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Electric and Gas
Company

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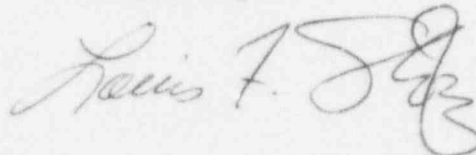
Gentlemen:

RADIOACTIVE EFFLUENT RELEASE REPORT - 18
HOPE CREEK GENERATING STATION
DOCKET NO. 50-354

In accordance with Section 6.9.1.8 of Appendix A to the Operating License for Hope Creek Generating Station, Public Service Electric and Gas Company hereby transmits one copy of the annual Radioactive Effluent Release Report, RERR-18. This report summarizes liquid and gaseous releases and solid waste shipments from the Hope Creek Generating Station for the period of January 1, 1995 through December 31, 1995.

Should you have any questions regarding this transmittal, please feel free to contact us.

Sincerely,



Attachment (1)

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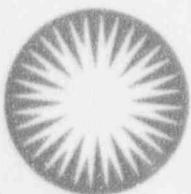
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HOPE CREEK GENERATING STATION
ANNUAL RADIOACTIVE
EFFLUENT RELEASE REPORT
HCGS RERR-18

DOCKET NO. 50-354
OPERATING LICENSE NO. NFP-57



April 1996

PSEG

The Energy People

HOPE CREEK GENERATING STATION
ANNUAL RADIOACTIVE
EFFLUENT RELEASE REPORT
HCGS RERR-18

DOCKET NO. 50-354
OPERATING LICENSE NO. NFP-57

April 1996

HOPE CREEK GENERATING STATION
RADIOACTIVE EFFLUENT RELEASE REPORT
JANUARY - DECEMBER 1995

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HOPE CREEK GENERATING STATION
RADIOACTIVE EFFLUENT RELEASE REPORT
JANUARY - DECEMBER 1995

INTRODUCTION

This report, HCGS-RERR-18, summarizes information pertaining to the releases of radioactive materials in liquid, gaseous and solid form from the Hope Creek Generating Station (HCGS) for the period January 1, 1995 to December 31, 1995.

The Hope Creek Generating Station (HCGS) employs a General Electric (GE) Boiling Water Reactor designed to operate at a rated core thermal power of 3293 MWt with a gross electrical output of approximately 1118 MWe and a net output of approximately 1067 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 Specification 6.9.1.7 of the Hope Creek Technical Specifications. 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 Hope Creek Technical Specification 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.

Hope Creek generated 7,063,919 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 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 the site to areas at and beyond the site boundary, shall be limited to the following:

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

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

1.2 Iodine, Particulates, and Tritium

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

For iodine-131, I-133, for tritium, and for 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-4 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 MPCs used in determining allowable release rates or concentrations for radioactive releases.

- a. MPC values were not used for gaseous release concentrations or in the determination of maximum release rates from gaseous effluents.
- b. MPC values as stated in 10CFR20, Appendix B, Table II, Column 2 are used for liquid effluents in accordance with current Technical Specifications.
- c. The MPC value used for dissolved or entrained noble gases is 2E-4 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 HCGS are not based upon average energy. Therefore this section is not applicable to HCGS.

4.0 MEASUREMENTS AND APPROXIMATION OF TOTAL RADIOACTIVITY

4.1 Liquid Effluents

Liquid effluents are monitored in accordance with Table 4.11.1.1.1-1 of the Technical Specifications. During the period of record, all batch liquid wastes were routed to the sampling tanks for monitoring prior to release. Technical Specifications require these tanks to be uniformly mixed for sampling and analysis before being released. Batch releases are defined as releases from the equipment drain sample tanks, floor drain sample tanks, detergent drain tanks, and the condensate storage tank dike. Normally, there are no continuous liquid releases. Specific activities from 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 4.11.1.1.1-1 of the Technical Specifications are achieved or exceeded. Radionuclides measured at concentrations below the Technical Specification detection limit (LLDs) are treated as being present. Radionuclides for which no activity was detected while meeting the required LLDs are treated as absent.

4.2 Gaseous Effluents

Gaseous effluent streams are monitored and sampled in accordance with Table 4.11.2.1.2-1 of the Technical Specifications. The north plant vent (NPV) and south plant vent (SPV) are the final release points for most planned gaseous effluent releases. A small quantity of gaseous effluent will be released via the filtration, recirculation, and ventilation system (FRVS) vent during testing periods. The NPV and SPV are continuously monitored for iodine, particulates and noble gases; the FRVS is continuously monitored for noble gases. The NPV and SPV monitors have moving particulate and fixed charcoal filters; the FRVS monitor has fixed particulate and charcoal filters. The

filters and charcoal are changed weekly, and are analyzed on a multichannel analyzer. The NPV and SPV are sampled weekly for noble gases and tritium.

The detection requirements of Tables 4.11.2.1.2-1 of the Technical Specifications are achieved or exceeded. Radionuclides detected at concentrations below the Technical Specification detection limit (LLDs) 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 (weekly) sampling and isotopic analyses of the plant vents. If noble gases are detected during the routine sampling, the measured concentrations are adjusted using the radiation monitoring readings to obtain an average concentration for the period. This average concentration is then multiplied by the total vent flow value for the entire sampling period in order to estimate the normal continuous release of radioactivity through the plant vent.

When monthly vent grab samples yield no detectable activity, continuous mode releases are quantified by integrating Radiation Monitor System readings. Noble gas isotopic abundances for these integrations are based on the ANSI N237-1976/ANS-18.1 mix for BWRs. Doses calculated from this data employ the methods from Section 2.0 and Appendix C of the Hope Creek ODCM.

Batch Mode gaseous releases (primary containment purge) are quantified by pre-release sampling and isotopic analysis. Specific activities for each isotope are multiplied by the total purge flow volume for that batch in order to estimate the batch release of radioactivity through the plant vent.

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 taken is not available, then the abnormal release is quantified by the use of the plant vent radiation monitors. The monitor's response is converted to a "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 estimate the total activity discharged.

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 due primarily 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 there were 2 unplanned releases. On April 5, 1995 approximately 85 millicuries of particulate radioactive material was released from the south plant ventilation system. The release resulted in measurable levels of radioactive material being deposited on plant structures, buildings, and vehicles located close to the plant ventilation exhaust. No measurable quantity of radioactive material as a result of this release was found outside of the company property area. The contamination was limited to areas inside the fenced in restricted area and were decontaminated to acceptable levels by health physics personnel. No Federal or State limits were exceeded and there was no measurable radiation dose to members of the general public as a result of this release. The cause of the unplanned release was the improper operation and design of the decontamination solution evaporator. The decontamination solution evaporator is part of the installed Radwaste Processing system. The evaporator experienced two high level alarms which led to moisture being carried over into the ventilation system and subsequently released to the environment. The evaporator was removed from service and will not be operated until a complete engineering evaluation can be performed.

The second unplanned release was a result of the particulate release as described above. On April 9, 1995 a sample taken from the south yard drainage system indicated the presence of radioactive material. The south yard drainage system as part of the station drainage system collects water from building roof drains and surrounding plant areas. The south yard drain effluent flows into the Delaware River. The sample taken from the south yard drain indicated the presence of Mn-54, Co-58, and Co-60 at levels well below those allowed by Technical Specifications. The source of the release was water runoff from areas contaminated by the particulate release of April 5th.

7.0 ELEVATED RADIATION MONITOR RESPONSES

During this reporting period, there were no elevated radiation monitor readings.

8.0 MODIFICATION TO PREVIOUS RADIOACTIVE EFFLUENT RELEASE REPORTS

There were no modifications to previous Radioactive Effluent Release Reports during this reporting period.

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 historical 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 coefficients as described in the 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

<u>Dose</u>	<u>Limit</u>
Total Body ----- 0.217 mrem	3 mrem
Organ Dose (GI-LLI) ----- 0.869 mrem	10 mrem
Population (Total) ----- 3.88 person-rem	N/A
Population (Average) ----- 0.00086 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., West	Milk, Ground Plane, Inhalation

<u>Dose:</u>	<u>Limit</u>
Total Body ----- 0.392 mrem	500 mrem/yr
Skin Dose ----- 0.855 mrem	3000 mrem/yr
Organ Dose (thyroid) ----- 0.020 mrem	15 mrem
Population (Total) ----- 0.504 person-rem	N/A
Population (Average) ----- 0.00011 mrem	N/A

Direct Radiation

Direct radiation may be estimated by thermoluminescent dosimetry (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:

TLD	Location	Measurement
2S-2	0.4 mi. NNE	4.1 mrad/month
5S-1	1.0 mi. E	3.5 mrad/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/month for location 2S-2, and 4.2 mrad/month for location 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

<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:

0.848 mrem	total body
1.307 mrem	organ (GI-LLI)
0.030 mrem	thyroid

Dose to members of the public due to activities inside the site boundary.

In accordance with the requirements of Technical Specification 6.9.1.7, the dose to members of the public inside the site boundary has been calculated based on the following assumptions:

- a. The most limiting member of the general public are the commercial food vendors.
- b. Food vendors spend 20 hours per week on site.
- c. The highest total body dose contributor is direct radiation received from Salem and Hope Creek operation.
- d. Occupancy coincides with gaseous effluent discharges.
- e. The food vendors are located near the restricted area boundary.

For the 12 month reporting period, January 1 1995 to December 31, 1995 the calculated doses are:

8.10E+00 mrem	Total Body
2.53E-02 mrem	Organ (Lung)
2.53E-02 mrem	Thyroid

Assessment

1. Gaseous:

Gaseous effluents released from Hope Creek resulted in a minimal dose to the maximum hypothetical individual. The dose for the 12 month period was a small fraction of all applicable limits.

Gaseous effluents decreased slightly from the previous reporting period. Gaseous effluent releases continue to remain well within Federal limits and are comparable to results from 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).

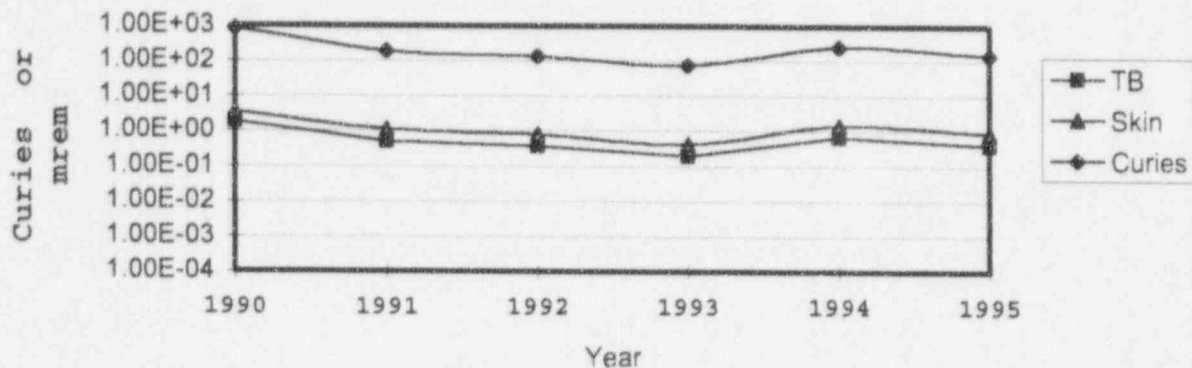
2. Liquids:

Liquid effluents released from Hope Creek station resulted in a minimal dose to the maximum hypothetical individual and were well within all applicable limits.

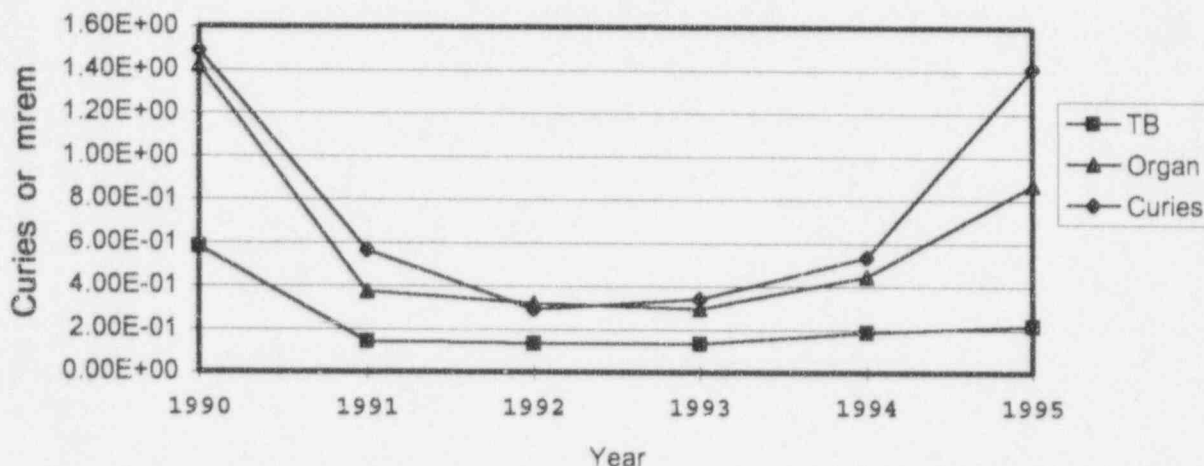
The amount of radioactivity in liquid effluents increased from previous reporting periods due to equipment problems associated with the liquid radwaste processing system during the 2nd and 3rd quarters of 1995. The equipment problems were identified and repaired during the 4th quarter of 1995. Radioactivity released in liquid effluents is expected to return to normal during 1996.

The following two trend graphs show the total curies of gaseous and liquid effluents released for Hope Creek from 1990 through 1995. Calculated doses in the graphs are to the maximum hypothetical individual.

Hope Creek Gaseous Effluents Curies of Noble Gases Released and Calculated Doses



Hope Creek Liquid Effluents Curies Released and Calculated Doses



PART F. METEOROLOGICAL DATA

Cumulative joint wind frequency distributions by atmospheric stability class at the 300 foot elevation are provided for 1995 at the end of this report.

PART G. OFFSITE DOSE CALCULATION MANUAL (ODCM) CHANGES

During this period, there was no revision of the HCGS Off-site Dose Calculation Manual.

PART H. INOPERABLE MONITORS

During this period the following effluent monitors were inoperable for greater than 30 days.

* Liquid Radwaste Discharge Monitor (OSPRY-4861)

The liquid radwaste discharge radiation monitor could not be returned to service within 30 days due to extensive testing that was performed on the monitor. The monitor was declared inoperable because it did not respond as predicted by grab samples taken prior to the start of liquid releases. Extensive troubleshooting led to the discovery of a badly corroded sample line at the inlet to the radiation monitor. The corroded line was replaced and the monitor was declared operable after follow up testing demonstrated good correlation to grab sample results.

* Cooling Tower Blowdown Flow Monitor (1DAFT-2461)

The cooling tower blowdown flow monitor could not be returned to service within the 30 day time period due to a design deficiency with the blowdown flow monitor. The flow monitor reading becomes invalid when blowdown flow exceeds 35,000 gpm. At flow rates less than 35,000 gpm the flow monitor remains operable. Normal cooling tower blowdown flow is 20,000 - 35,000 gpm. A design change to replace the flow monitor is being planned by system engineering and should be completed during the 1st quarter of 1996.

PART I. PROCESS CONTROL PROGRAM (PCP) CHANGES

During the reporting period, there were no changes to the process control program.

PART J. ENVIRONMENTAL MONITORING LOCATION CHANGES

During the reporting period, there were no changes to the Environmental Monitoring sample locations.

HOPE CREEK GENERATING STATION

TABLE 1A

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT
JANUARY - DECEMBER 1995

GASEOUS EFFLUENTS-SUMMATION OF ALL RELEASES

	Units	1st Qtr	2nd Qtr	Est. (1) Total Error %
<hr/>				
A. Fission and Activation Gases				
1. Total release	Ci	7.77E+01	2.36E+01	25
2. Average release				
rate for period	µCi/sec	9.99E+00	3.00E+00	
3. Percent of technical specification limit				
(T.S. 3.11.2.2(a))	%	1.06E+00	3.22E-01	
B. Iodines				
1. Total iodine-131	Ci	1.21E-04	1.94E-04	25
2. Average release				
rate for period	µCi/sec	1.55E-05	2.47E-05	
3. Percent of technical specification limit (2)				
(T.S. 3.11.2.3(a))	%	2.33E-02	3.89E-02	
C. Particulates				
1. Particulates with half-lives >8 days	Ci	1.23E-04	3.39E-04	25
2. Average release				
rate for period	µCi/sec	1.58E-05	4.31E-05	
3. Percent of technical specification limit (2)				
(T.S. 3.11.2.3(a))	%	2.33E-02	3.89E-02	
4. Gross alpha	Ci	1.45E-08	0.00E+00	
D. Tritium				
1. Total Release	Ci	3.40E+00	1.67E+00	25
2. Average release				
rate for period	µCi/sec	4.37E-01	2.12E-01	
3. Percent of technical specification limit (2)				
(T.S. 3.11.2.3(a))	%	2.33E-02	3.89E-02	

1) For batch releases the estimated overall error is within 10%

2) Iodine, tritium and particulates are treated as a group

HOPE CREEK GENERATING STATION

TABLE 1A

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT
JANUARY - DECEMBER 1995

GASEOUS EFFLUENTS-SUMMATION OF ALL RELEASES

	Units	3rd Qtr	4th Qtr	Est. (1) Total Error %
A. Fission and Activation Gases				
1. Total release	Ci	2.68E+01	2.19E+01	25
2. Average release rate for period	µCi/sec	3.37E+00	2.75E+00	
3. Percent of technical specification limit (T.S. 3.11.2.2(a))	%	3.65E-01	2.88E-01	
B. Iodines				
1. Total iodine-131	Ci	2.92E-04	4.42E-05	25
2. Average release rate for period	µCi/sec	3.67E-05	5.56E-06	
3. Percent of technical specification limit (2) (T.S. 3.11.2.3(a))	%	5.28E-02	1.51E-01	
C. Particulates				
1. Particulates with half-lives >8 days	Ci	7.83E-05	1.39E-03	25
2. Average release rate for period	µCi/sec	9.84E-06	1.74E-04	
3. Percent of technical specification limit (2) (T.S. 3.11.2.3(a))	%	5.28E-02	1.51E-01	
4. Gross alpha	Ci	0.00E+00	0.00E+00	
D. Tritium				
1. Total Release	Ci	2.22E-01	6.29E+00	25
2. Average release rate for period	µCi/sec	2.79E-02	7.91E-01	
3. Percent of technical specification limit (2) (T.S. 3.11.2.3(a))	%	5.28E-02	1.51E-01	

(1) For batch releases the estimated overall error is within 10%

(2) Iodine, tritium and particulates are treated as a group

HOPE CREEK GENERATING STATION

TABLE 1B

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT
JANUARY - DECEMBER 1995
GASEOUS EFFLUENTS-GROUND LEVEL RELEASES

		CONTINUOUS MODE		BATCH MODE	
Nuclides Released	Unit	1st Qtr	2nd Qtr	1st Qtr	2nd Qtr
1. Fission Gases					
Krypton-83m	Ci	7.77E-01	2.36E-01	0.00E+00	0.00E+00
Krypton-85m	Ci	7.77E-01	2.36E-01	0.00E+00	0.00E+00
Krypton-87	Ci	3.11E+00	9.44E-01	0.00E+00	0.00E+00
Krypton-88	Ci	3.11E+00	9.44E-01	0.00E+00	0.00E+00
Krypton-89	Ci	2.10E+01	6.37E+00	0.00E+00	0.00E+00
Xenon-133	Ci	1.55E+00	4.72E-01	0.00E+00	0.00E+00
Xenon-135	Ci	3.89E+00	1.18E+00	0.00E+00	0.00E+00
Xenon-135m	Ci	4.67E+00	1.42E+00	0.00E+00	0.00E+00
Xenon-137	Ci	2.41E+01	7.32E+00	0.00E+00	0.00E+00
Xenon-138	Ci	1.47E+01	4.48E+00	0.00E+00	0.00E+00

TOTALS	Ci	7.77E+01	2.36E+01	0.00E+00	0.00E+00
2. Iodines					
Iodine-131	Ci	1.21E-04	1.94E-04	0.00E+00	0.00E+00
Iodine-133	Ci	5.90E-03	1.15E-02	0.00E+00	0.00E+00

TOTALS	Ci	6.03E-03	1.17E-02	0.00E+00	0.00E+00
3. Particulates (half-life >8 days)					
Chromium-51	Ci	0.00E+00	6.13E-05	0.00E+00	0.00E+00
Manganese-54	Ci	1.77E-05	1.70E-04	0.00E+00	0.00E+00
Cobalt-58	Ci	0.00E+00	2.07E-05	0.00E+00	0.00E+00
Iron-59	Ci	0.00E+00	4.13E-05	0.00E+00	0.00E+00
Cobalt-60	Ci	0.00E+00	3.84E-05	0.00E+00	0.00E+00
Zinc-65	Ci	1.05E-04	0.00E+00	0.00E+00	0.00E+00
Strontium-89	Ci	0.00E+00	5.96E-06	0.00E+00	0.00E+00
Strontium-90	Ci	0.00E+00	1.26E-06	0.00E+00	0.00E+00

TOTALS	Ci	1.23E-04	3.39E-04	0.00E+00	0.00E+00

HOPE CREEK GENERATING STATION

TABLE 1B

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT
JANUARY - DECEMBER 1995
GASEOUS EFFLUENTS-GROUND LEVEL RELEASES

		CONTINUOUS MODE		BATCH MODE	
Nuclides Released	Unit	3rd Qtr	4th Qtr	3rd Qtr	4th Qtr
1. Fission Gases					
Krypton-83m	Ci	2.68E-01	2.08E-01	0.00E+00	0.00E+00
Krypton-85m	Ci	2.68E-01	2.08E-01	0.00E+00	0.00E+00
Krypton-87	Ci	1.07E+00	8.36E-01	0.00E+00	0.00E+00
Krypton-88	Ci	1.07E+00	8.36E-01	0.00E+00	0.00E+00
Krypton-89	Ci	7.22E+00	5.64E+00	0.00E+00	0.00E+00
Xenon-133	Ci	5.35E-01	4.18E-01	0.00E+00	0.00E+00
Xenon-135	Ci	1.34E+00	2.04E+00	2.97E-03	0.00E+00
Xenon-135m	Ci	1.61E+00	1.25E+00	0.00E+00	0.00E+00
Xenon-137	Ci	8.29E+00	6.48E+00	0.00E+00	0.00E+00
Xenon-138	Ci	5.08E+00	3.96E+00	0.00E+00	0.00E+00

TOTALS	Ci	2.67E+01	2.19E+01	2.97E-03	0.00E+00
2. Iodines					
Iodine-131	Ci	2.92E-04	4.42E-05	0.00E+00	0.00E+00
Iodine-133	Ci	1.30E-02	1.20E-01	3.42E-08	0.00E+00

TOTALS	Ci	1.33E-02	1.20E-01	3.42E-08	0.00E+00
3. Particulates (half-life >8 days)					
Manganese-54	Ci	6.36E-05	4.28E-04	1.42E-06	0.00E+00
Iron-59	Ci	7.17E-06	6.05E-04	0.00E+00	0.00E+00
Cobalt-60	Ci	3.60E-06	3.54E-04	6.09E-07	0.00E+00
Zinc-65	Ci	0.00E+00	0.00E+00	1.43E-06	0.00E+00
Strontium-89	Ci	3.21E-07	0.00E+00	0.00E+00	0.00E+00
Strontium-90	Ci	6.80E-08	0.00E+00	0.00E+00	0.00E+00

TOTALS	Ci	7.48E-05	1.39E-03	3.45E-06	0.00E+00

HOPE CREEK GENERATING STATION

TABLE 1C

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT

JANUARY - DECEMBER 1995

GASEOUS EFFLUENTS-ELEVATED RELEASES

There were no elevated gaseous releases during this reporting period.

HOPE CREEK GENERATING STATION

TABLE 2A

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT
 JANUARY - DECEMBER 1995
 LIQUID EFFLUENTS-SUMMATION OF ALL RELEASES

	Units	1st Qtr	2nd Qtr	Est. Total Error %
<hr/>				
A. Fission and activation products				
1. Total release (not including tritium, gases, alpha)	Ci	6.95E-02	2.93E-01	25
2. Average diluted concentration during release period.	µCi/mL	7.47E-09	2.38E-08	
3. Percent of technical specification limit (T.S. 3.11.1.2.(a))	%	1.55E+00	2.44E+00	
B. Tritium				
1. Total release	Ci	8.39E+00	1.40E+01	25
2. Average diluted concentration during release period	µCi/mL	9.01E-07	1.13E-06	
3. Percent of technical specification limit (T.S. 3.11.1.1)	%	3.00E-02	3.77E-02	
C. Dissolved and entrained noble gases				
1. Total release	Ci	1.44E-03	3.32E-03	25
2. Average diluted concentration during release period.	µCi/mL	1.55E-10	2.70E-10	
3. Percent of technical specification limit (T.S. 3.11.1.1)	%	7.75E-05	1.35E-04	
D. Gross alpha activity				
1. Total release	Ci	0.00E+00	0.00E+00	25
E. Volume of waste release (prior to dilution - Batch Release)	liters	7.08E+06	8.98E+06	25
F. Volume of dilution water used during entire period	liters	9.31E+09	1.23E+10	25

HOPE CREEK GENERATING STATION

TABLE 2A

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT
 JANUARY - DECEMBER 1995
 LIQUID EFFLUENTS-SUMMATION OF ALL RELEASES

	Units	3rd Qtr	4th Qtr	Est. Total Error %
A. Fission and activation products				
1. Total release (not including tritium, gases, alpha)	Ci	6.60E-01	3.83E-01	25
2. Average diluted concentration during release period.	µCi/mL	4.49E-08	4.17E-08	
3. Percent of technical specification limit (T.S. 3.11.1.2.(a))	%	1.05E+01	4.41E+00	
B. Tritium				
1. Total release	Ci	1.27E+01	1.10E+01	25
2. Average diluted concentration during release period	µCi/mL	8.64E-07	1.20E-06	
3. Percent of technical specification limit (T.S. 3.11.1.1)	%	2.88E-02	4.00E-02	
C. Dissolved and entrained noble gases				
1. Total release	Ci	5.53E-04	8.23E-04	25
2. Average diluted concentration during release period.	µCi/mL	3.76E-11	8.97E-11	
3. Percent of technical specification limit (T.S. 3.11.1.1)	%	1.88E-05	4.49E-05	
D. Gross alpha activity				
1. Total release	Ci	0.00E+00	0.00E+00	25
E. Volume of waste release (prior to dilution - Batch Release)	liters	6.47E+06	6.02E+06	25
F. Volume of dilution water used during entire period	liters	1.47E+10	9.18E+09	25

HOPE CREEK GENERATING STATION

TABLE 2B

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT
JANUARY - DECEMBER 1995

LIQUID EFFLUENTS

Nuclides Released	Unit	CONTINUOUS MODE		BATCH MODE	
		1st Qtr	2nd Qtr	1st Qtr	2nd Qtr
Chromium-51	Ci	0.00E+00	0.00E+00	7.62E-03	3.15E-03
Manganese-54	Ci	0.00E+00	5.85E-06	2.65E-02	1.68E-02
Iron-55	Ci	0.00E+00	0.00E+00	1.77E-02	2.58E-01
Cobalt-58	Ci	0.00E+00	2.11E-06	1.88E-03	1.33E-03
Iron-59	Ci	0.00E+00	0.00E+00	7.85E-04	3.01E-04
Cobalt-60	Ci	0.00E+00	4.52E-06	6.93E-03	5.70E-03
Zinc-65	Ci	0.00E+00	0.00E+00	8.02E-03	7.34E-03
Technetium-99m	Ci	0.00E+00	0.00E+00	8.26E-06	0.00E+00
Silver-110m	Ci	0.00E+00	0.00E+00	0.00E+00	1.48E-04
Indium-115m	Ci	0.00E+00	0.00E+00	2.90E-05	0.00E+00
Cesium-134	Ci	0.00E+00	0.00E+00	0.00E+00	3.36E-06
Cesium-137	Ci	0.00E+00	0.00E+00	0.00E+00	5.46E-06
Lanthanum-140	Ci	0.00E+00	0.00E+00	1.72E-05	0.00E+00

TOTALS	Ci	0.00E+00	1.25E-05	6.95E-02	2.93E-01
Tritium	Ci	0.00E+00	0.00E+00	8.39E+00	1.40E+01
Xenon-133	Ci	0.00E+00	0.00E+00	2.53E-04	6.82E-04
Xenon-135	Ci	0.00E+00	0.00E+00	1.18E-03	2.64E-03

TOTALS	Ci	0.00E+00	0.00E+00	8.39E+00	1.40E+01

HOPE CREEK GENERATING STATION

TABLE 2B

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT
JANUARY - DECEMBER 1995

LIQUID EFFLUENTS

Nuclides Released	Unit	CONTINUOUS MODE		BATCH MODE	
		3rd Qtr	4th Qtr	3rd Qtr	4th Qtr
Sodium-24	Ci	0.00E+00	0.00E+00	5.66E-06	1.58E-05
Chromium-51	Ci	0.00E+00	0.00E+00	7.93E-02	3.88E-02
Manganese-54	Ci	0.00E+00	9.97E-05	3.09E-01	5.94E-02
Iron-55	Ci	0.00E+00	6.40E-02	5.89E-02	1.45E-01
Manganese-56	Ci	0.00E+00	0.00E+00	1.14E-04	0.00E+00
Cobalt-58	Ci	0.00E+00	0.00E+00	2.02E-02	3.34E-03
Iron-59	Ci	0.00E+00	0.00E+00	1.02E-01	8.48E-03
Cobalt-60	Ci	0.00E+00	0.00E+00	5.28E-02	1.94E-02
Zinc-65	Ci	0.00E+00	0.00E+00	3.21E-02	4.02E-02
Arsenic-76	Ci	0.00E+00	0.00E+00	0.00E+00	8.42E-05
Niobium-95	Ci	0.00E+00	0.00E+00	1.00E-03	4.54E-05
Zirconium-97	Ci	0.00E+00	0.00E+00	0.00E+00	3.45E-05
Technetium-99m	Ci	0.00E+00	0.00E+00	3.92E-04	4.68E-04
Silver-110m	Ci	0.00E+00	0.00E+00	3.31E-03	3.96E-03
Antimony-124	Ci	0.00E+00	0.00E+00	3.78E-04	0.00E+00
Cesium-134	Ci	0.00E+00	0.00E+00	0.00E+00	1.48E-04
Cesium-137	Ci	0.00E+00	0.00E+00	0.00E+00	2.92E-04

TOTALS	Ci	0.00E+00	6.41E-02	6.60E-01	3.19E-01
Tritium	Ci	0.00E+00	0.00E+00	1.27E+01	1.10E+01
Argon-41	Ci	0.00E+00	0.00E+00	0.00E+00	1.04E-05
Xenon-133	Ci	0.00E+00	0.00E+00	3.80E-05	9.94E-05
Xenon-135	Ci	0.00E+00	0.00E+00	5.15E-04	7.13E-04

TOTALS	Ci	0.00E+00	0.00E+00	1.27E+01	1.10E+01

HOPE CREEK GENERATING STATION

TABLE 3

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT

JANUARY - DECEMBER 1995

SOLID WASTE AND IRRADIATED FUEL SHIPMENTS

SOLID WASTE SHIPPED OFFSITE FOR BURIAL OR DISPOSAL
(Not irradiated fuel)

1. Type of waste	Units(1)	12-month period	Est. Total Error, %
a. Spent resins, filters, sludges, evaporator bottoms	m3 Ci	1.19E+02 5.22E+02	25
b. Dry compressible waste, contaminated equipment.	m3 Ci	2.34E+01 7.58E-01	25
c. Irradiated components, control rods	m3 Ci	0.00E+00 0.00E+00	25
d. Others (described)	m3 Ci	0.00E+00 0.00E+00	25

2. Estimate of major nuclide composition

	RESINS			DAW	
	(%)	(Ci)		(%)	(Ci)
Zinc-65	61.0	3.18E+02		42.4	3.21E-01
Manganese-54	14.6	7.62E+01		25.9	1.96E-01
Iron-55	13.3	6.94E+01		21.7	1.64E-01
Cobalt-60	9.3	4.85E+01		8.6	6.52E-02
Chromium-51	0.0	0.00E+00		1.0	7.58E-02

(1) Volumes are measured, activities are estimated

HOPE CREEK GENERATING STATION

TABLE 3
(CONT'D)

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT
JANUARY - DECEMBER 1995
SOLID WASTE AND IRRADIATED FUEL SHIPMENTS

3. Solid Waste Disposition

<u>Number of Shipments</u>	<u>Mode of Transportation</u>	<u>Destination</u>	<u>Type of Containers</u>
28	Truck	Barnwell, SC	HIC and 17E Drums
17	Truck	Oak Ridge, Tn	Strong, Tight Containers

4. IRRADIATED FUEL SHIPMENTS (Disposition)

<u>Number of Shipments</u>	<u>Mode of Transportation</u>	<u>Destination</u>
None	N/A	N/A

HOPE CREEK GENERATING STATION
TABLE 4A

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT
JANUARY - DECEMBER 1995
SUMMARY SHEET FOR RADIOACTIVE EFFLUENTS RELEASED
IN A BATCH MODE

BATCH RELEASES ONLY

1. Dates: January 1 - March 31, 1995
2. Type of release: Gas
3. Number of releases during the 1st Qtr: 1
4. Total time duration for all releases of type listed above:
8.57E+03 min
5. Maximum duration for release of type listed above:
8.57E+03 min
6. Average duration for release of type listed above:
8.57E+03 min
7. Minimum duration for release of type listed above:
8.57E+03 min
8. Average stream flow (dilution flow) during the period of
release: N/A

HOPE CREEK GENERATING STATION
TABLE 4A
(CONT'D)

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT
JANUARY - DECEMBER 1995
SUMMARY SHEET FOR RADIOACTIVE EFFLUENTS RELEASED
IN A BATCH MODE

BATCH RELEASES ONLY

1. Dates: April 1 - June 30, 1995
2. Type of release: Gas
3. Number of releases during the 2nd Qtr: 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 the period of
release: N/A

HOPE CREEK GENERATING STATION
TABLE 4A
(CONT'D)

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT
JANUARY - DECEMBER 1995
SUMMARY SHEET FOR RADIOACTIVE EFFLUENTS RELEASED
IN A BATCH MODE

BATCH RELEASES ONLY

1. Dates: July 1 - September 30, 1995
2. Type of release: Gas
3. Number of releases during the 3rd Qtr: 2
4. Total time duration for all releases of type listed above:
2.35E+04 min
5. Maximum duration for release of type listed above:
2.31E+04 min
6. Average duration for release of type listed above:
1.18E+04 min
7. Minimum duration for release of type listed above:
4.19E+02 min
8. Average stream flow (dilution flow) during the period of
release: N/A

HOPE CREEK GENERATING STATION
TABLE 4A
(CONT'D)

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT
JANUARY - DECEMBER 1995
SUMMARY SHEET FOR RADIOACTIVE EFFLUENTS RELEASED
IN A BATCH MODE

BATCH RELEASES ONLY

1. Dates: October 1 - December 31, 1995
2. Type of release: Gas
3. Number of releases during the 4th Qtr: 1
4. Total time duration for all releases of type listed above:
1.33E+04 min
5. Maximum duration for release of type listed above:
1.33E+04 min
6. Average duration for release of type listed above:
1.33E+04 min
7. Minimum duration for release of type listed above:
1.33E+04 min
8. Average stream flow (dilution flow) during the period of
release: N/A

HOPE CREEK GENERATING STATION
TABLE 4B

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT
JANUARY - DECEMBER 1995
SUMMARY SHEET FOR RADIOACTIVE EFFLUENTS RELEASED
IN A BATCH MODE

BATCH RELEASES ONLY

1. Dates: January 1 - March 31, 1995
2. Type of release: Liquid
3. Number of releases during the 1st Qtr: 164
4. Total time duration for all releases of type listed above:
1.34E+04 min
5. Maximum duration for release of type listed above:
1.34E+02 min
6. Average duration for release of type listed above:
8.19E+01 min
7. Minimum duration for release of type listed above:
1.89+01 min
8. Average stream flow (dilution flow) during the period of
release: 20150 gpm

HOPE CREEK GENERATING STATION
TABLE 4B

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT
JANUARY - DECEMBER 1995
SUMMARY SHEET FOR RADIOACTIVE EFFLUENTS RELEASED
IN A BATCH MODE

BATCH RELEASES ONLY

1. Dates: April 1 - June 30, 1995
2. Type of release: Liquid
3. Number of releases during the 2nd Qtr: 224
4. Total time duration for all releases of type listed above:
1.76E+04 min
5. Maximum duration for release of type listed above:
1.05E+02 min
6. Average duration for release of type listed above:
7.86E+01 min
7. Minimum duration for release of type listed above:
1.80+01 min
8. Average stream flow (dilution flow) during the period of
release: 26010 gpm

HOPE CREEK GENERATING STATION
TABLE 4B
(CONT'D)

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT
JANUARY - DECEMBER 1995
SUMMARY SHEET FOR RADIOACTIVE EFFLUENTS RELEASED
IN A BATCH MODE

BATCH RELEASES ONLY

1. Dates: July 1 - September 30, 1995
2. Type of release: Liquid
3. Number of releases during the 3rd Qtr: 155
4. Total time duration for all releases of type listed above:
1.49E+04 min
5. Maximum duration for release of type listed above:
1.86E+02 min
6. Average duration for release of type listed above:
9.61E+01 min
7. Minimum duration for release of type listed above:
1.00+00 min
8. Average stream flow (dilution flow) during the period of
release: 37247 gpm

HOPE CREEK GENERATING STATION

TABLE 4B

(CONT'D)

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT
JANUARY - DECEMBER 1995
SUMMARY SHEET FOR RADIOACTIVE EFFLUENTS RELEASED
IN A BATCH MODE

BATCH RELEASES ONLY

1. Dates: October 1 - December 31, 1995
2. Type of release: Liquid
3. Number of releases during the 4th Qtr: 121
4. Total time duration for all releases of type listed above:
1.12E+04 min
5. Maximum duration for release of type listed above:
1.56E+02 min
6. Average duration for release of type listed above:
9.24E+01 min
7. Minimum duration for release of type listed above:
2.00+00 min
8. Average stream flow (dilution flow) during the period of
release: 39518 gpm

ARTIFICIAL ISLAND 1/95 - 3/95

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
N	0	0	0	1	1	1	0	3
NNE	0	0	0	0	0	0	0	0
NE	0	0	0	0	1	0	0	1
ENE	0	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0	0
SE	0	0	0	1	1	0	0	2
SSE	0	0	0	1	0	0	0	1
S	0	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0	0
WSW	0	0	0	1	10	2	0	13
W	0	0	1	1	11	5	3	21
WNW	0	0	0	0	1	1	0	2
NW	0	2	0	0	7	14	2	25
NNW	0	1	1	0	6	2	1	11
	0	0	2	5	38	25	4	79
	0.0	0.1	0.1	0.2	1.8	1.2	0.3	3.7

MEAN WIND SPEED: 16.9
MISSING: 0

ARTIFICIAL ISLAND 1/95 - 3/95

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
N	0	0	0	1	2	2	0	5
NNE	0	0	0	2	0	0	0	2
NE	0	0	0	1	0	0	0	1
ENE	0	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0	0
S	0	0	0	0	0	1	0	1
SSW	0	0	1	0	0	0	0	1
SW	0	0	0	0	0	0	0	0
WSW	0	0	2	2	0	0	0	5
W	0	0	1	4	11	6	3	25
WNW	0	0	1	4	8	0	5	18
NW	0	1	0	1	5	8	2	17
NNW	0	3	0	1	10	5	1	20
	0	4	5	16	37	22	11	95
	0.0	0.2	0.2	0.7	1.7	1.0	0.5	4.4

MEAN WIND SPEED: 16.2

MISSING: 0

ARTIFICIAL ISLAND 1/95 - 3/95

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	1	0.0	2	0.1	1	0.0	0	0.0	6	0.3
NNE	0	0.0	0	0.0	3	0.1	2	0.1	1	0.0	0	0.0	0	0.0	6	0.3
NE	0	0.0	0	0.0	2	0.1	6	0.3	1	0.0	0	0.0	0	0.0	9	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	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	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	1	0.0	0	0.0	0	0.0	4	0.2
S	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SSW	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	1	0.0
SW	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	1	0.0
WSW	0	0.0	0	0.0	0	0.0	3	0.1	1	0.0	1	0.0	0	0.0	5	0.2
W	0	0.0	0	0.0	1	0.0	8	0.4	2	0.1	2	0.1	4	0.2	17	0.8
WNW	0	0.0	0	0.0	5	0.2	6	0.3	4	0.2	3	0.1	8	0.4	26	1.2
NW	0	0.0	2	0.1	1	0.0	3	0.1	4	0.2	11	0.5	0	0.0	21	1.0
NNW	0	0.0	0	0.0	1	0.0	1	0.0	5	0.2	0	0.0	0	0.0	7	0.3
	0	0.0	2	0.1	16	0.7	33	1.5	23	1.1	21	1.0	12	0.6	107	5.0

MEAN WIND SPEED: 14.9
MISSING: 0

ARTIFICIAL ISLAND 1/95 - 3/95

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
N	0	0.0	5	11	16	4	0	37
NNE	0	0.0	6	22	20	0	0	49
NE	0	0.0	8	33	23	0	0	64
ENE	0	0.0	5	12	10	0	0	27
E	0	0.0	4	8	0	0	0	12
ESE	0	0.0	5	3	1	0	0	9
SE	0	0.0	10	4	6	3	4	28
SSE	0	0.0	3	9	8	11	2	35
S	0	0.0	5	11	5	0	0	22
SSW	0	0.0	3	8	3	3	0	17
SW	0	0.0	2	4	5	0	0	13
WSW	0	0.0	6	11	20	14	4	56
W	0	0.0	9	21	29	28	9	96
WNW	0	0.0	4	9	28	28	30	99
NW	0	0.0	3	3	17	51	19	117
NNW	0	0.0	6	5	15	11	3	45
	0	0.0	84	174	225	153	71	726
	0	0.0	3.9	8.1	10.4	7.1	3.3	33.7

MEAN WIND SPEED: 15.2
MISSING: 0

ARTIFICIAL ISLAND 1/95 - 3/95

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)

	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
DIRECTION	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	0	0.0	5	0.2	9	0.4	36	1.7	11	0.5	3	0.1	64	3.0
NNE	0	0.0	1	0.0	5	0.2	19	0.9	19	0.9	8	0.4	0	0.0	52	2.4
NE	0	0.0	0	0.0	4	0.2	16	0.7	12	0.6	0	0.0	0	0.0	32	1.5
ENE	0	0.0	0	0.0	5	0.2	14	0.6	4	0.2	1	0.0	1	0.0	25	1.2
E	0	0.0	0	0.0	7	0.3	11	0.5	8	0.4	3	0.1	0	0.0	29	1.3
ESE	0	0.0	2	0.1	1	0.0	7	0.3	4	0.2	0	0.0	1	0.0	15	0.7
SE	0	0.0	1	0.0	7	0.3	8	0.4	7	0.3	13	0.6	2	0.1	38	1.8
SSE	0	0.0	2	0.1	5	0.2	12	0.6	7	0.3	6	0.3	2	0.1	34	1.6
S	0	0.0	3	0.1	4	0.2	9	0.4	5	0.2	1	0.0	0	0.0	22	1.0
SSW	0	0.0	2	0.1	6	0.3	4	0.2	7	0.3	2	0.1	0	0.0	21	1.0
SW	0	0.0	2	0.1	6	0.3	13	0.6	26	1.2	5	0.2	0	0.0	52	2.4
WSW	0	0.0	1	0.0	6	0.3	23	1.1	23	1.1	3	0.1	0	0.0	56	2.6
W	0	0.0	2	0.1	6	0.3	16	0.7	29	1.3	3	0.1	0	0.0	56	2.6
WNW	0	0.0	2	0.1	8	0.4	17	0.8	31	1.4	6	0.3	1	0.0	65	3.0
NW	0	0.0	5	0.2	2	0.1	8	0.4	42	1.9	31	1.4	2	0.1	90	4.2
NNW	0	0.0	17	0.8	1	0.0	5	0.2	31	1.4	21	1.0	4	0.2	79	3.7
	0	0.0	40	1.9	78	3.6	191	8.9	291	13.5	114	5.3	16	0.7	730	33.8

MEAN WIND SPEED: 13.4

MISSING: 0

ARTIFICIAL ISLAND 1/95 - 3/95

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
N	0	1	0	7	10	0	0	18
NNE	0	0	4	0	13	1	0	18
NE	0	0	2	2	1	0	0	7
NNE	0	2	3	3	2	0	0	10
E	0	1	3	5	2	0	0	11
ESE	0	0	3	6	1	0	0	11
SE	0	0	1	6	10	7	1	25
SSE	0	0	4	15	8	5	2	34
S	0	0	1	3	8	5	0	17
SSW	0	2	0	3	16	4	0	25
SW	0	0	1	1	1	0	0	3
WSW	0	2	1	3	3	0	0	9
W	0	2	4	5	9	0	0	20
WNW	0	0	0	1	2	0	0	3
NW	0	0	0	0	4	0	0	4
NNW	0	0	2	2	7	0	0	11
	0	13	29	62	97	22	3	226
	0.0	0.6	1.3	2.9	4.5	1.0	0.1	10.5

MEAN WIND SPEED: 12.6
MISSING: 0

ARTIFICIAL ISLAND 1/95 - 3/95

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
N	0	0	0	1	0	0	0	3
NNE	0	0	0	4	1	0	0	5
NE	0	1	1	2	1	0	0	5
ENE	0	1	3	4	1	0	0	9
E	0	1	4	5	0	0	0	10
ESE	0	0	1	3	2	0	0	7
SE	0	0	1	5	1	0	0	12
SSE	0	3	0	4	2	1	3	66
S	0	3	0	3	8	9	3	26
SSW	0	0	0	1	10	1	0	12
SW	0	0	0	1	0	0	0	1
WSW	0	0	1	6	6	3	0	16
W	0	3	3	2	3	0	0	11
WNW	0	0	0	5	0	0	0	5
NW	0	1	2	1	0	0	0	4
NNW	0	1	1	0	0	0	0	2
	0	14	19	47	35	42	37	196
	0	0.0	0.6	0.9	2.2	1.6	1.7	9.0

MEAN WIND SPEED: 17.4
MISSING: 0

ARTIFICIAL ISLAND 1/95 - 3/95

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

ALL STABILITY CLASSES

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		
DIRECTION	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	14	0.6	31	1.4	67	3.1	19	0.9	3	0.1	136	6.3
NNE	0	0.0	2	0.1	18	0.8	49	2.3	54	2.5	9	0.4	0	0.0	132	6.1
NE	0	0.0	3	0.1	17	0.8	60	2.8	39	1.8	0	0.0	0	0.0	119	5.5
ENE	0	0.0	3	0.1	16	0.7	34	1.6	17	0.8	1	0.0	1	0.0	72	3.3
E	0	0.0	2	0.1	18	0.8	29	1.3	10	0.5	3	0.1	0	0.0	62	2.9
ESE	0	0.0	3	0.1	11	0.5	20	0.9	8	0.4	1	0.0	1	0.0	44	2.0
SE	0	0.0	2	0.1	19	0.9	24	1.1	26	1.2	28	1.3	7	0.3	106	4.9
SSE	0	0.0	7	0.3	12	0.6	41	1.9	26	1.2	49	2.3	40	1.9	175	8.1
S	0	0.0	7	0.3	10	0.5	26	1.2	26	1.2	15	0.7	3	0.1	87	4.0
SSW	0	0.0	4	0.2	10	0.5	16	0.7	37	1.7	10	0.5	0	0.0	77	3.6
SW	0	0.0	4	0.2	9	0.4	20	0.9	32	1.5	5	0.2	0	0.0	70	3.2
WSW	0	0.0	4	0.2	16	0.7	49	2.3	64	3.0	23	1.1	4	0.2	160	7.4
W	0	0.0	7	0.3	25	1.2	57	2.6	94	4.4	44	2.0	19	0.9	246	11.4
WNW	0	0.0	2	0.1	18	0.8	42	1.9	74	3.4	38	1.8	44	2.0	218	10.1
NW	0	0.0	16	0.7	8	0.4	16	0.7	98	4.5	115	5.3	25	1.2	278	12.9
NNW	0	0.0	27	1.3	12	0.6	14	0.6	74	3.4	39	1.8	9	0.4	175	8.1
	0	0.0	95	4.4	233	10.8	528	24.5	746	34.6	399	18.5	156	7.2	2157	100.0

MISSING HOURS: 3

MEAN WIND SPEED: 14.6

ARTIFICIAL ISLAND 1/95 - 3/95

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

DIRECTION VS SPEED ONLY

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		
DIRECTION	SUM PERCENT		SUM PERCENT		SUM PERCENT		SUM PERCENT		SUM PERCENT		SUM PERCENT		SUM PERCENT			
N	0	0.0	2	0.1	14	0.6	31	1.4	67	3.1	19	0.9	3	0.1	136	6.3
NNE	0	0.0	2	0.1	18	0.8	49	2.3	54	2.5	9	0.4	0	0.0	132	6.1
NE	0	0.0	3	0.1	17	0.8	60	2.8	41	1.9	0	0.0	0	0.0	121	5.6
ENE	0	0.0	3	0.1	16	0.7	34	1.6	17	0.8	1	0.0	1	0.0	72	3.3
E	0	0.0	2	0.1	18	0.8	29	1.3	10	0.5	3	0.1	0	0.0	62	2.9
ESE	0	0.0	3	0.1	11	0.5	20	0.9	8	0.4	1	0.0	1	0.0	44	2.0
SE	0	0.0	2	0.1	19	0.9	24	1.1	26	1.2	28	1.3	7	0.3	106	4.9
SSE	0	0.0	7	0.3	12	0.6	41	1.9	26	1.2	49	2.3	40	1.9	175	8.1
S	0	0.0	7	0.3	10	0.5	26	1.2	26	1.2	15	0.7	3	0.1	87	4.0
SSW	0	0.0	4	0.2	10	0.5	16	0.7	37	1.7	10	0.5	0	0.0	77	3.6
SW	0	0.0	4	0.2	9	0.4	20	0.9	32	1.5	5	0.2	0	0.0	70	3.2
WSW	0	0.0	4	0.2	16	0.7	49	2.3	64	3.0	23	1.1	4	0.2	160	7.4
W	0	0.0	7	0.3	25	1.2	57	2.6	94	4.4	44	2.0	19	0.9	246	11.4
WNW	0	0.0	2	0.1	18	0.8	42	1.9	74	3.4	38	1.8	44	2.0	218	10.1
NW	0	0.0	16	0.7	8	0.4	16	0.7	98	4.5	115	5.3	25	1.2	278	12.9
NNW	0	0.0	27	1.3	12	0.6	14	0.6	75	3.5	39	1.8	9	0.4	176	8.1
	0	0.0	95	4.4	233	10.8	528	24.4	749	34.7	399	18.5	156	7.2	2160	100.0

MISSING HOURS: 0

MEAN WIND SPEED: 14.6

ARTIFICIAL ISLAND 4/95 - 6/95

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASSWIND: 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
N	0	0	0	0	2	1	0	3
NNE	0	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0	0
ENE	0	0	0	1	0	0	0	1
E	0	0	0	0	0	0	0	0
ESE	0	0	0	1	0	0	0	1
SE	0	0	1	0	3	2	3	9
SSE	0	2	2	4	4	4	0	16
S	0	0	3	4	0	0	0	7
SSW	0	2	1	0	0	0	0	3
SW	0	0	3	5	1	0	0	9
WSW	0	0	3	8	0	1	0	12
W	0	0	0	2	7	0	0	9
WNW	0	0	0	2	4	8	1	15
NW	0	0	0	5	23	12	2	42
NNW	0	0	0	1	13	6	1	21
	0	4	13	33	57	34	7	148
	0.0	0.2	0.6	1.5	2.6	1.6	0.3	6.8

MEAN WIND SPEED: 15.1
MISSING: 0

ARTIFICIAL ISLAND 4/95 - 6/95

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS

WIND: 300 FT

DELTA T: (300-33FT)

LAPSE RATE: -1.8 TO -1.7 DEG C/100M
CLASS B

WIND SPEED GROUPS (MPH)

DIRECTION	0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT
N	0	0.0	0	0.0	1	0.0	7	0.3	5	0.2	1	0.0	0	0.0	14	0.6
NNE	0	0.0	0	0.0	0	0.0	1	0.0	1	0.0	0	0.0	0	0.0	2	0.1
NE	0	0.0	0	0.0	3	0.1	7	0.3	2	0.1	0	0.0	0	0.0	12	0.5
ENE	0	0.0	0	0.0	2	0.1	1	0.0	0	0.0	0	0.0	0	0.0	3	0.1
E	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
ESE	0	0.0	0	0.0	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	1	0.0	0	0.0	5	0.2
SSE	0	0.0	0	0.0	6	0.3	4	0.2	3	0.1	3	0.1	2	0.1	18	0.8
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	2	0.1	5	0.2	6	0.3	0	0.0	0	0.0	13	0.6
WSW	0	0.0	0	0.0	4	0.2	2	0.1	0	0.0	3	0.1	1	0.0	10	0.5
W	0	0.0	0	0.0	3	0.1	3	0.1	2	0.1	0	0.0	0	0.0	8	0.4
WNW	0	0.0	0	0.0	2	0.1	2	0.1	1	0.0	0	0.0	1	0.0	6	0.3
NW	0	0.0	0	0.0	1	0.0	6	0.3	13	0.6	9	0.4	0	0.0	29	1.3
NNW	0	0.0	0	0.0	0	0.0	7	0.3	10	0.5	2	0.1	1	0.0	20	0.9
	0	0.0	0	0.0	28	1.3	48	2.2	43	2.0	19	0.9	7	0.3	145	6.6

MEAN WIND SPEED: 13.2
MISSING: 0

ARTIFICIAL ISLAND 4/95 - 6/95

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
N	0	0	1	6	3	1	0	11
NNE	0	0	1	6	4	0	0	11
NE	0	0	2	7	0	0	0	9
ENE	0	0	1	6	0	3	0	10
E	0	0	2	3	0	0	0	5
ESE	0	0	1	0	0	0	0	1
SE	0	0	3	1	2	1	4	11
SSE	0	1	1	1	2	5	0	10
S	0	0	1	1	0	0	0	2
SSW	0	0	4	1	0	0	0	5
SW	0	0	2	2	5	1	1	11
WSW	0	0	3	2	1	1	1	8
W	0	0	3	1	1	0	0	5
WNW	0	0	1	2	2	1	1	7
NW	0	0	2	4	9	6	0	21
NNW	0	0	3	6	2	1	0	12
	0	1	31	49	31	20	7	139
	0.0	0.0	1.6	2.2	1.4	0.9	0.3	6.4

MEAN WIND SPEED: 12.9
MISSING: 0

ARTIFICIAL ISLAND 4/95 - 6/95

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASSWIND: 300 FT
DELTA T: (300-33FT)LAPSE RATE: -1.4 TO -0.5 DEG C/100M
CLASS D

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	
DIRECTION	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	0	0.0	2	0.1	8	0.4	13	0.6	14	0.6	2	0.1	39	1.8
NNE	0	0.0	1	0.0	3	0.1	6	0.3	19	0.9	13	0.6	1	0.0	43	2.0
NE	0	0.0	0	0.0	13	0.6	34	1.6	12	0.5	11	0.5	2	0.1	72	3.3
ENE	0	0.0	1	0.0	13	0.6	26	1.2	55	2.5	7	0.3	0	0.0	102	4.7
E	0	0.0	1	0.0	16	0.7	21	1.0	5	0.2	0	0.0	0	0.0	43	2.0
ESE	0	0.0	0	0.0	4	0.2	6	0.3	18	0.8	3	0.1	0	0.0	31	1.4
SE	0	0.0	1	0.0	4	0.2	14	0.6	24	1.1	23	1.1	8	0.4	74	3.4
SSE	0	0.0	3	0.1	10	0.5	20	0.9	51	2.3	28	1.3	9	0.4	121	5.5
S	0	0.0	5	0.2	14	0.6	20	0.9	17	0.8	12	0.5	0	0.0	68	3.1
SSW	0	0.0	2	0.1	5	0.2	9	0.4	8	0.4	2	0.1	1	0.0	27	1.2
SW	0	0.0	1	0.0	8	0.4	11	0.5	9	0.4	5	0.2	3	0.1	37	1.7
WSW	0	0.0	1	0.0	7	0.3	4	0.2	12	0.5	0	0.0	0	0.0	24	1.1
W	0	0.0	0	0.0	14	0.6	10	0.5	1	0.0	1	0.0	1	0.0	27	1.2
WNW	0	0.0	1	0.0	7	0.3	8	0.4	7	0.3	4	0.2	1	0.0	28	1.3
NW	0	0.0	1	0.0	2	0.1	4	0.2	27	1.2	17	0.8	4	0.2	55	2.5
NNW	0	0.0	0	0.0	2	0.1	7	0.3	7	0.3	14	0.6	7	0.3	37	1.7
	0	0.0	18	0.8	124	5.7	208	9.5	285	13.0	154	7.1	39	1.8	828	37.9

MEAN WIND SPEED: 14.0

MISSING: 0

ARTIFICIAL ISLAND 4/95 - 6/95

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASSWIND: 300 FT
DELTA T: (300-33FT)LAPSE RATE: -0.4 TO 1.5 DEG C/100M
CLASS E

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	
DIRECTION	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	0	0.0	9	0.4	5	0.2	14	0.6	4	0.2	1	0.0	33	1.5
NNE	0	0.0	0	0.0	3	0.1	8	0.4	10	0.5	9	0.4	0	0.0	30	1.4
NE	0	0.0	3	0.1	6	0.3	5	0.2	8	0.4	2	0.1	0	0.0	24	1.1
ENE	0	0.0	1	0.0	8	0.4	10	0.5	4	0.2	0	0.0	0	0.0	23	1.1
E	0	0.0	2	0.1	9	0.4	22	1.0	4	0.2	0	0.0	0	0.0	37	1.7
ESE	0	0.0	2	0.1	6	0.3	13	0.6	11	0.5	4	0.2	0	0.0	36	1.6
SE	0	0.0	1	0.0	6	0.3	7	0.3	12	0.5	7	0.3	1	0.0	34	1.6
SSE	0	0.0	2	0.1	12	0.5	9	0.4	17	0.8	7	0.3	8	0.4	55	2.5
S	0	0.0	4	0.2	5	0.2	8	0.4	18	0.8	12	0.5	3	0.1	50	2.3
SSW	0	0.0	1	0.0	5	0.2	11	0.5	17	0.8	17	0.8	4	0.2	55	2.5
SW	0	0.0	2	0.1	3	0.1	16	0.7	26	1.2	15	0.7	5	0.2	67	3.1
WSW	0	0.0	2	0.1	2	0.1	11	0.5	24	1.1	4	0.2	1	0.0	44	2.0
W	0	0.0	3	0.1	9	0.4	13	0.6	12	0.5	0	0.0	0	0.0	37	1.7
WNW	0	0.0	5	0.2	9	0.4	13	0.6	22	1.0	3	0.1	0	0.0	52	2.4
NW	0	0.0	2	0.1	6	0.3	14	0.6	33	1.5	22	1.0	1	0.0	78	3.6
NNW	0	0.0	3	0.1	3	0.1	8	0.4	24	1.1	13	0.6	6	0.3	57	2.6
	0	0.0	33	1.5	101	4.6	173	7.9	256	11.7	119	5.4	30	1.4	712	32.6

MEAN WIND SPEED: 13.6

MISSING: 0

ARTIFICIAL ISLAND 4/95 - 6/95

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
N	0	0	1	0	9	4	0	14
NNE	0	0	1	0	10	1	0	13
NE	0	0	3	0	2	3	0	8
ENE	0	2	2	5	2	0	0	11
E	0	2	5	1	0	0	0	8
ESE	0	1	0	0	0	0	0	1
SE	0	2	0	0	0	0	0	5
SSE	0	1	2	7	2	0	0	14
S	0	0	2	1	8	2	1	14
SSW	0	1	3	5	8	3	1	21
SW	0	1	1	6	8	0	0	16
WSW	0	1	1	1	14	9	0	26
W	0	0	1	2	5	2	0	10
WNW	0	0	0	0	0	0	0	0
NW	0	1	1	4	2	0	0	8
NNW	0	2	1	0	9	1	0	13
	0	14	28	33	79	26	2	182
	0.0	0.6	1.3	1.5	3.6	1.2	0.1	8.3

MEAN WIND SPEED: 13.0
MISSING: 0

ARTIFICIAL ISLAND 4/95 - 6/95 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/100H
 CLASS G

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

0 0.0 1 0.0 2 0.1 9 0.4 10 0.5 5 0.2 3 0.1 30 1.4

MEAN WIND SPEED: 16.0
 MISSING: 0

ARTIFICIAL ISLAND 4/95 - 6/95

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)																
0.0-0.5			0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT	
DIRECTION	SUM PERCENT		SUM PERCENT		SUM PERCENT		SUM PERCENT		SUM PERCENT		SUM PERCENT		SUM PERCENT			
N	0	0.0	0	0.0	14	0.6	26	1.2	48	2.2	28	1.3	3	0.1	119	5.4
NNE	0	0.0	1	0.0	8	0.4	22	1.0	44	2.0	23	1.1	1	0.0	99	4.5
NE	0	0.0	3	0.1	27	1.2	53	2.4	24	1.1	16	0.7	2	0.1	125	5.7
ENE	0	0.0	4	0.2	27	1.2	49	2.2	61	2.8	10	0.5	0	0.0	151	6.9
E	0	0.0	5	0.2	32	1.5	47	2.2	9	0.4	0	0.0	0	0.0	93	4.3
ESE	0	0.0	4	0.2	12	0.5	21	1.0	29	1.3	7	0.3	0	0.0	73	3.3
SE	0	0.0	4	0.2	16	0.7	24	1.1	41	1.9	35	1.6	18	0.8	138	6.3
SSE	0	0.0	9	0.4	35	1.6	45	2.1	80	3.7	47	2.2	20	0.9	236	10.8
S	0	0.0	9	0.4	27	1.2	34	1.6	46	2.1	28	1.3	6	0.3	150	6.9
SSW	0	0.0	6	0.3	19	0.9	29	1.3	35	1.6	22	1.0	6	0.3	117	5.4
SW	0	0.0	4	0.2	20	0.9	49	2.2	55	2.5	21	1.0	9	0.4	158	7.2
WSW	0	0.0	4	0.2	20	0.9	29	1.3	51	2.3	18	0.8	3	0.1	125	5.7
W	0	0.0	3	0.1	30	1.4	31	1.4	29	1.3	3	0.1	1	0.0	97	4.4
WNW	0	0.0	6	0.3	11	0.9	27	1.2	36	1.6	16	0.7	4	0.2	108	4.9
NW	0	0.0	4	0.2	12	0.5	37	1.7	107	4.9	66	3.0	7	0.3	233	10.7
NNW	0	0.0	5	0.2	9	0.4	30	1.4	66	3.0	37	1.7	15	0.7	162	7.4
	0	0.0	71	3.3	327	15.0	553	25.3	761	34.8	377	17.3	95	4.3	2184	100.0

MISSING HOURS: 0

MEAN WIND SPEED: 13.8

ARTIFICIAL ISLAND 4/95 - 6/95

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)																
0.0-0.5		0.6-3.5		3.6-7.5		7.6-12.5		12.6-18.5		18.6-24.5		GE 24.6		SUM PERCENT		
DIRECTION	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	0	0.0	14	0.6	26	1.2	48	2.2	28	1.3	3	0.1	119 5.4	
NNE	0	0.0	1	0.0	8	0.4	22	1.0	44	2.0	23	1.1	1	0.0	99 4.5	
NE	0	0.0	3	0.1	27	1.2	53	2.4	24	1.1	16	0.7	2	0.1	125 5.7	
ENE	0	0.0	4	0.2	27	1.2	49	2.2	61	2.8	10	0.5	0	0.0	151 6.9	
E	0	0.0	5	0.2	32	1.5	47	2.2	9	0.4	0	0.0	0	0.0	93 4.3	
ESE	0	0.0	4	0.2	12	0.5	21	1.0	29	1.3	7	0.3	0	0.0	73 3.3	
SE	0	0.0	4	0.2	16	0.7	24	1.1	41	1.9	35	1.6	18	0.8	138 6.3	
SSE	0	0.0	9	0.4	35	1.6	45	2.1	80	3.7	47	2.2	20	0.9	236 10.8	
S	0	0.0	9	0.4	27	1.2	34	1.6	46	2.1	28	1.3	6	0.3	150 6.9	
SSW	0	0.0	6	0.3	19	0.9	29	1.3	35	1.6	22	1.0	6	0.3	117 5.4	
SW	0	0.0	4	0.2	20	0.9	49	2.2	55	2.5	21	1.0	9	0.4	158 7.2	
WSW	0	0.0	4	0.2	20	0.9	29	1.3	51	2.3	18	0.8	3	0.1	125 5.7	
W	0	0.0	3	0.1	30	1.4	31	1.4	29	1.3	3	0.1	1	0.0	97 4.4	
WNW	0	0.0	6	0.3	19	0.9	27	1.2	36	1.6	16	0.7	4	0.2	108 4.9	
NW	0	0.0	4	0.2	12	0.5	37	1.7	107	4.9	66	3.0	7	0.3	233 10.7	
NNW	0	0.0	5	0.2	9	0.4	30	1.4	66	3.0	37	1.7	15	0.7	162 7.4	
	0	0.0	71	3.3	327	15.0	553	25.3	761	34.8	377	17.3	95	4.3	2184 100.0	

MISSING HOURS: 0

MEAN WIND SPEED: 13.8

ARTIFICIAL ISLAND 7/95 - 9/95

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)

	0.0-0.5	0.6-3.5	3.6-7.5	7.6-12.5	12.6-18.5	18.6-24.5	GE 24.6	SUM PERCENT
DIRECTION	SUM PERCENT	SUM PERCENT	SUM PERCENT	SUM PERCENT	SUM PERCENT	SUM PERCENT	SUM PERCENT	SUM PERCENT
N	0	0	1	0	1	0	0	2
NNE	0	0	2	0	0	0	0	2
NE	0	0	0	1	0	0	0	1
ENE	0	0	1	1	0	0	0	2
E	0	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0	0
SE	0	0	1	5	9	2	0	17
SSE	0	0	6	13	9	1	0	29
S	0	0	3	4	0	0	0	7
SSW	0	0	9	4	0	0	0	13
SW	0	0	10	6	4	0	0	21
WSW	0	0	10	11	2	0	0	23
W	0	0	2	1	6	0	0	9
WNW	0	0	1	0	1	0	0	2
NW	0	0	2	1	0	0	0	3
NNW	0	0	0	0	1	0	0	1
	0	1	48	47	33	3	0	132
	0.0	0.0	2.2	2.2	1.5	0.1	0.0	6.1

MEAN WIND SPEED: 10.0
MISSING: 0

ARTIFICIAL ISLAND 7/95 - 9/95

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS

WIND: 300 FT

DELTA T: (300-33FT)

LAPSE RATE: -1.8 TO -1.7 DEG C/100M
CLASS B

DIRECTION	WIND SPEED GROUPS (MPH)										SUM PERCENT					
	0.0-0.5	0.6-3.5	3.6-7.5	7.6-12.5	12.6-18.5	18.6-24.5	GE 24.6	SUM PERCENT	SUM PERCENT							
N	0	0.0	0	0.0	8	0.4	11	0.5	2	0.1	1	0.0	0	0.0	22	1.0
NNE	0	0.0	0	0.0	1	0.0	5	0.2	0	0.0	0	0.0	0	0.0	6	0.3
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	6	0.3	1	0.0	0	0.0	0	0.0	7	0.3
E	0	0.0	0	0.0	2	0.1	2	0.1	0	0.0	0	0.0	0	0.0	4	0.2
ESE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SE	0	0.0	0	0.0	1	0.0	2	0.1	3	0.1	6	0.3	0	0.0	12	0.6
SSE	0	0.0	0	0.0	5	0.2	2	0.1	2	0.1	4	0.2	0	0.0	13	0.6
S	0	0.0	0	0.0	7	0.3	3	0.1	2	0.1	0	0.0	0	0.0	12	0.6
SSW	0	0.0	0	0.0	3	0.1	4	0.2	0	0.0	0	0.0	0	0.0	7	0.3
SW	0	0.0	0	0.0	5	0.2	5	0.2	6	0.3	1	0.0	0	0.0	17	0.8
WSW	0	0.0	0	0.0	3	0.1	3	0.1	6	0.3	0	0.0	0	0.0	12	0.6
W	0	0.0	1	0.0	3	0.1	6	0.3	2	0.1	0	0.0	0	0.0	12	0.6
WNW	0	0.0	0	0.0	1	0.0	4	0.2	2	0.1	0	0.0	0	0.0	7	0.3
NW	0	0.0	0	0.0	5	0.2	1	0.0	1	0.0	0	0.0	0	0.0	7	0.3
NNW	0	0.0	0	0.0	3	0.1	13	0.6	4	0.2	0	0.0	0	0.0	20	0.9

165

0

12

33

70

49

1

0

0

7.6

MEAN WIND SPEED: 10.4
MISSING: 0

ARTIFICIAL ISLAND 7/95 - 9/95

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASSWIND: 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
N	0	0	3	14	4	1	0	22
NNE	0	0	1	6	1	0	0	8
NE	0	0	1	7	8	0	0	16
ENE	0	0	1	6	1	0	0	8
E	0	1	1	5	0	0	0	7
ESE	0	0	1	0	0	0	0	1
SE	0	0	4	3	4	3	0	14
SSE	0	0	3	2	4	3	0	12
S	0	2	6	1	0	0	0	9
SSW	0	3	2	1	1	0	0	7
SW	0	2	3	1	7	1	0	14
WSW	0	0	2	6	5	0	0	13
W	0	0	2	4	1	0	0	7
WNW	0	0	2	2	0	0	0	4
NW	0	0	4	3	1	0	0	8
NNW	0	1	2	9	3	0	0	15
	0	9	38	70	40	8	0	165
	0.0	0.4	1.7	3.2	4.0	0.4	0.0	7.6

MEAN WIND SPEED: 10.4
MISSING: 1

ARTIFICIAL ISLAND 7/95 - 9/95

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS

WIND: 300 FT

DELTA Y: (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
N	0	1	5	14	16	10	1	47
NNE	0	1	1	9	18	8	0	37
NE	0	2	5	12	29	19	2	69
ENE	0	0	6	14	29	0	0	49
E	0	0	6	37	4	0	0	47
ESE	0	0	1	9	11	0	0	21
SE	0	0	5	12	13	3	0	33
SSE	0	2	4	10	14	3	0	33
S	0	2	5	21	19	3	0	50
SSW	0	2	9	21	38	14	0	84
SW	0	6	11	26	43	21	0	107
WSW	0	3	7	18	25	0	0	61
W	0	2	16	13	9	2	0	42
WNW	0	1	3	10	2	0	0	16
NW	0	0	9	15	24	4	1	53
NNW	0	0	6	16	13	7	4	46
	0	22	99	257	307	102	8	795
	0.0	1.0	4.5	11.6	14.1	4.7	0.4	36.5

MEAN WIND SPEED: 13.0

MISSING: 3

ARTIFICIAL ISLAND 7/95 - 9/95

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
N	0	0	0	4	16	3	0	23
NNE	0	0	1	3	17	13	0	34
NE	0	1	1	0	15	8	0	25
ENE	0	0	0	2	5	5	0	12
E	0	1	1	5	2	0	0	9
ESE	0	0	0	0	1	5	0	6
SE	0	0	1	2	2	5	0	10
SSE	0	3	2	4	1	0	0	10
S	0	0	2	0	0	0	0	2
SSW	0	0	1	1	1	0	0	3
SW	0	2	1	1	3	3	0	10
WSW	0	0	1	5	11	1	0	18
W	0	0	4	3	5	1	0	13
WNW	0	0	0	1	3	0	0	4
NW	0	0	0	4	7	0	0	11
NNW	0	0	4	4	11	2	0	21
	0	7	19	39	100	46	0	211
	0.0	0.3	0.9	1.8	4.6	2.1	0.0	9.7

MEAN WIND SPEED: 14.5

MISSING: 0

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

LAPSE RATE: GT 4.0 DEG C/100M
CLASS G

[illegible]

MEAN WIND SPEED: 19.3
MISSING: 0

ARTIFICIAL ISLAND 7/95 - 9/95

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

ALL STABILITY CLASSES

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		
DIRECTION	SUM PERCENT		SUM PERCENT		SUM PERCENT		SUM PERCENT		SUM PERCENT		SUM PERCENT		SUM PERCENT			
N	0	0.0	2	0.1	21	1.0	56	2.6	61	2.8	21	1.0	1	0.0	162	7.4
NNE	0	0.0	1	0.0	14	0.6	32	1.5	41	1.9	24	1.1	0	0.0	112	5.1
NE	0	0.0	4	0.2	10	0.5	32	1.5	76	3.5	39	1.8	2	0.1	163	7.5
ENE	0	0.0	1	0.0	16	0.7	49	2.2	55	2.5	6	0.3	0	0.0	127	5.8
E	0	0.0	4	0.2	14	0.6	64	2.9	9	0.4	0	0.0	0	0.0	91	4.2
ESE	0	0.0	3	0.1	5	0.2	10	0.5	18	0.8	6	0.3	0	0.0	42	1.9
SE	0	0.0	0	0.0	15	0.7	35	1.6	44	2.0	38	1.7	4	0.2	136	6.2
SSE	0	0.0	7	0.3	37	1.7	58	2.7	88	4.0	50	2.3	1	0.0	241	11.0
S	0	0.0	5	0.2	27	1.2	73	3.3	70	3.2	11	0.5	0	0.0	186	8.5
SSW	0	0.0	9	0.4	29	1.3	44	2.0	76	3.5	22	1.0	0	0.0	180	8.3
SW	0	0.0	13	0.6	41	1.9	45	2.1	83	3.8	29	1.3	0	0.0	211	9.7
WSW	0	0.0	4	0.2	29	1.3	51	2.3	60	2.8	10	0.5	0	0.0	154	7.1
W	0	0.0	3	0.1	32	1.5	34	1.6	29	1.3	3	0.1	0	0.0	101	4.6
WNW	0	0.0	3	0.1	9	0.4	20	0.9	10	0.5	0	0.0	0	0.0	42	1.9
NW	0	0.0	0	0.0	24	1.1	38	1.7	35	1.6	6	0.3	2	0.1	105	4.8
NNW	0	0.0	3	0.1	24	1.1	51	2.3	36	1.7	9	0.4	5	0.2	128	5.9
	0	0.0	62	2.8	347	15.9	692	31.7	791	36.3	274	12.6	15	0.7	2181	100.0

MEAN WIND SPEED: 12.6

MISSING HOURS: 27

ARTIFICIAL ISLAND 7/95 - 9/95

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

DIRECTION VS SPEED ONLY

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	
DIRECTION	SUM PERCENT		SUM PERCENT		SUM PERCENT		SUM PERCENT		SUM PERCENT		SUM PERCENT		SUM PERCENT			
N	0	0.0	2	0.1	21	1.0	56	2.6	61	2.8	21	1.0	1	0.0	162	7.4
NNE	0	0.0	1	0.0	14	0.6	33	1.5	41	1.9	24	1.1	0	0.0	113	5.2
NE	0	0.0	4	0.2	11	0.5	33	1.5	76	3.5	39	1.8	2	0.1	165	7.5
ENE	0	0.0	1	0.0	17	0.8	49	2.2	55	2.5	6	0.3	0	0.0	128	5.8
E	0	0.0	4	0.2	15	0.7	64	2.9	9	0.4	0	0.0	0	0.0	92	4.2
ESE	0	0.0	3	0.1	5	0.2	10	0.5	18	0.8	6	0.3	0	0.0	42	1.9
SE	0	0.0	0	0.0	16	0.7	35	1.6	46	2.1	40	1.8	4	0.2	141	6.4
SSE	0	0.0	7	0.3	37	1.7	58	2.6	88	4.0	50	2.3	1	0.0	241	11.0
S	0	0.0	5	0.2	27	1.2	73	3.3	70	3.2	11	0.5	0	0.0	186	8.5
SSW	0	0.0	9	0.4	29	1.3	44	2.0	76	3.5	22	1.0	0	0.0	180	8.2
SW	0	0.0	13	0.6	41	1.9	45	2.1	83	3.8	29	1.3	0	0.0	211	9.6
WSW	0	0.0	4	0.2	29	1.3	51	2.3	60	2.7	10	0.5	0	0.0	154	7.0
W	0	0.0	3	0.1	32	1.5	34	1.6	29	1.3	3	0.1	0	0.0	101	4.6
WNW	0	0.0	3	0.1	9	0.4	20	0.9	10	0.5	0	0.0	0	0.0	42	1.9
NW	0	0.0	0	0.0	24	1.1	38	1.7	35	1.6	6	0.3	2	0.1	105	4.8
NNW	0	0.0	3	0.1	24	1.1	51	2.3	36	1.6	9	0.4	5	0.2	128	5.8
	0	0.0	62	2.8	351	16.0	694	31.7	793	36.2	276	12.6	15	0.7	2191	100.0

MISSING HOURS: 17

MEAN WIND SPEED: 12.6

ARTIFICIAL ISLAND 10/95-12/95

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
N	0	0	2	3	2	0	0	7
NNE	0	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0	0
SSW	0	0	1	0	2	0	0	4
SW	0	0	2	0	4	0	0	6
WSW	0	0	4	0	0	0	0	8
W	0	0	3	1	4	0	0	9
WNW	0	0	5	3	4	1	1	14
NW	0	0	3	6	6	4	4	25
NNW	0	0	0	6	17	8	1	32
	0	0	0	7	5	0	0	12
	0	0	20	30	44	15	6	123
	0	0.4	1.0	1.6	2.3	0.8	0.3	6.4

MEAN WIND SPEED: 13.1
MISSING: 10

ARTIFICIAL ISLAND 10/95-12/95

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
N	0	0	0	5	1	0	0	6
NNE	0	0	0	3	0	0	0	3
NE	0	1	0	0	0	0	0	1
ENE	0	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0	0
ESE	0	1	2	0	0	0	0	3
SE	0	0	0	2	0	0	0	2
SSE	0	0	1	1	1	0	1	4
S	0	0	2	0	1	0	0	3
SSW	0	0	0	0	2	0	0	2
SW	0	1	1	1	1	0	0	4
WSW	0	2	1	3	1	0	0	7
W	0	0	1	2	5	0	1	9
WNW	0	0	3	3	2	10	3	21
W	0	0	1	1	12	7	0	21
NNW	0	0	2	3	8	0	0	13
	0	5	14	24	34	17	6	100
	0.0	0.3	0.7	1.2	1.8	0.9	0.3	5.2

MEAN WIND SPEED: 13.8
MISSING: 18

ARTIFICIAL ISLAND 10/95-12/95

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASS

WIND: 30G FT

DELTA T: (300-33FT)

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

DIRECTION	WIND SPEED GROUPS (MPH)												SUM PERCENT	
	0.0-0.5	0.6-3.5	3.6-7.5	7.6-12.5	12.6-18.5	18.6-24.5	GE 24.6	SUM PERCENT						
N	0	0.0	1	0.1	4	0.2	2	0.1	0	0.0	0	0.0	7	0.4
NNE	0	0.0	2	0.1	2	0.1	0	0.0	0	0.0	0	0.0	5	0.3
NE	0	0.0	1	0.1	1	0.1	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
E	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	0.1	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1
SE	0	0.0	2	0.1	0	0.0	0	0.0	1	0.1	2	0.1	5	0.3
SSE	0	0.0	0	0.0	1	0.1	1	0.1	1	0.1	0	0.0	3	0.2
S	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SSW	0	0.1	2	0.1	0	0.0	1	0.1	1	0.1	0	0.0	3	0.2
SW	0	0.1	1	0.1	0	0.0	0	0.0	0	0.0	0	0.0	2	0.1
WSW	0	0.0	0	0.0	3	0.2	1	0.1	0	0.0	0	0.0	4	0.2
W	0	0.1	0	0.0	2	0.1	2	0.1	0	0.0	0	0.0	5	0.3
WNW	0	0.0	2	0.1	1	0.1	4	0.2	4	0.2	2	0.1	13	0.7
NW	0	0.0	0	0.0	3	0.2	5	0.3	3	0.2	0	0.0	11	0.6
NNW	0	0.0	1	0.1	0	0.0	7	0.4	0	0.0	0	0.0	8	0.4
	0	0.0	13	0.7	17	0.9	23	1.2	10	0.5	4	0.2	73	3.8

MEAN WIND SPEED: 12.9
MISSING: 15

ARTIFICIAL ISLAND 10/95-12/95

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	SUM	PERCENT
N	0	0.0	0	0.0	0	0.0	11	0.6	14	0.7	2	0.1	0	0.0	27	1.4
NNE	0	0.0	0	0.0	6	0.3	13	0.7	19	1.0	4	0.2	3	0.2	45	2.3
NNE	0	0.0	1	0.1	5	0.3	10	0.5	3	0.2	2	0.1	3	0.2	24	1.2
ENE	0	0.0	0	0.0	8	0.4	12	0.6	1	0.1	0	0.0	0	0.0	21	1.1
E	0	0.0	0	0.0	11	0.6	2	0.1	0	0.0	0	0.0	0	0.0	13	0.7
ESE	0	0.0	0	0.0	1	0.1	2	0.1	1	0.1	1	0.1	0	0.0	5	0.3
SE	0	0.0	1	0.1	6	0.3	3	0.2	1	0.1	2	0.1	6	0.3	19	1.0
SSE	0	0.0	0	0.0	3	0.2	3	0.2	13	0.7	2	0.1	0	0.0	21	1.1
S	0	0.0	2	0.1	7	0.4	2	0.1	14	0.7	15	0.8	1	0.1	41	2.1
SSW	0	0.0	3	0.2	6	0.3	9	0.5	7	0.4	8	0.4	2	0.1	35	1.8
SW	0	0.0	0	0.0	5	0.3	18	0.9	11	0.6	6	0.3	1	0.1	41	2.1
WSW	0	0.0	2	0.1	6	0.3	4	0.2	10	0.5	6	0.3	8	0.4	36	1.9
W	0	0.0	1	0.1	2	0.1	7	0.4	16	0.8	12	0.6	12	0.6	50	2.6
WNW	0	0.0	1	0.1	2	0.1	8	0.4	23	1.2	35	1.8	20	1.0	89	4.6
NW	0	0.0	0	0.0	2	0.1	12	0.6	29	1.5	29	1.5	10	0.5	82	4.2
NNW	0	0.0	1	0.1	2	0.1	7	0.4	21	1.1	13	0.7	0	0.0	44	2.3
	0	0.0	12	0.6	72	3.7	123	6.4	183	9.5	137	7.1	66	3.4	593	30.7

MEAN WIND SPEED: 15.8

MISSING: 146

ARTIFICIAL ISLAND 10/95-12/95

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASSWIND: 300 FT
DELTA T: (300-33FT)LAPSE RATE: -0.4 TO 1.5 DEG C/100M
CLASS E

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	
DIRECTION	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT	SUM	PERCENT		
N	0	0.0	0	0.0	7	0.4	5	0.3	7	0.4	1	0.1	0	0.0	20	1.0
NNE	0	0.0	0	0.0	4	0.2	9	0.5	13	0.7	0	0.0	0	0.0	26	1.3
NE	0	0.0	0	0.0	2	0.1	1	0.1	6	0.3	2	0.1	2	0.1	13	0.7
ENE	0	0.0	1	0.1	3	0.2	9	0.5	3	0.2	0	0.0	0	0.0	16	0.8
E	0	0.0	0	0.0	3	0.2	12	0.6	2	0.1	0	0.0	0	0.0	17	0.9
ESE	0	0.0	0	0.0	1	0.1	0	0.0	3	0.2	2	0.1	0	0.0	6	0.3
SE	0	0.0	0	0.0	1	0.1	5	0.3	6	0.3	5	0.3	20	1.0	37	1.9
SSE	0	0.0	2	0.1	7	0.4	10	0.5	15	0.8	11	0.6	5	0.3	50	2.6
S	0	0.0	1	0.1	11	0.6	19	1.0	27	1.4	23	1.2	2	0.1	83	4.3
SSW	0	0.0	1	0.1	12	0.6	29	1.5	31	1.6	24	1.2	8	0.4	105	5.4
SW	0	0.0	2	0.1	11	0.6	14	0.7	19	1.0	7	0.4	13	0.7	66	3.4
WSW	0	0.0	2	0.1	7	0.4	12	0.6	13	0.7	0	0.0	1	0.1	35	1.8
W	0	0.0	1	0.1	6	0.3	20	1.0	24	1.2	4	0.2	1	0.1	56	2.9
WNW	0	0.0	0	0.0	9	0.5	16	0.8	21	1.1	12	0.6	1	0.1	59	3.1
NW	0	0.0	1	0.1	6	0.3	23	1.2	43	2.2	18	0.9	10	0.5	101	5.2
NNW	0	0.0	0	0.0	3	0.2	21	1.1	44	2.3	14	0.7	0	0.0	82	4.2
	0	0.0	11	0.6	93	4.8	205	10.6	277	14.4	123	6.4	63	3.3	772	40.0

MEAN WIND SPEED: 14.8
MISSING: 79

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

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						
N	0	0.0	2	0.1	4	0.2	4	0.2	0	0.0	0	0.0	10	0.5
NNE	0	0.0	2	0.1	3	0.2	4	0.2	1	0.1	0	0.0	10	0.5
NE	0	0.0	2	0.1	1	0.1	0	0.0	0	0.0	0	0.0	3	0.2
ENE	0	0.0	2	0.1	6	0.3	6	0.3	0	0.0	0	0.0	14	0.7
E	0	0.0	2	0.1	2	0.1	4	0.2	0	0.0	0	0.0	8	0.4
ESE	0	0.0	1	0.1	4	0.2	2	0.1	0	0.0	0	0.0	7	0.4
SE	0	0.0	2	0.1	8	0.4	8	0.4	2	0.1	1	0.1	21	1.1
SSE	0	0.0	3	0.2	3	0.2	0	0.0	5	0.3	8	0.4	19	1.0
S	0	0.0	2	0.1	7	0.4	5	0.3	6	0.3	0	0.0	20	1.0
SSW	0	0.0	1	0.1	6	0.3	15	0.8	14	0.7	0	0.0	37	1.9
SW	0	0.0	3	0.2	7	0.4	16	0.8	4	0.2	0	0.0	30	1.6
WSW	0	0.0	0	0.0	10	0.5	5	0.3	2	0.1	0	0.0	17	0.9
W	0	0.0	1	0.1	5	0.3	10	0.5	2	0.1	2	0.1	21	1.1
WNW	0	0.0	1	0.1	2	0.1	5	0.3	0	0.0	0	0.0	8	0.4
NW	0	0.0	0	0.0	1	0.1	3	0.2	0	0.0	0	0.0	4	0.2
NNW	0	0.0	0	0.0	2	0.1	5	0.3	1	0.1	0	0.0	8	0.4
	0	0.0	24	1.2	71	3.7	92	4.8	37	1.9	11	0.6	237	12.3

MEAN WIND SPEED: 14.5
MISSING: 2

ARTIFICIAL ISLAND 10/95-12/95

JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED
BY ATMOSPHERIC STABILITY CLASSWIND: 300 FT
DELTA T: (300-33FT)LAPSE RATE: GT 4.0 DEG C/100M
CLASS G

DIRECTION	WIND SPEED GROUPS (MPH)							SUM PERCENT	
	0.0-0.5	0.6-3.5	3.6-7.5	7.6-12.5	12.6-18.5	18.6-24.5	GE 24.6		
N	0	0.0	0	1	0	0	0	0.0	1
NNE	0	0.0	0	0	0	0	0	0.0	0
NE	0	0.0	0	1	1	0	0	0.0	2
ENE	0	0.0	0	2	0	0	0	0.0	2
E	0	0.0	1	1	1	0	0	0.0	3
ESE	0	0.0	0	0	1	0	0	0.0	1
SE	0	0.0	0	1	1	0	0	0.0	2
SSE	0	0.0	0	1	1	0	0	0.1	4
S	0	0.0	0	1	1	0	0	0.0	2
SSW	0	0.0	0	0	0	0	0	0.0	0
SW	0	0.0	0	3	2	0	0	0.0	5
WSW	0	0.0	0	3	2	1	0	0.0	6
W	0	0.0	1	0	0	0	0	0.0	1
WNW	0	0.0	1	0	0	0	0	0.0	1
NW	0	0.0	0	0	0	0	0	0.0	0
NNW	0	0.0	1	1	0	0	0	0.0	2
	0	0.0	4	15	10	1	2	0.1	32
	0	0.0	0.2	0.8	0.5	0.1	0.1	0.1	1.7

MEAN WIND SPEED: 13.1
MISSING: 2

ARTIFICIAL ISLAND 10/95-12/95

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

ALL STABILITY CLASSES

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		
DIRECTION	SUM PERCENT		SUM PERCENT		SUM PERCENT		SUM PERCENT		SUM PERCENT		SUM PERCENT		SUM PERCENT			
N	0	0.0	0	0.0	12	0.6	33	1.7	30	1.6	3	0.2	0	0.0	78	4.0
NNE	0	0.0	1	0.1	14	0.7	30	1.6	36	1.9	5	0.3	3	0.2	89	4.6
NE	0	0.0	2	0.1	10	0.5	14	0.7	10	0.5	4	0.2	5	0.3	45	2.3
ENE	0	0.0	1	0.1	13	0.7	29	1.5	10	0.5	0	0.0	0	0.0	53	2.7
E	0	0.0	0	0.0	19	1.0	17	0.9	7	0.4	0	0.0	0	0.0	43	2.2
ESE	0	0.0	1	0.1	6	0.3	6	0.3	7	0.4	3	0.2	0	0.0	23	1.2
SE	0	0.0	1	0.1	11	0.6	19	1.0	16	0.8	10	0.5	30	1.6	87	4.5
SSE	0	0.0	2	0.1	14	0.7	23	1.2	31	1.6	19	1.0	16	0.8	105	5.4
S	0	0.0	7	0.4	23	1.2	29	1.5	51	2.6	45	2.3	3	0.2	158	8.2
SSW	0	0.0	9	0.5	21	1.1	44	2.3	59	3.1	46	2.4	10	0.5	189	9.8
SW	0	0.0	6	0.3	25	1.3	43	2.2	49	2.5	17	0.9	14	0.7	154	8.0
WSW	0	0.0	7	0.4	17	0.9	36	1.9	36	1.9	9	0.5	9	0.5	114	5.9
W	0	0.0	4	0.2	16	0.8	39	2.0	61	3.2	19	1.0	17	0.9	156	8.1
WNW	0	0.0	1	0.1	21	1.1	36	1.9	61	3.2	67	3.5	30	1.6	216	11.2
NW	0	0.0	1	0.1	9	0.5	46	2.4	109	5.6	65	3.4	21	1.1	251	13.0
NNW	0	0.0	1	0.1	9	0.5	41	2.1	90	4.7	28	1.5	0	0.0	169	8.8
	0	0.0	44	2.3	240	12.4	485	25.1	663	34.4	340	17.6	158	8.2	1930	100.0

MISSING HOURS: 278

MEAN WIND SPEED: 14.8

ARTIFICIAL ISLAND 10/95-12/95

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

DIRECTION VS SPEED ONLY

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	
DIRECTION	SUM PERCENT		SUM PERCENT		SUM PERCENT		SUM PERCENT		SUM PERCENT		SUM PERCENT		SUM PERCENT			
N	0	0.0	0	0.0	12	0.6	33	1.7	30	1.6	3	0.2	0	0.0	78	4.0
NNE	0	0.0	1	0.1	14	0.7	30	1.6	36	1.9	5	0.3	3	0.2	89	4.6
NE	0	0.0	2	0.1	10	0.5	14	0.7	10	0.5	4	0.2	5	0.3	45	2.3
ENE	0	0.0	1	0.1	13	0.7	29	1.5	10	0.5	0	0.0	0	0.0	53	2.7
E	0	0.0	0	0.0	19	1.0	17	0.9	7	0.4	0	0.0	0	0.0	43	2.2
ESE	0	0.0	1	0.1	6	0.3	6	0.3	7	0.4	3	0.2	0	0.0	23	1.2
SE	0	0.0	1	0.1	11	0.6	19	1.0	16	0.8	10	0.5	30	1.6	87	4.5
SSE	0	0.0	2	0.1	14	0.7	23	1.2	31	1.6	19	1.0	16	0.8	105	5.4
S	0	0.0	7	0.4	23	1.2	29	1.5	51	2.6	45	2.3	3	0.2	158	8.2
SSW	0	0.0	9	0.5	21	1.1	44	2.3	59	3.1	46	2.4	10	0.5	189	9.8
SW	0	0.0	6	0.3	25	1.3	43	2.2	49	2.5	17	0.9	14	0.7	154	8.0
WSW	0	0.0	7	0.4	17	0.9	36	1.9	36	1.9	9	0.5	9	0.5	114	5.9
W	0	0.0	4	0.2	16	0.8	39	2.0	63	3.3	19	1.0	17	0.9	158	8.2
WNW	0	0.0	1	0.1	21	1.1	36	1.9	61	3.2	67	3.5	30	1.6	216	11.2
NW	0	0.0	1	0.1	9	0.5	46	2.4	109	5.6	65	3.4	21	1.1	251	13.0
NNW	0	0.0	1	0.1	9	0.5	41	2.1	90	4.7	28	1.4	0	0.0	169	8.7
	0	0.0	44	2.3	240	12.4	485	25.1	665	34.4	340	17.6	158	8.2	1932	100.0

MISSING HOURS: 276

MEAN WIND SPEED: 14.8