

**PSEG NUCLEAR LLC**

**2005 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

**FOR**

**THE SALEM AND HOPE CREEK**

**GENERATING STATIONS**

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**SGS RERR-54**

**DOCKET NO. 50-272**

**DOCKET NO. 50-311**

**OPERATING LICENSE NO. DPR-070**

**OPERATING LICENSE NO. DPR-075**

**HCGS RERR-28**

**DOCKET NO. 50-354**

**OPERATING LICENSE NO. NPF-057**

**May 2006**



**SALEM AND HOPE CREEK GENERATING STATIONS**

**RADIOACTIVE EFFLUENT RELEASE REPORT**

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*JANUARY - DECEMBER 2005*

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## SALEM AND HOPE CREEK GENERATING STATIONS

### RADIOACTIVE EFFLUENT RELEASE REPORT: JANUARY - DECEMBER 2005

#### INTRODUCTION

This report, SGS-RERR-54/HCGS-RERR-28 summarizes information pertaining to the releases of radioactive materials in liquid, gaseous and solid form from the Salem (SGS) and Hope Creek Generating (HCGS) Stations for the period January 1, 2005 to December 31, 2005.

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 1177 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 1134 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 designed to operate at a rated core thermal power of 3339 MWt and an approximate net electrical output of 1139 MWe. The HCGS achieved initial criticality on June 28, 1986 and went into commercial operation on December 20, 1986.

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 Offsite Dose Calculation Manual limits are described in detail within this report along with a summary description of how total radioactivity measurements and their approximations were developed.

To facilitate determination of compliance with 40CFR190 requirements, the following information on electrical output is provided.

Salem Unit 1 generated 9440577 megawatt-hours of electrical energy (net) during the reporting period.

Salem Unit 2 generated 8886027 megawatt-hours of electrical energy (net) during the reporting period.

Hope Creek generated 7684767 megawatt-hours of electrical energy (net) during the reporting period.

**PART A. PRELIMINARY 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 & 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 Unit 1, Unit 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 Iodines, 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 microcuries 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 MPC's 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 microcuries 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 SGS or HCGS are not based upon average energy. Therefore this section is not applicable to SGS or HCGS.

## **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 Non-Radwaste 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. Specific activities from the analyses were multiplied by the volume of effluent discharged to the environment in order to determine the total liquid activity discharged.

The detection requirements of Table 4.11-1 (SGS) and Table 4.11.1.1.1-1 (HCGS) of the ODCM are achieved. Radionuclides measured at concentrations below the ODCM detection limit (LLD) are treated as being present. Radionuclides for which no activity was detected while meeting the required LLD's are treated as absent.



## 4.2 Gaseous Effluents

### Salem Units 1 and 2:

Gaseous effluent streams at SGS 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, iodines and tritium.

The detection requirements of Table 4.11-2 of the ODCM are achieved or exceeded. Radionuclides detected at concentrations below the ODCM LLD are treated as being present. Radionuclides for which no activity was detected while meeting the required LLDs are treated as 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 each isotope detected 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. Specific activities for each isotope are multiplied by the total volume of gas discharged for that batch to determine the total activity released.

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 "specific activity" is multiplied by the volume of effluent discharged while the channel was in an alarm state in order to determine the total activity discharged.

Hope Creek:

Gaseous effluent streams at HCGS 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 multichannel 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. Radionuclides detected at concentrations below the ODCM detection limit (LLD) are treated as being present. Radionuclides for which no activity was detected while meeting the required LLDs are treated as absent.

Batch Mode noble gas releases (i.e. primary containment purge) are quantified by pre-release sampling and isotopic analysis. In order to estimate the total radioactivity released, specific activities for each isotope are multiplied 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% when concentrations exceed detectable levels. This error is 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 since 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**

During this reporting period, no unplanned releases occurred.

### **7.0 ELEVATED RADIATION MONITOR RESPONSES**

During this reporting period, no elevated Effluent Radiation Monitor response occurred.

### **8.0 MODIFICATION TO PREVIOUS RADIOACTIVE EFFLUENT RELEASE REPORTS**

There were no modifications to the 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 Table 3.

**PART E. RADIOLOGICAL IMPACT ON MAN**

The calculated individual doses in this section are based on the controlling dose pathways and age groups as described below. The estimated dose represents the maximum radiation dose that could be received by a member of the general public. The population dose impact is based on the evaluation year site-specific data (i.e., food production, milk production, feed for milk animals and seafood production).

The doses were calculated using methods described in Regulatory Guide 1.109 and represent calculations for the 12-month reporting interval. Individual doses from batch and continuous releases were calculated using the annual average historic meteorological dispersion factors as described in the respective Offsite Dose Calculation Manual. Population doses were calculated using the meteorological dispersion coefficients for the twelve month reporting interval.

**Liquid Pathways**

<u>Type</u>	<u>Age Group</u>	<u>Location</u>	<u>Pathway</u>
Total Body	Adult	Site Boundary	Seafood Ingestion
Organ	Adult	Site Boundary	Seafood Ingestion

**Salem Unit 1**

<u>Type</u>	<u>Dose</u>		<u>Limit</u>
Total Body	2.10E-02	mrem	3 mrem
Organ Dose (GILLI)	1.27E-01	mrem	10 mrem

**Salem Unit 2**

<u>Type</u>	<u>Dose</u>		<u>Limit</u>
Total Body	1.64E-05	mrem	3 mrem
Organ Dose (GILLI)	2.14E-02	mrem	10 mrem

**Hope Creek**

<u>Type</u>	<u>Dose</u>		<u>Limit</u>
Total Body	2.40E-05	mrem	3 mrem
Organ Dose (Bone)	1.36E-04	mrem	10 mrem

<u>Site</u>	<u>Dose</u>		<u>Limit</u>
Population (Total)	2.10E-02	person-rem	N/A
Population (Average)	4.68E-06	mrem	N/A

**Air Pathways**

<u>Type</u>	<u>Age Group</u>	<u>Location</u>	<u>Pathway</u>
Total Body	All	Site Boundary	Direct Exposure
Skin	All	Site Boundary	Direct Exposure
Organ	Infant	4.9 mi. W.	Milk, Ground Plane, Inhalation

Salem Units 1&2

<u>Type</u>	<u>Dose</u>		<u>Limit</u>
Total Body	1.21E-03	mrem	500 mrem
Skin	4.56E-04	mrem	3000 mrem
Organ Dose (Thyroid)	1.48E-03	mrem	15 mrem

Hope Creek

<u>Type</u>	<u>Dose</u>		<u>Limit</u>
Total Body	8.12E-04	mrem	500 mrem
Skin	1.53E-03	mrem	3000 mrem
Organ Dose (Thyroid)	6.36E-02	mrem	15 mrem

<u>Site</u>	<u>Dose</u>		<u>Limit</u>
Population (Total)	2.02E-03	person-rem	N/A
Population (Average)	4.49E-07	mrem	N/A

**Direct Radiation**

Direct radiation may be estimated by thermoluminescent dosimetric (TLD) measurements. One method for comparing TLD measurements is by comparison with pre-operational data. It should be noted that the TLDs measure direct radiation from both the Salem and Hope Creek Generating Stations at Artificial Island, and natural background radiation.

TLD data for the twelve-month reporting period is given below:

<u>TLD</u>	<u>Location</u>	<u>Measurement</u>
1S-1	0.55 miles N of Vent	4.50 mrad/std. month
5S-1	1.0 mile E of Vent	3.45 mrad/std. month

These values are interpreted to represent natural background, since the values are within the statistical variation associated with the pre-operational program results which are 3.7 mrad/standard month for TLD 1S-1 and 4.2 mrad/standard month for TLD 5S-1.

**Total Dose**

40CFR190 limits the total dose to members of the public due to radioactivity and radiation from uranium fuel cycle sources to:

<25 mrem total body or any organ and;

<75 mrem thyroid for a calendar year.

For Artificial Island, the major sources of dose are from liquid and gaseous effluents from the Hope Creek and Salem plants.

The following doses to a "hypothetical maximum exposed individual" have been calculated for the twelve-month reporting period. They are the sum of gaseous and liquid pathway doses for the Salem 1 and 2 and Hope Creek plants:

9.92E-01	mrem	Total Body
1.29E-01	mrem	Organ (GI-LLI)
6.51E-02	mrem	Thyroid

**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 definition of members of the public changed on September 11, 2001. The various food vendors that have previously comprised the maximally exposed group are no longer allowed on site. For this reporting period, the definition of the members of the public are the members of the New Jersey National Guard to augment the security force at the site. Their typical patrol spans the site, and the following locations 16S1; CA8 and CA15 (Hope Creek Barge Slip, Dredge Spoils and Baseball Field) are averaged to estimate their dose. In accordance with the requirements of ODCM 6.9.1.8 (SGS) and 6.9.1.7 (HCGS), the dose to members of the public inside the site boundary has been calculated based on the following assumptions:

- a. The National Guard works a 40 hour week, therefore all doses are multiplied by 0.25 to assess their dose.

For the 12-month reporting period, January 1, 2005 to December 31, 2005 the calculated doses are:

2.43E-01	mrem TEDE	Total Body
4.84E-04	mrem TEDE	Organ (Lung)
1.63E-02	mrem TEDE	Thyroid

**Assessment**

**1. Liquids:**

Liquid effluents released from the Salem and Hope Creek Generating Stations resulted in a minimal dose to the hypothetical maximum exposed individual and were well within all applicable limits (Salem Unit 1 –  $6.99E-01$  % of Total Body Limit, Salem Unit 2 –  $5.46E-04$  % of Total Body Limit, and Hope Creek –  $8.00E-04$  % of Total Body Limit).

When compared to releases in the previous reporting period, the Salem and Hope Creek Fission & Activation Products activity in the liquid effluents decreased. Liquid effluent releases continue to remain well within Federal limits and compare favorably to other nuclear utilities.

**2. Gaseous:**

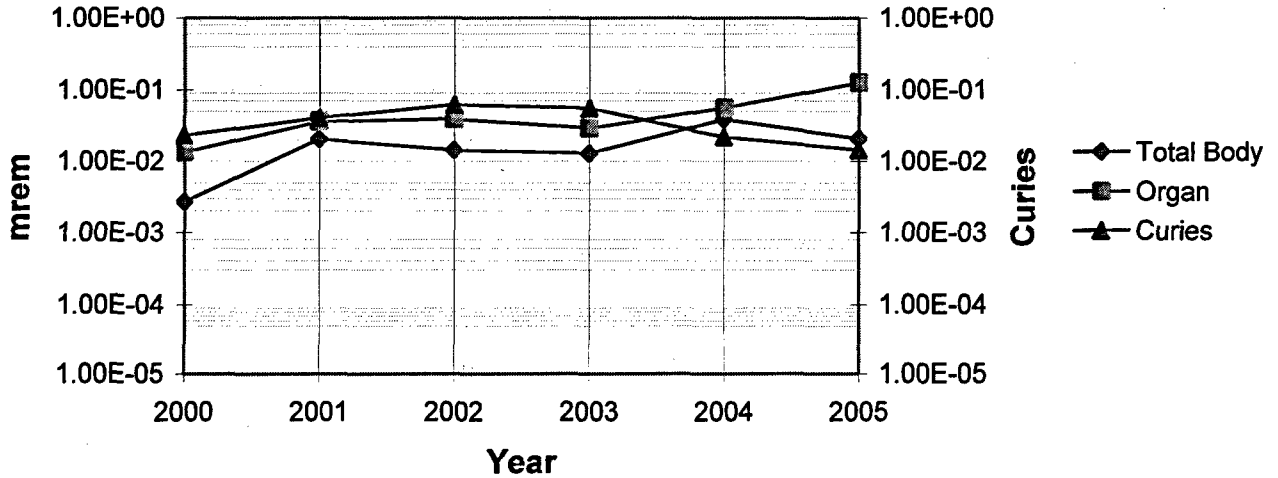
Gaseous effluents released from the Salem and Hope Creek Generating Stations resulted in a minimal dose to the hypothetical maximum exposed individual. The dose for the 12-month period was a small fraction of all applicable limits (Salem Unit 1 & 2 –  $7.99E-03$ % of Total Body Limit and Hope Creek –  $5.41E-03$  % of Total Body Limit).

When compared to releases in the previous reporting period, the Salem and Hope Creek noble gas effluents 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).

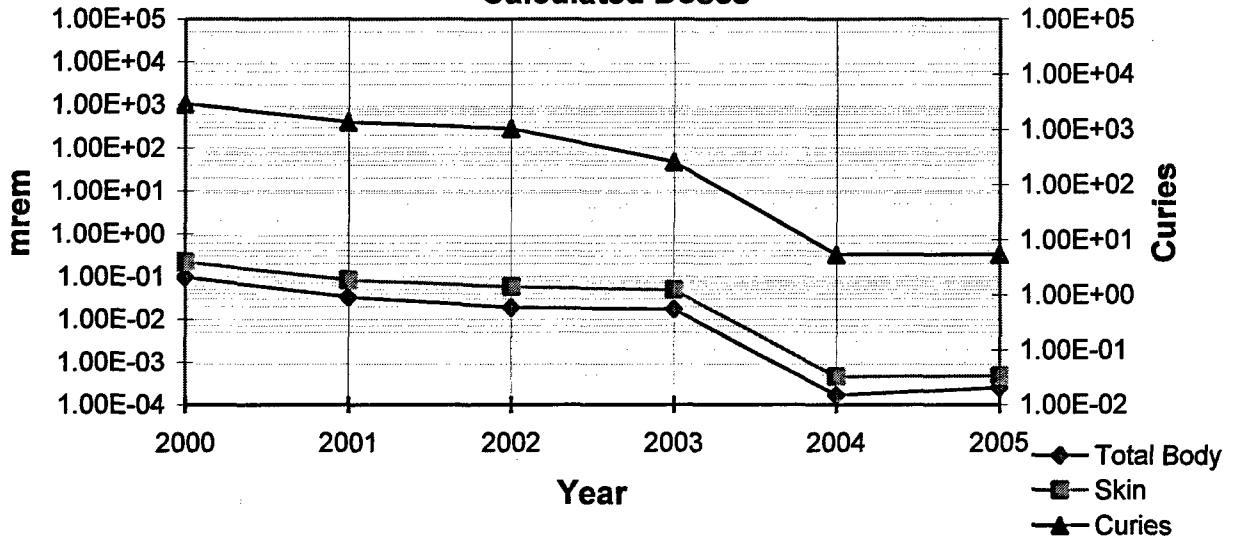
**Trends**

The following two trend graphs show the total curies of liquid and gaseous effluents released for Salem from 2000 through 2005. Calculated doses in the graphs are to the hypothetical maximum exposed individual.

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



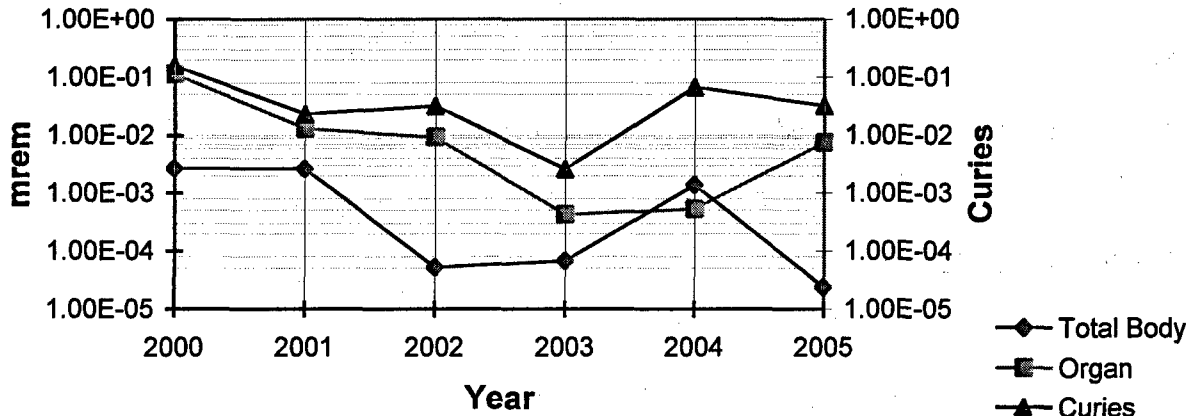
**Gaseous Releases (SGS) Curies of Noble Gases Released and Calculated Doses**



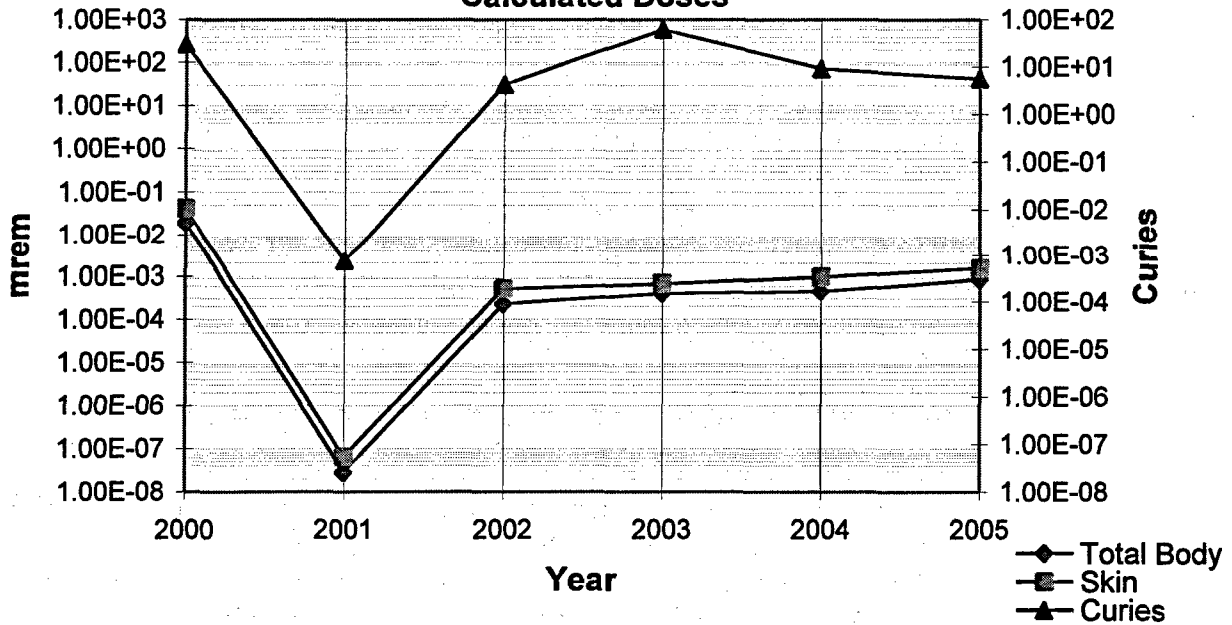


The following two trend graphs show the total curies of liquid and gaseous effluents released for Hope Creek from 2000 through 2005. Calculated doses in the graphs are to the hypothetical maximum exposed individual.

**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 at the 33 feet elevation are provided for the reporting period at the end of this report in Appendix A.

**PART G. OFFSITE DOSE CALCULATION MANUAL CHANGES**

**Salem**

The Salem ODCM was revised twice during the reporting period. A copy of the Salem ODCM revision 19 is included in Appendix C.

**Salem ODCM Revision 18**

This revision became effective April 27, 2005, accomplishing the following:

1. Added (#) symbol to Item 2, Table 3.3-13 (pg 25)
2. Revised (\*\*) footnote on Table 3.3-13 TABLE NOTATION (pg 26) – to read:  
“\*\* During containment purges or containment pressure - vacuum reliefs  
Applicability –  
R41A/D Monitors at all times, or  
R12A Monitors in all Modes (Mode 6 function is to alarm without automatic isolation)”
3. Added (#) footnote on Table 3.3-13 TABLE NOTATION (pg 26) – to read:  
“# During Fuel Handling inside containment without containment closure (hatches open) only R41A/D can be credited for minimum channel operability  
During Fuel Handling inside containment with containment closure (hatches closed) R12A may be credited for minimum channel operability”
4. Revised (\*\*) footnote on Table 4.3-13 (pg 28) – to read:  
“\*\* During containment purge or containment pressure - vacuum relief  
Surveillance requirement –  
R41A/D Monitors at all times  
R12A Monitors in all Modes (Mode 6 function is to alarm without automatic isolation)  
During Fuel Handling inside containment without containment closure (hatches open) only R41A/D can be credited for minimum channel operability  
During Fuel Handling inside containment with containment closure (hatches closed) R12A may be credited for minimum channel operability”
5. Revised (\*) footnote on Part II Computational Methodologies Section 2.1 (pg 81) to read:  
“The R12A in Mode 6 provides containment monitoring and alarm functions without automatic isolation”
6. Revised (\*\*) footnote on Tables 2-2.1 and 2-2.2 (pgs 105 and 106) to read:  
“\*\* Automatic Isolation function is applicable in all MODES except MODE 6”

**Justification:** Technical Specification Amendments 263 and 245, "Relaxation of T.S. Requirements Applicable During Movement of Irradiated Fuel," specify that fuel handling in containment can be performed with the equipment hatch open provided that: 1) containment closure can be performed within 1 hour, 2) ventilation is taking suction from the containment, and 3) the release from a postulated fuel handling accident can be monitored. This amendment removed the requirement to provide containment isolation of purge on a high rad signal when in Mode 6. ODCM Revision 17 implemented the T.S. Amendment by removing reference to R12A in Mode 6 and Defueled. This ODCM Revision provides redundancy to the R41A/D by allowing R12A to provide monitoring without automatic isolation during containment purges in Mode 6 and Defueled.

7. Revised ACTION 33 in Table 3.3-13 TABLE NOTATION (pg 26) – to remove wording: "and the Surveillance Requirement 4.11.2.1.1 is performed" and add wording: "Otherwise, suspend release of radioactive effluents via this pathway."

**Justification:** The ODCM is controlled Tech Specs Section 6.8.4.g - Radioactive Effluents Controls Program, 10CFR20 and NUREG-1301 ODCM Guidance: Standard Radiological Effluent Controls for PWRs. This revision is also consistent with the surveillance requirements of Hope Creek ODCM.

**Salem ODCM Revision 19**

This revision became effective September 7, 2005, accomplishing the following:

1. Removed the wording " Providing Alarm and Automatic Termination of Release" and added the # symbol – Items 2 & 3 Table 3.3-13 (pg 25)
2. Revised (\*\*) footnote and added (#) footnote on Table 3.3-13 (pg 26) – modified wording:

**\*\* During Containment Purges OR Containment Pressure – Vacuum Relief**

**APPLICABILITY:**

Modes 1-6, R41A/D Monitors providing Alarm and Automatic Termination of Release, or

Modes 1-5, R12A Monitor providing Alarm and Automatic Termination of Release, or Mode 6, R12A Monitor providing Alarm only (Automatic Termination of Release is not required).

During Mode Undefined (Defueled) operation, containment purge is reclassified as a building ventilation process stream monitored by the PLANT VENT HEADER SYSTEM.

**# During movement of irradiated fuel within containment with the Containment Equipment Hatch OPEN, only R41A/D can be credited for MINIMUM CHANNEL OPERABLE.**

During movement of irradiated fuel within containment with the Containment Equipment Hatch CLOSED, R41A/D or R12A may be credited for MINIMUM CHANNEL OPERABLE.

3. Removed the wording " Providing Alarm and Automatic Termination of Release" - Item 2 Table 4.3-13 (pg 27)
4. Revised (\*\*) footnote on Table 4.3-13 (pg 28) - modified wording:

\*\* During Containment Purges OR Containment Pressure - Vacuum Relief

Surveillance requirement –

Modes 1-6, R41A/D Monitors providing Alarm and Automatic Termination of Release

Modes 1-5, R12A Monitors providing Alarm and Automatic Termination of Release

Mode 6, R12A Monitors providing Alarm only (Automatic Termination of Release is not required).

During Mode Undefined (Defueled) operation, containment purge is reclassified as a building ventilation process stream monitored by the PLANT VENT HEADER SYSTEM.

During movement of irradiated fuel within containment with the Containment Equipment Hatch OPEN, only R41A/D can be credited for MINIMUM CHANNEL OPERABLE.

During movement of irradiated fuel within containment with the Containment Equipment Hatch CLOSED, R41A/D or R12A may be credited for MINIMUM CHANNEL OPERABLE.

**Justification:**

This ODCM further clarifies the 2 changes done by ODCM Revision 17 & 18 and further relaxes containment purging in refueling outages by redefining "purging" as "building ventilation" when the plant is in Mode Undefined (Defueled).

The design functions for the gaseous effluent radiation monitoring of releases from containment purge in Mode Undefined (Defueled) will be met by the use of the Plant Vent (PLANT VENT HEADER SYSTEM) radiation monitors. When defueled, "Purging" can be reclassified as a building ventilation stream feeding into the Plant Vent. This change to the ODCM relaxes the requirements of the R12A - R41A/D monitors in a defueled containment, which was overly restrictive. This ODCM change allows the Plant Vent radiation monitors with grab sample backup to support purging when defueled.

**PART H. INOPERABLE MONITORS**

During this reporting period there were no effluent radiation monitors inoperable for greater than 30 days.

**PART I. PROCESS CONTROL PROGRAM (PCP) CHANGES**

During the reporting period, there were no PCP changes.

**PART J. ENVIRONMENTAL MONITORING LOCATION CHANGES**

Since there are no milk farms within 5 Km of the Site, in accordance with the Salem and Hope Creek Offsite Dose Calculation Manual (ODCM), broad leaf vegetation was planted, maintained and harvested. The broad leaf vegetation sample locations are (1S1, 15S1 and 16S1, onsite) and 10D1 located 3.9 miles SSW across the river.

The objectives and effectiveness of the Radioactive Environmental Monitoring Program (REMP) were maintained during this reporting period.

**2005 SGS AND HCGS RADIOACTIVE EFFLUENTS RELEASE REPORT**

**TABLE 1A-1  
SALEM GENERATING STATION - UNIT 1  
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT  
JANUARY – JUNE 2005  
GASEOUS EFFLUENTS – SUMMATION OF ALL RELEASES**

		Units	1 <sup>st</sup> Quarter	2 <sup>nd</sup> Quarter	Est. Total Error
<b>A.</b>	<b>Fission and Activation Gases</b>				
1.	Total Release	Ci	2.40E-01	1.71E-01	50%
2.	Average Release Rate For Period	Ci/sec	3.09E-02	2.18E-02	
3.	Percent of Technical Specification Limit (ODCM 3.11.2.2(a))	%	2.77E-04	3.80E-04	
<b>B.</b>	<b>Iodines</b>				
1.	Total Iodine-131	Ci	0.00E+00	3.72E-07	50%
2.	Average Release Rate For Period	Ci/sec	0.00E+00	4.73E-08	
3.	Percent of Technical Specification Limit <sup>2</sup> (ODCM 3.11.2.3(a))	%	0.00E+00	8.09E-04	
<b>C.</b>	<b>Particulates</b>				
1.	Particulates With Half-lives > 8 days	Ci	2.35E-06	1.30E-06	50%
2.	Average Release Rate For Period	Ci/sec	3.02E-07	1.65E-07	
3.	Percent of Technical Specification Limit <sup>2</sup> (ODCM 3.11.2.3(a))	%	2.17E-05	8.09E-04	
4.	Gross Alpha	Ci	0.00E+00	0.00E+00	
<b>D.</b>	<b>Tritium</b>				
1.	Total Release	Ci	1.66E-01	1.10E+01	50%
2.	Average Release Rate For Period	Ci/sec	2.14E-02	1.40E+00	
3.	Percent of Technical Specification Limit <sup>2</sup> (ODCM 3.11.2.3(a))	%	2.17E-05	8.09E-04	

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

2005 SGS AND HCGS RADIOACTIVE EFFLUENTS RELEASE REPORT

TABLE 1A-2  
 SALEM GENERATING STATION - UNIT 2  
 EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT  
 JANUARY - JUNE 2005  
 GASEOUS EFFLUENTS - SUMMATION OF ALL RELEASES

	Units	1 <sup>st</sup> Quarter	2 <sup>nd</sup> Quarter	Est. Total Error
<b>A. Fission and Activation Gases</b>				
1. Total Release	Ci	1.97E+00	2.43E+00	50%
2. Average Release Rate For Period	Ci/sec	2.53E-01	3.09E-01	
3. Percent of Technical Specification Limit (ODCM 3.11.2.2(a))	%	1.45E-03	2.13E-03	
<b>B. Iodines</b>				
1. Total Iodine-131	Ci	0.00E+00	3.38E-05	50%
2. Average Release Rate For Period	Ci/sec	0.00E+00	4.30E-06	
3. Percent of Technical Specification Limit <sup>2</sup> (ODCM 3.11.2.3(a))	%	0.00E+00	6.11E-03	
<b>C. Particulates</b>				
1. Particulates With Half-lives > 8 days	Ci	1.80E-06	8.71E-07	50%
2. Average Release Rate For Period	Ci/sec	2.32E-07	1.11E-07	
3. Percent of Technical Specification Limit <sup>2</sup> (ODCM 3.11.2.3(a))	%	7.11E-04	6.11E-03	
4. Gross Alpha	Ci	0.00E+00	0.00E+00	
<b>D. Tritium</b>				
1. Total Release	Ci	1.01E+01	4.22E+01	50%
2. Average Release Rate For Period	Ci/sec	1.30E+00	5.37E+00	
3. Percent of Technical Specification Limit <sup>2</sup> (ODCM 3.11.2.3(a))	%	7.11E-04	6.11E-03	

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

**2005 SGS AND HCGS RADIOACTIVE EFFLUENTS RELEASE REPORT**

**TABLE 1A-3  
HOPE CREEK GENERATING STATION  
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT  
JANUARY – JUNE 2005  
GASEOUS EFFLUENTS – SUMMATION OF ALL RELEASES**

		Units	1 <sup>st</sup> Quarter	2 <sup>nd</sup> Quarter	Est. Total Error
<b>A.</b>	<b>Fission and Activation Gases</b>				
1.	Total Release	Ci	1.79E-03	4.99E-01	50%
2.	Average Release Rate For Period	Ci/sec	2.31E-04	6.36E-02	
3.	Percent of Technical Specification Limit (ODCM 3.11.2.2(a))	%	7.57E-06	7.62E-04	
<b>B.</b>	<b>Iodines</b>				
1.	Total Iodine-131	Ci	4.83E-04	1.03E-03	50%
2.	Average Release Rate For Period	Ci/sec	6.21E-05	1.31E-04	
3.	Percent of Technical Specification Limit <sup>2</sup> (ODCM 3.11.2.3(a))	%	9.57E-02	2.00E-01	
<b>C.</b>	<b>Particulates</b>				
1.	Particulates With Half-lives > 8 days	Ci	4.59E-06	2.38E-05	50%
2.	Average Release Rate For Period	Ci/sec	5.90E-07	3.03E-06	
3.	Percent of Technical Specification Limit <sup>2</sup> (ODCM 3.11.2.3(a))	%	9.57E-02	2.00E-01	
4.	Gross Alpha	Ci	0.00E+00	0.00E+00	
<b>D.</b>	<b>Tritium</b>				
1.	Total Release	Ci	0.00E+00	0.00E+00	50%
2.	Average Release Rate For Period	Ci/sec	0.00E+00	0.00E+00	
3.	Percent of Technical Specification Limit <sup>2</sup> (ODCM 3.11.2.3(a))	%	0.00E+00	0.00E+00	

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



**2005 SGS AND HCGS RADIOACTIVE EFFLUENTS RELEASE REPORT**

**TABLE 1A-4  
SALEM GENERATING STATION - UNIT 1  
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT  
JULY - DECEMBER 2005  
GASEOUS EFFLUENTS - SUMMATION OF ALL RELEASES**

		Units	3 <sup>rd</sup> Quarter	4 <sup>th</sup> Quarter	Est. Total Error
<b>A.</b>	<b>Fission and Activation Gases</b>				
1.	Total Release	Ci	3.93E-02	2.18E-01	50%
2.	Average Release Rate For Period	Ci/sec	4.95E-03	2.74E-02	
3.	Percent of Technical Specification Limit (ODCM 3.11.2.2(a))	%	3.68E-04	5.58E-04	
<b>B.</b>	<b>Iodines</b>				
1.	Total Iodine-131	Ci	6.19E-07	1.54E-06	50%
2.	Average Release Rate For Period	Ci/sec	7.78E-08	1.94E-07	
3.	Percent of Technical Specification Limit <sup>2</sup> (ODCM 3.11.2.3(a))	%	3.17E-03	4.28E-03	
<b>C.</b>	<b>Particulates</b>				
1.	Particulates With Half-lives > 8 days	Ci	7.26E-06	2.90E-06	50%
2.	Average Release Rate For Period	Ci/sec	9.13E-07	3.65E-07	
3.	Percent of Technical Specification Limit <sup>2</sup> (ODCM 3.11.2.3(a))	%	3.17E-03	4.28E-03	
4.	Gross Alpha	Ci	0.00E+00	0.00E+00	
<b>D.</b>	<b>Tritium</b>				
1.	Total Release	Ci	4.44E+01	5.96E+01	50%
2.	Average Release Rate For Period	Ci/sec	5.59E+00	7.49E+00	
3.	Percent of Technical Specification Limit <sup>2</sup> (ODCM 3.11.2.3(a))	%	3.17E-03	4.28E-03	

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

**2005 SGS AND HCGS RADIOACTIVE EFFLUENTS RELEASE REPORT**

**TABLE 1A-5  
SALEM GENERATING STATION - UNIT 2  
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT  
JULY - DECEMBER 2005  
GASEOUS EFFLUENTS - SUMMATION OF ALL RELEASES**

		Units	3 <sup>rd</sup> Quarter	4 <sup>th</sup> Quarter	Est. Total Error
<b>A.</b>	<b>Fission and Activation Gases</b>				
1.	Total Release	Ci	1.63E-01	1.71E-01	50%
2.	Average Release Rate For Period	Ci/sec	2.05E-02	2.14E-02	
3.	Percent of Technical Specification Limit (ODCM 3.11.2.2(a))	%	3.00E-04	5.64E-04	
<b>B.</b>	<b>Iodines</b>				
1.	Total Iodine-131	Ci	0.00E+00	0.00E+00	50%
2.	Average Release Rate For Period	Ci/sec	0.00E+00	0.00E+00	
3.	Percent of Technical Specification Limit <sup>2</sup> (ODCM 3.11.2.3(a))	%	0.00E+00	0.00E+00	
<b>C.</b>	<b>Particulates</b>				
1.	Particulates With Half-lives > 8 days	Ci	1.06E-05	7.98E-07	50%
2.	Average Release Rate For Period	Ci/sec	1.33E-06	1.00E-07	
3.	Percent of Technical Specification Limit <sup>2</sup> (ODCM 3.11.2.3(a))	%	2.57E-03	2.02E-03	
4.	Gross Alpha	Ci	0.00E+00	0.00E+00	
<b>D.</b>	<b>Tritium</b>				
1.	Total Release	Ci	3.72E+01	2.92E+01	50%
2.	Average Release Rate For Period	Ci/sec	4.68E+00	3.67E+00	
3.	Percent of Technical Specification Limit <sup>2</sup> (ODCM 3.11.2.3(a))	%	2.57E-03	2.02E-03	

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

**2005 SGS AND HCGS RADIOACTIVE EFFLUENTS RELEASE REPORT**

**TABLE 1A-6  
HOPE CREEK GENERATING STATION  
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT  
JULY – DECEMBER 2005  
GASEOUS EFFLUENTS – SUMMATION OF ALL RELEASES**

		Units	3 <sup>rd</sup> Quarter	4 <sup>th</sup> Quarter	Est. Total Error
<b>A.</b>	<b>Fission and Activation Gases</b>				
1.	Total Release	Ci	5.26E-01	4.65E+00	50%
2.	Average Release Rate For Period	Ci/sec	6.62E-02	5.86E-01	
3.	Percent of Technical Specification Limit (ODCM 3.11.2.2(a))	%	1.36E-03	1.61E-02	
<b>B.</b>	<b>Iodines</b>				
1.	Total Iodine-131	Ci	1.37E-03	1.38E-03	50%
2.	Average Release Rate For Period	Ci/sec	1.73E-04	1.73E-04	
3.	Percent of Technical Specification Limit <sup>2</sup> (ODCM 3.11.2.3(a))	%	2.73E-01	2.79E-01	
<b>C.</b>	<b>Particulates</b>				
1.	Particulates With Half-lives > 8 days	Ci	8.11E-05	1.02E-05	50%
2.	Average Release Rate For Period	Ci/sec	1.02E-05	1.29E-06	
3.	Percent of Technical Specification Limit <sup>2</sup> (ODCM 3.11.2.3(a))	%	2.73E-01	2.79E-01	
4.	Gross Alpha	Ci	0.00E+00	0.00E+00	
<b>D.</b>	<b>Tritium</b>				
1.	Total Release	Ci	0.00E+00	1.01E+02	50%
2.	Average Release Rate For Period	Ci/sec	0.00E+00	1.28E+01	
3.	Percent of Technical Specification Limit <sup>2</sup> (ODCM 3.11.2.3(a))	%	0.00E+00	2.79E-01	

1. For batch releases, the estimated overall error is 10%.  
 2. Iodines, 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 2005**  
**GASEOUS EFFLUENTS – ELEVATED RELEASES**

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

2005 SGS AND HCGS RADIOACTIVE EFFLUENTS RELEASE REPORT

**TABLE 1C-1**  
**SALEM GENERATING STATION - UNIT 1**  
**EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT**  
**JANUARY - JUNE 2005**  
**GASEOUS EFFLUENTS - GROUND LEVEL RELEASES**

<u>Nuclides Released</u>	<u>Units</u>	<u>Continuous Mode</u>		<u>Batch Mode</u>	
		<u>1<sup>st</sup> Quarter</u>	<u>2<sup>nd</sup> Quarter</u>	<u>1<sup>st</sup> Quarter</u>	<u>2<sup>nd</sup> Quarter</u>
<b>1. Fission Gases</b>					
Xenon-135	Ci	0.00E+00	0.00E+00	3.46E-04	0.00E+00
Krypton-85	Ci	0.00E+00	0.00E+00	0.00E+00	6.15E-03
Argon-41	Ci	0.00E+00	0.00E+00	1.27E-02	2.39E-02
Xenon-133	Ci	0.00E+00	0.00E+00	2.27E-01	1.41E-01
<b>Totals</b>	<b>Ci</b>	<b>0.00E+00</b>	<b>0.00E+00</b>	<b>2.40E-01</b>	<b>1.71E-01</b>
<b>2. Iodine</b>					
Iodine-131	Ci	0.00E+00	3.72E-07	0.00E+00	0.00E+00
Iodine-133	Ci	0.00E+00	1.12E-05	0.00E+00	0.00E+00
<b>Totals</b>	<b>Ci</b>	<b>0.00E+00</b>	<b>1.16E-05</b>	<b>0.00E+00</b>	<b>0.00E+00</b>
<b>3. Particulates</b> (Half-life >8 days)					
Cobalt-60	Ci	1.03E-06	0.00E+00	0.00E+00	0.00E+00
Cesium-137	Ci	1.32E-06	1.30E-06	0.00E+00	0.00E+00
<b>Totals</b>	<b>Ci</b>	<b>2.35E-06</b>	<b>1.30E-06</b>	<b>0.00E+00</b>	<b>0.00E+00</b>
<b>4. Tritium</b>	<b>Ci</b>	<b>0.00E+00</b>	<b>1.00E+01</b>	<b>1.66E-01</b>	<b>9.90E-01</b>

**2005 SGS AND HCGS RADIOACTIVE EFFLUENTS RELEASE REPORT**

**TABLE 1C-2  
SALEM GENERATING STATION - UNIT 2  
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT  
JANUARY - JUNE 2005  
GASEOUS EFFLUENTS - GROUND LEVEL RELEASES**

<b>Nuclides Released</b>	<b>Units</b>	<b>Continuous Mode</b>		<b>Batch Mode</b>	
		<b>1<sup>st</sup> Quarter</b>	<b>2<sup>nd</sup> Quarter</b>	<b>1<sup>st</sup> Quarter</b>	<b>2<sup>nd</sup> Quarter</b>
<b>1. Fission Gases</b>					
Krypton-88	Ci	0.00E+00	0.00E+00	0.00E+00	1.14E-03
Krypton-85m	Ci	0.00E+00	0.00E+00	0.00E+00	2.93E-03
Xenon-133m	Ci	0.00E+00	0.00E+00	0.00E+00	2.74E-02
Argon-41	Ci	0.00E+00	0.00E+00	8.73E-11	3.39E-02
Xenon-135	Ci	0.00E+00	0.00E+00	1.07E-02	2.23E-01
Xenon-133	Ci	0.00E+00	0.00E+00	1.96E+00	2.14E+00
<b>Totals</b>	<b>Ci</b>	<b>0.00E+00</b>	<b>0.00E+00</b>	<b>1.97E+00</b>	<b>2.43E+00</b>
<b>2. Iodine</b>					
Iodine-133	Ci	0.00E+00	2.43E-05	0.00E+00	0.00E+00
Iodine-131	Ci	0.00E+00	3.38E-05	0.00E+00	0.00E+00
Iodine-132	Ci	0.00E+00	4.15E-05	0.00E+00	0.00E+00
<b>Totals</b>	<b>Ci</b>	<b>0.00E+00</b>	<b>9.97E-05</b>	<b>0.00E+00</b>	<b>0.00E+00</b>
<b>3. Particulates (Half-life &gt;8 days)</b>					
Cesium-137	Ci	1.80E-06	0.00E+00	0.00E+00	0.00E+00
Cobalt-58	Ci	0.00E+00	8.71E-07	0.00E+00	0.00E+00
<b>Totals</b>	<b>Ci</b>	<b>1.80E-06</b>	<b>8.71E-07</b>	<b>0.00E+00</b>	<b>0.00E+00</b>
<b>4. Tritium</b>	<b>Ci</b>	<b>1.00E+01</b>	<b>4.21E+01</b>	<b>1.07E-01</b>	<b>1.40E-01</b>

2005 SGS AND HCGS RADIOACTIVE EFFLUENTS RELEASE REPORT

**TABLE 1C-3**  
**HOPE CREEK GENERATING STATION**  
**EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT**  
**JANUARY – JUNE 2005**  
**GASEOUS EFFLUENTS – GROUND LEVEL RELEASES**

<u>Nuclides Released</u>	<u>Units</u>	<u>Continuous Mode</u>		<u>Batch Mode</u>	
		<u>1<sup>st</sup> Quarter</u>	<u>2<sup>nd</sup> Quarter</u>	<u>1<sup>st</sup> Quarter</u>	<u>2<sup>nd</sup> Quarter</u>
<b>1. Fission Gases</b>					
Argon-41	Ci	0.00E+00	0.00E+00	4.02E-04	0.00E+00
Xenon-133	Ci	0.00E+00	2.44E-01	5.26E-04	9.58E-03
Xenon-133m	Ci	0.00E+00	0.00E+00	0.00E+00	2.93E-04
Xenon-135	Ci	0.00E+00	2.44E-01	8.65E-04	8.68E-04
Xenon-135m	Ci	0.00E+00	0.00E+00	0.00E+00	4.33E-04
<b>Totals</b>	<b>Ci</b>	<b>0.00E+00</b>	<b>4.89E-01</b>	<b>1.79E-03</b>	<b>1.12E-02</b>
<b>2. Iodine</b>					
Iodine-131	Ci	4.83E-04	1.03E-03	0.00E+00	0.00E+00
Iodine-133	Ci	2.61E-02	5.26E-02	0.00E+00	0.00E+00
<b>Totals</b>	<b>Ci</b>	<b>2.66E-02</b>	<b>5.36E-02</b>	<b>0.00E+00</b>	<b>0.00E+00</b>
<b>3. Particulates</b> (Half-life >8 days)					
Manganese-54	Ci	0.00E+00	2.38E-05	0.00E+00	0.00E+00
Cobalt-60	Ci	4.59E-06	0.00E+00	0.00E+00	0.00E+00
<b>Totals</b>	<b>Ci</b>	<b>4.59E-06</b>	<b>2.38E-05</b>	<b>0.00E+00</b>	<b>0.00E+00</b>
<b>4. Tritium</b>	<b>Ci</b>	<b>0.00E+00</b>	<b>0.00E+00</b>	<b>0.00E+00</b>	<b>0.00E+00</b>

**2005 SGS AND HCGS RADIOACTIVE EFFLUENTS RELEASE REPORT**

**TABLE 1C-4  
SALEM GENERATING STATION - UNIT 1  
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT  
JULY - DECEMBER 2005  
GASEOUS EFFLUENTS - GROUND LEVEL RELEASES**

<b>Nuclides Released</b>	<b>Units</b>	<b>Continuous Mode</b>		<b>Batch Mode</b>	
		<b>3<sup>rd</sup> Quarter</b>	<b>4<sup>th</sup> Quarter</b>	<b>3<sup>rd</sup> Quarter</b>	<b>4<sup>th</sup> Quarter</b>
<b>1. Fission Gases</b>					
Krypton-85m	Ci	0.00E+00	0.00E+00	0.00E+00	2.34E-04
Xenon-133m	Ci	0.00E+00	0.00E+00	0.00E+00	3.06E-03
Xenon-135	Ci	0.00E+00	0.00E+00	0.00E+00	1.43E-02
Argon-41	Ci	0.00E+00	0.00E+00	2.79E-02	3.36E-02
Xenon-133	Ci	0.00E+00	0.00E+00	1.14E-02	1.67E-01
<b>Totals</b>	<b>Ci</b>	<b>0.00E+00</b>	<b>0.00E+00</b>	<b>3.93E-02</b>	<b>2.18E-01</b>
<b>2. Iodine</b>					
Iodine-131	Ci	6.19E-07	1.54E-06	0.00E+00	0.00E+00
Iodine-133	Ci	4.45E-05	2.57E-05	0.00E+00	0.00E+00
Iodine-132	Ci	0.00E+00	0.00E+00	0.00E+00	1.97E-05
<b>Totals</b>	<b>Ci</b>	<b>4.51E-05</b>	<b>2.73E-05</b>	<b>0.00E+00</b>	<b>1.97E-05</b>
<b>3. Particulates (Half-life &gt;8 days)</b>					
Niobium-95	Ci	1.44E-06	0.00E+00	0.00E+00	0.00E+00
Cobalt-58	Ci	5.82E-06	2.25E-06	0.00E+00	6.45E-07
<b>Totals</b>	<b>Ci</b>	<b>7.26E-06</b>	<b>2.25E-06</b>	<b>0.00E+00</b>	<b>6.45E-07</b>
<b>4. Tritium</b>	<b>Ci</b>	<b>4.37E+01</b>	<b>5.89E+01</b>	<b>6.89E-01</b>	<b>6.64E-01</b>



**2005 SGS AND HCGS RADIOACTIVE EFFLUENTS RELEASE REPORT**

**TABLE 1C-5  
SALEM GENERATING STATION - UNIT 2  
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT  
JULY - DECEMBER 2005  
GASEOUS EFFLUENTS - GROUND LEVEL RELEASES**

<u>Nuclides Released</u>	<u>Units</u>	<u>Continuous Mode</u>		<u>Batch Mode</u>	
		<u>3<sup>rd</sup> Quarter</u>	<u>4<sup>th</sup> Quarter</u>	<u>3<sup>rd</sup> Quarter</u>	<u>4<sup>th</sup> Quarter</u>
<b>1. Fission Gases</b>					
Xenon-135	Ci	0.00E+00	0.00E+00	0.00E+00	2.41E-03
Argon-41	Ci	0.00E+00	0.00E+00	1.76E-02	3.81E-02
Xenon-133	Ci	0.00E+00	0.00E+00	1.45E-01	1.30E-01
<b>Totals</b>	<b>Ci</b>	<b>0.00E+00</b>	<b>0.00E+00</b>	<b>1.63E-01</b>	<b>1.71E-01</b>
<b>2. Iodine</b>					
<b>Totals</b>	<b>Ci</b>	<b>0.00E+00</b>	<b>0.00E+00</b>	<b>0.00E+00</b>	<b>0.00E+00</b>
<b>3. Particulates (Half-life &gt;8 days)</b>					
Cobalt-58	Ci	1.06E-05	7.98E-07	0.00E+00	0.00E+00
<b>Totals</b>	<b>Ci</b>	<b>1.06E-05</b>	<b>7.98E-07</b>	<b>0.00E+00</b>	<b>0.00E+00</b>
<b>4. Tritium</b>	<b>Ci</b>	<b>3.69E+01</b>	<b>2.89E+01</b>	<b>2.64E-01</b>	<b>2.46E-01</b>

**2005 SGS AND HCGS RADIOACTIVE EFFLUENTS RELEASE REPORT**

**TABLE 1C-6  
HOPE CREEK GENERATING STATION  
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT  
JULY – DECEMBER 2005  
GASEOUS EFFLUENTS – GROUND LEVEL RELEASES**

<b>Nuclides Released</b>	<b>Units</b>	<b>Continuous Mode</b>		<b>Batch Mode</b>	
		<b>3<sup>rd</sup> Quarter</b>	<b>4<sup>th</sup> Quarter</b>	<b>3<sup>rd</sup> Quarter</b>	<b>4<sup>th</sup> Quarter</b>
<b>1. Fission Gases</b>					
Xenon-133	Ci	0.00E+00	1.66E-05	4.07E-03	0.00E+00
Xenon-135m	Ci	0.00E+00	2.06E+00	0.00E+00	0.00E+00
Xenon-135	Ci	5.22E-01	2.59E+00	2.93E-04	0.00E+00
<b>Totals</b>	<b>Ci</b>	<b>5.22E-01</b>	<b>4.65E+00</b>	<b>4.37E-03</b>	<b>0.00E+00</b>
<b>2. Iodine</b>					
Iodine-131	Ci	1.37E-03	1.38E-03	0.00E+00	0.00E+00
Iodine-132	Ci	0.00E+00	8.05E-03	0.00E+00	0.00E+00
Iodine-133	Ci	7.45E-02	7.20E-02	0.00E+00	0.00E+00
<b>Totals</b>	<b>Ci</b>	<b>7.59E-02</b>	<b>8.14E-02</b>	<b>0.00E+00</b>	<b>0.00E+00</b>
<b>3. Particulates (Half-life &gt;8 days)</b>					
Cobalt-60	Ci	7.24E-05	1.76E-06	0.00E+00	0.00E+00
Barium-140	Ci	8.63E-06	8.45E-06	0.00E+00	0.00E+00
<b>Totals</b>	<b>Ci</b>	<b>8.10E-05</b>	<b>1.02E-05</b>	<b>0.00E+00</b>	<b>0.00E+00</b>
<b>4. Tritium</b>	<b>Ci</b>	<b>0.00E+00</b>	<b>1.01E+02</b>	<b>0.00E+00</b>	<b>0.00E+00</b>

**2005 SGS AND HCGS RADIOACTIVE EFFLUENTS RELEASE REPORT**

**TABLE 2A-1  
SALEM GENERATING STATION - UNIT 1  
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT  
JANUARY - JUNE 2005  
LIQUID EFFLUENTS - SUMMATION OF ALL RELEASES**

	Units	1 <sup>st</sup> Quarter	2 <sup>nd</sup> Quarter	Est. Total Error
<b>A. Fission and Activation Products</b>				
1. Total Release	Ci	1.11E-03	3.04E-03	25%
2. Average Diluted Concentration	Ci/ml	2.55E-12	6.84E-12	
3. Percent of Technical Specification Limit (ODCM 3.11.1.2(a))	%	9.94E-05	7.66E-04	
<b>B. Tritium</b>				
1. Total Release	Ci	8.18E+01	1.85E+02	25%
2. Average Diluted Concentration	Ci/ml	1.88E-07	4.18E-07	
3. Percent of Technical Specification Limit (ODCM 3.11.1.1)	%	6.26E-03	1.39E-02	
<b>C. Dissolved and Entrained Noble Gases</b>				
1. Total Release	Ci	6.51E-04	2.37E-03	25%
2. Average Diluted Concentration	Ci/ml	1.49E-12	5.33E-12	
3. Percent of Technical Specification Limit (ODCM 3.11.1.1)	%	7.47E-07	2.67E-06	
<b>D. Gross Alpha Total Release</b>	Ci	0.00E+00	0.00E+00	25%
<b>E. Volume of Waste Release (Prior to Dilution)</b>	Liters	5.32E+07	5.42E+07	25%
<b>F. Volume of Dilution Water Used During Entire Period</b>	Liters	4.36E+11	4.44E+11	25%

**2005 SGS AND HCGS RADIOACTIVE EFFLUENTS RELEASE REPORT**

**TABLE 2A-2  
SALEM GENERATING STATION - UNIT 2  
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT  
JANUARY - JUNE 2005  
LIQUID EFFLUENTS - SUMMATION OF ALL RELEASES**

		Units	1 <sup>st</sup> Quarter	2 <sup>nd</sup> Quarter	Est. Total Error
<b>A.</b>	<b>Fission and Activation Products</b>				
1.	Total Release	Ci	1.90E-04	6.30E-04	25%
2.	Average Diluted Concentration	Ci/ml	4.42E-13	2.09E-12	
3.	Percent of Technical Specification Limit (ODCM 3.11.1.2(a))	%	8.47E-05	7.15E-04	
<b>B.</b>	<b>Tritium</b>				
1.	Total Release	Ci	5.26E+01	8.14E+01	25%
2.	Average Diluted Concentration	Ci/ml	1.23E-07	2.71E-07	
3.	Percent of Technical Specification Limit (ODCM 3.11.1.1)	%	4.08E-03	9.02E-03	
<b>C.</b>	<b>Dissolved and Entrained Noble Gases</b>				
1.	Total Release	Ci	2.86E-04	3.54E-03	25%
2.	Average Diluted Concentration	Ci/ml	6.67E-13	1.18E-11	
3.	Percent of Technical Specification Limit (ODCM 3.11.1.1)	%	3.33E-07	5.88E-06	
<b>D.</b>	<b>Gross Alpha Total Release</b>	Ci	0.00E+00	0.00E+00	25%
<b>E.</b>	<b>Volume of Waste Release (Prior to Dilution)</b>	Liters	4.95E+07	3.58E+07	25%
<b>F.</b>	<b>Volume of Dilution Water Used During Entire Period</b>	Liters	4.29E+11	3.01E+11	25%

2005 SGS AND HCGS RADIOACTIVE EFFLUENTS RELEASE REPORT

**TABLE 2A-3**  
**HOPE CREEK GENERATING STATION**  
**EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT**  
**JANUARY – JUNE 2005**  
**LIQUID EFFLUENTS – SUMMATION OF ALL RELEASES**

	Units	1 <sup>st</sup> Quarter	2 <sup>nd</sup> Quarter	Est. Total Error
<b>A. Fission and Activation Products</b>				
1. Total Release	Ci	8.53E-04	4.25E-04	25%
2. Average Diluted Concentration	Ci/ml	5.70E-11	2.77E-11	
3. Percent of Technical Specification Limit (ODCM 3.11.1.2(a))	%	4.85E-05	7.75E-06	
<b>B. Tritium</b>				
1. Total Release	Ci	5.01E+00	3.57E+00	25%
2. Average Diluted Concentration	Ci/ml	3.35E-07	2.33E-07	
3. Percent of Technical Specification Limit (ODCM 3.11.1.1)	%	1.12E-02	7.76E-03	
<b>C. Dissolved and Entrained Noble Gases</b>				
1. Total Release	Ci	5.22E-04	2.52E-04	25%
2. Average Diluted Concentration	Ci/ml	3.49E-11	1.64E-11	
3. Percent of Technical Specification Limit (ODCM 3.11.1.1)	%	1.74E-05	8.22E-06	
<b>D. Gross Alpha Total Release</b>	Ci	0.00E+00	0.00E+00	25%
<b>E. Volume of Waste Release (Prior to Dilution)</b>	Liters	5.18E+07	5.16E+07	25%
<b>F. Volume of Dilution Water Used During Entire Period</b>	Liters	1.50E+10	1.53E+10	25%

**2005 SGS AND HCGS RADIOACTIVE EFFLUENTS RELEASE REPORT**

**TABLE 2A-4  
SALEM GENERATING STATION - UNIT 1  
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT  
JULY - DECEMBER 2005  
LIQUID EFFLUENTS - SUMMATION OF ALL RELEASES**

	Units	3 <sup>rd</sup> Quarter	4 <sup>th</sup> Quarter	Est. Total Error
<b>A. Fission and Activation Products</b>				
1. Total Release	Ci	1.22E-03	6.48E-03	25%
2. Average Diluted Concentration	Ci/ml	2.61E-12	1.96E-11	
3. Percent of Technical Specification Limit (ODCM 3.11.1.2(a))	%	1.74E-04	2.55E+00	
<b>B. Tritium</b>				
1. Total Release	Ci	6.49E+01	4.78E+00	25%
2. Average Diluted Concentration	Ci/ml	1.39E-07	1.45E-08	
3. Percent of Technical Specification Limit (ODCM 3.11.1.1)	%	4.62E-03	4.83E-04	
<b>C. Dissolved and Entrained Noble Gases</b>				
1. Total Release	Ci	4.99E-05	7.32E-05	25%
2. Average Diluted Concentration	Ci/ml	1.07E-13	2.22E-13	
3. Percent of Technical Specification Limit (ODCM 3.11.1.1)	%	5.33E-08	1.11E-07	
<b>D. Gross Alpha Total Release</b>	Ci	0.00E+00	0.00E+00	25%
<b>E. Volume of Waste Release (Prior to Dilution)</b>	Liters	5.41E+07	6.21E+07	25%
<b>F. Volume of Dilution Water Used During Entire Period</b>	Liters	4.68E+11	3.30E+11	25%

**2005 SGS AND HCGS RADIOACTIVE EFFLUENTS RELEASE REPORT**

**TABLE 2A-5  
SALEM GENERATING STATION - UNIT 2  
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT  
JULY - DECEMBER 2005  
LIQUID EFFLUENTS - SUMMATION OF ALL RELEASES**

	Units	3 <sup>rd</sup> Quarter	4 <sup>th</sup> Quarter	Est. Total Error
<b>A. Fission and Activation Products</b>				
1. Total Release	Ci	2.71E-04	1.42E-03	25%
2. Average Diluted Concentration	Ci/ml	5.89E-13	3.18E-12	
3. Percent of Technical Specification Limit (ODCM 3.11.1.2(a))	%	1.61E-04	1.31E-04	
<b>B. Tritium</b>				
1. Total Release	Ci	6.43E+01	1.23E+00	25%
2. Average Diluted Concentration	Ci/ml	1.40E-07	2.76E-09	
3. Percent of Technical Specification Limit (ODCM 3.11.1.1)	%	4.66E-03	9.20E-05	
<b>C. Dissolved and Entrained Noble Gases</b>				
1. Total Release	Ci	1.64E-05	5.09E-05	25%
2. Average Diluted Concentration	Ci/ml	3.57E-14	1.14E-13	
3. Percent of Technical Specification Limit (ODCM 3.11.1.1)	%	1.78E-08	5.70E-08	
<b>D. Gross Alpha Total Release</b>	Ci	0.00E+00	0.00E+00	25%
<b>E. Volume of Waste Release (Prior to Dilution)</b>	Liters	5.06E+07	5.06E+07	25%
<b>F. Volume of Dilution Water Used During Entire Period</b>	Liters	4.60E+11	4.46E+11	25%

**2005 SGS AND HCGS RADIOACTIVE EFFLUENTS RELEASE REPORT**

**TABLE 2A-6  
HOPE CREEK GENERATING STATION  
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT  
JULY – DECEMBER 2005  
LIQUID EFFLUENTS – SUMMATION OF ALL RELEASES**

	Units	3 <sup>rd</sup> Quarter	4 <sup>th</sup> Quarter	Est. Total Error
<b>A. Fission and Activation Products</b>				
1. Total Release	Ci	2.98E-02	6.87E-06	25%
2. Average Diluted Concentration	Ci/ml	1.46E-09	4.47E-13	
3. Percent of Technical Specification Limit (ODCM 3.11.1.2(a))	%	2.72E-03	9.09E-05	
<b>B. Tritium</b>				
1. Total Release	Ci	3.43E+00	7.57E-01	25%
2. Average Diluted Concentration	Ci/ml	1.68E-07	4.93E-08	
3. Percent of Technical Specification Limit (ODCM 3.11.1.1)	%	5.60E-03	1.64E-03	
<b>C. Dissolved and Entrained Noble Gases</b>				
1. Total Release	Ci	5.91E-04	2.24E-05	25%
2. Average Diluted Concentration	Ci/ml	2.89E-11	1.46E-12	
3. Percent of Technical Specification Limit (ODCM 3.11.1.1)	%	1.45E-05	7.29E-07	
<b>D. Gross Alpha Total Release</b>	Ci	0.00E+00	0.00E+00	25%
<b>E. Volume of Waste Release (Prior to Dilution)</b>	Liters	5.30E+07	5.02E+07	25%
<b>F. Volume of Dilution Water Used During Entire Period</b>	Liters	2.04E+10	1.54E+10	25%



**2005 SGS AND HCGS RADIOACTIVE EFFLUENTS RELEASE REPORT**

**TABLE 2B-1  
SALEM GENERATING STATION - UNIT 1  
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT  
JANUARY - JUNE 2005  
LIQUID EFFLUENTS**

<u>Nuclides Released</u>	<u>Units</u>	<u>Continuous Mode</u>		<u>Batch Mode</u>	
		<u>1<sup>st</sup> Quarter</u>	<u>2<sup>nd</sup> Quarter</u>	<u>1<sup>st</sup> Quarter</u>	<u>2<sup>nd</sup> Quarter</u>
<b>1. Fission and Activation Products</b>					
Silver-110m	Ci	0.00E+00	0.00E+00	2.92E-05	0.00E+00
Cobalt-57	Ci	0.00E+00	0.00E+00	0.00E+00	5.34E-06
Cobalt-58	Ci	0.00E+00	0.00E+00	5.25E-05	9.49E-04
Cobalt-60	Ci	0.00E+00	0.00E+00	6.90E-04	1.20E-03
Cesium-134	Ci	0.00E+00	0.00E+00	2.12E-05	8.35E-05
Cesium-137	Ci	0.00E+00	0.00E+00	2.74E-04	5.29E-04
Manganese-54	Ci	0.00E+00	0.00E+00	1.46E-05	1.78E-05
Niobium-95	Ci	0.00E+00	0.00E+00	0.00E+00	7.90E-05
Niobium-97	Ci	0.00E+00	0.00E+00	8.61E-06	0.00E+00
Ruthinium-105	Ci	0.00E+00	0.00E+00	0.00E+00	3.17E-05
Antimony-125	Ci	0.00E+00	0.00E+00	2.13E-05	6.57E-05
Antimony-126	Ci	0.00E+00	0.00E+00	0.00E+00	7.83E-06
Tin-117m	Ci	0.00E+00	0.00E+00	0.00E+00	4.88E-05
Tellurium-132	Ci	0.00E+00	0.00E+00	0.00E+00	5.67E-06
Zinc-95	Ci	0.00E+00	0.00E+00	0.00E+00	1.90E-05
<b>Totals</b>	<b>Ci</b>	<b>0.00E+00</b>	<b>0.00E+00</b>	<b>1.11E-03</b>	<b>3.04E-03</b>
<b>2. Tritium</b>	<b>Ci</b>	<b>4.07E-01</b>	<b>4.63E-01</b>	<b>8.14E+01</b>	<b>1.85E+02</b>
<b>3. Dissolved and Entrained Noble Gases</b>					
Xenon-133	Ci	0.00E+00	0.00E+00	6.51E-04	2.37E-03
<b>Totals</b>	<b>Ci</b>	<b>0.00E+00</b>	<b>0.00E+00</b>	<b>6.51E-04</b>	<b>2.37E-03</b>

2005 SGS AND HCGS RADIOACTIVE EFFLUENTS RELEASE REPORT

**TABLE 2B-2**  
**SALEM GENERATING STATION - UNIT 2**  
**EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT**  
**JANUARY - JUNE 2005**  
**LIQUID EFFLUENTS**

<u>Nuclides Released</u>	<u>Units</u>	<u>Continuous Mode</u>		<u>Batch Mode</u>	
		<u>1<sup>st</sup> Quarter</u>	<u>2<sup>nd</sup> Quarter</u>	<u>1<sup>st</sup> Quarter</u>	<u>2<sup>nd</sup> Quarter</u>
<b>1. Fission and Activation Products</b>					
Silver 110m	Ci	0.00E+00	0.00E+00	1.54E-05	0.00E+00
Cobalt-58	Ci	0.00E+00	0.00E+00	4.51E-05	4.08E-04
Cobalt-60	Ci	0.00E+00	0.00E+00	1.13E-04	1.43E-04
Cesium-137	Ci	0.00E+00	0.00E+00	0.00E+00	7.13E-05
Niobium-97	Ci	0.00E+00	0.00E+00	1.58E-05	0.00E+00
Tin-117m	Ci	0.00E+00	0.00E+00	0.00E+00	7.55E-06
<b>Totals</b>	<b>Ci</b>	<b>0.00E+00</b>	<b>0.00E+00</b>	<b>1.90E-04</b>	<b>6.30E-04</b>
<b>2. Tritium</b>	<b>Ci</b>	<b>8.68E-02</b>	<b>1.97E-01</b>	<b>5.25E+01</b>	<b>8.12E+01</b>
<b>3. Dissolved and Entrained Noble Gases</b>					
Xenon-133	Ci	0.00E+00	0.00E+00	2.86E-04	3.37E-03
Xenon-135	Ci	0.00E+00	0.00E+00	0.00E+00	1.70E-04
<b>Totals</b>	<b>Ci</b>	<b>0.00E+00</b>	<b>0.00E+00</b>	<b>2.86E-04</b>	<b>3.54E-03</b>

2005 SGS AND HCGS RADIOACTIVE EFFLUENTS RELEASE REPORT

**TABLE 2B-3**  
**HOPE CREEK GENERATING STATION**  
**EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT**  
**JANUARY – JUNE 2005**  
**LIQUID EFFLUENTS**

<u>Nuclides Released</u>	<u>Units</u>	<u>Continuous Mode</u>		<u>Batch Mode</u>	
		<u>1<sup>st</sup> Quarter</u>	<u>2<sup>nd</sup> Quarter</u>	<u>1<sup>st</sup> Quarter</u>	<u>2<sup>nd</sup> Quarter</u>
<b>1. Fission and Activation Products</b>					
Cobalt-58	Ci	0.00E+00	0.00E+00	1.00E-04	3.13E-05
Cobalt-60	Ci	0.00E+00	0.00E+00	5.03E-04	6.39E-05
Chromium-51	Ci	0.00E+00	0.00E+00	0.00E+00	8.94E-05
Cesium-137	Ci	0.00E+00	0.00E+00	8.73E-08	0.00E+00
Iodine-131	Ci	0.00E+00	0.00E+00	0.00E+00	1.02E-06
Manganese-54	Ci	0.00E+00	0.00E+00	2.50E-04	1.07E-04
Strontium-89	Ci	0.00E+00	0.00E+00	0.00E+00	1.32E-04
<b>Totals</b>	<b>Ci</b>	<b>0.00E+00</b>	<b>0.00E+00</b>	<b>8.53E-04</b>	<b>4.25E-04</b>
<b>2. Tritium</b>	<b>Ci</b>	<b>3.40E-02</b>	<b>0.00E+00</b>	<b>4.98E+00</b>	<b>3.57E+00</b>
<b>3. Dissolved and Entrained Noble Gases</b>					
Xenon-133	Ci	0.00E+00	0.00E+00	3.09E-04	2.10E-04
Xenon-135	Ci	0.00E+00	0.00E+00	2.13E-04	4.14E-05
<b>Totals</b>	<b>Ci</b>	<b>0.00E+00</b>	<b>0.00E+00</b>	<b>5.22E-04</b>	<b>2.51E-04</b>

2005 SGS AND HCGS RADIOACTIVE EFFLUENTS RELEASE REPORT

**TABLE 2B-4**  
**SALEM GENERATING STATION - UNIT 1**  
**EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT**  
**JULY - DECEMBER 2005**  
**LIQUID EFFLUENTS**

<u>Nuclides Released</u>	<u>Units</u>	<u>Continuous Mode</u>		<u>Batch Mode</u>	
		<u>3<sup>rd</sup> Quarter</u>	<u>4<sup>th</sup> Quarter</u>	<u>3<sup>rd</sup> Quarter</u>	<u>4<sup>th</sup> Quarter</u>
<b>1. Fission and Activation Products</b>					
Cobalt-58	Ci	0.00E+00	0.00E+00	3.03E-04	3.55E-03
Cobalt-60	Ci	0.00E+00	0.00E+00	5.56E-04	1.62E-03
Cesium-134	Ci	0.00E+00	0.00E+00	3.75E-05	1.16E-04
Cesium-137	Ci	0.00E+00	0.00E+00	2.43E-04	8.77E-04
Niobium-97	Ci	0.00E+00	0.00E+00	8.25E-06	0.00E+00
Antimony-125	Ci	0.00E+00	0.00E+00	7.68E-05	3.12E-04
<b>Totals</b>	<b>Ci</b>	<b>0.00E+00</b>	<b>0.00E+00</b>	<b>1.22E-03</b>	<b>6.48E-03</b>
<b>2. Tritium</b>	<b>Ci</b>	<b>3.94E-01</b>	<b>6.52E-01</b>	<b>6.45E+01</b>	<b>4.13E+00</b>
<b>3. Dissolved and Entrained Noble Gases</b>					
Xenon-133	Ci	0.00E+00	0.00E+00	4.99E-05	6.32E-05
Xenon-135	Ci	0.00E+00	0.00E+00	0.00E+00	9.94E-06
<b>Totals</b>	<b>Ci</b>	<b>0.00E+00</b>	<b>0.00E+00</b>	<b>4.99E-05</b>	<b>7.32E-05</b>

2005 SGS AND HCGS RADIOACTIVE EFFLUENTS RELEASE REPORT

**TABLE 2B-5**  
**SALEM GENERATING STATION - UNIT 2**  
**EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT**  
**JULY - DECEMBER 2005**  
**LIQUID EFFLUENTS**

<u>Nuclides Released</u>	<u>Units</u>	<u>Continuous Mode</u>		<u>Batch Mode</u>	
		<u>3<sup>rd</sup> Quarter</u>	<u>4<sup>th</sup> Quarter</u>	<u>3<sup>rd</sup> Quarter</u>	<u>4<sup>th</sup> Quarter</u>
<b>1. Fission and Activation Products</b>					
Cobalt-58	Ci	0.00E+00	0.00E+00	7.82E-05	1.02E-03
Cobalt-60	Ci	0.00E+00	0.00E+00	8.60E-05	1.66E-04
Cesium-134	Ci	0.00E+00	0.00E+00	1.83E-05	2.76E-06
Cesium-137	Ci	0.00E+00	0.00E+00	8.83E-05	1.83E-05
Antimony-125	Ci	0.00E+00	0.00E+00	0.00E+00	2.09E-04
Tin-117m	Ci	0.00E+00	0.00E+00	0.00E+00	5.84E-06
<b>Totals</b>	<b>Ci</b>	<b>0.00E+00</b>	<b>0.00E+00</b>	<b>2.71E-04</b>	<b>1.42E-03</b>
<b>2. Tritium</b>	<b>Ci</b>	<b>7.92E-01</b>	<b>1.23E+00</b>	<b>6.35E+01</b>	<b>0.00E+00</b>
<b>3. Dissolved and Entrained Noble Gases</b>					
Xenon-133	Ci	0.00E+00	0.00E+00	1.64E-05	3.85E-05
Xenon-135	Ci	0.00E+00	0.00E+00	0.00E+00	1.24E-05
<b>Totals</b>	<b>Ci</b>	<b>0.00E+00</b>	<b>0.00E+00</b>	<b>1.64E-05</b>	<b>5.09E-05</b>

2005 SGS AND HCGS RADIOACTIVE EFFLUENTS RELEASE REPORT

**TABLE 2B-6**  
**HOPE CREEK GENERATING STATION**  
**EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT**  
**JULY – DECEMBER 2005**  
**LIQUID EFFLUENTS**

<b>Nuclides Released</b>	<b>Units</b>	<b>Continuous Mode</b>		<b>Batch Mode</b>	
		<b>3<sup>rd</sup> Quarter</b>	<b>4<sup>th</sup> Quarter</b>	<b>3<sup>rd</sup> Quarter</b>	<b>4<sup>th</sup> Quarter</b>
<b>1. Fission and Activation Products</b>					
Cobalt-58	Ci	0.00E+00	0.00E+00	4.45E-06	1.15E-07
Cobalt-60	Ci	0.00E+00	0.00E+00	1.92E-05	4.74E-06
Cesium-137	Ci	0.00E+00	0.00E+00	1.43E-07	2.55E-07
Iron-55	Ci	0.00E+00	0.00E+00	2.79E-02	0.00E+00
Iodine-131	Ci	0.00E+00	0.00E+00	3.80E-05	0.00E+00
Iodine-132	Ci	0.00E+00	0.00E+00	1.78E-05	0.00E+00
Iodine-133	Ci	0.00E+00	0.00E+00	1.20E-04	0.00E+00
Iodine-134	Ci	0.00E+00	0.00E+00	9.15E-06	0.00E+00
Iodine-135	Ci	0.00E+00	0.00E+00	7.93E-05	0.00E+00
Manganese-54	Ci	0.00E+00	0.00E+00	2.05E-05	1.49E-06
Sodium-24	Ci	0.00E+00	0.00E+00	6.83E-07	0.00E+00
Strontium-89	Ci	0.00E+00	0.00E+00	1.57E-03	0.00E+00
Yttrium-91m	Ci	0.00E+00	0.00E+00	1.27E-06	0.00E+00
Zinc-65	Ci	0.00E+00	0.00E+00	0.00E+00	2.67E-07
<b>Totals</b>	<b>Ci</b>	<b>0.00E+00</b>	<b>0.00E+00</b>	<b>2.98E-02</b>	<b>6.87E-06</b>
<b>2. Tritium</b>	<b>Ci</b>	<b>1.29E-01</b>	<b>6.53E-01</b>	<b>3.30E+00</b>	<b>1.04E-01</b>
<b>3. Dissolved and Entrained Noble Gases</b>					
Xenon-133	Ci	0.00E+00	0.00E+00	1.49E-04	5.75E-06
Xenon-135	Ci	0.00E+00	0.00E+00	4.19E-04	1.66E-05
Xenon-135m	Ci	0.00E+00	0.00E+00	2.33E-05	0.00E+00
<b>Totals</b>	<b>Ci</b>	<b>0.00E+00</b>	<b>0.00E+00</b>	<b>5.91 E-04</b>	<b>2.24E-05</b>

**2005 SGS AND HCGS RADIOACTIVE EFFLUENTS RELEASE REPORT**

**TABLE 3A-1  
SALEM GENERATING STATION – UNITS 1 AND 2  
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT  
JANUARY – JUNE 2005  
SOLID WASTE AND IRRADIATED FUEL SHIPMENTS  
SOLID RADWASTE SHIPPED OFFSITE FOR BURIAL OR DISPOSAL  
(Not Irradiated Fuel)**

<b>SGS</b>		<b>Units<sup>1</sup></b>	<b>6-Month Period</b>	<b>Est. Total Error</b>
<b>1 A. Type of Waste (Class A)</b>				
a.	Resins, Filters, Sludges, Evaporator Bottoms	m <sup>3</sup> Ci	0.00E+00 0.00E+00	25%
b.	Dry Compressible Waste, Contaminated Equipment	m <sup>3</sup> Ci	3.26E+02 1.13E+00	25%
c.	Irradiated Components, Control Rods	m <sup>3</sup> Ci	0.00E+00 0.00E+00	25%
d.	Others – Unit 2 Reactor Head Equipment	m <sup>3</sup> Ci	2.50E+02 1.91E-02	25%

1 Volumes are measured, activities are estimated

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

<b>Nuclides</b>	<b>DAW</b>		<b>U2 Rx Head Equip</b>	
	<b>%</b>	<b>Ci</b>	<b>%</b>	<b>Ci</b>
Tritium	3.49	3.96E-02	8.94	1.71E-03
Manganese-54	1.18	1.34E-02	0.00	0.00E+00
Iron-55	35.68	4.05E-01	6.00	1.15E-03
Cobalt-58	27.10	3.07E-01	0.00	0.00E+00
Cobalt-60	4.45	5.04E-02	11.37	2.18E-03
Nickel-63	12.95	1.47E-01	49.78	9.55E-03
Niobium-95	1.18	1.33E-02	0.00	0.00E+00
Cesium-134	5.22	5.92E-02	0.00	0.00E+00
Cesium-137	8.25	9.35E-02	21.13	4.05E-03
Cerium-144	0.00	0.00E+00	2.20	4.22E-04

2005 SGS AND HCGS RADIOACTIVE EFFLUENTS RELEASE REPORT

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TABLE 3A-1 (Continued)  
SALEM GENERATING STATION – UNITS 1 AND 2  
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT  
JANUARY – JUNE 2005  
SOLID WASTE AND IRRADIATED FUEL SHIPMENTS  
SOLID RADWASTE SHIPPED OFFSITE FOR BURIAL OR DISPOSAL

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>
10	Truck	Memphis, TN	Metal



2005 SGS AND HCGS RADIOACTIVE EFFLUENTS RELEASE REPORT

**TABLE 3A-2**  
**SALEM GENERATING STATION – UNITS 1 AND 2**  
**EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT**  
**JULY – DECEMBER 2005**  
**SOLID WASTE AND IRRADIATED FUEL SHIPMENTS**  
**SOLID RADWASTE SHIPPED OFFSITE FOR BURIAL OR DISPOSAL**  
 (Not Irradiated Fuel)

SGS	Units <sup>1</sup>	6-Month Period	Est. Total Error
<b>1 A. Type of Waste (Class A)</b>			
a. Spent Resins, Filters, Sludge, Evaporator Bottoms	m <sup>3</sup> Ci	5.83E+00 1.80E+00	25%
b. Dry Compressible Waste, Contaminated Equipment	m <sup>3</sup> Ci	3.62E+02 5.67E-01	25%
c. Irradiated Components	m <sup>3</sup> Ci	0.00E+00 0.00E+00	25%
d. Others – U1 CRDM, & Head U2 CRDM, & Head	m <sup>3</sup> Ci	7.28E+02 4.92E+01	25%

1 Volumes are measured, activities are estimated

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

<u>Nuclides</u>	Resins		Irradiated Components	
	%	Ci	%	Ci
Tritium	1.30	2.36E-02	0.00	0.00E+00
Carbon-14	9.73	1.77E-01	0.00	0.00E+00
Iron-55	22.41	4.07E-01	0.00	0.00E+00
Cobalt-60	9.90	1.80E-01	0.00	0.00E+00
Nickel-63	39.20	7.12E-01	0.00	0.00E+00
Antimony-125	3.51	6.38E-02	0.00	0.00E+00
Cesium-134	3.77	6.85E-02	0.00	0.00E+00
Cesium-137	9.02	1.64E-01	0.00	0.00E+00

<u>Nuclides</u>	DAW		CRDMs, & Heads	
	%	Ci	%	Ci
Tritium	3.52	2.01E-02	0.00	0.00E+00
Chromium-51	0.00	0.00E+00	1.41	7.24E-01
Manganese-54	1.18	6.74E-03	0.00	0.00E+00
Iron-55	35.94	2.05E-01	72.81	3.74E+01
Cobalt-58	26.55	1.51E-01	8.23	4.23E+00
Cobalt-60	4.49	2.56E-02	5.05	2.60E+00
Nickel-63	13.08	7.45E-02	8.32	4.28E+00
Niobium-95	1.14	6.48E-03	0.00	0.00E+00
Cesium-134	5.26	2.99E-02	0.00	0.00E+00
Cesium-137	8.33	4.74E-02	0.00	0.00E+00

2005 SGS AND HCGS RADIOACTIVE EFFLUENTS RELEASE REPORT

TABLE 3A-2 (Continued)

SALEM GENERATING STATION – UNITS 1 AND 2  
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT

JULY – DECEMBER 2005

SOLID WASTE AND IRRADIATED FUEL SHIPMENTS  
SOLID RADWASTE SHIPPED OFFSITE FOR BURIAL OR DISPOSAL

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>
1	Truck	Barnwell, SC	HIC
21	Truck	Memphis, TN	Metal

**2005 SGS AND HCGS RADIOACTIVE EFFLUENTS RELEASE REPORT**

**TABLE 3A-2 (continued)**  
**SALEM GENERATING STATION – UNITS 1 AND 2**  
**EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT**  
**JULY – DECEMBER 2005**  
**SOLID WASTE AND IRRADIATED FUEL SHIPMENTS**  
**SOLID RADWASTE SHIPPED OFFSITE FOR BURIAL OR DISPOSAL**  
 (Not Irradiated Fuel)

<b>SGS</b>	<b>1 B. Type of Waste (Class B)</b>	<b>Units<sup>1</sup></b>	<b>6-Month Period</b>	<b>Est. Total Error</b>
a.	Spent Resins, Filters, Evaporator Bottoms	m <sup>3</sup>	1.02E+01	25%
		Ci	1.22E+02	
b.	Dry Compressible Waste, Contaminated Equipment	m <sup>3</sup>	0.00E+00	25%
		Ci	0.00E+00	
c.	Irradiated Components	m <sup>3</sup>	0.00E+00	25%
		Ci	0.00E+00	
d.	Others	m <sup>3</sup>	0.00E+00	25%
		Ci	0.00E+00	

1 Volumes are measured, activities are estimated

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

<b>Nuclides</b>	<b>Resins</b>		<b>Irradiated Components</b>	
	<b>%</b>	<b>Ci</b>	<b>%</b>	<b>Ci</b>
Iron-55	3.44	4.23E+00	0.00	0.00E+00
Cobalt-60	8.38	1.03E+01	0.00	0.00E+00
Nickel-63	49.88	6.12E+01	0.00	0.00E+00
Cesium-134	6.93	8.51E+00	0.00	0.00E+00
Cesium-137	31.04	3.81E+01	0.00	0.00E+00

**3B. Solid Waste Disposal (Class B) – SGS**

<b><u>Number of Shipments</u></b>	<b><u>Mode of Transportation</u></b>	<b><u>Destination</u></b>	<b><u>Type of Containers</u></b>
3	Truck	Barnwell, SC	HIC

**2005 SGS AND HCGS RADIOACTIVE EFFLUENTS RELEASE REPORT**

**TABLE 3B-1  
HOPE CREEK GENERATING STATION  
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT  
JANUARY – JUNE 2005  
SOLID WASTE AND IRRADIATED FUEL SHIPMENTS  
SOLID RADWASTE SHIPPED OFFSITE FOR BURIAL OR DISPOSAL  
(Not Irradiated Fuel)**

<b>HCGS</b>		<b>Units<sup>1</sup></b>	<b>6-Month Period</b>	<b>Est. Total Error</b>
<b>1 A. Type of Waste (Class A)</b>				
a. Spent Resins, Filters, Sludge, Evaporator Bottoms	m <sup>3</sup> Ci	0.00E+00 0.00E+00	25%	
b. Dry Compressible Waste, Contaminated Equipment	m <sup>3</sup> Ci	3.26E+02 6.35E-01	25%	
c. Irradiated Components, Control Rods	m <sup>3</sup> Ci	0.00E+00 0.00E+00	25%	
d. Others	m <sup>3</sup> Ci	0.00E+00 0.00E+00	25%	

<sup>1</sup> Volumes are measured, activities are estimated

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

<u>Nuclides</u>	<b>DAW</b>	
	<b>%</b>	<b>Ci</b>
Chromium-51	18.15	1.15E-01
Manganese-54	1.94	1.23E-02
Iron-55	54.70	3.48E-01
Cobalt-58	1.52	9.66E-03
Iron-59	13.63	8.67E-02
Cobalt-60	3.62	2.30E-02
Nickel-63	1.97	1.26E-02
Zinc-65	4.38	2.78E-02

**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>
6	Truck	Memphis, TN	Metal

2005 SGS AND HCGS RADIOACTIVE EFFLUENTS RELEASE REPORT

**TABLE 3B-2**  
**HOPE CREEK GENERATING STATION**  
**EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT**  
**JULY – DECEMBER 2005**  
**SOLID WASTE AND IRRADIATED FUEL SHIPMENTS**  
**SOLID RADWASTE SHIPPED OFFSITE FOR BURIAL OR DISPOSAL**  
 (Not Irradiated Fuel)

<b>HCGS</b>		<b>6-Month</b>	<b>Est. Total</b>
<b>1 A. Type of Waste (Class A)</b>	<b>Units<sup>1</sup></b>	<b>Period</b>	<b>Error</b>
a. Spent Resins, Filters, Evaporator Bottoms	m <sup>3</sup> Ci	1.22E+02 3.97E+02	25%
b. Dry Compressible Waste, Contaminated Equipment	m <sup>3</sup> Ci	2.17E+02 1.88E+00	25%
c. Irradiated Components, Control Rods	m <sup>3</sup> Ci	0.00E+00 0.00E+00	25%
d. Others – Contaminated Oil	m <sup>3</sup> Ci	7.25E+01 8.96E-02	25%

1 Volumes are measured, activities are estimated

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

<u><b>Nuclides</b></u>	<b>Resins</b>		<b>Irradiated Components</b>	
	<b>%</b>	<b>Ci</b>	<b>%</b>	<b>Ci</b>
Manganese-54	6.70	2.69E+01	0.00	0.00E+00
Iron-55	84.87	3.41E+02	0.00	0.00E+00
Cobalt-58	1.26	5.07E+00	0.00	0.00E+00
Cobalt-60	6.00	2.39E+01	0.00	0.00E+00

<u><b>Nuclides</b></u>	<b>DAW</b>		<b>Contaminated Oil</b>	
	<b>%</b>	<b>Ci</b>	<b>%</b>	<b>Ci</b>
Chromium-51	16.13	3.05E-01	16.13	1.46E-02
Manganese-54	2.07	3.92E-02	2.07	1.87E-03
Iron-55	61.21	1.16E+00	61.21	5.53E-02
Iron-59	11.00	2.08E-01	11.00	9.93E-03
Cobalt-60	4.44	8.40E-02	4.44	4.01E-03
Nickel-63	1.25	2.35E-02	1.25	1.12E-03
Zn-65	3.08	5.82E-02	3.08	2.78E-03

**TABLE 3B-2**  
**HOPE CREEK GENERATING STATION**  
**EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT**  
**JULY - DECEMBER 2005**  
**SOLID WASTE AND IRRADIATED FUEL SHIPMENTS**  
**SOLID RADWASTE SHIPPED OFFSITE FOR BURIAL OR DISPOSAL**

**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>
16	Truck	Barnwell, SC	HIC
6	Truck	Memphis, TN	Metal

2005 SGS AND HCGS RADIOACTIVE EFFLUENTS RELEASE REPORT

**TABLE 4A-1**  
**SALEM GENERATING STATION - UNIT 1**  
**EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT**  
**JANUARY - JUNE 2005**  
**SUMMARY SHEET FOR RADIOACTIVE EFFLUENTS RELEASED**  
**IN A BATCH MODE**

**BATCH RELEASES ONLY**

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1. Dates:	January 1, 2005 – March 31, 2005
2. Type of release:	<b>Gaseous</b>
3. Number of releases during quarter:	224
4. Total time duration for all releases of type listed above:	1.63E+04 Min.
5. Maximum duration for release of type listed above:	1.22E+02 Min.
6. Average duration for release of type listed above:	7.28E+01 Min.
7. Minimum duration for release of type listed above:	1.00E+01 Min.
8. Average stream flow (dilution flow) during period of release:	N/A

**BATCH RELEASES ONLY**

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1. Dates:	April 1, 2005 – June 30, 2005
2. Type of release:	<b>Gaseous</b>
3. Number of releases during quarter:	202
4. Total time duration for all releases of type listed above:	1.50E+04 Min.
5. Maximum duration for release of type listed above:	1.59E+02 Min.
6. Average duration for release of type listed above:	7.41E+01 Min.
7. Minimum duration for release of type listed above:	4.50E+01 Min.
8. Average stream flow (dilution flow) during period of release:	N/A

2005 SGS AND HCGS RADIOACTIVE EFFLUENTS RELEASE REPORT

TABLE 4A-1 (Continued)  
SALEM GENERATING STATION - UNIT 1  
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT  
JULY - DECEMBER 2005  
SUMMARY SHEET FOR RADIOACTIVE EFFLUENTS RELEASED  
IN A BATCH MODE

BATCH RELEASES ONLY

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1. Dates:	July 1, 2005 - September 30, 2005
2. Type of release:	Gaseous
3. Number of releases during quarter:	175
4. Total time duration for all releases of type listed above:	1.25E+04 Min.
5. Maximum duration for release of type listed above:	1.96E+02 Min.
6. Average duration for release of type listed above:	7.17E+01 Min.
7. Minimum duration for release of type listed above:	1.50E+01 Min.
8. Average stream flow (dilution flow) during period of release:	N/A

BATCH RELEASES ONLY

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1. Dates:	October 1, 2005 - December 31, 2005
2. Type of release:	Gaseous
3. Number of releases during quarter:	161
4. Total time duration for all releases of type listed above:	1.36E+04 Min.
5. Maximum duration for release of type listed above:	1.91E+02 Min.
6. Average duration for release of type listed above:	8.46E+01 Min.
7. Minimum duration for release of type listed above:	3.00E-02 Min.
8. Average stream flow (dilution flow) during period of release:	N/A



2005 SGS AND HCGS RADIOACTIVE EFFLUENTS RELEASE REPORT

**TABLE 4A-2**  
**SALEM GENERATING STATION - UNIT 2**  
**EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT**  
**JANUARY - JUNE 2005**  
**SUMMARY SHEET FOR RADIOACTIVE EFFLUENTS RELEASED**  
**IN A BATCH MODE**

**BATCH RELEASES ONLY**

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1. Dates:	January 1, 2005 - March 31, 2005	
2. Type of release:	<b>Gaseous</b>	
3. Number of releases during quarter:	184	
4. Total time duration for all releases of type listed above:	1.33E+04	Min.
5. Maximum duration for release of type listed above:	1.72E+02	Min.
6. Average duration for release of type listed above:	7.21E+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:	April 1, 2005 - June 30, 2005	
2. Type of release:	<b>Gaseous</b>	
3. Number of releases during quarter:	96	
4. Total time duration for all releases of type listed above:	7.14E+03	Min.
5. Maximum duration for release of type listed above:	3.43E+02	Min.
6. Average duration for release of type listed above:	7.44E+01	Min.
7. Minimum duration for release of type listed above:	3.50E+01	Min.
8. Average stream flow (dilution flow) during period of release:	N/A	

2005 SGS AND HCGS RADIOACTIVE EFFLUENTS RELEASE REPORT

TABLE 4A-2 (Continued)  
SALEM GENERATING STATION - UNIT 2  
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT  
JULY - DECEMBER 2005  
SUMMARY SHEET FOR RADIOACTIVE EFFLUENTS RELEASED  
IN A BATCH MODE

BATCH RELEASES ONLY

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1. Dates:	July 1, 2005 - September 30, 2005		
2. Type of release:	<b>Gaseous</b>		
3. Number of releases during quarter:	104		
4. Total time duration for all releases of type listed above:	6.63E+03	Min.	
5. Maximum duration for release of type listed above:	1.40E+02	Min.	
6. Average duration for release of type listed above:	6.37E+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, 2005 - December 31, 2005		
2. Type of release:	<b>Gaseous</b>		
3. Number of releases during quarter:	106		
4. Total time duration for all releases of type listed above:	7.99E+03	Min.	
5. Maximum duration for release of type listed above:	4.90E+02	Min.	
6. Average duration for release of type listed above:	7.54E+01	Min.	
7. Minimum duration for release of type listed above:	4.00E+01	Min.	
8. Average stream flow (dilution flow) during period of release:	N/A		

2005 SGS AND HCGS RADIOACTIVE EFFLUENTS RELEASE REPORT

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**TABLE 4A-3**  
**HOPE CREEK GENERATING STATION**  
**EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT**  
**JANUARY – JUNE 2005**  
**SUMMARY SHEET FOR RADIOACTIVE EFFLUENTS RELEASED**  
**IN A BATCH MODE**

**BATCH RELEASES ONLY**

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1. Dates:	January 1, 2005 – March 31, 2005	
2. Type of release:	<b>Gaseous</b>	
3. Number of releases during quarter:	3	
4. Total time duration for all releases of type listed above:	6.86E+03	Min.
5. Maximum duration for release of type listed above:	4.79E+03	Min.
6. Average duration for release of type listed above:	2.29E+03	Min.
7. Minimum duration for release of type listed above:	4.83E+02	Min.
8. Average stream flow (dilution flow) during period of release:	N/A	

**BATCH RELEASES ONLY**

---

1. Dates:	April 1, 2005– June 30, 2005	
2. Type of release:	<b>Gaseous</b>	
3. Number of releases during quarter:	3	
4. Total time duration for all releases of type listed above:	5.48E+03	Min.
5. Maximum duration for release of type listed above:	3.56E+03	Min.
6. Average duration for release of type listed above:	1.83E+03	Min.
7. Minimum duration for release of type listed above:	4.86E+02	Min.
8. Average stream flow (dilution flow) during period of release:	N/A	

2005 SGS AND HCGS RADIOACTIVE EFFLUENTS RELEASE REPORT

TABLE 4A-3 (Continued)  
HOPE CREEK GENERATING STATION  
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT  
JULY – DECEMBER 2005  
SUMMARY SHEET FOR RADIOACTIVE EFFLUENTS RELEASED  
IN A BATCH MODE

BATCH RELEASES ONLY

---

1. Dates:	July 1, 2005– September 30, 2005		
2. Type of release:	Gaseous		
3. Number of releases during quarter:	3		
4. Total time duration for all releases of type listed above:	7.83E+03	Min.	
5. Maximum duration for release of type listed above:	5.77E+03	Min.	
6. Average duration for release of type listed above:	2.61E+03	Min.	
7. Minimum duration for release of type listed above:	3.46E+02	Min.	
8. Average stream flow (dilution flow) during period of release:	N/A		

BATCH RELEASES ONLY

---

1. Dates:	October 1, 2005- December 31, 2005		
2. Type of release:	Gaseous		
3. Number of releases during quarter:	0		
4. Total time duration for all releases of type listed above:	0.00E+00	Min	
5. Maximum duration for release of type listed above:	0.00E+00	Min	
6. Average duration for release of type listed above:	0.00E+00	Min	
7. Minimum duration for release of type listed above:	0.00E+00	Min	
8. Average stream flow (dilution flow) during period of release:	N/A		

**2005 SGS AND HCGS RADIOACTIVE EFFLUENTS RELEASE REPORT**

**TABLE 4B-1  
SALEM GENERATING STATION - UNIT 1  
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT  
JANUARY - JUNE 2005  
SUMMARY SHEET FOR RADIOACTIVE EFFLUENTS RELEASED  
IN A BATCH MODE**

**BATCH RELEASES ONLY**

1. Dates:	January 1, 2005 - March 31, 2005		
2. Type of release:	<b>Liquid</b>		
3. Number of releases during quarter:	30		
4. Total time duration for all releases of type listed above:	3.94E+03	Min	
5. Maximum duration for release of type listed above:	4.93E+02	Min	
6. Average duration for release of type listed above:	1.31E+02	Min	
7. Minimum duration for release of type listed above:	5.00E-02	Min	
8. Average stream flow (dilution flow) during period of release:	8.89E+05	GPM	

**BATCH RELEASES ONLY**

1. Dates:	April 1, 2005 - June 30, 2005		
2. Type of release:	<b>Liquid</b>		
3. Number of releases during quarter:	25		
4. Total time duration for all releases of type listed above:	5.89E+03	Min.	
5. Maximum duration for release of type listed above:	6.30E+02	Min.	
6. Average duration for release of type listed above:	2.35E+02	Min.	
7. Minimum duration for release of type listed above:	2.00E-02	Min.	
8. Average stream flow (dilution flow) during period of release:	9.06E+05	GPM	

2005 SGS AND HCGS RADIOACTIVE EFFLUENTS RELEASE REPORT

TABLE 4B-1 (Continued)  
SALEM GENERATING STATION - UNIT 1  
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT  
JULY - DECEMBER 2005  
SUMMARY SHEET FOR RADIOACTIVE EFFLUENTS RELEASED  
IN A BATCH MODE

BATCH RELEASES ONLY

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1. Dates:	July 1, 2005 - September 30, 2005		
2. Type of release:	<b>Liquid</b>		
3. Number of releases during quarter:	18		
4. Total time duration for all releases of type listed above:	2.75E+03	Min.	
5. Maximum duration for release of type listed above:	3.99E+02	Min.	
6. Average duration for release of type listed above:	1.53E+02	Min.	
7. Minimum duration for release of type listed above:	4.20E-01	Min.	
8. Average stream flow (dilution flow) during period of release:	9.54E+05	GPM	

BATCH RELEASES ONLY

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1. Dates:	October 1, 2005 - December 31, 2005		
2. Type of release:	<b>Liquid</b>		
3. Number of releases during quarter:	24		
4. Total time duration for all releases of type listed above:	5.07E+03	Min.	
5. Maximum duration for release of type listed above:	3.32E+02	Min.	
6. Average duration for release of type listed above:	2.11E+02	Min.	
7. Minimum duration for release of type listed above:	8.00E-02	Min.	
8. Average stream flow (dilution flow) during period of release:	6.72E+05	GPM	

**2005 SGS AND HCGS RADIOACTIVE EFFLUENTS RELEASE REPORT**

**TABLE 4B-2  
SALEM GENERATING STATION - UNIT 2  
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT  
JANUARY - JUNE 2005  
SUMMARY SHEET FOR RADIOACTIVE EFFLUENTS RELEASED  
IN A BATCH MODE**

**BATCH RELEASES ONLY**

1. Dates:	January 1, 2005 - March 31, 2005		
2. Type of release:	<b>Liquid</b>		
3. Number of releases during quarter:	8		
4. Total time duration for all releases of type listed above:	2.30E+03		Min
5. Maximum duration for release of type listed above:	4.10E+02		Min
6. Average duration for release of type listed above:	2.88E+02		Min
7. Minimum duration for release of type listed above:	1.82E+02		Min
8. Average stream flow (dilution flow) during period of release:	8.75E+05		GPM

**BATCH RELEASES ONLY**

1. Dates:	April 1, 2005 - June 30, 2005		
2. Type of release:	<b>Liquid</b>		
3. Number of releases during quarter:	25		
4. Total time duration for all releases of type listed above:	8.72E+03		Min.
5. Maximum duration for release of type listed above:	9.05E+02		Min.
6. Average duration for release of type listed above:	3.49E+02		Min.
7. Minimum duration for release of type listed above:	2.00E+00		Min.
8. Average stream flow (dilution flow) during period of release:	6.13E+05		GPM

**2005 SGS AND HCGS RADIOACTIVE EFFLUENTS RELEASE REPORT**

**TABLE 4B-2 (Continued)  
SALEM GENERATING STATION - UNIT 2  
EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT  
JULY - DECEMBER 2005  
SUMMARY SHEET FOR RADIOACTIVE EFFLUENTS RELEASED  
IN A BATCH MODE**

**BATCH RELEASES ONLY**

1. Dates:	July 1, 2005 – September 30, 2005	
2. Type of release:	<b>Liquid</b>	
3. Number of releases during quarter:	7	
4. Total time duration for all releases of type listed above:	1.92E+03	Min.
5. Maximum duration for release of type listed above:	3.41E+02	Min.
6. Average duration for release of type listed above:	2.74E+02	Min.
7. Minimum duration for release of type listed above:	2.23E+02	Min.
8. Average stream flow (dilution flow) during period of release:	9.37E+05	GPM

**BATCH RELEASES ONLY**

1. Dates:	October 1, 2005 – December 31, 2005	
2. Type of release:	<b>Liquid</b>	
3. Number of releases during quarter:	7	
4. Total time duration for all releases of type listed above:	1.72E+03	Min.
5. Maximum duration for release of type listed above:	3.04E+02	Min.
6. Average duration for release of type listed above:	2.46E+02	Min.
7. Minimum duration for release of type listed above:	1.37E+02	Min.
8. Average stream flow (dilution flow) during period of release:	9.10E+05	GPM



2005 SGS AND HCGS RADIOACTIVE EFFLUENTS RELEASE REPORT

**TABLE 4B-3**  
**HOPE CREEK GENERATING STATION**  
**EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT**  
**JANUARY – JUNE 2005**  
**SUMMARY SHEET FOR RADIOACTIVE EFFLUENTS RELEASED**  
**IN A BATCH MODE**

**BATCH RELEASES ONLY**

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1. Dates:	January 1, 2005– March 31, 2005		
2. Type of release:	Liquid		
3. Number of releases during quarter:	71		
4. Total time duration for all releases of type listed above:	4.98E+03	Min.	
5. Maximum duration for release of type listed above:	9.22E+01	Min.	
6. Average duration for release of type listed above:	7.02E+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:	3.05E+04	GPM	

**BATCH RELEASES ONLY**

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1. Dates:	April 1, 2005– June 30, 2005		
2. Type of release:	Liquid		
3. Number of releases during quarter:	62		
4. Total time duration for all releases of type listed above:	3.91E+03	Min.	
5. Maximum duration for release of type listed above:	8.50E+01	Min.	
6. Average duration for release of type listed above:	6.31E+01	Min.	
7. Minimum duration for release of type listed above:	2.00E+01	Min.	
8. Average stream flow (dilution flow) during period of release:	3.12E+04	GPM	

**2005 SGS AND HCGS RADIOACTIVE EFFLUENTS RELEASE REPORT**

**TABLE 4B-3 (Continued)**  
**HOPE CREEK GENERATING STATION**  
**EFFLUENTS AND WASTE DISPOSAL ANNUAL REPORT**  
**JULY – DECEMBER 2005**  
**SUMMARY SHEET FOR RADIOACTIVE EFFLUENTS RELEASED**  
**IN A BATCH MODE**

**BATCH RELEASES ONLY**

1. Dates:	July 1, 2005– September 30, 2005	
2. Type of release:	<b>Liquid</b>	
3. Number of releases during quarter:	71	
4. Total time duration for all releases of type listed above:	5.04E+03	Min.
5. Maximum duration for release of type listed above:	8.60E+01	Min.
6. Average duration for release of type listed above:	7.09E+01	Min.
7. Minimum duration for release of type listed above:	3.03E+01	Min.
8. Average stream flow (dilution flow) during period of release:	4.16E+04	GPM

**BATCH RELEASES ONLY**

1. Dates:	October 1, 2005– December 31, 2005	
2. Type of release:	<b>Liquid</b>	
3. Number of releases during quarter:	7	
4. Total time duration for all releases of type listed above:	3.02E+02	Min.
5. Maximum duration for release of type listed above:	7.20E+01	Min.
6. Average duration for release of type listed above:	4.32E+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:	3.13E+04	GPM

# APPENDIX A

## METEOROLOGICAL DATA

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Lapse Rate  
Wind Distributions  
300-33 Foot

1/2005 - 3/2005

ARTIFICIAL ISLAND 01/05-03/05

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED  
BY ATMOSPHERIC STABILITY CLASS

WIND: 30 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	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	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	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	1	0.0	0	0.0	0	0.0	1	0.0
S	0	0.0	0	0.0	0	0.0	0	0.0	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	3	0.1	0	0.0	0	0.0	0	0.0	3	0.1
W	0	0.0	0	0.0	0	0.0	4	0.2	1	0.0	0	0.0	0	0.0	5	0.2
WNW	0	0.0	0	0.0	0	0.0	3	0.1	0	0.0	0	0.0	0	0.0	3	0.1
NW	0	0.0	0	0.0	0	0.0	9	0.4	16	0.7	3	0.1	0	0.0	28	1.3
NNW	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	1	0.0
	0	0.0	0	0.0	0	0.0	22	1.0	18	0.8	3	0.1	0	0.0	43	2.0

MEAN WIND SPEED: 13.4  
MISSING: 0



ARTIFICIAL ISLAND 01/05-03/05

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED  
 BY ATMOSPHERIC STABILITY CLASS  
 WIND: 30 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	4	0.2	8	0.4	1	0.0	0	0.0	0	0.0	13	0.6
NNE	0	0.0	0	0.0	3	0.1	6	0.3	2	0.1	0	0.0	0	0.0	11	0.5
NE	0	0.0	0	0.0	6	0.3	4	0.2	1	0.0	0	0.0	0	0.0	11	0.5
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	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
ESE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SE	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
SSE	0	0.0	0	0.0	0	0.0	0	0.0	2	0.1	0	0.0	0	0.0	2	0.1
S	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SSW	0	0.0	0	0.0	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	0	0.0	0	0.0	0	0.0	2	0.1
WSW	0	0.0	0	0.0	2	0.1	5	0.2	0	0.0	0	0.0	0	0.0	7	0.3
W	0	0.0	0	0.0	0	0.0	5	0.2	1	0.0	1	0.0	0	0.0	7	0.3
WNW	0	0.0	0	0.0	2	0.1	2	0.1	3	0.1	1	0.0	0	0.0	8	0.4
NW	0	0.0	0	0.0	4	0.2	8	0.4	7	0.3	2	0.1	0	0.0	21	1.0
NNW	0	0.0	0	0.0	7	0.3	13	0.6	2	0.1	1	0.0	0	0.0	23	1.1
	0	0.0	0	0.0	32	1.5	52	2.4	19	0.9	5	0.2	0	0.0	108	5.0

MEAN WIND SPEED: 10.3  
 MISSING: 0





ARTIFICIAL ISLAND 01/05-03/05

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED  
 BY ATMOSPHERIC STABILITY CLASS  
 WIND: 30 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	9	0.4	42	2.0	25	1.2	3	0.1	0	0.0	0	0.0	79	3.7
NNE	0	0.0	9	0.4	39	1.8	4	0.2	0	0.0	0	0.0	0	0.0	52	2.4
NE	0	0.0	10	0.5	40	1.9	8	0.4	0	0.0	0	0.0	0	0.0	58	2.7
ENE	0	0.0	8	0.4	15	0.7	0	0.0	0	0.0	0	0.0	0	0.0	23	1.1
E	0	0.0	12	0.6	16	0.7	0	0.0	1	0.0	0	0.0	0	0.0	29	1.3
ESE	0	0.0	8	0.4	32	1.5	6	0.3	2	0.1	0	0.0	1	0.0	49	2.3
SE	0	0.0	6	0.3	16	0.7	22	1.0	4	0.2	0	0.0	0	0.0	48	2.2
SSE	0	0.0	10	0.5	16	0.7	4	0.2	3	0.1	0	0.0	0	0.0	33	1.5
S	0	0.0	6	0.3	2	0.1	3	0.1	0	0.0	0	0.0	0	0.0	11	0.5
SSW	0	0.0	6	0.3	3	0.1	1	0.0	2	0.1	0	0.0	0	0.0	12	0.6
SW	0	0.0	7	0.3	10	0.5	2	0.1	1	0.0	0	0.0	0	0.0	20	0.9
WSW	0	0.0	3	0.1	29	1.3	6	0.3	3	0.1	0	0.0	0	0.0	41	1.9
W	0	0.0	3	0.1	18	0.8	11	0.5	0	0.0	0	0.0	0	0.0	32	1.5
WNW	0	0.0	6	0.3	31	1.4	29	1.3	1	0.0	0	0.0	0	0.0	67	3.1
NW	0	0.0	5	0.2	35	1.6	45	2.1	5	0.2	2	0.1	0	0.0	92	4.3
NNW	0	0.0	10	0.5	39	1.8	32	1.5	9	0.4	0	0.0	0	0.0	90	4.2
	0	0.0	118	5.5	383	17.8	198	9.2	34	1.6	2	0.1	1	0.0	736	34.2

MEAN WIND SPEED: 6.6  
 MISSING: 1



ARTIFICIAL ISLAND 01/05-03/05

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED  
 BY ATMOSPHERIC STABILITY CLASS  
 WIND: 30 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	3	0.1	2	0.1	0	0.0	0	0.0	0	0.0	5	0.2
NNE	0	0.0	0	0.0	10	0.5	2	0.1	0	0.0	0	0.0	0	0.0	12	0.6
NE	0	0.0	1	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	0.1
ENE	0	0.0	0	0.0	0	0.0	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	2	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	0.1
SE	0	0.0	2	0.1	14	0.7	14	0.7	8	0.4	0	0.0	0	0.0	38	1.8
SSE	0	0.0	5	0.2	8	0.4	4	0.2	2	0.1	0	0.0	0	0.0	19	0.9
S	0	0.0	3	0.1	0	0.0	0	0.0	0	0.0	1	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	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	3	0.1	1	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	0	0.0	6	0.3	0	0.0	0	0.0	0	0.0	0	0.0	6	0.3
	0	0.0	13	0.6	45	2.1	23	1.1	10	0.5	1	0.0	0	0.0	92	4.3

MEAN WIND SPEED: 7.6  
 MISSING: 0

ARTIFICIAL ISLAND 01/05-03/05

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED  
BY ATMOSPHERIC STABILITY CLASS

WIND: 30 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			
N	0	0.0	11	0.5	90	4.2	97	4.5	17	0.8	0	0.0	0	0.0	215	10.0
NNE	0	0.0	12	0.6	94	4.4	62	2.9	9	0.4	0	0.0	0	0.0	177	8.2
NE	0	0.0	16	0.7	94	4.4	48	2.2	7	0.3	0	0.0	0	0.0	165	7.7
ENE	0	0.0	16	0.7	51	2.4	11	0.5	5	0.2	0	0.0	0	0.0	83	3.9
E	0	0.0	16	0.7	26	1.2	1	0.0	1	0.0	0	0.0	0	0.0	44	2.0
ESE	0	0.0	11	0.5	45	2.1	14	0.7	2	0.1	0	0.0	2	0.1	74	3.4
SE	0	0.0	14	0.7	47	2.2	62	2.9	29	1.3	3	0.1	0	0.0	155	7.2
SSE	0	0.0	25	1.2	55	2.6	27	1.3	20	0.9	0	0.0	0	0.0	127	5.9
S	0	0.0	13	0.6	16	0.7	11	0.5	7	0.3	5	0.2	0	0.0	52	2.4
SSW	0	0.0	11	0.5	12	0.6	5	0.2	9	0.4	0	0.0	0	0.0	37	1.7
SW	0	0.0	11	0.5	28	1.3	19	0.9	2	0.1	2	0.1	0	0.0	62	2.9
WSW	0	0.0	7	0.3	53	2.5	50	2.3	13	0.6	0	0.0	0	0.0	123	5.7
W	0	0.0	6	0.3	29	1.3	54	2.5	20	0.9	1	0.0	0	0.0	110	5.1
WNW	0	0.0	9	0.4	56	2.6	65	3.0	45	2.1	13	0.6	1	0.0	189	8.8
NW	0	0.0	10	0.5	68	3.2	113	5.3	91	4.2	28	1.3	1	0.0	311	14.5
NNW	0	0.0	16	0.7	85	4.0	83	3.9	33	1.5	8	0.4	1	0.0	226	10.5
	0	0.0	204	9.5	849	39.5	722	33.6	310	14.4	60	2.8	5	0.2	2150	100.0
MISSING HOURS:	10															
MEAN WIND SPEED:	8.6															

ARTIFICIAL ISLAND 01/05-03/05

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED  
 BY ATMOSPHERIC STABILITY CLASS  
 WIND: 30 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	11	0.5	90	4.2	97	4.5	17	0.8	0	0.0	0	0.0	0	0.0	215	10.0
NNE	0	0.0	12	0.6	94	4.4	62	2.9	9	0.4	0	0.0	0	0.0	0	0.0	177	8.2
NE	0	0.0	16	0.7	94	4.4	48	2.2	7	0.3	0	0.0	0	0.0	0	0.0	165	7.7
ENE	0	0.0	16	0.7	51	2.4	11	0.5	5	0.2	0	0.0	0	0.0	0	0.0	83	3.9
E	0	0.0	16	0.7	26	1.2	1	0.0	1	0.0	0	0.0	0	0.0	0	0.0	44	2.0
ESE	0	0.0	11	0.5	45	2.1	14	0.7	2	0.1	0	0.0	0	0.0	2	0.1	74	3.4
SE	0	0.0	14	0.7	47	2.2	63	2.9	29	1.3	3	0.1	0	0.0	0	0.0	156	7.2
SSE	0	0.0	25	1.2	56	2.6	27	1.3	20	0.9	0	0.0	0	0.0	0	0.0	128	5.9
S	0	0.0	14	0.7	16	0.7	11	0.5	7	0.3	5	0.2	0	0.0	0	0.0	53	2.5
SSW	0	0.0	11	0.5	12	0.6	5	0.2	9	0.4	0	0.0	0	0.0	0	0.0	37	1.7
SW	0	0.0	11	0.5	28	1.3	19	0.9	2	0.1	2	0.1	0	0.0	0	0.0	62	2.9
WSW	0	0.0	7	0.3	53	2.5	50	2.3	13	0.6	0	0.0	0	0.0	0	0.0	123	5.7
W	0	0.0	6	0.3	29	1.3	54	2.5	20	0.9	1	0.0	0	0.0	0	0.0	110	5.1
WNW	0	0.0	9	0.4	56	2.6	65	3.0	45	2.1	13	0.6	1	0.0	1	0.0	189	8.8
NW	0	0.0	10	0.5	68	3.2	113	5.2	91	4.2	28	1.3	1	0.0	1	0.0	311	14.4
NNW	0	0.0	16	0.7	85	3.9	83	3.9	33	1.5	8	0.4	1	0.0	1	0.0	226	10.5
	0	0.0	205	9.5	850	39.5	723	33.6	310	14.4	60	2.8	5	0.2	5	0.2	2153	100.0

MISSING HOURS: 7

MEAN WIND SPEED: 8.6

ARTIFICIAL ISLAND 01/05-03/05

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	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	1	0.0	0	0.0	0	0.0	2	0.1
NE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
ENE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
E	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
ESE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SSE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	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	0	0.0	0	0.0	1	0.0	3	0.1	0	0.0	0	0.0	4	0.2
W	0	0.0	0	0.0	0	0.0	2	0.1	1	0.0	1	0.0	0	0.0	4	0.2
WNW	0	0.0	0	0.0	0	0.0	3	0.1	0	0.0	0	0.0	0	0.0	3	0.1
NW	0	0.0	0	0.0	0	0.0	2	0.1	11	0.5	12	0.6	2	0.1	27	1.3
NNW	0	0.0	0	0.0	0	0.0	0	0.0	2	0.1	0	0.0	0	0.0	2	0.1
	0	0.0	0	0.0	0	0.0	9	0.4	18	0.8	14	0.7	2	0.1	43	2.0

MEAN WIND SPEED: 16.7

MISSING: 0

ARTIFICIAL ISLAND 01/05-03/05

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	0	0.0	2	0.1	8	0.4	1	0.0	0	0.0	11	0.5
NNE	0	0.0	0	0.0	0	0.0	4	0.2	7	0.3	0	0.0	0	0.0	11	0.5
NE	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	1	0.0
ENE	0	0.0	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	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
SE	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	1	0.0
SSE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	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	2	0.1	0	0.0	1	0.0	0	0.0	0	0.0	3	0.1
WSW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	3	0.1	0	0.0	3	0.1
W	0	0.0	0	0.0	0	0.0	4	0.2	4	0.2	4	0.2	0	0.0	12	0.6
WNW	0	0.0	0	0.0	0	0.0	0	0.0	2	0.1	4	0.2	1	0.0	7	0.3
NW	0	0.0	0	0.0	0	0.0	2	0.1	5	0.2	13	0.6	1	0.0	21	1.0
NNW	0	0.0	0	0.0	0	0.0	1	0.0	7	0.3	1	0.0	0	0.0	9	0.4
	0	0.0	0	0.0	3	0.1	15	0.7	35	1.6	27	1.3	2	0.1	82	3.8

MEAN WIND SPEED: 16.1  
MISSING: 0

ARTIFICIAL ISLAND 01/05-03/05

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	4	0.2	6	0.3	1	0.0	0	0.0	12	0.6
NNE	0	0.0	0	0.0	1	0.0	9	0.4	3	0.1	2	0.1	0	0.0	15	0.7
NE	0	0.0	0	0.0	3	0.1	3	0.1	2	0.1	0	0.0	0	0.0	8	0.4
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	0	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	0	0.0	2	0.1	0	0.0	2	0.1
S	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SSW	0	0.0	0	0.0	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	0	0.0	0	0.0	0	0.0	2	0.1
WSW	0	0.0	0	0.0	1	0.0	1	0.0	5	0.2	0	0.0	0	0.0	7	0.3
W	0	0.0	0	0.0	0	0.0	4	0.2	1	0.0	2	0.1	0	0.0	7	0.3
WNW	0	0.0	0	0.0	0	0.0	3	0.1	1	0.0	3	0.1	1	0.0	8	0.4
NW	0	0.0	0	0.0	1	0.0	5	0.2	8	0.4	4	0.2	2	0.1	20	0.9
NNW	0	0.0	0	0.0	5	0.2	9	0.4	9	0.4	1	0.0	1	0.0	25	1.2

0 0.0 0 0.0 15 0.7 39 1.8 35 1.6 15 0.7 4 0.2 108 5.1

MEAN WIND SPEED: 13.0

MISSING: 0



ARTIFICIAL ISLAND 01/05-03/05

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	SUM	PERCENT
N	0	0.0	0	0.0	8	0.4	34	1.6	22	1.0	6	0.3	1	0.0	71	3.3
NNE	0	0.0	0	0.0	8	0.4	36	1.7	31	1.5	3	0.1	0	0.0	78	3.7
NE	0	0.0	0	0.0	13	0.6	29	1.4	19	0.9	6	0.3	0	0.0	67	3.1
ENE	0	0.0	2	0.1	22	1.0	20	0.9	6	0.3	6	0.3	0	0.0	56	2.6
E	0	0.0	1	0.0	9	0.4	1	0.0	0	0.0	0	0.0	0	0.0	11	0.5
ESE	0	0.0	0	0.0	6	0.3	9	0.4	5	0.2	1	0.0	0	0.0	21	1.0
SE	0	0.0	0	0.0	3	0.1	9	0.4	8	0.4	11	0.5	2	0.1	33	1.5
SSE	0	0.0	2	0.1	14	0.7	17	0.8	17	0.8	3	0.1	0	0.0	53	2.5
S	0	0.0	2	0.1	5	0.2	5	0.2	3	0.1	3	0.1	0	0.0	18	0.8
SSW	0	0.0	2	0.1	3	0.1	5	0.2	4	0.2	0	0.0	0	0.0	14	0.7
SW	0	0.0	2	0.1	8	0.4	8	0.4	0	0.0	0	0.0	2	0.1	20	0.9
WSW	0	0.0	1	0.0	5	0.2	6	0.3	25	1.2	5	0.2	0	0.0	42	2.0
W	0	0.0	1	0.0	5	0.2	20	0.9	16	0.7	10	0.5	0	0.0	52	2.4
WNW	0	0.0	2	0.1	10	0.5	21	1.0	31	1.5	29	1.4	11	0.5	104	4.9
NW	0	0.0	4	0.2	7	0.3	13	0.6	45	2.1	33	1.5	31	1.5	133	6.2
NNW	0	0.0	1	0.0	10	0.5	20	0.9	15	0.7	15	0.7	11	0.5	72	3.4
	0	0.0	20	0.9	136	6.4	253	11.9	247	11.6	131	6.1	58	2.7	845	39.6

MEAN WIND SPEED: 13.7  
 MISSING: 18

ARTIFICIAL ISLAND 01/05-03/05

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	11	0.5	33	1.5	27	1.3	4	0.2	0	0.0	77	3.6
NNE	0	0.0	3	0.1	5	0.2	30	1.4	3	0.1	0	0.0	0	0.0	41	1.9
NE	0	0.0	2	0.1	13	0.6	44	2.1	8	0.4	0	0.0	0	0.0	67	3.1
ENE	0	0.0	1	0.0	13	0.6	10	0.5	0	0.0	0	0.0	0	0.0	24	1.1
E	0	0.0	1	0.0	17	0.8	7	0.3	1	0.0	0	0.0	0	0.0	26	1.2
ESE	0	0.0	2	0.1	13	0.6	20	0.9	10	0.5	2	0.1	0	0.0	47	2.2
SE	0	0.0	3	0.1	9	0.4	16	0.7	21	1.0	6	0.3	3	0.1	58	2.7
SSE	0	0.0	1	0.0	8	0.4	5	0.2	3	0.1	2	0.1	1	0.0	20	0.9
S	0	0.0	6	0.3	14	0.7	3	0.1	3	0.1	0	0.0	0	0.0	26	1.2
SSW	0	0.0	2	0.1	5	0.2	0	0.0	2	0.1	1	0.0	1	0.0	11	0.5
SW	0	0.0	3	0.1	11	0.5	12	0.6	1	0.0	0	0.0	1	0.0	28	1.3
WSW	0	0.0	1	0.0	7	0.3	20	0.9	5	0.2	3	0.1	0	0.0	36	1.7
W	0	0.0	1	0.0	8	0.4	11	0.5	7	0.3	0	0.0	0	0.0	27	1.3
WNW	0	0.0	0	0.0	11	0.5	29	1.4	19	0.9	0	0.0	0	0.0	59	2.8
NW	0	0.0	0	0.0	13	0.6	23	1.1	58	2.7	5	0.2	2	0.1	101	4.7
NNW	0	0.0	2	0.1	10	0.5	36	1.7	28	1.3	9	0.4	2	0.1	87	4.1
	0	0.0	30	1.4	168	7.9	299	14.0	196	9.2	32	1.5	10	0.5	735	34.4
MEAN WIND SPEED:	10.7															
MISSING:	2															

ARTIFICIAL ISLAND 01/05-03/05

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	0	0.0	8	0.4	15	0.7	0	0.0	0	0.0	23	1.1
NNE	0	0.0	0	0.0	1	0.0	10	0.5	7	0.3	0	0.0	0	0.0	18	0.8
NE	0	0.0	0	0.0	0	0.0	8	0.4	8	0.4	0	0.0	0	0.0	16	0.7
ENE	0	0.0	1	0.0	3	0.1	5	0.2	0	0.0	0	0.0	0	0.0	9	0.4
E	0	0.0	0	0.0	4	0.2	1	0.0	0	0.0	0	0.0	0	0.0	5	0.2
ESE	0	0.0	1	0.0	3	0.1	2	0.1	1	0.0	0	0.0	0	0.0	7	0.3
SE	0	0.0	1	0.0	5	0.2	3	0.1	6	0.3	1	0.0	5	0.2	21	1.0
SSE	0	0.0	0	0.0	2	0.1	4	0.2	8	0.4	1	0.0	1	0.0	16	0.7
S	0	0.0	1	0.0	6	0.3	5	0.2	1	0.0	4	0.2	4	0.2	21	1.0
SSW	0	0.0	1	0.0	0	0.0	4	0.2	3	0.1	4	0.2	2	0.1	14	0.7
SW	0	0.0	0	0.0	0	0.0	7	0.3	11	0.5	1	0.0	1	0.0	20	0.9
WSW	0	0.0	0	0.0	1	0.0	3	0.1	11	0.5	0	0.0	0	0.0	15	0.7
W	0	0.0	1	0.0	1	0.0	4	0.2	1	0.0	0	0.0	0	0.0	7	0.3
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	3	0.1	6	0.3	2	0.1	0	0.0	0	0.0	0	0.0	11	0.5
NNW	0	0.0	0	0.0	6	0.3	8	0.4	8	0.4	0	0.0	0	0.0	22	1.0
	0	0.0	10	0.5	39	1.8	76	3.6	80	3.7	11	0.5	13	0.6	229	10.7

MEAN WIND SPEED: 12.4  
MISSING: 0



ARTIFICIAL ISLAND 01/05-03/05

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	2	0.1	23	1.1	84	3.9	78	3.7	12	0.6	1	0.0	200	9.4
NNE	0	0.0	3	0.1	15	0.7	93	4.4	59	2.8	5	0.2	0	0.0	175	8.2
NE	0	0.0	3	0.1	29	1.4	87	4.1	39	1.8	6	0.3	0	0.0	164	7.7
ENE	0	0.0	4	0.2	38	1.8	37	1.7	6	0.3	6	0.3	0	0.0	91	4.3
E	0	0.0	2	0.1	30	1.4	9	0.4	1	0.0	0	0.0	0	0.0	42	2.0
ESE	0	0.0	4	0.2	24	1.1	31	1.5	16	0.7	3	0.1	0	0.0	78	3.7
SE	0	0.0	5	0.2	20	0.9	29	1.4	38	1.8	18	0.8	10	0.5	120	5.6
SSE	0	0.0	3	0.1	27	1.3	33	1.5	39	1.8	16	0.7	8	0.4	126	5.9
S	0	0.0	10	0.5	25	1.2	15	0.7	11	0.5	11	0.5	5	0.2	77	3.6
SSW	0	0.0	6	0.3	9	0.4	9	0.4	10	0.5	5	0.2	3	0.1	42	2.0
SW	0	0.0	7	0.3	23	1.1	27	1.3	13	0.6	1	0.0	4	0.2	75	3.5
WSW	0	0.0	4	0.2	15	0.7	32	1.5	52	2.4	11	0.5	0	0.0	114	5.3
W	0	0.0	3	0.1	14	0.7	45	2.1	30	1.4	17	0.8	0	0.0	109	5.1
WNW	0	0.0	4	0.2	23	1.1	58	2.7	53	2.5	36	1.7	13	0.6	187	8.8
NW	0	0.0	7	0.3	27	1.3	47	2.2	127	6.0	67	3.1	38	1.8	313	14.7
NNW	0	0.0	3	0.1	32	1.5	76	3.6	70	3.3	26	1.2	14	0.7	221	10.4
	0	0.0	70	3.3	374	17.5	712	33.4	642	30.1	240	11.2	96	4.5	2134	100.0

MISSING HOURS: 26

MEAN WIND SPEED: 12.6

ARTIFICIAL ISLAND 01/05-03/05

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED  
BY ATMOSPHERIC STABILITY CLASS

WIND: 150 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	2	0.1	23	1.1	84	3.9	78	3.6	12	0.6	1	0.0	200	9.4
NNE	0	0.0	3	0.1	15	0.7	93	4.4	59	2.8	5	0.2	0	0.0	175	8.2
NE	0	0.0	3	0.1	29	1.4	87	4.1	39	1.8	6	0.3	0	0.0	164	7.7
ENE	0	0.0	5	0.2	38	1.8	37	1.7	6	0.3	6	0.3	0	0.0	92	4.3
E	0	0.0	2	0.1	30	1.4	9	0.4	1	0.0	0	0.0	0	0.0	42	2.0
ESE	0	0.0	4	0.2	24	1.1	32	1.5	16	0.7	3	0.1	0	0.0	79	3.7
SE	0	0.0	5	0.2	20	0.9	30	1.4	38	1.8	18	0.8	10	0.5	121	5.7
SSE	0	0.0	3	0.1	27	1.3	33	1.5	39	1.8	16	0.7	8	0.4	126	5.9
S	0	0.0	10	0.5	25	1.2	15	0.7	11	0.5	11	0.5	5	0.2	77	3.6
SSW	0	0.0	6	0.3	9	0.4	9	0.4	10	0.5	5	0.2	3	0.1	42	2.0
SW	0	0.0	7	0.3	23	1.1	27	1.3	13	0.6	1	0.0	4	0.2	75	3.5
WSW	0	0.0	4	0.2	15	0.7	32	1.5	52	2.4	11	0.5	0	0.0	114	5.3
W	0	0.0	3	0.1	14	0.7	45	2.1	30	1.4	17	0.8	0	0.0	109	5.1
WNW	0	0.0	4	0.2	23	1.1	58	2.7	53	2.5	36	1.7	13	0.6	187	8.8
NW	0	0.0	7	0.3	27	1.3	47	2.2	127	5.9	67	3.1	38	1.8	313	14.6
NNW	0	0.0	3	0.1	32	1.5	76	3.6	70	3.3	26	1.2	14	0.7	221	10.3
	0	0.0	71	3.3	374	17.5	714	33.4	642	30.0	240	11.2	96	4.5	2137	100.0
MISSING HOURS:	23															
MEAN WIND SPEED:	12.6															

ARTIFICIAL ISLAND 01/05-03/05

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	1	0.0	1	0.0	0	0.0	0	0.0	2	0.1
NE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
ENE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
E	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
ESE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SSE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	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	0	0.0	0	0.0	0	0.0	4	0.2	0	0.0	0	0.0	4	0.2
W	0	0.0	0	0.0	0	0.0	2	0.1	1	0.0	1	0.0	0	0.0	4	0.2
WNW	0	0.0	0	0.0	0	0.0	3	0.1	0	0.0	0	0.0	1	0.0	4	0.2
NW	0	0.0	0	0.0	0	0.0	0	0.0	13	0.6	8	0.4	6	0.3	27	1.3
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	0	0.0	0	0.0	6	0.3	20	0.9	10	0.5	7	0.3	43	2.0

MEAN WIND SPEED: 18.0  
 MISSING: 0





ARTIFICIAL ISLAND 01/05-03/05

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	0	0.0	4	0.2	3	0.1	2	0.1	0	0.0	9	0.4
NNE	0	0.0	0	0.0	3	0.1	7	0.3	4	0.2	1	0.0	0	0.0	15	0.7
NE	0	0.0	0	0.0	2	0.1	3	0.1	2	0.1	0	0.0	0	0.0	7	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	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
ESE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SE	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
SSE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	0.1	0	0.0	2	0.1
S	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SSW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SW	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
WSW	0	0.0	0	0.0	2	0.1	1	0.0	4	0.2	1	0.0	0	0.0	8	0.4
W	0	0.0	0	0.0	0	0.0	3	0.1	1	0.0	0	0.0	2	0.1	6	0.3
WNW	0	0.0	0	0.0	0	0.0	4	0.2	1	0.0	2	0.1	2	0.1	9	0.4
NW	0	0.0	0	0.0	0	0.0	4	0.2	7	0.3	4	0.2	4	0.2	19	0.9
NNW	0	0.0	0	0.0	6	0.3	8	0.4	12	0.6	2	0.1	1	0.0	29	1.3
	0	0.0	0	0.0	16	0.7	35	1.6	34	1.6	14	0.6	9	0.4	108	5.0

MEAN WIND SPEED: 13.9  
 MISSING: 0

ARTIFICIAL ISLAND 01/05-03/05

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	6	0.3	22	1.0	28	1.3	11	0.5	3	0.1	70	3.2
NNE	0	0.0	0	0.0	10	0.5	24	1.1	31	1.4	11	0.5	0	0.0	76	3.5
NE	0	0.0	0	0.0	8	0.4	26	1.2	24	1.1	9	0.4	1	0.0	68	3.2
ENE	0	0.0	1	0.0	16	0.7	20	0.9	11	0.5	7	0.3	0	0.0	55	2.6
E	0	0.0	1	0.0	8	0.4	5	0.2	1	0.0	0	0.0	0	0.0	15	0.7
ESE	0	0.0	0	0.0	6	0.3	7	0.3	5	0.2	3	0.1	0	0.0	21	1.0
SE	0	0.0	1	0.0	1	0.0	3	0.1	7	0.3	16	0.7	5	0.2	33	1.5
SSE	0	0.0	2	0.1	12	0.6	16	0.7	12	0.6	6	0.3	0	0.0	48	2.2
S	0	0.0	3	0.1	5	0.2	3	0.1	6	0.3	2	0.1	0	0.0	19	0.9
SSW	0	0.0	1	0.0	7	0.3	3	0.1	5	0.2	0	0.0	0	0.0	16	0.7
SW	0	0.0	1	0.0	4	0.2	9	0.4	0	0.0	0	0.0	2	0.1	16	0.7
WSW	0	0.0	2	0.1	9	0.4	9	0.4	19	0.9	6	0.3	1	0.0	46	2.1
W	0	0.0	2	0.1	2	0.1	16	0.7	20	0.9	15	0.7	2	0.1	57	2.6
WNW	0	0.0	1	0.0	9	0.4	14	0.6	26	1.2	34	1.6	28	1.3	112	5.2
NW	0	0.0	2	0.1	7	0.3	9	0.4	37	1.7	27	1.3	49	2.3	131	6.1
NNW	0	0.0	2	0.1	8	0.4	26	1.2	10	0.5	10	0.5	24	1.1	80	3.7
	0	0.0	19	0.9	118	5.5	212	9.8	242	11.2	157	7.3	115	5.3	863	40.1

MEAN WIND SPEED: 15.2

MISSING: 0

ARTIFICIAL ISLAND 01/05-03/05

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	0	0.0	7	0.3	15	0.7	39	1.8	11	0.5	0	0.0	72	3.3
NNE	0	0.0	2	0.1	6	0.3	18	0.8	12	0.6	0	0.0	0	0.0	38	1.8
NE	0	0.0	2	0.1	4	0.2	22	1.0	22	1.0	1	0.0	0	0.0	51	2.4
ENE	0	0.0	1	0.0	11	0.5	16	0.7	9	0.4	0	0.0	0	0.0	37	1.7
E	0	0.0	2	0.1	10	0.5	9	0.4	1	0.0	0	0.0	0	0.0	22	1.0
ESE	0	0.0	3	0.1	10	0.5	14	0.6	19	0.9	5	0.2	1	0.0	52	2.4
SE	0	0.0	3	0.1	6	0.3	14	0.6	21	1.0	14	0.6	7	0.3	65	3.0
SSE	0	0.0	3	0.1	9	0.4	7	0.3	3	0.1	1	0.0	0	0.0	23	1.1
S	0	0.0	4	0.2	3	0.1	2	0.1	5	0.2	0	0.0	0	0.0	14	0.6
SSW	0	0.0	2	0.1	5	0.2	5	0.2	0	0.0	3	0.1	1	0.0	16	0.7
SW	0	0.0	2	0.1	4	0.2	14	0.6	6	0.3	0	0.0	2	0.1	28	1.3
WSW	0	0.0	1	0.0	5	0.2	12	0.6	11	0.5	2	0.1	1	0.0	32	1.5
W	0	0.0	2	0.1	4	0.2	12	0.6	11	0.5	4	0.2	0	0.0	33	1.5
WNW	0	0.0	0	0.0	1	0.0	21	1.0	23	1.1	2	0.1	0	0.0	47	2.2
NW	0	0.0	0	0.0	10	0.5	23	1.1	42	1.9	32	1.5	6	0.3	113	5.2
NNW	0	0.0	0	0.0	7	0.3	22	1.0	42	1.9	16	0.7	7	0.3	94	4.4
	0	0.0	27	1.3	102	4.7	226	10.5	266	12.3	91	4.2	25	1.2	737	34.2

MEAN WIND SPEED: 13.1  
MISSING: 0

ARTIFICIAL ISLAND 01/05-03/05

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	1	0.0	3	0.1	2	0.1	11	0.5	4	0.2	0	0.0	21	1.0
NNE	0	0.0	1	0.0	1	0.0	5	0.2	2	0.1	9	0.4	0	0.0	18	0.8
NE	0	0.0	0	0.0	1	0.0	6	0.3	11	0.5	5	0.2	0	0.0	23	1.1
ENE	0	0.0	1	0.0	4	0.2	3	0.1	2	0.1	0	0.0	0	0.0	10	0.5
E	0	0.0	0	0.0	1	0.0	3	0.1	0	0.0	0	0.0	0	0.0	4	0.2
ESE	0	0.0	1	0.0	2	0.1	3	0.1	1	0.0	1	0.0	0	0.0	8	0.4
SE	0	0.0	0	0.0	1	0.0	4	0.2	0	0.0	4	0.2	5	0.2	14	0.6
SSE	0	0.0	1	0.0	1	0.0	0	0.0	8	0.4	1	0.0	1	0.0	12	0.6
S	0	0.0	1	0.0	1	0.0	4	0.2	5	0.2	4	0.2	4	0.2	19	0.9
SSW	0	0.0	0	0.0	2	0.1	1	0.0	4	0.2	3	0.1	4	0.2	14	0.6
SW	0	0.0	0	0.0	1	0.0	5	0.2	12	0.6	11	0.5	1	0.0	30	1.4
WSW	0	0.0	1	0.0	1	0.0	1	0.0	5	0.2	5	0.2	0	0.0	13	0.6
W	0	0.0	0	0.0	0	0.0	1	0.0	5	0.2	3	0.1	0	0.0	9	0.4
WNW	0	0.0	1	0.0	6	0.3	2	0.1	1	0.0	0	0.0	0	0.0	10	0.5
NW	0	0.0	2	0.1	4	0.2	1	0.0	2	0.1	0	0.0	0	0.0	9	0.4
NNW	0	0.0	0	0.0	0	0.0	4	0.2	8	0.4	3	0.1	0	0.0	15	0.7
	0	0.0	10	0.5	29	1.3	45	2.1	77	3.6	53	2.5	15	0.7	229	10.6

MEAN WIND SPEED: 15.1  
MISSING: 0

ARTIFICIAL ISLAND 01/05-03/05

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

ALL STABILITY CLASSES

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	1	0.0	19	0.9	47	2.2	85	3.9	31	1.4	3	0.1	186	8.6
NNE	0	0.0	4	0.2	21	1.0	60	2.8	60	2.8	21	1.0	0	0.0	166	7.7
NE	0	0.0	3	0.1	15	0.7	61	2.8	62	2.9	20	0.9	1	0.0	162	7.5
ENE	0	0.0	3	0.1	31	1.4	42	1.9	22	1.0	7	0.3	0	0.0	105	4.9
E	0	0.0	3	0.1	20	0.9	17	0.8	2	0.1	0	0.0	0	0.0	42	1.9
ESE	0	0.0	4	0.2	19	0.9	24	1.1	25	1.2	9	0.4	1	0.0	82	3.8
SE	0	0.0	4	0.2	10	0.5	24	1.1	29	1.3	34	1.6	17	0.8	118	5.5
SSE	0	0.0	6	0.3	22	1.0	23	1.1	27	1.3	13	0.6	5	0.2	96	4.5
S	0	0.0	8	0.4	11	0.5	9	0.4	28	1.3	15	0.7	7	0.3	78	3.6
SSW	0	0.0	3	0.1	18	0.8	9	0.4	11	0.5	11	0.5	5	0.2	57	2.6
SW	0	0.0	3	0.1	10	0.5	28	1.3	19	0.9	11	0.5	5	0.2	76	3.5
WSW	0	0.0	4	0.2	21	1.0	24	1.1	43	2.0	20	0.9	2	0.1	114	5.3
W	0	0.0	4	0.2	11	0.5	37	1.7	44	2.0	26	1.2	6	0.3	128	5.9
WNW	0	0.0	2	0.1	18	0.8	44	2.0	53	2.5	39	1.8	35	1.6	191	8.9
NW	0	0.0	5	0.2	21	1.0	38	1.8	107	5.0	81	3.8	70	3.2	322	14.9
NNW	0	0.0	2	0.1	22	1.0	62	2.9	80	3.7	33	1.5	32	1.5	231	10.7
	0	0.0	59	2.7	289	13.4	549	25.5	697	32.4	371	17.2	189	8.8	2154	100.0

MISSING HOURS: 6

MEAN WIND SPEED: 14.5

ARTIFICIAL ISLAND 01/05-03/05

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	3	0.1	2	0.1	1	0.0	0	0.0	0	0.0	6	0.3
NNE	0	0.0	1	0.0	1	0.0	2	0.1	3	0.1	0	0.0	0	0.0	7	0.3
NE	0	0.0	1	0.0	0	0.0	2	0.1	3	0.1	5	0.2	0	0.0	11	0.5
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	3	0.1	0	0.0	0	0.0	0	0.0	4	0.2
SSE	0	0.0	0	0.0	0	0.0	0	0.0	4	0.2	1	0.0	4	0.2	9	0.4
S	0	0.0	0	0.0	2	0.1	0	0.0	12	0.6	9	0.4	3	0.1	26	1.2
SSW	0	0.0	0	0.0	4	0.2	0	0.0	2	0.1	5	0.2	0	0.0	11	0.5
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	2	0.1	1	0.0	0	0.0	3	0.1	0	0.0	6	0.3
W	0	0.0	0	0.0	5	0.2	1	0.0	1	0.0	0	0.0	0	0.0	7	0.3
WNW	0	0.0	0	0.0	2	0.1	0	0.0	0	0.0	0	0.0	0	0.0	2	0.1
NW	0	0.0	1	0.0	0	0.0	0	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	3	0.1	21	1.0	12	0.6	26	1.2	23	1.1	7	0.3	92	4.3

MEAN WIND SPEED: 14.5

MISSING: 0

ARTIFICIAL ISLAND 01/05-03/05

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	19	0.9	47	2.2	85	3.9	31	1.4	3	0.1	186	8.6
NNE	0	0.0	4	0.2	21	1.0	60	2.8	60	2.8	21	1.0	0	0.0	166	7.7
NE	0	0.0	3	0.1	15	0.7	61	2.8	62	2.9	20	0.9	1	0.0	162	7.5
ENE	0	0.0	3	0.1	32	1.5	42	1.9	22	1.0	7	0.3	0	0.0	106	4.9
E	0	0.0	3	0.1	20	0.9	17	0.8	2	0.1	0	0.0	0	0.0	42	1.9
ESE	0	0.0	4	0.2	19	0.9	24	1.1	25	1.2	9	0.4	1	0.0	82	3.8
SE	0	0.0	4	0.2	10	0.5	26	1.2	29	1.3	34	1.6	17	0.8	120	5.6
SSE	0	0.0	6	0.3	22	1.0	23	1.1	27	1.3	13	0.6	5	0.2	96	4.5
S	0	0.0	8	0.4	11	0.5	9	0.4	28	1.3	15	0.7	7	0.3	78	3.6
SSW	0	0.0	3	0.1	18	0.8	9	0.4	11	0.5	11	0.5	5	0.2	57	2.6
SW	0	0.0	3	0.1	10	0.5	28	1.3	19	0.9	11	0.5	5	0.2	76	3.5
WSW	0	0.0	4	0.2	21	1.0	24	1.1	43	2.0	20	0.9	2	0.1	114	5.3
W	0	0.0	4	0.2	11	0.5	37	1.7	44	2.0	26	1.2	6	0.3	128	5.9
WNW	0	0.0	2	0.1	18	0.8	44	2.0	53	2.5	39	1.8	35	1.6	191	8.9
NW	0	0.0	5	0.2	21	1.0	38	1.8	107	5.0	81	3.8	70	3.2	322	14.9
NNW	0	0.0	2	0.1	22	1.0	62	2.9	80	3.7	33	1.5	32	1.5	231	10.7
	0	0.0	59	2.7	290	13.4	551	25.5	697	32.3	371	17.2	189	8.8	2157	100.0

MISSING HOURS: 3

MEAN WIND SPEED: 14.5

Lapse Rate  
Wind Distributions  
300-33 Foot

4/2005 - 6/2005



ARTIFICIAL ISLAND 04/05-06/05

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED  
BY ATMOSPHERIC STABILITY CLASS

WIND: 30 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	7	0.3	4	0.2	0	0.0	0	0.0	11	0.5
NNE	0	0.0	0	0.0	0	0.0	11	0.5	2	0.1	0	0.0	0	0.0	13	0.6
NE	0	0.0	0	0.0	0	0.0	11	0.5	11	0.5	0	0.0	0	0.0	22	1.0
ENE	0	0.0	0	0.0	0	0.0	5	0.2	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	0	0.0	0	0.0	1	0.0
ESE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SE	0	0.0	0	0.0	1	0.0	5	0.2	8	0.4	0	0.0	0	0.0	14	0.6
SSE	0	0.0	0	0.0	2	0.1	10	0.5	4	0.2	5	0.2	0	0.0	21	1.0
S	0	0.0	0	0.0	1	0.0	2	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	1	0.0	1	0.0	0	0.0	0	0.0	0	0.0	2	0.1
WSW	0	0.0	0	0.0	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	5	0.2	7	0.3	0	0.0	0	0.0	12	0.6
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	5	0.2	3	0.1	0	0.0	0	0.0	8	0.4
NNW	0	0.0	0	0.0	0	0.0	5	0.2	10	0.5	0	0.0	0	0.0	15	0.7
	0	0.0	0	0.0	5	0.2	73	3.4	54	2.5	5	0.2	0	0.0	137	6.3

MEAN WIND SPEED: 12.4

MISSING: 0

ARTIFICIAL ISLAND 04/05-06/05

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED  
 BY ATMOSPHERIC STABILITY CLASS  
 WIND: 30 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	8	0.4	0	0.0	0	0.0	0	0.0	9	0.4
NNE	0	0.0	0	0.0	0	0.0	1	0.0	2	0.1	0	0.0	0	0.0	3	0.1
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	3	0.1	3	0.1	0	0.0	0	0.0	0	0.0	6	0.3
E	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
ESE	0	0.0	0	0.0	1	0.0	1	0.0	0	0.0	0	0.0	0	0.0	2	0.1
SE	0	0.0	0	0.0	1	0.0	1	0.0	2	0.1	1	0.0	0	0.0	5	0.2
SSE	0	0.0	0	0.0	3	0.1	1	0.0	1	0.0	3	0.1	0	0.0	8	0.4
S	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SSW	0	0.0	0	0.0	5	0.2	0	0.0	0	0.0	0	0.0	0	0.0	5	0.2
SW	0	0.0	0	0.0	2	0.1	0	0.0	0	0.0	0	0.0	0	0.0	2	0.1
WSW	0	0.0	0	0.0	4	0.2	6	0.3	0	0.0	0	0.0	0	0.0	10	0.5
W	0	0.0	0	0.0	3	0.1	6	0.3	3	0.1	0	0.0	0	0.0	12	0.6
WNW	0	0.0	0	0.0	4	0.2	1	0.0	1	0.0	0	0.0	0	0.0	6	0.3
NW	0	0.0	0	0.0	0	0.0	3	0.1	2	0.1	0	0.0	0	0.0	5	0.2
NNW	0	0.0	0	0.0	0	0.0	6	0.3	0	0.0	0	0.0	0	0.0	6	0.3
	0	0.0	0	0.0	34	1.6	40	1.8	12	0.6	4	0.2	0	0.0	90	4.1

MEAN WIND SPEED: 9.5  
 MISSING: 0

ARTIFICIAL ISLAND 04/05-06/05

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED  
 BY ATMOSPHERIC STABILITY CLASS  
 WIND: 30 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	6	0.3	2	0.1	2	0.1	0	0.0	0	0.0	10	0.5
NNE	0	0.0	0	0.0	4	0.2	4	0.2	1	0.0	0	0.0	0	0.0	9	0.4
NE	0	0.0	0	0.0	8	0.4	12	0.6	1	0.0	0	0.0	0	0.0	21	1.0
ENE	0	0.0	0	0.0	1	0.0	3	0.1	0	0.0	0	0.0	0	0.0	4	0.2
E	0	0.0	0	0.0	2	0.1	0	0.0	0	0.0	0	0.0	0	0.0	2	0.1
ESE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SE	0	0.0	0	0.0	2	0.1	2	0.1	4	0.2	2	0.1	0	0.0	10	0.5
SSE	0	0.0	0	0.0	2	0.1	1	0.0	6	0.3	2	0.1	0	0.0	11	0.5
S	0	0.0	0	0.0	3	0.1	3	0.1	0	0.0	0	0.0	0	0.0	6	0.3
SSW	0	0.0	0	0.0	5	0.2	1	0.0	0	0.0	0	0.0	0	0.0	6	0.3
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	2	0.1	3	0.1	1	0.0	0	0.0	0	0.0	6	0.3
W	0	0.0	0	0.0	2	0.1	6	0.3	7	0.3	0	0.0	0	0.0	15	0.7
WNW	0	0.0	0	0.0	2	0.1	5	0.2	2	0.1	0	0.0	0	0.0	9	0.4
NW	0	0.0	0	0.0	3	0.1	4	0.2	0	0.0	0	0.0	0	0.0	7	0.3
NNW	0	0.0	0	0.0	4	0.2	7	0.3	2	0.1	0	0.0	0	0.0	13	0.6
	0	0.0	0	0.0	55	2.5	54	2.5	27	1.2	4	0.2	0	0.0	140	6.4

MEAN WIND SPEED: 9.5  
 MISSING: 0

ARTIFICIAL ISLAND 04/05-06/05

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED  
 BY ATMOSPHERIC STABILITY CLASS  
 WIND: 30 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	SUM	PERCENT
N	0	0.0	0	0.0	11	0.5	15	0.7	5	0.2	0	0.0	0	0.0	31	1.4
NNE	0	0.0	0	0.0	17	0.8	20	0.9	13	0.6	0	0.0	0	0.0	50	2.3
NE	0	0.0	3	0.1	12	0.6	29	1.3	7	0.3	0	0.0	0	0.0	51	2.3
ENE	0	0.0	2	0.1	21	1.0	29	1.3	2	0.1	0	0.0	0	0.0	54	2.5
E	0	0.0	1	0.0	20	0.9	9	0.4	0	0.0	0	0.0	0	0.0	30	1.4
ESE	0	0.0	0	0.0	8	0.4	18	0.8	0	0.0	0	0.0	0	0.0	26	1.2
SE	0	0.0	3	0.1	10	0.5	44	2.0	43	2.0	5	0.2	0	0.0	105	4.8
SSE	0	0.0	2	0.1	14	0.6	33	1.5	22	1.0	2	0.1	0	0.0	73	3.4
S	0	0.0	3	0.1	27	1.2	46	2.1	3	0.1	0	0.0	0	0.0	79	3.6
SSW	0	0.0	1	0.0	44	2.0	20	0.9	2	0.1	1	0.0	0	0.0	68	3.1
SW	0	0.0	1	0.0	17	0.8	26	1.2	3	0.1	2	0.1	1	0.0	50	2.3
WSW	0	0.0	1	0.0	17	0.8	25	1.1	17	0.8	0	0.0	0	0.0	60	2.8
W	0	0.0	1	0.0	20	0.9	34	1.6	12	0.6	5	0.2	0	0.0	72	3.3
WNW	0	0.0	1	0.0	12	0.6	23	1.1	8	0.4	3	0.1	0	0.0	47	2.2
NW	0	0.0	2	0.1	14	0.6	16	0.7	8	0.4	0	0.0	0	0.0	40	1.8
NNW	0	0.0	4	0.2	16	0.7	10	0.5	4	0.2	0	0.0	0	0.0	34	1.6
	0	0.0	25	1.1	280	12.8	397	18.2	149	6.8	18	0.8	1	0.0	870	39.9

MEAN WIND SPEED: 9.4  
 MISSING: 0

ARTIFICIAL ISLAND 04/05-06/05

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED  
BY ATMOSPHERIC STABILITY CLASS

WIND: 30 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	SUM	PERCENT
N	0	0.0	5	0.2	24	1.1	7	0.3	0	0.0	0	0.0	0	0.0	36	1.7
NNE	0	0.0	3	0.1	26	1.2	11	0.5	0	0.0	0	0.0	0	0.0	40	1.8
NE	0	0.0	3	0.1	31	1.4	15	0.7	0	0.0	0	0.0	0	0.0	49	2.2
ENE	0	0.0	9	0.4	18	0.8	2	0.1	0	0.0	0	0.0	0	0.0	29	1.3
E	0	0.0	5	0.2	7	0.3	1	0.0	0	0.0	0	0.0	0	0.0	13	0.6
ESE	0	0.0	1	0.0	16	0.7	10	0.5	0	0.0	0	0.0	0	0.0	27	1.2
SE	0	0.0	1	0.0	18	0.8	46	2.1	20	0.9	5	0.2	4	0.2	94	4.3
SSE	0	0.0	4	0.2	17	0.8	17	0.8	5	0.2	2	0.1	0	0.0	45	2.1
S	0	0.0	2	0.1	18	0.8	12	0.6	3	0.1	0	0.0	0	0.0	35	1.6
SSW	0	0.0	2	0.1	19	0.9	14	0.6	3	0.1	2	0.1	0	0.0	40	1.8
SW	0	0.0	1	0.0	26	1.2	6	0.3	3	0.1	0	0.0	0	0.0	36	1.7
WSW	0	0.0	3	0.1	33	1.5	15	0.7	4	0.2	0	0.0	0	0.0	55	2.5
W	0	0.0	6	0.3	26	1.2	8	0.4	0	0.0	0	0.0	0	0.0	40	1.8
WNW	0	0.0	6	0.3	30	1.4	19	0.9	0	0.0	0	0.0	0	0.0	55	2.5
NW	0	0.0	5	0.2	32	1.5	32	1.5	1	0.0	0	0.0	0	0.0	70	3.2
NNW	0	0.0	4	0.2	16	0.7	5	0.2	0	0.0	0	0.0	0	0.0	25	1.1
	0	0.0	60	2.8	357	16.4	220	10.1	39	1.8	9	0.4	4	0.2	689	31.6

MEAN WIND SPEED: 7.5  
MISSING: 0

ARTIFICIAL ISLAND 04/05-06/05

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED  
BY ATMOSPHERIC STABILITY CLASS

WIND: 30 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	6	0.3	3	0.1	0	0.0	0	0.0	0	0.0	10	0.5
NNE	0	0.0	2	0.1	8	0.4	0	0.0	0	0.0	0	0.0	0	0.0	10	0.5
NE	0	0.0	0	0.0	4	0.2	0	0.0	0	0.0	0	0.0	0	0.0	4	0.2
ENE	0	0.0	0	0.0	3	0.1	0	0.0	0	0.0	0	0.0	0	0.0	3	0.1
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	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	2	0.1	14	0.6	25	1.1	9	0.4	0	0.0	1	0.0	51	2.3
SSE	0	0.0	4	0.2	7	0.3	5	0.2	0	0.0	1	0.0	0	0.0	17	0.8
S	0	0.0	0	0.0	7	0.3	5	0.2	0	0.0	0	0.0	0	0.0	12	0.6
SSW	0	0.0	1	0.0	3	0.1	7	0.3	3	0.1	0	0.0	0	0.0	14	0.6
SW	0	0.0	0	0.0	5	0.2	2	0.1	0	0.0	0	0.0	0	0.0	7	0.3
WSW	0	0.0	3	0.1	15	0.7	2	0.1	0	0.0	0	0.0	0	0.0	20	0.9
W	0	0.0	1	0.0	6	0.3	0	0.0	0	0.0	0	0.0	0	0.0	7	0.3
WNW	0	0.0	3	0.1	8	0.4	0	0.0	0	0.0	0	0.0	0	0.0	11	0.5
NW	0	0.0	1	0.0	6	0.3	0	0.0	0	0.0	0	0.0	0	0.0	7	0.3
NNW	0	0.0	2	0.1	6	0.3	2	0.1	0	0.0	0	0.0	0	0.0	10	0.5
	0	0.0	22	1.0	100	4.6	53	2.4	12	0.6	1	0.0	1	0.0	189	8.7

MEAN WIND SPEED: 7.2  
MISSING: 0

ARTIFICIAL ISLAND 04/05-06/05

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED  
 BY ATMOSPHERIC STABILITY CLASS  
 WIND: 30 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	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	2	0.1	2	0.1	0	0.0	0	0.0	0	0.0	0	0.0	4	0.2
E	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
ESE	0	0.0	2	0.1	2	0.1	1	0.0	0	0.0	0	0.0	0	0.0	5	0.2
SE	0	0.0	1	0.0	10	0.5	15	0.7	0	0.0	0	0.0	0	0.0	26	1.2
SSE	0	0.0	4	0.2	7	0.3	0	0.0	0	0.0	0	0.0	0	0.0	11	0.5
S	0	0.0	3	0.1	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	4	0.2
SSW	0	0.0	1	0.0	1	0.0	3	0.1	0	0.0	0	0.0	0	0.0	5	0.2
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	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	1	0.0	1	0.0	0	0.0	0	0.0	0	0.0	2	0.1
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	14	0.6	29	1.3	21	1.0	0	0.0	0	0.0	0	0.0	64	2.9

MEAN WIND SPEED: 6.0

MISSING: 0

ARTIFICIAL ISLAND 04/05-06/05

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED  
 BY ATMOSPHERIC STABILITY CLASS  
 WIND: 30 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
N	0	0.0	6	0.3	50	2.3	42	1.9	11	0.5	0	0.0	0	0.0	109	5.0
NNE	0	0.0	5	0.2	55	2.5	47	2.2	18	0.8	0	0.0	0	0.0	125	5.7
NE	0	0.0	6	0.3	61	2.8	70	3.2	20	0.9	0	0.0	0	0.0	157	7.2
ENE	0	0.0	13	0.6	48	2.2	42	1.9	2	0.1	0	0.0	0	0.0	105	4.8
E	0	0.0	8	0.4	31	1.4	11	0.5	0	0.0	0	0.0	0	0.0	50	2.3
ESE	0	0.0	3	0.1	29	1.3	32	1.5	0	0.0	0	0.0	0	0.0	64	2.9
SE	0	0.0	7	0.3	56	2.6	138	6.3	86	3.9	13	0.6	5	0.2	305	14.0
SSE	0	0.0	14	0.6	52	2.4	67	3.1	38	1.7	15	0.7	0	0.0	186	8.5
S	0	0.0	8	0.4	57	2.6	68	3.1	6	0.3	0	0.0	0	0.0	139	6.4
SSW	0	0.0	5	0.2	77	3.5	45	2.1	8	0.4	3	0.1	0	0.0	138	6.3
SW	0	0.0	2	0.1	61	2.8	36	1.7	7	0.3	2	0.1	1	0.0	109	5.0
WSW	0	0.0	8	0.4	71	3.3	54	2.5	23	1.1	0	0.0	0	0.0	156	7.2
W	0	0.0	8	0.4	57	2.6	59	2.7	29	1.3	5	0.2	0	0.0	158	7.3
WNW	0	0.0	10	0.5	56	2.6	50	2.3	15	0.7	3	0.1	0	0.0	134	6.1
NW	0	0.0	8	0.4	56	2.6	61	2.8	14	0.6	0	0.0	0	0.0	139	6.4
NNW	0	0.0	10	0.5	43	2.0	36	1.7	16	0.7	0	0.0	0	0.0	105	4.8
	0	0.0	121	5.6	860	39.5	858	39.4	293	13.4	41	1.9	6	0.3	2179	100.0

MISSING HOURS: 5

MEAN WIND SPEED: 8.7



ARTIFICIAL ISLAND 04/05-06/05

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED  
 BY ATMOSPHERIC STABILITY CLASS  
 WIND: 30 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	6	0.3	50	2.3	42	1.9	11	0.5	0	0.0	0	0.0	109	5.0
NNE	0	0.0	5	0.2	55	2.5	47	2.2	18	0.8	0	0.0	0	0.0	125	5.7
NE	0	0.0	6	0.3	61	2.8	70	3.2	20	0.9	0	0.0	0	0.0	157	7.2
ENE	0	0.0	13	0.6	48	2.2	42	1.9	2	0.1	0	0.0	0	0.0	105	4.8
E	0	0.0	8	0.4	31	1.4	11	0.5	0	0.0	0	0.0	0	0.0	50	2.3
ESE	0	0.0	3	0.1	29	1.3	32	1.5	0	0.0	0	0.0	0	0.0	64	2.9
SE	0	0.0	7	0.3	56	2.6	141	6.5	86	3.9	13	0.6	5	0.2	308	14.1
SSE	0	0.0	14	0.6	53	2.4	67	3.1	38	1.7	15	0.7	0	0.0	187	8.6
S	0	0.0	8	0.4	57	2.6	68	3.1	6	0.3	0	0.0	0	0.0	139	6.4
SSW	0	0.0	5	0.2	77	3.5	45	2.1	8	0.4	3	0.1	0	0.0	138	6.3
SW	0	0.0	2	0.1	61	2.8	36	1.6	7	0.3	2	0.1	1	0.0	109	5.0
WSW	0	0.0	8	0.4	71	3.3	54	2.5	23	1.1	0	0.0	0	0.0	156	7.1
W	0	0.0	8	0.4	57	2.6	59	2.7	29	1.3	5	0.2	0	0.0	158	7.2
WNW	0	0.0	10	0.5	56	2.6	50	2.3	15	0.7	3	0.1	0	0.0	134	6.1
NW	0	0.0	8	0.4	56	2.6	61	2.8	14	0.6	0	0.0	0	0.0	139	6.4
NNW	0	0.0	10	0.5	43	2.0	36	1.6	16	0.7	0	0.0	0	0.0	105	4.8
	0	0.0	121	5.5	861	39.4	861	39.4	293	13.4	41	1.9	6	0.3	2183	100.0

MISSING HOURS: 1

MEAN WIND SPEED: 8.7

ARTIFICIAL ISLAND 04/05-06/05

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	6	0.3	5	0.2	0	0.0	0	0.0	11	0.5
NNE	0	0.0	0	0.0	0	0.0	4	0.2	12	0.6	0	0.0	0	0.0	16	0.8
NE	0	0.0	0	0.0	0	0.0	2	0.1	11	0.5	6	0.3	0	0.0	19	0.9
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	1	0.0	0	0.0	0	0.0	0	0.0	1	0.0
ESE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SE	0	0.0	0	0.0	0	0.0	3	0.1	3	0.1	2	0.1	0	0.0	8	0.4
SSE	0	0.0	0	0.0	0	0.0	4	0.2	11	0.5	11	0.5	0	0.0	26	1.2
S	0	0.0	0	0.0	1	0.0	2	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	1	0.0	1	0.0	0	0.0	0	0.0	0	0.0	2	0.1
WSW	0	0.0	0	0.0	0	0.0	3	0.1	2	0.1	0	0.0	0	0.0	5	0.2
W	0	0.0	0	0.0	0	0.0	3	0.1	3	0.1	5	0.2	0	0.0	11	0.5
WNW	0	0.0	0	0.0	0	0.0	0	0.0	2	0.1	4	0.2	0	0.0	6	0.3
NW	0	0.0	0	0.0	0	0.0	2	0.1	5	0.2	1	0.0	0	0.0	8	0.4
NNW	0	0.0	0	0.0	0	0.0	2	0.1	7	0.3	6	0.3	0	0.0	15	0.7
	0	0.0	0	0.0	2	0.1	34	1.6	65	3.1	35	1.7	0	0.0	136	6.5

MEAN WIND SPEED: 15.5  
MISSING: 1

ARTIFICIAL ISLAND 04/05-06/05

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	5	0.2	1	0.0	0	0.0	0	0.0	7	0.3
NNE	0	0.0	0	0.0	0	0.0	2	0.1	1	0.0	1	0.0	0	0.0	4	0.2
NE	0	0.0	0	0.0	2	0.1	7	0.3	2	0.1	0	0.0	0	0.0	11	0.5
ENE	0	0.0	0	0.0	2	0.1	2	0.1	1	0.0	0	0.0	0	0.0	5	0.2
E	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
ESE	0	0.0	0	0.0	0	0.0	2	0.1	0	0.0	0	0.0	0	0.0	2	0.1
SE	0	0.0	0	0.0	0	0.0	2	0.1	1	0.0	2	0.1	0	0.0	5	0.2
SSE	0	0.0	0	0.0	1	0.0	1	0.0	2	0.1	1	0.0	3	0.1	8	0.4
S	0	0.0	0	0.0	1	0.0	1	0.0	0	0.0	0	0.0	0	0.0	2	0.1
SSW	0	0.0	0	0.0	1	0.0	1	0.0	0	0.0	0	0.0	0	0.0	2	0.1
SW	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	1	0.0
WSW	0	0.0	0	0.0	2	0.1	6	0.3	2	0.1	0	0.0	0	0.0	10	0.5
W	0	0.0	0	0.0	2	0.1	7	0.3	2	0.1	2	0.1	0	0.0	13	0.6
WNW	0	0.0	0	0.0	0	0.0	5	0.2	0	0.0	1	0.0	0	0.0	6	0.3
NW	0	0.0	0	0.0	0	0.0	3	0.1	3	0.1	0	0.0	0	0.0	6	0.3
NNW	0	0.0	0	0.0	0	0.0	5	0.2	2	0.1	0	0.0	0	0.0	7	0.3
	0	0.0	0	0.0	13	0.6	50	2.4	17	0.8	7	0.3	3	0.1	90	4.3

MEAN WIND SPEED: 11.7  
MISSING: 0

ARTIFICIAL ISLAND 04/05-06/05

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	4	0.2	2	0.1	1	0.0	0	0.0	10	0.5
NNE	0	0.0	0	0.0	2	0.1	4	0.2	1	0.0	1	0.0	0	0.0	8	0.4
NE	0	0.0	0	0.0	4	0.2	9	0.4	8	0.4	1	0.0	0	0.0	22	1.0
ENE	0	0.0	0	0.0	1	0.0	3	0.1	1	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	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	1	0.0	2	0.1	1	0.0	1	0.0	5	0.2
SSE	0	0.0	0	0.0	2	0.1	2	0.1	5	0.2	5	0.2	1	0.0	15	0.7
S	0	0.0	0	0.0	3	0.1	1	0.0	1	0.0	0	0.0	0	0.0	5	0.2
SSW	0	0.0	0	0.0	4	0.2	1	0.0	1	0.0	0	0.0	0	0.0	6	0.3
SW	0	0.0	0	0.0	2	0.1	3	0.1	2	0.1	0	0.0	0	0.0	7	0.3
WSW	0	0.0	0	0.0	2	0.1	4	0.2	0	0.0	1	0.0	0	0.0	7	0.3
W	0	0.0	0	0.0	2	0.1	6	0.3	4	0.2	3	0.1	0	0.0	15	0.7
WNW	0	0.0	0	0.0	2	0.1	5	0.2	1	0.0	2	0.1	0	0.0	10	0.5
NW	0	0.0	0	0.0	1	0.0	3	0.1	2	0.1	0	0.0	0	0.0	6	0.3
NNW	0	0.0	0	0.0	1	0.0	9	0.4	2	0.1	1	0.0	0	0.0	13	0.6
	0	0.0	0	0.0	31	1.5	56	2.7	32	1.5	16	0.8	2	0.1	137	6.5

MEAN WIND SPEED: 12.0

MISSING: 3

ARTIFICIAL ISLAND 04/05-06/05

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	13	0.6	15	0.7	2	0.1	0	0.0	37	1.8
NNE	0	0.0	0	0.0	6	0.3	17	0.8	17	0.8	12	0.6	0	0.0	52	2.5
NE	0	0.0	1	0.0	9	0.4	13	0.6	12	0.6	6	0.3	0	0.0	41	2.0
ENE	0	0.0	1	0.0	11	0.5	17	0.8	20	1.0	2	0.1	0	0.0	51	2.4
E	0	0.0	0	0.0	10	0.5	15	0.7	3	0.1	0	0.0	0	0.0	28	1.3
ESE	0	0.0	1	0.0	4	0.2	9	0.4	8	0.4	0	0.0	0	0.0	22	1.0
SE	0	0.0	2	0.1	3	0.1	15	0.7	35	1.7	17	0.8	10	0.5	82	3.9
SSE	0	0.0	2	0.1	9	0.4	21	1.0	28	1.3	15	0.7	0	0.0	75	3.6
S	0	0.0	1	0.0	13	0.6	37	1.8	27	1.3	0	0.0	0	0.0	78	3.7
SSW	0	0.0	1	0.0	18	0.9	20	1.0	12	0.6	1	0.0	1	0.0	53	2.5
SW	0	0.0	0	0.0	10	0.5	22	1.0	9	0.4	3	0.1	3	0.1	47	2.2
WSW	0	0.0	1	0.0	12	0.6	17	0.8	15	0.7	13	0.6	4	0.2	62	3.0
W	0	0.0	1	0.0	12	0.6	22	1.0	26	1.2	5	0.2	5	0.2	71	3.4
WNW	0	0.0	2	0.1	7	0.3	17	0.8	20	1.0	3	0.1	3	0.1	52	2.5
NW	0	0.0	1	0.0	6	0.3	12	0.6	10	0.5	7	0.3	0	0.0	36	1.7
NNW	0	0.0	1	0.0	9	0.4	10	0.5	7	0.3	1	0.0	0	0.0	28	1.3
	0	0.0	16	0.8	145	6.9	277	13.2	264	12.6	87	4.1	26	1.2	815	38.8

MEAN WIND SPEED: 12.6  
 MISSING: 55

ARTIFICIAL ISLAND 04/05-06/05

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	1	0.0	2	0.1	12	0.6	14	0.7	0	0.0	0	0.0	29	1.4
NNE	0	0.0	0	0.0	9	0.4	20	1.0	14	0.7	0	0.0	0	0.0	43	2.0
NE	0	0.0	0	0.0	6	0.3	22	1.0	10	0.5	0	0.0	0	0.0	38	1.8
ENE	0	0.0	1	0.0	9	0.4	14	0.7	2	0.1	0	0.0	0	0.0	26	1.2
E	0	0.0	3	0.1	12	0.6	3	0.1	1	0.0	0	0.0	0	0.0	19	0.9
ESE	0	0.0	0	0.0	4	0.2	11	0.5	7	0.3	1	0.0	0	0.0	23	1.1
SE	0	0.0	2	0.1	9	0.4	14	0.7	27	1.3	10	0.5	16	0.8	78	3.7
SSE	0	0.0	2	0.1	6	0.3	13	0.6	19	0.9	4	0.2	2	0.1	46	2.2
S	0	0.0	2	0.1	8	0.4	12	0.6	5	0.2	3	0.1	0	0.0	30	1.4
SSW	0	0.0	0	0.0	11	0.5	16	0.8	10	0.5	2	0.1	3	0.1	42	2.0
SW	0	0.0	2	0.1	11	0.5	18	0.9	8	0.4	3	0.1	1	0.0	43	2.0
WSW	0	0.0	0	0.0	18	0.9	24	1.1	14	0.7	3	0.1	0	0.0	59	2.8
W	0	0.0	2	0.1	12	0.6	23	1.1	7	0.3	0	0.0	0	0.0	44	2.1
WNW	0	0.0	5	0.2	16	0.8	24	1.1	15	0.7	0	0.0	0	0.0	60	2.9
NW	0	0.0	0	0.0	5	0.2	19	0.9	34	1.6	1	0.0	0	0.0	59	2.8
NNW	0	0.0	2	0.1	6	0.3	15	0.7	7	0.3	0	0.0	0	0.0	30	1.4
	0	0.0	22	1.0	144	6.9	260	12.4	194	9.2	27	1.3	22	1.0	669	31.9

MEAN WIND SPEED: 11.4  
MISSING: 20

ARTIFICIAL ISLAND 04/05-06/05

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	1	0.0	5	0.2	3	0.1	0	0.0	0	0.0	9	0.4
NNE	0	0.0	0	0.0	0	0.0	3	0.1	4	0.2	0	0.0	0	0.0	7	0.3
NE	0	0.0	0	0.0	1	0.0	5	0.2	0	0.0	0	0.0	0	0.0	6	0.3
ENE	0	0.0	0	0.0	3	0.1	2	0.1	0	0.0	0	0.0	0	0.0	5	0.2
E	0	0.0	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	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	2	0.1	5	0.2	13	0.6	11	0.5	1	0.0	32	1.5
SSE	0	0.0	0	0.0	4	0.2	4	0.2	11	0.5	2	0.1	1	0.0	22	1.0
S	0	0.0	0	0.0	2	0.1	7	0.3	5	0.2	0	0.0	0	0.0	14	0.7
SSW	0	0.0	0	0.0	3	0.1	4	0.2	9	0.4	5	0.2	0	0.0	21	1.0
SW	0	0.0	0	0.0	1	0.0	4	0.2	4	0.2	0	0.0	0	0.0	9	0.4
WSW	0	0.0	0	0.0	3	0.1	13	0.6	6	0.3	0	0.0	0	0.0	22	1.0
W	0	0.0	0	0.0	5	0.2	6	0.3	0	0.0	0	0.0	0	0.0	11	0.5
WNW	0	0.0	0	0.0	6	0.3	8	0.4	0	0.0	0	0.0	0	0.0	14	0.7
NW	0	0.0	0	0.0	2	0.1	2	0.1	4	0.2	0	0.0	0	0.0	8	0.4
NNW	0	0.0	0	0.0	0	0.0	2	0.1	2	0.1	0	0.0	0	0.0	4	0.2
	0	0.0	0	0.0	35	1.7	72	3.4	62	3.0	18	0.9	2	0.1	189	9.0

MEAN WIND SPEED: 12.3  
MISSING: 0

ARTIFICIAL ISLAND 04/05-06/05

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	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	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	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
ESE	0	0.0	1	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	2	0.1
SE	0	0.0	0	0.0	1	0.0	4	0.2	4	0.2	1	0.0	0	0.0	10	0.5
SSE	0	0.0	0	0.0	1	0.0	5	0.2	7	0.3	0	0.0	0	0.0	13	0.6
S	0	0.0	0	0.0	1	0.0	1	0.0	3	0.1	0	0.0	0	0.0	5	0.2
SSW	0	0.0	0	0.0	4	0.2	2	0.1	3	0.1	2	0.1	0	0.0	11	0.5
SW	0	0.0	0	0.0	4	0.2	6	0.3	1	0.0	0	0.0	0	0.0	11	0.5
WSW	0	0.0	0	0.0	2	0.1	1	0.0	0	0.0	0	0.0	0	0.0	3	0.1
W	0	0.0	0	0.0	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	1	0.0	0	0.0	1	0.0	1	0.0	0	0.0	0	0.0	3	0.1
NNW	0	0.0	0	0.0	0	0.0	0	0.0	2	0.1	0	0.0	0	0.0	2	0.1
	0	0.0	2	0.1	15	0.7	22	1.0	22	1.0	3	0.1	0	0.0	64	3.0

MEAN WIND SPEED: 10.9  
MISSING: 0



ARTIFICIAL ISLAND 04/05-06/05

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	2	0.1	13	0.6	46	2.2	41	2.0	3	0.1	0	0.0	105	5.0
NNE	0	0.0	0	0.0	17	0.8	50	2.4	49	2.3	14	0.7	0	0.0	130	6.2
NE	0	0.0	1	0.0	22	1.0	58	2.8	43	2.0	13	0.6	0	0.0	137	6.5
ENE	0	0.0	2	0.1	26	1.2	39	1.9	28	1.3	2	0.1	0	0.0	97	4.6
E	0	0.0	3	0.1	25	1.2	20	1.0	4	0.2	0	0.0	0	0.0	52	2.5
ESE	0	0.0	2	0.1	11	0.5	25	1.2	16	0.8	1	0.0	0	0.0	55	2.6
SE	0	0.0	4	0.2	15	0.7	44	2.1	85	4.0	44	2.1	28	1.3	220	10.5
SSE	0	0.0	4	0.2	23	1.1	50	2.4	83	4.0	38	1.8	7	0.3	205	9.8
S	0	0.0	3	0.1	29	1.4	61	2.9	41	2.0	3	0.1	0	0.0	137	6.5
SSW	0	0.0	1	0.0	41	2.0	44	2.1	35	1.7	10	0.5	4	0.2	135	6.4
SW	0	0.0	2	0.1	29	1.4	55	2.6	24	1.1	6	0.3	4	0.2	120	5.7
WSW	0	0.0	1	0.0	39	1.9	68	3.2	39	1.9	17	0.8	4	0.2	168	8.0
W	0	0.0	3	0.1	33	1.6	67	3.2	42	2.0	15	0.7	5	0.2	165	7.9
WNW	0	0.0	7	0.3	32	1.5	59	2.8	38	1.8	10	0.5	3	0.1	149	7.1
NW	0	0.0	2	0.1	14	0.7	42	2.0	59	2.8	9	0.4	0	0.0	126	6.0
NNW	0	0.0	3	0.1	16	0.8	43	2.0	29	1.4	8	0.4	0	0.0	99	4.7
	0	0.0	40	1.9	385	18.3	771	36.7	656	31.2	193	9.2	55	2.6	2100	100.0

MISSING HOURS: 84

MEAN WIND SPEED: 12.2

ARTIFICIAL ISLAND 04/05-06/05

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED  
 BY ATMOSPHERIC STABILITY CLASS  
 WIND: 150 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	2	0.1	13	0.6	46	2.2	41	1.9	3	0.1	0	0.0	105	5.0
NNE	0	0.0	0	0.0	17	0.8	50	2.4	49	2.3	14	0.7	0	0.0	130	6.2
NE	0	0.0	1	0.0	22	1.0	58	2.8	43	2.0	13	0.6	0	0.0	137	6.5
ENE	0	0.0	2	0.1	26	1.2	39	1.9	28	1.3	2	0.1	0	0.0	97	4.6
E	0	0.0	3	0.1	25	1.2	20	1.0	4	0.2	0	0.0	0	0.0	52	2.5
ESE	0	0.0	2	0.1	11	0.5	25	1.2	16	0.8	1	0.0	0	0.0	55	2.6
SE	0	0.0	4	0.2	16	0.8	45	2.1	86	4.1	44	2.1	28	1.3	223	10.6
SSE	0	0.0	4	0.2	23	1.1	50	2.4	83	3.9	38	1.8	7	0.3	205	9.7
S	0	0.0	3	0.1	29	1.4	61	2.9	41	1.9	3	0.1	0	0.0	137	6.5
SSW	0	0.0	1	0.0	41	1.9	44	2.1	35	1.7	10	0.5	4	0.2	135	6.4
SW	0	0.0	2	0.1	29	1.4	55	2.6	24	1.1	6	0.3	4	0.2	120	5.7
WSW	0	0.0	1	0.0	39	1.9	68	3.2	39	1.9	17	0.8	4	0.2	168	8.0
W	0	0.0	3	0.1	33	1.6	67	3.2	42	2.0	15	0.7	5	0.2	165	7.8
WNW	0	0.0	7	0.3	32	1.5	59	2.8	38	1.8	10	0.5	3	0.1	149	7.1
NW	0	0.0	2	0.1	14	0.7	42	2.0	59	2.8	9	0.4	0	0.0	126	6.0
NNW	0	0.0	3	0.1	16	0.8	43	2.0	29	1.4	8	0.4	0	0.0	99	4.7
	0	0.0	40	1.9	386	18.4	772	36.7	657	31.2	193	9.2	55	2.6	2103	100.0

MISSING HOURS: 81

MEAN WIND SPEED: 12.2

ARTIFICIAL ISLAND 04/05-06/05

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	4	0.2	5	0.2	1	0.0	0	0.0	10	0.5
NNE	0	0.0	0	0.0	0	0.0	2	0.1	9	0.4	2	0.1	0	0.0	13	0.6
NE	0	0.0	0	0.0	0	0.0	3	0.1	11	0.5	6	0.3	1	0.0	21	1.0
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	1	0.0	0	0.0	0	0.0	0	0.0	1	0.0
ESE	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	1	0.0
SE	0	0.0	0	0.0	0	0.0	1	0.0	3	0.1	4	0.2	0	0.0	8	0.4
SSE	0	0.0	0	0.0	0	0.0	6	0.3	10	0.5	8	0.4	1	0.0	25	1.1
S	0	0.0	0	0.0	1	0.0	2	0.1	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	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	1	0.0
WSW	0	0.0	0	0.0	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	3	0.1	3	0.1	4	0.2	1	0.0	11	0.5
WNW	0	0.0	0	0.0	0	0.0	0	0.0	2	0.1	3	0.1	1	0.0	6	0.3
NW	0	0.0	0	0.0	0	0.0	1	0.0	4	0.2	3	0.1	0	0.0	8	0.4
NNW	0	0.0	0	0.0	0	0.0	1	0.0	9	0.4	7	0.3	0	0.0	17	0.8
	0	0.0	0	0.0	3	0.1	29	1.3	63	2.9	38	1.7	4	0.2	137	6.3

MEAN WIND SPEED: 16.1  
MISSING: 0

ARTIFICIAL ISLAND 04/05-06/05

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	5	0.2	1	0.0	0	0.0	0	0.0	7	0.3
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	1	0.0	9	0.4	2	0.1	0	0.0	0	0.0	12	0.6
ENE	0	0.0	0	0.0	1	0.0	2	0.1	1	0.0	0	0.0	0	0.0	4	0.2
E	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	1	0.0
ESE	0	0.0	0	0.0	0	0.0	2	0.1	0	0.0	0	0.0	0	0.0	2	0.1
SE	0	0.0	0	0.0	0	0.0	2	0.1	1	0.0	2	0.1	0	0.0	5	0.2
SSE	0	0.0	0	0.0	2	0.1	0	0.0	2	0.1	1	0.0	3	0.1	8	0.4
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	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	2	0.1	0	0.0	0	0.0	0	0.0	2	0.1
WSW	0	0.0	0	0.0	1	0.0	5	0.2	4	0.2	0	0.0	0	0.0	10	0.5
W	0	0.0	0	0.0	1	0.0	6	0.3	4	0.2	2	0.1	0	0.0	13	0.6
WNW	0	0.0	0	0.0	0	0.0	5	0.2	1	0.0	1	0.0	0	0.0	7	0.3
NW	0	0.0	0	0.0	0	0.0	1	0.0	3	0.1	1	0.0	0	0.0	5	0.2
NNW	0	0.0	0	0.0	0	0.0	5	0.2	3	0.1	0	0.0	0	0.0	8	0.4
	0	0.0	0	0.0	9	0.4	47	2.2	23	1.1	8	0.4	3	0.1	90	4.1

MEAN WIND SPEED: 12.3  
MISSING: 0

ARTIFICIAL ISLAND 04/05-06/05

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	3	0.1	2	0.1	2	0.1	2	0.1	0	0.0	9	0.4
NNE	0	0.0	0	0.0	2	0.1	5	0.2	1	0.0	1	0.0	0	0.0	9	0.4
NE	0	0.0	0	0.0	3	0.1	8	0.4	9	0.4	1	0.0	0	0.0	21	1.0
ENE	0	0.0	0	0.0	1	0.0	3	0.1	1	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	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	1	0.0	1	0.0	1	0.0	1	0.0	1	0.0	5	0.2
SSE	0	0.0	0	0.0	1	0.0	2	0.1	5	0.2	6	0.3	1	0.0	15	0.7
S	0	0.0	0	0.0	2	0.1	1	0.0	1	0.0	0	0.0	0	0.0	4	0.2
SSW	0	0.0	0	0.0	3	0.1	2	0.1	1	0.0	0	0.0	0	0.0	6	0.3
SW	0	0.0	0	0.0	4	0.2	3	0.1	1	0.0	1	0.0	0	0.0	9	0.4
WSW	0	0.0	0	0.0	3	0.1	4	0.2	1	0.0	1	0.0	0	0.0	9	0.4
W	0	0.0	0	0.0	2	0.1	5	0.2	4	0.2	4	0.2	0	0.0	15	0.7
WNW	0	0.0	0	0.0	1	0.0	5	0.2	2	0.1	1	0.0	1	0.0	10	0.5
NW	0	0.0	0	0.0	1	0.0	2	0.1	4	0.2	0	0.0	0	0.0	7	0.3
NNW	0	0.0	0	0.0	1	0.0	9	0.4	2	0.1	1	0.0	0	0.0	13	0.6
	0	0.0	0	0.0	30	1.4	53	2.4	35	1.6	19	0.9	3	0.1	140	6.4

MEAN WIND SPEED: 12.5

MISSING: 0

ARTIFICIAL ISLAND 04/05-06/05

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	6	0.3	11	0.5	8	0.4	11	0.5	0	0.0	36	1.7
NNE	0	0.0	0	0.0	6	0.3	10	0.5	16	0.7	17	0.8	0	0.0	49	2.2
NE	0	0.0	2	0.1	8	0.4	8	0.4	19	0.9	9	0.4	2	0.1	48	2.2
ENE	0	0.0	1	0.0	11	0.5	21	1.0	22	1.0	1	0.0	0	0.0	56	2.6
E	0	0.0	0	0.0	11	0.5	14	0.6	9	0.4	0	0.0	0	0.0	34	1.6
ESE	0	0.0	0	0.0	3	0.1	7	0.3	7	0.3	3	0.1	0	0.0	20	0.9
SE	0	0.0	1	0.0	4	0.2	17	0.8	42	1.9	23	1.1	13	0.6	100	4.6
SSE	0	0.0	1	0.0	13	0.6	20	0.9	31	1.4	14	0.6	0	0.0	79	3.6
S	0	0.0	2	0.1	9	0.4	30	1.4	30	1.4	0	0.0	0	0.0	71	3.3
SSW	0	0.0	0	0.0	10	0.5	33	1.5	12	0.6	3	0.1	1	0.0	59	2.7
SW	0	0.0	0	0.0	7	0.3	15	0.7	23	1.1	4	0.2	3	0.1	52	2.4
WSW	0	0.0	0	0.0	11	0.5	15	0.7	19	0.9	14	0.6	8	0.4	67	3.1
W	0	0.0	1	0.0	10	0.5	21	1.0	30	1.4	6	0.3	7	0.3	75	3.4
WNW	0	0.0	1	0.0	8	0.4	13	0.6	23	1.1	6	0.3	5	0.2	56	2.6
NW	0	0.0	2	0.1	7	0.3	10	0.5	8	0.4	9	0.4	1	0.0	37	1.7
NNW	0	0.0	0	0.0	8	0.4	8	0.4	7	0.3	8	0.4	0	0.0	31	1.4
	0	0.0	11	0.5	132	6.1	253	11.6	306	14.0	128	5.9	40	1.8	870	39.9

MEAN WIND SPEED: 13.6

MISSING: 0

ARTIFICIAL ISLAND 04/05-06/05

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	0	0.0	4	0.2	11	0.5	18	0.8	2	0.1	0	0.0	35	1.6
NNE	0	0.0	0	0.0	2	0.1	8	0.4	22	1.0	1	0.0	0	0.0	33	1.5
NE	0	0.0	0	0.0	4	0.2	8	0.4	20	0.9	6	0.3	0	0.0	38	1.7
ENE	0	0.0	1	0.0	9	0.4	11	0.5	5	0.2	0	0.0	0	0.0	26	1.2
E	0	0.0	0	0.0	11	0.5	9	0.4	2	0.1	0	0.0	0	0.0	22	1.0
ESE	0	0.0	0	0.0	1	0.0	9	0.4	7	0.3	2	0.1	0	0.0	19	0.9
SE	0	0.0	0	0.0	4	0.2	15	0.7	16	0.7	14	0.6	16	0.7	65	3.0
SSE	0	0.0	1	0.0	8	0.4	10	0.5	27	1.2	9	0.4	4	0.2	59	2.7
S	0	0.0	2	0.1	6	0.3	12	0.6	10	0.5	2	0.1	1	0.0	33	1.5
SSW	0	0.0	2	0.1	5	0.2	17	0.8	14	0.6	3	0.1	4	0.2	45	2.1
SW	0	0.0	2	0.1	10	0.5	14	0.6	21	1.0	4	0.2	3	0.1	54	2.5
WSW	0	0.0	0	0.0	10	0.5	14	0.6	16	0.7	9	0.4	0	0.0	49	2.2
W	0	0.0	2	0.1	11	0.5	20	0.9	21	1.0	3	0.1	0	0.0	57	2.6
WNW	0	0.0	2	0.1	9	0.4	16	0.7	25	1.1	5	0.2	0	0.0	57	2.6
NW	0	0.0	1	0.0	4	0.2	15	0.7	31	1.4	17	0.8	0	0.0	68	3.1
NNW	0	0.0	1	0.0	4	0.2	10	0.5	10	0.5	4	0.2	0	0.0	29	1.3
	0	0.0	14	0.6	102	4.7	199	9.1	265	12.2	81	3.7	28	1.3	689	31.6

MEAN WIND SPEED: 13.5  
 MISSING: 0

ARTIFICIAL ISLAND 04/05-06/05

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	1	0.0	0	0.0	1	0.0	4	0.2	0	0.0	0	0.0	6	0.3
NNE	0	0.0	0	0.0	1	0.0	3	0.1	6	0.3	3	0.1	0	0.0	13	0.6
NE	0	0.0	0	0.0	0	0.0	1	0.0	1	0.0	0	0.0	0	0.0	2	0.1
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	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	4	0.2	1	0.0	0	0.0	0	0.0	0	0.0	5	0.2
SE	0	0.0	1	0.0	1	0.0	1	0.0	2	0.1	5	0.2	4	0.2	14	0.6
SSE	0	0.0	0	0.0	1	0.0	5	0.2	15	0.7	4	0.2	1	0.0	26	1.2
S	0	0.0	0	0.0	2	0.1	5	0.2	11	0.5	0	0.0	0	0.0	18	0.8
SSW	0	0.0	0	0.0	3	0.1	5	0.2	8	0.4	12	0.6	1	0.0	29	1.3
SW	0	0.0	0	0.0	2	0.1	2	0.1	7	0.3	2	0.1	0	0.0	13	0.6
WSW	0	0.0	0	0.0	0	0.0	4	0.2	14	0.6	2	0.1	0	0.0	20	0.9
W	0	0.0	0	0.0	1	0.0	6	0.3	2	0.1	0	0.0	0	0.0	9	0.4
WNW	0	0.0	0	0.0	2	0.1	5	0.2	5	0.2	0	0.0	0	0.0	12	0.6
NW	0	0.0	0	0.0	1	0.0	2	0.1	6	0.3	0	0.0	0	0.0	9	0.4
NNW	0	0.0	0	0.0	1	0.0	4	0.2	3	0.1	1	0.0	0	0.0	9	0.4
	0	0.0	2	0.1	22	1.0	46	2.1	84	3.9	29	1.3	6	0.3	189	8.7

MEAN WIND SPEED: 14.3

MISSING: 0



ARTIFICIAL ISLAND 04/05-06/05

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	3	0.1	1	0.0	0	0.0	4	0.2
NNE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	1	0.0
NE	0	0.0	0	0.0	0	0.0	0	0.0	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	3	0.1	0	0.0	0	0.0	0	0.0	3	0.1
SSE	0	0.0	0	0.0	1	0.0	0	0.0	4	0.2	0	0.0	0	0.0	5	0.2
S	0	0.0	0	0.0	2	0.1	5	0.2	6	0.3	1	0.0	0	0.0	14	0.6
SSW	0	0.0	0	0.0	0	0.0	3	0.1	3	0.1	5	0.2	0	0.0	11	0.5
SW	0	0.0	0	0.0	1	0.0	3	0.1	7	0.3	1	0.0	0	0.0	12	0.6
WSW	0	0.0	0	0.0	0	0.0	5	0.2	5	0.2	0	0.0	0	0.0	10	0.5
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	2	0.1	0	0.0	0	0.0	0	0.0	2	0.1
NNW	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	1	0.0
	0	0.0	0	0.0	5	0.2	22	1.0	28	1.3	9	0.4	0	0.0	64	2.9

MEAN WIND SPEED: 13.5

MISSING: 0

ARTIFICIAL ISLAND 04/05-06/05

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED  
BY ATMOSPHERIC STABILITY CLASS

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

ALL STABILITY CLASSES

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	1	0.0	14	0.6	34	1.6	41	1.9	17	0.8	0	0.0	107	4.9
NNE	0	0.0	0	0.0	11	0.5	29	1.3	55	2.5	26	1.2	0	0.0	121	5.6
NE	0	0.0	2	0.1	16	0.7	37	1.7	62	2.8	22	1.0	3	0.1	142	6.5
ENE	0	0.0	2	0.1	23	1.1	39	1.8	33	1.5	1	0.0	0	0.0	98	4.5
E	0	0.0	0	0.0	24	1.1	26	1.2	11	0.5	0	0.0	0	0.0	61	2.8
ESE	0	0.0	0	0.0	10	0.5	20	0.9	14	0.6	5	0.2	0	0.0	49	2.2
SE	0	0.0	2	0.1	10	0.5	40	1.8	65	3.0	49	2.2	34	1.6	200	9.2
SSE	0	0.0	2	0.1	26	1.2	43	2.0	94	4.3	42	1.9	10	0.5	217	10.0
S	0	0.0	4	0.2	24	1.1	56	2.6	58	2.7	3	0.1	1	0.0	146	6.7
SSW	0	0.0	2	0.1	22	1.0	60	2.8	38	1.7	23	1.1	6	0.3	151	6.9
SW	0	0.0	2	0.1	24	1.1	40	1.8	59	2.7	12	0.6	6	0.3	143	6.6
WSW	0	0.0	0	0.0	26	1.2	49	2.2	62	2.8	26	1.2	8	0.4	171	7.8
W	0	0.0	3	0.1	25	1.1	61	2.8	64	2.9	19	0.9	8	0.4	180	8.3
WNW	0	0.0	3	0.1	21	1.0	44	2.0	58	2.7	16	0.7	7	0.3	149	6.8
NW	0	0.0	3	0.1	13	0.6	33	1.5	56	2.6	30	1.4	1	0.0	136	6.2
NNW	0	0.0	1	0.0	14	0.6	38	1.7	34	1.6	21	1.0	0	0.0	108	5.0
	0	0.0	27	1.2	303	13.9	649	29.8	804	36.9	312	14.3	84	3.9	2179	100.0

MISSING HOURS: 5

MEAN WIND SPEED: 13.6

ARTIFICIAL ISLAND 04/05-06/05

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	14	0.6	34	1.6	41	1.9	17	0.8	0	0.0	107	4.9
NNE	0	0.0	0	0.0	11	0.5	29	1.3	55	2.5	26	1.2	0	0.0	121	5.5
NE	0	0.0	2	0.1	16	0.7	37	1.7	62	2.8	22	1.0	3	0.1	142	6.5
ENE	0	0.0	2	0.1	23	1.1	39	1.8	33	1.5	1	0.0	0	0.0	98	4.5
E	0	0.0	0	0.0	24	1.1	26	1.2	11	0.5	0	0.0	0	0.0	61	2.8
ESE	0	0.0	0	0.0	10	0.5	20	0.9	14	0.6	5	0.2	0	0.0	49	2.2
SE	0	0.0	2	0.1	10	0.5	40	1.8	67	3.1	49	2.2	34	1.6	202	9.3
SSE	0	0.0	2	0.1	27	1.2	43	2.0	94	4.3	42	1.9	10	0.5	218	10.0
S	0	0.0	4	0.2	25	1.1	56	2.6	58	2.7	3	0.1	1	0.0	147	6.7
SSW	0	0.0	2	0.1	22	1.0	60	2.7	38	1.7	23	1.1	6	0.3	151	6.9
SW	0	0.0	2	0.1	24	1.1	40	1.8	59	2.7	12	0.5	6	0.3	143	6.6
WSW	0	0.0	0	0.0	26	1.2	49	2.2	62	2.8	26	1.2	8	0.4	171	7.8
W	0	0.0	3	0.1	25	1.1	61	2.8	64	2.9	19	0.9	8	0.4	180	8.2
WNW	0	0.0	3	0.1	21	1.0	44	2.0	58	2.7	16	0.7	7	0.3	149	6.8
NW	0	0.0	3	0.1	13	0.6	33	1.5	56	2.6	30	1.4	1	0.0	136	6.2
NNW	0	0.0	1	0.0	14	0.6	38	1.7	34	1.6	21	1.0	0	0.0	108	4.9
	0	0.0	27	1.2	305	14.0	649	29.7	806	36.9	312	14.3	84	3.8	2183	100.0

MISSING HOURS: 1

MEAN WIND SPEED: 13.6

Lapse Rate  
Wind Distributions  
300-33 Foot

7/2005 - 9/2005

ARTIFICIAL ISLAND 07/05-09/05

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED  
BY ATMOSPHERIC STABILITY CLASS

WIND: 30 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	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
NE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
ENE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
E	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
ESE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SE	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	1	0.0
SSE	0	0.0	0	0.0	0	0.0	1	0.0	1	0.0	0	0.0	0	0.0	2	0.1
S	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SSW	0	0.0	0	0.0	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	1	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	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	1	0.0	0	0.0	3	0.1	1	0.0	0	0.0	0	0.0	5	0.2

MEAN WIND SPEED: 9.4  
MISSING: 0

ARTIFICIAL ISLAND 07/05-09/05

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED  
BY ATMOSPHERIC STABILITY CLASS

WIND: 30 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	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	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	6	0.3	1	0.0	0	0.0	0	0.0	9	0.4
SSE	0	0.0	0	0.0	2	0.1	7	0.3	0	0.0	0	0.0	0	0.0	9	0.4
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	0.0	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	0	0.0	0	0.0	0	0.0	2	0.1
WSW	0	0.0	0	0.0	2	0.1	5	0.2	0	0.0	0	0.0	0	0.0	7	0.3
W	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
WNW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
NW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
NNW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	0	0.0	0	0.0	10	0.5	19	0.9	1	0.0	0	0.0	0	0.0	30	1.4

MEAN WIND SPEED: 8.9  
MISSING: 0

ARTIFICIAL ISLAND 07/05-09/05  
WIND: 30 FT  
DELTA T: (300-33FT)

ARTIFICIAL ISLAND 07/05-09/05

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED  
BY ATMOSPHERIC STABILITY CLASS

WIND: 30 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	5	0.2	0	0.0	0	0.0	0	0.0	0	0.0	5	0.2
NNE	0	0.0	1	0.0	1	0.0	0	0.0	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	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
E	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
ESE	0	0.0	0	0.0	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	11	0.5	2	0.1	0	0.0	0	0.0	15	0.7
SSE	0	0.0	0	0.0	15	0.7	8	0.4	1	0.0	0	0.0	0	0.0	24	1.1
S	0	0.0	0	0.0	7	0.3	2	0.1	0	0.0	0	0.0	0	0.0	9	0.4
SSW	0	0.0	0	0.0	4	0.2	1	0.0	0	0.0	0	0.0	0	0.0	5	0.2
SW	0	0.0	0	0.0	7	0.3	1	0.0	0	0.0	0	0.0	0	0.0	8	0.4
WSW	0	0.0	1	0.0	6	0.3	8	0.4	0	0.0	0	0.0	0	0.0	15	0.7
W	0	0.0	0	0.0	4	0.2	1	0.0	0	0.0	0	0.0	0	0.0	5	0.2
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	0	0.0	4	0.2	0	0.0	0	0.0	0	0.0	4	0.2
NNW	0	0.0	0	0.0	3	0.1	3	0.1	0	0.0	0	0.0	0	0.0	6	0.3
	0	0.0	2	0.1	56	2.5	40	1.8	3	0.1	0	0.0	0	0.0	101	4.6

MEAN WIND SPEED: 7.3  
MISSING: 0

ARTIFICIAL ISLAND 07/05-09/05

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED  
BY ATMOSPHERIC STABILITY CLASS

WIND: 30 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	5	0.2	32	1.5	18	0.8	1	0.0	0	0.0	0	0.0	56	2.5
NNE	0	0.0	7	0.3	14	0.6	10	0.5	4	0.2	0	0.0	0	0.0	35	1.6
NE	0	0.0	2	0.1	27	1.2	5	0.2	0	0.0	0	0.0	0	0.0	34	1.5
ENE	0	0.0	2	0.1	33	1.5	4	0.2	0	0.0	0	0.0	0	0.0	39	1.8
E	0	0.0	5	0.2	34	1.5	0	0.0	0	0.0	0	0.0	0	0.0	39	1.8
ESE	0	0.0	1	0.0	19	0.9	5	0.2	0	0.0	0	0.0	0	0.0	25	1.1
SE	0	0.0	5	0.2	19	0.9	52	2.4	40	1.8	2	0.1	0	0.0	118	5.4
SSE	0	0.0	5	0.2	31	1.4	65	2.9	15	0.7	0	0.0	0	0.0	116	5.3
S	0	0.0	2	0.1	62	2.8	47	2.1	15	0.7	0	0.0	0	0.0	126	5.7
SSW	0	0.0	2	0.1	34	1.5	18	0.8	14	0.6	1	0.0	0	0.0	69	3.1
SW	0	0.0	2	0.1	45	2.0	21	1.0	6	0.3	0	0.0	0	0.0	74	3.4
WSW	0	0.0	4	0.2	15	0.7	20	0.9	1	0.0	0	0.0	0	0.0	40	1.8
W	0	0.0	3	0.1	20	0.9	34	1.5	0	0.0	0	0.0	0	0.0	57	2.6
WNW	0	0.0	2	0.1	15	0.7	9	0.4	1	0.0	0	0.0	0	0.0	27	1.2
NW	0	0.0	1	0.0	29	1.3	17	0.8	2	0.1	0	0.0	0	0.0	49	2.2
NNW	0	0.0	6	0.3	53	2.4	23	1.0	2	0.1	0	0.0	0	0.0	84	3.8
	0	0.0	54	2.4	482	21.9	348	15.8	101	4.6	3	0.1	0	0.0	988	44.8

MEAN WIND SPEED: 7.9  
MISSING: 0

DATE: 07/05-09/05  
TIME: 0000-2359  
WIND: 30 FT  
DELTA T: (300-33FT)



ARTIFICIAL ISLAND 07/05-09/05

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED  
BY ATMOSPHERIC STABILITY CLASS

WIND: 30 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	SUM	PERCENT
N	0	0.0	10	0.5	38	1.7	13	0.6	2	0.1	0	0.0	0	0.0	63	2.9
NNE	0	0.0	9	0.4	32	1.5	5	0.2	0	0.0	0	0.0	0	0.0	46	2.1
NE	0	0.0	10	0.5	53	2.4	6	0.3	0	0.0	0	0.0	0	0.0	69	3.1
ENE	0	0.0	17	0.8	20	0.9	4	0.2	0	0.0	0	0.0	0	0.0	41	1.9
E	0	0.0	18	0.8	31	1.4	5	0.2	0	0.0	0	0.0	0	0.0	54	2.4
ESE	0	0.0	7	0.3	52	2.4	5	0.2	1	0.0	0	0.0	0	0.0	65	2.9
SE	0	0.0	1	0.0	12	0.5	29	1.3	12	0.5	0	0.0	0	0.0	54	2.4
SSE	0	0.0	0	0.0	9	0.4	14	0.6	20	0.9	2	0.1	0	0.0	45	2.0
S	0	0.0	0	0.0	12	0.5	10	0.5	4	0.2	0	0.0	0	0.0	26	1.2
SSW	0	0.0	2	0.1	30	1.4	28	1.3	3	0.1	0	0.0	0	0.0	63	2.9
SW	0	0.0	2	0.1	51	2.3	20	0.9	1	0.0	0	0.0	0	0.0	74	3.4
WSW	0	0.0	6	0.3	37	1.7	7	0.3	0	0.0	0	0.0	0	0.0	50	2.3
W	0	0.0	13	0.6	17	0.8	7	0.3	1	0.0	0	0.0	0	0.0	38	1.7
WNW	0	0.0	18	0.8	36	1.6	12	0.5	1	0.0	0	0.0	0	0.0	67	3.0
NW	0	0.0	9	0.4	43	2.0	9	0.4	2	0.1	0	0.0	0	0.0	63	2.9
NNW	0	0.0	6	0.3	13	0.6	9	0.4	1	0.0	0	0.0	0	0.0	29	1.3
	0	0.0	128	5.8	486	22.0	183	8.3	48	2.2	2	0.1	0	0.0	847	38.4

MEAN WIND SPEED: 6.5  
MISSING: 0

ARTIFICIAL ISLAND 07/05-09/05

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED  
 BY ATMOSPHERIC STABILITY CLASS  
 WIND: 30 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	SUM PERCENT	SUM PERCENT	SUM PERCENT	SUM PERCENT	SUM PERCENT	SUM PERCENT	SUM PERCENT	SUM PERCENT
N	0	0.0	2	0.1	30	1.4	3	0.1	0	0.0	0	0.0	0	0.0	35	1.6
NNE	0	0.0	1	0.0	38	1.7	1	0.0	0	0.0	0	0.0	0	0.0	40	1.8
NE	0	0.0	4	0.2	18	0.8	0	0.0	0	0.0	0	0.0	0	0.0	22	1.0
ENE	0	0.0	8	0.4	12	0.5	0	0.0	0	0.0	0	0.0	0	0.0	20	0.9
E	0	0.0	4	0.2	2	0.1	0	0.0	0	0.0	0	0.0	0	0.0	6	0.3
ESE	0	0.0	1	0.0	7	0.3	0	0.0	0	0.0	0	0.0	0	0.0	8	0.4
SE	0	0.0	0	0.0	1	0.0	0	0.0	1	0.0	0	0.0	0	0.0	2	0.1
SSE	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0	1	0.0	0	0.0	2	0.1
S	0	0.0	2	0.1	1	0.0	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	1	0.0	0	0.0	0	0.0	0	0.0	2	0.1
SW	0	0.0	1	0.0	3	0.1	0	0.0	0	0.0	0	0.0	0	0.0	4	0.2
WSW	0	0.0	2	0.1	8	0.4	0	0.0	0	0.0	0	0.0	0	0.0	10	0.5
W	0	0.0	4	0.2	7	0.3	0	0.0	0	0.0	0	0.0	0	0.0	11	0.5
WNW	0	0.0	5	0.2	12	0.5	0	0.0	0	0.0	0	0.0	0	0.0	17	0.8
NW	0	0.0	1	0.0	13	0.6	2	0.1	0	0.0	0	0.0	0	0.0	16	0.7
NNW	0	0.0	2	0.1	16	0.7	6	0.3	0	0.0	0	0.0	0	0.0	24	1.1
	0	0.0	37	1.7	169	7.7	13	0.6	2	0.1	1	0.0	0	0.0	222	10.1

MEAN WIND SPEED: 5.4  
 MISSING: 0

U.S. GOVERNMENT PRINTING OFFICE: 1964 O 354-100

ARTIFICIAL ISLAND 07/05-09/05

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED  
BY ATMOSPHERIC STABILITY CLASS

WIND: 30 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	3	0.1	0	0.0	0	0.0	0	0.0	0	0.0	3	0.1
NNE	0	0.0	0	0.0	5	0.2	0	0.0	0	0.0	0	0.0	0	0.0	5	0.2
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	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
E	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
ESE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SE	0	0.0	0	0.0	0	0.0	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	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	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
NNW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	0	0.0	2	0.1	10	0.5	0	0.0	0	0.0	0	0.0	0	0.0	12	0.5

MEAN WIND SPEED: 4.9  
MISSING: 0



ARTIFICIAL ISLAND 07/05-09/05

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED  
BY ATMOSPHERIC STABILITY CLASS

WIND: 30 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	17	0.8	108	4.9	34	1.5	3	0.1	0	0.0	0	0.0	162	7.3
NNE	0	0.0	19	0.9	90	4.1	16	0.7	4	0.2	0	0.0	0	0.0	129	5.8
NE	0	0.0	16	0.7	100	4.5	11	0.5	0	0.0	0	0.0	0	0.0	127	5.8
ENE	0	0.0	28	1.3	65	2.9	8	0.4	0	0.0	0	0.0	0	0.0	101	4.6
E	0	0.0	27	1.2	68	3.1	5	0.2	0	0.0	0	0.0	0	0.0	100	4.5
ESE	0	0.0	9	0.4	79	3.6	10	0.5	1	0.0	0	0.0	0	0.0	99	4.5
SE	0	0.0	6	0.3	36	1.6	99	4.5	56	2.5	2	0.1	0	0.0	199	9.0
SSE	0	0.0	5	0.2	57	2.6	95	4.3	38	1.7	3	0.1	0	0.0	198	9.0
S	0	0.0	4	0.2	84	3.8	59	2.7	19	0.9	0	0.0	0	0.0	166	7.5
SSW	0	0.0	4	0.2	70	3.2	48	2.2	17	0.8	1	0.0	0	0.0	140	6.3
SW	0	0.0	5	0.2	109	4.9	43	1.9	7	0.3	0	0.0	0	0.0	164	7.4
WSW	0	0.0	13	0.6	68	3.1	41	1.9	1	0.0	0	0.0	0	0.0	123	5.6
W	0	0.0	21	1.0	48	2.2	42	1.9	1	0.0	0	0.0	0	0.0	112	5.1
WNW	0	0.0	25	1.1	63	2.9	22	1.0	2	0.1	0	0.0	0	0.0	112	5.1
NW	0	0.0	11	0.5	85	3.9	32	1.4	4	0.2	0	0.0	0	0.0	132	6.0
NNW	0	0.0	14	0.6	85	3.9	41	1.9	3	0.1	0	0.0	0	0.0	143	6.5
	0	0.0	224	10.1	1215	55.1	606	27.5	156	7.1	6	0.3	0	0.0	2207	100.0

MISSING HOURS: 1

MEAN WIND SPEED: 7.0



ARTIFICIAL ISLAND 07/05-09/05

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	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	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	1	0.0	0	0.0	0	0.0	4	0.2
SSE	0	0.0	0	0.0	0	0.0	7	0.3	6	0.3	0	0.0	0	0.0	13	0.6
S	0	0.0	0	0.0	3	0.1	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	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	0	0.0	6	0.3	1	0.0	0	0.0	0	0.0	7	0.3
W	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	1	0.0
WNW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
NW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
NNW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	0	0.0	0	0.0	4	0.2	17	0.8	9	0.4	0	0.0	0	0.0	30	1.4

MEAN WIND SPEED: 10.9

MISSING: 0

ARTIFICIAL ISLAND 07/05-09/05

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	2	0.1	3	0.1	2	0.1	0	0.0	0	0.0	7	0.3
NNE	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
NE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
ENE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
E	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
ESE	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
SE	0	0.0	0	0.0	0	0.0	6	0.3	7	0.3	1	0.0	0	0.0	14	0.6
SSE	0	0.0	0	0.0	9	0.4	14	0.6	2	0.1	1	0.0	0	0.0	26	1.2
S	0	0.0	0	0.0	5	0.2	3	0.1	0	0.0	0	0.0	0	0.0	8	0.4
SSW	0	0.0	0	0.0	4	0.2	1	0.0	0	0.0	0	0.0	0	0.0	5	0.2
SW	0	0.0	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	1	0.0	5	0.2	11	0.5	0	0.0	0	0.0	0	0.0	17	0.8
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	0	0.0	1	0.0	1	0.0	0	0.0	0	0.0	0	0.0	2	0.1
NW	0	0.0	0	0.0	0	0.0	4	0.2	0	0.0	0	0.0	0	0.0	4	0.2
NNW	0	0.0	0	0.0	3	0.1	2	0.1	0	0.0	0	0.0	0	0.0	5	0.2
	0	0.0	2	0.1	37	1.7	49	2.2	11	0.5	2	0.1	0	0.0	101	4.6

MEAN WIND SPEED: 9.0  
MISSING: 0



ARTIFICIAL ISLAND 07/05-09/05

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	2	0.1	25	1.1	25	1.1	8	0.4	1	0.0	0	0.0	61	2.8
NNE	0	0.0	1	0.0	9	0.4	19	0.9	4	0.2	5	0.2	0	0.0	38	1.7
NE	0	0.0	3	0.1	9	0.4	16	0.7	4	0.2	0	0.0	0	0.0	32	1.5
ENE	0	0.0	1	0.0	24	1.1	24	1.1	3	0.1	0	0.0	0	0.0	52	2.4
E	0	0.0	2	0.1	23	1.1	9	0.4	0	0.0	0	0.0	0	0.0	34	1.6
ESE	0	0.0	0	0.0	10	0.5	15	0.7	0	0.0	0	0.0	0	0.0	25	1.1
SE	0	0.0	2	0.1	7	0.3	25	1.1	32	1.5	16	0.7	5	0.2	87	4.0
SSE	0	0.0	1	0.0	19	0.9	47	2.2	61	2.8	6	0.3	1	0.0	135	6.2
S	0	0.0	2	0.1	31	1.4	51	2.3	32	1.5	5	0.2	0	0.0	121	5.5
SSW	0	0.0	0	0.0	24	1.1	14	0.6	18	0.8	13	0.6	1	0.0	70	3.2
SW	0	0.0	0	0.0	28	1.3	28	1.3	13	0.6	7	0.3	0	0.0	76	3.5
WSW	0	0.0	2	0.1	9	0.4	28	1.3	2	0.1	1	0.0	0	0.0	42	1.9
W	0	0.0	1	0.0	10	0.5	31	1.4	12	0.5	1	0.0	0	0.0	55	2.5
WNW	0	0.0	2	0.1	13	0.6	10	0.5	6	0.3	1	0.0	0	0.0	32	1.5
NW	0	0.0	1	0.0	15	0.7	20	0.9	7	0.3	0	0.0	1	0.0	44	2.0
NNW	0	0.0	2	0.1	31	1.4	36	1.6	5	0.2	2	0.1	0	0.0	76	3.5
	0	0.0	22	1.0	287	13.1	398	18.2	207	9.5	58	2.7	8	0.4	980	44.9

MEAN WIND SPEED: 10.3

MISSING: 8

ARTIFICIAL ISLAND 07/05-09/05

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	1	0.0	7	0.3	23	1.1	17	0.8	4	0.2	0	0.0	52	2.4
NNE	0	0.0	0	0.0	10	0.5	22	1.0	7	0.3	2	0.1	0	0.0	41	1.9
NE	0	0.0	2	0.1	15	0.7	40	1.8	6	0.3	1	0.0	0	0.0	64	2.9
ENE	0	0.0	3	0.1	21	1.0	18	0.8	5	0.2	0	0.0	0	0.0	47	2.2
E	0	0.0	4	0.2	30	1.4	5	0.2	0	0.0	0	0.0	0	0.0	39	1.8
ESE	0	0.0	4	0.2	13	0.6	44	2.0	1	0.0	0	0.0	0	0.0	62	2.8
SE	0	0.0	2	0.1	8	0.4	28	1.3	24	1.1	4	0.2	0	0.0	66	3.0
SSE	0	0.0	4	0.2	8	0.4	12	0.5	18	0.8	10	0.5	1	0.0	53	2.4
S	0	0.0	1	0.0	5	0.2	18	0.8	8	0.4	7	0.3	0	0.0	39	1.8
SSW	0	0.0	0	0.0	5	0.2	30	1.4	17	0.8	1	0.0	0	0.0	53	2.4
SW	0	0.0	1	0.0	21	1.0	41	1.9	11	0.5	1	0.0	0	0.0	75	3.4
WSW	0	0.0	1	0.0	25	1.1	27	1.2	4	0.2	0	0.0	0	0.0	57	2.6
W	0	0.0	2	0.1	26	1.2	11	0.5	4	0.2	1	0.0	0	0.0	44	2.0
WNW	0	0.0	3	0.1	19	0.9	35	1.6	5	0.2	0	0.0	0	0.0	62	2.8
NW	0	0.0	3	0.1	18	0.8	25	1.1	10	0.5	2	0.1	0	0.0	58	2.7
NNW	0	0.0	2	0.1	4	0.2	8	0.4	6	0.3	2	0.1	1	0.0	23	1.1
	0	0.0	33	1.5	235	10.8	387	17.7	143	6.5	35	1.6	2	0.1	835	38.2

MEAN WIND SPEED: 9.8

MISSING: 12

ARTIFICIAL ISLAND 07/05-09/05

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	1	0.0	4	0.2	13	0.6	8	0.4	0	0.0	0	0.0	26	1.2
NNE	0	0.0	0	0.0	4	0.2	26	1.2	6	0.3	0	0.0	0	0.0	36	1.6
NE	0	0.0	1	0.0	4	0.2	15	0.7	5	0.2	0	0.0	0	0.0	25	1.1
ENE	0	0.0	1	0.0	2	0.1	11	0.5	0	0.0	0	0.0	0	0.0	14	0.6
E	0	0.0	1	0.0	7	0.3	0	0.0	0	0.0	0	0.0	0	0.0	8	0.4
ESE	0	0.0	2	0.1	4	0.2	6	0.3	2	0.1	0	0.0	0	0.0	14	0.6
SE	0	0.0	0	0.0	2	0.1	2	0.1	2	0.1	1	0.0	0	0.0	7	0.3
SSE	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
S	0	0.0	0	0.0	1	0.0	1	0.0	0	0.0	2	0.1	0	0.0	4	0.2
SSW	0	0.0	0	0.0	1	0.0	1	0.0	1	0.0	0	0.0	0	0.0	3	0.1
SW	0	0.0	2	0.1	0	0.0	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	4	0.2	0	0.0	0	0.0	0	0.0	6	0.3
W	0	0.0	0	0.0	14	0.6	7	0.3	0	0.0	0	0.0	0	0.0	21	1.0
WNW	0	0.0	0	0.0	8	0.4	8	0.4	0	0.0	0	0.0	0	0.0	16	0.7
NW	0	0.0	0	0.0	1	0.0	5	0.2	4	0.2	0	0.0	0	0.0	10	0.5
NNW	0	0.0	0	0.0	4	0.2	11	0.5	12	0.5	0	0.0	0	0.0	27	1.2
	0	0.0	8	0.4	59	2.7	111	5.1	40	1.8	3	0.1	0	0.0	221	10.1

MEAN WIND SPEED: 9.6  
MISSING: 1

ARTIFICIAL ISLAND 07/05-09/05

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	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	2	0.1	1	0.0	3	0.1	0	0.0	0	0.0	6	0.3
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	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
ESE	0	0.0	0	0.0	0	0.0	2	0.1	0	0.0	0	0.0	0	0.0	2	0.1
SE	0	0.0	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	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
WNW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
NW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
NNW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	0	0.0	0	0.0	6	0.3	3	0.1	3	0.1	0	0.0	0	0.0	12	0.5
MEAN WIND SPEED:	8.8															
MISSING:	0															

WIND DIRECTION

WIND SPEED

WIND DIRECTION

WIND SPEED

ARTIFICIAL ISLAND 07/05-09/05

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	4	0.2	38	1.7	64	2.9	35	1.6	5	0.2	0	0.0	146	6.7
NNE	0	0.0	3	0.1	23	1.1	67	3.1	17	0.8	7	0.3	0	0.0	117	5.4
NE	0	0.0	6	0.3	30	1.4	72	3.3	18	0.8	1	0.0	0	0.0	127	5.8
ENE	0	0.0	5	0.2	49	2.2	53	2.4	8	0.4	0	0.0	0	0.0	115	5.3
E	0	0.0	7	0.3	62	2.8	14	0.6	0	0.0	0	0.0	0	0.0	83	3.8
ESE	0	0.0	6	0.3	28	1.3	67	3.1	3	0.1	0	0.0	0	0.0	104	4.8
SE	0	0.0	4	0.2	17	0.8	64	2.9	67	3.1	22	1.0	5	0.2	179	8.2
SSE	0	0.0	5	0.2	37	1.7	81	3.7	88	4.0	17	0.8	2	0.1	230	10.5
S	0	0.0	3	0.1	45	2.1	73	3.3	40	1.8	14	0.6	0	0.0	175	8.0
SSW	0	0.0	0	0.0	35	1.6	46	2.1	36	1.6	14	0.6	1	0.0	132	6.0
SW	0	0.0	3	0.1	52	2.4	72	3.3	25	1.1	8	0.4	0	0.0	160	7.3
WSW	0	0.0	4	0.2	41	1.9	76	3.5	8	0.4	1	0.0	0	0.0	130	6.0
W	0	0.0	3	0.1	54	2.5	52	2.4	16	0.7	2	0.1	0	0.0	127	5.8
WNW	0	0.0	5	0.2	41	1.9	54	2.5	11	0.5	1	0.0	0	0.0	112	5.1
NW	0	0.0	4	0.2	34	1.6	54	2.5	21	1.0	2	0.1	1	0.0	116	5.3
NNW	0	0.0	4	0.2	42	1.9	57	2.6	23	1.1	4	0.2	1	0.0	131	6.0
	0	0.0	66	3.0	628	28.8	966	44.2	416	19.0	98	4.5	10	0.5	2184	100.0

MISSING HOURS: 24

MEAN WIND SPEED: 10.0

ARTIFICIAL ISLAND 07/05-09/05

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED  
BY ATMOSPHERIC STABILITY CLASS

WIND: 150 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	4	0.2	38	1.7	64	2.9	35	1.6	5	0.2	0	0.0	146	6.7
NNE	0	0.0	3	0.1	23	1.1	67	3.1	17	0.8	7	0.3	0	0.0	117	5.4
NE	0	0.0	6	0.3	30	1.4	72	3.3	18	0.8	1	0.0	0	0.0	127	5.8
ENE	0	0.0	5	0.2	49	2.2	53	2.4	8	0.4	0	0.0	0	0.0	115	5.3
E	0	0.0	7	0.3	62	2.8	14	0.6	0	0.0	0	0.0	0	0.0	83	3.8
ESE	0	0.0	6	0.3	28	1.3	67	3.1	3	0.1	0	0.0	0	0.0	104	4.8
SE	0	0.0	4	0.2	17	0.8	64	2.9	67	3.1	22	1.0	5	0.2	179	8.2
SSE	0	0.0	5	0.2	37	1.7	81	3.7	88	4.0	17	0.8	2	0.1	230	10.5
S	0	0.0	3	0.1	45	2.1	73	3.3	40	1.8	14	0.6	0	0.0	175	8.0
SSW	0	0.0	0	0.0	36	1.6	46	2.1	36	1.6	14	0.6	1	0.0	133	6.1
SW	0	0.0	3	0.1	53	2.4	72	3.3	25	1.1	8	0.4	0	0.0	161	7.4
WSW	0	0.0	4	0.2	41	1.9	76	3.5	8	0.4	1	0.0	0	0.0	130	5.9
W	0	0.0	3	0.1	54	2.5	52	2.4	16	0.7	2	0.1	0	0.0	127	5.8
WNW	0	0.0	5	0.2	41	1.9	54	2.5	11	0.5	1	0.0	0	0.0	112	5.1
NW	0	0.0	4	0.2	34	1.6	54	2.5	21	1.0	2	0.1	1	0.0	116	5.3
NNW	0	0.0	4	0.2	42	1.9	57	2.6	23	1.1	4	0.2	1	0.0	131	6.0
	0	0.0	66	3.0	630	28.8	966	44.2	416	19.0	98	4.5	10	0.5	2186	100.0
MISSING HOURS:	22															
MEAN WIND SPEED:	10.0															

ARTIFICIAL ISLAND 07/05-09/05

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	1	0.0	0	0.0	0	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	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	1	0.0	0	0.0	0	0.0	1	0.0
SSE	0	0.0	0	0.0	0	0.0	1	0.0	1	0.0	0	0.0	0	0.0	2	0.1
S	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SSW	0	0.0	0	0.0	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	1	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	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	1	0.0	0	0.0	1	0.0	3	0.1	0	0.0	0	0.0	5	0.2

MEAN WIND SPEED: 12.2  
 MISSING: 0





ARTIFICIAL ISLAND 07/05-09/05

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	2	0.1	2	0.1	0	0.0	0	0.0	0	0.0	4	0.2
NNE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
NE	0	0.0	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
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	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
SE	0	0.0	0	0.0	0	0.0	6	0.3	8	0.4	1	0.0	0	0.0	15	0.7
SSE	0	0.0	0	0.0	6	0.3	14	0.6	2	0.1	1	0.0	0	0.0	23	1.0
S	0	0.0	0	0.0	4	0.2	4	0.2	0	0.0	0	0.0	0	0.0	8	0.4
SSW	0	0.0	0	0.0	4	0.2	1	0.0	0	0.0	0	0.0	0	0.0	5	0.2
SW	0	0.0	0	0.0	3	0.1	1	0.0	1	0.0	0	0.0	0	0.0	5	0.2
WSW	0	0.0	1	0.0	3	0.1	13	0.6	2	0.1	0	0.0	0	0.0	19	0.9
W	0	0.0	0	0.0	1	0.0	4	0.2	0	0.0	0	0.0	0	0.0	5	0.2
WNW	0	0.0	0	0.0	1	0.0	0	0.0	1	0.0	0	0.0	0	0.0	2	0.1
NW	0	0.0	0	0.0	1	0.0	2	0.1	2	0.1	0	0.0	0	0.0	5	0.2
NNW	0	0.0	0	0.0	2	0.1	3	0.1	2	0.1	0	0.0	0	0.0	7	0.3
	0	0.0	2	0.1	29	1.3	50	2.3	18	0.8	2	0.1	0	0.0	101	4.6

MEAN WIND SPEED: 9.5  
 MISSING: 0



ARTIFICIAL ISLAND 07/05-09/05

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	2	0.1	7	0.3	21	1.0	23	1.0	4	0.2	2	0.1	59	2.7
NNE	0	0.0	0	0.0	5	0.2	9	0.4	10	0.5	3	0.1	0	0.0	27	1.2
NE	0	0.0	1	0.0	6	0.3	19	0.9	18	0.8	1	0.0	0	0.0	45	2.0
ENE	0	0.0	0	0.0	16	0.7	23	1.0	6	0.3	0	0.0	0	0.0	45	2.0
E	0	0.0	3	0.1	19	0.9	14	0.6	9	0.4	0	0.0	0	0.0	45	2.0
ESE	0	0.0	0	0.0	8	0.4	23	1.0	23	1.0	0	0.0	0	0.0	54	2.4
SE	0	0.0	1	0.0	9	0.4	23	1.0	32	1.5	8	0.4	2	0.1	75	3.4
SSE	0	0.0	2	0.1	3	0.1	13	0.6	20	0.9	11	0.5	4	0.2	53	2.4
S	0	0.0	0	0.0	10	0.5	13	0.6	8	0.4	8	0.4	0	0.0	39	1.8
SSW	0	0.0	3	0.1	2	0.1	29	1.3	25	1.1	11	0.5	0	0.0	70	3.2
SW	0	0.0	1	0.0	5	0.2	30	1.4	29	1.3	6	0.3	0	0.0	71	3.2
WSW	0	0.0	0	0.0	9	0.4	30	1.4	18	0.8	1	0.0	0	0.0	58	2.6
W	0	0.0	1	0.0	18	0.8	19	0.9	7	0.3	1	0.0	0	0.0	46	2.1
WNW	0	0.0	0	0.0	19	0.9	35	1.6	21	1.0	4	0.2	0	0.0	79	3.6
NW	0	0.0	0	0.0	8	0.4	21	1.0	16	0.7	8	0.4	0	0.0	53	2.4
NNW	0	0.0	2	0.1	1	0.0	7	0.3	13	0.6	4	0.2	1	0.0	28	1.3
	0	0.0	16	0.7	145	6.6	329	14.9	278	12.6	70	3.2	9	0.4	847	38.4

MEAN WIND SPEED: 12.0

MISSING: 0

ARTIFICIAL ISLAND 07/05-09/05

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	1	0.0	3	0.1	14	0.6	12	0.5	2	0.1	1	0.0	33	1.5
NNE	0	0.0	0	0.0	2	0.1	9	0.4	22	1.0	2	0.1	0	0.0	35	1.6
NE	0	0.0	2	0.1	1	0.0	4	0.2	10	0.5	3	0.1	0	0.0	20	0.9
ENE	0	0.0	0	0.0	6	0.3	4	0.2	1	0.0	0	0.0	0	0.0	11	0.5
E	0	0.0	0	0.0	2	0.1	3	0.1	0	0.0	0	0.0	0	0.0	5	0.2
ESE	0	0.0	0	0.0	1	0.0	4	0.2	6	0.3	0	0.0	0	0.0	11	0.5
SE	0	0.0	1	0.0	3	0.1	6	0.3	5	0.2	0	0.0	0	0.0	15	0.7
SSE	0	0.0	0	0.0	1	0.0	1	0.0	0	0.0	1	0.0	2	0.1	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	3	0.1	3	0.1	0	0.0	0	0.0	6	0.3
SW	0	0.0	0	0.0	1	0.0	0	0.0	1	0.0	0	0.0	0	0.0	2	0.1
WSW	0	0.0	0	0.0	2	0.1	2	0.1	1	0.0	1	0.0	0	0.0	6	0.3
W	0	0.0	0	0.0	4	0.2	11	0.5	2	0.1	0	0.0	0	0.0	17	0.8
WNW	0	0.0	0	0.0	1	0.0	12	0.5	2	0.1	0	0.0	0	0.0	15	0.7
NW	0	0.0	0	0.0	1	0.0	5	0.2	6	0.3	3	0.1	0	0.0	15	0.7
NNW	0	0.0	0	0.0	2	0.1	5	0.2	14	0.6	4	0.2	0	0.0	25	1.1
	0	0.0	4	0.2	31	1.4	83	3.8	85	3.9	16	0.7	3	0.1	222	10.1

MEAN WIND SPEED: 12.3

MISSING: 0

ARTIFICIAL ISLAND 07/05-09/05

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	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	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	3	0.1	0	0.0	4	0.2
ENE	0	0.0	2	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	0.1
E	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
ESE	0	0.0	0	0.0	1	0.0	1	0.0	0	0.0	0	0.0	0	0.0	2	0.1
SE	0	0.0	0	0.0	0	0.0	2	0.1	0	0.0	0	0.0	0	0.0	2	0.1
SSE	0	0.0	0	0.0	0	0.0	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	1	0.0	0	0.0	0	0.0	0	0.0	1	0.0
NW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
NNW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	0	0.0	2	0.1	3	0.1	4	0.2	0	0.0	3	0.1	0	0.0	12	0.5

MEAN WIND SPEED: 10.2  
MISSING: 0



ARTIFICIAL ISLAND 07/05-09/05

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED  
BY ATMOSPHERIC STABILITY CLASS

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

DIRECTION VS SPEED ONLY

DIRECTION	WIND SPEED GROUPS (MPH)														SUM PERCENT	
	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6			
	SUM PERCENT	SUM PERCENT	SUM PERCENT	SUM PERCENT	SUM PERCENT	SUM PERCENT	SUM PERCENT	SUM PERCENT	SUM PERCENT	SUM PERCENT	SUM PERCENT	SUM PERCENT	SUM PERCENT	SUM PERCENT		
N	0	0.0	5	0.2	32	1.4	64	2.9	46	2.1	6	0.3	4	0.2	157	7.1
NNE	0	0.0	1	0.0	17	0.8	29	1.3	36	1.6	7	0.3	2	0.1	92	4.2
NE	0	0.0	8	0.4	15	0.7	37	1.7	34	1.5	7	0.3	0	0.0	101	4.6
ENE	0	0.0	2	0.1	47	2.1	45	2.0	9	0.4	0	0.0	0	0.0	103	4.7
E	0	0.0	4	0.2	40	1.8	36	1.6	9	0.4	0	0.0	0	0.0	89	4.0
ESE	0	0.0	0	0.0	20	0.9	42	1.9	34	1.5	0	0.0	0	0.0	96	4.3
SE	0	0.0	4	0.2	20	0.9	61	2.8	85	3.9	26	1.2	11	0.5	207	9.4
SSE	0	0.0	4	0.2	21	1.0	87	3.9	84	3.8	20	0.9	7	0.3	223	10.1
S	0	0.0	0	0.0	46	2.1	62	2.8	37	1.7	18	0.8	1	0.0	164	7.4
SSW	0	0.0	3	0.1	27	1.2	51	2.3	42	1.9	30	1.4	3	0.1	156	7.1
SW	0	0.0	3	0.1	34	1.5	58	2.6	49	2.2	13	0.6	0	0.0	157	7.1
WSW	0	0.0	2	0.1	27	1.2	68	3.1	35	1.6	5	0.2	0	0.0	137	6.2
W	0	0.0	1	0.0	30	1.4	73	3.3	25	1.1	3	0.1	0	0.0	132	6.0
WNW	0	0.0	2	0.1	34	1.5	60	2.7	34	1.5	5	0.2	0	0.0	135	6.1
NW	0	0.0	2	0.1	22	1.0	44	2.0	35	1.6	12	0.5	1	0.0	116	5.3
NNW	0	0.0	2	0.1	30	1.4	53	2.4	46	2.1	10	0.5	1	0.0	142	6.4
	0	0.0	43	1.9	462	20.9	870	39.4	640	29.0	162	7.3	30	1.4	2207	100.0

MISSING HOURS: 1

MEAN WIND SPEED: 11.5

Lapse Rate  
Wind Distributions  
300-33 Foot

10/2005 - 12/2005



ARTIFICIAL ISLAND 10/05-12/05

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED  
BY ATMOSPHERIC STABILITY CLASS

WIND: 30 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	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	0	0.0	0	0.0	0	0.0	0	0.0
SSE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
S	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SSW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
WSW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
W	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
WNW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
NW	0	0.0	0	0.0	0	0.0	0	0.0	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	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	1	0.0

MEAN WIND SPEED: 13.7  
MISSING: 0

ARTIFICIAL ISLAND 10/05-12/05

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED  
BY ATMOSPHERIC STABILITY CLASS

WIND: 30 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	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	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
ESE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SSE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
S	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SSW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
WSW	0	0.0	0	0.0	2	0.1	2	0.1	0	0.0	0	0.0	0	0.0	4	0.2
W	0	0.0	0	0.0	0	0.0	1	0.0	1	0.0	0	0.0	0	0.0	2	0.1
WNW	0	0.0	0	0.0	0	0.0	3	0.1	2	0.1	0	0.0	0	0.0	5	0.2
NW	0	0.0	0	0.0	0	0.0	1	0.0	4	0.2	0	0.0	0	0.0	5	0.2
NNW	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	1	0.0
	0	0.0	0	0.0	2	0.1	8	0.4	7	0.3	0	0.0	0	0.0	17	0.8

MEAN WIND SPEED: 11.6  
MISSING: 0

ARTIFICIAL ISLAND 10/05-12/05

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED  
 BY ATMOSPHERIC STABILITY CLASS  
 WIND: 30 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	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	1	0.0
NNE	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
NE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
ENE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
E	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
ESE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SE	0	0.0	0	0.0	2	0.1	0	0.0	0	0.0	0	0.0	0	0.0	2	0.1
SSE	0	0.0	0	0.0	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	4	0.2	0	0.0	0	0.0	0	0.0	5	0.2
W	0	0.0	0	0.0	1	0.0	4	0.2	2	0.1	1	0.0	0	0.0	8	0.4
WNW	0	0.0	0	0.0	1	0.0	2	0.1	8	0.4	1	0.0	0	0.0	12	0.5
NW	0	0.0	0	0.0	1	0.0	1	0.0	6	0.3	0	0.0	0	0.0	8	0.4
NNW	0	0.0	0	0.0	2	0.1	0	0.0	0	0.0	0	0.0	0	0.0	2	0.1
	0	0.0	0	0.0	9	0.4	12	0.5	16	0.7	2	0.1	0	0.0	39	1.8

MEAN WIND SPEED: 11.4  
 MISSING: 0

ARTIFICIAL ISLAND 10/05-12/05

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED  
BY ATMOSPHERIC STABILITY CLASS

WIND: 30 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	23	1.0	19	0.9	3	0.1	0	0.0	0	0.0	46	2.1
NNE	0	0.0	2	0.1	46	2.1	26	1.2	8	0.4	0	0.0	0	0.0	82	3.7
NE	0	0.0	1	0.0	20	0.9	7	0.3	6	0.3	0	0.0	0	0.0	34	1.5
ENE	0	0.0	4	0.2	7	0.3	1	0.0	0	0.0	0	0.0	0	0.0	12	0.5
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	1	0.0	4	0.2	8	0.4	2	0.1	3	0.1	0	0.0	18	0.8
SSE	0	0.0	1	0.0	14	0.6	10	0.5	3	0.1	1	0.0	0	0.0	29	1.3
S	0	0.0	5	0.2	20	0.9	18	0.8	4	0.2	0	0.0	0	0.0	47	2.1
SSW	0	0.0	0	0.0	9	0.4	11	0.5	4	0.2	0	0.0	0	0.0	24	1.1
SW	0	0.0	3	0.1	18	0.8	12	0.5	7	0.3	0	0.0	0	0.0	40	1.8
WSW	0	0.0	4	0.2	18	0.8	20	0.9	1	0.0	0	0.0	0	0.0	43	2.0
W	0	0.0	1	0.0	12	0.5	39	1.8	39	1.8	10	0.5	0	0.0	101	4.6
WNW	0	0.0	3	0.1	24	1.1	33	1.5	40	1.8	0	0.0	0	0.0	100	4.5
NW	0	0.0	0	0.0	11	0.5	57	2.6	49	2.2	7	0.3	2	0.1	126	5.7
NNW	0	0.0	0	0.0	9	0.4	19	0.9	9	0.4	0	0.0	0	0.0	37	1.7
	0	0.0	31	1.4	245	11.1	281	12.8	175	8.0	21	1.0	2	0.1	755	34.3

MEAN WIND SPEED: 9.8  
MISSING: 2

ARTIFICIAL ISLAND 10/05-12/05

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED  
 BY ATMOSPHERIC STABILITY CLASS  
 WIND: 30 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	21	1.0	25	1.1	7	0.3	0	0.0	0	0.0	57	2.6
NNE	0	0.0	5	0.2	32	1.5	18	0.8	15	0.7	0	0.0	0	0.0	70	3.2
NE	0	0.0	4	0.2	34	1.5	7	0.3	3	0.1	0	0.0	0	0.0	48	2.2
ENE	0	0.0	13	0.6	19	0.9	12	0.5	0	0.0	0	0.0	0	0.0	44	2.0
E	0	0.0	11	0.5	10	0.5	1	0.0	0	0.0	0	0.0	0	0.0	22	1.0
ESE	0	0.0	4	0.2	22	1.0	8	0.4	0	0.0	0	0.0	0	0.0	34	1.5
SE	0	0.0	6	0.3	18	0.8	26	1.2	10	0.5	4	0.2	0	0.0	64	2.9
SSE	0	0.0	1	0.0	15	0.7	12	0.5	4	0.2	2	0.1	0	0.0	34	1.5
S	0	0.0	3	0.1	25	1.1	30	1.4	4	0.2	6	0.3	0	0.0	68	3.1
SSW	0	0.0	5	0.2	33	1.5	25	1.1	7	0.3	1	0.0	0	0.0	71	3.2
SW	0	0.0	3	0.1	27	1.2	16	0.7	1	0.0	0	0.0	0	0.0	47	2.1
WSW	0	0.0	6	0.3	34	1.5	9	0.4	0	0.0	0	0.0	0	0.0	49	2.2
W	0	0.0	6	0.3	24	1.1	31	1.4	6	0.3	0	0.0	0	0.0	67	3.0
WNW	0	0.0	13	0.6	27	1.2	49	2.2	8	0.4	0	0.0	0	0.0	97	4.4
NW	0	0.0	10	0.5	48	2.2	81	3.7	42	1.9	4	0.2	0	0.0	185	8.4
NNW	0	0.0	5	0.2	23	1.0	29	1.3	11	0.5	0	0.0	0	0.0	68	3.1
	0	0.0	99	4.5	412	18.7	379	17.2	118	5.4	17	0.8	0	0.0	1025	46.6

MEAN WIND SPEED: 8.1  
 MISSING: 1

ARTIFICIAL ISLAND 10/05-12/05

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED  
BY ATMOSPHERIC STABILITY CLASS

WIND: 30 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	7	0.3	1	0.0	1	0.0	0	0.0	0	0.0	0	0.0	9	0.4
NNE	0	0.0	4	0.2	8	0.4	0	0.0	0	0.0	0	0.0	0	0.0	12	0.5
NE	0	0.0	11	0.5	18	0.8	0	0.0	0	0.0	0	0.0	0	0.0	29	1.3
ENE	0	0.0	1	0.0	5	0.2	0	0.0	0	0.0	0	0.0	0	0.0	6	0.3
E	0	0.0	5	0.2	5	0.2	3	0.1	1	0.0	0	0.0	0	0.0	14	0.6
ESE	0	0.0	4	0.2	16	0.7	1	0.0	0	0.0	0	0.0	0	0.0	21	1.0
SE	0	0.0	3	0.1	17	0.8	25	1.1	8	0.4	11	0.5	1	0.0	65	3.0
SSE	0	0.0	4	0.2	11	0.5	7	0.3	11	0.5	0	0.0	0	0.0	33	1.5
S	0	0.0	4	0.2	3	0.1	4	0.2	6	0.3	0	0.0	0	0.0	17	0.8
SSW	0	0.0	2	0.1	6	0.3	1	0.0	1	0.0	0	0.0	0	0.0	10	0.5
SW	0	0.0	2	0.1	12	0.5	0	0.0	0	0.0	0	0.0	0	0.0	14	0.6
WSW	0	0.0	0	0.0	5	0.2	1	0.0	0	0.0	0	0.0	0	0.0	6	0.3
W	0	0.0	4	0.2	2	0.1	0	0.0	0	0.0	0	0.0	0	0.0	6	0.3
WNW	0	0.0	4	0.2	2	0.1	0	0.0	0	0.0	0	0.0	0	0.0	6	0.3
NW	0	0.0	1	0.0	4	0.2	1	0.0	0	0.0	0	0.0	0	0.0	6	0.3
NNW	0	0.0	3	0.1	3	0.1	0	0.0	0	0.0	0	0.0	0	0.0	6	0.3
	0	0.0	59	2.7	118	5.4	44	2.0	27	1.2	11	0.5	1	0.0	260	11.8

MEAN WIND SPEED: 7.3  
MISSING: 0

ARTIFICIAL ISLAND 10/05-12/05

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED  
BY ATMOSPHERIC STABILITY CLASS

WIND: 30 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	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
NE	0	0.0	1	0.0	9	0.4	0	0.0	0	0.0	0	0.0	0	0.0	10	0.5
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	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	1	0.0	12	0.5	0	0.0	0	0.0	0	0.0	0	0.0	13	0.6
SE	0	0.0	1	0.0	11	0.5	14	0.6	17	0.8	4	0.2	0	0.0	47	2.1
SSE	0	0.0	0	0.0	5	0.2	4	0.2	4	0.2	1	0.0	0	0.0	14	0.6
S	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SSW	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
SW	0	0.0	0	0.0	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	2	0.1	3	0.1	0	0.0	0	0.0	0	0.0	0	0.0	5	0.2
WNW	0	0.0	2	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	0.1
NW	0	0.0	2	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	0.1
NNW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	0	0.0	9	0.4	49	2.2	18	0.8	21	1.0	5	0.2	0	0.0	102	4.6

MEAN WIND SPEED: 8.6  
MISSING: 0

ARTIFICIAL ISLAND 10/05-12/05

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED  
BY ATMOSPHERIC STABILITY CLASS

WIND: 30 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	12	0.5	45	2.0	46	2.1	10	0.5	0	0.0	0	0.0	113	5.1
NNE	0	0.0	11	0.5	88	4.0	44	2.0	23	1.0	0	0.0	0	0.0	166	7.5
NE	0	0.0	17	0.8	81	3.7	14	0.6	9	0.4	0	0.0	0	0.0	121	5.5
ENE	0	0.0	18	0.8	35	1.6	13	0.6	0	0.0	0	0.0	0	0.0	66	3.0
E	0	0.0	19	0.9	21	1.0	4	0.2	1	0.0	0	0.0	0	0.0	45	2.0
ESE	0	0.0	11	0.5	56	2.5	10	0.5	0	0.0	0	0.0	0	0.0	77	3.5
SE	0	0.0	11	0.5	52	2.4	73	3.3	37	1.7	22	1.0	1	0.0	196	8.9
SSE	0	0.0	6	0.3	45	2.0	33	1.5	22	1.0	4	0.2	0	0.0	110	5.0
S	0	0.0	12	0.5	48	2.2	52	2.4	14	0.6	6	0.3	0	0.0	132	6.0
SSW	0	0.0	7	0.3	49	2.2	37	1.7	12	0.5	1	0.0	0	0.0	106	4.8
SW	0	0.0	8	0.4	57	2.6	28	1.3	8	0.4	0	0.0	0	0.0	101	4.6
WSW	0	0.0	10	0.5	61	2.8	36	1.6	1	0.0	0	0.0	0	0.0	108	4.9
W	0	0.0	13	0.6	42	1.9	75	3.4	48	2.2	11	0.5	0	0.0	189	8.6
WNW	0	0.0	22	1.0	54	2.5	87	4.0	58	2.6	1	0.0	0	0.0	222	10.1
NW	0	0.0	13	0.6	64	2.9	141	6.4	102	4.6	11	0.5	2	0.1	333	15.1
NNW	0	0.0	8	0.4	37	1.7	49	2.2	20	0.9	0	0.0	0	0.0	114	5.2
	0	0.0	198	9.0	835	38.0	742	33.7	365	16.6	56	2.5	3	0.1	2199	100.0

MISSING HOURS: 9

MEAN WIND SPEED: 8.7



ARTIFICIAL ISLAND 10/05-12/05

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED  
 BY ATMOSPHERIC STABILITY CLASS  
 WIND: 30 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	12	0.5	46	2.1	46	2.1	10	0.5	0	0.0	0	0.0	114	5.2
NNE	0	0.0	11	0.5	88	4.0	44	2.0	23	1.0	0	0.0	0	0.0	166	7.5
NE	0	0.0	17	0.8	81	3.7	14	0.6	9	0.4	0	0.0	0	0.0	121	5.5
ENE	0	0.0	18	0.8	35	1.6	13	0.6	0	0.0	0	0.0	0	0.0	66	3.0
E	0	0.0	19	0.9	21	1.0	4	0.2	1	0.0	0	0.0	0	0.0	45	2.0
ESE	0	0.0	11	0.5	56	2.5	10	0.5	0	0.0	0	0.0	0	0.0	77	3.5
SE	0	0.0	11	0.5	52	2.4	73	3.3	37	1.7	22	1.0	1	0.0	196	8.9
SSE	0	0.0	6	0.3	45	2.0	33	1.5	22	1.0	4	0.2	0	0.0	110	5.0
S	0	0.0	12	0.5	48	2.2	52	2.4	14	0.6	6	0.3	0	0.0	132	6.0
SSW	0	0.0	7	0.3	49	2.2	37	1.7	12	0.5	1	0.0	0	0.0	106	4.8
SW	0	0.0	8	0.4	57	2.6	28	1.3	8	0.4	0	0.0	0	0.0	101	4.6
WSW	0	0.0	10	0.5	61	2.8	36	1.6	1	0.0	0	0.0	0	0.0	108	4.9
W	0	0.0	13	0.6	42	1.9	75	3.4	48	2.2	11	0.5	0	0.0	189	8.6
WNW	0	0.0	22	1.0	54	2.5	87	4.0	58	2.6	1	0.0	0	0.0	222	10.1
NW	0	0.0	13	0.6	64	2.9	142	6.4	102	4.6	11	0.5	2	0.1	334	15.2
NNW	0	0.0	8	0.4	38	1.7	49	2.2	20	0.9	0	0.0	0	0.0	115	5.2
	0	0.0	198	9.0	837	38.0	743	33.7	365	16.6	56	2.5	3	0.1	2202	100.0

MISSING HOURS: 6

MEAN WIND SPEED: 8.7

ARTIFICIAL ISLAND 10/05-12/05

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	SUM PERCENT	SUM PERCENT	SUM PERCENT	SUM PERCENT	SUM PERCENT	SUM PERCENT	SUM PERCENT	SUM PERCENT	SUM PERCENT
N	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
NNE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
NE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
ENE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
E	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
ESE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SSE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
S	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SSW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
WSW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
W	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
WNW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
NW	0	0.0	0	0.0	0	0.0	0	0.0	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	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	1	0.0

MEAN WIND SPEED: 18.3  
MISSING: 0

ARTIFICIAL ISLAND 10/05-12/05

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	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	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	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	4	0.2	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	2	0.1	0	0.0	0	0.0	2	0.1
WNW	0	0.0	0	0.0	0	0.0	0	0.0	3	0.1	1	0.0	0	0.0	4	0.2
NW	0	0.0	0	0.0	0	0.0	0	0.0	5	0.2	1	0.0	0	0.0	6	0.3
NNW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	0	0.0	0	0.0	0	0.0	4	0.2	11	0.5	2	0.1	0	0.0	17	0.8

MEAN WIND SPEED: 15.4

MISSING: 0

ARTIFICIAL ISLAND 10/05-12/05

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	SUM	PERCENT
N	0	0.0	0	0.0	0	0.0	2	0.1	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	0	0.0	0	0.0	0	0.0	0	0.0
NE	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
ENE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
E	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
ESE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SE	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	1	0.0
SSE	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	1	0.0
S	0	0.0	0	0.0	0	0.0	0	0.0	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	1	0.0	0	0.0	0	0.0	0	0.0	2	0.1
W	0	0.0	0	0.0	1	0.0	0	0.0	9	0.4	0	0.0	1	0.0	11	0.5
WNW	0	0.0	0	0.0	1	0.0	0	0.0	4	0.2	3	0.1	1	0.0	9	0.4
NW	0	0.0	0	0.0	0	0.0	1	0.0	7	0.3	3	0.1	0	0.0	11	0.5
NNW	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	1	0.0
	0	0.0	0	0.0	4	0.2	7	0.3	20	0.9	6	0.3	2	0.1	39	1.8

MEAN WIND SPEED: 15.1  
MISSING: 0

ARTIFICIAL ISLAND 10/05-12/05

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	5	0.2	21	1.0	19	0.9	7	0.3	0	0.0	52	2.4
NNE	0	0.0	0	0.0	6	0.3	45	2.1	15	0.7	10	0.5	0	0.0	76	3.5
NE	0	0.0	1	0.0	5	0.2	24	1.1	3	0.1	6	0.3	0	0.0	39	1.8
ENE	0	0.0	2	0.1	4	0.2	7	0.3	2	0.1	0	0.0	0	0.0	15	0.7
E	0	0.0	0	0.0	7	0.3	0	0.0	0	0.0	0	0.0	0	0.0	7	0.3
ESE	0	0.0	1	0.0	2	0.1	4	0.2	1	0.0	0	0.0	0	0.0	8	0.4
SE	0	0.0	1	0.0	3	0.1	1	0.0	3	0.1	1	0.0	5	0.2	14	0.6
SSE	0	0.0	0	0.0	7	0.3	12	0.6	5	0.2	2	0.1	1	0.0	27	1.2
S	0	0.0	5	0.2	8	0.4	19	0.9	7	0.3	4	0.2	0	0.0	43	2.0
SSW	0	0.0	0	0.0	9	0.4	12	0.6	7	0.3	1	0.0	0	0.0	29	1.3
SW	0	0.0	3	0.1	12	0.6	6	0.3	11	0.5	8	0.4	0	0.0	40	1.8
WSW	0	0.0	3	0.1	11	0.5	14	0.6	12	0.6	1	0.0	0	0.0	41	1.9
W	0	0.0	0	0.0	12	0.6	9	0.4	45	2.1	26	1.2	12	0.6	104	4.8
WNW	0	0.0	1	0.0	8	0.4	22	1.0	33	1.5	29	1.3	1	0.0	94	4.3
NW	0	0.0	0	0.0	5	0.2	11	0.5	59	2.7	27	1.2	12	0.6	114	5.3
NNW	0	0.0	1	0.0	2	0.1	11	0.5	17	0.8	5	0.2	1	0.0	37	1.7
	0	0.0	18	0.8	106	4.9	218	10.1	239	11.0	127	5.9	32	1.5	740	34.2

MEAN WIND SPEED: 13.7  
 MISSING: 17

ARTIFICIAL ISLAND 10/05-12/05

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	4	0.2	7	0.3	12	0.6	21	1.0	12	0.6	1	0.0	57	2.6
NNE	0	0.0	0	0.0	7	0.3	21	1.0	13	0.6	19	0.9	0	0.0	60	2.8
NE	0	0.0	1	0.0	5	0.2	35	1.6	6	0.3	4	0.2	0	0.0	51	2.4
ENE	0	0.0	1	0.0	13	0.6	21	1.0	12	0.6	2	0.1	0	0.0	49	2.3
E	0	0.0	3	0.1	10	0.5	11	0.5	0	0.0	0	0.0	0	0.0	24	1.1
ESE	0	0.0	0	0.0	5	0.2	9	0.4	9	0.4	0	0.0	0	0.0	23	1.1
SE	0	0.0	4	0.2	8	0.4	17	0.8	17	0.8	5	0.2	9	0.4	60	2.8
SSE	0	0.0	0	0.0	4	0.2	13	0.6	11	0.5	3	0.1	2	0.1	33	1.5
S	0	0.0	0	0.0	10	0.5	27	1.2	12	0.6	1	0.0	6	0.3	56	2.6
SSW	0	0.0	2	0.1	15	0.7	27	1.2	20	0.9	6	0.3	2	0.1	72	3.3
SW	0	0.0	4	0.2	16	0.7	19	0.9	21	1.0	6	0.3	0	0.0	66	3.1
WSW	0	0.0	1	0.0	12	0.6	28	1.3	11	0.5	1	0.0	0	0.0	53	2.5
W	0	0.0	5	0.2	12	0.6	14	0.6	20	0.9	3	0.1	0	0.0	54	2.5
WNW	0	0.0	3	0.1	13	0.6	35	1.6	51	2.4	8	0.4	0	0.0	110	5.1
NW	0	0.0	4	0.2	9	0.4	37	1.7	87	4.0	30	1.4	10	0.5	177	8.2
NNW	0	0.0	3	0.1	3	0.1	19	0.9	22	1.0	9	0.4	3	0.1	59	2.7
	0	0.0	35	1.6	149	6.9	345	16.0	333	15.4	109	5.0	33	1.5	1004	46.4

MEAN WIND SPEED: 12.6  
MISSING: 22

ARTIFICIAL ISLAND 10/05-12/05

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	1	0.0	3	0.1	2	0.1	1	0.0	0	0.0	0	0.0	7	0.3
NNE	0	0.0	0	0.0	2	0.1	2	0.1	1	0.0	0	0.0	0	0.0	5	0.2
NE	0	0.0	0	0.0	2	0.1	6	0.3	0	0.0	0	0.0	0	0.0	8	0.4
ENE	0	0.0	1	0.0	11	0.5	9	0.4	0	0.0	0	0.0	0	0.0	21	1.0
E	0	0.0	0	0.0	4	0.2	4	0.2	1	0.0	1	0.0	0	0.0	10	0.5
ESE	0	0.0	0	0.0	2	0.1	2	0.1	2	0.1	1	0.0	1	0.0	8	0.4
SE	0	0.0	4	0.2	6	0.3	13	0.6	6	0.3	12	0.6	16	0.7	57	2.6
SSE	0	0.0	2	0.1	4	0.2	8	0.4	14	0.6	8	0.4	0	0.0	36	1.7
S	0	0.0	0	0.0	4	0.2	13	0.6	4	0.2	3	0.1	2	0.1	26	1.2
SSW	0	0.0	2	0.1	3	0.1	8	0.4	2	0.1	5	0.2	0	0.0	20	0.9
SW	0	0.0	2	0.1	2	0.1	9	0.4	0	0.0	0	0.0	0	0.0	13	0.6
WSW	0	0.0	2	0.1	4	0.2	7	0.3	1	0.0	2	0.1	0	0.0	16	0.7
W	0	0.0	1	0.0	5	0.2	1	0.0	0	0.0	0	0.0	0	0.0	7	0.3
WNW	0	0.0	1	0.0	4	0.2	2	0.1	1	0.0	0	0.0	0	0.0	8	0.4
NW	0	0.0	0	0.0	2	0.1	5	0.2	1	0.0	0	0.0	0	0.0	8	0.4
NNW	0	0.0	1	0.0	5	0.2	4	0.2	0	0.0	0	0.0	0	0.0	10	0.5
	0	0.0	17	0.8	63	2.9	95	4.4	34	1.6	32	1.5	19	0.9	260	12.0

MEAN WIND SPEED: 12.1  
 MISSING: 0

ARTIFICIAL ISLAND 10/05-12/05

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	SUM	PERCENT
N	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
NNE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
NE	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
ENE	0	0.0	0	0.0	1	0.0	6	0.3	0	0.0	0	0.0	0	0.0	7	0.3
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	2	0.1	0	0.0	2	0.1	1	0.0	0	0.0	0	0.0	5	0.2
SE	0	0.0	0	0.0	1	0.0	10	0.5	5	0.2	11	0.5	21	1.0	48	2.2
SSE	0	0.0	2	0.1	2	0.1	5	0.2	8	0.4	3	0.1	1	0.0	21	1.0
S	0	0.0	0	0.0	1	0.0	4	0.2	0	0.0	0	0.0	0	0.0	5	0.2
SSW	0	0.0	0	0.0	1	0.0	0	0.0	1	0.0	0	0.0	0	0.0	2	0.1
SW	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
WSW	0	0.0	0	0.0	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	3	0.1	6	0.3	0	0.0	0	0.0	0	0.0	9	0.4
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	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
NNW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	0	0.0	5	0.2	12	0.6	34	1.6	15	0.7	14	0.6	22	1.0	102	4.7

MEAN WIND SPEED: 16.1  
MISSING: 0



ARTIFICIAL ISLAND 10/05-12/05

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

ALL STABILITY CLASSES

DIRECTION	WIND SPEED GROUPS (MPH)														SUM PERCENT	
	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6			
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	5	0.2	15	0.7	37	1.7	42	1.9	19	0.9	1	0.0	119	5.5
NNE	0	0.0	0	0.0	15	0.7	68	3.1	29	1.3	29	1.3	0	0.0	141	6.5
NE	0	0.0	2	0.1	14	0.6	65	3.0	9	0.4	10	0.5	0	0.0	100	4.6
ENE	0	0.0	4	0.2	29	1.3	43	2.0	14	0.6	2	0.1	0	0.0	92	4.3
E	0	0.0	3	0.1	23	1.1	15	0.7	1	0.0	1	0.0	0	0.0	43	2.0
ESE	0	0.0	3	0.1	9	0.4	17	0.8	13	0.6	1	0.0	1	0.0	44	2.0
SE	0	0.0	9	0.4	18	0.8	42	1.9	31	1.4	29	1.3	51	2.4	180	8.3
SSE	0	0.0	4	0.2	17	0.8	39	1.8	38	1.8	16	0.7	4	0.2	118	5.5
S	0	0.0	5	0.2	23	1.1	63	2.9	23	1.1	8	0.4	8	0.4	130	6.0
SSW	0	0.0	4	0.2	28	1.3	47	2.2	30	1.4	12	0.6	2	0.1	123	5.7
SW	0	0.0	10	0.5	30	1.4	34	1.6	32	1.5	14	0.6	0	0.0	120	5.5
WSW	0	0.0	6	0.3	28	1.3	54	2.5	24	1.1	4	0.2	0	0.0	116	5.4
W	0	0.0	6	0.3	33	1.5	30	1.4	76	3.5	29	1.3	13	0.6	187	8.6
WNW	0	0.0	5	0.2	26	1.2	60	2.8	92	4.3	41	1.9	2	0.1	226	10.4
NW	0	0.0	4	0.2	16	0.7	54	2.5	160	7.4	61	2.8	22	1.0	317	14.7
NNW	0	0.0	5	0.2	10	0.5	35	1.6	39	1.8	14	0.6	4	0.2	107	4.9
	0	0.0	75	3.5	334	15.4	703	32.5	653	30.2	290	13.4	108	5.0	2163	100.0

MISSING HOURS: 45

MEAN WIND SPEED: 13.2

ARTIFICIAL ISLAND 10/05-12/05

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED  
BY ATMOSPHERIC STABILITY CLASS

WIND: 150 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	5	0.2	15	0.7	38	1.8	42	1.9	19	0.9	1	0.0	120	5.5
NNE	0	0.0	0	0.0	15	0.7	68	3.1	29	1.3	29	1.3	0	0.0	141	6.5
NE	0	0.0	2	0.1	14	0.6	65	3.0	9	0.4	10	0.5	0	0.0	100	4.6
ENE	0	0.0	4	0.2	29	1.3	43	2.0	14	0.6	2	0.1	0	0.0	92	4.2
E	0	0.0	3	0.1	23	1.1	15	0.7	1	0.0	1	0.0	0	0.0	43	2.0
ESE	0	0.0	3	0.1	9	0.4	17	0.8	13	0.6	1	0.0	1	0.0	44	2.0
SE	0	0.0	9	0.4	18	0.8	42	1.9	31	1.4	29	1.3	51	2.4	180	8.3
SSE	0	0.0	4	0.2	17	0.8	39	1.8	38	1.8	16	0.7	4	0.2	118	5.4
S	0	0.0	5	0.2	23	1.1	63	2.9	23	1.1	8	0.4	8	0.4	130	6.0
SSW	0	0.0	4	0.2	28	1.3	47	2.2	30	1.4	12	0.6	2	0.1	123	5.7
SW	0	0.0	10	0.5	30	1.4	34	1.6	32	1.5	14	0.6	0	0.0	120	5.5
WSW	0	0.0	6	0.3	28	1.3	54	2.5	24	1.1	4	0.2	0	0.0	116	5.4
W	0	0.0	6	0.3	33	1.5	30	1.4	76	3.5	29	1.3	13	0.6	187	8.6
WNW	0	0.0	5	0.2	26	1.2	60	2.8	92	4.2	41	1.9	2	0.1	226	10.4
NW	0	0.0	4	0.2	16	0.7	55	2.5	160	7.4	61	2.8	22	1.0	318	14.7
NNW	0	0.0	5	0.2	10	0.5	36	1.7	39	1.8	14	0.6	4	0.2	108	5.0
	0	0.0	75	3.5	334	15.4	706	32.6	653	30.1	290	13.4	108	5.0	2166	100.0

MISSING HOURS: 42

MEAN WIND SPEED: 13.2

ARTIFICIAL ISLAND 10/05-12/05

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	0	0.0	0	0.0	0	0.0	0	0.0
NE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
ENE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
E	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
ESE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SSE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
S	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SSW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
WSW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
W	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
WNW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
NW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	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	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	1	0.0

MEAN WIND SPEED: 21.0

MISSING: 0

ARTIFICIAL ISLAND 10/05-12/05

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	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	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
ESE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SSE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
S	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SSW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
WSW	0	0.0	0	0.0	0	0.0	4	0.2	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	1	0.0	1	0.0	0	0.0	2	0.1
WNW	0	0.0	0	0.0	0	0.0	0	0.0	2	0.1	2	0.1	1	0.0	5	0.2
NW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	5	0.2	0	0.0	5	0.2
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	0	0.0	0	0.0	4	0.2	4	0.2	8	0.4	1	0.0	17	0.8

MEAN WIND SPEED: 17.3  
MISSING: 0

ARTIFICIAL ISLAND 10/05-12/05

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	0	0.0	0	0.0	2	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	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
ENE	0	0.0	0	0.0	0	0.0	0	0.0	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	0	0.0	0	0.0	0	0.0	2	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	1	0.0	2	0.1	0	0.0	0	0.0	4	0.2
W	0	0.0	0	0.0	0	0.0	1	0.0	5	0.2	2	0.1	1	0.0	9	0.4
WNW	0	0.0	0	0.0	0	0.0	1	0.0	2	0.1	6	0.3	1	0.0	10	0.5
NW	0	0.0	0	0.0	0	0.0	1	0.0	1	0.0	8	0.4	0	0.0	10	0.5
NNW	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	1	0.0
	0	0.0	0	0.0	2	0.1	9	0.4	10	0.5	16	0.7	2	0.1	39	1.8

MEAN WIND SPEED: 16.8

MISSING: 0

ARTIFICIAL ISLAND 10/05-12/05

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	0.1	13	0.6	16	0.7	15	0.7	0	0.0	47	2.1
NNE	0	0.0	0	0.0	5	0.2	38	1.7	21	1.0	14	0.6	2	0.1	80	3.6
NE	0	0.0	1	0.0	3	0.1	19	0.9	5	0.2	6	0.3	1	0.0	35	1.6
ENE	0	0.0	0	0.0	7	0.3	10	0.5	2	0.1	0	0.0	0	0.0	19	0.9
E	0	0.0	0	0.0	2	0.1	2	0.1	0	0.0	0	0.0	0	0.0	4	0.2
ESE	0	0.0	1	0.0	2	0.1	1	0.0	1	0.0	0	0.0	0	0.0	5	0.2
SE	0	0.0	1	0.0	1	0.0	9	0.4	1	0.0	3	0.1	5	0.2	20	0.9
SSE	0	0.0	1	0.0	5	0.2	3	0.1	9	0.4	2	0.1	2	0.1	22	1.0
S	0	0.0	3	0.1	5	0.2	11	0.5	12	0.5	4	0.2	0	0.0	35	1.6
SSW	0	0.0	4	0.2	5	0.2	9	0.4	17	0.8	3	0.1	0	0.0	38	1.7
SW	0	0.0	0	0.0	10	0.5	5	0.2	6	0.3	10	0.5	2	0.1	33	1.5
WSW	0	0.0	0	0.0	13	0.6	18	0.8	9	0.4	3	0.1	0	0.0	43	2.0
W	0	0.0	1	0.0	8	0.4	11	0.5	29	1.3	37	1.7	20	0.9	106	4.8
WNW	0	0.0	0	0.0	10	0.5	17	0.8	33	1.5	31	1.4	16	0.7	107	4.9
NW	0	0.0	2	0.1	3	0.1	10	0.5	38	1.7	53	2.4	25	1.1	131	5.9
NNW	0	0.0	0	0.0	2	0.1	7	0.3	15	0.7	5	0.2	3	0.1	32	1.5
	0	0.0	14	0.6	84	3.8	183	8.3	214	9.7	186	8.4	76	3.5	757	34.4

MEAN WIND SPEED: 15.6  
MISSING: 0

ARTIFICIAL ISLAND 10/05-12/05

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	0	0.0	2	0.1	10	0.5	15	0.7	19	0.9	8	0.4	54	2.5
NNE	0	0.0	4	0.2	0	0.0	14	0.6	16	0.7	21	1.0	5	0.2	60	2.7
NE	0	0.0	1	0.0	4	0.2	10	0.5	16	0.7	8	0.4	0	0.0	39	1.8
ENE	0	0.0	0	0.0	9	0.4	26	1.2	18	0.8	1	0.0	0	0.0	54	2.5
E	0	0.0	1	0.0	5	0.2	9	0.4	4	0.2	0	0.0	0	0.0	19	0.9
ESE	0	0.0	2	0.1	1	0.0	7	0.3	12	0.5	4	0.2	0	0.0	26	1.2
SE	0	0.0	1	0.0	5	0.2	7	0.3	20	0.9	9	0.4	11	0.5	53	2.4
SSE	0	0.0	2	0.1	7	0.3	8	0.4	16	0.7	2	0.1	4	0.2	39	1.8
S	0	0.0	2	0.1	7	0.3	10	0.5	15	0.7	7	0.3	5	0.2	46	2.1
SSW	0	0.0	0	0.0	5	0.2	19	0.9	42	1.9	18	0.8	7	0.3	91	4.1
SW	0	0.0	4	0.2	9	0.4	17	0.8	19	0.9	17	0.8	0	0.0	66	3.0
WSW	0	0.0	0	0.0	3	0.1	15	0.7	20	0.9	1	0.0	0	0.0	39	1.8
W	0	0.0	3	0.1	7	0.3	23	1.0	33	1.5	15	0.7	3	0.1	84	3.8
WNW	0	0.0	4	0.2	6	0.3	18	0.8	45	2.0	24	1.1	4	0.2	101	4.6
NW	0	0.0	2	0.1	6	0.3	20	0.9	57	2.6	68	3.1	25	1.1	178	8.1
NNW	0	0.0	1	0.0	2	0.1	16	0.7	34	1.5	21	1.0	3	0.1	77	3.5
	0	0.0	27	1.2	78	3.5	229	10.4	382	17.3	235	10.7	75	3.4	1026	46.6

MEAN WIND SPEED: 15.6  
 MISSING: 0

ARTIFICIAL ISLAND 10/05-12/05

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	4	0.2	4	0.2	2	0.1	1	0.0	0	0.0	11	0.5
NNE	0	0.0	2	0.1	2	0.1	1	0.0	0	0.0	0	0.0	0	0.0	5	0.2
NE	0	0.0	1	0.0	1	0.0	3	0.1	3	0.1	0	0.0	0	0.0	8	0.4
ENE	0	0.0	1	0.0	4	0.2	5	0.2	3	0.1	0	0.0	0	0.0	13	0.6
E	0	0.0	0	0.0	6	0.3	2	0.1	3	0.1	1	0.0	1	0.0	13	0.6
ESE	0	0.0	0	0.0	1	0.0	1	0.0	1	0.0	1	0.0	1	0.0	5	0.2
SE	0	0.0	0	0.0	3	0.1	4	0.2	8	0.4	1	0.0	20	0.9	36	1.6
SSE	0	0.0	1	0.0	3	0.1	11	0.5	10	0.5	11	0.5	1	0.0	37	1.7
S	0	0.0	1	0.0	1	0.0	9	0.4	7	0.3	12	0.5	5	0.2	35	1.6
SSW	0	0.0	2	0.1	3	0.1	5	0.2	14	0.6	2	0.1	2	0.1	28	1.3
SW	0	0.0	0	0.0	3	0.1	10	0.5	8	0.4	1	0.0	0	0.0	22	1.0
WSW	0	0.0	0	0.0	2	0.1	5	0.2	7	0.3	0	0.0	2	0.1	16	0.7
W	0	0.0	1	0.0	3	0.1	1	0.0	4	0.2	0	0.0	0	0.0	9	0.4
WNW	0	0.0	2	0.1	3	0.1	2	0.1	2	0.1	0	0.0	0	0.0	9	0.4
NW	0	0.0	1	0.0	0	0.0	1	0.0	2	0.1	1	0.0	0	0.0	5	0.2
NNW	0	0.0	0	0.0	1	0.0	4	0.2	3	0.1	0	0.0	0	0.0	8	0.4
	0	0.0	12	0.5	40	1.8	68	3.1	77	3.5	31	1.4	32	1.5	260	11.8

MEAN WIND SPEED: 14.9  
 MISSING: 0



ARTIFICIAL ISLAND 10/05-12/05

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	1	0.0	0	0.0	0	0.0	0	0.0	1	0.0
NE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
ENE	0	0.0	0	0.0	0	0.0	7	0.3	0	0.0	0	0.0	0	0.0	7	0.3
E	0	0.0	0	0.0	1	0.0	2	0.1	0	0.0	0	0.0	0	0.0	3	0.1
ESE	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	1	0.0
SE	0	0.0	0	0.0	0	0.0	0	0.0	3	0.1	4	0.2	12	0.5	19	0.9
SSE	0	0.0	0	0.0	0	0.0	3	0.1	2	0.1	3	0.1	19	0.9	27	1.2
S	0	0.0	2	0.1	1	0.0	7	0.3	6	0.3	6	0.3	0	0.0	22	1.0
SSW	0	0.0	0	0.0	1	0.0	3	0.1	3	0.1	1	0.0	0	0.0	8	0.4
SW	0	0.0	0	0.0	1	0.0	1	0.0	0	0.0	0	0.0	0	0.0	2	0.1
WSW	0	0.0	0	0.0	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	6	0.3	2	0.1	0	0.0	10	0.5
WNW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
NW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
NNW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	0	0.0	2	0.1	4	0.2	28	1.3	21	1.0	16	0.7	31	1.4	102	4.6

MEAN WIND SPEED: 19.8  
MISSING: 0

ARTIFICIAL ISLAND 10/05-12/05

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	0	0.0	9	0.4	29	1.3	33	1.5	35	1.6	8	0.4	114	5.2
NNE	0	0.0	6	0.3	7	0.3	54	2.5	37	1.7	35	1.6	7	0.3	146	6.6
NE	0	0.0	3	0.1	9	0.4	32	1.5	24	1.1	14	0.6	1	0.0	83	3.8
ENE	0	0.0	1	0.0	20	0.9	48	2.2	23	1.0	1	0.0	0	0.0	93	4.2
E	0	0.0	1	0.0	14	0.6	15	0.7	7	0.3	1	0.0	1	0.0	39	1.8
ESE	0	0.0	3	0.1	4	0.2	9	0.4	15	0.7	5	0.2	1	0.0	37	1.7
SE	0	0.0	2	0.1	9	0.4	22	1.0	32	1.5	17	0.8	48	2.2	130	5.9
SSE	0	0.0	4	0.2	15	0.7	25	1.1	37	1.7	18	0.8	26	1.2	125	5.7
S	0	0.0	8	0.4	14	0.6	37	1.7	40	1.8	29	1.3	10	0.5	138	6.3
SSW	0	0.0	6	0.3	14	0.6	36	1.6	76	3.5	24	1.1	9	0.4	165	7.5
SW	0	0.0	4	0.2	23	1.0	33	1.5	33	1.5	28	1.3	2	0.1	123	5.6
WSW	0	0.0	0	0.0	19	0.9	45	2.0	38	1.7	4	0.2	2	0.1	108	4.9
W	0	0.0	5	0.2	18	0.8	38	1.7	78	3.5	57	2.6	24	1.1	220	10.0
WNW	0	0.0	6	0.3	19	0.9	38	1.7	84	3.8	63	2.9	22	1.0	232	10.5
NW	0	0.0	5	0.2	9	0.4	32	1.5	98	4.5	136	6.2	50	2.3	330	15.0
NNW	0	0.0	1	0.0	5	0.2	28	1.3	53	2.4	26	1.2	6	0.3	119	5.4
	0	0.0	55	2.5	208	9.4	521	23.7	708	32.2	493	22.4	217	9.9	2202	100.0

MISSING HOURS: 6

MEAN WIND SPEED: 15.8

ARTIFICIAL ISLAND 10/05-12/05

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

DIRECTION VS SPEED ONLY

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	0	0.0	9	0.4	29	1.3	33	1.5	35	1.6	8	0.4	114	5.2
NNE	0	0.0	6	0.3	7	0.3	54	2.4	37	1.7	35	1.6	7	0.3	146	6.6
NE	0	0.0	3	0.1	9	0.4	32	1.5	24	1.1	14	0.6	1	0.0	83	3.8
ENE	0	0.0	1	0.0	20	0.9	48	2.2	23	1.0	1	0.0	0	0.0	93	4.2
E	0	0.0	1	0.0	14	0.6	15	0.7	7	0.3	1	0.0	1	0.0	39	1.8
ESE	0	0.0	3	0.1	4	0.2	9	0.4	15	0.7	5	0.2	1	0.0	37	1.7
SE	0	0.0	2	0.1	9	0.4	22	1.0	32	1.5	17	0.8	48	2.2	130	5.9
SSE	0	0.0	4	0.2	15	0.7	25	1.1	37	1.7	18	0.8	26	1.2	125	5.7
S	0	0.0	8	0.4	14	0.6	37	1.7	40	1.8	29	1.3	10	0.5	138	6.3
SSW	0	0.0	6	0.3	14	0.6	36	1.6	76	3.4	24	1.1	9	0.4	165	7.5
SW	0	0.0	4	0.2	23	1.0	33	1.5	33	1.5	28	1.3	2	0.1	123	5.6
WSW	0	0.0	0	0.0	19	0.9	45	2.0	38	1.7	4	0.2	2	0.1	108	4.9
W	0	0.0	5	0.2	18	0.8	38	1.7	78	3.5	57	2.6	24	1.1	220	10.0
WNW	0	0.0	6	0.3	19	0.9	38	1.7	84	3.8	63	2.9	22	1.0	232	10.5
NW	0	0.0	5	0.2	9	0.4	32	1.5	99	4.5	136	6.2	50	2.3	331	15.0
NNW	0	0.0	1	0.0	5	0.2	29	1.3	54	2.4	26	1.2	6	0.3	121	5.5
	0	0.0	55	2.5	208	9.4	522	23.7	710	32.2	493	22.4	217	9.8	2205	100.0

MISSING HOURS: 3

MEAN WIND SPEED: 15.8

# APPENDIX B

## **MPC DATA**

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**2005 SGS AND HCGS RADIOACTIVE EFFLUENTS RELEASE REPORT**

**APPENDIX F: Maximum Permissible Concentration (MPC) Values - Liquid Effluents**

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

**Table F-1: 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
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
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

**2005 SGS AND HCGS RADIOACTIVE EFFLUENTS RELEASE REPORT**

Table F-1 (Continued)

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	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

**2005 SGS AND HCGS RADIOACTIVE EFFLUENTS RELEASE REPORT**

Table F-1 (Continued)

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-131	3E-7	6E-5
	I-132	8E-6	2E-4
	I-133	1E-6	4E-5
	I-134	2E-5	6E-4
	I-135	4E-6	7E-5
Iridium (77)	Ir-190	2E-4	2E-4
	Ir-192	4E-5	4E-5
	Ir-194	3E-5	3E-5
Iron (26)	Fe-55	8E-4	2E-3
	Fe-59	6E-5	5E-5
Lanthanum (57)	La-140	2E-5	2E-5
Lead (82)	Pb-203	4E-4	4E-4
	Pb-210	1E-7	2E-4
	Pb-212	2E-5	2E-5
Lutetium (71)	Lu-177	1E-4	1E-4
Manganese (25)	Mn-52	3E-5	3E-5
	Mn-54	1E-4	1E-4
	Mn-56	1E-4	1E-4
Mercury (80)	Hg-197m	2E-4	2E-4
	Hg-197	3E-4	5E-4
	Hg-203	2E-5	1E-4
Molybdenum (42)	Mo-99	2E-4	4E-5

**2005 SGS AND HCGS RADIOACTIVE EFFLUENTS RELEASE REPORT**

Table F-1 (Continued)

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



**2005 SGS AND HCGS RADIOACTIVE EFFLUENTS RELEASE REPORT**

Table F-1 (Continued)

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-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

2005 SGS AND HCGS RADIOACTIVE EFFLUENTS RELEASE REPORT

Table F-1 (Continued)

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

**2005 SGS AND HCGS RADIOACTIVE EFFLUENTS RELEASE REPORT**

Table F-1 (Continued)

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 radio-nuclide not listed above with decay mode other than alpha emission or spontaneous fission and with radio-active half-life greater than 2 hours		3E-6	3E-6
Any single radio-nuclide 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").