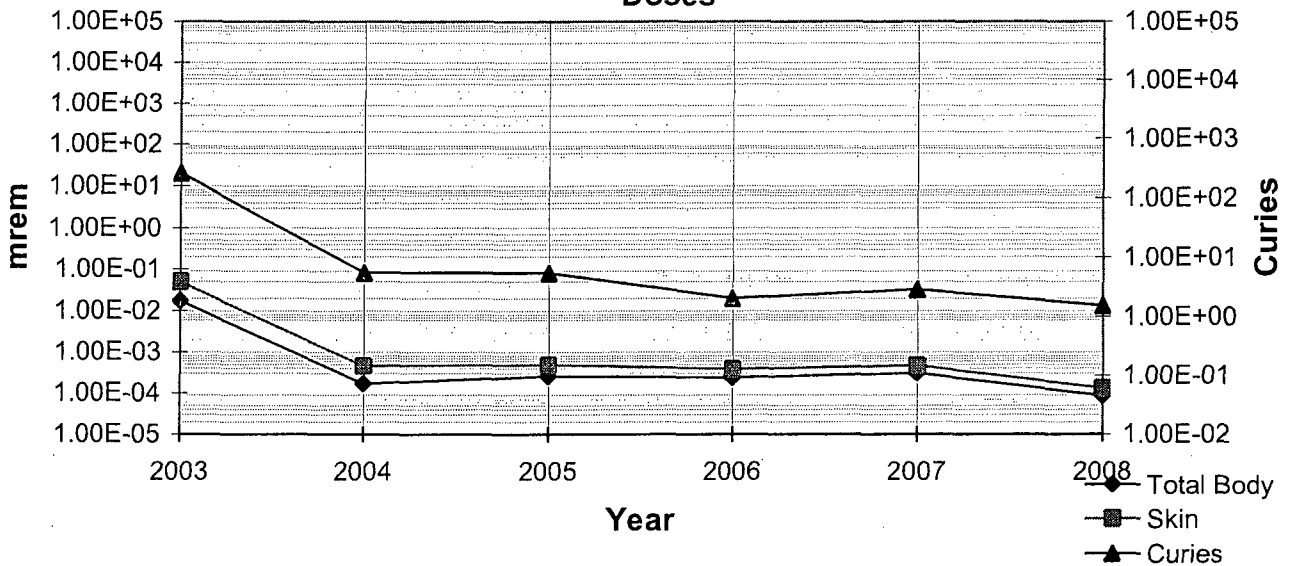
1.4 Trends

The following two trend graphs show the total curies of liquid and gaseous effluents released for Salem from 2003 through 2008. Calculated doses in the graphs are to the hypothetical maximum exposed individual.

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

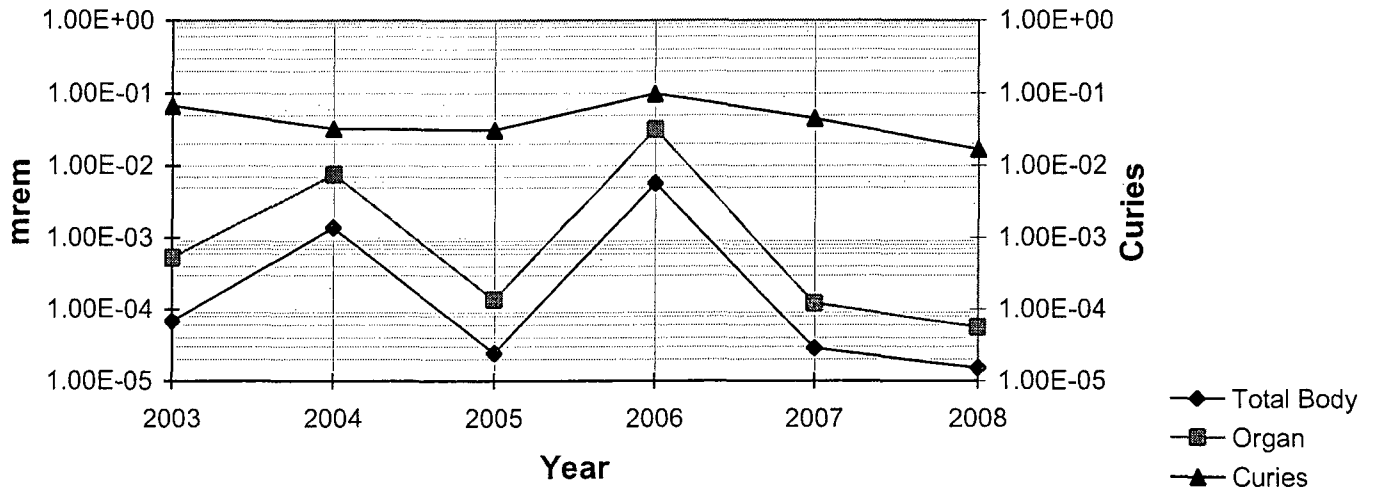


Gaseous Releases (SGS) Curies of Noble Gases Released and Calculated Doses

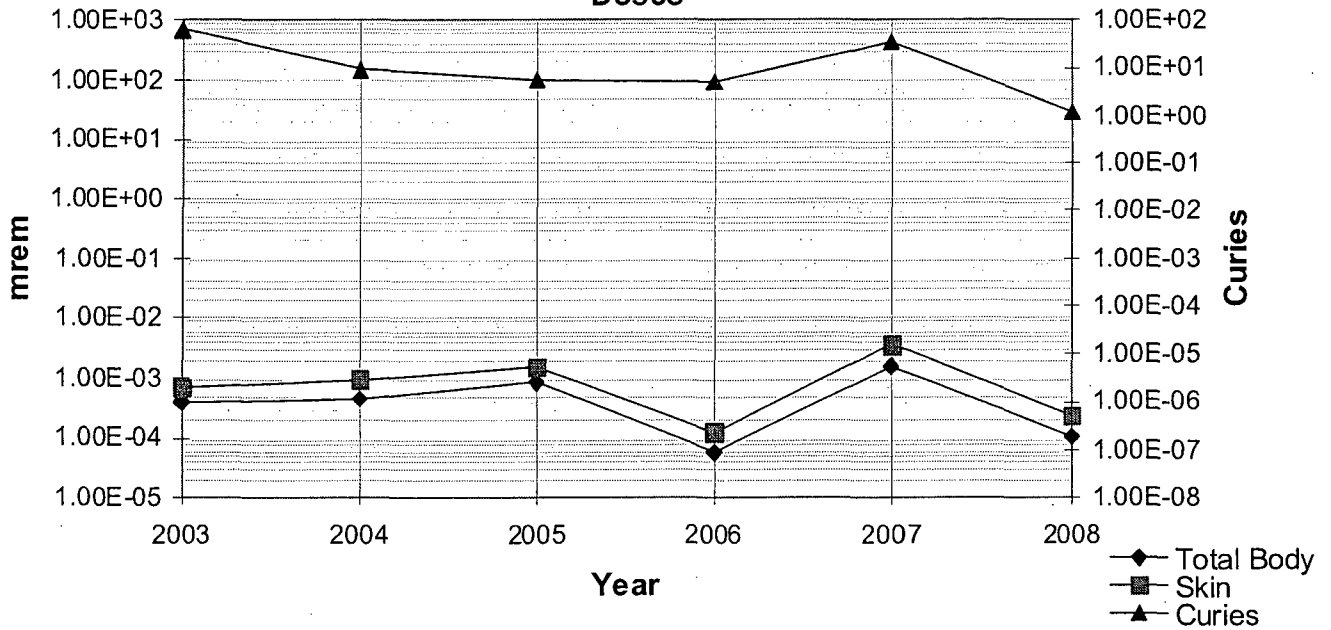


The following two trend graphs show the total curies of liquid and gaseous effluents released for Hope Creek from 2002 through 2008. Calculated doses in the graphs are to the hypothetical maximum exposed individual.

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 revision 21 is provided in Appendix C.

Revision 21 of the Salem ODCM became effective September 30, 2008 and accomplished the following:

- Section 1.0, Definitions: Added “or 10 CFR 72.75” to the definition of Reportable Event.
- Controls Section 3/4.11.4, Action (a): Added “or 10 CFR 72.104”, and subsequently added “and 10 CFR 72.104”, in addition to 40 CFR 190 which requires, when estimated dose limits have been exceeded a Special Report to the NRC is required.
- Bases Section 3/4.11.4, Total Dose: Revised the section to include the dose limitations specific to the ISFSI in accordance with 10 CFR 72.104 which parallel the limits of 40 CFR 90.
- Administrative Controls Section 6.9.1.8, Radioactive Effluent Release Report: Revised the scope of the requirement to generate the RERR annually is to show conformance with 40 CFR 90 and 10 CFR 72.104.
- PART II, Section 3.2, Total Dose to Members of the Public: Added 10 CFR 72.104 to be included in the title of the section and added the ISFSI to the HCGS as a source of exposure.
- Section 3.2.2, Direct Exposure Dose Determination: Revised section for non-typical conditions that would require detailed evaluation for demonstrating compliance with 40 CFR 190 to include 10 CFR 72.104. However, should a situation exist whereby the direct exposure contribution is potentially significant, on-site measurements, off-site measurements and/or calculation techniques will be used for determination of dose for assessing 40 CFR 190 or 10 CFR 72.104 compliance.
- Administrative Controls Section 6.1: Revised “Station” to “Plant” and “SORC” to “PORC.”
- Table 4.3-12, Table Notation: Revised Item (1)3., (2)3., and added Item (5) to clarify current configuration.
- Table 4.3-13, Table Notation: Revised Item (1)3. and (2)3. to clarify current configuration.

- Section 1.0, Definitions 1.18 OPERABLE or OPERABILITY and 1.31 SOURCE CHECK were changed to corresponding definitions in the Salem Technical Specifications.
- Table 4.3-12, Table Notation: foot note number for 1R18 was changed from "...in-line..." to "...off-line..." based on DCP80019351.
- Revised the 2R13 Radiation Monitor configuration in the following: Table 3.3-12, Item 2a., section 3.3 Instrumentation, Bases, Unit 2, item 2a, Part II – Calculational Methodologies, Section 1.0 Liquid Effluents, 1.1 Radiation Monitoring Instrumentation and Controls, item 2, Figure 1-2: Liquid Release Flowpath Unit 2, Table 1-1.2: Parameters for Liquid Alarm Setpoint Determinations – Unit 2. This change was based on DCP 80059614.

Hope Creek

No changes were made to the Hope Creek ODCM during this reporting period.

PART H. INOPERABLE MONITORS

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

Salem Unit 1: Containment Fan Cooler – Service Water Line Discharge Radiation Monitors (1R13A-E).

Salem Unit 2: Containment Fan Cooler – Service Water Line Discharge Radiation Monitors (2R13A - C).

These radiation monitors were inoperable because the Containment Fan Coil Units were removed from service and drained during a maintenance outage at Unit 2. Each radiation monitor was tested and returned to service following completion of required maintenance during the outage. All required compensatory sampling was performed during the period of monitor inoperability.

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 no changes to environmental monitoring locations as currently described in the Salem and Hope Creek ODCMs.

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

TABLE 1A-1
SALEM GENERATING STATION - UNIT 1
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT
JANUARY – JUNE 2008
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	1.35E-01	1.31E-01	50%
2.	Average Release Rate For Period	μCi/sec	1.72E-02	1.67E-02	
3.	Percent of Technical Specification Limit (ODCM 3.11.2.2(a))	%	3.36E-04	1.94E-04	
B.	Iodine				
1.	Total Iodine-131	Ci	5.08E-06	4.59E-08	50%
2.	Average Release Rate For Period	μCi/sec	6.46E-07	5.84E-09	
3.	Percent of Technical Specification Limit ² (ODCM 3.11.2.3(a))	%	1.88E-02	3.89E-03	
C.	Particulates				
1.	Particulates With Half-lives >8 days	Ci	0.00E+00	1.46E-05	50%
2.	Average Release Rate For Period	μCi/sec	0.00E+00	1.86E-06	
3.	Percent of Technical Specification Limit ² (ODCM 3.11.2.3(a))	%	0.00E+00	3.89E-03	
4.	Gross Alpha	Ci	0.00E+00	0.00E+00	
D.	Tritium				
1.	Total Release	Ci	6.99E+01	2.29E+01	50%
2.	Average Release Rate For Period	μCi/sec	8.90E+00	2.91E+00	
3.	Percent of Technical Specification Limit ² (ODCM 3.11.2.3(a))	%	1.88E-02	3.89E-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

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

TABLE 1A-2
SALEM GENERATING STATION - UNIT 2
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT
JANUARY – JUNE 2008
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	7.44E-01	3.00E-02	50%
2.	Average Release Rate For Period	µCi/sec	9.46E-02	3.81E-03	
3.	Percent of Technical Specification Limit (ODCM 3.11.2.2(a))	%	6.25E-04	1.23E-05	
B.	Iodine				
1.	Total Iodine-131	Ci	1.63E-05	2.06E-06	50%
2.	Average Release Rate For Period	µCi/sec	2.07E-06	2.62E-07	
3.	Percent of Technical Specification Limit ² (ODCM 3.11.2.3(a))	%	5.27E-03	1.23E-03	
C.	Particulates				
1.	Particulates With Half-Lives >8 days	Ci	1.36E-06	1.49E-04	50%
2.	Average Release Rate For Period	µC/sec	1.73E-07	1.89E-05	
3.	Percent of Technical Specification Limit ² (ODCM 3.11.2.3(a))	%	5.27E-03	1.23E-03	
4.	Gross Alpha	Ci	0.00E+00	0.00E+00	
D.	Tritium				
1.	Total Release	Ci	1.94E+01	7.06E+00	50%
2.	Average Release Rate For Period	µCi/sec	2.47E+00	8.98E-01	
3.	Percent of Technical Specification Limit ² (ODCM 3.11.2.3(a))	%	5.27E-03	1.23E-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

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

TABLE 1A-3
HOPE CREEK GENERATING STATION
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT
JANUARY – JUNE 2008
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	5.86E-01	4.18E-01	25%
2.	Average Release Rate For Period	µCi/sec	7.46E-02	5.31E-02	
3.	Percent of Technical Specification Limit (ODCM 3.11.2.2(a))	%	1.17E-03	8.85E-04	
B.	Iodine				
1.	Total Iodine-131	Ci	6.47E-04	1.26E-03	25%
2.	Average Release Rate For Period	µCi/sec	8.23E-05	1.61E-04	
3.	Percent of Technical Specification Limit ² (ODCM 3.11.2.3(a))	%	2.77E-02	5.60E-02	
C.	Particulates				
1.	Particulates With Half-Lives >8 days	Ci	1.38E-04	5.83E-04	25%
2.	Average Release Rate For Period	µCi/sec	1.75E-05	7.41E-05	
3.	Percent of Technical Specification Limit ² (ODCM 3.11.2.3(a))	%	2.77E-02	5.60E-02	
4.	Gross Alpha	Ci	0.00E+00	0.00E+00	
D.	Tritium				
1.	Total Release	Ci	0.00E+00	0.00E+00	25%
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	

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

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

TABLE 1A-4
SALEM GENERATING STATION - UNIT 1
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT
JULY – DECEMBER 2008
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	1.33E-01	1.90E-01	50%
2.	Average Release Rate For Period	µCi/sec	1.67E-02	2.39E-02	
3.	Percent of Technical Specification Limit (ODCM 3.11.2.2(a))	%	1.73E-04	9.76E-05	
B.	Iodine				
1.	Total Iodine-131	Ci	0.00E+00	1.03E-06	50%
2.	Average Release Rate For Period	µCi/sec	0.00E+00	1.30E-07	
3.	Percent of Technical Specification Limit ² (ODCM 3.11.2.3(a))	%	0.00E+00	1.38E-02	
C.	Particulates				
1.	Particulates With Half-Lives >8 days	Ci	0.00E+00	1.09E-05	50%
2.	Average Release Rate For Period	µCi/sec	0.00E+00	1.38E-06	
3.	Percent of Technical Specification Limit ² (ODCM 3.11.2.3(a))	%	0.00E+00	1.38E-02	
4.	Gross Alpha	Ci	0.00E+00	0.00E+00	
D.	Tritium				
1.	Total Release	Ci	6.81E+01	5.74E+01	50%
2.	Average Release Rate For Period	µCi/sec	8.57E+00	7.23E+00	
3.	Percent of Technical Specification Limit ² (ODCM 3.11.2.3(a))	%	9.64E-03	1.38E-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

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

TABLE 1A-5
SALEM GENERATING STATION - UNIT 2
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT
JULY - DECEMBER 2008
GASEOUS EFFLUENTS - SUMMATION OF ALL RELEASES

	Units	3 rd Quarter	4 th Quarter	Est. Total Error ¹
A. Fission and Activation Gases				
1.	Ci	1.03E-01	6.10E-02	50%
2.	μCi/sec	1.29E-02	7.68E-03	
3.	%	1.05E-04	1.19E-04	
B. Iodine				
1.	Ci	0.00E+00	0.00E+00	50%
2.	μCi/sec	0.00E+00	0.00E+00	
3.	%	0.00E+00	0.00E+00	
C. Particulates				
1.	Ci	0.00E+00	0.00E+00	50%
2.	μCi/sec	0.00E+00	0.00E+00	
3.	%	0.00E+00	0.00E+00	
4.	Ci	0.00E+00	0.00E+00	
D. Tritium				
1.	Ci	2.81E+01	6.01E+00	50%
2.	μCi/sec	3.54E+00	7.56E-01	
3.	%	3.99E-03	1.44E-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

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

TABLE 1A-6
HOPE CREEK GENERATING STATION
 EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT
 JULY – DECEMBER 2008
 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	1.71E-01	0.00E+00	25%
2.	Average Release Rate For Period	μCi/sec	2.15E-02	0.00E+00	
3.	Percent of Technical Specification Limit (ODCM 3.11.2.2(a))	%	1.52E-04	0.00E+00	
B.	Iodine				
1.	Total Iodine-131	Ci	1.82E-03	3.51E-03	25%
2.	Average Release Rate For Period	μCi/sec	2.29E-04	4.41E-04	
3.	Percent of Technical Specification Limit ¹ (ODCM 3.11.2.3(a))	%	5.97E-02	7.10E-02	
C.	Particulates				
1.	Particulates With Half-lives > 8 days	Ci	1.05E-03	9.46E-04	25%
2.	Average Release Rate For Period	μCi/sec	1.32E-04	1.19E-04	
3.	Percent of Technical Specification Limit ¹ (ODCM 3.11.2.3(a))	%	5.97E-02	7.10E-02	
4.	Gross Alpha	Ci	0.00E+00	0.00E+00	
D.	Tritium				
1.	Total Release	Ci	5.50E-05	3.53E-03	25%
2.	Average Release Rate For Period	μCi/sec	6.91E-06	4.44E-04	
3.	Percent of Technical Specification Limit ¹ (ODCM 3.11.2.3(a))	%	5.97E-02	7.10E-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 2008
GASEOUS EFFLUENTS – ELEVATED RELEASES

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

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

TABLE 1C-1
SALEM GENERATING STATION - UNIT 1
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT
JANUARY - JUNE 2008
GASEOUS EFFLUENTS - GROUND LEVEL RELEASES

Nuclides Released	Units	Continuous Mode		Batch Mode	
		1 st Quarter	2 nd Quarter	1 st Quarter	2 nd Quarter
1. Fission Gases					
Argon-41	Ci	0.00E+00	0.00E+00	8.64E-02	7.93E-02
Xenon-133	Ci	3.58E-06	0.00E+00	4.87E-02	5.20E-02
Xenon-135	Ci	0.00E+00	0.00E+00	1.54E-04	0.00E+00
Total	Ci	3.58E-06	0.00E+00	1.35E-01	1.31E-01
2. Iodine					
Iodine-131	Ci	5.08E-06	4.59E-08	0.00E+00	0.00E+00
Total	Ci	5.08E-06	4.59E-08	0.00E+00	0.00E+00
3. Particulates (Half-life >8 days)					
Cobalt-58	Ci	0.00E+00	1.46E-05	0.00E+00	0.00E+00
Total	Ci	0.00E+00	1.46E-05	0.00E+00	0.00E+00
4. Tritium	Ci	6.89E+01	2.18E+01	1.00E+00	1.03E+00

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

TABLE 1C-2
SALEM GENERATING STATION - UNIT 2
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT
JANUARY – JUNE 2008
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					
Krypton-85m	Ci	0.00E+00	0.00E+00	5.85E-04	0.00E+00
Xenon-133m	Ci	0.00E+00	0.00E+00	8.19E-03	0.00E+00
Xenon-133	Ci	0.00E+00	0.00E+00	5.59E-01	2.58E-02
Xenon-135	Ci	0.00E+00	0.00E+00	4.18E-02	0.00E+00
Argon-41	Ci	0.00E+00	0.00E+00	1.34E-01	4.15E-03
Total	Ci	0.00E+00	0.00E+00	7.44E-01	3.00E-02
2. Iodine					
Iodine-131	Ci	1.63E-05	2.06E-06	0.00E+00	0.00E+00
Total	Ci	1.63E-05	2.06E-06	0.00E+00	0.00E+00
3. Particulates (Half-life >8 days)					
Tellurium-131m	Ci	1.86E-05	0.00E+00	0.00E+00	0.00E+00
Cobalt-58	Ci	1.36E-06	1.49E-04	0.00E+00	0.00E+00
Total	Ci	1.99E-05	1.49E-04	0.00E+00	0.00E+00
4. Tritium	Ci	1.92E+01	7.01E+00	1.81E-01	4.75E-02

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

TABLE 1C-3
HOPE CREEK GENERATING STATION
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT
JANUARY – JUNE 2008
GASEOUS EFFLUENTS – GROUND LEVEL RELEASES

Nuclides Released	Units	Continuous Mode		Batch Mode	
		1 st Quarter	2 nd Quarter	1 st Quarter	2 nd Quarter
1. Fission Gases					
Xenon-135	Ci	5.86E-01	4.18E-01	0.00E+00	0.00E+00
Total	Ci	5.86E-01	4.18E-01	0.00E+00	0.00E+00
2. Iodine					
Iodine-131	Ci	6.47E-04	1.26E-03	0.00E+00	0.00E+00
Iodine-133	Ci	8.73E-03	1.65E-02	0.00E+00	0.00E+00
Total	Ci	9.38E-03	1.78E-02	0.00E+00	0.00E+00
3. Particulates (Half-life >8 days)					
Cobalt-60	Ci	2.37E-05	2.48E-05	0.00E+00	0.00E+00
Strontium-91	Ci	1.72E-02	0.00E+00	0.00E+00	0.00E+00
Strontium-92	Ci	4.10E-02	0.00E+00	0.00E+00	0.00E+00
Lanthanum-140	Ci	4.57E-05	2.79E-04	0.00E+00	0.00E+00
Barium-140	Ci	1.14E-04	5.50E-04	0.00E+00	0.00E+00
Barium-139	Ci	1.20E-03	7.49E-02	0.00E+00	0.00E+00
Cerium-141	Ci	0.00E+00	8.19E-06	0.00E+00	0.00E+00
Total		5.96E-02	7.57E-02	0.00E+00	0.00E+00
4. Tritium	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

TABLE 1C-4
SALEM GENERATING STATION - UNIT 1
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT
JULY - DECEMBER 2008
GASEOUS EFFLUENTS - GROUND LEVEL RELEASES

Nuclides Released	Units	Continuous Mode		Batch Mode	
		3 rd Quarter	4 th Quarter	3 rd Quarter	4 th Quarter
1. Fission Gases					
Krypton-85m	Ci	0.00E+00	0.00E+00	0.00E+00	4.15E-04
Xenon-133m	Ci	0.00E+00	0.00E+00	0.00E+00	2.57E-03
Xenon-133	Ci	0.00E+00	0.00E+00	4.71E-02	1.23E-01
Xenon-135	Ci	0.00E+00	0.00E+00	0.00E+00	2.37E-02
Argon-41	Ci	0.00E+00	0.00E+00	8.54E-02	3.96E-02
Total	Ci	0.00E+00	0.00E+00	1.33E-01	1.90E-01
2. Iodine					
Iodine-131	Ci	0.00E+00	1.03E-06	0.00E+00	0.00E+00
Total	Ci	0.00E+00	1.03E-06	0.00E+00	0.00E+00
3. Particulates (Half-life >8 days)					
Bromide-82	Ci	0.00E+00	5.27E-06	0.00E+00	0.00E+00
Cobalt-58	Ci	0.00E+00	1.09E-05	0.00E+00	0.00E+00
Total	Ci	0.00E+00	1.62E-05	0.00E+00	0.00E+00
4. Tritium	Ci	6.66E+01	5.70E+01	1.49E+00	3.91E-01

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

TABLE 1C-5
SALEM GENERATING STATION - UNIT 2
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT
JULY - DECEMBER 2008
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					
Krypton-85m	Ci	0.00E+00	0.00E+00	1.38E-04	0.00E+00
Xenon-133m	Ci	0.00E+00	0.00E+00	1.13E-03	0.00E+00
Xenon-133	Ci	0.00E+00	0.00E+00	4.36E-02	8.10E-04
Xenon-135	Ci	0.00E+00	0.00E+00	8.01E-03	0.00E+00
Argon-41	Ci	0.00E+00	0.00E+00	4.97E-02	6.02E-02
Total	Ci	0.00E+00	0.00E+00	1.03E-01	6.10E-02
2. Iodine	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3. Particulates (Half-life >8 days)	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4. Tritium	Ci	2.80E+01	5.83E+00	1.55E-01	1.76E-01

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

TABLE 1C-6
HOPE CREEK GENERATING STATION
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT
JULY – DECEMBER 2008
GASEOUS EFFLUENTS – GROUND LEVEL RELEASES

Nuclides Released	Units	Continuous Mode		Batch Mode	
		3 rd Quarter	4 th Quarter	3 rd Quarter	4 th Quarter
1. Fission Gases					
Xenon-131m	Ci	2.68E-04	0.00E+00	0.00E+00	0.00E+00
Xenon-133	Ci	9.91E-02	0.00E+00	0.00E+00	0.00E+00
Xenon-135	Ci	7.18E-02	0.00E+00	0.00E+00	0.00E+00
Total	Ci	1.71E-01	0.00E+00	0.00E+00	0.00E+00
2. Iodine					
Iodine-131	Ci	1.82E-03	3.51E-03	0.00E+00	0.00E+00
Iodine-133	Ci	2.16E-02	2.85E-02	0.00E+00	0.00E+00
Total	Ci	2.34E-02	3.20E-02	0.00E+00	0.00E+00
3. Particulates (Half-life >8 days)					
Cobalt-60	Ci	1.85E-05	1.60E-05	0.00E+00	0.00E+00
Yttrium-91m	Ci	2.40E+00	0.00E+00	0.00E+00	0.00E+00
Molybdenum-99	Ci	0.00E+00	1.08E-05	0.00E+00	0.00E+00
Technicium-99m	Ci	0.00E+00	1.09E-05	0.00E+00	0.00E+00
Barium-139	Ci	3.36E+00	0.00E+00	0.00E+00	0.00E+00
Barium-140	Ci	9.78E-04	9.17E-04	0.00E+00	0.00E+00
Lanthanum-140	Ci	4.78E-04	2.11E-04	0.00E+00	0.00E+00
Cerium-141	Ci	4.97E-05	1.32E-05	0.00E+00	0.00E+00
Total	Ci	5.76E+00	1.18E-03	0.00E+00	0.00E+00
4. Tritium	Ci	5.50E-05	3.53E-03	0.00E+00	0.00E+00

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

TABLE 2A-1
SALEM GENERATING STATION - UNIT 1
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT
JANUARY - JUNE 2008
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	3.96E-03	4.76E-03	25%
2. Average Diluted Concentration	μCi/ml	9.17E-12	1.04E-11	
3. Percent of Technical Specification Limit (ODCM 3.11.1.2(a))	%	7.27E-04	4.75E-04	
B. Tritium				
1. Total Release	Ci	1.04E+02	7.35e+01	25%
2. Average Diluted Concentration	μCi/ml	2.42E-07	1.61E-07	
3. Percent of Technical Specification Limit (ODCM 3.11.1.1)	%	8.07E-03	5.37E-03	
C. Dissolved and Entrained Noble Gases				
1. Total Release	Ci	7.79E-04	3.93E-06	25%
2. Average Diluted Concentration	μCi/ml	1.80E-12	8.58E-15	
3. Percent of Technical Specification Limit (ODCM 3.11.1.1)	%	9.00E-07	4.29E-09	
D. Gross Alpha				
Total Release	Ci	0.00E+00	0.00E+00	25%
E. Volume of Waste Release (Prior to Dilution)	Liters	5.13E+07	5.09E+07	
F. Volume of Dilution Water Used During Entire Period	Liters	4.32E+11	4.58E+11	

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

TABLE 2A-2
SALEM GENERATING STATION - UNIT 2
 EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT
 JANUARY – JUNE 2008
 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	8.55E-04	3.63E-03	25%
2. Average Diluted Concentration	µCi/ml	1.07E-12	4.81E-12	
3. Percent of Technical Specification Limit (ODCM 3.11.1.2(a))	%	1.33E-04	1.10E-04	
B. Tritium				
1. Total Release	Ci	4.21E+01	4.01E+01	25%
2. Average Diluted Concentration	µCi/ml	5.26E-08	5.31E-08	
3. Percent of Technical Specification Limit (ODCM 3.11.1.1)	%	1.75E-03	1.77E-03	
C. Dissolved and Entrained Noble Gases				
1. Total Release	Ci	2.50E-04	0.00E+00	25%
2. Average Diluted Concentration	µCi/ml	3.12E-13	0.00E+00	
3. Percent of Technical Specification Limit (ODCM 3.11.1.1)	%	1.56E-07	0.00E+00	
D. Gross Alpha Total Release	Ci	0.00E+00	0.00E+00	25%
E. Volume of Waste Release (Prior to Dilution)	Liters	3.94E+07	3.39E+07	
F. Volume of Dilution Water Used During Entire Period	Liters	7.99E+11	7.54E+11	

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

TABLE 2A-3
HOPE CREEK GENERATING STATION
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT
JANUARY – JUNE 2008
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	3.42E-03	4.05E-03	25%
2.	Average Diluted Concentration	μCi/ml	2.69E-10	2.76E-10	
3.	Percent of Technical Specification Limit (ODCM 3.11.1.2(a))	%	1.01E-04	1.20E-04	
B.	Tritium				
1.	Total Release	Ci	8.54E-01	1.31E+00	25%
2.	Average Diluted Concentration	μCi/ml	6.72E-08	8.94E-08	
3.	Percent of Technical Specification Limit (ODCM 3.11.1.1)	%	2.24E-03	2.98E-03	
C.	Dissolved and Entrained Noble Gases				
1.	Total Release	Ci	2.85E-07	1.86E-06	25%
2.	Average Diluted Concentration	μCi/ml	2.24E-14	1.27E-13	
3.	Percent of Technical Specification Limit (ODCM 3.11.1.1)	%	1.12E-08	6.35E-08	
D.	Gross Alpha Total Release	Ci	0.00E+00	0.00E+00	25%
E.	Volume of Waste Release (Prior to Dilution)	Liters	4.83E+07	5.00E+07	25%
F.	Volume of Dilution Water Used During Entire Period	Liters	1.27E+10	1.46E+10	25%

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

TABLE 2A-4
SALEM GENERATING STATION - UNIT 1
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT
JULY - DECEMBER 2008
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	5.09E-03	5.18E-03	25%
2. Average Diluted Concentration	µCi/ml	1.05E-11	1.56E-11	
3. Percent of Technical Specification Limit (ODCM 3.11.1.2(a))	%	3.89E-04	1.09E-03	
B. Tritium				
1. Total Release	Ci	5.75E+01	1.89E+02	25%
2. Average Diluted Concentration	µCi/ml	1.19E-07	5.67E-07	
3. Percent of Technical Specification Limit (ODCM 3.11.1.1)	%	3.97E-03	1.89E-02	
C. Dissolved and Entrained Noble Gases				
1. Total Release	Ci	0.00E+00	5.60E-05	25%
2. Average Diluted Concentration	µCi/ml	0.00E+00	1.68E-13	
3. Percent of Technical Specification Limit (ODCM 3.11.1.1)	%	0.00E+00	8.40E-08	
D. Gross Alpha				
Total Release	Ci	0.00E+00	0.00E+00	25%
E. Volume of Waste Release (Prior to Dilution)	Liters	5.15E+07	5.43E+07	
F. Volume of Dilution Water Used During Entire Period	Liters	4.85E+11	3.33E+11	

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

TABLE 2A-5
SALEM GENERATING STATION - UNIT 2
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT
JULY – DECEMBER 2008
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	2.08E-03	2.95E-03	25%
2. Average Diluted Concentration	μCi/ml	2.19E-12	3.93E-12	
3. Percent of Technical Specification Limit (ODCM 3.11.1.2(a))	%	3.40E-04	3.83E-04	
B. Tritium				
1. Total Release	Ci	7.66E+01	1.08E+02	25%
2. Average Diluted Concentration	μCi/ml	8.08E-08	1.43E-07	
3. Percent of Technical Specification Limit (ODCM 3.11.1.1)	%	2.69E-03	4.77E-03	
C. Dissolved and Entrained Noble Gases				
1. Total Release	Ci	0.00E+00	1.21E-05	25%
2. Average Diluted Concentration	μCi/ml	0.00E+00	1.62E-14	
3. Percent of Technical Specification Limit (ODCM 3.11.1.1)	%	0.00E+00	8.10E-09	
D. Gross Alpha				
Total Release	Ci	0.00E+00	0.00E+00	25%
E. Volume of Waste Release (Prior to Dilution)	Liters	5.07E+07	5.10E+07	
F. Volume of Dilution Water Used During Entire Period	Liters	9.49E+11	7.50E+11	

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

TABLE 2A-6
HOPE CREEK GENERATING STATION
 EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT
 JULY – DECEMBER 2008
 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	8.40E-03	7.48E-04	25%
2. Average Diluted Concentration	μCi/ml	4.31E-10	5.19E-11	
3. Percent of Technical Specification Limit (ODCM 3.11.1.2(a))	%	3.15E-05	5.02E-04	
B. Tritium				
1. Total Release	Ci	3.19E+00	1.12E+00	25%
2. Average Diluted Concentration	μCi/ml	1.64E-07	7.75E-08	
3. Percent of Technical Specification Limit (ODCM 3.11.1.1)	%	5.47E-03	2.58E-03	
C. Dissolved and Entrained Noble Gases				
1. Total Release	Ci	3.81E-05	0.00E+00	25%
2. Average Diluted Concentration	μCi/ml	1.95E-12	0.00E+00	
3. Percent of Technical Specification Limit (ODCM 3.11.1.1)	%	9.75E-07	0.00E+00	
D. Gross Alpha Total Release	Ci	0.00E+00	0.00E+00	25%
E. Volume of Waste Release (Prior to Dilution)	Liters	4.61E+07	5.07E+07	25%
F. Volume of Dilution Water Used During Entire Period	Liters	1.95E+10	1.44E+10	25%

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

TABLE 2B-1
SALEM GENERATING STATION - UNIT 1
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT
JANUARY - JUNE 2008
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	1.39E-03	3.90E-03
Cobalt-60	Ci	0.00E+00	0.00E+00	1.15E-03	4.18E-04
Cesium-134	Ci	0.00E+00	0.00E+00	3.58E-05	8.20E-06
Cesium-137	Ci	0.00E+00	0.00E+00	1.36E-03	3.05E-04
Niobium-97	Ci	0.00E+00	0.00E+00	3.86E-06	0.00E+00
Silver-110m	Ci	0.00E+00	0.00E+00	1.55E-05	0.00E+00
Tin-117m	Ci	0.00E+00	0.00E+00	0.00E+00	1.28E-04
Total	Ci	0.00E+00	0.00E+00	3.96E-03	4.76E-03
2. Tritium	Ci	7.99E-01	5.22E-01	1.04E+02	7.30E+01
3. Dissolved and Entrained Noble Gases					
Xenon-133	Ci	0.00E+00	0.00E+00	7.72E-04	0.00E+00
Xenon-135	Ci	0.00E+00	0.00E+00	6.66E-06	3.93E-06
Total	Ci	0.00E+00	0.00E+00	7.79E-04	3.93E-06
4. Gross Alpha		0.00E+00	0.00E+00	0.00E+00	0.00E+00

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

TABLE 2B-2
SALEM GENERATING STATION - UNIT 2
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT
JANUARY – JUNE 2008
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	4.32E-05	4.73E-08
Cobalt-57	Ci	0.00E+00	0.00E+00	0.00E+00	3.08E-08
Cobalt-58	Ci	0.00E+00	0.00E+00	2.50E-04	3.36E-03
Cobalt-60	Ci	0.00E+00	0.00E+00	3.97E-04	1.89E-04
Chromium-51	Ci	0.00E+00	0.00E+00	0.00E+00	1.05E-06
Cesium-134	Ci	0.00E+00	0.00E+00	0.00E+00	7.00E-08
Cesium-137	Ci	0.00E+00	0.00E+00	1.92E-05	4.93E-06
Iron-59	Ci	0.00E+00	0.00E+00	0.00E+00	3.10E-07
Maganese-54	Ci	0.00E+00	0.00E+00	2.25E-05	9.28E-08
Niobium-95	Ci	0.00E+00	0.00E+00	0.00E+00	5.62E-08
Antimony-125	Ci	0.00E+00	0.00E+00	1.24E-04	4.04E-07
Tin-117m	Ci	0.00E+00	0.00E+00	0.00E+00	7.12E-05
Total	Ci	0.00E+00	0.00E+00	8.55E-04	3.63E-03
2. Tritium	Ci	5.25E-01	3.15E-02	4.15E+01	4.00E+01
3. Dissolved and Entrained Noble Gases					
Xenon-133	Ci	0.00E+00	0.00E+00	2.39E-04	0.00E+00
Xenon-135	Ci	0.00E+00	0.00E+00	1.06E-05	0.00E+00
Total	Ci	0.00E+00	0.00E+00	2.49E-04	0.00E+00
4. Gross Alpha	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

TABLE 2B-3
HOPE CREEK GENERATING STATION
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT
JANUARY – JUNE 2008
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	5.95E-06	0.00E+00
Cerium-141	Ci	0.00E+00	0.00E+00	4.25E-06	5.23E-06
Cobalt-58	Ci	0.00E+00	0.00E+00	2.14E-06	3.76E-06
Cobalt-60	Ci	0.00E+00	0.00E+00	7.74E-05	2.20E-04
Cesium-137	Ci	0.00E+00	0.00E+00	1.77E-07	3.88E-07
Iron-55	Ci	0.00E+00	0.00E+00	3.28E-03	3.67E-03
Iodine-131	Ci	0.00E+00	0.00E+00	6.63E-06	0.00E+00
Iodine-133	Ci	0.00E+00	0.00E+00	7.25E-07	0.00E+00
Manganese-54	Ci	0.00E+00	0.00E+00	4.72E-05	1.35E-04
Niobium-97	Ci	0.00E+00	0.00E+00	0.00E+00	6.49E-06
Total	Ci	0.00E+00	0.00E+00	3.42E-03	4.05E-03
2. Tritium	Ci	1.74E-01	2.96E-01	6.80E-01	1.01E+00
3. Dissolved and Entrained Noble Gases					
Xenon-133	Ci	0.00E+00	0.00E+00	2.85E-07	0.00E+00
Xenon-135	Ci	0.00E+00	0.00E+00	0.00E+00	1.86E-06
Total	Ci	0.00E+00	0.00E+00	2.85E-07	1.86E-06
4. Gross Alpha	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

TABLE 2B-4
SALEM GENERATING STATION - UNIT 1
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT
JULY - DECEMBER 2008
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					
Cobalt-57	Ci	0.00E+00	0.00E+00	0.00E+00	3.81E-06
Cobalt-58	Ci	0.00E+00	0.00E+00	2.77E-03	3.96E-03
Cobalt-60	Ci	0.00E+00	0.00E+00	9.00E-04	6.36E-04
Cesium-134	Ci	0.00E+00	0.00E+00	1.75E-05	0.00E+00
Cesium-137	Ci	0.00E+00	0.00E+00	1.40E-03	5.81E-04
Total	Ci	0.00E+00	0.00E+00	5.09E-03	5.18E-03
2. Tritium	Ci	4.90E-01	2.83E-01	5.70E+01	1.89E+02
3. Dissolved and Entrained Noble Gases					
Xenon-133	Ci	0.00E+00	0.00E+00	0.00E+00	5.60E-05
Total	Ci	0.00E+00	0.00E+00	0.00E+00	5.60E-05
4. Gross Alpha	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

TABLE 2B-5
SALEM GENERATING STATION - UNIT 2
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT
JULY - DECEMBER 2008
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					
Cobalt-57	Ci	0.00E+00	0.00E+00	1.04E-05	0.00E+00
Cobalt-58	Ci	0.00E+00	0.00E+00	1.85E-03	2.83E-03
Cobalt-60	Ci	0.00E+00	0.00E+00	2.16E-04	1.16E-04
Tin-117m	Ci	0.00E+00	0.00E+00	5.81E-06	5.93E-06
Total	Ci	0.00E+00	0.00E+00	2.08E-03	2.95E-03
2. Tritium	Ci	4.09E-01	5.03E-01	7.62E+01	1.07E+02
3. Dissolved and Entrained Noble Gases					
Xenon-133	Ci	0.00E+00	0.00E+00	0.00E+00	1.21E-05
Total	Ci	0.00E+00	0.00E+00	0.00E+00	1.21E-05
4. Gross Alpha	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

TABLE 2B-6
HOPE CREEK GENERATING STATION
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT
JULY - DECEMBER 2008
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	2.02E-06
Cerium-141	Ci	0.00E+00	0.00E+00	1.24E-04	3.48E-06
Cobalt-58	Ci	0.00E+00	0.00E+00	1.43E-05	0.00E+00
Cobalt-60	Ci	0.00E+00	0.00E+00	1.20E-03	3.23E-04
Cesium-134	Ci	0.00E+00	0.00E+00	2.26E-04	1.11E-04
Cesium-137	Ci	0.00E+00	0.00E+00	3.44E-04	1.57E-04
Iron-55	Ci	0.00E+00	0.00E+00	5.50E-03	0.00E+00
Lanthanum-140	Ci	0.00E+00	0.00E+00	2.79E-04	6.80E-06
Manganese-54	Ci	0.00E+00	0.00E+00	5.78E-04	1.45E-04
Niobium-97	Ci	0.00E+00	0.00E+00	1.32E-05	0.00E+00
Zinc-65	Ci	0.00E+00	0.00E+00	1.17E-04	0.00E+00
Total	Ci	0.00E+00	0.00E+00	8.40E-03	7.48E-04
2. Tritium	Ci	3.71E-01	1.21E-01	2.82E+00	9.96E-01
3. Dissolved and Entrained Noble Gases					
Xenon-133	Ci	0.00E+00	0.00E+00	1.64E-05	0.00E+00
Xenon-135	Ci	0.00E+00	0.00E+00	2.17E-05	0.00E+00
Total	Ci	0.00E+00	0.00E+00	3.81E-05	0.00E+00
4. Gross Alpha	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00

2008 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 2008
SOLID WASTE AND IRRADIATED FUEL SHIPMENTS
SOLID RADWASTE SHIPPED OFFSITE FOR BURIAL OR DISPOSAL
 (Not Irradiated Fuel)

SGS 1A. Type of Waste (Class A)	Units ¹	6-Month Period	Est. Total Error
a. Resins, Filters, & Evap Bottoms	m ³	1.27E+01	25%
	Ci	1.12E-05	
b. Dry Active Waste – DAW-U-NA Seavan	m ³	1.58E+03	25%
	Ci	3.03E+00	
c. Irradiated Components	m ³	0.00E+00	25%
	Ci	0.00E+00	
d. Others – Dewatered Soil/NRW Resin	m ³	9.01E+01	25%
	Ci	7.56E-04	

¹ Volumes are measured, activities are estimated

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

Nuclides	Resins, Filters, Evaporator Bottoms		Dry Active Waste	
	%	Ci	%	Ci
Tritium	3.58	4.00E-07	2.83	8.58E-02
Manganese-54	0.00	0.00E+00	1.15	3.48E-02
Iron-55	56.04	6.26E-06	50.54	1.53E+00
Cobalt-58	0.00	0.00E+00	8.57	2.59E-01
Cobalt-60	4.53	5.06E-07	6.79	2.06E-01
Nickel-63	28.28	3.16E-06	22.86	6.92E-01
Cesium-134	0.00	0.00E+00	1.29	3.92E-02
Cesium-137	7.30	8.15E-07	4.77	1.44E-01
Nuclides	Others – Dewatered Soil/NRW Resin			
	%	Ci		
Potassium-40	10.58	8.00E-05		
Iron-55	48.39	3.66E-04		
Cobalt-60	3.76	2.84E-05		
Nickel-63	22.34	1.69E-04		
Cesium-137	1.37	1.04E-05		
Radium-226	12.88	9.74E-05		

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

3A. Solid Waste Disposal (Class A or less) – SGS

<u>Number of Shipments</u>	<u>Mode of Transportation</u>	<u>Destination</u>	<u>Type of Containers</u>
14	Truck	Oak Ridge, TN	Seavan/Intermodal/ Metal Boxes
17	Truck	Memphis, TN	Seavan

2008 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 2008
SOLID WASTE AND IRRADIATED FUEL SHIPMENTS
SOLID RADWASTE SHIPPED OFFSITE FOR BURIAL OR DISPOSAL
 (Not Irradiated Fuel)

SGS 1A. Type of Waste (Class A)	Units ¹	6-Month Period	Est. Total Error
a. Resins, Filters, Evaporator Bottoms	m ³	3.26E+01	25%
	Ci	9.35E-01	
b. Dry Active Waste- DAW-U-NA Seavan/DAW box	m ³	4.89E+02	25%
	Ci	8.33E+00	
c. Irradiated Components	m ³	0.00E+00	25%
	Ci	0.00E+00	
d. Others – Dewatered Soil/NRW Resin/Resin/Separator Material CNS 14-220L	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	2.97	2.24E-02	3.10	2.58E-01
Carbon-14	5.57	5.21E-02	---	---
Manganese-54	1.02	9.50E-03	1.06	8.82E-02
Iron-55	7.40	6.92E-02	51.96	4.33E+00
Cobalt-58	1.92	1.79E-02	3.65	3.04E-01
Cobalt-60	16.85	1.57E-01	7.42	6.18E-01
Nickel-63	29.82	2.79E-01	25.72	2.14E+00
Antimony-125	9.30	8.69E-02	---	---
Cesium-134	6.77	6.32E-02	1.18	9.84E-02
Cesium-137	17.77	1.68E-01	5.20	4.34E-01

3A. Solid Waste Disposal (Class A or less) – SGS

<u>Number of Shipments</u>	<u>Mode of Transportation</u>	<u>Destination</u>	<u>Type of Containers</u>
4	Truck	Oak Ridge, TN	Seavan
2	Truck	Barnwell, SC	HIC
6	Truck	Memphis, TN	Seavan/Steel Liner/Metal Boxes

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

TABLE 3B-1
HOPE CREEK GENERATING STATION
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT
JANUARY – JUNE 2008
SOLID WASTE AND IRRADIATED FUEL SHIPMENTS
SOLID RADWASTE SHIPPED OFFSITE FOR BURIAL OR DISPOSAL
 (Not Irradiated Fuel)

1A. Type of Waste (Class A)	HCGS Units ¹	6-Month Period	Est. Total Error
a. Resins, Filters, Evaporator Bottoms	m ³	0.00E+00	25%
	Ci	0.00E+00	
b. Dry Active Waste – scrap metal	m ³	3.84E+02	25%
	Ci	5.78E-01	
c. Irradiated Components	m ³	0.00E+00	25%
	Ci	0.00E+00	
d. Others – combined packages	m ³	5.20E+00	25%
	Ci	3.16E-05	

¹ Volumes are measured, activities are estimated

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

<u>Nuclides</u>	Dry Active Waste		Other Wastes	
	%	Ci	%	Ci
Chromium-51	3.33	1.92E-02	---	---
Manganese-54	3.02	1.75E-02	2.03	6.41E-07
Iron-55	78.81	4.56E-01	87.44	2.76E-05
Iron-59	2.52	1.46E-02	---	---
Cobalt-60	9.22	5.33E-02	6.99	2.21E-06
Zinc-65	1.52	8.77E-03	---	---
Silver-110m	---	---	1.52	4.79E-07

3A. Solid Waste Disposal (Class A) – HCGS

<u>Number of Shipments</u>	<u>Mode of Transportation</u>	<u>Destination</u>	<u>Type of Containers</u>
10	Truck	Memphis, TN	Seavan/Metal Boxes

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

TABLE 3B-2
HOPE CREEK GENERATING STATION
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT
JULY – DECEMBER 2008
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	5.61E+00	25%
	Ci	5.16E+01	
b. Dry Active Waste	m ³	9.06E+01	25%
	Ci	1.15E+00	
c. Irradiated Components	m ³	0.00E+00	25%
	Ci	0.00E+00	
d. Other – STP Sludge Cake	m ³	6.80E+00	25%
	Ci	3.87E-05	

¹ Volumes are measured, activities are estimated

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

Nuclides	Resins, Filters, Evap Bottoms		Dry Active Waste	
	%	Ci	%	Ci
Manganese-54	8.49	4.38E+00	1.356	1.56E-02
Iron-55	65.23	3.36E+01	88.40	1.02E+00
Cobalt-60	18.57	9.58E+00	7.33	8.41E-02
Zinc-65	1.55	7.97E-01	---	---
Cesium-134	1.92	9.93E-01	---	---
Cesium-137	2.74	1.41E+00	---	---
Nuclides	Other – STP Sludge Cake			
	%	Ci		
Iron-55	92.20	3.57E-05		
Cobalt-60	7.48	2.90E-06		

3A. Solid Waste Disposal (Class A) – HCGS

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

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

TABLE 4A-1
SALEM GENERATING STATION - UNIT 1
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT
JANUARY - JUNE 2008
SUMMARY SHEET FOR RADIOACTIVE EFFLUENTS RELEASED
IN A BATCH MODE

BATCH RELEASES ONLY

1. Dates:	January 1, 2008 - March 31, 2008	
2. Type of release:	Gaseous	
3. Number of releases during quarter:	248	
4. Total time duration for all releases of type listed above:	1.98E+04	Min.
5. Maximum duration for release of type listed above:	1.58E+02	Min.
6. Average duration for release of type listed above:	7.97E+01	Min.
7. Minimum duration for release of type listed above:	3.70E+01	Min.
8. Average stream flow (dilution flow) during period of release:	N/A	

BATCH RELEASES ONLY

1. Dates:	April 1, 2008 - June 30, 2008	
2. Type of release:	Gaseous	
3. Number of releases during quarter:	216	
4. Total time duration for all releases of type listed above:	1.79E+04	Min.
5. Maximum duration for release of type listed above:	1.50E+03	Min.
6. Average duration for release of type listed above:	8.28E+01	Min.
7. Minimum duration for release of type listed above:	3.00E+01	Min.
8. Average stream flow (dilution flow) during period of release:	N/A	

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

TABLE 4A-1 (continued)
SALEM GENERATING STATION - UNIT 1
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT
JULY - SEPTEMBER 2008
SUMMARY SHEET FOR RADIOACTIVE EFFLUENTS RELEASED
IN A BATCH MODE

BATCH RELEASES ONLY

1. Dates:	July 1, 2008 - September 30, 2008		
2. Type of release:	Gaseous		
3. Number of releases during quarter:	223		
4. Total time duration for all releases of type listed above:	1.65E+04	Min.	
5. Maximum duration for release of type listed above:	1.90E+02	Min.	
6. Average duration for release of type listed above:	7.41E+01	Min.	
7. Minimum duration for release of type listed above:	3.00E+01	Min.	
8. Average stream flow (dilution flow) during period of release:	N/A		

BATCH RELEASES ONLY

1. Dates:	October 1, 2008 - December 31, 2008		
2. Type of release:	Gaseous		
3. Number of releases during quarter:	169		
4. Total time duration for all releases of type listed above:	1.61E+04	Min.	
5. Maximum duration for release of type listed above:	1.52E+03	Min.	
6. Average duration for release of type listed above:	9.51E+01	Min.	
7. Minimum duration for release of type listed above:	3.30E+01	Min.	
8. Average stream flow (dilution flow) during period of release:	N/A		

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

TABLE 4A-2
SALEM GENERATING STATION - UNIT 2
 EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT
 JANUARY – JUNE 2008
 SUMMARY SHEET FOR RADIOACTIVE EFFLUENTS RELEASED
 IN A BATCH MODE

BATCH RELEASES ONLY

1. Dates:	January 1, 2008 – March 31, 2008	
2. Type of release:	Gaseous	
3. Number of releases during quarter:	114	
4. Total time duration for all releases of type listed above:	8.14E+03	Min.
5. Maximum duration for release of type listed above:	1.40E+02	Min.
6. Average duration for release of type listed above:	7.14E+01	Min.
7. Minimum duration for release of type listed above:	3.60E+01	Min.
8. Average stream flow (dilution flow) during period of release:	N/A	

BATCH RELEASES ONLY

1. Dates:	April 1, 2008 – June 30, 2008	
2. Type of release:	Gaseous	
3. Number of releases during quarter:	79	
4. Total time duration for all releases of type listed above:	5.92E+03	Min.
5. Maximum duration for release of type listed above:	1.65E+02	Min.
6. Average duration for release of type listed above:	7.49E+01	Min.
7. Minimum duration for release of type listed above:	2.30E+01	Min.
8. Average stream flow (dilution flow) during period of release:	N/A	

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

TABLE 4A-2 (continued)
SALEM GENERATING STATION - UNIT 2
 EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT
 JANUARY – DECEMBER 2008
 SUMMARY SHEET FOR RADIOACTIVE EFFLUENTS RELEASED
 IN A BATCH MODE

BATCH RELEASES ONLY

1. Dates:	July 1, 2008 – September 30, 2008		
2. Type of release:	Gaseous		
3. Number of releases during quarter:	88		
4. Total time duration for all releases of type listed above:	5.67E+03	Min.	
5. Maximum duration for release of type listed above:	1.35E+02	Min.	
6. Average duration for release of type listed above:	6.44E+01	Min.	
7. Minimum duration for release of type listed above:	4.20E+01	Min.	
8. Average stream flow (dilution flow) during period of release:	N/A		

BATCH RELEASES ONLY

1. Dates:	October 1, 2008 – December 31, 2008		
2. Type of release:	Gaseous		
3. Number of releases during quarter:	93		
4. Total time duration for all releases of type listed above:	6.22E+03	Min.	
5. Maximum duration for release of type listed above:	1.25E+02	Min.	
6. Average duration for release of type listed above:	6.69E+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		

TABLE 4A-3
HOPE CREEK GENERATING STATION
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT
JANUARY – JUNE 2008
SUMMARY SHEET FOR RADIOACTIVE EFFLUENTS RELEASED
IN A BATCH MODE

There were no gaseous effluent batch releases during from the Hope Creek Generating Station 2008.

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

TABLE 4B-1
SALEM GENERATING STATION - UNIT 1
 EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT
 JANUARY – JUNE 2008
 SUMMARY SHEET FOR RADIOACTIVE EFFLUENTS RELEASED
 IN A BATCH MODE

BATCH RELEASES ONLY

1. Dates:	January 1, 2008 – March 31, 2008		
2. Type of release:	Liquid		
3. Number of releases during quarter:	23		
4. Total time duration for all releases of type listed above:	6.66E+03	Min	
5. Maximum duration for release of type listed above:	3.99E+02	Min	
6. Average duration for release of type listed above:	2.90E+02	Min	
7. Minimum duration for release of type listed above:	1.00E+00	Min	
8. Average stream flow (dilution flow) during period of release:	8.68E+05	GPM	

BATCH RELEASES ONLY

1. Dates:	April 1, 2008 – June 30, 2008		
2. Type of release:	Liquid		
3. Number of releases during quarter:	22		
4. Total time duration for all releases of type listed above:	5.35E+03	Min.	
5. Maximum duration for release of type listed above:	4.53E+02	Min.	
6. Average duration for release of type listed above:	2.43E+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:	9.21E+05	GPM	

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

TABLE 4B-1 (continued)
SALEM GENERATING STATION - UNIT 1
 EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT
 JANUARY – JUNE 2008
 SUMMARY SHEET FOR RADIOACTIVE EFFLUENTS RELEASED
 IN A BATCH MODE

BATCH RELEASES ONLY

1. Dates:	July 1, 2008 – September 30, 2008		
2. Type of release:	Liquid		
3. Number of releases during quarter:	26		
4. Total time duration for all releases of type listed above:	6.43E+03	Min	
5. Maximum duration for release of type listed above:	5.02E+02	Min	
6. Average duration for release of type listed above:	2.47E+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:	9.74E+05	GPM	

BATCH RELEASES ONLY

1. Dates:	October 1, 2008 – December 31, 2008		
2. Type of release:	Liquid		
3. Number of releases during quarter:	22		
4. Total time duration for all releases of type listed above:	5.92E+03	Min.	
5. Maximum duration for release of type listed above:	4.61E+02	Min.	
6. Average duration for release of type listed above:	2.69E+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:	6.70E+05	GPM	

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

TABLE 4B-2
SALEM GENERATING STATION - UNIT 2
 EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT
 JANUARY – JUNE 2008
 SUMMARY SHEET FOR RADIOACTIVE EFFLUENTS RELEASED
 IN A BATCH MODE

BATCH RELEASES ONLY

1. Dates:	January 1, 2008 – March 31, 2008		
2. Type of release:	Liquid		
3. Number of releases during quarter:	11		
4. Total time duration for all releases of type listed above:	3.69E+03		Min
5. Maximum duration for release of type listed above:	4.15E+02		Min
6. Average duration for release of type listed above:	3.35E+02		Min
7. Minimum duration for release of type listed above:	2.30E+02		Min
8. Average stream flow (dilution flow) during period of release:	1.61E+06		GPM

BATCH RELEASES ONLY

1. Dates:	April 1, 2008 – June 30, 2008		
2. Type of release:	Liquid		
3. Number of releases during quarter:	11		
4. Total time duration for all releases of type listed above:	3.91E+03		Min.
5. Maximum duration for release of type listed above:	6.08E+02		Min.
6. Average duration for release of type listed above:	3.55E+02		Min.
7. Minimum duration for release of type listed above:	1.00E+00		Min.
8. Average stream flow (dilution flow) during period of release:	1.51E+06		GPM

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

TABLE 4B-2 (continued)
SALEM GENERATING STATION - UNIT 2
 EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT
 JULY - DECEMBER 2008
 SUMMARY SHEET FOR RADIOACTIVE EFFLUENTS RELEASED
 IN A BATCH MODE

BATCH RELEASES ONLY

1. Dates:	July 1, 2008 - September 30, 2008		
2. Type of release:	Liquid		
3. Number of releases during quarter:	9		
4. Total time duration for all releases of type listed above:	4.07E+03	Min.	
5. Maximum duration for release of type listed above:	1.26E+03	Min.	
6. Average duration for release of type listed above:	4.52E+02	Min.	
7. Minimum duration for release of type listed above:	1.61E+02	Min.	
8. Average stream flow (dilution flow) during period of release:	1.91E+06	GPM	

BATCH RELEASES ONLY

1. Dates:	October 1, 2008 - December 31, 2008		
2. Type of release:	Liquid		
3. Number of releases during quarter:	14		
4. Total time duration for all releases of type listed above:	5.27E+03	Min.	
5. Maximum duration for release of type listed above:	5.10E+02	Min.	
6. Average duration for release of type listed above:	3.77E+02	Min.	
7. Minimum duration for release of type listed above:	2.71E+02	Min.	
8. Average stream flow (dilution flow) during period of release:	1.51E+06	GPM	

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

TABLE 4B-3
HOPE CREEK GENERATING STATION
 EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT
 JANUARY – DECEMBER 2008
 SUMMARY SHEET FOR RADIOACTIVE EFFLUENTS RELEASED
 IN A BATCH MODE

BATCH RELEASES ONLY

1. Dates:	January 1, 2008 – June 30, 2008	
2. Type of release:	Liquid	
3. Number of releases during quarter:	24	
4. Total time duration for all releases of type listed above:	1.46E+03	Min.
5. Maximum duration for release of type listed above:	8.00E+01	Min.
6. Average duration for release of type listed above:	6.10E+01	Min.
7. Minimum duration for release of type listed above:	3.30E+01	Min.
8. Average stream flow (dilution flow) during period of release:	2.75E+04	GPM

BATCH RELEASES ONLY

1. Dates:	July 1, 2008 – December 31, 2008	
2. Type of release:	Liquid	
3. Number of releases during quarter:	56	
4. Total time duration for all releases of type listed above:	3.75E+03	Min.
5. Maximum duration for release of type listed above:	8.80E+01	Min.
6. Average duration for release of type listed above:	6.69E+01	Min.
7. Minimum duration for release of type listed above:	2.51E+01	Min.
8. Average stream flow (dilution flow) during period of release:	3.41E+04	GPM

APPENDIX A

METEOROLOGICAL
DATA

Lapse Rate
Wind Distributions
300 – 33 foot

1/2008 – 3/2008

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 01/08-03/08

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS

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

LAPSE RATE: LE -1.9 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	3	0.1	14	0.6	3	0.1	0	0.0	0	0.0	20	0.9
NNE	0	0.0	0	0.0	0	0.0	3	0.1	0	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	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	1	0.0	0	0.0	0	0.0	0	0.0	1	0.0
SE	0	0.0	0	0.0	1	0.0	2	0.1	6	0.3	3	0.1	0	0.0	12	0.6
SSE	0	0.0	0	0.0	2	0.1	7	0.3	1	0.0	4	0.2	0	0.0	14	0.6
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	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	3	0.1	1	0.0	0	0.0	0	0.0	4	0.2
W	0	0.0	0	0.0	0	0.0	9	0.4	11	0.5	5	0.2	0	0.0	25	1.2
WNW	0	0.0	0	0.0	4	0.2	2	0.1	15	0.7	1	0.0	0	0.0	22	1.0
NW	0	0.0	0	0.0	0	0.0	10	0.5	16	0.7	7	0.3	0	0.0	33	1.5
NNW	0	0.0	0	0.0	2	0.1	10	0.5	12	0.6	0	0.0	0	0.0	24	1.1
	0	0.0	0	0.0	16	0.7	66	3.1	65	3.0	20	0.9	0	0.0	167	7.7

MEAN WIND SPEED: 12.9
MISSING: 0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 01/08-03/08

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

LAPSE RATE: -1.8 TO -1.7 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	2	0.1	2	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	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	0	0.0	1	0.0	1	0.0	2	0.1	0	0.0	4	0.2
SSE	0	0.0	0	0.0	4	0.2	1	0.0	0	0.0	0	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	0	0.0	0	0.0	0	0.0	0	0.0	0	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	3	0.1	2	0.1	2	0.1	0	0.0	0	0.0	7	0.3
W	0	0.0	0	0.0	3	0.1	5	0.2	6	0.3	1	0.0	0	0.0	15	0.7
WNW	0	0.0	0	0.0	2	0.1	6	0.3	2	0.1	1	0.0	0	0.0	11	0.5
NW	0	0.0	0	0.0	8	0.4	5	0.2	5	0.2	1	0.0	0	0.0	19	0.9
NNW	0	0.0	0	0.0	4	0.2	7	0.3	5	0.2	0	0.0	0	0.0	16	0.7
	0	0.0	0	0.0	36	1.7	37	1.7	21	1.0	5	0.2	0	0.0	99	4.6

MEAN WIND SPEED: 10.0
MISSING: 0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 01/08-03/08

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

LAPSE RATE: -1.6 TO -1.5 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	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	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	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	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	2	0.1	1	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	2	0.1	2	0.1	3	0.1	1	0.0	0	0.0	8	0.4
SSE	0	0.0	0	0.0	2	0.1	1	0.0	2	0.1	1	0.0	0	0.0	6	0.3
S	0	0.0	0	0.0	3	0.1	0	0.0	0	0.0	0	0.0	0	0.0	3	0.1
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	2	0.1	3	0.1	0	0.0	0	0.0	0	0.0	5	0.2
W	0	0.0	0	0.0	1	0.0	8	0.4	4	0.2	0	0.0	0	0.0	13	0.6
WNW	0	0.0	0	0.0	1	0.0	4	0.2	6	0.3	3	0.1	1	0.0	15	0.7
NW	0	0.0	0	0.0	4	0.2	3	0.1	9	0.4	0	0.0	0	0.0	16	0.7
NNW	0	0.0	0	0.0	2	0.1	8	0.4	2	0.1	0	0.0	0	0.0	12	0.6
	0	0.0	0	0.0	27	1.2	38	1.8	26	1.2	5	0.2	1	0.0	97	4.5

MEAN WIND SPEED: 10.8
 MISSING: 0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 01/08-03/08

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

LAPSE RATE: -1.4 TO -0.5 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	14	0.6	10	0.5	2	0.1	0	0.0	0	0.0	28	1.3
NNE	0	0.0	3	0.1	23	1.1	3	0.1	0	0.0	0	0.0	0	0.0	29	1.3
NE	0	0.0	2	0.1	24	1.1	4	0.2	0	0.0	0	0.0	0	0.0	30	1.4
ENE	0	0.0	4	0.2	21	1.0	4	0.2	0	0.0	0	0.0	0	0.0	29	1.3
E	0	0.0	6	0.3	13	0.6	0	0.0	0	0.0	0	0.0	0	0.0	19	0.9
ESE	0	0.0	4	0.2	15	0.7	6	0.3	0	0.0	0	0.0	0	0.0	25	1.2
SE	0	0.0	2	0.1	8	0.4	8	0.4	16	0.7	4	0.2	0	0.0	38	1.8
SSE	0	0.0	1	0.0	7	0.3	8	0.4	3	0.1	0	0.0	0	0.0	19	0.9
S	0	0.0	1	0.0	7	0.3	8	0.4	10	0.5	2	0.1	0	0.0	28	1.3
SSW	0	0.0	4	0.2	9	0.4	10	0.5	0	0.0	0	0.0	0	0.0	23	1.1
SW	0	0.0	1	0.0	12	0.6	6	0.3	0	0.0	0	0.0	0	0.0	19	0.9
WSW	0	0.0	2	0.1	8	0.4	16	0.7	1	0.0	0	0.0	0	0.0	27	1.2
W	0	0.0	2	0.1	4	0.2	27	1.2	16	0.7	8	0.4	1	0.0	58	2.7
WNW	0	0.0	2	0.1	8	0.4	49	2.3	39	1.8	5	0.2	1	0.0	104	4.8
NW	0	0.0	0	0.0	12	0.6	31	1.4	38	1.8	17	0.8	0	0.0	98	4.5
NNW	0	0.0	1	0.0	18	0.8	25	1.2	41	1.9	3	0.1	0	0.0	88	4.1
	0	0.0	37	1.7	203	9.4	215	9.9	166	7.7	39	1.8	2	0.1	662	30.6

MEAN WIND SPEED: 10.2
 MISSING: 4

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 01/08-03/08

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

LAPSE RATE: -0.4 TO 1.5 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	6	0.3	37	1.7	11	0.5	4	0.2	0	0.0	0	0.0	58	2.7
NNE	0	0.0	10	0.5	38	1.8	3	0.1	0	0.0	0	0.0	0	0.0	51	2.4
NE	0	0.0	5	0.2	13	0.6	1	0.0	0	0.0	0	0.0	0	0.0	19	0.9
ENE	0	0.0	12	0.6	17	0.8	1	0.0	0	0.0	0	0.0	0	0.0	30	1.4
E	0	0.0	16	0.7	17	0.8	4	0.2	0	0.0	0	0.0	0	0.0	37	1.7
ESE	0	0.0	7	0.3	15	0.7	1	0.0	0	0.0	0	0.0	0	0.0	23	1.1
SE	0	0.0	3	0.1	25	1.2	14	0.6	11	0.5	2	0.1	0	0.0	55	2.5
SSE	0	0.0	6	0.3	14	0.6	16	0.7	6	0.3	1	0.0	0	0.0	43	2.0
S	0	0.0	6	0.3	14	0.6	11	0.5	7	0.3	0	0.0	0	0.0	38	1.8
SSW	0	0.0	5	0.2	21	1.0	12	0.6	13	0.6	1	0.0	0	0.0	52	2.4
SW	0	0.0	8	0.4	20	0.9	9	0.4	9	0.4	0	0.0	0	0.0	46	2.1
WSW	0	0.0	5	0.2	25	1.2	6	0.3	3	0.1	0	0.0	1	0.0	40	1.9
W	0	0.0	4	0.2	17	0.8	23	1.1	3	0.1	0	0.0	0	0.0	47	2.2
WNW	0	0.0	7	0.3	12	0.6	10	0.5	1	0.0	0	0.0	0	0.0	30	1.4
NW	0	0.0	5	0.2	44	2.0	34	1.6	6	0.3	0	0.0	0	0.0	89	4.1
NNW	0	0.0	6	0.3	51	2.4	50	2.3	9	0.4	0	0.0	0	0.0	116	5.4
	0	0.0	111	5.1	380	17.6	206	9.5	72	3.3	4	0.2	1	0.0	774	35.8

MEAN WIND SPEED: 7.3
 MISSING: 10

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 01/08-03/08

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

LAPSE RATE: 1.6 TO 4.0 DEG C/100M
CLASS F

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	4	0.2	13	0.6	1	0.0	0	0.0	0	0.0	0	0.0	18	0.8
NNE	0	0.0	3	0.1	17	0.8	0	0.0	0	0.0	0	0.0	0	0.0	20	0.9
NE	0	0.0	2	0.1	18	0.8	0	0.0	0	0.0	0	0.0	0	0.0	20	0.9
ENE	0	0.0	5	0.2	4	0.2	0	0.0	0	0.0	0	0.0	0	0.0	9	0.4
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	5	0.2	8	0.4	0	0.0	0	0.0	0	0.0	0	0.0	13	0.6
SE	0	0.0	1	0.0	13	0.6	12	0.6	1	0.0	2	0.1	0	0.0	29	1.3
SSE	0	0.0	2	0.1	9	0.4	2	0.1	2	0.1	0	0.0	0	0.0	15	0.7
S	0	0.0	4	0.2	1	0.0	5	0.2	9	0.4	0	0.0	0	0.0	19	0.9
SSW	0	0.0	1	0.0	3	0.1	4	0.2	19	0.9	3	0.1	0	0.0	30	1.4
SW	0	0.0	1	0.0	4	0.2	3	0.1	3	0.1	3	0.1	0	0.0	14	0.6
WSW	0	0.0	2	0.1	2	0.1	0	0.0	2	0.1	0	0.0	0	0.0	6	0.3
W	0	0.0	0	0.0	2	0.1	0	0.0	0	0.0	0	0.0	0	0.0	2	0.1
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	5	0.2	7	0.3	0	0.0	0	0.0	0	0.0	0	0.0	12	0.6
NNW	0	0.0	0	0.0	8	0.4	1	0.0	0	0.0	0	0.0	0	0.0	9	0.4
	0	0.0	38	1.8	116	5.4	28	1.3	36	1.7	8	0.4	0	0.0	226	10.5

MEAN WIND SPEED: 7.6
MISSING: 5

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 01/08-03/08

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

LAPSE RATE: GT 4.0 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	2	0.1	4	0.2	0	0.0	0	0.0	0	0.0	0	0.0	6	0.3
NNE	0	0.0	2	0.1	3	0.1	0	0.0	0	0.0	0	0.0	0	0.0	5	0.2
NE	0	0.0	0	0.0	6	0.3	0	0.0	0	0.0	0	0.0	0	0.0	6	0.3
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	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	1	0.0	4	0.2	0	0.0	0	0.0	0	0.0	0	0.0	5	0.2
SE	0	0.0	3	0.1	20	0.9	23	1.1	26	1.2	2	0.1	0	0.0	74	3.4
SSE	0	0.0	1	0.0	11	0.5	9	0.4	3	0.1	1	0.0	0	0.0	25	1.2
S	0	0.0	2	0.1	0	0.0	2	0.1	3	0.1	0	0.0	0	0.0	7	0.3
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	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	1	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	1	0.0	2	0.1	0	0.0	0	0.0	0	0.0	0	0.0	3	0.1
	0	0.0	14	0.6	52	2.4	35	1.6	32	1.5	3	0.1	0	0.0	136	6.3

MEAN WIND SPEED: 9.2
MISSING: 1

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 01/08-03/08

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			
N	0	0.0	14	0.6	77	3.6	44	2.0	9	0.4	0	0.0	0	0.0	144	6.7
NNE	0	0.0	18	0.8	83	3.8	12	0.6	0	0.0	0	0.0	0	0.0	113	5.2
NE	0	0.0	9	0.4	64	3.0	7	0.3	0	0.0	0	0.0	0	0.0	80	3.7
ENE	0	0.0	22	1.0	44	2.0	7	0.3	0	0.0	0	0.0	0	0.0	73	3.4
E	0	0.0	25	1.2	39	1.8	7	0.3	0	0.0	0	0.0	0	0.0	71	3.3
ESE	0	0.0	17	0.8	43	2.0	8	0.4	0	0.0	0	0.0	0	0.0	68	3.1
SE	0	0.0	9	0.4	69	3.2	62	2.9	64	3.0	16	0.7	0	0.0	220	10.2
SSE	0	0.0	10	0.5	49	2.3	44	2.0	17	0.8	7	0.3	0	0.0	127	5.9
S	0	0.0	13	0.6	26	1.2	27	1.2	29	1.3	2	0.1	0	0.0	97	4.5
SSW	0	0.0	10	0.5	35	1.6	27	1.2	32	1.5	4	0.2	0	0.0	108	5.0
SW	0	0.0	10	0.5	41	1.9	23	1.1	12	0.6	3	0.1	0	0.0	89	4.1
WSW	0	0.0	9	0.4	40	1.9	30	1.4	9	0.4	0	0.0	1	0.0	89	4.1
W	0	0.0	6	0.3	27	1.2	72	3.3	40	1.9	14	0.6	1	0.0	160	7.4
WNW	0	0.0	10	0.5	31	1.4	71	3.3	63	2.9	10	0.5	2	0.1	187	8.7
NW	0	0.0	10	0.5	75	3.5	83	3.8	74	3.4	25	1.2	0	0.0	267	12.4
NNW	0	0.0	8	0.4	87	4.0	101	4.7	69	3.2	3	0.1	0	0.0	268	12.4
	0	0.0	200	9.3	830	38.4	625	28.9	418	19.3	84	3.9	4	0.2	2161	100.0

MISSING HOURS: 23

MEAN WIND SPEED: 9.0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 01/08-03/08

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	14	0.6	77	3.6	44	2.0	9	0.4	0	0.0	0	0.0	144	6.7
NNE	0	0.0	18	0.8	83	3.8	12	0.6	0	0.0	0	0.0	0	0.0	113	5.2
NE	0	0.0	9	0.4	64	3.0	7	0.3	0	0.0	0	0.0	0	0.0	80	3.7
ENE	0	0.0	22	1.0	44	2.0	7	0.3	0	0.0	0	0.0	0	0.0	73	3.4
E	0	0.0	25	1.2	39	1.8	7	0.3	0	0.0	0	0.0	0	0.0	71	3.3
ESE	0	0.0	17	0.8	43	2.0	8	0.4	0	0.0	0	0.0	0	0.0	68	3.1
SE	0	0.0	9	0.4	69	3.2	62	2.9	64	3.0	16	0.7	0	0.0	220	10.2
SSE	0	0.0	10	0.5	49	2.3	44	2.0	17	0.8	7	0.3	0	0.0	127	5.9
S	0	0.0	13	0.6	26	1.2	27	1.2	29	1.3	2	0.1	0	0.0	97	4.5
SSW	0	0.0	10	0.5	35	1.6	27	1.2	32	1.5	4	0.2	0	0.0	108	5.0
SW	0	0.0	10	0.5	41	1.9	23	1.1	12	0.6	3	0.1	0	0.0	89	4.1
WSW	0	0.0	9	0.4	40	1.8	30	1.4	9	0.4	0	0.0	1	0.0	89	4.1
W	0	0.0	6	0.3	28	1.3	73	3.4	40	1.8	14	0.6	1	0.0	162	7.5
WNW	0	0.0	10	0.5	31	1.4	71	3.3	63	2.9	10	0.5	2	0.1	187	8.6
NW	0	0.0	10	0.5	75	3.5	83	3.8	74	3.4	25	1.2	0	0.0	267	12.3
NNW	0	0.0	8	0.4	87	4.0	101	4.7	69	3.2	3	0.1	0	0.0	268	12.4
	0	0.0	200	9.2	831	38.4	626	28.9	418	19.3	84	3.9	4	0.2	2163	100.0

MISSING HOURS: 21

MEAN WIND SPEED: 9.0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 01/08-03/08

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

LAPSE RATE: LE -1.9 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	8	0.4	4	0.2	0	0.0	0	0.0	12	0.6
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	0	0.0	0	0.0	0	0.0	0	0.0
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	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	1	0.0	0	0.0	0	0.0	0	0.0	1	0.0
SE	0	0.0	0	0.0	2	0.1	3	0.1	3	0.1	3	0.1	4	0.2	15	0.7
SSE	0	0.0	0	0.0	0	0.0	4	0.2	1	0.0	3	0.1	2	0.1	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	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	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	1	0.0	4	0.2	1	0.0	1	0.0	7	0.3
W	0	0.0	0	0.0	0	0.0	2	0.1	10	0.5	7	0.3	6	0.3	25	1.2
WNW	0	0.0	0	0.0	2	0.1	3	0.1	8	0.4	15	0.7	1	0.0	29	1.4
NW	0	0.0	0	0.0	0	0.0	2	0.1	9	0.4	8	0.4	7	0.3	26	1.2
NNW	0	0.0	0	0.0	1	0.0	10	0.5	14	0.7	4	0.2	0	0.0	29	1.4
	0	0.0	0	0.0	8	0.4	43	2.0	53	2.5	41	1.9	21	1.0	166	7.8

MEAN WIND SPEED: 16.5
 MISSING: 1

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 01/08-03/08

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

LAPSE RATE: -1.8 TO -1.7 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	4	0.2	1	0.0	0	0.0	0	0.0	6	0.3
NNE	0	0.0	0	0.0	1	0.0	2	0.1	0	0.0	0	0.0	0	0.0	3	0.1
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	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	0	0.0	3	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	2	0.1	1	0.0	0	0.0	2	0.1	5	0.2
SSE	0	0.0	0	0.0	3	0.1	0	0.0	0	0.0	0	0.0	0	0.0	3	0.1
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	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	1	0.0	1	0.0	0	0.0	0	0.0	3	0.1
WSW	0	0.0	0	0.0	4	0.2	2	0.1	1	0.0	2	0.1	0	0.0	9	0.4
W	0	0.0	0	0.0	2	0.1	5	0.2	5	0.2	3	0.1	3	0.1	18	0.8
WNW	0	0.0	0	0.0	1	0.0	4	0.2	2	0.1	3	0.1	1	0.0	11	0.5
NW	0	0.0	0	0.0	4	0.2	4	0.2	5	0.2	3	0.1	1	0.0	17	0.8
NNW	0	0.0	0	0.0	2	0.1	7	0.3	5	0.2	2	0.1	0	0.0	16	0.7
	0	0.0	0	0.0	22	1.0	36	1.7	21	1.0	13	0.6	7	0.3	99	4.6

MEAN WIND SPEED: 13.0
 MISSING: 0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 01/08-03/08

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

LAPSE RATE: -1.6 TO -1.5 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	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	0	0.0	1	0.0	0	0.0	0	0.0	1	0.0
NE	0	0.0	0	0.0	2	0.1	1	0.0	1	0.0	0	0.0	0	0.0	4	0.2
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	2	0.1	1	0.0	0	0.0	0	0.0	0	0.0	3	0.1
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	0	0.0	0	0.0	2	0.1	4	0.2	1	0.0	7	0.3
SSE	0	0.0	0	0.0	2	0.1	1	0.0	0	0.0	1	0.0	0	0.0	4	0.2
S	0	0.0	0	0.0	3	0.1	0	0.0	0	0.0	0	0.0	0	0.0	3	0.1
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	1	0.0	2	0.1	3	0.1	0	0.0	0	0.0	6	0.3
W	0	0.0	0	0.0	0	0.0	2	0.1	8	0.4	3	0.1	5	0.2	18	0.8
WNW	0	0.0	0	0.0	1	0.0	0	0.0	4	0.2	5	0.2	0	0.0	10	0.5
NW	0	0.0	0	0.0	1	0.0	4	0.2	3	0.1	5	0.2	2	0.1	15	0.7
NNW	0	0.0	0	0.0	2	0.1	11	0.5	3	0.1	2	0.1	0	0.0	18	0.8
	0	0.0	0	0.0	17	0.8	27	1.3	25	1.2	20	0.9	8	0.4	97	4.5

MEAN WIND SPEED: 14.4
MISSING: 0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 01/08-03/08

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

LAPSE RATE: -1.4 TO -0.5 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	6	0.3	10	0.5	2	0.1	1	0.0	0	0.0	19	0.9
NNE	0	0.0	1	0.0	11	0.5	12	0.6	3	0.1	0	0.0	0	0.0	27	1.3
NE	0	0.0	0	0.0	15	0.7	11	0.5	3	0.1	0	0.0	0	0.0	29	1.4
ENE	0	0.0	0	0.0	10	0.5	12	0.6	3	0.1	0	0.0	0	0.0	25	1.2
E	0	0.0	2	0.1	14	0.7	2	0.1	0	0.0	0	0.0	0	0.0	18	0.8
ESE	0	0.0	0	0.0	8	0.4	11	0.5	5	0.2	0	0.0	0	0.0	24	1.1
SE	0	0.0	0	0.0	9	0.4	1	0.0	8	0.4	11	0.5	9	0.4	38	1.8
SSE	0	0.0	1	0.0	4	0.2	6	0.3	6	0.3	4	0.2	0	0.0	21	1.0
S	0	0.0	1	0.0	5	0.2	2	0.1	10	0.5	3	0.1	0	0.0	21	1.0
SSW	0	0.0	2	0.1	11	0.5	10	0.5	5	0.2	0	0.0	0	0.0	28	1.3
SW	0	0.0	1	0.0	3	0.1	14	0.7	2	0.1	0	0.0	0	0.0	20	0.9
WSW	0	0.0	2	0.1	3	0.1	9	0.4	12	0.6	2	0.1	1	0.0	29	1.4
W	0	0.0	1	0.0	5	0.2	7	0.3	32	1.5	16	0.7	17	0.8	78	3.6
WNW	0	0.0	0	0.0	4	0.2	11	0.5	46	2.1	27	1.3	10	0.5	98	4.6
NW	0	0.0	1	0.0	4	0.2	10	0.5	24	1.1	36	1.7	18	0.8	93	4.3
NNW	0	0.0	1	0.0	3	0.1	18	0.8	17	0.8	26	1.2	10	0.5	75	3.5
	0	0.0	13	0.6	115	5.4	146	6.8	178	8.3	126	5.9	65	3.0	643	30.0

MEAN WIND SPEED: 14.6
MISSING: 23

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 01/08-03/08

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

LAPSE RATE: -0.4 TO 1.5 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	SUM PERCENT	SUM PERCENT	SUM PERCENT	SUM PERCENT	SUM PERCENT	SUM PERCENT			
N	0	0.0	0	0.0	8	0.4	21	1.0	19	0.9	3	0.1	0	0.0	51	2.4
NNE	0	0.0	0	0.0	10	0.5	17	0.8	7	0.3	0	0.0	0	0.0	34	1.6
NE	0	0.0	3	0.1	9	0.4	14	0.7	1	0.0	0	0.0	0	0.0	27	1.3
ENE	0	0.0	2	0.1	19	0.9	12	0.6	5	0.2	0	0.0	0	0.0	38	1.8
E	0	0.0	6	0.3	18	0.8	12	0.6	0	0.0	0	0.0	0	0.0	36	1.7
ESE	0	0.0	2	0.1	8	0.4	10	0.5	5	0.2	0	0.0	1	0.0	26	1.2
SE	0	0.0	2	0.1	7	0.3	19	0.9	8	0.4	7	0.3	8	0.4	51	2.4
SSE	0	0.0	0	0.0	5	0.2	11	0.5	9	0.4	5	0.2	2	0.1	32	1.5
S	0	0.0	1	0.0	9	0.4	13	0.6	13	0.6	2	0.1	1	0.0	39	1.8
SSW	0	0.0	3	0.1	11	0.5	20	0.9	9	0.4	5	0.2	11	0.5	59	2.8
SW	0	0.0	2	0.1	10	0.5	16	0.7	4	0.2	4	0.2	5	0.2	41	1.9
WSW	0	0.0	1	0.0	6	0.3	23	1.1	8	0.4	3	0.1	4	0.2	45	2.1
W	0	0.0	3	0.1	5	0.2	21	1.0	21	1.0	1	0.0	0	0.0	51	2.4
WNW	0	0.0	5	0.2	9	0.4	15	0.7	6	0.3	1	0.0	0	0.0	36	1.7
NW	0	0.0	1	0.0	6	0.3	39	1.8	51	2.4	9	0.4	0	0.0	106	5.0
NNW	0	0.0	4	0.2	8	0.4	27	1.3	47	2.2	11	0.5	0	0.0	97	4.5
	0	0.0	35	1.6	148	6.9	290	13.6	213	10.0	51	2.4	32	1.5	769	35.9

MEAN WIND SPEED: 11.7
 MISSING: 15

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 01/08-03/08

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

LAPSE RATE: 1.6 TO 4.0 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	4	0.2	1	0.0	2	0.1	0	0.0	0	0.0	9	0.4
NNE	0	0.0	1	0.0	0	0.0	10	0.5	4	0.2	0	0.0	0	0.0	15	0.7
NE	0	0.0	0	0.0	2	0.1	11	0.5	3	0.1	0	0.0	0	0.0	16	0.7
ENE	0	0.0	1	0.0	7	0.3	6	0.3	0	0.0	0	0.0	0	0.0	14	0.7
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	2	0.1	1	0.0	2	0.1	1	0.0	0	0.0	0	0.0	6	0.3
SE	0	0.0	1	0.0	6	0.3	12	0.6	4	0.2	4	0.2	2	0.1	29	1.4
SSE	0	0.0	0	0.0	7	0.3	4	0.2	3	0.1	2	0.1	1	0.0	17	0.8
S	0	0.0	3	0.1	6	0.3	0	0.0	2	0.1	10	0.5	2	0.1	23	1.1
SSW	0	0.0	2	0.1	2	0.1	1	0.0	7	0.3	7	0.3	16	0.7	35	1.6
SW	0	0.0	2	0.1	2	0.1	2	0.1	4	0.2	2	0.1	6	0.3	18	0.8
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	2	0.1	2	0.1	4	0.2	0	0.0	0	0.0	0	0.0	8	0.4
WNW	0	0.0	1	0.0	1	0.0	2	0.1	0	0.0	0	0.0	0	0.0	4	0.2
NW	0	0.0	0	0.0	2	0.1	5	0.2	5	0.2	0	0.0	0	0.0	12	0.6
NNW	0	0.0	0	0.0	3	0.1	8	0.4	3	0.1	0	0.0	0	0.0	14	0.7
	0	0.0	17	0.8	52	2.4	71	3.3	38	1.8	25	1.2	27	1.3	230	10.7

MEAN WIND SPEED: 12.8

MISSING: 1

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 01/08-03/08

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS

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

LAPSE RATE: GT 4.0 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	2	0.1	0	0.0	0	0.0	0	0.0	0	0.0	2	0.1
NNE	0	0.0	1	0.0	1	0.0	1	0.0	0	0.0	0	0.0	0	0.0	3	0.1
NE	0	0.0	0	0.0	1	0.0	2	0.1	1	0.0	0	0.0	0	0.0	4	0.2
ENE	0	0.0	1	0.0	2	0.1	0	0.0	0	0.0	0	0.0	0	0.0	3	0.1
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	0	0.0	4	0.2	0	0.0	1	0.0	0	0.0	0	0.0	5	0.2
SE	0	0.0	1	0.0	1	0.0	4	0.2	7	0.3	3	0.1	11	0.5	27	1.3
SSE	0	0.0	0	0.0	3	0.1	10	0.5	14	0.7	11	0.5	9	0.4	47	2.2
S	0	0.0	0	0.0	3	0.1	9	0.4	10	0.5	4	0.2	1	0.0	27	1.3
SSW	0	0.0	0	0.0	1	0.0	4	0.2	2	0.1	2	0.1	2	0.1	11	0.5
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	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	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	1	0.0	0	0.0	0	0.0	0	0.0	2	0.1
	0	0.0	4	0.2	23	1.1	31	1.4	35	1.6	20	0.9	23	1.1	136	6.4

MEAN WIND SPEED: 15.6
MISSING: 1

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 01/08-03/08

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)															
	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
N	0	0.0	2	0.1	22	1.0	45	2.1	28	1.3	4	0.2	0	0.0	101	4.7
NNE	0	0.0	3	0.1	23	1.1	44	2.1	15	0.7	0	0.0	0	0.0	85	4.0
NE	0	0.0	3	0.1	29	1.4	40	1.9	9	0.4	0	0.0	0	0.0	81	3.8
ENE	0	0.0	4	0.2	39	1.8	33	1.5	8	0.4	0	0.0	0	0.0	84	3.9
E	0	0.0	9	0.4	41	1.9	20	0.9	0	0.0	0	0.0	0	0.0	70	3.3
ESE	0	0.0	4	0.2	21	1.0	28	1.3	12	0.6	0	0.0	1	0.0	66	3.1
SE	0	0.0	4	0.2	25	1.2	41	1.9	33	1.5	32	1.5	37	1.7	172	8.0
SSE	0	0.0	1	0.0	24	1.1	36	1.7	33	1.5	26	1.2	14	0.7	134	6.3
S	0	0.0	5	0.2	28	1.3	25	1.2	35	1.6	19	0.9	4	0.2	116	5.4
SSW	0	0.0	7	0.3	26	1.2	36	1.7	23	1.1	14	0.7	29	1.4	135	6.3
SW	0	0.0	5	0.2	20	0.9	35	1.6	11	0.5	6	0.3	11	0.5	88	4.1
WSW	0	0.0	3	0.1	18	0.8	39	1.8	28	1.3	8	0.4	6	0.3	102	4.8
W	0	0.0	6	0.3	14	0.7	41	1.9	76	3.6	30	1.4	31	1.4	198	9.3
WNW	0	0.0	6	0.3	18	0.8	35	1.6	66	3.1	51	2.4	12	0.6	188	8.8
NW	0	0.0	2	0.1	17	0.8	64	3.0	97	4.5	61	2.9	28	1.3	269	12.6
NNW	0	0.0	5	0.2	20	0.9	82	3.8	89	4.2	45	2.1	10	0.5	251	11.7
	0	0.0	69	3.2	385	18.0	644	30.1	563	26.3	296	13.8	183	8.6	2140	100.0

MISSING HOURS: 44

MEAN WIND SPEED: 13.5

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 01/08-03/08

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	2	0.1	22	1.0	45	2.1	28	1.3	4	0.2	0	0.0	101	4.7
NNE	0	0.0	3	0.1	23	1.1	44	2.1	15	0.7	0	0.0	0	0.0	85	4.0
NE	0	0.0	3	0.1	29	1.4	40	1.9	9	0.4	0	0.0	0	0.0	81	3.8
ENE	0	0.0	4	0.2	39	1.8	33	1.5	8	0.4	0	0.0	0	0.0	84	3.9
E	0	0.0	9	0.4	41	1.9	20	0.9	0	0.0	0	0.0	0	0.0	70	3.3
ESE	0	0.0	4	0.2	21	1.0	28	1.3	12	0.6	0	0.0	1	0.0	66	3.1
SE	0	0.0	4	0.2	25	1.2	41	1.9	33	1.5	32	1.5	37	1.7	172	8.0
SSE	0	0.0	1	0.0	24	1.1	36	1.7	33	1.5	26	1.2	14	0.7	134	6.3
S	0	0.0	5	0.2	28	1.3	25	1.2	35	1.6	19	0.9	4	0.2	116	5.4
SSW	0	0.0	7	0.3	26	1.2	36	1.7	23	1.1	14	0.7	29	1.4	135	6.3
SW	0	0.0	5	0.2	20	0.9	35	1.6	11	0.5	6	0.3	11	0.5	88	4.1
WSW	0	0.0	3	0.1	18	0.8	39	1.8	28	1.3	8	0.4	6	0.3	102	4.8
W	0	0.0	6	0.3	14	0.7	42	2.0	77	3.6	30	1.4	31	1.4	200	9.3
WNW	0	0.0	6	0.3	18	0.8	35	1.6	66	3.1	51	2.4	12	0.6	188	8.8
NW	0	0.0	2	0.1	17	0.8	64	3.0	97	4.5	61	2.8	28	1.3	269	12.6
NNW	0	0.0	5	0.2	20	0.9	82	3.8	89	4.2	45	2.1	10	0.5	251	11.7
	0	0.0	69	3.2	385	18.0	645	30.1	564	26.3	296	13.8	183	8.5	2142	100.0

MISSING HOURS: 42

MEAN WIND SPEED: 13.5

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 01/08-03/08

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS

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

LAPSE RATE: LE -1.9 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	0.2	5	0.3	0	0.0	0	0.0	8	0.4
NNE	0	0.0	0	0.0	0	0.0	1	0.1	1	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	0	0.0	0	0.0	0	0.0
ENE	0	0.0	0	0.0	1	0.1	1	0.1	0	0.0	0	0.0	0	0.0	2	0.1
E	0	0.0	0	0.0	1	0.1	1	0.1	0	0.0	0	0.0	0	0.0	2	0.1
ESE	0	0.0	0	0.0	0	0.0	1	0.1	0	0.0	0	0.0	0	0.0	1	0.1
SE	0	0.0	0	0.0	2	0.1	2	0.1	2	0.1	2	0.1	5	0.3	13	0.7
SSE	0	0.0	0	0.0	1	0.1	3	0.2	2	0.1	2	0.1	3	0.2	11	0.6
S	0	0.0	0	0.0	1	0.1	1	0.1	0	0.0	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	1	0.1	1	0.1	2	0.1	0	0.0	0	0.0	4	0.2
WSW	0	0.0	0	0.0	1	0.1	1	0.1	1	0.1	2	0.1	1	0.1	6	0.3
W	0	0.0	0	0.0	0	0.0	1	0.1	7	0.4	5	0.3	7	0.4	20	1.1
WNW	0	0.0	0	0.0	0	0.0	3	0.2	1	0.1	13	0.7	5	0.3	22	1.2
NW	0	0.0	0	0.0	2	0.1	1	0.1	6	0.3	2	0.1	12	0.6	23	1.2
NNW	0	0.0	0	0.0	0	0.0	9	0.5	14	0.7	7	0.4	0	0.0	30	1.6
	0	0.0	0	0.0	10	0.5	29	1.5	41	2.2	33	1.8	33	1.8	146	7.8

MEAN WIND SPEED: 18.1
MISSING: 21

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 01/08-03/08

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

LAPSE RATE: -1.8 TO -1.7 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	0.1	2	0.1	2	0.1	0	0.0	0	0.0	5	0.3
NNE	0	0.0	0	0.0	0	0.0	1	0.1	1	0.1	0	0.0	0	0.0	2	0.1
NE	0	0.0	0	0.0	0	0.0	1	0.1	0	0.0	0	0.0	0	0.0	1	0.1
ENE	0	0.0	0	0.0	1	0.1	1	0.1	0	0.0	0	0.0	0	0.0	2	0.1
E	0	0.0	0	0.0	0	0.0	3	0.2	0	0.0	0	0.0	0	0.0	3	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	0.1	0	0.0	0	0.0	2	0.1	3	0.2
SSE	0	0.0	0	0.0	3	0.2	1	0.1	0	0.0	0	0.0	0	0.0	4	0.2
S	0	0.0	0	0.0	1	0.1	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1
SSW	0	0.0	0	0.0	1	0.1	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1
SW	0	0.0	0	0.0	0	0.0	0	0.0	2	0.1	0	0.0	0	0.0	2	0.1
WSW	0	0.0	0	0.0	4	0.2	0	0.0	2	0.1	2	0.1	0	0.0	8	0.4
W	0	0.0	0	0.0	2	0.1	5	0.3	3	0.2	1	0.1	6	0.3	17	0.9
WNW	0	0.0	0	0.0	2	0.1	2	0.1	4	0.2	1	0.1	2	0.1	11	0.6
NW	0	0.0	0	0.0	4	0.2	4	0.2	5	0.3	1	0.1	2	0.1	16	0.9
NNW	0	0.0	0	0.0	0	0.0	8	0.4	2	0.1	4	0.2	1	0.1	15	0.8
	0	0.0	0	0.0	19	1.0	29	1.5	21	1.1	9	0.5	13	0.7	91	4.8

MEAN WIND SPEED: 14.1
MISSING: 8

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 01/08-03/08

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

LAPSE RATE: -1.6 TO -1.5 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	0.1	2	0.1	0	0.0	0	0.0	0	0.0	3	0.2
NNE	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1	0	0.0	0	0.0	1	0.1
NE	0	0.0	0	0.0	2	0.1	1	0.1	1	0.1	0	0.0	0	0.0	4	0.2
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	0.1	2	0.1	0	0.0	0	0.0	0	0.0	3	0.2
ESE	0	0.0	0	0.0	0	0.0	1	0.1	1	0.1	0	0.0	0	0.0	2	0.1
SE	0	0.0	0	0.0	0	0.0	0	0.0	2	0.1	2	0.1	1	0.1	5	0.3
SSE	0	0.0	0	0.0	3	0.2	0	0.0	1	0.1	1	0.1	1	0.1	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	1	0.1	0	0.0	0	0.0	0	0.0	0	0.0	1	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	0	0.0	2	0.1	2	0.1	0	0.0	0	0.0	4	0.2
W	0	0.0	0	0.0	0	0.0	2	0.1	6	0.3	4	0.2	1	0.1	13	0.7
WNW	0	0.0	0	0.0	1	0.1	0	0.0	2	0.1	3	0.2	3	0.2	9	0.5
NW	0	0.0	0	0.0	1	0.1	3	0.2	3	0.2	5	0.3	2	0.1	14	0.7
NNW	0	0.0	0	0.0	2	0.1	5	0.3	6	0.3	1	0.1	1	0.1	15	0.8
	0	0.0	0	0.0	14	0.7	18	1.0	25	1.3	16	0.9	9	0.5	82	4.4

MEAN WIND SPEED: 15.4
 MISSING: 15

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 01/08-03/08

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS

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

LAPSE RATE: -1.4 TO -0.5 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	3	0.2	8	0.4	9	0.5	1	0.1	1	0.1	22	1.2
NNE	0	0.0	0	0.0	8	0.4	14	0.7	6	0.3	0	0.0	0	0.0	28	1.5
NE	0	0.0	1	0.1	9	0.5	12	0.6	5	0.3	0	0.0	0	0.0	27	1.4
ENE	0	0.0	0	0.0	6	0.3	12	0.6	4	0.2	0	0.0	0	0.0	22	1.2
E	0	0.0	0	0.0	9	0.5	5	0.3	0	0.0	0	0.0	0	0.0	14	0.7
ESE	0	0.0	0	0.0	5	0.3	14	0.7	7	0.4	3	0.2	0	0.0	29	1.5
SE	0	0.0	0	0.0	2	0.1	1	0.1	2	0.1	6	0.3	10	0.5	21	1.1
SSE	0	0.0	0	0.0	6	0.3	2	0.1	6	0.3	2	0.1	2	0.1	18	1.0
S	0	0.0	1	0.1	1	0.1	5	0.3	8	0.4	6	0.3	2	0.1	23	1.2
SSW	0	0.0	3	0.2	6	0.3	6	0.3	8	0.4	0	0.0	0	0.0	23	1.2
SW	0	0.0	1	0.1	4	0.2	12	0.6	3	0.2	1	0.1	0	0.0	21	1.1
WSW	0	0.0	0	0.0	5	0.3	5	0.3	12	0.6	1	0.1	1	0.1	24	1.3
W	0	0.0	2	0.1	3	0.2	4	0.2	20	1.1	16	0.9	24	1.3	69	3.7
WNW	0	0.0	0	0.0	3	0.2	6	0.3	24	1.3	45	2.4	11	0.6	89	4.7
NW	0	0.0	1	0.1	4	0.2	9	0.5	15	0.8	31	1.6	22	1.2	82	4.4
NNW	0	0.0	1	0.1	2	0.1	13	0.7	16	0.9	13	0.7	17	0.9	62	3.3
	0	0.0	10	0.5	76	4.0	128	6.8	145	7.7	125	6.6	90	4.8	574	30.5

MEAN WIND SPEED: 16.4
MISSING: 92

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 01/08-03/08

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

LAPSE RATE: -0.4 TO 1.5 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	1	0.1	2	0.1	19	1.0	15	0.8	13	0.7	2	0.1	52	2.8
NNE	0	0.0	0	0.0	5	0.3	11	0.6	11	0.6	2	0.1	0	0.0	29	1.5
NE	0	0.0	1	0.1	8	0.4	11	0.6	7	0.4	0	0.0	0	0.0	27	1.4
ENE	0	0.0	0	0.0	13	0.7	14	0.7	4	0.2	0	0.0	0	0.0	31	1.6
E	0	0.0	1	0.1	4	0.2	20	1.1	9	0.5	2	0.1	0	0.0	36	1.9
ESE	0	0.0	1	0.1	6	0.3	5	0.3	14	0.7	1	0.1	0	0.0	27	1.4
SE	0	0.0	0	0.0	0	0.0	7	0.4	7	0.4	5	0.3	7	0.4	26	1.4
SSE	0	0.0	1	0.1	6	0.3	8	0.4	6	0.3	6	0.3	7	0.4	34	1.8
S	0	0.0	1	0.1	2	0.1	4	0.2	10	0.5	7	0.4	1	0.1	25	1.3
SSW	0	0.0	0	0.0	2	0.1	15	0.8	12	0.6	11	0.6	13	0.7	53	2.8
SW	0	0.0	0	0.0	2	0.1	22	1.2	17	0.9	3	0.2	8	0.4	52	2.8
WSW	0	0.0	3	0.2	5	0.3	13	0.7	11	0.6	4	0.2	6	0.3	42	2.2
W	0	0.0	1	0.1	1	0.1	9	0.5	12	0.6	12	0.6	1	0.1	36	1.9
WNW	0	0.0	2	0.1	2	0.1	9	0.5	12	0.6	4	0.2	0	0.0	29	1.5
NW	0	0.0	0	0.0	5	0.3	16	0.9	42	2.2	25	1.3	1	0.1	89	4.7
NNW	0	0.0	1	0.1	3	0.2	16	0.9	41	2.2	21	1.1	6	0.3	88	4.7
	0	0.0	13	0.7	66	3.5	199	10.6	230	12.2	116	6.2	52	2.8	676	35.9

MEAN WIND SPEED: 14.6
 MISSING: 108

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 01/08-03/08

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

LAPSE RATE: 1.6 TO 4.0 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	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	4	0.2	7	0.4	0	0.0	0	0.0	11	0.6
NE	0	0.0	0	0.0	0	0.0	3	0.2	9	0.5	0	0.0	0	0.0	12	0.6
ENE	0	0.0	0	0.0	3	0.2	5	0.3	5	0.3	1	0.1	0	0.0	14	0.7
E	0	0.0	0	0.0	3	0.2	4	0.2	1	0.1	0	0.0	0	0.0	8	0.4
ESE	0	0.0	1	0.1	1	0.1	3	0.2	1	0.1	0	0.0	0	0.0	6	0.3
SE	0	0.0	0	0.0	3	0.2	3	0.2	0	0.0	2	0.1	3	0.2	11	0.6
SSE	0	0.0	0	0.0	6	0.3	6	0.3	3	0.2	3	0.2	1	0.1	19	1.0
S	0	0.0	0	0.0	4	0.2	3	0.2	1	0.1	9	0.5	4	0.2	21	1.1
SSW	0	0.0	0	0.0	2	0.1	2	0.1	5	0.3	6	0.3	20	1.1	35	1.9
SW	0	0.0	1	0.1	2	0.1	5	0.3	0	0.0	3	0.2	6	0.3	17	0.9
WSW	0	0.0	1	0.1	3	0.2	3	0.2	3	0.2	0	0.0	0	0.0	10	0.5
W	0	0.0	0	0.0	2	0.1	2	0.1	2	0.1	0	0.0	0	0.0	6	0.3
WNW	0	0.0	0	0.0	0	0.0	1	0.1	0	0.0	0	0.0	0	0.0	1	0.1
NW	0	0.0	0	0.0	2	0.1	0	0.0	8	0.4	1	0.1	0	0.0	11	0.6
NNW	0	0.0	1	0.1	1	0.1	4	0.2	6	0.3	0	0.0	0	0.0	12	0.6
	0	0.0	4	0.2	32	1.7	50	2.7	53	2.8	25	1.3	34	1.8	198	10.5

MEAN WIND SPEED: 15.7
 MISSING: 33

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 01/08-03/08

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

LAPSE RATE: GT 4.0 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	0.1	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1
ENE	0	0.0	0	0.0	0	0.0	1	0.1	2	0.1	0	0.0	0	0.0	3	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	1	0.1	0	0.0	2	0.1	0	0.0	0	0.0	3	0.2
SE	0	0.0	0	0.0	2	0.1	1	0.1	0	0.0	0	0.0	0	0.0	3	0.2
SSE	0	0.0	0	0.0	5	0.3	4	0.2	5	0.3	3	0.2	11	0.6	28	1.5
S	0	0.0	0	0.0	3	0.2	2	0.1	7	0.4	19	1.0	7	0.4	38	2.0
SSW	0	0.0	0	0.0	1	0.1	4	0.2	15	0.8	7	0.4	3	0.2	30	1.6
SW	0	0.0	0	0.0	1	0.1	4	0.2	0	0.0	0	0.0	0	0.0	5	0.3
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	2	0.1	0	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	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	14	0.7	20	1.1	31	1.6	29	1.5	21	1.1	115	6.1

MEAN WIND SPEED: 17.6
MISSING: 22

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 01/08-03/08

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	SUM PERCENT	SUM PERCENT	SUM PERCENT	SUM PERCENT	SUM PERCENT	SUM PERCENT		
N	0	0.0	1	0.1	7	0.4	36	1.9	33	1.8	14	0.7	3	0.2	94	5.0
NNE	0	0.0	0	0.0	13	0.7	31	1.6	27	1.4	2	0.1	0	0.0	73	3.9
NE	0	0.0	2	0.1	20	1.1	28	1.5	22	1.2	0	0.0	0	0.0	72	3.8
ENE	0	0.0	0	0.0	24	1.3	34	1.8	15	0.8	1	0.1	0	0.0	74	3.9
E	0	0.0	1	0.1	18	1.0	35	1.9	10	0.5	2	0.1	0	0.0	66	3.5
ESE	0	0.0	2	0.1	13	0.7	24	1.3	25	1.3	4	0.2	0	0.0	68	3.6
SE	0	0.0	0	0.0	9	0.5	15	0.8	13	0.7	17	0.9	28	1.5	82	4.4
SSE	0	0.0	1	0.1	30	1.6	24	1.3	23	1.2	17	0.9	25	1.3	120	6.4
S	0	0.0	2	0.1	14	0.7	15	0.8	26	1.4	41	2.2	14	0.7	112	6.0
SSW	0	0.0	3	0.2	13	0.7	27	1.4	40	2.1	24	1.3	36	1.9	143	7.6
SW	0	0.0	2	0.1	10	0.5	44	2.3	24	1.3	7	0.4	14	0.7	101	5.4
WSW	0	0.0	4	0.2	18	1.0	26	1.4	31	1.6	9	0.5	8	0.4	96	5.1
W	0	0.0	3	0.2	8	0.4	25	1.3	50	2.7	38	2.0	39	2.1	163	8.7
WNW	0	0.0	2	0.1	8	0.4	21	1.1	43	2.3	66	3.5	21	1.1	161	8.6
NW	0	0.0	1	0.1	18	1.0	33	1.8	79	4.2	65	3.5	39	2.1	235	12.5
NNW	0	0.0	3	0.2	8	0.4	55	2.9	85	4.5	46	2.4	25	1.3	222	11.8
	0	0.0	27	1.4	231	12.3	473	25.1	546	29.0	353	18.8	252	13.4	1882	100.0

MISSING HOURS: 302

MEAN WIND SPEED: 15.7

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 01/08-03/08

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	0.1	7	0.4	36	1.9	33	1.8	14	0.7	3	0.2	94	5.0
NNE	0	0.0	0	0.0	13	0.7	31	1.6	27	1.4	2	0.1	0	0.0	73	3.9
NE	0	0.0	2	0.1	20	1.1	28	1.5	22	1.2	0	0.0	0	0.0	72	3.8
ENE	0	0.0	0	0.0	24	1.3	34	1.8	15	0.8	1	0.1	0	0.0	74	3.9
E	0	0.0	1	0.1	18	1.0	35	1.9	10	0.5	2	0.1	0	0.0	66	3.5
ESE	0	0.0	2	0.1	13	0.7	24	1.3	25	1.3	4	0.2	0	0.0	68	3.6
SE	0	0.0	0	0.0	9	0.5	15	0.8	13	0.7	17	0.9	28	1.5	82	4.4
SSE	0	0.0	1	0.1	30	1.6	24	1.3	23	1.2	17	0.9	25	1.3	120	6.4
S	0	0.0	2	0.1	14	0.7	15	0.8	26	1.4	41	2.2	14	0.7	112	6.0
SSW	0	0.0	3	0.2	13	0.7	27	1.4	40	2.1	24	1.3	36	1.9	143	7.6
SW	0	0.0	2	0.1	10	0.5	44	2.3	24	1.3	7	0.4	14	0.7	101	5.4
WSW	0	0.0	4	0.2	18	1.0	26	1.4	31	1.6	9	0.5	8	0.4	96	5.1
W	0	0.0	3	0.2	8	0.4	25	1.3	50	2.7	38	2.0	39	2.1	163	8.7
WNW	0	0.0	2	0.1	8	0.4	21	1.1	43	2.3	66	3.5	21	1.1	161	8.6
NW	0	0.0	1	0.1	18	1.0	33	1.8	79	4.2	65	3.5	39	2.1	235	12.5
NNW	0	0.0	3	0.2	8	0.4	55	2.9	85	4.5	46	2.4	25	1.3	222	11.8
	0	0.0	27	1.4	231	12.3	473	25.1	546	29.0	353	18.8	252	13.4	1882	100.0

MISSING HOURS: 302

MEAN WIND SPEED: 15.7

Lapse Rate
Wind Distributions
300 – 33 foot

4/2008 – 6/2008

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 04/08-06/08

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

LAPSE RATE: LE -1.9 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	4	0.2	23	1.1	1	0.0	0	0.0	0	0.0	28	1.4
NNE	0	0.0	0	0.0	2	0.1	10	0.5	4	0.2	0	0.0	0	0.0	16	0.8
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	0	0.0	1	0.0	4	0.2	0	0.0	0	0.0	5	0.2
E	0	0.0	0	0.0	0	0.0	6	0.3	0	0.0	0	0.0	0	0.0	6	0.3
ESE	0	0.0	0	0.0	0	0.0	3	0.1	2	0.1	0	0.0	0	0.0	5	0.2
SE	0	0.0	0	0.0	0	0.0	3	0.1	12	0.6	1	0.0	0	0.0	16	0.8
SSE	0	0.0	0	0.0	2	0.1	6	0.3	3	0.1	0	0.0	0	0.0	11	0.5
S	0	0.0	0	0.0	0	0.0	4	0.2	0	0.0	0	0.0	0	0.0	4	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	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	7	0.3	1	0.0	0	0.0	0	0.0	10	0.5
W	0	0.0	0	0.0	3	0.1	5	0.2	1	0.0	0	0.0	0	0.0	9	0.4
WNW	0	0.0	0	0.0	1	0.0	10	0.5	6	0.3	0	0.0	0	0.0	17	0.8
NW	0	0.0	0	0.0	0	0.0	8	0.4	0	0.0	0	0.0	0	0.0	8	0.4
NNW	0	0.0	0	0.0	8	0.4	32	1.6	10	0.5	0	0.0	0	0.0	50	2.4
	0	0.0	0	0.0	25	1.2	122	5.9	44	2.1	1	0.0	0	0.0	192	9.4

MEAN WIND SPEED: 10.7

MISSING: 9

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 04/08-06/08

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

LAPSE RATE: -1.8 TO -1.7 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	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	4	0.2	1	0.0	1	0.0	0	0.0	0	0.0	6	0.3
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	1	0.0	0	0.0	2	0.1	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	2	0.1	3	0.1	0	0.0	0	0.0	0	0.0	5	0.2
SE	0	0.0	0	0.0	0	0.0	4	0.2	3	0.1	0	0.0	0	0.0	7	0.3
SSE	0	0.0	0	0.0	2	0.1	4	0.2	2	0.1	0	0.0	0	0.0	8	0.4
S	0	0.0	0	0.0	3	0.1	1	0.0	0	0.0	0	0.0	0	0.0	4	0.2
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	1	0.0	1	0.0	0	0.0	0	0.0	3	0.1
WSW	0	0.0	0	0.0	1	0.0	9	0.4	0	0.0	0	0.0	0	0.0	10	0.5
W	0	0.0	0	0.0	3	0.1	4	0.2	3	0.1	0	0.0	0	0.0	10	0.5
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	3	0.1	6	0.3	1	0.0	0	0.0	0	0.0	10	0.5
NNW	0	0.0	0	0.0	4	0.2	5	0.2	1	0.0	0	0.0	0	0.0	10	0.5
	0	0.0	0	0.0	29	1.4	45	2.2	17	0.8	0	0.0	0	0.0	91	4.4

MEAN WIND SPEED: 9.6
 MISSING: 4

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 04/08-06/08

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS

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

LAPSE RATE: -1.6 TO -1.5 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	6	0.3	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	0	0.0	0	0.0	1	0.0
NE	0	0.0	0	0.0	4	0.2	2	0.1	0	0.0	0	0.0	0	0.0	6	0.3
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	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	1	0.0	0	0.0	0	0.0	0	0.0	3	0.1
SE	0	0.0	0	0.0	1	0.0	0	0.0	2	0.1	0	0.0	0	0.0	3	0.1
SSE	0	0.0	0	0.0	6	0.3	2	0.1	1	0.0	0	0.0	0	0.0	9	0.4
S	0	0.0	1	0.0	4	0.2	1	0.0	0	0.0	0	0.0	0	0.0	6	0.3
SSW	0	0.0	0	0.0	3	0.1	0	0.0	0	0.0	0	0.0	0	0.0	3	0.1
SW	0	0.0	0	0.0	9	0.4	1	0.0	1	0.0	0	0.0	0	0.0	11	0.5
WSW	0	0.0	0	0.0	1	0.0	10	0.5	1	0.0	0	0.0	0	0.0	12	0.6
W	0	0.0	0	0.0	3	0.1	2	0.1	2	0.1	0	0.0	0	0.0	7	0.3
WNW	0	0.0	0	0.0	6	0.3	4	0.2	3	0.1	0	0.0	0	0.0	13	0.6
NW	0	0.0	0	0.0	4	0.2	3	0.1	2	0.1	0	0.0	0	0.0	9	0.4
NNW	0	0.0	0	0.0	4	0.2	2	0.1	1	0.0	0	0.0	0	0.0	7	0.3
	0	0.0	1	0.0	52	2.5	37	1.8	14	0.7	0	0.0	0	0.0	104	5.1

MEAN WIND SPEED: 8.2
MISSING: 9

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 04/08-06/08

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

LAPSE RATE: -1.4 TO -0.5 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	10	0.5	8	0.4	10	0.5	0	0.0	0	0.0	28	1.4
NNE	0	0.0	1	0.0	4	0.2	14	0.7	6	0.3	3	0.1	0	0.0	28	1.4
NE	0	0.0	0	0.0	16	0.8	22	1.1	3	0.1	0	0.0	5	0.2	46	2.2
ENE	0	0.0	0	0.0	30	1.5	32	1.6	8	0.4	6	0.3	0	0.0	76	3.7
E	0	0.0	4	0.2	20	1.0	14	0.7	0	0.0	0	0.0	0	0.0	38	1.9
ESE	0	0.0	0	0.0	2	0.1	5	0.2	1	0.0	0	0.0	0	0.0	8	0.4
SE	0	0.0	0	0.0	4	0.2	21	1.0	16	0.8	0	0.0	0	0.0	41	2.0
SSE	0	0.0	1	0.0	19	0.9	30	1.5	28	1.4	2	0.1	0	0.0	80	3.9
S	0	0.0	7	0.3	23	1.1	19	0.9	5	0.2	4	0.2	0	0.0	58	2.8
SSW	0	0.0	3	0.1	20	1.0	8	0.4	6	0.3	1	0.0	0	0.0	38	1.9
SW	0	0.0	2	0.1	20	1.0	16	0.8	8	0.4	0	0.0	0	0.0	46	2.2
WSW	0	0.0	1	0.0	19	0.9	15	0.7	6	0.3	1	0.0	0	0.0	42	2.0
W	0	0.0	3	0.1	11	0.5	9	0.4	2	0.1	0	0.0	0	0.0	25	1.2
WNW	0	0.0	2	0.1	17	0.8	11	0.5	2	0.1	1	0.0	0	0.0	33	1.6
NW	0	0.0	1	0.0	9	0.4	10	0.5	6	0.3	1	0.0	0	0.0	27	1.3
NNW	0	0.0	0	0.0	10	0.5	16	0.8	5	0.2	0	0.0	0	0.0	31	1.5
	0	0.0	25	1.2	234	11.4	250	12.2	112	5.5	19	0.9	5	0.2	645	31.4

MEAN WIND SPEED: 9.4
 MISSING: 18

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 04/08-06/08

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

LAPSE RATE: -0.4 TO 1.5 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	12	0.6	34	1.7	4	0.2	0	0.0	0	0.0	51	2.5
NNE	0	0.0	4	0.2	12	0.6	7	0.3	0	0.0	0	0.0	0	0.0	23	1.1
NE	0	0.0	6	0.3	17	0.8	9	0.4	0	0.0	0	0.0	0	0.0	32	1.6
ENE	0	0.0	6	0.3	18	0.9	2	0.1	0	0.0	0	0.0	0	0.0	26	1.3
E	0	0.0	6	0.3	10	0.5	2	0.1	0	0.0	0	0.0	0	0.0	18	0.9
ESE	0	0.0	3	0.1	12	0.6	7	0.3	0	0.0	0	0.0	0	0.0	22	1.1
SE	0	0.0	5	0.2	14	0.7	25	1.2	12	0.6	0	0.0	0	0.0	56	2.7
SSE	0	0.0	0	0.0	17	0.8	25	1.2	7	0.3	0	0.0	0	0.0	49	2.4
S	0	0.0	0	0.0	17	0.8	11	0.5	10	0.5	1	0.0	0	0.0	39	1.9
SSW	0	0.0	5	0.2	21	1.0	16	0.8	15	0.7	2	0.1	0	0.0	59	2.9
SW	0	0.0	7	0.3	39	1.9	23	1.1	10	0.5	1	0.0	0	0.0	80	3.9
WSW	0	0.0	9	0.4	57	2.8	17	0.8	1	0.0	0	0.0	0	0.0	84	4.1
W	0	0.0	8	0.4	32	1.6	12	0.6	0	0.0	0	0.0	0	0.0	52	2.5
WNW	0	0.0	4	0.2	34	1.7	8	0.4	2	0.1	0	0.0	0	0.0	48	2.3
NW	0	0.0	9	0.4	16	0.8	20	1.0	3	0.1	1	0.0	0	0.0	49	2.4
NNW	0	0.0	6	0.3	28	1.4	13	0.6	2	0.1	0	0.0	0	0.0	49	2.4
	0	0.0	79	3.8	356	17.3	231	11.3	66	3.2	5	0.2	0	0.0	737	35.9

MEAN WIND SPEED: 7.4
 MISSING: 35

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 04/08-06/08

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

LAPSE RATE: 1.6 TO 4.0 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	10	0.5	0	0.0	0	0.0	0	0.0	0	0.0	11	0.5
NNE	0	0.0	5	0.2	7	0.3	0	0.0	0	0.0	0	0.0	0	0.0	12	0.6
NE	0	0.0	0	0.0	3	0.1	0	0.0	0	0.0	0	0.0	0	0.0	3	0.1
ENE	0	0.0	2	0.1	3	0.1	0	0.0	0	0.0	0	0.0	0	0.0	5	0.2
E	0	0.0	3	0.1	4	0.2	0	0.0	0	0.0	0	0.0	0	0.0	7	0.3
ESE	0	0.0	2	0.1	6	0.3	1	0.0	0	0.0	0	0.0	0	0.0	9	0.4
SE	0	0.0	3	0.1	13	0.6	22	1.1	4	0.2	0	0.0	0	0.0	42	2.0
SSE	0	0.0	1	0.0	9	0.4	17	0.8	1	0.0	0	0.0	0	0.0	28	1.4
S	0	0.0	2	0.1	6	0.3	4	0.2	1	0.0	0	0.0	0	0.0	13	0.6
SSW	0	0.0	2	0.1	7	0.3	4	0.2	2	0.1	0	0.0	0	0.0	15	0.7
SW	0	0.0	2	0.1	13	0.6	2	0.1	1	0.0	0	0.0	0	0.0	18	0.9
WSW	0	0.0	1	0.0	11	0.5	4	0.2	0	0.0	0	0.0	0	0.0	16	0.8
W	0	0.0	0	0.0	11	0.5	2	0.1	0	0.0	0	0.0	0	0.0	13	0.6
WNW	0	0.0	2	0.1	2	0.1	0	0.0	0	0.0	0	0.0	0	0.0	4	0.2
NW	0	0.0	3	0.1	13	0.6	0	0.0	0	0.0	0	0.0	0	0.0	16	0.8
NNW	0	0.0	1	0.0	9	0.4	1	0.0	0	0.0	0	0.0	0	0.0	11	0.5
	0	0.0	30	1.5	127	6.2	57	2.8	9	0.4	0	0.0	0	0.0	223	10.9

MEAN WIND SPEED: 6.5
 MISSING: 3

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 04/08-06/08

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

LAPSE RATE: GT 4.0 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	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	3	0.1	0	0.0	0	0.0	0	0.0	0	0.0	3	0.1
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	3	0.1	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	4	0.2
E	0	0.0	2	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	0.1
ESE	0	0.0	2	0.1	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	3	0.1
SE	0	0.0	0	0.0	9	0.4	14	0.7	4	0.2	0	0.0	0	0.0	27	1.3
SSE	0	0.0	0	0.0	8	0.4	0	0.0	2	0.1	0	0.0	0	0.0	10	0.5
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	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SW	0	0.0	2	0.1	2	0.1	0	0.0	0	0.0	0	0.0	0	0.0	4	0.2
WSW	0	0.0	0	0.0	4	0.2	0	0.0	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	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	10	0.5	30	1.5	15	0.7	6	0.3	0	0.0	0	0.0	61	3.0

MEAN WIND SPEED: 6.8
 MISSING: 0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 04/08-06/08

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			
N	0	0.0	2	0.1	42	2.0	74	3.6	15	0.7	0	0.0	0	0.0	133	6.5
NNE	0	0.0	10	0.5	32	1.6	33	1.6	11	0.5	3	0.1	0	0.0	89	4.3
NE	0	0.0	6	0.3	42	2.0	37	1.8	3	0.1	0	0.0	5	0.2	93	4.5
ENE	0	0.0	11	0.5	54	2.6	36	1.8	15	0.7	6	0.3	0	0.0	122	5.9
E	0	0.0	15	0.7	35	1.7	24	1.2	0	0.0	0	0.0	0	0.0	74	3.6
ESE	0	0.0	7	0.3	25	1.2	20	1.0	3	0.1	0	0.0	0	0.0	55	2.7
SE	0	0.0	8	0.4	41	2.0	89	4.3	53	2.6	1	0.0	0	0.0	192	9.4
SSE	0	0.0	2	0.1	63	3.1	84	4.1	44	2.1	2	0.1	0	0.0	195	9.5
S	0	0.0	10	0.5	54	2.6	41	2.0	16	0.8	5	0.2	0	0.0	126	6.1
SSW	0	0.0	10	0.5	52	2.5	28	1.4	23	1.1	3	0.1	0	0.0	116	5.7
SW	0	0.0	13	0.6	86	4.2	44	2.1	21	1.0	1	0.0	0	0.0	165	8.0
WSW	0	0.0	11	0.5	95	4.6	62	3.0	9	0.4	1	0.0	0	0.0	178	8.7
W	0	0.0	11	0.5	63	3.1	34	1.7	8	0.4	0	0.0	0	0.0	116	5.7
WNW	0	0.0	8	0.4	61	3.0	35	1.7	16	0.8	1	0.0	0	0.0	121	5.9
NW	0	0.0	13	0.6	45	2.2	47	2.3	12	0.6	2	0.1	0	0.0	119	5.8
NNW	0	0.0	8	0.4	63	3.1	69	3.4	19	0.9	0	0.0	0	0.0	159	7.7
	0	0.0	145	7.1	853	41.5	757	36.9	268	13.1	25	1.2	5	0.2	2053	100.0

MISSING HOURS: 131

MEAN WIND SPEED: 8.4

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 04/08-06/08

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	3	0.1	43	2.0	75	3.6	15	0.7	0	0.0	0	0.0	136	6.5
NNE	0	0.0	10	0.5	33	1.6	33	1.6	11	0.5	3	0.1	0	0.0	90	4.3
NE	0	0.0	6	0.3	43	2.0	37	1.8	3	0.1	0	0.0	5	0.2	94	4.5
ENE	0	0.0	11	0.5	54	2.6	36	1.7	15	0.7	6	0.3	0	0.0	122	5.8
E	0	0.0	15	0.7	35	1.7	24	1.1	0	0.0	0	0.0	0	0.0	74	3.5
ESE	0	0.0	7	0.3	25	1.2	20	1.0	3	0.1	0	0.0	0	0.0	55	2.6
SE	0	0.0	8	0.4	42	2.0	90	4.3	53	2.5	1	0.0	0	0.0	194	9.2
SSE	0	0.0	2	0.1	64	3.0	84	4.0	44	2.1	2	0.1	0	0.0	196	9.3
S	0	0.0	10	0.5	54	2.6	41	2.0	16	0.8	5	0.2	0	0.0	126	6.0
SSW	0	0.0	10	0.5	52	2.5	28	1.3	23	1.1	3	0.1	0	0.0	116	5.5
SW	0	0.0	13	0.6	86	4.1	44	2.1	21	1.0	1	0.0	0	0.0	165	7.9
WSW	0	0.0	11	0.5	95	4.5	62	3.0	9	0.4	1	0.0	0	0.0	178	8.5
W	0	0.0	11	0.5	64	3.0	34	1.6	8	0.4	0	0.0	0	0.0	117	5.6
WNW	0	0.0	8	0.4	63	3.0	38	1.8	16	0.8	1	0.0	0	0.0	126	6.0
NW	0	0.0	13	0.6	49	2.3	58	2.8	21	1.0	2	0.1	0	0.0	143	6.8
NNW	0	0.0	8	0.4	69	3.3	71	3.4	19	0.9	0	0.0	0	0.0	167	8.0
	0	0.0	146	7.0	871	41.5	775	36.9	277	13.2	25	1.2	5	0.2	2099	100.0

MISSING HOURS: 85

MEAN WIND SPEED: 8.4

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 04/08-06/08

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

LAPSE RATE: LE -1.9 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	12	0.6	8	0.4	0	0.0	0	0.0	20	1.0
NNE	0	0.0	0	0.0	0	0.0	4	0.2	7	0.3	1	0.0	0	0.0	12	0.6
NE	0	0.0	0	0.0	0	0.0	2	0.1	1	0.0	3	0.1	0	0.0	6	0.3
ENE	0	0.0	0	0.0	0	0.0	1	0.0	1	0.0	1	0.0	0	0.0	3	0.1
E	0	0.0	0	0.0	0	0.0	4	0.2	2	0.1	0	0.0	0	0.0	6	0.3
ESE	0	0.0	0	0.0	0	0.0	0	0.0	4	0.2	0	0.0	0	0.0	4	0.2
SE	0	0.0	0	0.0	0	0.0	0	0.0	8	0.4	8	0.4	1	0.0	17	0.8
SSE	0	0.0	0	0.0	2	0.1	4	0.2	3	0.1	1	0.0	0	0.0	10	0.5
S	0	0.0	0	0.0	0	0.0	3	0.1	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	1	0.0	0	0.0	0	0.0	1	0.0
WSW	0	0.0	0	0.0	1	0.0	6	0.3	4	0.2	1	0.0	0	0.0	12	0.6
W	0	0.0	0	0.0	2	0.1	4	0.2	1	0.0	2	0.1	0	0.0	9	0.4
WNW	0	0.0	0	0.0	2	0.1	2	0.1	10	0.5	3	0.1	0	0.0	17	0.8
NW	0	0.0	0	0.0	0	0.0	6	0.3	6	0.3	0	0.0	0	0.0	12	0.6
NNW	0	0.0	0	0.0	1	0.0	34	1.7	21	1.0	3	0.1	0	0.0	59	2.9
	0	0.0	0	0.0	8	0.4	82	4.0	77	3.8	23	1.1	1	0.0	191	9.3

MEAN WIND SPEED: 13.3
 MISSING: 10

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 04/08-06/08

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

LAPSE RATE: -1.8 TO -1.7 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	1	0.0	0	0.0	0	0.0	0	0.0	4	0.2
NNE	0	0.0	0	0.0	2	0.1	2	0.1	0	0.0	1	0.0	0	0.0	0	0.0	5	0.2
NE	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	1	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	1	0.0	0	0.0	0	0.0	2	0.1
E	0	0.0	0	0.0	1	0.0	0	0.0	2	0.1	0	0.0	0	0.0	0	0.0	3	0.1
ESE	0	0.0	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	0	0.0	6	0.3	0	0.0	2	0.1	0	0.0	0	0.0	8	0.4
SSE	0	0.0	0	0.0	1	0.0	2	0.1	0	0.0	2	0.1	0	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	0	0.0	1	0.0
SSW	0	0.0	0	0.0	4	0.2	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	4	0.2
SW	0	0.0	0	0.0	1	0.0	0	0.0	2	0.1	0	0.0	0	0.0	0	0.0	3	0.1
WSW	0	0.0	0	0.0	0	0.0	7	0.3	3	0.1	0	0.0	0	0.0	0	0.0	10	0.5
W	0	0.0	0	0.0	2	0.1	3	0.1	3	0.1	1	0.0	1	0.0	1	0.0	10	0.5
WNW	0	0.0	0	0.0	1	0.0	2	0.1	2	0.1	2	0.1	2	0.1	0	0.0	7	0.3
NW	0	0.0	0	0.0	1	0.0	5	0.2	4	0.2	0	0.0	0	0.0	0	0.0	10	0.5
NNW	0	0.0	0	0.0	3	0.1	6	0.3	3	0.1	0	0.0	0	0.0	0	0.0	12	0.6
	0	0.0	0	0.0	18	0.9	39	1.9	22	1.1	11	0.5	1	0.0	1	0.0	91	4.4

MEAN WIND SPEED: 12.2
 MISSING: 4

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 04/08-06/08

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

LAPSE RATE: -1.6 TO -1.5, 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	1	0.0	2	0.1	0	0.0	0	0.0	6	0.3
NNE	0	0.0	0	0.0	1	0.0	1	0.0	1	0.0	0	0.0	0	0.0	3	0.1
NE	0	0.0	0	0.0	3	0.1	2	0.1	0	0.0	0	0.0	0	0.0	5	0.2
ENE	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	1	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	1	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	0	0.0	1	0.0	1	0.0	0	0.0	3	0.1
SSE	0	0.0	1	0.0	3	0.1	3	0.1	0	0.0	0	0.0	0	0.0	7	0.3
S	0	0.0	0	0.0	4	0.2	2	0.1	0	0.0	0	0.0	0	0.0	6	0.3
SSW	0	0.0	0	0.0	3	0.1	0	0.0	0	0.0	0	0.0	0	0.0	3	0.1
SW	0	0.0	0	0.0	5	0.2	2	0.1	1	0.0	0	0.0	0	0.0	8	0.4
WSW	0	0.0	0	0.0	3	0.1	6	0.3	8	0.4	1	0.0	0	0.0	18	0.9
W	0	0.0	0	0.0	0	0.0	4	0.2	2	0.1	1	0.0	0	0.0	7	0.3
WNW	0	0.0	0	0.0	6	0.3	6	0.3	2	0.1	2	0.1	0	0.0	16	0.8
NW	0	0.0	0	0.0	1	0.0	2	0.1	2	0.1	1	0.0	0	0.0	6	0.3
NNW	0	0.0	0	0.0	4	0.2	5	0.2	1	0.0	1	0.0	0	0.0	11	0.5
	0	0.0	1	0.0	40	2.0	37	1.8	21	1.0	8	0.4	0	0.0	107	5.2

MEAN WIND SPEED: 10.4
 MISSING: 6

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 04/08-06/08

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

LAPSE RATE: -1.4 TO -0.5 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		
N	0	0.0	0	0.0	6	0.3	5	0.2	11	0.5	7	0.3	0	0.0	29	1.4
NNE	0	0.0	1	0.0	4	0.2	7	0.3	14	0.7	5	0.2	3	0.1	34	1.7
NE	0	0.0	0	0.0	3	0.1	22	1.1	18	0.9	3	0.1	12	0.6	58	2.8
ENE	0	0.0	0	0.0	11	0.5	31	1.5	20	1.0	10	0.5	2	0.1	74	3.6
E	0	0.0	1	0.0	9	0.4	12	0.6	1	0.0	0	0.0	0	0.0	23	1.1
ESE	0	0.0	1	0.0	3	0.1	2	0.1	6	0.3	1	0.0	0	0.0	13	0.6
SE	0	0.0	0	0.0	6	0.3	11	0.5	17	0.8	14	0.7	4	0.2	52	2.5
SSE	0	0.0	0	0.0	12	0.6	20	1.0	21	1.0	11	0.5	0	0.0	64	3.1
S	0	0.0	3	0.1	14	0.7	24	1.2	6	0.3	4	0.2	0	0.0	51	2.5
SSW	0	0.0	3	0.1	14	0.7	8	0.4	11	0.5	3	0.1	0	0.0	39	1.9
SW	0	0.0	5	0.2	9	0.4	16	0.8	12	0.6	5	0.2	0	0.0	47	2.3
WSW	0	0.0	1	0.0	10	0.5	13	0.6	14	0.7	4	0.2	3	0.1	45	2.2
W	0	0.0	1	0.0	14	0.7	10	0.5	6	0.3	2	0.1	1	0.0	34	1.7
WNW	0	0.0	0	0.0	6	0.3	19	0.9	6	0.3	2	0.1	0	0.0	33	1.6
NW	0	0.0	0	0.0	7	0.3	6	0.3	7	0.3	6	0.3	1	0.0	27	1.3
NNW	0	0.0	0	0.0	3	0.1	10	0.5	12	0.6	3	0.1	0	0.0	28	1.4
	0	0.0	16	0.8	131	6.4	216	10.5	182	8.9	80	3.9	26	1.3	651	31.8

MEAN WIND SPEED: 12.7
 MISSING: 12

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 04/08-06/08

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

LAPSE RATE: -0.4 TO 1.5 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	6	0.3	10	0.5	33	1.6	2	0.1	0	0.0	53	2.6
NNE	0	0.0	2	0.1	1	0.0	5	0.2	8	0.4	0	0.0	0	0.0	16	0.8
NE	0	0.0	0	0.0	4	0.2	20	1.0	9	0.4	0	0.0	0	0.0	33	1.6
ENE	0	0.0	1	0.0	14	0.7	10	0.5	1	0.0	0	0.0	0	0.0	26	1.3
E	0	0.0	1	0.0	7	0.3	4	0.2	2	0.1	0	0.0	0	0.0	14	0.7
ESE	0	0.0	0	0.0	4	0.2	7	0.3	10	0.5	0	0.0	0	0.0	21	1.0
SE	0	0.0	1	0.0	10	0.5	12	0.6	13	0.6	16	0.8	5	0.2	57	2.8
SSE	0	0.0	0	0.0	8	0.4	19	0.9	16	0.8	2	0.1	1	0.0	46	2.2
S	0	0.0	3	0.1	9	0.4	13	0.6	5	0.2	6	0.3	3	0.1	39	1.9
SSW	0	0.0	1	0.0	11	0.5	21	1.0	11	0.5	11	0.5	9	0.4	64	3.1
SW	0	0.0	1	0.0	17	0.8	33	1.6	20	1.0	6	0.3	2	0.1	79	3.9
WSW	0	0.0	1	0.0	27	1.3	40	2.0	10	0.5	0	0.0	0	0.0	78	3.8
W	0	0.0	3	0.1	25	1.2	32	1.6	10	0.5	0	0.0	0	0.0	70	3.4
WNW	0	0.0	2	0.1	16	0.8	15	0.7	8	0.4	1	0.0	1	0.0	43	2.1
NW	0	0.0	0	0.0	12	0.6	16	0.8	19	0.9	3	0.1	1	0.0	51	2.5
NNW	0	0.0	1	0.0	6	0.3	18	0.9	14	0.7	2	0.1	1	0.0	42	2.0
	0	0.0	19	0.9	177	8.6	275	13.4	189	9.2	49	2.4	23	1.1	732	35.7

MEAN WIND SPEED: 11.3
 MISSING: 40

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 04/08-06/08

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

LAPSE RATE: 1.6 TO 4.0 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	1	0.0	4	0.2	3	0.1	5	0.2	0	0.0	0	0.0	13	0.6
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	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	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	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	1	0.0	2	0.1	3	0.1	0	0.0	0	0.0	6	0.3
SE	0	0.0	0	0.0	5	0.2	11	0.5	10	0.5	11	0.5	3	0.1	40	2.0
SSE	0	0.0	0	0.0	0	0.0	12	0.6	10	0.5	0	0.0	0	0.0	22	1.1
S	0	0.0	0	0.0	2	0.1	6	0.3	5	0.2	2	0.1	0	0.0	15	0.7
SSW	0	0.0	1	0.0	2	0.1	9	0.4	1	0.0	5	0.2	0	0.0	18	0.9
SW	0	0.0	0	0.0	2	0.1	10	0.5	6	0.3	1	0.0	0	0.0	19	0.9
WSW	0	0.0	1	0.0	9	0.4	10	0.5	6	0.3	0	0.0	0	0.0	26	1.3
W	0	0.0	0	0.0	4	0.2	6	0.3	2	0.1	0	0.0	0	0.0	12	0.6
WNW	0	0.0	1	0.0	4	0.2	5	0.2	1	0.0	0	0.0	0	0.0	11	0.5
NW	0	0.0	0	0.0	5	0.2	4	0.2	1	0.0	0	0.0	0	0.0	10	0.5
NNW	0	0.0	0	0.0	3	0.1	4	0.2	1	0.0	0	0.0	0	0.0	8	0.4
	0	0.0	4	0.2	47	2.3	90	4.4	54	2.6	19	0.9	3	0.1	217	10.6

MEAN WIND SPEED: 11.5
 MISSING: 9

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 04/08-06/08

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

LAPSE RATE: GT 4.0 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	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	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	0	0.0	1	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	0	0.0
E	0	0.0	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	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	8	0.4	1	0.0	5	0.2	19	0.9		
SSE	0	0.0	1	0.0	1	0.0	7	0.3	3	0.1	2	0.1	0	0.0	14	0.7		
S	0	0.0	0	0.0	1	0.0	2	0.1	2	0.1	0	0.0	0	0.0	5	0.2		
SSW	0	0.0	2	0.1	1	0.0	0	0.0	0	0.0	1	0.0	0	0.0	4	0.2		
SW	0	0.0	1	0.0	0	0.0	3	0.1	0	0.0	0	0.0	0	0.0	4	0.2		
WSW	0	0.0	0	0.0	1	0.0	5	0.2	0	0.0	0	0.0	0	0.0	6	0.3		
W	0	0.0	0	0.0	2	0.1	0	0.0	0	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	2	0.1	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	3	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	6	0.3	11	0.5	22	1.1	13	0.6	4	0.2	5	0.2	61	3.0		

MEAN WIND SPEED: 11.4
MISSING: 0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 04/08-06/08

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	19	0.9	34	1.7	60	2.9	9	0.4	0	0.0	125	6.1
NNE	0	0.0	3	0.1	8	0.4	23	1.1	31	1.5	7	0.3	3	0.1	75	3.7
NE	0	0.0	0	0.0	13	0.6	49	2.4	30	1.5	7	0.3	12	0.6	111	5.4
ENE	0	0.0	1	0.0	26	1.3	45	2.2	22	1.1	13	0.6	2	0.1	109	5.3
E	0	0.0	2	0.1	23	1.1	22	1.1	7	0.3	0	0.0	0	0.0	54	2.6
ESE	0	0.0	1	0.0	10	0.5	14	0.7	26	1.3	2	0.1	0	0.0	53	2.6
SE	0	0.0	1	0.0	24	1.2	43	2.1	57	2.8	53	2.6	18	0.9	196	9.6
SSE	0	0.0	2	0.1	27	1.3	67	3.3	53	2.6	18	0.9	1	0.0	168	8.2
S	0	0.0	6	0.3	31	1.5	50	2.4	18	0.9	12	0.6	3	0.1	120	5.9
SSW	0	0.0	7	0.3	35	1.7	38	1.9	23	1.1	20	1.0	9	0.4	132	6.4
SW	0	0.0	7	0.3	34	1.7	64	3.1	42	2.0	12	0.6	2	0.1	161	7.9
WSW	0	0.0	3	0.1	51	2.5	87	4.2	45	2.2	6	0.3	3	0.1	195	9.5
W	0	0.0	4	0.2	49	2.4	59	2.9	24	1.2	6	0.3	2	0.1	144	7.0
WNW	0	0.0	3	0.1	35	1.7	49	2.4	29	1.4	10	0.5	1	0.0	127	6.2
NW	0	0.0	2	0.1	27	1.3	39	1.9	39	1.9	10	0.5	2	0.1	119	5.8
NNW	0	0.0	1	0.0	20	1.0	78	3.8	52	2.5	9	0.4	1	0.0	161	7.9
	0	0.0	46	2.2	432	21.1	761	37.1	558	27.2	194	9.5	59	2.9	2050	100.0

MISSING HOURS: 134

MEAN WIND SPEED: 11.9

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 04/08-06/08

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	21	1.0	35	1.7	60	2.9	9	0.4	0	0.0	128	6.1
NNE	0	0.0	3	0.1	9	0.4	24	1.1	31	1.5	7	0.3	3	0.1	77	3.7
NE	0	0.0	0	0.0	13	0.6	49	2.3	30	1.4	7	0.3	12	0.6	111	5.3
ENE	0	0.0	1	0.0	26	1.2	45	2.1	22	1.0	13	0.6	2	0.1	109	5.2
E	0	0.0	2	0.1	23	1.1	22	1.0	7	0.3	0	0.0	0	0.0	54	2.6
ESE	0	0.0	1	0.0	10	0.5	14	0.7	26	1.2	2	0.1	0	0.0	53	2.5
SE	0	0.0	1	0.0	24	1.1	45	2.1	57	2.7	53	2.5	18	0.9	198	9.4
SSE	0	0.0	2	0.1	27	1.3	67	3.2	53	2.5	18	0.9	1	0.0	168	8.0
S	0	0.0	6	0.3	32	1.5	50	2.4	18	0.9	12	0.6	3	0.1	121	5.8
SSW	0	0.0	7	0.3	35	1.7	38	1.8	23	1.1	20	1.0	9	0.4	132	6.3
SW	0	0.0	7	0.3	34	1.6	64	3.1	42	2.0	12	0.6	2	0.1	161	7.7
WSW	0	0.0	3	0.1	51	2.4	87	4.2	45	2.1	6	0.3	3	0.1	195	9.3
W	0	0.0	4	0.2	49	2.3	60	2.9	24	1.1	6	0.3	2	0.1	145	6.9
WNW	0	0.0	3	0.1	37	1.8	50	2.4	32	1.5	10	0.5	1	0.0	133	6.3
NW	0	0.0	2	0.1	27	1.3	46	2.2	51	2.4	15	0.7	2	0.1	143	6.8
NNW	0	0.0	1	0.0	21	1.0	84	4.0	52	2.5	9	0.4	1	0.0	168	8.0
	0	0.0	46	2.2	439	20.9	780	37.2	573	27.3	199	9.5	59	2.8	2096	100.0

MISSING HOURS: 88

MEAN WIND SPEED: 11.9

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 04/08-06/08

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

LAPSE RATE: LE -1.9 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	8	0.4	12	0.6	1	0.1	0	0.0	21	1.1
NNE	0	0.0	0	0.0	0	0.0	5	0.3	5	0.3	2	0.1	0	0.0	12	0.6
NE	0	0.0	0	0.0	0	0.0	1	0.1	1	0.1	1	0.1	0	0.0	3	0.2
ENE	0	0.0	0	0.0	0	0.0	2	0.1	0	0.0	3	0.2	0	0.0	5	0.3
E	0	0.0	0	0.0	0	0.0	0	0.0	5	0.3	1	0.1	0	0.0	6	0.3
ESE	0	0.0	0	0.0	0	0.0	0	0.0	2	0.1	2	0.1	0	0.0	4	0.2
SE	0	0.0	0	0.0	0	0.0	1	0.1	5	0.3	8	0.4	2	0.1	16	0.8
SSE	0	0.0	0	0.0	1	0.1	3	0.2	2	0.1	1	0.1	0	0.0	7	0.4
S	0	0.0	0	0.0	1	0.1	4	0.2	2	0.1	0	0.0	0	0.0	7	0.4
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	0.1	0	0.0	0	0.0	0	0.0	1	0.1
WSW	0	0.0	0	0.0	1	0.1	4	0.2	4	0.2	1	0.1	0	0.0	10	0.5
W	0	0.0	0	0.0	0	0.0	5	0.3	2	0.1	0	0.0	1	0.1	8	0.4
WNW	0	0.0	0	0.0	4	0.2	0	0.0	10	0.5	3	0.2	2	0.1	19	1.0
NW	0	0.0	0	0.0	0	0.0	3	0.2	8	0.4	1	0.1	0	0.0	12	0.6
NNW	0	0.0	0	0.0	1	0.1	24	1.2	28	1.4	4	0.2	1	0.1	58	3.0
	0	0.0	0	0.0	8	0.4	61	3.1	86	4.4	28	1.4	6	0.3	189	9.6

MEAN WIND SPEED: 14.5
 MISSING: 12

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 04/08-06/08

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

LAPSE RATE: -1.8 TO -1.7 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	0.1	2	0.1	3	0.2	0	0.0	0	0.0	6	0.3
NNE	0	0.0	0	0.0	2	0.1	2	0.1	0	0.0	1	0.1	0	0.0	5	0.3
NE	0	0.0	0	0.0	0	0.0	1	0.1	0	0.0	0	0.0	0	0.0	1	0.1
ENE	0	0.0	0	0.0	0	0.0	1	0.1	0	0.0	2	0.1	0	0.0	3	0.2
E	0	0.0	0	0.0	0	0.0	1	0.1	0	0.0	2	0.1	0	0.0	3	0.2
ESE	0	0.0	0	0.0	1	0.1	1	0.1	2	0.1	0	0.0	1	0.1	5	0.3
SE	0	0.0	0	0.0	1	0.1	5	0.3	0	0.0	0	0.0	2	0.1	8	0.4
SSE	0	0.0	0	0.0	0	0.0	2	0.1	0	0.0	2	0.1	0	0.0	4	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	1	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1
SW	0	0.0	0	0.0	2	0.1	0	0.0	0	0.0	1	0.1	0	0.0	3	0.2
WSW	0	0.0	0	0.0	0	0.0	3	0.2	7	0.4	0	0.0	0	0.0	10	0.5
W	0	0.0	0	0.0	1	0.1	2	0.1	3	0.2	1	0.1	1	0.1	8	0.4
WNW	0	0.0	0	0.0	1	0.1	1	0.1	1	0.1	3	0.2	0	0.0	6	0.3
NW	0	0.0	0	0.0	2	0.1	4	0.2	4	0.2	1	0.1	0	0.0	11	0.6
NNW	0	0.0	0	0.0	0	0.0	6	0.3	4	0.2	0	0.0	0	0.0	10	0.5
	0	0.0	1	0.1	11	0.6	31	1.6	24	1.2	13	0.7	4	0.2	84	4.3

MEAN WIND SPEED: 13.5
 MISSING: 11

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 04/08-06/08

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS

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

LAPSE RATE: -1.6 TO -1.5 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	SUM	PERCENT
N	0	0.0	0	0.0	3	0.2	1	0.1	3	0.2	0	0.0	0	0.0	7	0.4
NNE	0	0.0	0	0.0	2	0.1	0	0.0	2	0.1	0	0.0	0	0.0	4	0.2
NE	0	0.0	0	0.0	3	0.2	1	0.1	1	0.1	0	0.0	0	0.0	5	0.3
ENE	0	0.0	0	0.0	0	0.0	1	0.1	0	0.0	1	0.1	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	1	0.1	2	0.1	0	0.0	0	0.0	0	0.0	3	0.2
SE	0	0.0	0	0.0	1	0.1	0	0.0	1	0.1	2	0.1	0	0.0	4	0.2
SSE	0	0.0	1	0.1	0	0.0	2	0.1	1	0.1	0	0.0	0	0.0	4	0.2
S	0	0.0	2	0.1	4	0.2	0	0.0	0	0.0	0	0.0	0	0.0	6	0.3
SSW	0	0.0	0	0.0	1	0.1	2	0.1	1	0.1	0	0.0	0	0.0	4	0.2
SW	0	0.0	0	0.0	1	0.1	2	0.1	0	0.0	0	0.0	0	0.0	3	0.2
WSW	0	0.0	0	0.0	3	0.2	4	0.2	10	0.5	3	0.2	0	0.0	20	1.0
W	0	0.0	0	0.0	3	0.2	5	0.3	1	0.1	0	0.0	1	0.1	10	0.5
WNW	0	0.0	0	0.0	5	0.3	3	0.2	3	0.2	2	0.1	1	0.1	14	0.7
NW	0	0.0	0	0.0	2	0.1	1	0.1	2	0.1	2	0.1	0	0.0	7	0.4
NNW	0	0.0	0	0.0	3	0.2	3	0.2	2	0.1	0	0.0	1	0.1	9	0.5
	0	0.0	3	0.2	34	1.7	27	1.4	27	1.4	10	0.5	3	0.2	104	5.3

MEAN WIND SPEED: 11.4

MISSING: 9

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 04/08-06/08

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

LAPSE RATE: -1.4 TO -0.5 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	3	0.2	6	0.3	4	0.2	10	0.5	6	0.3	29	1.5
NNE	0	0.0	1	0.1	1	0.1	6	0.3	14	0.7	4	0.2	6	0.3	32	1.6
NE	0	0.0	1	0.1	3	0.2	17	0.9	21	1.1	10	0.5	5	0.3	57	2.9
ENE	0	0.0	0	0.0	12	0.6	23	1.2	17	0.9	11	0.6	9	0.5	72	3.7
E	0	0.0	1	0.1	6	0.3	13	0.7	7	0.4	2	0.1	0	0.0	29	1.5
ESE	0	0.0	0	0.0	2	0.1	1	0.1	4	0.2	0	0.0	1	0.1	8	0.4
SE	0	0.0	2	0.1	1	0.1	11	0.6	8	0.4	18	0.9	7	0.4	47	2.4
SSE	0	0.0	1	0.1	9	0.5	13	0.7	19	1.0	14	0.7	2	0.1	58	3.0
S	0	0.0	1	0.1	7	0.4	12	0.6	7	0.4	3	0.2	5	0.3	35	1.8
SSW	0	0.0	0	0.0	11	0.6	13	0.7	9	0.5	7	0.4	1	0.1	41	2.1
SW	0	0.0	2	0.1	5	0.3	7	0.4	8	0.4	10	0.5	0	0.0	32	1.6
WSW	0	0.0	0	0.0	10	0.5	9	0.5	13	0.7	4	0.2	5	0.3	41	2.1
W	0	0.0	3	0.2	13	0.7	12	0.6	4	0.2	4	0.2	2	0.1	38	1.9
WNW	0	0.0	2	0.1	13	0.7	15	0.8	7	0.4	4	0.2	1	0.1	42	2.1
NW	0	0.0	0	0.0	3	0.2	7	0.4	7	0.4	1	0.1	5	0.3	23	1.2
NNW	0	0.0	0	0.0	4	0.2	8	0.4	12	0.6	6	0.3	3	0.2	33	1.7
	0	0.0	14	0.7	103	5.2	173	8.8	161	8.2	108	5.5	58	3.0	617	31.4

MEAN WIND SPEED: 14.4
 MISSING: 46

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 04/08-06/08

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

LAPSE RATE: -0.4 TO 1.5 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	0.1	3	0.2	6	0.3	7	0.4	21	1.1	3	0.2	41	2.1
NNE	0	0.0	1	0.1	1	0.1	3	0.2	7	0.4	9	0.5	0	0.0	21	1.1
NE	0	0.0	0	0.0	5	0.3	11	0.6	7	0.4	6	0.3	0	0.0	29	1.5
ENE	0	0.0	1	0.1	10	0.5	12	0.6	4	0.2	0	0.0	0	0.0	27	1.4
E	0	0.0	1	0.1	12	0.6	6	0.3	2	0.1	1	0.1	1	0.1	23	1.2
ESE	0	0.0	0	0.0	5	0.3	8	0.4	4	0.2	7	0.4	0	0.0	24	1.2
SE	0	0.0	0	0.0	4	0.2	10	0.5	12	0.6	8	0.4	11	0.6	45	2.3
SSE	0	0.0	1	0.1	8	0.4	15	0.8	9	0.5	9	0.5	1	0.1	43	2.2
S	0	0.0	0	0.0	6	0.3	11	0.6	9	0.5	5	0.3	5	0.3	36	1.8
SSW	0	0.0	0	0.0	2	0.1	14	0.7	11	0.6	16	0.8	10	0.5	53	2.7
SW	0	0.0	3	0.2	7	0.4	15	0.8	34	1.7	12	0.6	5	0.3	76	3.9
WSW	0	0.0	3	0.2	7	0.4	27	1.4	20	1.0	4	0.2	0	0.0	61	3.1
W	0	0.0	1	0.1	13	0.7	34	1.7	23	1.2	2	0.1	0	0.0	73	3.7
WNW	0	0.0	2	0.1	11	0.6	19	1.0	9	0.5	1	0.1	2	0.1	44	2.2
NW	0	0.0	2	0.1	8	0.4	11	0.6	16	0.8	16	0.8	3	0.2	56	2.9
NNW	0	0.0	0	0.0	2	0.1	8	0.4	23	1.2	5	0.3	3	0.2	41	2.1
	0	0.0	16	0.8	104	5.3	210	10.7	197	10.0	122	6.2	44	2.2	693	35.3

MEAN WIND SPEED: 14.0
 MISSING: 79

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 04/08-06/08

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

LAPSE RATE: 1.6 TO 4.0 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	3	0.2	8	0.4	1	0.1	0	0.0	12	0.6
NNE	0	0.0	0	0.0	2	0.1	2	0.1	4	0.2	0	0.0	0	0.0	8	0.4
NE	0	0.0	0	0.0	0	0.0	0	0.0	3	0.2	0	0.0	0	0.0	3	0.2
ENE	0	0.0	0	0.0	3	0.2	2	0.1	1	0.1	0	0.0	0	0.0	6	0.3
E	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1	0	0.0	0	0.0	1	0.1
ESE	0	0.0	0	0.0	0	0.0	1	0.1	1	0.1	1	0.1	0	0.0	3	0.2
SE	0	0.0	0	0.0	4	0.2	1	0.1	8	0.4	7	0.4	5	0.3	25	1.3
SSE	0	0.0	0	0.0	5	0.3	11	0.6	5	0.3	4	0.2	2	0.1	27	1.4
S	0	0.0	0	0.0	2	0.1	6	0.3	9	0.5	3	0.2	2	0.1	22	1.1
SSW	0	0.0	1	0.1	1	0.1	3	0.2	6	0.3	2	0.1	3	0.2	16	0.8
SW	0	0.0	0	0.0	1	0.1	5	0.3	10	0.5	4	0.2	1	0.1	21	1.1
WSW	0	0.0	0	0.0	1	0.1	6	0.3	10	0.5	6	0.3	0	0.0	23	1.2
W	0	0.0	1	0.1	1	0.1	7	0.4	6	0.3	2	0.1	0	0.0	17	0.9
WNW	0	0.0	2	0.1	1	0.1	6	0.3	2	0.1	1	0.1	0	0.0	12	0.6
NW	0	0.0	0	0.0	2	0.1	4	0.2	5	0.3	0	0.0	0	0.0	11	0.6
NNW	0	0.0	0	0.0	3	0.2	4	0.2	2	0.1	0	0.0	0	0.0	9	0.5
	0	0.0	4	0.2	26	1.3	61	3.1	81	4.1	31	1.6	13	0.7	216	11.0

MEAN WIND SPEED: 14.1
 MISSING: 10

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 04/08-06/08

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

LAPSE RATE: GT 4.0 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
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	0	0.0	1	0.1	0	0.0	0	0.0	0	0.0	1	0.1
ESE	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1	0	0.0	0	0.0	1	0.1
SE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1	2	0.1	3	0.2
SSE	0	0.0	0	0.0	3	0.2	5	0.3	4	0.2	4	0.2	1	0.1	17	0.9
S	0	0.0	0	0.0	0	0.0	4	0.2	6	0.3	0	0.0	0	0.0	10	0.5
SSW	0	0.0	0	0.0	0	0.0	1	0.1	1	0.1	1	0.1	0	0.0	3	0.2
SW	0	0.0	0	0.0	2	0.1	8	0.4	2	0.1	1	0.1	0	0.0	13	0.7
WSW	0	0.0	0	0.0	1	0.1	1	0.1	4	0.2	0	0.0	0	0.0	6	0.3
W	0	0.0	0	0.0	3	0.2	0	0.0	0	0.0	0	0.0	0	0.0	3	0.2
WNW	0	0.0	0	0.0	1	0.1	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1
NW	0	0.0	1	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1
NNW	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1	0	0.0	0	0.0	1	0.1
	0	0.0	1	0.1	10	0.5	20	1.0	19	1.0	7	0.4	3	0.2	60	3.1

MEAN WIND SPEED: 13.0
MISSING: 1

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 04/08-06/08

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	0.1	10	0.5	26	1.3	37	1.9	33	1.7	9	0.5	116	5.9
NNE	0	0.0	2	0.1	8	0.4	18	0.9	32	1.6	16	0.8	6	0.3	82	4.2
NE	0	0.0	1	0.1	11	0.6	31	1.6	33	1.7	17	0.9	5	0.3	98	5.0
ENE	0	0.0	1	0.1	25	1.3	41	2.1	22	1.1	17	0.9	9	0.5	115	5.9
E	0	0.0	2	0.1	20	1.0	21	1.1	15	0.8	6	0.3	1	0.1	65	3.3
ESE	0	0.0	0	0.0	9	0.5	13	0.7	14	0.7	10	0.5	2	0.1	48	2.4
SE	0	0.0	2	0.1	11	0.6	28	1.4	34	1.7	44	2.2	29	1.5	148	7.5
SSE	0	0.0	3	0.2	26	1.3	51	2.6	40	2.0	34	1.7	6	0.3	160	8.2
S	0	0.0	3	0.2	20	1.0	37	1.9	33	1.7	11	0.6	12	0.6	116	5.9
SSW	0	0.0	2	0.1	15	0.8	33	1.7	28	1.4	26	1.3	14	0.7	118	6.0
SW	0	0.0	5	0.3	18	0.9	38	1.9	54	2.8	28	1.4	6	0.3	149	7.6
WSW	0	0.0	3	0.2	23	1.2	54	2.8	68	3.5	18	0.9	5	0.3	171	8.7
W	0	0.0	5	0.3	34	1.7	65	3.3	39	2.0	9	0.5	5	0.3	157	8.0
WNW	0	0.0	6	0.3	36	1.8	44	2.2	32	1.6	14	0.7	6	0.3	138	7.0
NW	0	0.0	3	0.2	17	0.9	30	1.5	42	2.1	21	1.1	8	0.4	121	6.2
NNW	0	0.0	0	0.0	13	0.7	53	2.7	72	3.7	15	0.8	8	0.4	161	8.2
	0	0.0	39	2.0	296	15.1	583	29.7	595	30.3	319	16.3	131	6.7	1963	100.0

MISSING HOURS: 221

MEAN WIND SPEED: 14.0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 04/08-06/08

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	10	0.5	27	1.3	37	1.8	33	1.6	9	0.4	117	5.8
NNE	0	0.0	2	0.1	8	0.4	20	1.0	33	1.6	16	0.8	6	0.3	85	4.2
NE	0	0.0	1	0.0	11	0.5	31	1.5	33	1.6	17	0.8	5	0.2	98	4.9
ENE	0	0.0	1	0.0	25	1.2	41	2.0	22	1.1	17	0.8	9	0.4	115	5.7
E	0	0.0	2	0.1	20	1.0	21	1.0	15	0.7	6	0.3	1	0.0	65	3.2
ESE	0	0.0	0	0.0	9	0.4	13	0.6	14	0.7	10	0.5	2	0.1	48	2.4
SE	0	0.0	2	0.1	11	0.5	28	1.4	34	1.7	44	2.2	29	1.4	148	7.4
SSE	0	0.0	3	0.1	27	1.3	51	2.5	40	2.0	34	1.7	6	0.3	161	8.0
S	0	0.0	3	0.1	20	1.0	37	1.8	33	1.6	11	0.5	12	0.6	116	5.8
SSW	0	0.0	2	0.1	16	0.8	33	1.6	28	1.4	26	1.3	14	0.7	119	5.9
SW	0	0.0	5	0.2	19	0.9	38	1.9	54	2.7	28	1.4	6	0.3	150	7.5
WSW	0	0.0	3	0.1	23	1.1	54	2.7	68	3.4	18	0.9	5	0.2	171	8.5
W	0	0.0	5	0.2	34	1.7	66	3.3	39	1.9	9	0.4	5	0.2	158	7.9
WNW	0	0.0	6	0.3	36	1.8	44	2.2	35	1.7	15	0.7	6	0.3	142	7.1
NW	0	0.0	3	0.1	17	0.8	35	1.7	52	2.6	30	1.5	10	0.5	147	7.3
NNW	0	0.0	0	0.0	13	0.6	60	3.0	73	3.6	15	0.7	8	0.4	169	8.4
	0	0.0	39	1.9	299	14.9	599	29.8	610	30.4	329	16.4	133	6.6	2009	100.0

MISSING HOURS: 175

MEAN WIND SPEED: 14.0

Lapse Rate
Wind Distributions
300 – 33 foot

7/2008 – 9/2008

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 07/08-09/08

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

LAPSE RATE: LE -1.9 DEG C/100M
 CLASS A

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	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	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	9	0.4	14	0.6	8	0.4	0	0.0	31	1.4
SSE	0	0.0	0	0.0	3	0.1	12	0.5	11	0.5	0	0.0	0	0.0	26	1.2
S	0	0.0	0	0.0	3	0.1	2	0.1	0	0.0	0	0.0	0	0.0	5	0.2
SSW	0	0.0	0	0.0	0	0.0	5	0.2	0	0.0	0	0.0	0	0.0	5	0.2
SW	0	0.0	0	0.0	4	0.2	15	0.7	1	0.0	0	0.0	0	0.0	20	0.9
WSW	0	0.0	0	0.0	1	0.0	8	0.4	1	0.0	0	0.0	0	0.0	10	0.5
W	0	0.0	0	0.0	0	0.0	3	0.1	0	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	3	0.1	1	0.0	0	0.0	0	0.0	4	0.2
NNW	0	0.0	0	0.0	1	0.0	1	0.0	0	0.0	0	0.0	0	0.0	2	0.1
	0	0.0	0	0.0	12	0.5	60	2.7	28	1.3	8	0.4	0	0.0	108	4.9

MEAN WIND SPEED: 11.7
 MISSING: 0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 07/08-09/08

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

LAPSE RATE: -1.8 TO -1.7 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	5	0.2	5	0.2	0	0.0	0	0.0	0	0.0	10	0.5
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	10	0.5	0	0.0	0	0.0	0	0.0	10	0.5
ENE	0	0.0	0	0.0	1	0.0	5	0.2	0	0.0	0	0.0	0	0.0	6	0.3
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	1	0.0	0	0.0	0	0.0	0	0.0	1	0.0
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	5	0.2	4	0.2	1	0.0	0	0.0	0	0.0	10	0.5
S	0	0.0	0	0.0	4	0.2	2	0.1	0	0.0	0	0.0	0	0.0	6	0.3
SSW	0	0.0	0	0.0	6	0.3	3	0.1	0	0.0	0	0.0	0	0.0	9	0.4
SW	0	0.0	0	0.0	5	0.2	7	0.3	1	0.0	0	0.0	0	0.0	13	0.6
WSW	0	0.0	0	0.0	7	0.3	5	0.2	0	0.0	0	0.0	0	0.0	12	0.5
W	0	0.0	0	0.0	3	0.1	3	0.1	0	0.0	0	0.0	0	0.0	6	0.3
WNW	0	0.0	0	0.0	2	0.1	4	0.2	0	0.0	0	0.0	0	0.0	6	0.3
NW	0	0.0	0	0.0	5	0.2	11	0.5	1	0.0	0	0.0	0	0.0	17	0.8
NNW	0	0.0	0	0.0	5	0.2	12	0.5	0	0.0	0	0.0	0	0.0	17	0.8
	0	0.0	0	0.0	52	2.4	78	3.6	5	0.2	0	0.0	0	0.0	135	6.1

MEAN WIND SPEED: 8.3
 MISSING: 0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 07/08-09/08

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS

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

LAPSE RATE: -1.6 TO -1.5 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	13	0.6	2	0.1	0	0.0	0	0.0	0	0.0	15	0.7
NNE	0	0.0	0	0.0	7	0.3	4	0.2	0	0.0	0	0.0	0	0.0	11	0.5
NE	0	0.0	1	0.0	4	0.2	5	0.2	3	0.1	0	0.0	0	0.0	13	0.6
ENE	0	0.0	0	0.0	3	0.1	1	0.0	0	0.0	0	0.0	0	0.0	4	0.2
E	0	0.0	1	0.0	0	0.0	1	0.0	1	0.0	0	0.0	0	0.0	3	0.1
ESE	0	0.0	0	0.0	0	0.0	3	0.1	0	0.0	0	0.0	0	0.0	3	0.1
SE	0	0.0	0	0.0	1	0.0	5	0.2	2	0.1	1	0.0	0	0.0	9	0.4
SSE	0	0.0	0	0.0	9	0.4	3	0.1	5	0.2	0	0.0	0	0.0	17	0.8
S	0	0.0	0	0.0	2	0.1	1	0.0	0	0.0	0	0.0	0	0.0	3	0.1
SSW	0	0.0	1	0.0	5	0.2	2	0.1	0	0.0	0	0.0	0	0.0	8	0.4
SW	0	0.0	0	0.0	6	0.3	6	0.3	3	0.1	0	0.0	0	0.0	15	0.7
WSW	0	0.0	1	0.0	5	0.2	3	0.1	0	0.0	0	0.0	0	0.0	9	0.4
W	0	0.0	0	0.0	6	0.3	2	0.1	0	0.0	0	0.0	0	0.0	8	0.4
WNW	0	0.0	2	0.1	3	0.1	3	0.1	1	0.0	0	0.0	0	0.0	9	0.4
NW	0	0.0	0	0.0	9	0.4	14	0.6	0	0.0	0	0.0	0	0.0	23	1.0
NNW	0	0.0	0	0.0	22	1.0	9	0.4	0	0.0	0	0.0	0	0.0	31	1.4
	0	0.0	6	0.3	95	4.3	64	2.9	15	0.7	1	0.0	0	0.0	181	8.2

MEAN WIND SPEED: 7.6
MISSING: 2

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 07/08-09/08

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

LAPSE RATE: -1.4 TO -0.5 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	29	1.3	7	0.3	0	0.0	0	0.0	0	0.0	42	1.9
NNE	0	0.0	4	0.2	10	0.5	12	0.5	0	0.0	0	0.0	0	0.0	26	1.2
NE	0	0.0	3	0.1	8	0.4	19	0.9	24	1.1	0	0.0	0	0.0	54	2.5
ENE	0	0.0	3	0.1	10	0.5	4	0.2	2	0.1	0	0.0	0	0.0	19	0.9
E	0	0.0	5	0.2	12	0.5	8	0.4	0	0.0	0	0.0	0	0.0	25	1.1
ESE	0	0.0	1	0.0	6	0.3	3	0.1	1	0.0	1	0.0	0	0.0	12	0.5
SE	0	0.0	1	0.0	17	0.8	33	1.5	17	0.8	0	0.0	0	0.0	68	3.1
SSE	0	0.0	6	0.3	18	0.8	41	1.9	21	1.0	0	0.0	0	0.0	86	3.9
S	0	0.0	5	0.2	20	0.9	42	1.9	13	0.6	0	0.0	0	0.0	80	3.6
SSW	0	0.0	4	0.2	35	1.6	32	1.5	7	0.3	0	0.0	0	0.0	78	3.6
SW	0	0.0	2	0.1	26	1.2	34	1.5	5	0.2	0	0.0	0	0.0	67	3.0
WSW	0	0.0	5	0.2	15	0.7	15	0.7	0	0.0	0	0.0	0	0.0	35	1.6
W	0	0.0	2	0.1	22	1.0	16	0.7	2	0.1	0	0.0	0	0.0	42	1.9
WNW	0	0.0	0	0.0	25	1.1	12	0.5	0	0.0	0	0.0	0	0.0	37	1.7
NW	0	0.0	5	0.2	23	1.0	25	1.1	1	0.0	0	0.0	0	0.0	54	2.5
NNW	0	0.0	4	0.2	22	1.0	17	0.8	1	0.0	1	0.0	0	0.0	45	2.0
	0	0.0	56	2.5	298	13.6	320	14.6	94	4.3	2	0.1	0	0.0	770	35.0

MEAN WIND SPEED: 8.2
 MISSING: 1

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 07/08-09/08

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

LAPSE RATE: -0.4 TO 1.5 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	7	0.3	21	1.0	5	0.2	0	0.0	0	0.0	0	0.0	33	1.5
NNE	0	0.0	13	0.6	41	1.9	23	1.0	0	0.0	0	0.0	0	0.0	77	3.5
NE	0	0.0	5	0.2	21	1.0	23	1.0	3	0.1	0	0.0	0	0.0	52	2.4
ENE	0	0.0	10	0.5	35	1.6	10	0.5	0	0.0	0	0.0	0	0.0	55	2.5
E	0	0.0	13	0.6	30	1.4	0	0.0	0	0.0	0	0.0	0	0.0	43	2.0
ESE	0	0.0	5	0.2	22	1.0	11	0.5	0	0.0	0	0.0	0	0.0	38	1.7
SE	0	0.0	2	0.1	6	0.3	17	0.8	2	0.1	0	0.0	0	0.0	27	1.2
SSE	0	0.0	1	0.0	6	0.3	19	0.9	2	0.1	0	0.0	0	0.0	28	1.3
S	0	0.0	2	0.1	13	0.6	13	0.6	5	0.2	0	0.0	0	0.0	33	1.5
SSW	0	0.0	4	0.2	28	1.3	34	1.5	4	0.2	0	0.0	0	0.0	70	3.2
SW	0	0.0	5	0.2	34	1.5	21	1.0	2	0.1	0	0.0	0	0.0	62	2.8
WSW	0	0.0	7	0.3	34	1.5	25	1.1	1	0.0	0	0.0	0	0.0	67	3.0
W	0	0.0	11	0.5	21	1.0	9	0.4	0	0.0	0	0.0	0	0.0	41	1.9
WNW	0	0.0	17	0.8	30	1.4	9	0.4	3	0.1	0	0.0	0	0.0	59	2.7
NW	0	0.0	13	0.6	47	2.1	29	1.3	1	0.0	0	0.0	0	0.0	90	4.1
NNW	0	0.0	5	0.2	33	1.5	13	0.6	0	0.0	0	0.0	0	0.0	51	2.3
	0	0.0	120	5.5	422	19.2	261	11.9	23	1.0	0	0.0	0	0.0	826	37.6

MEAN WIND SPEED: 6.6
 MISSING: 0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 07/08-09/08

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS

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

LAPSE RATE: 1.6 TO 4.0 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	14	0.6	2	0.1	0	0.0	0	0.0	0	0.0	17	0.8
NNE	0	0.0	3	0.1	23	1.0	5	0.2	0	0.0	0	0.0	0	0.0	31	1.4
NE	0	0.0	3	0.1	13	0.6	3	0.1	0	0.0	0	0.0	0	0.0	19	0.9
ENE	0	0.0	3	0.1	15	0.7	1	0.0	0	0.0	0	0.0	0	0.0	19	0.9
E	0	0.0	3	0.1	5	0.2	1	0.0	0	0.0	0	0.0	0	0.0	9	0.4
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	0	0.0	0	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	4	0.2	0	0.0	0	0.0	0	0.0	0	0.0	4	0.2
SSW	0	0.0	1	0.0	2	0.1	0	0.0	0	0.0	0	0.0	0	0.0	3	0.1
SW	0	0.0	0	0.0	3	0.1	1	0.0	0	0.0	0	0.0	0	0.0	4	0.2
WSW	0	0.0	2	0.1	9	0.4	3	0.1	0	0.0	0	0.0	0	0.0	14	0.6
W	0	0.0	2	0.1	2	0.1	0	0.0	0	0.0	0	0.0	0	0.0	4	0.2
WNW	0	0.0	2	0.1	2	0.1	0	0.0	0	0.0	0	0.0	0	0.0	4	0.2
NW	0	0.0	0	0.0	10	0.5	0	0.0	0	0.0	0	0.0	0	0.0	10	0.5
NNW	0	0.0	2	0.1	15	0.7	1	0.0	0	0.0	0	0.0	0	0.0	18	0.8
	0	0.0	22	1.0	120	5.5	19	0.9	1	0.0	0	0.0	0	0.0	162	7.4

MEAN WIND SPEED: 5.6
MISSING: 0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 07/08-09/08

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS

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

LAPSE RATE: GT 4.0 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	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
NNE	0	0.0	0	0.0	2	0.1	1	0.0	0	0.0	0	0.0	0	0.0	3	0.1
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	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	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	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	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	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	0	0.0	0	0.0	13	0.6	2	0.1	0	0.0	0	0.0	0	0.0	15	0.7

MEAN WIND SPEED: 6.0
MISSING: 0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 07/08-09/08

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			
N	0	0.0	14	0.6	83	3.8	22	1.0	0	0.0	0	0.0	0	0.0	119	5.4
NNE	0	0.0	20	0.9	84	3.8	48	2.2	0	0.0	0	0.0	0	0.0	152	6.9
NE	0	0.0	12	0.5	48	2.2	61	2.8	30	1.4	0	0.0	0	0.0	151	6.9
ENE	0	0.0	16	0.7	68	3.1	22	1.0	2	0.1	0	0.0	0	0.0	108	4.9
E	0	0.0	22	1.0	48	2.2	10	0.5	1	0.0	0	0.0	0	0.0	81	3.7
ESE	0	0.0	6	0.3	33	1.5	19	0.9	1	0.0	1	0.0	0	0.0	60	2.7
SE	0	0.0	3	0.1	27	1.2	68	3.1	37	1.7	9	0.4	0	0.0	144	6.6
SSE	0	0.0	7	0.3	41	1.9	79	3.6	41	1.9	0	0.0	0	0.0	168	7.6
S	0	0.0	7	0.3	46	2.1	60	2.7	18	0.8	0	0.0	0	0.0	131	6.0
SSW	0	0.0	10	0.5	76	3.5	76	3.5	11	0.5	0	0.0	0	0.0	173	7.9
SW	0	0.0	7	0.3	78	3.6	84	3.8	12	0.5	0	0.0	0	0.0	181	8.2
WSW	0	0.0	15	0.7	71	3.2	59	2.7	2	0.1	0	0.0	0	0.0	147	6.7
W	0	0.0	15	0.7	54	2.5	33	1.5	2	0.1	0	0.0	0	0.0	104	4.7
WNW	0	0.0	21	1.0	62	2.8	28	1.3	4	0.2	0	0.0	0	0.0	115	5.2
NW	0	0.0	18	0.8	95	4.3	82	3.7	4	0.2	0	0.0	0	0.0	199	9.1
NNW	0	0.0	11	0.5	98	4.5	53	2.4	1	0.0	1	0.0	0	0.0	164	7.5
	0	0.0	204	9.3	1012	46.1	804	36.6	166	7.6	11	0.5	0	0.0	2197	100.0

MISSING HOURS: 11

MEAN WIND SPEED: 7.5

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 07/08-09/08

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	14	0.6	83	3.8	23	1.0	0	0.0	0	0.0	0	0.0	120	5.5
NNE	0	0.0	20	0.9	84	3.8	48	2.2	0	0.0	0	0.0	0	0.0	152	6.9
NE	0	0.0	12	0.5	48	2.2	61	2.8	30	1.4	0	0.0	0	0.0	151	6.9
ENE	0	0.0	16	0.7	68	3.1	22	1.0	2	0.1	0	0.0	0	0.0	108	4.9
E	0	0.0	22	1.0	48	2.2	10	0.5	1	0.0	0	0.0	0	0.0	81	3.7
ESE	0	0.0	6	0.3	33	1.5	19	0.9	1	0.0	1	0.0	0	0.0	60	2.7
SE	0	0.0	3	0.1	27	1.2	68	3.1	37	1.7	9	0.4	0	0.0	144	6.5
SSE	0	0.0	7	0.3	41	1.9	79	3.6	41	1.9	0	0.0	0	0.0	168	7.6
S	0	0.0	7	0.3	46	2.1	60	2.7	18	0.8	0	0.0	0	0.0	131	6.0
SSW	0	0.0	10	0.5	76	3.5	76	3.5	11	0.5	0	0.0	0	0.0	173	7.9
SW	0	0.0	7	0.3	78	3.5	84	3.8	12	0.5	0	0.0	0	0.0	181	8.2
WSW	0	0.0	15	0.7	71	3.2	59	2.7	2	0.1	0	0.0	0	0.0	147	6.7
W	0	0.0	15	0.7	54	2.5	33	1.5	2	0.1	0	0.0	0	0.0	104	4.7
WNW	0	0.0	21	1.0	62	2.8	29	1.3	4	0.2	0	0.0	0	0.0	116	5.3
NW	0	0.0	18	0.8	95	4.3	83	3.8	4	0.2	0	0.0	0	0.0	200	9.1
NNW	0	0.0	11	0.5	98	4.5	54	2.5	1	0.0	1	0.0	0	0.0	165	7.5
	0	0.0	204	9.3	1012	46.0	808	36.7	166	7.5	11	0.5	0	0.0	2201	100.0

MISSING HOURS: 7

MEAN WIND SPEED: 7.5

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 07/08-09/08

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

LAPSE RATE: LE -1.9 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	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	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	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	1	0.0	9	0.4	9	0.4	11	0.5	10	0.5	40	1.8
SSE	0	0.0	0	0.0	3	0.1	3	0.1	11	0.5	4	0.2	0	0.0	21	1.0
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	2	0.1	5	0.2	0	0.0	0	0.0	7	0.3
SW	0	0.0	0	0.0	0	0.0	11	0.5	6	0.3	1	0.0	0	0.0	18	0.8
WSW	0	0.0	0	0.0	0	0.0	6	0.3	3	0.1	1	0.0	0	0.0	10	0.5
W	0	0.0	0	0.0	0	0.0	2	0.1	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	4	0.2	0	0.0	0	0.0	4	0.2
NNW	0	0.0	0	0.0	0	0.0	1	0.0	1	0.0	0	0.0	0	0.0	2	0.1
	0	0.0	0	0.0	5	0.2	35	1.6	41	1.9	17	0.8	10	0.5	108	4.9

MEAN WIND SPEED: 15.1
MISSING: 0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 07/08-09/08

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

LAPSE RATE: -1.8 TO -1.7 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	7	0.3	0	0.0	0	0.0	0	0.0	9	0.4
NNE	0	0.0	0	0.0	0	0.0	3	0.1	2	0.1	0	0.0	0	0.0	5	0.2
NE	0	0.0	0	0.0	0	0.0	5	0.2	6	0.3	0	0.0	0	0.0	11	0.5
ENE	0	0.0	0	0.0	0	0.0	2	0.1	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	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	1	0.0	0	0.0	0	0.0	1	0.0
SE	0	0.0	0	0.0	1	0.0	2	0.1	5	0.2	1	0.0	0	0.0	9	0.4
SSE	0	0.0	0	0.0	3	0.1	5	0.2	3	0.1	0	0.0	0	0.0	11	0.5
S	0	0.0	0	0.0	4	0.2	0	0.0	1	0.0	0	0.0	0	0.0	5	0.2
SSW	0	0.0	0	0.0	3	0.1	4	0.2	2	0.1	0	0.0	0	0.0	9	0.4
SW	0	0.0	0	0.0	5	0.2	3	0.1	3	0.1	1	0.0	0	0.0	12	0.5
WSW	0	0.0	0	0.0	3	0.1	7	0.3	2	0.1	0	0.0	0	0.0	12	0.5
W	0	0.0	0	0.0	1	0.0	5	0.2	0	0.0	0	0.0	0	0.0	6	0.3
WNW	0	0.0	0	0.0	1	0.0	5	0.2	0	0.0	0	0.0	0	0.0	6	0.3
NW	0	0.0	0	0.0	1	0.0	13	0.6	7	0.3	1	0.0	0	0.0	22	1.0
NNW	0	0.0	0	0.0	0	0.0	13	0.6	1	0.0	0	0.0	0	0.0	14	0.6
	0	0.0	0	0.0	24	1.1	74	3.4	34	1.5	3	0.1	0	0.0	135	6.1

MEAN WIND SPEED: 10.6
 MISSING: 0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 07/08-09/08

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

LAPSE RATE: -1.6 TO -1.5 DEG C/100M
CLASS C

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	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	7	0.3	0	0.0	0	0.0	0	0.0	16	0.7
NNE	0	0.0	0	0.0	7	0.3	2	0.1	0	0.0	0	0.0	0	0.0	9	0.4
NE	0	0.0	0	0.0	1	0.0	5	0.2	3	0.1	2	0.1	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	0	0.0	1	0.0	0	0.0	1	0.0	0	0.0	2	0.1
ESE	0	0.0	0	0.0	1	0.0	2	0.1	1	0.0	0	0.0	0	0.0	4	0.2
SE	0	0.0	0	0.0	3	0.1	4	0.2	4	0.2	3	0.1	1	0.0	15	0.7
SSE	0	0.0	0	0.0	5	0.2	0	0.0	4	0.2	1	0.0	0	0.0	10	0.5
S	0	0.0	0	0.0	2	0.1	0	0.0	1	0.0	0	0.0	0	0.0	3	0.1
SSW	0	0.0	0	0.0	4	0.2	3	0.1	1	0.0	0	0.0	0	0.0	8	0.4
SW	0	0.0	0	0.0	5	0.2	4	0.2	4	0.2	2	0.1	0	0.0	15	0.7
WSW	0	0.0	0	0.0	4	0.2	3	0.1	1	0.0	0	0.0	0	0.0	8	0.4
W	0	0.0	1	0.0	8	0.4	5	0.2	0	0.0	0	0.0	0	0.0	14	0.6
WNW	0	0.0	0	0.0	2	0.1	2	0.1	1	0.0	1	0.0	0	0.0	6	0.3
NW	0	0.0	0	0.0	6	0.3	14	0.6	6	0.3	0	0.0	0	0.0	26	1.2
NNW	0	0.0	0	0.0	14	0.6	13	0.6	4	0.2	0	0.0	0	0.0	31	1.4
	0	0.0	1	0.0	75	3.4	66	3.0	30	1.4	10	0.5	1	0.0	183	8.3

MEAN WIND SPEED: 9.6
MISSING: 0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 07/08-09/08

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

LAPSE RATE: -1.4 TO -0.5 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	3	0.1	18	0.8	12	0.5	4	0.2	0	0.0	0	0.0	37	1.7
NNE	0	0.0	2	0.1	6	0.3	11	0.5	5	0.2	6	0.3	0	0.0	30	1.4
NE	0	0.0	3	0.1	6	0.3	4	0.2	15	0.7	14	0.6	1	0.0	43	2.0
ENE	0	0.0	3	0.1	10	0.5	9	0.4	1	0.0	0	0.0	0	0.0	23	1.0
E	0	0.0	1	0.0	7	0.3	7	0.3	3	0.1	1	0.0	0	0.0	19	0.9
ESE	0	0.0	0	0.0	5	0.2	4	0.2	0	0.0	0	0.0	1	0.0	10	0.5
SE	0	0.0	1	0.0	6	0.3	14	0.6	36	1.6	15	0.7	0	0.0	72	3.3
SSE	0	0.0	3	0.1	19	0.9	19	0.9	40	1.8	3	0.1	0	0.0	84	3.8
S	0	0.0	2	0.1	20	0.9	34	1.5	32	1.5	2	0.1	0	0.0	90	4.1
SSW	0	0.0	5	0.2	18	0.8	25	1.1	26	1.2	1	0.0	0	0.0	75	3.4
SW	0	0.0	1	0.0	13	0.6	29	1.3	15	0.7	4	0.2	0	0.0	62	2.8
WSW	0	0.0	3	0.1	6	0.3	20	0.9	3	0.1	0	0.0	0	0.0	32	1.5
W	0	0.0	1	0.0	12	0.5	29	1.3	5	0.2	1	0.0	0	0.0	48	2.2
WNW	0	0.0	1	0.0	11	0.5	21	1.0	6	0.3	0	0.0	0	0.0	39	1.8
NW	0	0.0	1	0.0	15	0.7	19	0.9	17	0.8	0	0.0	1	0.0	53	2.4
NNW	0	0.0	2	0.1	17	0.8	24	1.1	7	0.3	0	0.0	1	0.0	51	2.3
	0	0.0	32	1.5	189	8.6	281	12.8	215	9.8	47	2.1	4	0.2	768	35.0

MEAN WIND SPEED: 10.8
 MISSING: 3

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 07/08-09/08

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

LAPSE RATE: -0.4 TO 1.5 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	10	0.5	25	1.1	12	0.5	0	0.0	0	0.0	47	2.1
NNE	0	0.0	2	0.1	10	0.5	22	1.0	32	1.5	0	0.0	0	0.0	66	3.0
NE	0	0.0	2	0.1	9	0.4	16	0.7	10	0.5	2	0.1	0	0.0	39	1.8
ENE	0	0.0	0	0.0	18	0.8	26	1.2	2	0.1	0	0.0	0	0.0	46	2.1
E	0	0.0	3	0.1	32	1.5	7	0.3	0	0.0	0	0.0	0	0.0	42	1.9
ESE	0	0.0	0	0.0	3	0.1	12	0.5	12	0.5	0	0.0	0	0.0	27	1.2
SE	0	0.0	1	0.0	5	0.2	8	0.4	14	0.6	5	0.2	0	0.0	33	1.5
SSE	0	0.0	2	0.1	2	0.1	19	0.9	7	0.3	0	0.0	0	0.0	30	1.4
S	0	0.0	2	0.1	6	0.3	17	0.8	11	0.5	3	0.1	0	0.0	39	1.8
SSW	0	0.0	5	0.2	14	0.6	40	1.8	23	1.0	3	0.1	0	0.0	85	3.9
SW	0	0.0	2	0.1	15	0.7	29	1.3	15	0.7	2	0.1	1	0.0	64	2.9
WSW	0	0.0	3	0.1	23	1.0	39	1.8	8	0.4	0	0.0	0	0.0	73	3.3
W	0	0.0	4	0.2	22	1.0	15	0.7	2	0.1	2	0.1	0	0.0	45	2.0
WNW	0	0.0	3	0.1	29	1.3	20	0.9	6	0.3	2	0.1	0	0.0	60	2.7
NW	0	0.0	0	0.0	14	0.6	42	1.9	28	1.3	1	0.0	0	0.0	85	3.9
NNW	0	0.0	4	0.2	8	0.4	15	0.7	18	0.8	0	0.0	0	0.0	45	2.0
	0	0.0	33	1.5	220	10.0	352	16.0	200	9.1	20	0.9	1	0.0	826	37.6

MEAN WIND SPEED: 9.9
 MISSING: 0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 07/08-09/08

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS

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

LAPSE RATE: 1.6 TO 4.0 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	9	0.4	11	0.5	0	0.0	0	0.0	24	1.1
NNE	0	0.0	1	0.0	6	0.3	7	0.3	6	0.3	0	0.0	0	0.0	20	0.9
NE	0	0.0	0	0.0	3	0.1	5	0.2	3	0.1	0	0.0	0	0.0	11	0.5
ENE	0	0.0	1	0.0	5	0.2	7	0.3	1	0.0	0	0.0	0	0.0	14	0.6
E	0	0.0	0	0.0	3	0.1	3	0.1	0	0.0	0	0.0	0	0.0	6	0.3
ESE	0	0.0	0	0.0	1	0.0	1	0.0	2	0.1	0	0.0	0	0.0	4	0.2
SE	0	0.0	1	0.0	1	0.0	2	0.1	2	0.1	0	0.0	0	0.0	6	0.3
SSE	0	0.0	0	0.0	1	0.0	1	0.0	0	0.0	0	0.0	0	0.0	2	0.1
S	0	0.0	1	0.0	0	0.0	3	0.1	0	0.0	0	0.0	0	0.0	4	0.2
SSW	0	0.0	0	0.0	0	0.0	4	0.2	0	0.0	0	0.0	0	0.0	4	0.2
SW	0	0.0	0	0.0	0	0.0	6	0.3	1	0.0	0	0.0	0	0.0	7	0.3
WSW	0	0.0	0	0.0	5	0.2	7	0.3	1	0.0	0	0.0	0	0.0	13	0.6
W	0	0.0	0	0.0	3	0.1	2	0.1	0	0.0	0	0.0	0	0.0	5	0.2
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	2	0.1	7	0.3	10	0.5	0	0.0	0	0.0	0	0.0	19	0.9
NNW	0	0.0	1	0.0	3	0.1	13	0.6	2	0.1	0	0.0	0	0.0	19	0.9
	0	0.0	8	0.4	45	2.0	80	3.6	29	1.3	0	0.0	0	0.0	162	7.4

MEAN WIND SPEED: 9.4

MISSING: 0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 07/08-09/08

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

LAPSE RATE: GT 4.0 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	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	2	0.1	0	0.0	0	0.0	3	0.1
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	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	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	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	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	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	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	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	1	0.0	0	0.0	0	0.0	0	0.0	1	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	1	0.0	9	0.4	3	0.1	2	0.1	0	0.0	0	0.0	15	0.7

MEAN WIND SPEED: 7.7
MISSING: 0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 07/08-09/08

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	3	0.1	43	2.0	61	2.8	30	1.4	0	0.0	0	0.0	137	6.2
NNE	0	0.0	5	0.2	29	1.3	45	2.0	45	2.0	6	0.3	0	0.0	130	5.9
NE	0	0.0	5	0.2	19	0.9	36	1.6	37	1.7	18	0.8	1	0.0	116	5.3
ENE	0	0.0	4	0.2	39	1.8	45	2.0	5	0.2	0	0.0	0	0.0	93	4.2
E	0	0.0	4	0.2	45	2.0	18	0.8	3	0.1	2	0.1	0	0.0	72	3.3
ESE	0	0.0	0	0.0	11	0.5	19	0.9	16	0.7	0	0.0	1	0.0	47	2.1
SE	0	0.0	3	0.1	18	0.8	40	1.8	70	3.2	35	1.6	11	0.5	177	8.1
SSE	0	0.0	5	0.2	34	1.5	47	2.1	65	3.0	8	0.4	0	0.0	159	7.2
S	0	0.0	5	0.2	33	1.5	54	2.5	45	2.0	5	0.2	0	0.0	142	6.5
SSW	0	0.0	10	0.5	39	1.8	78	3.6	57	2.6	4	0.2	0	0.0	188	8.6
SW	0	0.0	3	0.1	38	1.7	82	3.7	44	2.0	10	0.5	1	0.0	178	8.1
WSW	0	0.0	7	0.3	41	1.9	82	3.7	18	0.8	1	0.0	0	0.0	149	6.8
W	0	0.0	6	0.3	46	2.1	58	2.6	8	0.4	3	0.1	0	0.0	121	5.5
WNW	0	0.0	5	0.2	46	2.1	48	2.2	13	0.6	3	0.1	0	0.0	115	5.2
NW	0	0.0	3	0.1	43	2.0	99	4.5	62	2.8	2	0.1	1	0.0	210	9.6
NNW	0	0.0	7	0.3	43	2.0	79	3.6	33	1.5	0	0.0	1	0.0	163	7.4
	0	0.0	75	3.4	567	25.8	891	40.6	551	25.1	97	4.4	16	0.7	2197	100.0

MISSING HOURS: 11

MEAN WIND SPEED: 10.4

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 07/08-09/08

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	3	0.1	43	2.0	62	2.8	30	1.4	0	0.0	0	0.0	138	6.3
NNE	0	0.0	5	0.2	29	1.3	45	2.0	45	2.0	6	0.3	0	0.0	130	5.9
NE	0	0.0	5	0.2	19	0.9	36	1.6	37	1.7	18	0.8	1	0.0	116	5.3
ENE	0	0.0	4	0.2	39	1.8	45	2.0	5	0.2	0	0.0	0	0.0	93	4.2
E	0	0.0	4	0.2	45	2.0	18	0.8	3	0.1	2	0.1	0	0.0	72	3.3
ESE	0	0.0	0	0.0	11	0.5	19	0.9	16	0.7	0	0.0	1	0.0	47	2.1
SE	0	0.0	3	0.1	18	0.8	40	1.8	70	3.2	35	1.6	11	0.5	177	8.0
SSE	0	0.0	5	0.2	34	1.5	47	2.1	65	3.0	8	0.4	0	0.0	159	7.2
S	0	0.0	5	0.2	33	1.5	54	2.5	45	2.0	5	0.2	0	0.0	142	6.5
SSW	0	0.0	10	0.5	39	1.8	78	3.5	57	2.6	4	0.2	0	0.0	188	8.5
SW	0	0.0	3	0.1	38	1.7	82	3.7	44	2.0	10	0.5	1	0.0	178	8.1
WSW	0	0.0	7	0.3	41	1.9	82	3.7	18	0.8	1	0.0	0	0.0	149	6.8
W	0	0.0	6	0.3	46	2.1	58	2.6	8	0.4	3	0.1	0	0.0	121	5.5
WNW	0	0.0	5	0.2	46	2.1	48	2.2	13	0.6	4	0.2	0	0.0	116	5.3
NW	0	0.0	3	0.1	43	2.0	100	4.5	62	2.8	2	0.1	1	0.0	211	9.6
NNW	0	0.0	7	0.3	43	2.0	79	3.6	34	1.5	0	0.0	1	0.0	164	7.5
	0	0.0	75	3.4	567	25.8	893	40.6	552	25.1	98	4.5	16	0.7	2201	100.0

MISSING HOURS: 7

MEAN WIND SPEED: 10.5

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 07/08-09/08

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

LAPSE RATE: LE -1.9 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	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	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	1	0.0	0	0.0	0	0.0	1	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	1	0.0	8	0.4	8	0.4	11	0.5	11	0.5	39	1.8
SSE	0	0.0	0	0.0	3	0.1	3	0.1	11	0.5	4	0.2	0	0.0	21	1.0
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	0	0.0	0	0.0	4	0.2	0	0.0	0	0.0	4	0.2
SW	0	0.0	0	0.0	0	0.0	9	0.4	10	0.5	2	0.1	0	0.0	21	1.0
WSW	0	0.0	0	0.0	0	0.0	3	0.1	5	0.2	1	0.0	0	0.0	9	0.4
W	0	0.0	0	0.0	0	0.0	2	0.1	2	0.1	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	1	0.0	0	0.0	1	0.0
NW	0	0.0	0	0.0	0	0.0	0	0.0	3	0.1	0	0.0	0	0.0	3	0.1
NNW	0	0.0	0	0.0	0	0.0	1	0.0	1	0.0	0	0.0	0	0.0	2	0.1
	0	0.0	0	0.0	5	0.2	27	1.2	46	2.1	19	0.9	11	0.5	108	5.0

MEAN WIND SPEED: 15.7
 MISSING: 0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 07/08-09/08

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

LAPSE RATE: -1.8 TO -1.7 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	1	0.0	4	0.2	1	0.0	0	0.0	0	0.0	6	0.3
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	2	0.1	9	0.4	0	0.0	0	0.0	11	0.5
ENE	0	0.0	0	0.0	0	0.0	3	0.1	1	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	1	0.0	0	0.0	0	0.0	1	0.0
SE	0	0.0	0	0.0	1	0.0	1	0.0	5	0.2	1	0.0	0	0.0	8	0.4
SSE	0	0.0	0	0.0	3	0.1	6	0.3	3	0.1	0	0.0	0	0.0	12	0.6
S	0	0.0	0	0.0	4	0.2	0	0.0	1	0.0	0	0.0	0	0.0	5	0.2
SSW	0	0.0	0	0.0	2	0.1	3	0.1	2	0.1	0	0.0	0	0.0	7	0.3
SW	0	0.0	0	0.0	1	0.0	4	0.2	3	0.1	1	0.0	0	0.0	9	0.4
WSW	0	0.0	0	0.0	3	0.1	6	0.3	4	0.2	0	0.0	0	0.0	13	0.6
W	0	0.0	0	0.0	2	0.1	4	0.2	0	0.0	0	0.0	0	0.0	6	0.3
WNW	0	0.0	0	0.0	1	0.0	4	0.2	0	0.0	0	0.0	0	0.0	5	0.2
NW	0	0.0	0	0.0	1	0.0	10	0.5	11	0.5	1	0.0	0	0.0	23	1.1
NNW	0	0.0	0	0.0	0	0.0	15	0.7	0	0.0	1	0.0	0	0.0	16	0.7
	0	0.0	0	0.0	19	0.9	64	3.0	43	2.0	4	0.2	0	0.0	130	6.0

MEAN WIND SPEED: 11.2
MISSING: 5

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 07/08-09/08

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

LAPSE RATE: -1.6 TO -1.5 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	9	0.4	1	0.0	0	0.0	0	0.0	15	0.7
NNE	0	0.0	1	0.0	4	0.2	2	0.1	1	0.0	0	0.0	0	0.0	8	0.4
NE	0	0.0	0	0.0	4	0.2	5	0.2	3	0.1	3	0.1	0	0.0	15	0.7
ENE	0	0.0	0	0.0	3	0.1	1	0.0	0	0.0	0	0.0	0	0.0	4	0.2
E	0	0.0	0	0.0	1	0.0	1	0.0	0	0.0	1	0.0	0	0.0	3	0.1
ESE	0	0.0	0	0.0	0	0.0	1	0.0	2	0.1	0	0.0	0	0.0	3	0.1
SE	0	0.0	0	0.0	3	0.1	4	0.2	4	0.2	2	0.1	1	0.0	14	0.6
SSE	0	0.0	0	0.0	5	0.2	0	0.0	4	0.2	2	0.1	0	0.0	11	0.5
S	0	0.0	0	0.0	2	0.1	0	0.0	1	0.0	0	0.0	0	0.0	3	0.1
SSW	0	0.0	0	0.0	3	0.1	4	0.2	0	0.0	0	0.0	0	0.0	7	0.3
SW	0	0.0	0	0.0	3	0.1	5	0.2	4	0.2	3	0.1	0	0.0	15	0.7
WSW	0	0.0	0	0.0	3	0.1	3	0.1	2	0.1	0	0.0	0	0.0	8	0.4
W	0	0.0	0	0.0	7	0.3	5	0.2	0	0.0	0	0.0	0	0.0	12	0.6
WNW	0	0.0	0	0.0	3	0.1	4	0.2	1	0.0	1	0.0	0	0.0	9	0.4
NW	0	0.0	0	0.0	6	0.3	10	0.5	10	0.5	0	0.0	0	0.0	26	1.2
NNW	0	0.0	0	0.0	13	0.6	11	0.5	3	0.1	1	0.0	0	0.0	28	1.3
	0	0.0	1	0.0	65	3.0	65	3.0	36	1.7	13	0.6	1	0.0	181	8.4

MEAN WIND SPEED: 10.3
 MISSING: 2

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 07/08-09/08

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

LAPSE RATE: -1.4 TO -0.5 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	13	0.6	13	0.6	3	0.1	2	0.1	0	0.0	35	1.6
NNE	0	0.0	1	0.0	3	0.1	10	0.5	9	0.4	3	0.1	1	0.0	27	1.2
NE	0	0.0	2	0.1	6	0.3	2	0.1	15	0.7	10	0.5	13	0.6	48	2.2
ENE	0	0.0	2	0.1	9	0.4	6	0.3	1	0.0	1	0.0	0	0.0	19	0.9
E	0	0.0	0	0.0	3	0.1	14	0.6	4	0.2	1	0.0	0	0.0	22	1.0
ESE	0	0.0	0	0.0	7	0.3	6	0.3	1	0.0	0	0.0	2	0.1	16	0.7
SE	0	0.0	2	0.1	2	0.1	14	0.6	25	1.2	15	0.7	1	0.0	59	2.7
SSE	0	0.0	2	0.1	13	0.6	15	0.7	49	2.3	5	0.2	0	0.0	84	3.9
S	0	0.0	4	0.2	16	0.7	25	1.2	31	1.4	5	0.2	0	0.0	81	3.7
SSW	0	0.0	4	0.2	13	0.6	29	1.3	25	1.2	7	0.3	0	0.0	78	3.6
SW	0	0.0	4	0.2	12	0.6	17	0.8	30	1.4	6	0.3	1	0.0	70	3.2
WSW	0	0.0	3	0.1	8	0.4	16	0.7	8	0.4	0	0.0	0	0.0	35	1.6
W	0	0.0	3	0.1	9	0.4	22	1.0	8	0.4	1	0.0	2	0.1	45	2.1
WNW	0	0.0	0	0.0	9	0.4	20	0.9	10	0.5	1	0.0	0	0.0	40	1.8
NW	0	0.0	0	0.0	9	0.4	13	0.6	21	1.0	1	0.0	0	0.0	44	2.0
NNW	0	0.0	0	0.0	20	0.9	18	0.8	14	0.6	2	0.1	1	0.0	55	2.5
	0	0.0	31	1.4	152	7.0	240	11.1	254	11.7	60	2.8	21	1.0	758	35.0

MEAN WIND SPEED: 11.8
MISSING: 13

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 07/08-09/08

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

LAPSE RATE: -0.4 TO 1.5 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	3	0.1	25	1.2	15	0.7	1	0.0	0	0.0	45	2.1
NNE	0	0.0	1	0.0	3	0.1	7	0.3	31	1.4	14	0.6	0	0.0	56	2.6
NE	0	0.0	0	0.0	4	0.2	4	0.2	20	0.9	11	0.5	0	0.0	39	1.8
ENE	0	0.0	0	0.0	7	0.3	13	0.6	5	0.2	1	0.0	0	0.0	26	1.2
E	0	0.0	3	0.1	10	0.5	35	1.6	11	0.5	0	0.0	0	0.0	59	2.7
ESE	0	0.0	1	0.0	2	0.1	9	0.4	17	0.8	0	0.0	0	0.0	29	1.3
SE	0	0.0	0	0.0	1	0.0	9	0.4	14	0.6	4	0.2	1	0.0	29	1.3
SSE	0	0.0	0	0.0	4	0.2	12	0.6	10	0.5	1	0.0	0	0.0	27	1.2
S	0	0.0	5	0.2	10	0.5	17	0.8	13	0.6	3	0.1	0	0.0	48	2.2
SSW	0	0.0	2	0.1	7	0.3	20	0.9	31	1.4	12	0.6	1	0.0	73	3.4
SW	0	0.0	2	0.1	19	0.9	17	0.8	29	1.3	12	0.6	2	0.1	81	3.7
WSW	0	0.0	0	0.0	16	0.7	20	0.9	27	1.2	3	0.1	0	0.0	66	3.0
W	0	0.0	1	0.0	20	0.9	14	0.6	14	0.6	2	0.1	1	0.0	52	2.4
WNW	0	0.0	0	0.0	22	1.0	16	0.7	11	0.5	2	0.1	0	0.0	51	2.4
NW	0	0.0	5	0.2	6	0.3	22	1.0	41	1.9	7	0.3	1	0.0	82	3.8
NNW	0	0.0	1	0.0	8	0.4	16	0.7	22	1.0	2	0.1	0	0.0	49	2.3
	0	0.0	22	1.0	142	6.6	256	11.8	311	14.4	75	3.5	6	0.3	812	37.5

MEAN WIND SPEED: 12.3
 MISSING: 14

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 07/08-09/08

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

LAPSE RATE: 1.6 TO 4.0 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	2	0.1	12	0.6	14	0.6	2	0.1	0	0.0	30	1.4
NNE	0	0.0	0	0.0	1	0.0	3	0.1	12	0.6	2	0.1	0	0.0	18	0.8
NE	0	0.0	1	0.0	1	0.0	3	0.1	2	0.1	3	0.1	0	0.0	10	0.5
ENE	0	0.0	1	0.0	1	0.0	6	0.3	2	0.1	0	0.0	0	0.0	10	0.5
E	0	0.0	0	0.0	0	0.0	3	0.1	3	0.1	0	0.0	0	0.0	6	0.3
ESE	0	0.0	0	0.0	1	0.0	2	0.1	8	0.4	0	0.0	0	0.0	11	0.5
SE	0	0.0	0	0.0	1	0.0	0	0.0	2	0.1	0	0.0	0	0.0	3	0.1
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	2	0.1	2	0.1	1	0.0	0	0.0	0	0.0	5	0.2
SSW	0	0.0	2	0.1	2	0.1	2	0.1	3	0.1	0	0.0	0	0.0	9	0.4
SW	0	0.0	0	0.0	0	0.0	2	0.1	3	0.1	0	0.0	0	0.0	5	0.2
WSW	0	0.0	0	0.0	1	0.0	4	0.2	5	0.2	1	0.0	0	0.0	11	0.5
W	0	0.0	0	0.0	3	0.1	4	0.2	3	0.1	0	0.0	0	0.0	10	0.5
WNW	0	0.0	1	0.0	2	0.1	2	0.1	0	0.0	0	0.0	0	0.0	5	0.2
NW	0	0.0	0	0.0	4	0.2	7	0.3	1	0.0	0	0.0	0	0.0	12	0.6
NNW	0	0.0	0	0.0	2	0.1	7	0.3	7	0.3	0	0.0	0	0.0	16	0.7
	0	0.0	5	0.2	24	1.1	59	2.7	66	3.0	8	0.4	0	0.0	162	7.5

MEAN WIND SPEED: 11.7
MISSING: 0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 07/08-09/08

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

LAPSE RATE: GT 4.0 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	1	0.0	1	0.0	0	0.0	0	0.0	2	0.1
NNE	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0	1	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	1	0.0	0	0.0	0	0.0	2	0.1	0	0.0	0	0.0	3	0.1
ESE	0	0.0	1	0.0	0	0.0	1	0.0	1	0.0	0	0.0	0	0.0	3	0.1
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	1	0.0	0	0.0	0	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	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	1	0.0	0	0.0	0	0.0	1	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	2	0.1	3	0.1	6	0.3	1	0.0	0	0.0	15	0.7

MEAN WIND SPEED: 10.3
 MISSING: 0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 07/08-09/08

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	SUM PERCENT	SUM PERCENT	SUM PERCENT	SUM PERCENT	SUM PERCENT	SUM PERCENT		
N	0	0.0	5	0.2	24	1.1	64	3.0	36	1.7	5	0.2	0	0.0	134	6.2
NNE	0	0.0	3	0.1	11	0.5	24	1.1	56	2.6	20	0.9	1	0.0	115	5.3
NE	0	0.0	3	0.1	15	0.7	16	0.7	50	2.3	27	1.2	13	0.6	124	5.7
ENE	0	0.0	3	0.1	20	0.9	29	1.3	9	0.4	2	0.1	0	0.0	63	2.9
E	0	0.0	4	0.2	14	0.6	53	2.4	20	0.9	2	0.1	0	0.0	93	4.3
ESE	0	0.0	2	0.1	10	0.5	19	0.9	30	1.4	0	0.0	2	0.1	63	2.9
SE	0	0.0	2	0.1	9	0.4	37	1.7	58	2.7	33	1.5	14	0.6	153	7.1
SSE	0	0.0	2	0.1	30	1.4	36	1.7	77	3.6	12	0.6	0	0.0	157	7.2
S	0	0.0	10	0.5	35	1.6	45	2.1	47	2.2	8	0.4	0	0.0	145	6.7
SSW	0	0.0	8	0.4	28	1.3	58	2.7	65	3.0	19	0.9	1	0.0	179	8.3
SW	0	0.0	6	0.3	35	1.6	54	2.5	79	3.6	24	1.1	3	0.1	201	9.3
WSW	0	0.0	3	0.1	31	1.4	52	2.4	51	2.4	5	0.2	0	0.0	142	6.6
W	0	0.0	4	0.2	41	1.9	51	2.4	27	1.2	3	0.1	3	0.1	129	6.0
WNW	0	0.0	1	0.0	37	1.7	46	2.1	22	1.0	5	0.2	0	0.0	111	5.1
NW	0	0.0	5	0.2	26	1.2	62	2.9	88	4.1	9	0.4	1	0.0	191	8.8
NNW	0	0.0	1	0.0	43	2.0	68	3.1	47	2.2	6	0.3	1	0.0	166	7.7
	0	0.0	62	2.9	409	18.9	714	33.0	762	35.2	180	8.3	39	1.8	2166	100.0

MISSING HOURS: 42

MEAN WIND SPEED: 12.0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 07/08-09/08

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	5	0.2	24	1.1	64	3.0	36	1.7	5	0.2	0	0.0	134	6.2
NNE	0	0.0	3	0.1	11	0.5	24	1.1	56	2.6	20	0.9	1	0.0	115	5.3
NE	0	0.0	3	0.1	15	0.7	16	0.7	50	2.3	27	1.2	13	0.6	124	5.7
ENE	0	0.0	3	0.1	20	0.9	29	1.3	9	0.4	2	0.1	0	0.0	63	2.9
E	0	0.0	4	0.2	14	0.6	53	2.4	20	0.9	2	0.1	0	0.0	93	4.3
ESE	0	0.0	2	0.1	10	0.5	19	0.9	30	1.4	0	0.0	2	0.1	63	2.9
SE	0	0.0	2	0.1	9	0.4	37	1.7	58	2.7	33	1.5	14	0.6	153	7.1
SSE	0	0.0	2	0.1	30	1.4	36	1.7	77	3.6	12	0.6	0	0.0	157	7.2
S	0	0.0	10	0.5	35	1.6	45	2.1	47	2.2	8	0.4	0	0.0	145	6.7
SSW	0	0.0	8	0.4	28	1.3	58	2.7	65	3.0	19	0.9	1	0.0	179	8.3
SW	0	0.0	6	0.3	35	1.6	54	2.5	79	3.6	24	1.1	3	0.1	201	9.3
WSW	0	0.0	3	0.1	31	1.4	52	2.4	51	2.4	5	0.2	0	0.0	142	6.5
W	0	0.0	4	0.2	41	1.9	51	2.4	27	1.2	3	0.1	3	0.1	129	5.9
WNW	0	0.0	1	0.0	37	1.7	46	2.1	23	1.1	5	0.2	0	0.0	112	5.2
NW	0	0.0	5	0.2	26	1.2	63	2.9	88	4.1	9	0.4	1	0.0	192	8.9
NNW	0	0.0	1	0.0	43	2.0	68	3.1	48	2.2	6	0.3	1	0.0	167	7.7
	0	0.0	62	2.9	409	18.9	715	33.0	764	35.2	180	8.3	39	1.8	2169	100.0

MISSING HOURS: 39

MEAN WIND SPEED: 12.0

Lapse Rate
Wind Distributions
300 – 33 foot

10/2008 – 12/2008

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 10/08-12/08

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

LAPSE RATE: LE -1.9 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	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	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	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	3	0.1	0	0.0	0	0.0	0	0.0	3	0.1
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	1	0.0	6	0.3	2	0.1	0	0.0	0	0.0	9	0.4
W	0	0.0	0	0.0	0	0.0	7	0.3	4	0.2	0	0.0	0	0.0	11	0.5
WNW	0	0.0	0	0.0	1	0.0	2	0.1	2	0.1	0	0.0	0	0.0	5	0.2
NW	0	0.0	0	0.0	0	0.0	5	0.2	6	0.3	0	0.0	0	0.0	11	0.5
NNW	0	0.0	0	0.0	0	0.0	4	0.2	9	0.4	0	0.0	0	0.0	13	0.6
	0	0.0	0	0.0	2	0.1	27	1.2	25	1.1	0	0.0	0	0.0	54	2.5

MEAN WIND SPEED: 11.9
 MISSING: 0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 10/08-12/08

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

LAPSE RATE: -1.8 TO -1.7 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	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	1	0.0	0	0.0	0	0.0	5	0.2
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	1	0.0	4	0.2	1	0.0	0	0.0	0	0.0	6	0.3
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	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	1	0.0	5	0.2	0	0.0	0	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	2	0.1	1	0.0	0	0.0	0	0.0	0	0.0	3	0.1
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	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	4	0.2	8	0.4	0	0.0	0	0.0	0	0.0	12	0.5
W	0	0.0	0	0.0	3	0.1	6	0.3	1	0.0	0	0.0	0	0.0	10	0.5
WNW	0	0.0	0	0.0	0	0.0	3	0.1	7	0.3	4	0.2	0	0.0	14	0.6
NW	0	0.0	0	0.0	2	0.1	4	0.2	9	0.4	0	0.0	1	0.0	16	0.7
NNW	0	0.0	0	0.0	2	0.1	3	0.1	3	0.1	0	0.0	0	0.0	8	0.4
	0	0.0	0	0.0	23	1.0	38	1.7	23	1.0	4	0.2	1	0.0	89	4.0

MEAN WIND SPEED: 10.9
 MISSING: 0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 10/08-12/08

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

LAPSE RATE: -1.6 TO -1.5 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	1	0.0	2	0.1	0	0.0	0	0.0	8	0.4
NNE	0	0.0	0	0.0	1	0.0	2	0.1	1	0.0	0	0.0	0	0.0	4	0.2
NE	0	0.0	0	0.0	6	0.3	3	0.1	1	0.0	0	0.0	0	0.0	10	0.5
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	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	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	2	0.1	2	0.1	1	0.0	0	0.0	0	0.0	5	0.2
SSW	0	0.0	0	0.0	3	0.1	1	0.0	0	0.0	0	0.0	0	0.0	4	0.2
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	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	3	0.1	8	0.4	3	0.1	0	0.0	0	0.0	14	0.6
WNW	0	0.0	0	0.0	4	0.2	3	0.1	5	0.2	2	0.1	0	0.0	14	0.6
NW	0	0.0	1	0.0	1	0.0	7	0.3	5	0.2	0	0.0	2	0.1	16	0.7
NNW	0	0.0	0	0.0	2	0.1	4	0.2	2	0.1	0	0.0	0	0.0	8	0.4
	0	0.0	1	0.0	39	1.8	37	1.7	20	0.9	2	0.1	2	0.1	101	4.6

MEAN WIND SPEED: 9.7
 MISSING: 0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 10/08-12/08

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

LAPSE RATE: -1.4 TO -0.5 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		
N	0	0.0	0	0.0	22	1.0	10	0.5	1	0.0	0	0.0	0	0.0	33	1.5
NNE	0	0.0	1	0.0	27	1.2	55	2.5	19	0.9	2	0.1	0	0.0	104	4.7
NE	0	0.0	1	0.0	22	1.0	23	1.0	2	0.1	0	0.0	0	0.0	48	2.2
ENE	0	0.0	2	0.1	4	0.2	4	0.2	0	0.0	0	0.0	0	0.0	10	0.5
E	0	0.0	3	0.1	6	0.3	1	0.0	0	0.0	0	0.0	0	0.0	10	0.5
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	2	0.1	8	0.4	10	0.5	2	0.1	4	0.2	0	0.0	26	1.2
SSE	0	0.0	0	0.0	5	0.2	13	0.6	18	0.8	0	0.0	0	0.0	36	1.6
S	0	0.0	2	0.1	11	0.5	23	1.0	18	0.8	0	0.0	0	0.0	54	2.5
SSW	0	0.0	4	0.2	7	0.3	10	0.5	2	0.1	0	0.0	0	0.0	23	1.0
SW	0	0.0	1	0.0	16	0.7	15	0.7	2	0.1	2	0.1	0	0.0	36	1.6
WSW	0	0.0	2	0.1	21	1.0	24	1.1	3	0.1	0	0.0	0	0.0	50	2.3
W	0	0.0	0	0.0	19	0.9	43	2.0	33	1.5	6	0.3	0	0.0	101	4.6
WNW	0	0.0	2	0.1	19	0.9	43	2.0	29	1.3	21	1.0	5	0.2	119	5.4
NW	0	0.0	2	0.1	10	0.5	42	1.9	34	1.5	8	0.4	0	0.0	96	4.4
NNW	0	0.0	3	0.1	10	0.5	21	1.0	15	0.7	0	0.0	0	0.0	49	2.2
	0	0.0	25	1.1	209	9.5	338	15.3	178	8.1	43	2.0	5	0.2	798	36.2

MEAN WIND SPEED: 10.3
 MISSING: 1

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 10/08-12/08

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

LAPSE RATE: -0.4 TO 1.5 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	27	1.2	4	0.2	1	0.0	0	0.0	0	0.0	42	1.9
NNE	0	0.0	4	0.2	33	1.5	36	1.6	7	0.3	4	0.2	0	0.0	84	3.8
NE	0	0.0	7	0.3	26	1.2	24	1.1	0	0.0	0	0.0	0	0.0	57	2.6
ENE	0	0.0	8	0.4	13	0.6	3	0.1	0	0.0	0	0.0	0	0.0	24	1.1
E	0	0.0	4	0.2	23	1.0	2	0.1	0	0.0	0	0.0	0	0.0	29	1.3
ESE	0	0.0	6	0.3	9	0.4	11	0.5	0	0.0	0	0.0	0	0.0	26	1.2
SE	0	0.0	7	0.3	26	1.2	27	1.2	9	0.4	3	0.1	0	0.0	72	3.3
SSE	0	0.0	1	0.0	32	1.5	16	0.7	7	0.3	2	0.1	0	0.0	58	2.6
S	0	0.0	1	0.0	16	0.7	12	0.5	6	0.3	0	0.0	0	0.0	35	1.6
SSW	0	0.0	5	0.2	21	1.0	8	0.4	5	0.2	3	0.1	1	0.0	43	2.0
SW	0	0.0	4	0.2	23	1.0	23	1.0	4	0.2	0	0.0	0	0.0	54	2.5
WSW	0	0.0	2	0.1	35	1.6	19	0.9	1	0.0	0	0.0	0	0.0	57	2.6
W	0	0.0	5	0.2	18	0.8	18	0.8	6	0.3	0	0.0	0	0.0	47	2.1
WNW	0	0.0	2	0.1	23	1.0	25	1.1	9	0.4	0	0.0	0	0.0	59	2.7
NW	0	0.0	5	0.2	36	1.6	39	1.8	14	0.6	0	0.0	0	0.0	94	4.3
NNW	0	0.0	10	0.5	37	1.7	20	0.9	6	0.3	0	0.0	0	0.0	73	3.3
	0	0.0	81	3.7	398	18.1	287	13.0	75	3.4	12	0.5	1	0.0	854	38.8

MEAN WIND SPEED: 7.7
MISSING: 0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 10/08-12/08

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

LAPSE RATE: 1.6 TO 4.0 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	13	0.6	4	0.2	0	0.0	0	0.0	0	0.0	17	0.8
NNE	0	0.0	2	0.1	23	1.0	15	0.7	0	0.0	0	0.0	0	0.0	40	1.8
NE	0	0.0	1	0.0	16	0.7	3	0.1	0	0.0	0	0.0	0	0.0	20	0.9
ENE	0	0.0	5	0.2	9	0.4	0	0.0	0	0.0	0	0.0	0	0.0	14	0.6
E	0	0.0	1	0.0	6	0.3	1	0.0	0	0.0	0	0.0	0	0.0	8	0.4
ESE	0	0.0	2	0.1	11	0.5	2	0.1	0	0.0	0	0.0	0	0.0	15	0.7
SE	0	0.0	0	0.0	16	0.7	5	0.2	3	0.1	0	0.0	0	0.0	24	1.1
SSE	0	0.0	1	0.0	6	0.3	5	0.2	1	0.0	0	0.0	0	0.0	13	0.6
S	0	0.0	0	0.0	2	0.1	0	0.0	8	0.4	7	0.3	0	0.0	17	0.8
SSW	0	0.0	0	0.0	0	0.0	6	0.3	15	0.7	1	0.0	0	0.0	22	1.0
SW	0	0.0	0	0.0	5	0.2	7	0.3	2	0.1	0	0.0	0	0.0	14	0.6
WSW	0	0.0	2	0.1	9	0.4	1	0.0	0	0.0	0	0.0	0	0.0	12	0.5
W	0	0.0	3	0.1	2	0.1	0	0.0	0	0.0	0	0.0	0	0.0	5	0.2
WNW	0	0.0	2	0.1	8	0.4	0	0.0	0	0.0	0	0.0	0	0.0	10	0.5
NW	0	0.0	1	0.0	9	0.4	3	0.1	0	0.0	0	0.0	0	0.0	13	0.6
NNW	0	0.0	3	0.1	7	0.3	1	0.0	0	0.0	0	0.0	0	0.0	11	0.5
	0	0.0	23	1.0	142	6.4	53	2.4	29	1.3	8	0.4	0	0.0	255	11.6

MEAN WIND SPEED: 7.7
 MISSING: 0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 10/08-12/08

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

LAPSE RATE: GT 4.0 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	4	0.2	2	0.1	0	0.0	0	0.0	0	0.0	6	0.3
NE	0	0.0	1	0.0	3	0.1	0	0.0	0	0.0	0	0.0	0	0.0	4	0.2
ENE	0	0.0	0	0.0	4	0.2	0	0.0	0	0.0	0	0.0	0	0.0	4	0.2
E	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
ESE	0	0.0	1	0.0	3	0.1	0	0.0	0	0.0	0	0.0	0	0.0	4	0.2
SE	0	0.0	0	0.0	2	0.1	9	0.4	6	0.3	0	0.0	0	0.0	17	0.8
SSE	0	0.0	1	0.0	1	0.0	1	0.0	5	0.2	0	0.0	0	0.0	8	0.4
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	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	0	0.0	0	0.0	0	0.0	1	0.0
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	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	3	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	3	0.1
	0	0.0	8	0.4	20	0.9	13	0.6	11	0.5	0	0.0	0	0.0	52	2.4

MEAN WIND SPEED: 8.3
MISSING: 0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 10/08-12/08

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	10	0.5	71	3.2	19	0.9	5	0.2	0	0.0	0	0.0	105	4.8
NNE	0	0.0	7	0.3	88	4.0	111	5.0	28	1.3	6	0.3	0	0.0	240	10.9
NE	0	0.0	10	0.5	74	3.4	57	2.6	6	0.3	0	0.0	0	0.0	147	6.7
ENE	0	0.0	15	0.7	31	1.4	8	0.4	0	0.0	0	0.0	0	0.0	54	2.5
E	0	0.0	9	0.4	35	1.6	4	0.2	0	0.0	0	0.0	0	0.0	48	2.2
ESE	0	0.0	9	0.4	25	1.1	14	0.6	0	0.0	0	0.0	0	0.0	48	2.2
SE	0	0.0	9	0.4	54	2.5	60	2.7	20	0.9	7	0.3	0	0.0	150	6.8
SSE	0	0.0	3	0.1	47	2.1	35	1.6	31	1.4	2	0.1	0	0.0	118	5.4
S	0	0.0	3	0.1	33	1.5	39	1.8	33	1.5	7	0.3	0	0.0	115	5.2
SSW	0	0.0	9	0.4	32	1.5	25	1.1	22	1.0	4	0.2	1	0.0	93	4.2
SW	0	0.0	5	0.2	48	2.2	48	2.2	8	0.4	2	0.1	0	0.0	111	5.0
WSW	0	0.0	6	0.3	77	3.5	62	2.8	6	0.3	0	0.0	0	0.0	151	6.9
W	0	0.0	9	0.4	45	2.0	82	3.7	47	2.1	6	0.3	0	0.0	189	8.6
WNW	0	0.0	6	0.3	55	2.5	76	3.4	52	2.4	27	1.2	5	0.2	221	10.0
NW	0	0.0	9	0.4	60	2.7	100	4.5	68	3.1	8	0.4	3	0.1	248	11.3
NNW	0	0.0	19	0.9	58	2.6	53	2.4	35	1.6	0	0.0	0	0.0	165	7.5
	0	0.0	138	6.3	833	37.8	793	36.0	361	16.4	69	3.1	9	0.4	2203	100.0

MISSING HOURS: 5

MEAN WIND SPEED: 9.0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 10/08-12/08

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	10	0.5	71	3.2	20	0.9	5	0.2	0	0.0	0	0.0	106	4.8
NNE	0	0.0	7	0.3	88	4.0	111	5.0	28	1.3	6	0.3	0	0.0	240	10.9
NE	0	0.0	10	0.5	74	3.4	57	2.6	6	0.3	0	0.0	0	0.0	147	6.7
ENE	0	0.0	15	0.7	31	1.4	8	0.4	0	0.0	0	0.0	0	0.0	54	2.4
E	0	0.0	9	0.4	35	1.6	4	0.2	0	0.0	0	0.0	0	0.0	48	2.2
ESE	0	0.0	9	0.4	25	1.1	14	0.6	0	0.0	0	0.0	0	0.0	48	2.2
SE	0	0.0	9	0.4	54	2.4	60	2.7	20	0.9	7	0.3	0	0.0	150	6.8
SSE	0	0.0	3	0.1	47	2.1	35	1.6	31	1.4	2	0.1	0	0.0	118	5.3
S	0	0.0	3	0.1	33	1.5	39	1.8	33	1.5	7	0.3	0	0.0	115	5.2
SSW	0	0.0	9	0.4	32	1.4	25	1.1	22	1.0	4	0.2	1	0.0	93	4.2
SW	0	0.0	5	0.2	48	2.2	48	2.2	8	0.4	2	0.1	0	0.0	111	5.0
WSW	0	0.0	6	0.3	77	3.5	62	2.8	6	0.3	0	0.0	0	0.0	151	6.8
W	0	0.0	9	0.4	45	2.0	82	3.7	47	2.1	6	0.3	0	0.0	189	8.6
WNW	0	0.0	6	0.3	55	2.5	76	3.4	52	2.4	27	1.2	5	0.2	221	10.0
NW	0	0.0	9	0.4	60	2.7	100	4.5	68	3.1	8	0.4	3	0.1	248	11.2
NNW	0	0.0	19	0.9	58	2.6	56	2.5	35	1.6	0	0.0	0	0.0	168	7.6
	0	0.0	138	6.3	833	37.7	797	36.1	361	16.4	69	3.1	9	0.4	2207	100.0

MISSING HOURS: 1

MEAN WIND SPEED: 9.0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 10/08-12/08

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

LAPSE RATE: LE -1.9 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	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	1	0.0	1	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	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	3	0.1	0	0.0	0	0.0	3	0.1
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	5	0.2	4	0.2	2	0.1	0	0.0	11	0.5
W	0	0.0	0	0.0	0	0.0	0	0.0	7	0.3	1	0.0	0	0.0	8	0.4
WNW	0	0.0	0	0.0	0	0.0	2	0.1	4	0.2	0	0.0	0	0.0	6	0.3
NW	0	0.0	0	0.0	0	0.0	2	0.1	6	0.3	2	0.1	0	0.0	10	0.5
NNW	0	0.0	0	0.0	0	0.0	1	0.0	3	0.1	10	0.5	0	0.0	14	0.6
	0	0.0	0	0.0	0	0.0	10	0.5	28	1.3	16	0.7	0	0.0	54	2.5

MEAN WIND SPEED: 16.3
MISSING: 0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 10/08-12/08

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS

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

LAPSE RATE: -1.8 TO -1.7 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	1	0.0	2	0.1	0	0.0	0	0.0	0	0.0	3	0.1
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	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	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	3	0.1	0	0.0	0	0.0	5	0.2
SSE	0	0.0	0	0.0	0	0.0	2	0.1	0	0.0	0	0.0	0	0.0	2	0.1
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	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	2	0.1	0	0.0	2	0.1	0	0.0	0	0.0	4	0.2
WSW	0	0.0	0	0.0	0	0.0	7	0.3	2	0.1	0	0.0	0	0.0	9	0.4
W	0	0.0	0	0.0	1	0.0	7	0.3	6	0.3	0	0.0	0	0.0	14	0.6
WNW	0	0.0	0	0.0	0	0.0	1	0.0	3	0.1	4	0.2	4	0.2	12	0.5
NW	0	0.0	0	0.0	1	0.0	3	0.1	4	0.2	6	0.3	2	0.1	16	0.7
NNW	0	0.0	0	0.0	0	0.0	3	0.1	2	0.1	6	0.3	0	0.0	11	0.5
	0	0.0	0	0.0	6	0.3	35	1.6	26	1.2	16	0.7	6	0.3	89	4.0

MEAN WIND SPEED: 14.7

MISSING: 0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 10/08-12/08

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

LAPSE RATE: -1.6 TO -1.5 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	1	0.0	3	0.1	0	0.0	0	0.0	5	0.2
NNE	0	0.0	0	0.0	2	0.1	0	0.0	4	0.2	0	0.0	0	0.0	6	0.3
NE	0	0.0	0	0.0	3	0.1	3	0.1	0	0.0	0	0.0	0	0.0	6	0.3
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	1	0.0	0	0.0	0	0.0	1	0.0
SSE	0	0.0	0	0.0	2	0.1	2	0.1	0	0.0	0	0.0	0	0.0	4	0.2
S	0	0.0	0	0.0	0	0.0	3	0.1	1	0.0	0	0.0	0	0.0	4	0.2
SSW	0	0.0	0	0.0	1	0.0	2	0.1	1	0.0	0	0.0	0	0.0	4	0.2
SW	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	1	0.0
WSW	0	0.0	0	0.0	2	0.1	7	0.3	2	0.1	0	0.0	0	0.0	11	0.5
W	0	0.0	0	0.0	1	0.0	7	0.3	5	0.2	3	0.1	0	0.0	16	0.7
WNW	0	0.0	0	0.0	1	0.0	1	0.0	4	0.2	2	0.1	3	0.1	11	0.5
NW	0	0.0	0	0.0	3	0.1	5	0.2	3	0.1	5	0.2	2	0.1	18	0.8
NNW	0	0.0	0	0.0	5	0.2	2	0.1	3	0.1	3	0.1	0	0.0	13	0.6
	0	0.0	0	0.0	22	1.0	33	1.5	28	1.3	13	0.6	5	0.2	101	4.6

MEAN WIND SPEED: 13.1
 MISSING: 0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 10/08-12/08

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

LAPSE RATE: -1.4 TO -0.5 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	6	0.3	12	0.5	9	0.4	3	0.1	0	0.0	31	1.4
NNE	0	0.0	1	0.0	8	0.4	34	1.5	42	1.9	15	0.7	3	0.1	103	4.7
NE	0	0.0	1	0.0	7	0.3	14	0.6	9	0.4	0	0.0	0	0.0	31	1.4
ENE	0	0.0	0	0.0	6	0.3	8	0.4	9	0.4	0	0.0	0	0.0	23	1.0
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	2	0.1	2	0.1	0	0.0	0	0.0	0	0.0	4	0.2
SE	0	0.0	1	0.0	6	0.3	5	0.2	9	0.4	0	0.0	4	0.2	25	1.1
SSE	0	0.0	1	0.0	5	0.2	11	0.5	7	0.3	8	0.4	0	0.0	32	1.5
S	0	0.0	0	0.0	7	0.3	11	0.5	28	1.3	16	0.7	0	0.0	62	2.8
SSW	0	0.0	1	0.0	5	0.2	8	0.4	9	0.4	1	0.0	0	0.0	24	1.1
SW	0	0.0	2	0.1	5	0.2	12	0.5	8	0.4	1	0.0	4	0.2	32	1.5
WSW	0	0.0	0	0.0	10	0.5	24	1.1	13	0.6	7	0.3	0	0.0	54	2.5
W	0	0.0	1	0.0	11	0.5	23	1.0	35	1.6	25	1.1	13	0.6	108	4.9
WNW	0	0.0	1	0.0	9	0.4	16	0.7	40	1.8	19	0.9	27	1.2	112	5.1
NW	0	0.0	1	0.0	2	0.1	9	0.4	39	1.8	30	1.4	10	0.5	91	4.1
NNW	0	0.0	1	0.0	13	0.6	8	0.4	16	0.7	16	0.7	6	0.3	60	2.7
	0	0.0	12	0.5	108	4.9	198	9.0	273	12.4	141	6.4	67	3.0	799	36.3

MEAN WIND SPEED: 14.8
MISSING: 0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 10/08-12/08

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

LAPSE RATE: -0.4 TO 1.5 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	10	0.5	14	0.6	18	0.8	2	0.1	0	0.0	44	2.0
NNE	0	0.0	3	0.1	11	0.5	25	1.1	33	1.5	5	0.2	6	0.3	83	3.8
NE	0	0.0	2	0.1	9	0.4	17	0.8	7	0.3	0	0.0	0	0.0	35	1.6
ENE	0	0.0	0	0.0	7	0.3	4	0.2	3	0.1	0	0.0	0	0.0	14	0.6
E	0	0.0	3	0.1	10	0.5	4	0.2	0	0.0	0	0.0	0	0.0	17	0.8
ESE	0	0.0	2	0.1	6	0.3	10	0.5	5	0.2	4	0.2	0	0.0	27	1.2
SE	0	0.0	2	0.1	4	0.2	16	0.7	14	0.6	6	0.3	8	0.4	50	2.3
SSE	0	0.0	0	0.0	10	0.5	30	1.4	17	0.8	5	0.2	4	0.2	66	3.0
S	0	0.0	1	0.0	17	0.8	18	0.8	18	0.8	3	0.1	0	0.0	57	2.6
SSW	0	0.0	1	0.0	10	0.5	21	1.0	7	0.3	0	0.0	8	0.4	47	2.1
SW	0	0.0	1	0.0	6	0.3	29	1.3	15	0.7	5	0.2	3	0.1	59	2.7
WSW	0	0.0	1	0.0	13	0.6	35	1.6	9	0.4	1	0.0	1	0.0	60	2.7
W	0	0.0	0	0.0	10	0.5	24	1.1	16	0.7	4	0.2	2	0.1	56	2.5
WNW	0	0.0	2	0.1	8	0.4	18	0.8	24	1.1	9	0.4	2	0.1	63	2.9
NW	0	0.0	3	0.1	7	0.3	23	1.0	35	1.6	13	0.6	0	0.0	81	3.7
NNW	0	0.0	2	0.1	9	0.4	31	1.4	34	1.5	17	0.8	2	0.1	95	4.3
	0	0.0	23	1.0	147	6.7	319	14.5	255	11.6	74	3.4	36	1.6	854	38.7

MEAN WIND SPEED: 12.4
MISSING: 0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 10/08-12/08

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

LAPSE RATE: 1.6 TO 4.0 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	6	0.3	11	0.5	11	0.5	0	0.0	0	0.0	28	1.3
NNE	0	0.0	0	0.0	0	0.0	14	0.6	15	0.7	0	0.0	0	0.0	29	1.3
NE	0	0.0	1	0.0	1	0.0	12	0.5	1	0.0	0	0.0	0	0.0	15	0.7
ENE	0	0.0	0	0.0	3	0.1	1	0.0	0	0.0	0	0.0	0	0.0	4	0.2
E	0	0.0	1	0.0	3	0.1	2	0.1	1	0.0	0	0.0	0	0.0	7	0.3
ESE	0	0.0	2	0.1	3	0.1	4	0.2	1	0.0	1	0.0	0	0.0	11	0.5
SE	0	0.0	3	0.1	2	0.1	15	0.7	2	0.1	1	0.0	2	0.1	25	1.1
SSE	0	0.0	0	0.0	2	0.1	6	0.3	7	0.3	1	0.0	1	0.0	17	0.8
S	0	0.0	0	0.0	0	0.0	5	0.2	5	0.2	2	0.1	7	0.3	19	0.9
SSW	0	0.0	0	0.0	2	0.1	0	0.0	3	0.1	13	0.6	13	0.6	31	1.4
SW	0	0.0	0	0.0	0	0.0	2	0.1	3	0.1	9	0.4	0	0.0	14	0.6
WSW	0	0.0	1	0.0	7	0.3	8	0.4	2	0.1	1	0.0	0	0.0	19	0.9
W	0	0.0	0	0.0	1	0.0	7	0.3	0	0.0	0	0.0	0	0.0	8	0.4
WNW	0	0.0	0	0.0	0	0.0	6	0.3	0	0.0	0	0.0	0	0.0	6	0.3
NW	0	0.0	0	0.0	1	0.0	3	0.1	7	0.3	0	0.0	0	0.0	11	0.5
NNW	0	0.0	0	0.0	2	0.1	5	0.2	4	0.2	0	0.0	0	0.0	11	0.5
	0	0.0	8	0.4	33	1.5	101	4.6	62	2.8	28	1.3	23	1.0	255	11.6

MEAN WIND SPEED: 13.2
 MISSING: 0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 10/08-12/08

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

LAPSE RATE: GT 4.0 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	1	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	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	3	0.1	2	0.1	0	0.0	0	0.0	0	0.0	5	0.2
ESE	0	0.0	1	0.0	1	0.0	1	0.0	0	0.0	0	0.0	0	0.0	3	0.1
SE	0	0.0	0	0.0	1	0.0	3	0.1	2	0.1	0	0.0	1	0.0	7	0.3
SSE	0	0.0	0	0.0	0	0.0	1	0.0	4	0.2	4	0.2	5	0.2	14	0.6
S	0	0.0	0	0.0	0	0.0	0	0.0	2	0.1	6	0.3	2	0.1	10	0.5
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	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	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	1	0.0	0	0.0	0	0.0	0	0.0	1	0.0
NW	0	0.0	0	0.0	1	0.0	2	0.1	0	0.0	0	0.0	0	0.0	3	0.1
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	1	0.0	10	0.5	13	0.6	10	0.5	10	0.5	8	0.4	52	2.4

MEAN WIND SPEED: 15.3
 MISSING: 0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 10/08-12/08

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS
WIND: 150 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	24	1.1	40	1.8	41	1.9	5	0.2	0	0.0	111	5.0
NNE	0	0.0	4	0.2	21	1.0	75	3.4	99	4.5	21	1.0	9	0.4	229	10.4
NE	0	0.0	4	0.2	20	0.9	50	2.3	19	0.9	0	0.0	0	0.0	93	4.2
ENE	0	0.0	0	0.0	17	0.8	13	0.6	12	0.5	0	0.0	0	0.0	42	1.9
E	0	0.0	4	0.2	22	1.0	9	0.4	1	0.0	0	0.0	0	0.0	36	1.6
ESE	0	0.0	5	0.2	12	0.5	17	0.8	6	0.3	5	0.2	0	0.0	45	2.0
SE	0	0.0	6	0.3	13	0.6	41	1.9	34	1.5	7	0.3	15	0.7	116	5.3
SSE	0	0.0	1	0.0	19	0.9	52	2.4	35	1.6	18	0.8	10	0.5	135	6.1
S	0	0.0	1	0.0	25	1.1	40	1.8	54	2.5	27	1.2	9	0.4	156	7.1
SSW	0	0.0	2	0.1	19	0.9	31	1.4	20	0.9	14	0.6	21	1.0	107	4.9
SW	0	0.0	3	0.1	13	0.6	43	2.0	29	1.3	15	0.7	7	0.3	110	5.0
WSW	0	0.0	2	0.1	33	1.5	88	4.0	32	1.5	11	0.5	1	0.0	167	7.6
W	0	0.0	1	0.0	25	1.1	68	3.1	69	3.1	33	1.5	15	0.7	211	9.6
WNW	0	0.0	3	0.1	18	0.8	45	2.0	75	3.4	34	1.5	36	1.6	211	9.6
NW	0	0.0	4	0.2	15	0.7	47	2.1	94	4.3	56	2.5	14	0.6	230	10.4
NNW	0	0.0	3	0.1	30	1.4	50	2.3	62	2.8	52	2.4	8	0.4	205	9.3
	0	0.0	44	2.0	326	14.8	709	32.2	682	30.9	298	13.5	145	6.6	2204	100.0

MISSING HOURS: 4

MEAN WIND SPEED: 13.7

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 10/08-12/08

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	SUM PERCENT	SUM PERCENT	SUM PERCENT	SUM PERCENT	SUM PERCENT	SUM PERCENT	
N	0	0.0	1	0.0	24	1.1	40	1.8	41	1.9	5	0.2	0	0.0	111	5.0
NNE	0	0.0	4	0.2	21	1.0	75	3.4	99	4.5	21	1.0	9	0.4	229	10.4
NE	0	0.0	4	0.2	20	0.9	50	2.3	19	0.9	0	0.0	0	0.0	93	4.2
ENE	0	0.0	0	0.0	17	0.8	13	0.6	12	0.5	0	0.0	0	0.0	42	1.9
E	0	0.0	4	0.2	22	1.0	9	0.4	1	0.0	0	0.0	0	0.0	36	1.6
ESE	0	0.0	5	0.2	12	0.5	17	0.8	6	0.3	5	0.2	0	0.0	45	2.0
SE	0	0.0	6	0.3	13	0.6	41	1.9	34	1.5	7	0.3	15	0.7	116	5.3
SSE	0	0.0	1	0.0	19	0.9	52	2.4	35	1.6	18	0.8	10	0.5	135	6.1
S	0	0.0	1	0.0	25	1.1	40	1.8	54	2.4	27	1.2	9	0.4	156	7.1
SSW	0	0.0	2	0.1	19	0.9	31	1.4	20	0.9	14	0.6	21	1.0	107	4.8
SW	0	0.0	3	0.1	13	0.6	43	1.9	29	1.3	15	0.7	7	0.3	110	5.0
WSW	0	0.0	2	0.1	33	1.5	88	4.0	32	1.4	11	0.5	1	0.0	167	7.6
W	0	0.0	1	0.0	25	1.1	68	3.1	69	3.1	33	1.5	15	0.7	211	9.6
WNW	0	0.0	3	0.1	18	0.8	45	2.0	75	3.4	34	1.5	36	1.6	211	9.6
NW	0	0.0	4	0.2	15	0.7	47	2.1	95	4.3	56	2.5	14	0.6	231	10.5
NNW	0	0.0	3	0.1	30	1.4	51	2.3	64	2.9	52	2.4	8	0.4	208	9.4
	0	0.0	44	2.0	326	14.8	710	32.2	685	31.0	298	13.5	145	6.6	2208	100.0

MISSING HOURS: 0

MEAN WIND SPEED: 13.7

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 10/08-12/08

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

LAPSE RATE: LE -1.9 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	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	1	0.0	1	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	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	3	0.1	0	0.0	0	0.0	3	0.1
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	2	0.1	6	0.3	3	0.1	0	0.0	11	0.5
W	0	0.0	0	0.0	0	0.0	1	0.0	4	0.2	2	0.1	0	0.0	7	0.3
WNW	0	0.0	0	0.0	0	0.0	2	0.1	2	0.1	3	0.1	0	0.0	7	0.3
NW	0	0.0	0	0.0	0	0.0	2	0.1	8	0.4	3	0.1	0	0.0	13	0.6
NNW	0	0.0	0	0.0	0	0.0	1	0.0	1	0.0	7	0.3	2	0.1	11	0.5
	0	0.0	0	0.0	0	0.0	8	0.4	25	1.1	19	0.9	2	0.1	54	2.5

MEAN WIND SPEED: 17.3
 MISSING: 0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 10/08-12/08

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

LAPSE RATE: -1.8 TO -1.7 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	2	0.1	0	0.0	0	0.0	0	0.0	3	0.1
NNE	0	0.0	0	0.0	0	0.0	1	0.0	1	0.0	1	0.0	0	0.0	3	0.1
NE	0	0.0	0	0.0	0	0.0	3	0.1	3	0.1	0	0.0	0	0.0	6	0.3
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	3	0.1	3	0.1	0	0.0	0	0.0	6	0.3
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	2	0.1	0	0.0	0	0.0	0	0.0	2	0.1
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	1	0.0	0	0.0	2	0.1	0	0.0	0	0.0	3	0.1
WSW	0	0.0	0	0.0	1	0.0	4	0.2	6	0.3	0	0.0	0	0.0	11	0.5
W	0	0.0	0	0.0	1	0.0	7	0.3	3	0.1	1	0.0	0	0.0	12	0.5
WNW	0	0.0	0	0.0	0	0.0	1	0.0	1	0.0	5	0.2	6	0.3	13	0.6
NW	0	0.0	0	0.0	1	0.0	2	0.1	5	0.2	8	0.4	2	0.1	18	0.8
NNW	0	0.0	0	0.0	0	0.0	3	0.1	1	0.0	5	0.2	0	0.0	9	0.4
	0	0.0	0	0.0	6	0.3	30	1.4	25	1.1	20	0.9	8	0.4	89	4.0

MEAN WIND SPEED: 15.6
MISSING: 0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 10/08-12/08

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

LAPSE RATE: -1.6 TO -1.5 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	2	0.1	0	0.0	1	0.0	0	0.0	3	0.1
NNE	0	0.0	0	0.0	0	0.0	0	0.0	5	0.2	1	0.0	0	0.0	6	0.3
NE	0	0.0	0	0.0	5	0.2	4	0.2	0	0.0	0	0.0	0	0.0	9	0.4
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	2	0.1	0	0.0	1	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	3	0.1	1	0.0	0	0.0	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	1	0.0	1	0.0	2	0.1	0	0.0	0	0.0	4	0.2
WSW	0	0.0	0	0.0	1	0.0	6	0.3	2	0.1	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	4	0.2	1	0.0	18	0.8
WNW	0	0.0	0	0.0	1	0.0	2	0.1	2	0.1	1	0.0	5	0.2	11	0.5
NW	0	0.0	0	0.0	2	0.1	6	0.3	2	0.1	5	0.2	4	0.2	19	0.9
NNW	0	0.0	0	0.0	4	0.2	4	0.2	1	0.0	3	0.1	0	0.0	12	0.5
	0	0.0	0	0.0	21	1.0	34	1.5	21	1.0	15	0.7	10	0.5	101	4.6

MEAN WIND SPEED: 13.9
 MISSING: 0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 10/08-12/08

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

LAPSE RATE: -1.4 TO -0.5 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	1	0.0	5	0.2	16	0.7	8	0.4	2	0.1	0	0.0	32	1.5
NNE	0	0.0	1	0.0	7	0.3	22	1.0	39	1.8	23	1.0	10	0.5	102	4.6
NE	0	0.0	1	0.0	6	0.3	17	0.8	18	0.8	1	0.0	0	0.0	43	2.0
ENE	0	0.0	3	0.1	5	0.2	3	0.1	6	0.3	0	0.0	0	0.0	17	0.8
E	0	0.0	2	0.1	2	0.1	3	0.1	1	0.0	0	0.0	0	0.0	8	0.4
ESE	0	0.0	1	0.0	0	0.0	5	0.2	0	0.0	0	0.0	0	0.0	6	0.3
SE	0	0.0	1	0.0	7	0.3	7	0.3	7	0.3	1	0.0	3	0.1	26	1.2
SSE	0	0.0	3	0.1	4	0.2	2	0.1	7	0.3	5	0.2	1	0.0	22	1.0
S	0	0.0	0	0.0	7	0.3	13	0.6	31	1.4	9	0.4	0	0.0	60	2.7
SSW	0	0.0	1	0.0	3	0.1	9	0.4	11	0.5	1	0.0	0	0.0	25	1.1
SW	0	0.0	0	0.0	3	0.1	9	0.4	9	0.4	2	0.1	4	0.2	27	1.2
WSW	0	0.0	2	0.1	7	0.3	18	0.8	20	0.9	4	0.2	4	0.2	55	2.5
W	0	0.0	0	0.0	13	0.6	17	0.8	29	1.3	32	1.5	19	0.9	110	5.0
WNW	0	0.0	1	0.0	6	0.3	19	0.9	37	1.7	33	1.5	38	1.7	134	6.1
NW	0	0.0	2	0.1	1	0.0	8	0.4	26	1.2	28	1.3	20	0.9	85	3.9
NNW	0	0.0	1	0.0	8	0.4	8	0.4	10	0.5	17	0.8	3	0.1	47	2.1
	0	0.0	20	0.9	84	3.8	176	8.0	259	11.8	158	7.2	102	4.6	799	36.3

MEAN WIND SPEED: 16.0
MISSING: 0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 10/08-12/08

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

LAPSE RATE: -0.4 TO 1.5 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	4	0.2	6	0.3	15	0.7	11	0.5	10	0.5	0	0.0	46	2.1
NNE	0	0.0	1	0.0	4	0.2	9	0.4	19	0.9	20	0.9	9	0.4	62	2.8
NE	0	0.0	2	0.1	6	0.3	14	0.6	20	0.9	9	0.4	0	0.0	51	2.3
ENE	0	0.0	2	0.1	4	0.2	9	0.4	8	0.4	0	0.0	0	0.0	23	1.0
E	0	0.0	0	0.0	2	0.1	3	0.1	3	0.1	0	0.0	0	0.0	8	0.4
ESE	0	0.0	0	0.0	5	0.2	4	0.2	11	0.5	9	0.4	2	0.1	31	1.4
SE	0	0.0	0	0.0	4	0.2	13	0.6	6	0.3	7	0.3	11	0.5	41	1.9
SSE	0	0.0	0	0.0	7	0.3	15	0.7	10	0.5	4	0.2	4	0.2	40	1.8
S	0	0.0	1	0.0	14	0.6	22	1.0	20	0.9	8	0.4	0	0.0	65	2.9
SSW	0	0.0	0	0.0	9	0.4	22	1.0	19	0.9	5	0.2	8	0.4	63	2.9
SW	0	0.0	1	0.0	5	0.2	13	0.6	26	1.2	7	0.3	5	0.2	57	2.6
WSW	0	0.0	1	0.0	7	0.3	20	0.9	31	1.4	7	0.3	1	0.0	67	3.0
W	0	0.0	2	0.1	5	0.2	22	1.0	20	0.9	9	0.4	6	0.3	64	2.9
WNW	0	0.0	4	0.2	5	0.2	8	0.4	22	1.0	12	0.5	8	0.4	59	2.7
NW	0	0.0	2	0.1	5	0.2	17	0.8	46	2.1	28	1.3	0	0.0	98	4.4
NNW	0	0.0	2	0.1	6	0.3	21	1.0	32	1.5	14	0.6	4	0.2	79	3.6
	0	0.0	22	1.0	94	4.3	227	10.3	304	13.8	149	6.8	58	2.6	854	38.7

MEAN WIND SPEED: 14.6
MISSING: 0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 10/08-12/08

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

LAPSE RATE: 1.6 TO 4.0 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	6	0.3	6	0.3	11	0.5	0	0.0	0	0.0	23	1.0
NNE	0	0.0	0	0.0	0	0.0	3	0.1	21	1.0	5	0.2	0	0.0	29	1.3
NE	0	0.0	0	0.0	1	0.0	0	0.0	8	0.4	1	0.0	0	0.0	10	0.5
ENE	0	0.0	0	0.0	3	0.1	2	0.1	5	0.2	0	0.0	0	0.0	10	0.5
E	0	0.0	1	0.0	3	0.1	4	0.2	0	0.0	1	0.0	0	0.0	9	0.4
ESE	0	0.0	0	0.0	2	0.1	2	0.1	2	0.1	1	0.0	0	0.0	7	0.3
SE	0	0.0	0	0.0	8	0.4	6	0.3	5	0.2	1	0.0	2	0.1	22	1.0
SSE	0	0.0	0	0.0	3	0.1	5	0.2	5	0.2	0	0.0	2	0.1	15	0.7
S	0	0.0	0	0.0	0	0.0	3	0.1	6	0.3	3	0.1	5	0.2	17	0.8
SSW	0	0.0	1	0.0	1	0.0	4	0.2	3	0.1	8	0.4	21	1.0	38	1.7
SW	0	0.0	0	0.0	0	0.0	3	0.1	2	0.1	9	0.4	5	0.2	19	0.9
WSW	0	0.0	1	0.0	1	0.0	3	0.1	4	0.2	3	0.1	0	0.0	12	0.5
W	0	0.0	0	0.0	3	0.1	5	0.2	8	0.4	2	0.1	0	0.0	18	0.8
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	4	0.2	7	0.3	4	0.2	0	0.0	16	0.7
NNW	0	0.0	1	0.0	0	0.0	3	0.1	6	0.3	0	0.0	0	0.0	10	0.5
	0	0.0	4	0.2	32	1.5	53	2.4	93	4.2	38	1.7	35	1.6	255	11.6

MEAN WIND SPEED: 15.7
MISSING: 0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 10/08-12/08

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

LAPSE RATE: GT 4.0 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	3	0.1	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	0	0.0	2	0.1	2	0.1	0	0.0	0	0.0	4	0.2
SE	0	0.0	2	0.1	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	3	0.1
SSE	0	0.0	0	0.0	0	0.0	3	0.1	0	0.0	0	0.0	3	0.1	6	0.3
S	0	0.0	0	0.0	0	0.0	3	0.1	4	0.2	0	0.0	13	0.6	20	0.9
SSW	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	3	0.1	0	0.0	4	0.2
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	1	0.0	0	0.0	3	0.1
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	1	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	2	0.1	0	0.0	0	0.0	2	0.1
NNW	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	1	0.0
	0	0.0	2	0.1	4	0.2	10	0.5	12	0.5	8	0.4	16	0.7	52	2.4

MEAN WIND SPEED: 17.8
 MISSING: 0

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 10/08-12/08

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	18	0.8	41	1.9	30	1.4	13	0.6	0	0.0	107	4.9
NNE	0	0.0	2	0.1	11	0.5	35	1.6	86	3.9	51	2.3	19	0.9	204	9.3
NE	0	0.0	3	0.1	18	0.8	38	1.7	49	2.2	14	0.6	0	0.0	122	5.5
ENE	0	0.0	5	0.2	12	0.5	15	0.7	19	0.9	0	0.0	0	0.0	51	2.3
E	0	0.0	3	0.1	8	0.4	11	0.5	4	0.2	1	0.0	0	0.0	27	1.2
ESE	0	0.0	1	0.0	7	0.3	13	0.6	15	0.7	10	0.5	2	0.1	48	2.2
SE	0	0.0	3	0.1	21	1.0	29	1.3	25	1.1	10	0.5	16	0.7	104	4.7
SSE	0	0.0	3	0.1	16	0.7	26	1.2	22	1.0	9	0.4	10	0.5	86	3.9
S	0	0.0	1	0.0	22	1.0	46	2.1	62	2.8	20	0.9	18	0.8	169	7.7
SSW	0	0.0	2	0.1	15	0.7	36	1.6	33	1.5	17	0.8	29	1.3	132	6.0
SW	0	0.0	1	0.0	10	0.5	26	1.2	41	1.9	18	0.8	14	0.6	110	5.0
WSW	0	0.0	4	0.2	18	0.8	53	2.4	70	3.2	18	0.8	5	0.2	168	7.6
W	0	0.0	2	0.1	24	1.1	58	2.6	71	3.2	50	2.3	26	1.2	231	10.5
WNW	0	0.0	5	0.2	13	0.6	32	1.5	64	2.9	54	2.5	57	2.6	225	10.2
NW	0	0.0	4	0.2	10	0.5	39	1.8	96	4.4	76	3.4	26	1.2	251	11.4
NNW	0	0.0	4	0.2	18	0.8	40	1.8	52	2.4	46	2.1	9	0.4	169	7.7
	0	0.0	48	2.2	241	10.9	538	24.4	739	33.5	407	18.5	231	10.5	2204	100.0
MISSING HOURS:	4															
MEAN WIND SPEED:	15.4															

2008 SGS AND HCGS RADIOACTIVE EFFLUENT RELEASE REPORT

ARTIFICIAL ISLAND 10/08-12/08

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	5	0.2	18	0.8	41	1.9	30	1.4	13	0.6	0	0.0	107	4.8
NNE	0	0.0	2	0.1	11	0.5	35	1.6	86	3.9	51	2.3	19	0.9	204	9.2
NE	0	0.0	3	0.1	18	0.8	38	1.7	49	2.2	14	0.6	0	0.0	122	5.5
ENE	0	0.0	5	0.2	12	0.5	15	0.7	19	0.9	0	0.0	0	0.0	51	2.3
E	0	0.0	3	0.1	8	0.4	11	0.5	4	0.2	1	0.0	0	0.0	27	1.2
ESE	0	0.0	1	0.0	7	0.3	13	0.6	15	0.7	10	0.5	2	0.1	48	2.2
SE	0	0.0	3	0.1	21	1.0	29	1.3	25	1.1	10	0.5	16	0.7	104	4.7
SSE	0	0.0	3	0.1	16	0.7	26	1.2	22	1.0	9	0.4	10	0.5	86	3.9
S	0	0.0	1	0.0	22	1.0	46	2.1	62	2.8	20	0.9	18	0.8	169	7.7
SSW	0	0.0	2	0.1	15	0.7	36	1.6	33	1.5	17	0.8	29	1.3	132	6.0
SW	0	0.0	1	0.0	10	0.5	26	1.2	41	1.9	18	0.8	14	0.6	110	5.0
WSW	0	0.0	4	0.2	18	0.8	53	2.4	70	3.2	18	0.8	5	0.2	168	7.6
W	0	0.0	2	0.1	24	1.1	58	2.6	71	3.2	50	2.3	26	1.2	231	10.5
WNW	0	0.0	5	0.2	13	0.6	32	1.4	64	2.9	54	2.4	57	2.6	225	10.2
NW	0	0.0	4	0.2	10	0.5	39	1.8	97	4.4	76	3.4	26	1.2	252	11.4
NNW	0	0.0	4	0.2	18	0.8	40	1.8	55	2.5	46	2.1	9	0.4	172	7.8
	0	0.0	48	2.2	241	10.9	538	24.4	743	33.7	407	18.4	231	10.5	2208	100.0

MISSING HOURS: 0

MEAN WIND SPEED: 15.4

APPENDIX B

MPC Data

2008 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

2008 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
	Cs-137	2E-5	4E-5
Chlorine (17)	Cl-36	8E-5	6E-5
	Cl-38	4E-4	4E-4
Chromium (24)	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
	Co-60	5E-5	3E-5
Copper (29)	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
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
	Es-255	3E-5	3E-5
Erbium (68)	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
	Eu-155	2E-4	2E-4
Fermium (100)	Fm-254	1E-4	1E-4
	Fm-255	3E-5	3E-5
	Fm-256	9E-7	9E-7

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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
	Fe-55	8E-4	2E-3
Iron (26)	Fe-59	6E-5	5E-5
	La-140	2E-5	2E-5
Lanthanum (57)	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

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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

2008 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

2008 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
	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: 3E-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").