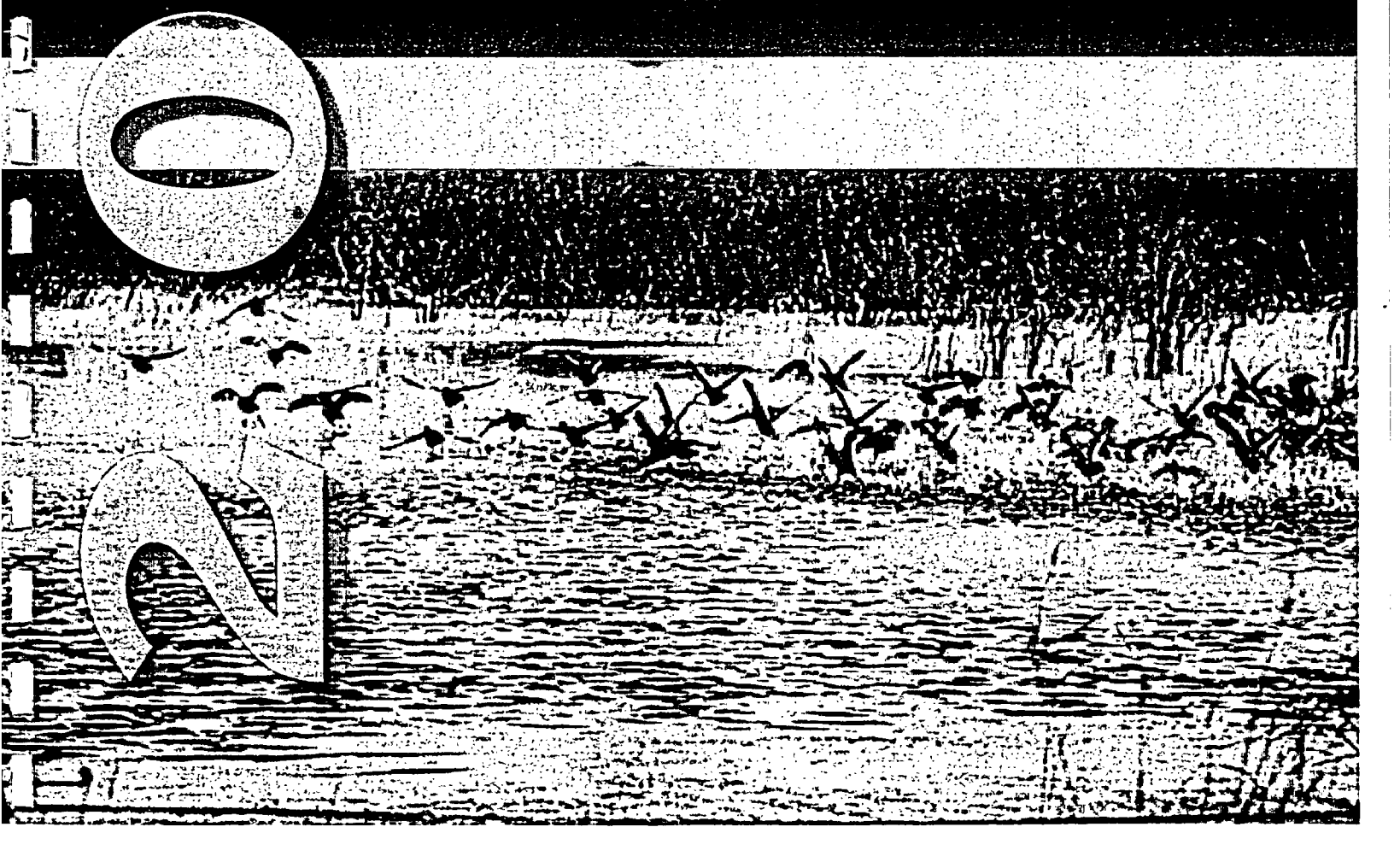
Radioactive Effluent Release Report



Nuclear Operating Company
South Texas Project Electric Generating Station P.O. Box 289 Wadsworth, Texas 77483

April 28, 2005
NOC-AE-05001882
10CFR50.36a
STI: 31879153

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
One White Flint North
11555 Rockville Pike
Rockville, MD 20852

South Texas Project
Units 1 & 2
Docket Nos. STN 50-498 & 50-499
Radioactive Effluent Release Report for 2004

Pursuant to the South Texas Project Technical Specification 6.9.1.4 and 10CFR50.36a, attached is the Radioactive Effluent Release Report for 2004. The report covers the period from January 1, 2004 to December 31, 2004.

There are no commitments included in this report.

If you have any questions on this matter, please contact Mr. K. W. Reynolds at (361) 972-3611 extension 6678 or me at (361) 972-7879.

R. A. Gangluff
Manager,

Chemistry

MK/

Attachments: 1) Radioactive Effluent Release Report for 2004

IE48

cc:
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Completed by
Generation Support
in accordance with
Technical Specifications
for
United States Nuclear Regulatory Commission
License Nos.
NPF-76 & NPF-80
April 2005

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2004
Radioactive Effluent Release Report

SOUTH TEXAS PROJECT ELECTRIC GENERATING STATION

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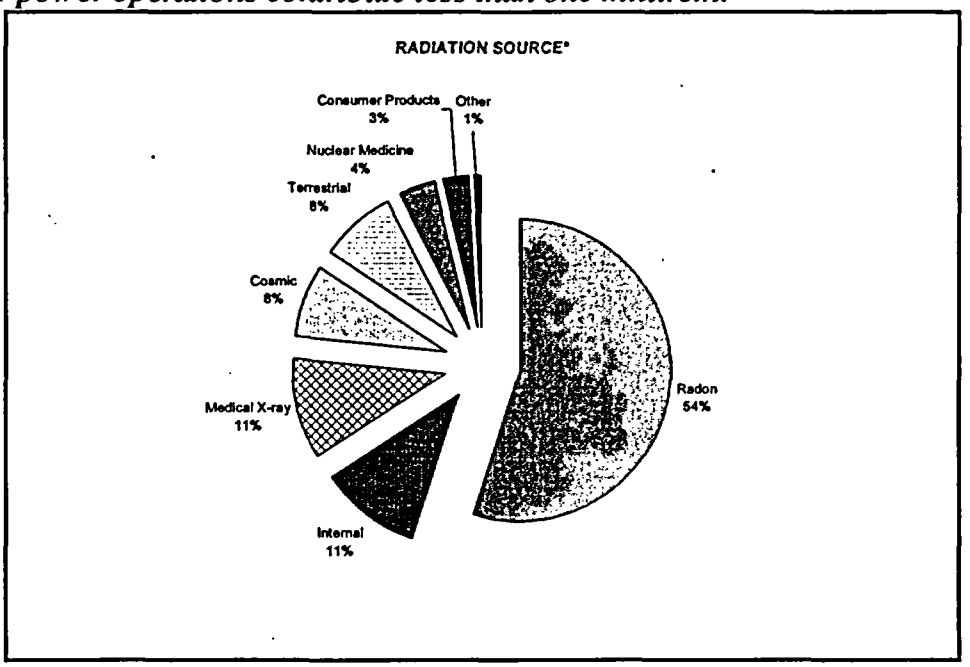
SUMMARY

Report Summary

During 2004, as in all previous years, operation of the South Texas Project created no adverse effects or health risks. The maximum radiation exposure calculated for a hypothetical person living at the boundary of the South Texas Project during 2004 due to operation of the South Texas Project was less than one millirem. For reference, this dose may be compared to the average annual radiation exposure of 360 millirem to people in the United States from all sources. Natural radiation sources in the environment contribute most of the radiation exposure to people; nuclear power operations contribute less than one millirem.



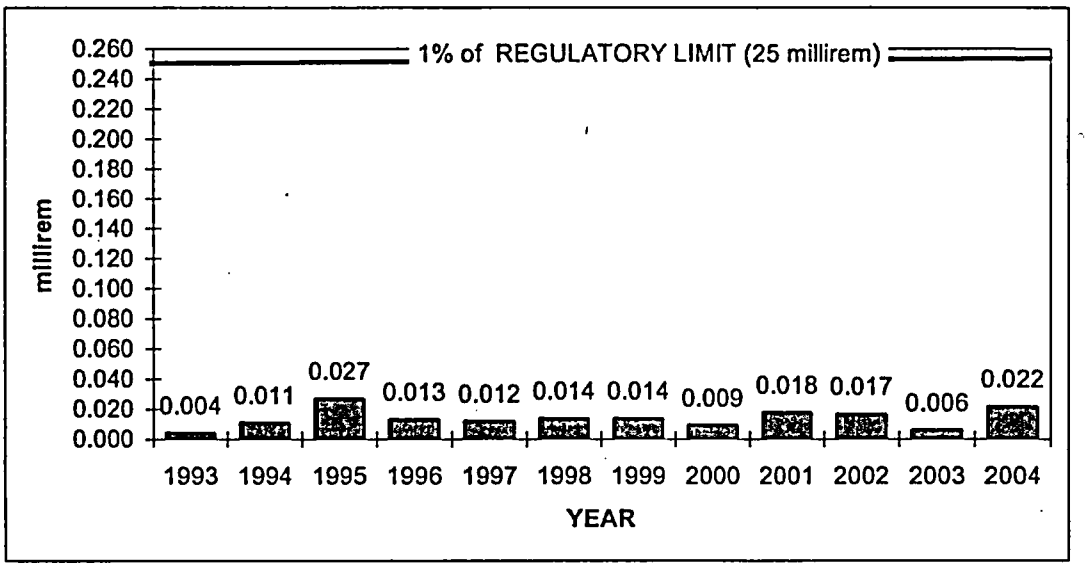
*NCRP (1987). National Council on Radiation Protection and Measurements, *Ionizing Radiation Exposure of the Population of the United States*, (Bethesda, Maryland), NCRP Report No. 93.

During 2004, the estimated total body dose to a hypothetical Member of the Public with the highest probability for exposure from radioactive effluents and direct radiation was 0.02 millirem. This total represents approximately 0.09% of the limits of 40 C.F.R. §190. Based on our 2004 Land Use Census, real individuals reside in the West by South-West Sector, approximately 4,000 meters (2.5 miles) from the site. For dose calculation purposes, the residents at this location are characterized as the theoretically exposed with regard to food consumption, occupancy, and other uses of the areas in the plant vicinity. Our dose model assumes that this theoretically exposed individual may consume the maximum amount of food with all the food being grown or grazed at the residence. This individual receives shoreline exposure from Little Robbins Slough for 12 hours per year and consumes 21 kilograms (48 pounds) of fish taken from Little Robbins Slough. This individual receives a submersion dose from noble gases and dose from inhaled radioactive particulates,

radioiodines, and tritium. This hypothetical adult is assumed to consumes 64 kilograms (150 pounds) of vegetables grown at the residence and consumes 110 kilograms (250 pounds) of meat from livestock grazed at the residence.

Doses from releases to the environment at the South Texas Project Electric Generating Station have historically been and continue to be well below regulatory limits as shown in the following figure. Members of the public received negligible additional radiation due to the operation of the South Texas Project. This Radioactive Effluent Release Report summarizes the data describing the radioactive liquid and gaseous releases from the South Texas Project Electric Generating Station during 2004. The radioactive effluents from the South Texas Project are effectively monitored and controlled in accordance with regulatory requirements.

THEORETICAL TOTAL BODY DOSE FOR ALL PATHWAYS



Liquid and gaseous discharges from the South Texas Project are continuously monitored for radioactive content. Samples are also collected from ventilation systems and liquid discharges and analyzed for radioactivity. The sample and analysis methods are verified and augmented using an environmental laboratory. Radioactivity monitors continuously sample the ventilation exhaust systems. On the liquid discharge lines, radioactivity monitors automatically divert or isolate liquid effluents if the radioactivity is higher than expected. These monitors are also equipped with remote alarm indications in the control rooms and health physics offices.

Prior to and during power operation South Texas Project is required to evaluate radioactivity in the environment. We are committed to sampling and analyzing environmental samples for radioactivity to support our Radiological Environmental Monitoring Program. The results of these environmental samples are reported in our Annual Environmental Operating Report. These environmental measurements affirm the accuracy of our sampling and analysis program.

The radiation monitors, and the sampling and analysis program, provide an accurate determination of the type and quantity of radioactive materials released in plant effluents. Liquid effluents are directed to the Main Cooling Reservoir that is located entirely within the site boundary. The South Texas Project continues to aggressively pursue the reduction of radioactive material in liquid effluents consistent with prudent industry practices.

Each year, the effluent monitoring results are summarized in this report and a hypothetical radiation dose to the population in the surrounding area is calculated based on gaseous radioactive effluents, meteorological conditions and liquid radioactive effluents. The hypothetical dose assumes all credible paths for radioactivity to reach a member of the public, such as consumption of vegetables from a garden, fish from the river, inhalation, and direct exposure. The highest potential hypothetical dose to an individual at the site boundary was calculated to be less than 1 millirem which is significantly less than an average person receives from natural sources annually. The information presented in this report demonstrates that plant operation is consistently controlled to ensure that radioactive effluents remain below regulatory limits and to ensure protection of the public and the environment.

INTRODUCTION

This Radioactive Effluent Release Report is submitted for the period January 1, 2004, through December 31, 2004, in accordance with Appendix A of License Nos. NPF-76 and NPF-80, Technical Specifications and the Offsite Dose Calculation Manual.

A single submittal is made for both units combining those sections that are common. Separate tables of releases and release totals are included where separate processing systems exist.

This report includes an annual summary of hourly meteorological measurements taken during each quarter. This data appears as tables of wind direction and wind speed by atmospheric stability class. All assessments of radiation doses are performed in accordance with the Offsite Dose Calculation Manual.

Minimal quantities of radioactivity were released during 2004. Liquid effluents are discharged to the on-site Main Cooling Reservoir and subsequently released offsite. The radioactivity released in liquids beyond the site boundary was estimated using the South Texas Project Electric Generating Station Offsite Dose Calculation Manual. Solid radioactive waste is shipped offsite for disposal. The following table is a brief summary of the radioactive effluents and solid waste attributable to the station.

TYPE OF RADIOACTIVE MATERIAL	EFFLUENT TYPE	DESTINATION	VOLUME CUBIC METER	CURIES
NOBLE GAS	GAS	OFFSITE	6.0E+09	2.7E+02
PARTICULATE AND IODINES	GAS	OFFSITE	6.0E+09	6.9E-04
TRITIUM	GAS	OFFSITE	6.0E+09	2.8E+02
TRITIUM	LIQUID	OFFSITE	4.8E+06	3.5E+02
FISSION AND ACTIVATION PRODUCTS	LIQUID	OFFSITE	4.8E+06	3.5E-04
TRITIUM	LIQUID	ON-SITE	3.9E+04	2.7E+03
FISSION AND ACTIVATION PRODUCTS[1]	LIQUID	ON-SITE	3.9E+04	5.1E-02
SPENT RESINS AND FILTERS	SOLID	FOR BURIAL	1.3E+01	7.1E+02
DRY COMPRESSIBLE WASTE	SOLID	FOR BURIAL	1.8E+01	1.6E+00
OTHER WASTE (SECONDARY RESIN, CHARCOAL, AND FILTER CAKE)	SOLID	FOR BURIAL	0.0E+00	0.0E+00

[1]Excludes 0.01 curies of dissolved and entrained gases.

Tritium was the largest contributor to the offsite doses from radioactive effluents both liquid and gaseous. The offsite doses are well below any regulatory limit and significantly less than the average annual radiation exposure to people in the United States from all sources (360 millirem).

EFFLUENT PROGRAM

Supplemental Information for Effluent and Waste Disposal

Supplemental Information for Effluent and Waste Disposal

The South Texas Project Electric Generating Station is located on 49,800,000 square meters (12,300 acres) in Matagorda County, Texas, approximately 24,000 meters (15 miles) southwest of Bay City along the west bank of the Colorado River. The South Texas Project is jointly owned by Texas Genco LP, AEP Texas Central Company, the City of Austin, and the City of San Antonio. Until late 1997, Reliant Energy HL&P was the designated licensee for the owners. On November 14, 1997, the station owners changed the licensee to STP Nuclear Operating Company, which is responsible for implementation of the Radioactive Effluent Control Program.

The South Texas Project Electric Generating Station consists of two 1,250 megawatt-electric Westinghouse pressurized water reactors. The thermal output has been up-rated by 1.4 percent increasing the electrical output. Unit 1 received a low-power testing license on August 21, 1987, obtained initial criticality on March 8, 1988, and was declared commercially operational on August 25, 1988. Unit 2 received a low-power testing license on December 16, 1988, obtained initial criticality on March 12, 1989, and was declared commercially operational on June 19, 1989. Both units together produce enough electricity to serve over one million homes.

Regulatory Limits

Fission and Activation Gases

The **air dose** due to noble gases released in gaseous effluents from each unit to areas at and beyond the Site Boundary shall be limited to the following:

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

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

Iodines and Particulates, Half-Lives > 8 days

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 eight days in gaseous effluents released, from each 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 millirems to any organ; and

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

Liquid Effluents

The **dose or dose commitment** to a Member of the Public from radioactive materials in liquid effluents released from each unit to Unrestricted Areas shall be limited to:

During any calendar quarter: Less than or equal to 1.5 millirems to the whole body and to less than or equal to 5 millirems to any organ; and

During any calendar year: Less than or equal to 3 millirems to the whole body and to less than or equal to 10 millirems to any organ.

Effluent Concentrations Limits

Gaseous Effluents

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 millirems/year to the whole body and less than or equal to 3000 millirems/year to the skin; and

For Iodine-131, Iodine-133, tritium and all radionuclides in particulate form with half-lives greater than eight days: Less than or equal to 1500 millirems/year to any organ.

Liquid Effluents

The concentration of radioactive material released in liquid effluents to Unrestricted Areas shall be limited to 10 times the concentrations specified in 10CFR, Part 20, 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 2.0E-04 microcurie/milliliter total activity.

Average Energy (Million Electron Volts/Disintegration

The **Average Energy** (or E-bar) shall be the average (weighted in proportion to the concentration of each radionuclide in the reactor coolant at the time of sampling) of the sum of the average beta and gamma energies per disintegration for the isotopes other than Iodines, with half-lives greater than 15 minutes, making up at least 95% of the total non-iodine activity in the coolant. The following average energy values are based on grab sample analyses from each reactor coolant systems with both samples being collected during September of 2004.

E-bar (Million Electron Volts/Disintegration)	0.0822 *	Unit 1
	0.0698 *	Unit 2

* Includes tritium

The average energy (E-bar) values of the radionuclide mixture in gaseous releases of fission and activation gases are based on noble gases released during the reporting period.

E-bar (Million Electron Volts/Disintegration)	0.246	Unit 1
	0.249	Unit 2

Measurement and Approximations of Total Activity

The following discussions detail the methods used to measure and approximate total activity for the following:

Gaseous Effluents: Fission and Activation Gases, Tritium, Iodines and Particulates
Liquid Effluents: Fission and Activation Products, Tritium, Dissolved and Entrained Gases

Tables A3-1 and A4-1 of the South Texas Project Electric Generating Station Offsite Dose Calculation Manual give sampling frequencies and lower limit of detection requirements for the analysis of liquid and gaseous effluent streams.

Gaseous Effluents

Analytical Methods For Batch Gaseous Releases

Monthly pre-release grab samples are collected from the plant Reactor Containment Building atmosphere. These samples are analyzed on a Gamma Spectroscopy System utilizing high purity germanium detectors for noble gas, iodine and particulate activity. Tritium specific radioactivity are measured using Liquid Scintillation Counting techniques.

The radionuclide concentrations obtained are used in conjunction with the gross noble gas release rate monitoring data collected by the radiation monitoring system to estimate the release rate of each radionuclide in the effluent streams. The noble gas release rate data collected by the unit vent radiation monitor is quantified and reported as continuous mode of release. The data from the unit vent radiation monitor in conjunction with the grab sample results of the Reactor Containment Building atmosphere are used to quantify the radioactivity released.

Analytical Methods For Continuous Gaseous Releases

Periodic noble gas and tritium grab samples are taken from the continuous release points such as the Unit Vent. Secondary liquid grab samples in conjunction with the mass of the secondary coolant lost are used for quantifying secondary steam releases. Continuous sampling for particulates and iodine is also performed on the effluent streams. These samples are analyzed for tritium and gamma radionuclides, as described above for batch releases. Strontium-89, Strontium-90, and gross alpha analyses were performed by the on-site Radiological Services Laboratory.

Noble gas quantification is performed by the plant radiation monitoring system using noble gas grab sample results and the gross noble gas release rate monitor.

Liquid Effluents

Analytical Methods For Liquid Releases

Liquid batch releases include waste liquid treated by the liquid waste processing system and secondary regenerative waste. Liquid effluents resulting from primary to secondary leakage

or other plant operations are continuously monitored and are tracked as continuous releases. For batch releases, representative pre-release grab samples are taken and analyzed in accordance with Table A3-1 of the Offsite Dose Calculation Manual. For continuous releases, representative samples are collected weekly and analyzed. Radionuclide analyses are performed using a Gamma Spectroscopy System. Aliquots of each pre-release batch sample and of representative samples for continuous releases are composited in accordance with the requirements in Table A3-1 of the Offsite Dose Calculation Manual. Tritium concentrations are determined using Liquid Scintillation Counting techniques. Dissolved and entrained gas concentrations are determined by counting grab samples on the Gamma Spectroscopy System. Strontium-89, Strontium-90, gross alpha, and Iron-55 determinations are performed by the on-site Radiological Services Laboratory. The radionuclide concentrations obtained are used with the total volume for each batch release.

Batch Releases

Liquid and gaseous summaries are compiled from permits generated using a computer-based effluent management system and plant procedures. Liquid batch releases are accounted for by individual permits. Gaseous batch releases are accounted for by monthly permits and consist of reactor containment purges for the purpose of reducing radioactivity concentrations. Batch times represent the actual period of releases and the periods that the purge valves were open.

Liquid (Unit 1)

Liquid (Unit 1)	Quarter 1	Quarter 2	Quarter 3	Quarter 4
a. Number of batch releases	8	13	10	26
b. Total time period for batch releases (minutes)	520	826	691	1754
c. Maximum time period for a batch release (minutes)	68	73	79	71
d. Average time period for batch releases (minutes)	65	64	69	67
e. Minimum time period for a batch release (minutes)	57	44	64	62

Gaseous (Unit 1)

Gaseous (Unit 1)	Quarter 1	Quarter 2	Quarter 3	Quarter 4
a. Number of batch releases	1	0	0	0
b. Total time period for batch releases (minutes)	120	0	0	0
c. Maximum time period for a batch release (minutes)	120	0	0	0
d. Average time period for batch releases (minutes)	120	0	0	0
e. Minimum time period for a batch release (minutes)	120	0	0	0

Liquid (Unit 2)

Liquid (Unit 2)	Quarter 1	Quarter 2	Quarter 3	Quarter 4
a. Number of batch releases	24	24	8	7
b. Total time period for batch releases (minutes)	1386	1370	500	423
c. Maximum time period for a batch release (minutes)	67	67	69	64
d. Average time period for batch releases (minutes)	58	57	63	60
e. Minimum time period for a batch release (minutes)	44	7	59	49

Gaseous (Unit 2)

Gaseous (Unit 2)	Quarter 1	Quarter 2	Quarter 3	Quarter 4
a. Number of batch releases	1	7	0	0
b. Total time period for batch releases (minutes)	720	29400	0	0
c. Maximum time period for a batch release (minutes)	720	10680	0	0
d. Average time period for batch releases (minutes)	720	4200	0	0
e. Minimum time period for a batch release (minutes)	720	120	0	0

Abnormal (Unplanned) Releases

No abnormal releases occurred during this reporting period.

Estimate of Total Error

Estimate of Error for Liquid Effluents

The **maximum error** associated with volume and flow measurements, based upon plant calibration practice, is estimated to be ± 1.27%. The error associated with the flow measurement is small in relation to the counting uncertainty of the radionuclide concentration analysis.

The **average uncertainty** associated with counting measurements is 10% or less at the 95% confidence level.

The **error** associated with dilution volume is estimated to be ± 10%.

Estimate of Error for Gaseous Effluents

The **maximum error** associated with monitor readings, sample flow, vent flow, sample collection, monitor calibration and laboratory procedures are collectively estimated to be:

Fission and Activation Gases Low Activity (less than 10 microcurie per second)	± 100%
Fission and Activation Gases High Activity (greater than or equal to 10 microcurie per second)	± 20%
Iodines	± 25%
Particulates	± 25%
Tritium	± 50%

The **average uncertainty** associated with counting measurements is 10% or less at the 95% confidence level for fission and activation gases, iodines, particulates and tritium.

Estimate of Error for Solid Radioactive Waste

The **error** associated with determining the volume of solid radioactive waste shipments is estimated to be ± 1%. The **error** associated with determining the filter media, spent primary resins, and spent secondary resins radioactivity is estimated to be within a factor of two of the real value and is due primarily to waste stream sampling uncertainty. The **error** associated with determining the radioactivity of other solid radioactive waste shipments is estimated to be within a factor of three of the real value.

Solid Waste Shipments

A total of nineteen shipments of radioactive filter media, spent resins, dry active and other wastes were made during the reporting period. A summary of the data is provided in the Section 6, Solid Waste and Irradiated Fuel Shipments.

Radiological Impact on Man

The data for the period January 1, 2004, through December 31, 2004, is provided in the Dose Accumulation (Section 7) and the Summary of Direct Radiation Table 8-1 (Section 8). The following dilution factors and dilution water flows were used for assessing the radiation doses due to radioactive liquid effluents released to unrestricted areas.

Receptor Location	ODCM[1] Dilution Factor	Dilution Water Flow Cubic Feet/Second	Dilution Water Flow Liters/Year	Dilution Water Flow Liters/Quarter
Colorado River	1.00E+00	6.00E+02	5.36E+11	1.34E+11
Matagorda Bay	1.63E+02	9.78E+04	8.73E+13	2.18E+13
Little Robbins Slough Area	3.05E-02	1.83E+01	1.63E+10	4.08E+09

[1] Offsite Dose Calculation Manual factor

The dilution water flow used to estimate the individual dose due to ingestion of saltwater fish and saltwater invertebrates (shrimp) harvested from the Colorado River was 5.36E+11 liters per year for the years of 1989 through 2004. The dilution water flow used to estimate the individual dose due to ingestion of saltwater fish and saltwater invertebrates harvested from the Matagorda Bay was 8.73E+13 liters per year for the years of 1993 through 2004 as the result of a diversion channel that routes the Colorado River into Matagorda Bay. The dilution water flow used to estimate the individual dose due to ingestion of freshwater fish from the Little Robbins Slough Area was 1.63E+10 liters per year for the years 1989 through 2004. These dilution water flows were also used for estimating individual dose due to shoreline deposits. The radioactivity reported in the Liquid Effluent tables is the amount released to the Main Cooling Reservoir and does not contribute to dose until the radioactivity is released to unrestricted areas. In order to estimate the doses due to liquid effluents, the radioactivity reported must be adjusted by the values listed in the Offsite Dose Calculation Manual, Table B4-1, "Radionuclide Fraction Leaving STPEGS Via Liquid Routes".

Meteorological Data

The **2004 meteorological data** is presented in the form of joint frequency tables. Each quarter contains eight tables, one for each stability class and one for all classes combined.

A second set of joint frequency tables is provided for time periods when the reactor containment building fans were operating to remove radioactivity from the containment for personnel protection reasons. These containment purges are classified as batch releases.

Lower Limit of Detection

The **Lower Limit of Detection** (an a priori limit) is defined as the smallest concentration of radioactive material in a sample that will yield a net count above system background that will be detected with 95% probability, and only a 5% probability of falsely concluding that a blank observation represents a "real" signal. A zero (0) value in the attached tables indicates no activity detected.

Dose to Member of the Public

Dose to Member of the Public from Direct Radiation Outside the Site Boundary

The Offsite Dose Calculation Manual includes the direct radiation from plant structures as a component to the dose to a hypothetical, highest exposed Member of the Public located off site due to plant operations. The Offsite Dose Calculation Manual allows measurements made near the plant structures to be used in these calculations following suitable adjustments for distance and exposure time. In 2004, Thermoluminescent Dosimeters were placed along the protected area fence surrounding Units 1 and 2 of the South Texas Project as pictured in Figure 8-1 of Section 8. The results of these measurements are summarized in Table 8-1 of Section 8. The table shows that in 2004 no Thermoluminescent Dosimeter stations measured more exposure than typical of natural background determined prior to operation in the vicinity of the South Texas Project. Hence no dose due to direct radiation in 2004 was delivered to a Member of the Public located off site.

Dose to Member of the Public from Direct Radiation Inside the Site Boundary

A hypothetical Member of the Public inside the site boundary but outside the protected area fence could receive less than one millirem from direct radiation if they spent 2000 hours a year near the protected area fence south of Unit 2.

Dose to Member of the Public from Radioactive Effluents Outside the Site Boundary

During 2004, the estimated total body dose to a hypothetical Member of the Public with the highest probability for exposure from radioactive effluents and direct radiation was 0.02 millirem. This total represents approximately 0.09% of the limits of 40 C.F.R. §190. Based on our 2004 Land Use Census, real individuals reside in the West by South-West Sector, approximately 4,000 meters (2.5 miles) from the site. For dose calculation purposes, the residents at this location are characterized as the theoretically exposed with regard to food consumption, occupancy, and other uses of the areas in the plant vicinity. Our dose model assumes that this theoretically exposed individual may consume the maximum amount of food with all the food being grown or grazed at the residence. This individual receives shoreline exposure from Little Robbins Slough for 12 hours per year and consumes 21 kilograms (48 pounds) of fish taken from Little Robbins Slough. This individual receives a submersion dose from noble gases and dose from inhaled radioactive particulates, radioiodines, and tritium. This hypothetical adult is assumed to consumes 64 kilograms (150 pounds) of vegetables grown at the residence and consumes 110 kilograms (250 pounds) of meat from livestock grazed at the residence.

Dose to Member of the Public from Direct Radiation and Radioactive Effluents Inside the Site Boundary

A hypothetical Member of the Public outside the protected area fence but inside the site boundary could receive approximately 0.84 millirem from radioactive effluents due to inhalation and immersion. This dose plus the direct radiation dose would yield 0.84 millirem, a small fraction of 10 C.F.R. §20.1301 annual limit.

Sewage Sludge Land Farming

Sewage sludge removed from the West Sanitary Waste Treatment System was beneficially land applied onsite during 2004. This beneficial land application is not a radioactive effluent and is only reported to document this activity. The amount of radioactivity contained in the sludge was approximately 130 microcuries. This radioactivity includes nuclides of Cobalt-57 and tritium. In accordance with Texas Commission on Environmental Quality Permit No. 04523, the sludge is incorporated into the soil after application. A soil sample collected from the area in December 2004 indicated no activity above background, confirming that the concentration in the soil is below the limits established in Title 25 of the Texas Administrative Code Section 289.202 (ddd).

Technical Specifications and Offsite Dose Calculation Manual Controls Reporting Requirements

Offsite Dose Calculation Manual Changes (reference, Technical Specifications, 6.13)

There were no changes to the Offsite Dose Calculation Manual during this period.

Annual Land Use Census (reference, Offsite Dose Calculation Manual Controls, 3.12.2.a)

The Land Use Census did not identify any new locations for dose calculations.

Radioactive Waste Treatment System Design Modification Description (reference, Offsite Dose Calculation Manual Controls, 6.15)

No major design modifications were made to the gaseous, liquid, or solid radioactive waste treatment systems during this reporting period.

Inoperable Effluent Monitoring Instrumentation Explanation (reference, Offsite Dose Calculation Manual Controls, 6.9.1.4)

For 2004, inoperable liquid effluent monitoring instruments were corrected within the time specified in Sections 3.3.3.10 of Offsite Dose Calculation Manual Controls.

For 2004, inoperable gaseous effluent monitoring instruments were corrected within the time specified in Sections 3.3.3.11 of Offsite Dose Calculation Manual Controls.

Gas Storage Tank Curie Limit Violation Description (reference, Offsite Dose Calculation Manual Controls, 6.9.1.4)

The Reactor Coolant System Vacuum Degassing System was not used during this reporting period. Therefore, the quantity of radioactive material in the Reactor Coolant System Vacuum Degassing System Storage Tanks did not exceed the limits set forth in Section 3.11.2.6 of Technical Specifications.

Unprotected Outdoor Tank Curie Limit Violation Description (reference, Offsite Dose Calculation Manual Controls, 6.9.1.4)

There are no Unprotected Outdoor Tanks at South Texas Project Electric Generating Station.

Abnormal (Unplanned) Release Description (reference, Offsite Dose Calculation Manual, 6.9.1.4)

No abnormal (unplanned) releases occurred during this reporting period.

Radioactive Waste Process Control Program Changes (reference, Technical Specifications, 6.13)

There were no changes to the Radioactive Waste Process Control Program during this reporting period.

RADIOACTIVE DATA

GASEOUS EFFLUENTS

STP NUCLEAR OPERATING COMPANY
SEMIANNUAL SUMMATION OF ALL RELEASES BY QUARTER
ALL AIRBORNE EFFLUENTS
Unit: 1
Starting : 1-Jan-2004 Ending : 30-Jun-2004

TYPE OF EFFLUENT	UNITS	QUARTER 1	QUARTER 2	EST. TOT ERROR %
A. FISSION & ACTIVATION PRODUCTS				
1. TOTAL RELEASE	CURIES	4.23E+01	3.12E+01	100
2. AVERAGE RELEASE RATE FOR PERIOD	uCi/sec	5.37E+00	3.97E+00	
3. PERCENT OF LIMIT (9.60E+04 uCi/sec)	%	5.60E-03	4.13E-03	
B. RADIOIODINES				
1. IODINE-131	CURIES	0.00E+00	0.00E+00	25
2. AVERAGE RELEASE RATE FOR PERIOD	uCi/sec	0.00E+00	0.00E+00	
3. PERCENT OF LIMIT (4.00E-02 uCi/sec)	%	0.00E+00	0.00E+00	
C. PARTICULATES				
1. PARTICULATES(HALF-LIVES>8 DAYS)	CURIES	6.19E-07	0.00E+00	25
2. AVERAGE RELEASE RATE FOR PERIOD	uCi/sec	7.87E-08	0.00E+00	
3. PERCENT OF LIMIT (3.00E-01 uCi/sec)	%	2.62E-05	0.00E+00	
4. GROSS ALPHA RADIOACTIVITY	CURIES	6.90E-08	0.00E+00	
D. TRITIUM				
1. TOTAL RELEASE	CURIES	4.67E+01	2.27E+01	50
2. AVERAGE RELEASE RATE FOR PERIOD	uCi/sec	5.94E+00	2.88E+00	
3. PERCENT OF LIMIT (1.80E+05 uCi/sec)	%	3.30E-03	1.60E-03	

STP NUCLEAR OPERATING COMPANY

Unit 1

REPORT CATEGORY: SEMIANNUAL AIRBORNE GROUND LEVEL CONTINUOUS AND BATCH RELEASES. TOTALS FOR EACH NUCLIDE RELEASED.

TYPE OF ACTIVITY: FISSION GASES, IODINES, AND PARTICULATES

REPORTING PERIOD: QUARTER # 1 AND QUARTER # 2 YEAR 2004

		CONTINUOUS MODE		BATCH MODE	
NUCLIDES RELEASED	**UNITS**	**QUARTER 1**	**QUARTER 2**	**QUARTER 1**	**QUARTER 2**
FISSION GASES					
Argon-41	CURIES	1.62E+00	1.18E+00	3.76E-02	0.00E+00
Xenon-133	CURIES	4.06E+01	3.00E+01	1.40E-03	0.00E+00
TOTAL FOR PERIOD	CURIES	4.22E+01	3.12E+01	3.90E-02	0.00E+00
IODINES					
Iodine-131	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Iodine-133	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Iodine-135	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TOTAL FOR PERIOD	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PARTICULATES					
Beryllium-7	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cobalt-58	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cobalt-60	CURIES	6.11E-07	0.00E+00	7.47E-09	0.00E+00
Chromium-51	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cesium-134	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cesium-137	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Iron-59	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Manganese-54	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sodium-24	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Niobium-95	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Technetium-99M	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Zirconium-95	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TOTAL FOR PERIOD	CURIES	6.11E-07	0.00E+00	7.47E-09	0.00E+00
OTHER					
Gross Alpha	CURIES	6.90E-08	0.00E+00	0.00E+00	0.00E+00
Hydrogen-3 (Tritium)	CURIES	4.67E+01	2.27E+01	6.64E-02	0.00E+00
TOTAL FOR PERIOD	CURIES	4.67E+01	2.27E+01	6.64E-02	0.00E+00

STP NUCLEAR OPERATING COMPANY
SEMIANNUAL SUMMATION OF ALL RELEASES BY QUARTER
ALL AIRBORNE EFFLUENTS
Unit: 1
Starting : 1-Jul-2004 Ending : 31-Dec-2004

TYPE OF EFFLUENT	UNITS	QUARTER 3	QUARTER 4	EST. TOT ERROR %
A. FISSION & ACTIVATION PRODUCTS				
1. TOTAL RELEASE	CURIES	3.81E+01	3.50E+01	100
2. AVERAGE RELEASE RATE FOR PERIOD	uCi/sec	4.80E+00	4.41E+00	
3. PERCENT OF LIMIT (9.60E+04 uCi/sec)	%	5.00E-03	4.59E-03	
B. RADIOIODINES				
1. IODINE-131	CURIES	8.61E-09	1.97E-07	25
2. AVERAGE RELEASE RATE FOR PERIOD	uCi/sec	1.08E-09	2.48E-08	
3. PERCENT OF LIMIT (4.00E-02 uCi/sec)	%	2.71E-06	6.21E-05	
C. PARTICULATES				
1. PARTICULATES(HALF-LIVES>8 DAYS)	CURIES	7.67E-09	5.01E-05	25
2. AVERAGE RELEASE RATE FOR PERIOD	uCi/sec	9.64E-10	6.30E-06	
3. PERCENT OF LIMIT (3.00E-01 uCi/sec)	%	3.21E-07	2.10E-03	
4. GROSS ALPHA RADIOACTIVITY	CURIES	0.00E+00	0.00E+00	
D. TRITIUM				
1. TOTAL RELEASE	CURIES	2.78E+01	1.58E+01	50
2. AVERAGE RELEASE RATE FOR PERIOD	uCi/sec	3.50E+00	1.98E+00	
3. PERCENT OF LIMIT (1.80E+05 uCi/sec)	%	1.94E-03	1.10E-03	

STP NUCLEAR OPERATING COMPANY

Unit 1

REPORT CATEGORY: SEMIANNUAL AIRBORNE GROUND LEVEL CONTINUOUS AND BATCH RELEASES. TOTALS FOR EACH NUCLIDE RELEASED.

TYPE OF ACTIVITY: FISSION GASES, IODINES, AND PARTICULATES

REPORTING PERIOD: QUARTER # 3 AND QUARTER # 4 YEAR 2004

		CONTINUOUS MODE		BATCH MODE	
NUCLIDES RELEASED	**UNITS**	**QUARTER 3**	**QUARTER 4**	**QUARTER 3**	**QUARTER 4**
FISSION GASES					
Argon-41	CURIES	1.54E+00	1.66E+00	0.00E+00	0.00E+00
Krypton-85M	CURIES	0.00E+00	2.27E-02	0.00E+00	0.00E+00
Krypton-88	CURIES	0.00E+00	5.93E-04	0.00E+00	0.00E+00
Xenon-133	CURIES	3.66E+01	3.30E+01	0.00E+00	0.00E+00
Xenon-135	CURIES	0.00E+00	3.71E-01	0.00E+00	0.00E+00
TOTAL FOR PERIOD	CURIES	3.81E+01	3.50E+01	0.00E+00	0.00E+00
IODINES					
Iodine-131	CURIES	8.61E-09	1.97E-07	0.00E+00	0.00E+00
Iodine-133	CURIES	0.00E+00	8.45E-07	0.00E+00	0.00E+00
Iodine-135	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TOTAL FOR PERIOD	CURIES	8.61E-09	1.04E-06	0.00E+00	0.00E+00
PARTICULATES					
Beryllium-7	CURIES	0.00E+00	4.81E-05	0.00E+00	0.00E+00
Cobalt-58	CURIES	0.00E+00	8.88E-09	0.00E+00	0.00E+00
Cobalt-60	CURIES	2.62E-09	4.08E-09	0.00E+00	0.00E+00
Cesium-134	CURIES	0.00E+00	3.58E-07	0.00E+00	0.00E+00
Cesium-137	CURIES	5.05E-09	1.09E-06	0.00E+00	0.00E+00
Manganese-54	CURIES	0.00E+00	1.23E-08	0.00E+00	0.00E+00
Sodium-24	CURIES	0.00E+00	4.50E-07	0.00E+00	0.00E+00
Technetium-99M	CURIES	0.00E+00	4.08E-08	0.00E+00	0.00E+00
Zirconium-95	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TOTAL FOR PERIOD	CURIES	7.67E-09	5.01E-05	0.00E+00	0.00E+00
OTHER					
Gross Alpha	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Hydrogen-3 (Tritium)	CURIES	2.78E+01	1.58E+01	0.00E+00	0.00E+00
TOTAL FOR PERIOD	CURIES	2.78E+01	1.58E+01	0.00E+00	0.00E+00

STP NUCLEAR OPERATING COMPANY
SEMIANNUAL SUMMATION OF ALL RELEASES BY QUARTER
ALL AIRBORNE EFFLUENTS
Unit: 2
Starting : 1-Jan-2004 Ending : 30-Jun-2004

TYPE OF EFFLUENT	UNITS	QUARTER 1	QUARTER 2	EST. TOT ERROR %
A. FISSION & ACTIVATION PRODUCTS				
1. TOTAL RELEASE	CURIES	3.28E+01	3.62E+01	100
2. AVERAGE RELEASE RATE FOR PERIOD	uCi/sec	4.18E+00	4.60E+00	
3. PERCENT OF LIMIT (9.60E+04 uCi/sec)	%	4.35E-03	4.79E-03	
B. RADIOIODINES				
1. IODINE-131	CURIES	9.93E-06	1.47E-04	25
2. AVERAGE RELEASE RATE FOR PERIOD	uCi/sec	1.26E-06	1.88E-05	
3. PERCENT OF LIMIT (4.00E-02 uCi/sec)	%	3.16E-03	4.69E-02	
C. PARTICULATES				
1. PARTICULATES(HALF-LIVES>8 DAYS)	CURIES	5.36E-06	4.47E-04	25
2. AVERAGE RELEASE RATE FOR PERIOD	uCi/sec	6.81E-07	5.68E-05	
3. PERCENT OF LIMIT (3.00E-01 uCi/sec)	%	2.27E-04	1.89E-02	
4. GROSS ALPHA RADIOACTIVITY	CURIES	0.00E+00	0.00E+00	
D. TRITIUM				
1. TOTAL RELEASE	CURIES	2.39E+01	3.39E+01	50
2. AVERAGE RELEASE RATE FOR PERIOD	uCi/sec	3.04E+00	4.31E+00	
3. PERCENT OF LIMIT (1.80E+05 uCi/sec)	%	1.69E-03	2.40E-03	

STP NUCLEAR OPERATING COMPANY

Unit 2

REPORT CATEGORY: SEMIANNUAL AIRBORNE GROUND LEVEL CONTINUOUS AND BATCH RELEASES. TOTALS FOR EACH NUCLIDE RELEASED.

TYPE OF ACTIVITY: FISSION GASES, IODINES, AND PARTICULATES

REPORTING PERIOD: QUARTER # 1 AND QUARTER # 2 YEAR 2004

		CONTINUOUS MODE		BATCH MODE	
NUCLIDES RELEASED	**UNITS**	**QUARTER 1**	**QUARTER 2**	**QUARTER 1**	**QUARTER 2**
FISSION GASES					
Argon-41	CURIES	9.04E-01	5.18E-01	3.35E-01	1.69E+00
Xenon-133	CURIES	3.16E+01	2.41E+01	1.37E-02	9.90E+00
TOTAL FOR PERIOD	CURIES	3.25E+01	2.46E+01	3.49E-01	1.16E+01
IODINES					
Iodine-131	CURIES	7.73E-07	1.60E-05	9.16E-06	1.31E-04
Iodine-133	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Iodine-135	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TOTAL FOR PERIOD	CURIES	7.73E-07	1.60E-05	9.16E-06	1.31E-04
PARTICULATES					
Beryllium-7	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cobalt-58	CURIES	3.24E-06	3.78E-05	7.79E-07	1.71E-04
Cobalt-60	CURIES	8.94E-07	2.96E-06	7.21E-08	1.77E-05
Chromium-51	CURIES	2.87E-08	2.49E-05	3.40E-07	1.67E-04
Cesium-134	CURIES	0.00E+00	3.91E-09	0.00E+00	0.00E+00
Cesium-137	CURIES	0.00E+00	1.49E-06	0.00E+00	9.46E-07
Iron-59	CURIES	0.00E+00	0.00E+00	0.00E+00	2.74E-06
Manganese-54	CURIES	0.00E+00	7.20E-07	0.00E+00	6.26E-06
Niobium-95	CURIES	0.00E+00	8.86E-07	0.00E+00	8.67E-06
Technetium-99M	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Zirconium-95	CURIES	0.00E+00	1.19E-09	0.00E+00	3.45E-06
TOTAL FOR PERIOD	CURIES	4.16E-06	6.88E-05	1.19E-06	3.78E-04
OTHER					
Gross Alpha	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Hydrogen-3 (Tritium)	CURIES	2.14E+01	4.04E+00	2.55E+00	2.99E+01
TOTAL FOR PERIOD	CURIES	2.14E+01	4.04E+00	2.55E+00	2.99E+01

STP NUCLEAR OPERATING COMPANY
SEMIANNUAL SUMMATION OF ALL RELEASES BY QUARTER
ALL AIRBORNE EFFLUENTS
Unit: 2
Starting : 1-Jul-2004 Ending : 31-Dec-2004

TYPE OF EFFLUENT	UNITS	QUARTER 3	QUARTER 4	EST. TOT ERROR %
A. FISSION & ACTIVATION PRODUCTS				
1. TOTAL RELEASE	CURIES	2.69E+01	2.43E+01	100
2. AVERAGE RELEASE RATE FOR PERIOD	uCi/sec	3.38E+00	3.05E+00	
3. PERCENT OF LIMIT (9.60E+04 uCi/sec)	%	3.52E-03	3.18E-03	
B. RADIOIODINES				
1. IODINE-131	CURIES	4.84E-07	1.22E-07	25
2. AVERAGE RELEASE RATE FOR PERIOD	uCi/sec	6.09E-08	1.54E-08	
3. PERCENT OF LIMIT (4.00E-02 uCi/sec)	%	1.52E-04	3.85E-05	
C. PARTICULATES				
1. PARTICULATES(HALF-LIVES>8 DAYS)	CURIES	7.05E-06	2.35E-05	25
2. AVERAGE RELEASE RATE FOR PERIOD	uCi/sec	8.86E-07	2.96E-06	
3. PERCENT OF LIMIT (3.00E-01 uCi/sec)	%	2.95E-04	9.87E-04	
4. GROSS ALPHA RADIOACTIVITY	CURIES	1.34E-07	0.00E+00	
D. TRITIUM				
1. TOTAL RELEASE	CURIES	2.63E+01	8.55E+01	50
2. AVERAGE RELEASE RATE FOR PERIOD	uCi/sec	3.31E+00	1.08E+01	
3. PERCENT OF LIMIT (1.80E+05 uCi/sec)	%	1.84E-03	5.97E-03	

STP NUCLEAR OPERATING COMPANY

Unit 2

REPORT CATEGORY: SEMIANNUAL AIRBORNE GROUND LEVEL CONTINUOUS AND BATCH RELEASES. TOTALS FOR EACH NUCLIDE RELEASED.

TYPE OF ACTIVITY: FISSION GASES, IODINES, AND PARTICULATES

REPORTING PERIOD: QUARTER # 3 AND QUARTER # 4 YEAR 2004

		CONTINUOUS MODE		BATCH MODE	
NUCLIDES RELEASED	**UNITS**	**QUARTER 3**	**QUARTER 4**	**QUARTER 3**	**QUARTER 4**
FISSION GASES					
Argon-41	CURIES	8.12E-01	9.42E-01	0.00E+00	0.00E+00
Xenon-133	CURIES	2.61E+01	2.33E+01	0.00E+00	0.00E+00
TOTAL FOR PERIOD	CURIES	2.69E+01	2.43E+01	0.00E+00	0.00E+00
IODINES					
Iodine-131	CURIES	4.84E-07	1.22E-07	0.00E+00	0.00E+00
Iodine-133	CURIES	3.58E-07	6.64E-07	0.00E+00	0.00E+00
Iodine-135	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TOTAL FOR PERIOD	CURIES	8.42E-07	7.86E-07	0.00E+00	0.00E+00
PARTICULATES					
Beryllium-7	CURIES	2.48E-06	2.27E-05	0.00E+00	0.00E+00
Cobalt-58	CURIES	4.23E-06	0.00E+00	0.00E+00	0.00E+00
Cobalt-60	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cesium-134	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cesium-137	CURIES	3.37E-07	6.33E-07	0.00E+00	0.00E+00
Iron-59	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Manganese-54	CURIES	5.27E-09	1.05E-08	0.00E+00	0.00E+00
Sodium-24	CURIES	0.00E+00	1.85E-07	0.00E+00	0.00E+00
Niobium-95	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Technetium-99M	CURIES	0.00E+00	1.59E-08	0.00E+00	0.00E+00
Zirconium-95	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TOTAL FOR PERIOD	CURIES	7.04E-06	2.35E-05	0.00E+00	0.00E+00
OTHER					
Gross Alpha	CURIES	1.34E-07	0.00E+00	0.00E+00	0.00E+00
Hydrogen-3 (Tritium)	CURIES	2.63E+01	8.55E+01	0.00E+00	0.00E+00
TOTAL FOR PERIOD	CURIES	2.63E+01	8.55E+01	0.00E+00	0.00E+00

STP NUCLEAR OPERATING COMPANY

Unit 1 plus 2 Total

REPORT CATEGORY: ANNUAL AIRBORNE GROUND LEVEL RELEASES. TOTALS FOR EACH NUCLIDE RELEASED. FOR ALL OF 2004

NUCLIDES RELEASED	UNITS	UNIT 1 2004	UNIT 2 2004	TOTAL 2004
FISSION GASES				
Argon-41	CURIES	6.012E+00	5.195E+00	1.121E+01
Krypton-85M	CURIES	2.268E-02	0.000E+00	2.268E-02
Krypton-88	CURIES	5.934E-04	0.000E+00	5.934E-04
Xenon-133	CURIES	1.397E+02	1.147E+02	2.545E+02
Xenon-135	CURIES	3.708E-01	0.000E+00	3.708E-01
TOTAL FOR PERIOD	CURIES	1.462E+02	1.199E+02	2.661E+02
IODINES				
Iodine-131	CURIES	2.060E-07	1.580E-04	1.582E-04
Iodine-133	CURIES	8.451E-07	1.013E-06	1.858E-06
Iodine-135	CURIES	0.000E+00	0.000E+00	0.000E+00
TOTAL FOR PERIOD	CURIES	1.051E-06	1.590E-04	1.600E-04
PARTICULATES				
Beryllium-7	CURIES	4.712E-05	2.515E-05	7.228E-05
Cobalt-58	CURIES	8.883E-09	2.170E-04	2.170E-04
Cobalt-60	CURIES	6.252E-07	2.167E-05	2.230E-05
Chromium-51	CURIES	0.000E+00	1.926E-04	1.926E-04
Cesium-134	CURIES	3.577E-07	3.912E-09	3.616E-07
Cesium-137	CURIES	1.092E-06	3.403E-06	4.495E-06
Iron-59	CURIES	0.000E+00	2.740E-06	2.740E-06
Manganese-54	CURIES	1.226E-08	6.999E-06	7.011E-06
Sodium-24	CURIES	4.498E-07	1.854E-07	6.351E-07
Niobium-95	CURIES	0.000E+00	9.560E-06	9.560E-06
Technetium-99M	CURIES	4.076E-08	1.588E-08	5.664E-08
Zirconium-95	CURIES	0.000E+00	3.451E-06	3.451E-06
TOTAL FOR PERIOD	CURIES	4.971E-05	4.827E-04	5.324E-04
OTHER				
Gross Alpha	CURIES	6.904E-08	1.336E-07	2.026E-07
Hydrogen-3 (Tritium)	CURIES	1.128E+02	1.694E+02	2.822E+02
TOTAL FOR PERIOD	CURIES	1.128E+02	1.694E+02	2.822E+02

LIQUID EFFLUENTS

STP NUCLEAR OPERATING COMPANY
SEMIANNUAL SUMMATION OF ALL RELEASES BY QUARTER
ALL LIQUID EFFLUENTS
Unit: 1
Starting : 1-Jan-2004 Ending : 30-Jun-2004

TYPE OF EFFLUENT	UNITS	QUARTER 1	QUARTER 2	EST. TOT ERROR %
A. FISSION & ACTIVATION PRODUCTS				
1. TOTAL RELEASE (NOT INCLUDING TRITIUM, GASES, ALPHA)	CURIES	1.704E-03	2.475E-03	10
2. AVERAGE DILUTED CONCENTRATION DURING PERIOD	uCi/mL	2.529E-09	1.870E-09	
3. PERCENT OF EC* LIMIT (FRACTIONAL)	%	1.815E-03	2.741E-03	
B. TRITIUM				
1. TOTAL RELEASE	CURIES	2.649E+02	3.089E+02	10
2. AVERAGE DILUTED CONCENTRATION DURING PERIOD	uCi/mL	3.931E-04	2.334E-04	
3. % OF LIMIT (1.00E-02 uCi/mL)	%	3.932E+00	2.335E+00	
C. DISSOLVED AND ENTRAINED GASES				
1. TOTAL RELEASE	CURIES	5.327E-04	4.376E-05	10
2. AVERAGE DILUTED CONCENTRATION DURING PERIOD	uCi/mL	7.906E-10	3.307E-11	
3. PERCENT OF LIMIT (2.00E-04 uCi/mL)	%	3.953E-04	1.654E-05	
D. GROSS ALPHA RADIOACTIVITY				
1. TOTAL RELEASE	CURIES	0.000E+00	0.000E+00	10
E. WASTE VOL RELEASED				
1. TOTAL PRE-DILUTION VOLUME	LITERS	6.520E+06	8.214E+06	1
2. BATCH PRE-DILUTION VOLUME	LITERS	4.218E+05	6.205E+05	1
F. VOLUME OF DILUTION WATER USED**	LITERS	6.673E+08	1.315E+09	10

*EC= Effluent Concentration

**"Volume of dilution water used" means the volume of water circulated through the main condenser during the actual time of release. Liquid effluent releases ultimately dilute into the volume of the onsite main cooling reservoir and then into offsite water bodies as described in Section 2, subsection Radiological Impact on Man of this report.

STP NUCLEAR OPERATING COMPANY

Unit 1

REPORT CATEGORY: SEMIANNUAL LIQUID CONTINUOUS AND BATCH RELEASES. TOTALS FOR EACH NUCLIDE RELEASED.

TYPE OF ACTIVITY: ALL RADIONUCLIDES

REPORTING PERIOD: QUARTER # 1 AND QUARTER # 2 YEAR 2004

		CONTINUOUS RELEASES		BATCH RELEASES	
NUCLIDES RELEASED	**UNITS**	**QUARTER 1**	**QUARTER 2**	**QUARTER 1**	**QUARTER 2**
ALL NUCLIDES					
Silver-110M	CURIES	0.00E+00	0.00E+00	1.80E-06	0.00E+00
Cobalt-57	CURIES	0.00E+00	0.00E+00	0.00E+00	1.38E-05
Cobalt-58	CURIES	0.00E+00	0.00E+00	7.27E-05	4.66E-04
Cobalt-60	CURIES	0.00E+00	0.00E+00	1.98E-04	6.98E-04
Chromium-51	CURIES	0.00E+00	0.00E+00	0.00E+00	4.26E-05
Cesium-134	CURIES	0.00E+00	0.00E+00	8.79E-06	3.05E-05
Cesium-137	CURIES	0.00E+00	0.00E+00	1.60E-05	4.53E-05
Iron-55	CURIES	0.00E+00	0.00E+00	1.06E-03	7.11E-04
Iron-59	CURIES	0.00E+00	0.00E+00	0.00E+00	2.61E-06
Tritium	CURIES	4.27E-01	3.96E-01	2.64E+02	3.09E+02
Krypton-85	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Krypton-85M	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Manganese-54	CURIES	0.00E+00	0.00E+00	3.52E-05	2.85E-04
Sodium-24	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Niobium-95	CURIES	0.00E+00	0.00E+00	0.00E+00	9.58E-06
Antimony-124	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Antimony-125	CURIES	0.00E+00	0.00E+00	3.00E-04	1.62E-04
Tin-117M	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Strontium-89	CURIES	0.00E+00	0.00E+00	5.42E-06	4.24E-07
Strontium-90	CURIES	0.00E+00	0.00E+00	2.08E-06	2.19E-06
Technetium-99M	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Telurium-125M	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xenon-133	CURIES	0.00E+00	0.00E+00	5.06E-04	4.38E-05
Xenon-133M	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xenon-135	CURIES	0.00E+00	0.00E+00	2.68E-05	0.00E+00
Zirconium-95	CURIES	0.00E+00	0.00E+00	0.00E+00	4.61E-06
Zirconium-97	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TOTAL FOR PERIOD	CURIES	4.27E-01	3.96E-01	2.64E+02	3.09E+02

STP NUCLEAR OPERATING COMPANY
SEMIANNUAL SUMMATION OF ALL RELEASES BY QUARTER
ALL LIQUID EFFLUENTS
Unit: 1
Starting : 1-Jul-2004 Ending : 31-Dec-2004

TYPE OF EFFLUENT	UNITS	QUARTER 3	QUARTER 4	EST. TOT ERROR %
A. FISSION & ACTIVATION PRODUCTS				
1. TOTAL RELEASE (NOT INCLUDING TRITIUM, GASES, ALPHA)	CURIES	8.982E-04	9.604E-03	10
2. AVERAGE DILUTED CONCENTRATION DURING PERIOD	uCi/mL	7.565E-10	3.903E-09	
3. PERCENT OF EC* LIMIT (FRACTIONAL)	%	1.066E-03	5.563E-03	
B. TRITIUM				
1. TOTAL RELEASE	CURIES	3.782E+02	6.143E+02	10
2. AVERAGE DILUTED CONCENTRATION DURING PERIOD	uCi/mL	3.185E-04	2.497E-04	
3. % OF LIMIT (1.00E-02 uCi/mL)	%	3.184E+00	2.497E+00	
C. DISSOLVED AND ENTRAINED GASES				
1. TOTAL RELEASE	CURIES	1.740E-03	2.617E-03	10
2. AVERAGE DILUTED CONCENTRATION DURING PERIOD	uCi/mL	1.465E-09	1.064E-09	
3. PERCENT OF LIMIT (2.00E-04 uCi/mL)	%	7.326E-04	5.317E-04	
D. GROSS ALPHA RADIOACTIVITY				
1. TOTAL RELEASE	CURIES	0.000E+00	0.000E+00	10
E. WASTE VOL RELEASED				
1. TOTAL PRE-DILUTION VOLUME	LITERS	5.370E+06	6.414E+06	1
2. BATCH PRE-DILUTION VOLUME	LITERS	5.588E+05	1.455E+06	1
F. VOLUME OF DILUTION WATER USED**	LITERS	1.182E+09	2.454E+09	10

*EC= Effluent Concentration

**"Volume of dilution water used" means the volume of water circulated through the main condenser during the actual time of release. Liquid effluent releases ultimately dilute into the volume of the onsite main cooling reservoir and then into offsite water bodies as described in Section 2, subsection Radiological Impact on Man of this report.

STP NUCLEAR OPERATING COMPANY

Unit 1

REPORT CATEGORY: SEMIANNUAL LIQUID CONTINUOUS AND BATCH RELEASES. TOTALS FOR EACH NUCLIDE RELEASED.

TYPE OF ACTIVITY: ALL RADIONUCLIDES

REPORTING PERIOD: QUARTER # 3 AND QUARTER # 4 YEAR 2004

		CONTINUOUS RELEASES		BATCH RELEASES	
NUCLIDES RELEASED	**UNITS**	**QUARTER 3**	**QUARTER 4**	**QUARTER 3**	**QUARTER 4**
ALL NUCLIDES					
Silver-110M	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cobalt-57	CURIES	0.00E+00	0.00E+00	0.00E+00	1.17E-05
Cobalt-58	CURIES	0.00E+00	0.00E+00	6.92E-06	7.20E-05
Cobalt-60	CURIES	0.00E+00	0.00E+00	3.34E-04	3.55E-03
Chromium-51	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cesium-134	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cesium-137	CURIES	0.00E+00	0.00E+00	1.59E-06	7.28E-07
Iron-55	CURIES	0.00E+00	0.00E+00	3.20E-04	2.45E-03
Iron-59	CURIES	0.00E+00	0.00E+00	0.00E+00	6.89E-05
Tritium	CURIES	2.68E-01	8.88E-02	3.78E+02	6.14E+02
Krypton-85	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Krypton-85M	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Manganese-54	CURIES	0.00E+00	0.00E+00	5.30E-06	3.23E-04
Sodium-24	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Niobium-95	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Antimony-124	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Antimony-125	CURIES	0.00E+00	0.00E+00	2.22E-04	1.16E-03
Tin-117M	CURIES	0.00E+00	0.00E+00	0.00E+00	2.93E-06
Strontium-89	CURIES	0.00E+00	0.00E+00	6.95E-06	1.84E-05
Strontium-90	CURIES	0.00E+00	0.00E+00	7.68E-07	0.00E+00
Technetium-99M	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Telurium-125M	CURIES	0.00E+00	0.00E+00	0.00E+00	1.95E-03
Xenon-133	CURIES	0.00E+00	0.00E+00	1.62E-03	2.50E-03
Xenon-133M	CURIES	0.00E+00	0.00E+00	6.21E-05	3.63E-05
Xenon-135	CURIES	0.00E+00	0.00E+00	5.89E-05	7.91E-05
Zirconium-95	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Zirconium-97	CURIES	0.00E+00	0.00E+00	0.00E+00	1.20E-06
TOTAL FOR PERIOD	CURIES	2.68E-01	8.88E-02	3.78E+02	6.14E+02

STP NUCLEAR OPERATING COMPANY
SEMIANNUAL SUMMATION OF ALL RELEASES BY QUARTER
ALL LIQUID EFFLUENTS
Unit: 2
Starting : 1-Jan-2004 Ending : 30-Jun-2004

TYPE OF EFFLUENT	UNITS	QUARTER 1	QUARTER 2	EST. TOT ERROR %
A. FISSION & ACTIVATION PRODUCTS				
1. TOTAL RELEASE (NOT INCLUDING TRITIUM, GASES, ALPHA)	CURIES	2.131E-02	1.059E-02	10
2. AVERAGE DILUTED CONCENTRATION DURING PERIOD	uCi/mL	1.213E-08	5.863E-09	
3. PERCENT OF EC* LIMIT (FRACTIONAL)	%	1.458E-02	4.972E-03	
B. TRITIUM				
1. TOTAL RELEASE	CURIES	8.232E+02	1.526E+02	10
2. AVERAGE DILUTED CONCENTRATION DURING PERIOD	uCi/mL	4.687E-04	8.449E-05	
3. % OF LIMIT (1.00E-02 uCi/mL)	%	4.688E+00	8.446E-01	
C. DISSOLVED AND ENTRAINED GASES				
1. TOTAL RELEASE	CURIES	4.751E-03	4.165E-03	10
2. AVERAGE DILUTED CONCENTRATION DURING PERIOD	uCi/mL	2.705E-09	2.306E-09	
3. PERCENT OF LIMIT (2.00E-04 uCi/mL)	%	1.353E-03	1.153E-03	
D. GROSS ALPHA RADIOACTIVITY				
1. TOTAL RELEASE	CURIES	0.000E+00	0.000E+00	10
E. WASTE VOL RELEASED				
1. TOTAL PRE-DILUTION VOLUME	LITERS	4.363E+06	3.156E+06	1
2. BATCH PRE-DILUTION VOLUME	LITERS	1.244E+06	1.169E+06	1
F. VOLUME OF DILUTION WATER USED**	LITERS	1.752E+09	1.803E+09	10

*EC= Effluent Concentration

**"Volume of dilution water used" means the volume of water circulated through the main condenser during the actual time of release. Liquid effluent releases ultimately dilute into the volume of the onsite main cooling reservoir and then into offsite water bodies as described in Section 2, subsection Radiological Impact on Man of this report.

STP NUCLEAR OPERATING COMPANY

Unit 2

REPORT CATEGORY: SEMIANNUAL LIQUID CONTINUOUS AND BATCH RELEASES. TOTALS FOR EACH NUCLIDE RELEASED.

TYPE OF ACTIVITY: ALL RADIONUCLIDES

REPORTING PERIOD: QUARTER # 1 AND QUARTER # 2 YEAR 2004

		CONTINUOUS RELEASES		BATCH RELEASES	
NUCLIDES RELEASED	**UNITS**	**QUARTER 1**	**QUARTER 2**	**QUARTER 1**	**QUARTER 2**
ALL NUCLIDES					
Silver-110M	CURIES	0.00E+00	0.00E+00	4.53E-04	1.06E-04
Cobalt-57	CURIES	0.00E+00	0.00E+00	1.17E-04	3.03E-05
Cobalt-58	CURIES	0.00E+00	0.00E+00	1.97E-03	1.58E-03
Cobalt-60	CURIES	0.00E+00	0.00E+00	5.13E-03	1.73E-03
Chromium-51	CURIES	0.00E+00	0.00E+00	3.52E-05	3.70E-04
Cesium-134	CURIES	0.00E+00	0.00E+00	7.85E-05	9.92E-06
Cesium-137	CURIES	0.00E+00	0.00E+00	2.12E-04	4.40E-05
Iron-55	CURIES	0.00E+00	0.00E+00	6.65E-03	3.68E-03
Iron-59	CURIES	0.00E+00	0.00E+00	0.00E+00	9.38E-06
Tritium	CURIES	1.37E-01	1.04E-01	8.23E+02	1.52E+02
Krypton-85	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Krypton-85M	CURIES	0.00E+00	0.00E+00	2.15E-06	0.00E+00
Manganese-54	CURIES	0.00E+00	0.00E+00	8.39E-04	1.75E-04
Sodium-24	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Niobium-95	CURIES	0.00E+00	0.00E+00	1.48E-04	2.78E-05
Antimony-124	CURIES	0.00E+00	0.00E+00	0.00E+00	8.23E-05
Antimony-125	CURIES	0.00E+00	0.00E+00	1.49E-03	1.99E-03
Tin-117M	CURIES	0.00E+00	0.00E+00	0.00E+00	2.36E-05
Strontium-89	CURIES	0.00E+00	0.00E+00	2.17E-05	3.68E-06
Strontium-90	CURIES	0.00E+00	0.00E+00	7.26E-06	4.46E-06
Technetium-99M	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Telurium-125M	CURIES	0.00E+00	0.00E+00	4.15E-03	7.30E-04
Xenon-133	CURIES	0.00E+00	0.00E+00	4.69E-03	3.91E-03
Xenon-133M	CURIES	0.00E+00	0.00E+00	3.63E-05	4.99E-05
Xenon-135	CURIES	0.00E+00	0.00E+00	2.58E-05	2.08E-04
Zirconium-95	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Zirconium-97	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TOTAL FOR PERIOD	CURIES	1.37E-01	1.04E-01	8.23E+02	1.52E+02

STP NUCLEAR OPERATING COMPANY
SEMIANNUAL SUMMATION OF ALL RELEASES BY QUARTER
ALL LIQUID EFFLUENTS
Unit: 2
Starting : 1-Jul-2004 Ending : 31-Dec-2004

TYPE OF EFFLUENT	UNITS	QUARTER 3	QUARTER 4	EST. TOT ERROR %
A. FISSION & ACTIVATION PRODUCTS				
1. TOTAL RELEASE (NOT INCLUDING TRITIUM, GASES, ALPHA)	CURIES	3.089E-03	8.040E-04	10
2. AVERAGE DILUTED CONCENTRATION DURING PERIOD	uCi/mL	3.600E-09	1.243E-09	
3. PERCENT OF EC* LIMIT (FRACTIONAL)	%	4.574E-03	1.360E-03	
B. TRITIUM				
1. TOTAL RELEASE	CURIES	5.564E+01	1.006E+02	10
2. AVERAGE DILUTED CONCENTRATION DURING PERIOD	uCi/mL	6.484E-05	1.555E-04	
3. % OF LIMIT (1.00E-02 uCi/mL)	%	6.484E-01	1.555E+00	
C. DISSOLVED AND ENTRAINED GASES				
1. TOTAL RELEASE	CURIES	0.000E+00	0.000E+00	10
2. AVERAGE DILUTED CONCENTRATION DURING PERIOD	uCi/mL	0.000E+00	0.000E+00	
3. PERCENT OF LIMIT (2.00E-04 uCi/mL)	%	0.000E+00	0.000E+00	
D. GROSS ALPHA RADIOACTIVITY				
1. TOTAL RELEASE	CURIES	0.000E+00	0.000E+00	10
E. WASTE VOL RELEASED				
1. TOTAL PRE-DILUTION VOLUME	LITERS	2.658E+06	2.793E+06	1
2. BATCH PRE-DILUTION VOLUME	LITERS	4.396E+05	3.616E+05	1
F. VOLUME OF DILUTION WATER USED**	LITERS	8.555E+08	6.442E+08	10

*EC= Effluent Concentration

**"Volume of dilution water used" means the volume of water circulated through the main condenser during the actual time of release. Liquid effluent releases ultimately dilute into the volume of the onsite main cooling reservoir and then into offsite water bodies as described in Section 2, subsection Radiological Impact on Man of this report.

STP NUCLEAR OPERATING COMPANY

Unit 2

REPORT CATEGORY: SEMIANNUAL LIQUID CONTINUOUS AND BATCH RELEASES. TOTALS FOR EACH NUCLIDE RELEASED.

TYPE OF ACTIVITY: ALL RADIONUCLIDES

REPORTING PERIOD: QUARTER # 3 AND QUARTER # 4 YEAR 2004

		CONTINUOUS RELEASES		BATCH RELEASES	
NUCLIDES RELEASED	**UNITS**	**QUARTER 3**	**QUARTER 4**	**QUARTER 3**	**QUARTER 4**
ALL NUCLIDES					
Silver-110M	CURIES	0.00E+00	0.00E+00	1.74E-05	0.00E+00
Cobalt-57	CURIES	0.00E+00	0.00E+00	2.77E-06	0.00E+00
Cobalt-58	CURIES	0.00E+00	0.00E+00	2.43E-04	3.65E-05
Cobalt-60	CURIES	0.00E+00	0.00E+00	5.99E-04	2.15E-04
Chromium-51	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cesium-134	CURIES	0.00E+00	0.00E+00	3.83E-05	0.00E+00
Cesium-137	CURIES	0.00E+00	0.00E+00	9.57E-05	2.30E-06
Iron-55	CURIES	0.00E+00	0.00E+00	1.31E-03	2.78E-04
Iron-59	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tritium	CURIES	2.04E-01	1.27E-01	5.54E+01	1.01E+02
Krypton-85	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Krypton-85M	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Manganese-54	CURIES	0.00E+00	0.00E+00	2.83E-04	3.97E-05
Sodium-24	CURIES	0.00E+00	0.00E+00	4.12E-06	0.00E+00
Niobium-95	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Antimony-124	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Antimony-125	CURIES	0.00E+00	0.00E+00	4.88E-04	2.27E-04
Tin-117M	CURIES	0.00E+00	0.00E+00	1.28E-06	0.00E+00
Strontium-89	CURIES	0.00E+00	0.00E+00	5.36E-06	5.08E-06
Strontium-90	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Technetium-99M	CURIES	0.00E+00	0.00E+00	3.53E-06	0.00E+00
Telurium-125M	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xenon-133	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xenon-133M	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xenon-135	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Zirconium-95	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Zirconium-97	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TOTAL FOR PERIOD	CURIES	2.04E-01	1.27E-01	5.54E+01	1.01E+02

STP NUCLEAR OPERATING COMPANY

Unit 1 plus 2 Total

REPORT CATEGORY: ANNUAL LIQUID RELEASES. TOTALS FOR EACH NUCLIDE RELEASED. FOR ALL OF 2004

NUCLIDES RELEASED	UNITS	UNIT 1 2004	UNIT 2 2004	TOTAL 2004
ALL NUCLIDES				
Silver-110M	CURIES	1.800E-06	5.770E-04	5.780E-04
Cobalt-57	CURIES	2.540E-05	1.510E-04	1.760E-04
Cobalt-58	CURIES	6.180E-04	3.830E-03	4.450E-03
Cobalt-60	CURIES	4.780E-03	7.670E-03	1.250E-02
Chromium-51	CURIES	4.260E-05	4.050E-04	4.480E-04
Cesium-134	CURIES	3.920E-05	1.270E-04	1.660E-04
Cesium-137	CURIES	6.360E-05	3.540E-04	4.180E-04
Iron-55	CURIES	4.540E-03	1.190E-02	1.650E-02
Iron-59	CURIES	7.150E-05	9.380E-06	8.090E-05
Tritium	CURIES	1.570E+03	1.130E+03	2.700E+03
Krypton-85	CURIES	0.000E+00	0.000E+00	0.000E+00
Krypton-85M	CURIES	0.000E+00	2.150E-06	2.150E-06
Manganese-54	CURIES	6.480E-04	1.340E-03	1.990E-03
Sodium-24	CURIES	0.000E+00	4.120E-06	4.120E-06
Niobium-95	CURIES	9.580E-06	1.760E-04	1.860E-04
Antimony-124	CURIES	0.000E+00	8.230E-05	8.230E-05
Antimony-125	CURIES	1.840E-03	4.200E-03	6.040E-03
Tin-117M	CURIES	2.930E-06	2.490E-05	2.780E-05
Strontium-89	CURIES	3.120E-05	3.580E-05	6.700E-05
Strontium-90	CURIES	5.040E-06	1.170E-05	1.680E-05
Technetium-99M	CURIES	0.000E+00	3.530E-06	3.530E-06
Telurium-125M	CURIES	1.950E-03	4.880E-03	6.830E-03
Xenon-133	CURIES	4.670E-03	8.590E-03	1.330E-02
Xenon-133M	CURIES	9.840E-05	8.620E-05	1.850E-04
Xenon-135	CURIES	1.650E-04	2.340E-04	3.990E-04
Zirconium-95	CURIES	4.610E-06	0.000E+00	4.610E-06
Zirconium-97	CURIES	1.200E-06	0.000E+00	1.200E-06
TOTAL FOR PERIOD	CURIES	1.570E+03	1.130E+03	2.700E+03
TOTAL Noble Gases	CURIES	4.933E-03	8.912E-03	1.389E-02
TOTAL Excluding Tritium & Noble Gases	CURIES	1.467E-02	3.578E-02	5.057E-02

Solid Waste and Irradiated Fuel Shipments

A. SOLID WASTE SHIPPED OFFSITE FOR BURIAL OR DISPOSAL (Not Irradiated Fuel)

1. Type of Waste	Units	12-Month Period Shipped	12-Month Period Buried	Est. Total Error, %	
a. Spent resins, filter sludges, evaporator bottoms, etc.	m^3 Ci	2.54E+01 5.29E+02	1.30E+01 7.11E+02	-1.0E+00 -5.0E+01	+1.0E+00 +1.0E+02
b. Dry compressible waste, contaminated equip., etc.	m^3 Ci	3.69E+02 3.69E+00	1.84E+01 1.56E+00	-1.0E+00 -6.6E+01	+1.0E+00 +2.0E+02
c. Irradiated components, control rods, etc.	m^3 Ci	0.00E+00 0.00E+00	0.00E+00 0.00E+00	N/A	N/A
d. Other (low level secondary resin, sludge)	m^3 Ci	1.27E+01 3.58E-05	0.00E+00 0.00E+00	-1.0E+00 -5.0E+01	+1.0E+00 +1.0E+02

2. Estimate of major nuclide composition (by type of waste)

a. Spent resins, filters, evaporator bottoms, etc.		
Nickel-63	%	3.92 E+01
Iron-55	%	3.22 E+01
Cobalt-60	%	1.41 E+01
Cesium-137	%	6.5 E+00
Cesium-134	%	3.7 E+00
Tritium	%	1.7 E+00
Manganese-54	%	1.4 E+00
Cobalt-58	%	1.0 E+00
Cobalt-57	%	2.0 E-01
b. Dry compressible waste, contaminated equip., etc.		
Iron-55	%	4.55 E+01
Nickel-63	%	2.05 E+01
Cobalt-60	%	1.50 E+01
Cobalt-58	%	8.10 E+00
Chromium-51	%	6.20 E+00
Antimony-125	%	1.30 E+00
Manganese-54	%	1.10 E+00
Niobium-95	%	7.00 E-01
Zirconium-95	%	5.00 E-01
Cesium-134	%	4.00 E-01
Cesium-137	%	4.00 E-01
Cerium-144	%	3.00 E-01
c. N/A	N/A	N/A
d. Other (secondary DE and HVAC charcoal)		
Tritium	%	1.00 E+02

3. Solid Waste Disposition:

Number of Shipments	Mode of Transportation	Destination
8	Truck	Studsvik Processing Facility, LLC 151 TC Runnion Rd. Erwin, Tn 37650
8	Truck	GTS-Duratek 1560 Bear Creek Road Oak Ridge, TN 37830
2	Truck	Chem-Nuclear Systems Barnwell Waste Management Facility 740 Osborn Rd. Barnwell, SC 29812
1	Truck	GTS-Duratek Gallaher Road Facility 628 Gallaher Rd. Kingston, TN 37763

4. Class of Solid Waste:
A, B & C

5. Type of Containers Used for Shipment:
Strong Tight, General Design, High-Integrity Containers, Type A and B casks

6. Solidifying Agent:
N/A

B. IRRADIATED FUEL SHIPMENTS (Disposal)
No shipments made during this period.

DOSE DATA

DOSE ACCUMULATIONS

STP NUCLEAR OPERATING COMPANY
SUMMARY OF MAXIMUM INDIVIDUAL DOSES
Unit: 1
TOTAL ACCUMULATION FOR PERIODS:
for LIQUID, GASEOUS AND AIR
Starting: 1-Jan-2004 Ending: 31-Dec-2004

EFFLUENT	APPLICABLE ORGAN	ESTIMATED DOSE (mrem)	AGE GROUP	LOCATION DIST DIR (m) (TOWARD)	% OF APPLICABLE LIMIT	LIMIT (mrad or mrem)
LIQUID	TOTAL BODY	8.99E-03	ADULT	RECEPTOR 3[5]	3.00E-01	3.0
LIQUID	GI-TRACT	9.05E-03	ADULT	RECEPTOR 3[5]	9.05E-02	10.0
NOBLE GAS	AIR DOSE (gamma-mrad)	2.50E-03		1540m NNW	2.50E-02	10.0
NOBLE GAS	AIR DOSE (beta-mrad)	4.41E-03		1540m NNW	2.20E-02	20.0
NOBLE GAS	TOTAL BODY	1.55E-03	ALL[1]	1540m NNW	3.11E-02	5.0
NOBLE GAS	TOTAL BODY	5.06E-04	ALL[2]	4000m WSW	1.01E-02	5.0
NOBLE GAS	SKIN	3.45E-03	ALL[1]	1540m NNW	2.30E-02	15.0
NOBLE GAS	SKIN	1.06E-03	ALL[2]	4000m WSW	7.08E-03	15.0
IODINE, PARTICULATES & TRITIUM	LIVER	1.19E-02	CHILD[1]	1540m NNW	7.94E-02	15.0
IODINE, PARTICULATES & TRITIUM	LIVER	2.98E-03	CHILD[2]	4000m WSW	1.99E-02	15.0

SUMMARY OF POPULATION DOSES FOR 2004			
EFFLUENT	APPLICABLE ORGAN	ESTIMATED POPULATION DOSE (person-rem)	AVERAGE DOSE TO POPULATION (rem per person)
LIQUID	TOTAL BODY	2.6E-03	6.6E-07[3]
GASEOUS	TOTAL BODY	1.6E-02	1.70E-09[4]

NOTES:

[1]Doses were calculated for HYPOTHETICAL receptors at the site boundary.

[2]Highest dose for nearest individual or receptor. This individual is assumed to reside at this location.

[3] Calculation based on a population of 303,500 for shore line exposure and for salt water invertebrate ingestion and 3,800 for salt water sport fish ingestion.

[4] Calculation based on a population of 299,000 within fifty (50) miles of South Texas Project Electric Generating Station.

[5]Receptor 3 is an individual ingesting fresh water sport fish and receiving shoreline exposure from the Little Robbins Slough Area.

STP NUCLEAR OPERATING COMPANY
SUMMARY OF MAXIMUM INDIVIDUAL DOSES
Unit: 2
TOTAL ACCUMULATION FOR PERIODS:
for LIQUID, GASEOUS, AND AIR
Starting: 1-Jan-2004 Ending: 31-Dec-2004

EFFLUENT	APPLICABLE ORGAN	ESTIMATED DOSE (mrem)	AGE GROUP	LOCATION DIST DIR (m) (TOWARD)	% OF APPLICABLE LIMIT	LIMIT (mrad or mrem)
LIQUID	TOTAL BODY	6.52E-03	ADULT	RECEPTOR 3[5]	2.17E-01	3.0
LIQUID	GI-TRACT	6.62E-03	ADULT	RECEPTOR 3[5]	6.62E-02	10.0
NOBLE GAS	AIR DOSE (gamma-mrad)	2.91E-03		1540m NNW	2.91E-02	10.0
NOBLE GAS	AIR DOSE (beta-mrad)	4.06E-03		1540m NNW	2.03E-02	20.0
NOBLE GAS	TOTAL BODY	1.84E-03	ALL[1]	1540m NNW	3.69E-02	5.0
NOBLE GAS	TOTAL BODY	2.90E-04	ALL[2]	4000m WSW	5.80E-03	5.0
NOBLE GAS	SKIN	3.78E-03	ALL[1]	1540m NNW	2.52E-02	15.0
NOBLE GAS	SKIN	6.80E-04	ALL[2]	4000m WSW	4.53E-03	15.0
IODINE, PARTICULATES & TRITIUM	THYROID	2.00E-02	CHILD[1]	1540m NNW	1.33E-01	15.0
IODINE, PARTICULATES & TRITIUM	THYROID	4.24E-03	CHILD[2]	4000m WSW	2.82E-02	15.0

SUMMARY OF POPULATION DOSES FOR 2004			
EFFLUENT	APPLICABLE ORGAN	ESTIMATED POPULATION DOSE (person-rem)	AVERAGE DOSE TO POPULATION (rem per person)
LIQUID	TOTAL BODY	2.0E-03	4.8E-07[3]
GASEOUS	TOTAL BODY	2.3E-02	2.4E-09[4]

NOTES:

[1]Doses were calculated for HYPOTHETICAL receptors at the site boundary.

[2]Highest dose for nearest individual or receptor. This individual is assumed to reside at this location.

[3] Calculation based on a population of 303,500 for shore line exposure and for salt water invertebrate ingestion and 3,800 for salt water sport fish ingestion.

[4] Calculation based on a population of 299,000 within fifty (50) miles of South Texas Project Electric Generating Station.

[5]Receptor 3 is an individual ingesting fresh water sport fish and receiving shoreline exposure from the Little Robbins Slough Area.

STP NUCLEAR OPERATING COMPANY
SUMMARY OF MAXIMUM INDIVIDUAL DOSES
Unit: 1 PLUS 2
TOTAL ACCUMULATION FOR PERIODS:
for LIQUID, GASEOUS, AND AIR
Starting: 1-Jan-2004 Ending: 31-Dec-2004

EFFLUENT	APPLICABLE ORGAN	UNIT 1 ESTIMATED DOSE (mrem)	UNIT 2 ESTIMATED DOSE (mrem)	TOTAL 1+2 ESTIMATED DOSE (mrem)	AGE GROUP	LOCATION DIST DIR (m) (TOWARD)
LIQUID	TOTAL BODY	8.99E-03	6.52E-03	1.55E-02	ADULT	RECEPTOR 3[5]
LIQUID	GI-TRACT	9.05E-03	6.62E-03	1.57E-02	ADULT	RECEPTOR 3[5]
NOBLE GAS	AIR DOSE (gamma-mrad)	2.50E-03	2.91E-03	5.42E-03		1540m NNW
NOBLE GAS	AIR DOSE (beta-mrad)	4.41E-03	4.06E-03	8.47E-03		1540m NNW
NOBLE GAS	TOTAL BODY	1.55E-03	1.84E-03	3.40E-03	ALL[1]	1540m NNW
NOBLE GAS	TOTAL BODY	5.06E-04	2.90E-04	7.96E-04	ALL[2]	4000m WSW
NOBLE GAS	SKIN	3.45E-03	3.78E-03	7.23E-03	ALL[1]	1540m NNW
NOBLE GAS	SKIN	1.06E-03	6.80E-04	1.74E-03	ALL[2]	4000m WSW
IODINE, PARTICULATES & TRITIUM	THYROID	1.19E-02	2.00E-02	3.19E-02	CHILD[1]	1540m NNW
IODINE, PARTICULATES & TRITIUM	THYROID	2.98E-03	4.24E-03	7.22E-03	CHILD[2]	4000m WSW
IODINE, PARTICULATES & TRITIUM	TOTAL BODY	2.30E-03	3.20E-03	5.49E-03	ADULT[2]	4000m WSW

SUMMARY OF POPULATION DOSES FOR 2004			
EFFLUENT	APPLICABLE ORGAN	TOTAL 1+2 ESTIMATED POPULATION DOSE (person-rem)	TOTAL 1+2 AVERAGE DOSE TO POPULATION (rem per person)
LIQUID	TOTAL BODY	4.6E-03	1.1E-06[3]
GASEOUS	TOTAL BODY	3.9E-02	2.1E-09[4]

NOTES:

[1] Doses were calculated for HYPOTHETICAL receptors at the site boundary.

[2] Highest dose for nearest individual or receptor. This individual is assumed to reside at this location.

[3] Calculation based on a population of 303,500 for shore line exposure and for salt water invertebrate ingestion and 3,800 for salt water sport fish ingestion.

[4] Calculation based on a population of 299,000 within fifty (50) miles of South Texas Project Electric Generating Station.

[5] Receptor 3 is an individual ingesting fresh water sport fish and receiving shoreline exposure from the Little Robbins Slough Area.

RESULTS OF THE PROTECTED AREA DIRECT RADIATION MEASUREMENTS PROGRAM

Table 8-1

2004 STPEGS PROTECTED AREA THERMOLUMINESCENT DOSIMETER MONITORING STATIONS						
Station Number	1st Qtr Average	2nd Qtr Average	3rd Qtr Average	4th Qtr Average	Average Rate	Average[1] Net Rate
	[2](mR)	[2](mR)	[2](mR)	[2](mR)	[2](mR)	(mR/hour)
1	13.4	13.2	14.4	13.4	13.6	-0-
2	12.5	13.2	14.6	13.2	13.4	-0-
3	13.1	13.0	13.6	13.3	13.3	-0-
4	12.8	12.5	13.3	13.0	12.9	-0-
5	12.7	13.6	14.2	13.4	13.5	-0-
6	14.9	14.8	14.6	13.5	14.5	-0-
7	15.0	14.9	14.9	13.3	14.5	-0-
8	13.5	13.6	14.2	12.8	13.5	-0-
9	13.1	13.1	13.4	12.9	13.1	-0-
10	12.5	12.6	13.5	12.1	12.7	-0-
11	11.5	11.5	12.3	11.2	11.6	-0-
12	12.1	12.3	12.9	12.5	12.5	-0-
13	12.0	12.3	13.1	12.8	12.6	-0-
14	12.3	12.1	13.2	12.3	12.5	-0-
15	13.5	12.9	13.5	13.3	13.3	-0-
16	13.2	12.4	13.4	12.8	13.0	-0-

Notes:
Individual values normalized to a 91 day quarter.
Only the calcium sulfate elements were used in these averages.

(1) Net Rate:

Difference between the exposure rate in 2004 and the rate measured in 1986 due to natural background ([average rate] - 15.4 mR background) / 91 days / 24 hours per day

The 1986 background rate of 15.4 milliroentgen per quarter at the site boundary has been used to reflect the pre-operational baseline exposure rate for STP. Historically the exposure rates measured near the protected area fence have been lower than the historical background at the site boundary. However, dosimeter stations 6 and 7 have at times exceeded the background rate exposure rate at the site boundary due to radioactive waste processing activities on the south sides of the Units. Waste processing activities during 2004 did not cause these two stations to exceed the site area background.

Zero (-0-) indicates background levels.

(2) mR = milliroentgen, a unit of exposure for X and gamma rays

FIGURE 8-1

PROTECTED AREA MONITORING STATIONS

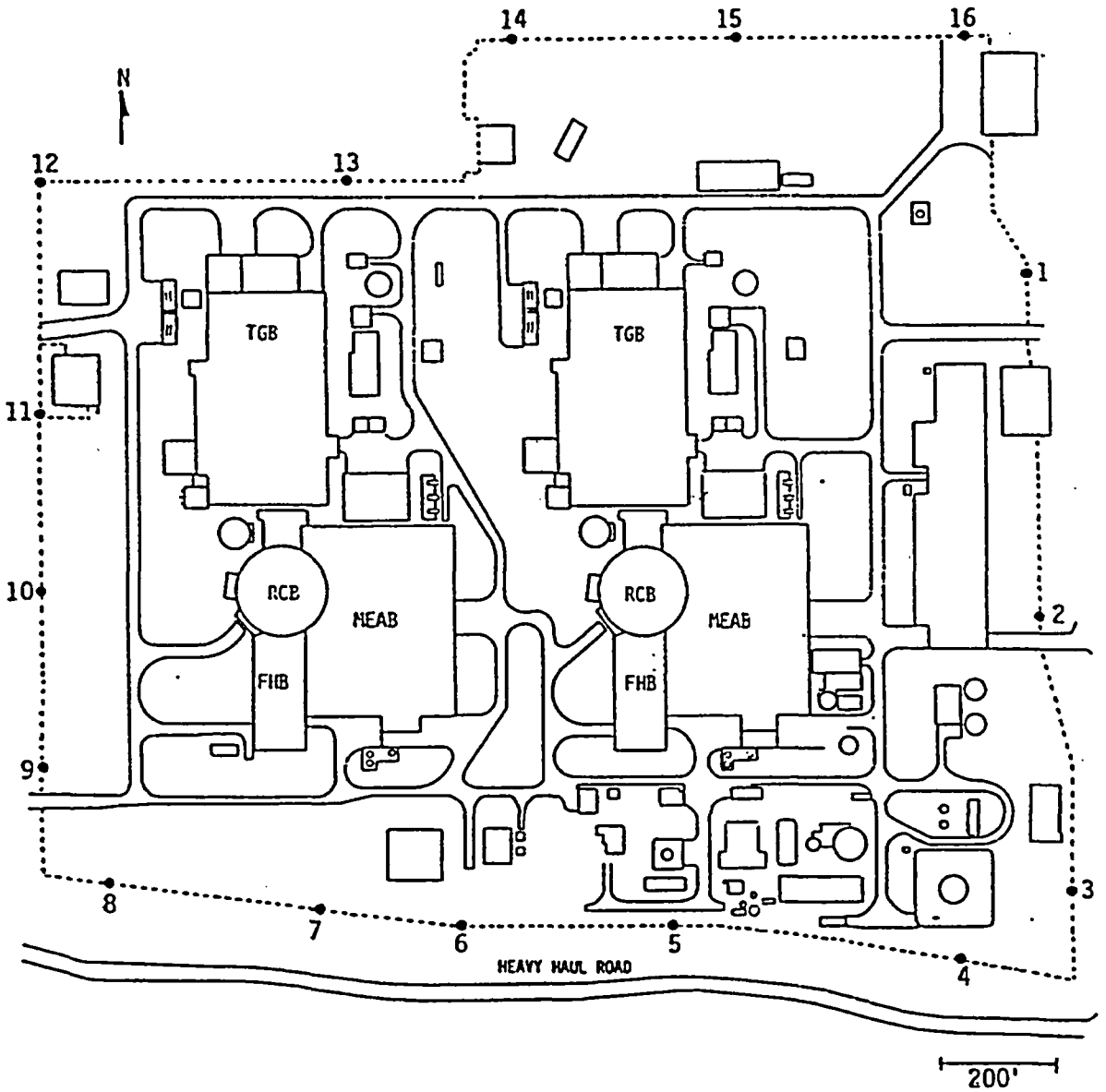


Figure 1

METEROLOGICAL DATA

JOINT FREQUENCY TABLES

First Quarter 2004

Joint Frequency Tables

Joint Frequency Table

From : 01/01/2004 00:00 **To :** 03/31/2004 23:00

PRIMARY TOWER

ALL STABILITY CLASSES COMBINED

Wind Speed (MPH) -> / Sector	(1) CALM	(2) 1.0 - 3.5	(3) 3.6 - 7.5	(4) 7.6 - 12.5	(5) 12.6 - 18.5	(6) 18.6 - 24.5	(7) 24.6 - 32.5	(8) 32.6 +	Total	% Of Total	Avg. Speed
N	0	18	51	70	78	2	0	0	219	10.4%	10.5
NNE	0	17	60	90	16	0	0	0	183	8.7%	8.1
NE	0	14	74	51	11	0	0	0	150	7.1%	7.4
ENE	0	9	92	52	11	0	0	0	164	7.8%	7.2
E	0	12	73	68	49	0	0	0	202	9.6%	9.0
ESE	0	8	51	95	74	12	0	0	240	11.4%	10.9
SE	0	14	48	84	87	23	1	0	257	12.2%	11.5
SSE	0	7	34	85	48	4	0	0	178	8.5%	10.5
S	0	4	42	69	33	3	0	0	151	7.2%	9.9
SSW	0	5	22	9	2	0	0	0	38	1.8%	6.6
SW	0	4	10	2	2	0	0	0	18	0.9%	6.1
WSW	0	4	8	6	1	0	0	0	19	0.9%	6.0
W	0	8	14	3	0	0	0	0	25	1.2%	5.2
WNW	0	17	18	6	3	0	0	0	44	2.1%	5.4
NW	0	8	30	21	21	3	0	0	83	3.9%	9.4
NNW	0	7	26	56	37	6	0	0	132	6.3%	10.6
Total	0	156	653	767	473	53	1	0	2103		
% Of Total	0.0%	7.4%	31.1%	36.5%	22.5%	2.5%	0.0%	0.0%			

Average speed for this table (MPH): 9.4
Hours in above table with variable direction : 0
Total number of CALMs : 0
Total number of Invalid hours : 81
Total number of Valid hours : 2103
Total number of hours for period : 2184

Joint Frequency Table

From : 01/01/2004 00:00 **To :** 03/31/2004 23:00

PRIMARY TOWER

STABILTY CLASS A

Wind Speed (MPH) -> Sector	(1) CALM	(2) 1.0 - 3.5	(3) 3.6 - 7.5	(4) 7.6 - 12.5	(5) 12.6 - 18.5	(6) 18.6 - 24.5	(7) 24.6 - 32.5	(8) 32.6 +	Total	% Of Total	Avg. Speed
N	0	0	0	4	2	0	0	0	6	4.9%	11.6
NNE	0	0	1	6	0	0	0	0	7	5.7%	9.2
NE	0	0	1	3	1	0	0	0	5	4.1%	10.6
ENE	0	0	0	3	0	0	0	0	3	2.5%	10.7
E	0	0	0	0	4	0	0	0	4	3.3%	16.3
ESE	0	0	0	1	6	3	0	0	10	8.2%	16.5
SE	0	0	0	2	3	1	0	0	6	4.9%	15.2
SSE	0	0	0	5	1	0	0	0	6	4.9%	10.4
S	0	0	1	9	10	3	0	0	23	18.9%	13.8
SSW	0	0	1	5	0	0	0	0	6	4.9%	9.7
SW	0	0	1	1	0	0	0	0	2	1.6%	8.8
WSW	0	0	0	1	0	0	0	0	1	0.8%	7.8
W	0	0	1	0	0	0	0	0	1	0.8%	5.1
WNW	0	0	1	1	0	0	0	0	2	1.6%	8.3
NW	0	0	3	2	4	0	0	0	9	7.4%	11.5
NNW	0	0	2	18	11	0	0	0	31	25.4%	12.0
Total	0	0	12	61	42	7	0	0	122		
% Of Total	0.0%	0.0%	9.8%	50.0%	34.4%	5.7%	0.0%	0.0%			

Average speed for this table (MPH): 12.3

Joint Frequency Table

From : 01/01/2004 00:00 **To :** 03/31/2004 23:00

PRIMARY TOWER

STABILTY CLASS B

Wind Speed (MPH) -> / Sector	(1) CALM	(2) 1.0 - 3.5	(3) 3.6 - 7.5	(4) 7.6 - 12.5	(5) 12.6 - 18.5	(6) 18.6 - 24.5	(7) 24.6 - 32.5	(8) 32.6 +	Total	% Of Total	Avg. Speed
N	0	0	2	3	1	0	0	0	6	6.2%	10.3
NNE	0	0	1	5	3	0	0	0	9	9.3%	10.2
NE	0	0	1	6	0	0	0	0	7	7.2%	9.5
ENE	0	0	0	1	2	0	0	0	3	3.1%	13.2
E	0	0	0	0	2	0	0	0	2	2.1%	14.3
ESE	0	0	0	3	9	2	0	0	14	14.4%	15.6
SE	0	0	0	7	9	7	0	0	23	23.7%	16.1
SSE	0	0	1	3	1	1	0	0	6	6.2%	11.5
S	0	0	1	2	3	0	0	0	6	6.2%	12.9
SSW	0	0	2	0	0	0	0	0	2	2.1%	6.8
SW	0	0	1	1	0	0	0	0	2	2.1%	6.6
WSW	0	0	1	0	0	0	0	0	1	1.0%	5.2
W	0	0	0	0	0	0	0	0	0	0.0%	0.0
WNW	0	0	0	1	1	0	0	0	2	2.1%	11.7
NW	0	0	3	0	3	0	0	0	6	6.2%	11.2
NNW	0	0	1	4	3	0	0	0	8	8.2%	11.0
Total	0	0	14	36	37	10	0	0	97		
% Of Total	0.0%	0.0%	14.4%	37.1%	38.1%	10.3%	0.0%	0.0%			

Average speed for this table (MPH): 12.7

Joint Frequency Table

From : 01/01/2004 00:00 **To :** 03/31/2004 23:00

PRIMARY TOWER

STABILTY CLASS C

Wind Speed (MPH) -> Sector	(1) CALM	(2) 1.0 - 3.5	(3) 3.6 - 7.5	(4) 7.6 - 12.5	(5) 12.6 - 18.5	(6) 18.6 - 24.5	(7) 24.6 - 32.5	(8) 32.6 +	Total	% Of Total	Avg. Speed
N	0	0	0	3	7	0	0	0	10	9.4%	13.9
NNE	0	0	4	3	2	0	0	0	9	8.5%	9.8
NE	0	0	2	0	1	0	0	0	3	2.8%	9.1
ENE	0	0	1	5	3	0	0	0	9	8.5%	11.1
E	0	0	0	2	4	0	0	0	6	5.7%	12.7
ESE	0	0	1	3	8	0	0	0	12	11.3%	13.8
SE	0	0	1	4	6	4	0	0	15	14.2%	14.7
SSE	0	0	0	4	12	0	0	0	16	15.1%	14.9
S	0	0	2	3	4	0	0	0	9	8.5%	12.3
SSW	0	0	2	0	0	0	0	0	2	1.9%	5.1
SW	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
W	0	1	0	0	0	0	0	0	1	0.9%	3.3
WNW	0	0	2	2	0	0	0	0	4	3.8%	7.7
NW	0	0	1	2	2	0	0	0	5	4.7%	11.5
NNW	0	0	0	2	2	1	0	0	5	4.7%	14.2
Total	0	1	16	33	51	5	0	0	106		
% Of Total	0.0%	0.9%	15.1%	31.1%	48.1%	4.7%	0.0%	0.0%			

Average speed for this table (MPH): 12.6

Joint Frequency Table

From : 01/01/2004 00:00 **To :** 03/31/2004 23:00

PRIMARY TOWER

STABILTY CLASS D

Wind Speed (MPH) -> / Sector	(1) CALM	(2) 1.0 - 3.5	(3) 3.6 - 7.5	(4) 7.6 - 12.5	(5) 12.6 - 18.5	(6) 18.6 - 24.5	(7) 24.6 - 32.5	(8) 32.6 +	Total	% Of Total	Avg. Speed
N	0	0	4	36	62	2	0	0	104	17.6%	13.5
NNE	0	1	11	40	11	0	0	0	63	10.6%	9.4
NE	0	0	13	18	9	0	0	0	40	6.8%	9.9
ENE	0	0	6	17	2	0	0	0	25	4.2%	9.3
E	0	0	7	16	24	0	0	0	47	7.9%	11.7
ESE	0	2	5	31	31	6	0	0	75	12.7%	12.4
SE	0	0	7	16	49	11	1	0	84	14.2%	14.2
SSE	0	0	3	22	14	3	0	0	42	7.1%	12.3
S	0	0	10	10	9	0	0	0	29	4.9%	10.0
SSW	0	1	4	1	0	0	0	0	6	1.0%	5.6
SW	0	0	1	0	0	0	0	0	1	0.2%	5.1
WSW	0	0	0	0	0	0	0	0	0	0.0%	0.0
W	0	1	2	2	0	0	0	0	5	0.8%	6.7
WNW	0	4	0	2	2	0	0	0	8	1.4%	7.4
NW	0	1	4	6	11	2	0	0	24	4.1%	12.4
NNW	0	0	3	17	18	1	0	0	39	6.6%	12.2
Total	0	10	80	234	242	25	1	0	592		
% Of Total	0.0%	1.7%	13.5%	39.5%	40.9%	4.2%	0.2%	0.0%			

Average speed for this table (MPH): 11.8

Joint Frequency Table

From : 01/01/2004 00:00 **To :** 03/31/2004 23:00

PRIMARY TOWER

STABILTY CLASS E

Wind Speed (MPH) -> Sector	(1) CALM	(2) 1.0 - 3.5	(3) 3.6 - 7.5	(4) 7.6 - 12.5	(5) 12.6 - 18.5	(6) 18.6 - 24.5	(7) 24.6 - 32.5	(8) 32.6 +	Total	% Of Total	Avg. Speed
N	0	5	24	23	6	0	0	0	58	7.1%	8.4
NNE	0	5	23	33	0	0	0	0	61	7.5%	7.7
NE	0	3	23	21	0	0	0	0	47	5.8%	7.1
ENE	0	0	36	26	4	0	0	0	66	8.1%	7.7
E	0	4	36	41	15	0	0	0	96	11.8%	8.8
ESE	0	3	30	57	20	1	0	0	111	13.6%	9.5
SE	0	4	31	55	20	0	0	0	110	13.5%	9.1
SSE	0	1	14	45	20	0	0	0	80	9.8%	10.5
S	0	2	18	45	7	0	0	0	72	8.8%	8.9
SSW	0	1	12	3	2	0	0	0	18	2.2%	6.7
SW	0	4	6	0	2	0	0	0	12	1.5%	5.9
WSW	0	1	5	3	1	0	0	0	10	1.2%	6.8
W	0	2	4	1	0	0	0	0	7	0.9%	5.4
WNW	0	8	4	0	0	0	0	0	12	1.5%	3.6
NW	0	2	10	9	1	1	0	0	23	2.8%	7.9
NNW	0	0	10	15	3	4	0	0	32	3.9%	10.2
Total	0	45	286	377	101	6	0	0	815		
% Of Total	0.0%	5.5%	35.1%	46.3%	12.4%	0.7%	0.0%	0.0%			

Average speed for this table (MPH): 8.6

Joint Frequency Table

From : 01/01/2004 00:00 **To :** 03/31/2004 23:00

PRIMARY TOWER

STABILTY CLASS F

Wind Speed (MPH) -> Sector	(1) CALM	(2) 1.0 - 3.5	(3) 3.6 - 7.5	(4) 7.6 - 12.5	(5) 12.6 - 18.5	(6) 18.6 - 24.5	(7) 24.6 - 32.5	(8) 32.6 +	Total	% Of Total	Avg. Speed
N	0	5	11	1	0	0	0	0	17	7.9%	4.8
NNE	0	2	10	3	0	0	0	0	15	7.0%	5.8
NE	0	4	17	2	0	0	0	0	23	10.7%	5.0
ENE	0	3	29	0	0	0	0	0	32	15.0%	5.1
E	0	3	22	9	0	0	0	0	34	15.9%	6.0
ESE	0	0	11	0	0	0	0	0	11	5.1%	5.0
SE	0	6	6	0	0	0	0	0	12	5.6%	4.0
SSE	0	4	11	6	0	0	0	0	21	9.8%	5.7
S	0	0	10	0	0	0	0	0	10	4.7%	4.6
SSW	0	2	1	0	0	0	0	0	3	1.4%	3.7
SW	0	0	1	0	0	0	0	0	1	0.5%	3.8
WSW	0	2	1	2	0	0	0	0	5	2.3%	5.3
W	0	3	3	0	0	0	0	0	6	2.8%	4.0
WNW	0	2	5	0	0	0	0	0	7	3.3%	4.3
NW	0	2	6	1	0	0	0	0	9	4.2%	5.3
NNW	0	3	5	0	0	0	0	0	8	3.7%	4.6
Total	0	41	149	24	0	0	0	0	214		
% Of Total	0.0%	19.2%	69.6%	11.2%	0.0%	0.0%	0.0%	0.0%			

Average speed for this table (MPH): 5.1

Joint Frequency Table

From : 01/01/2004 00:00 **To :** 03/31/2004 23:00

PRIMARY TOWER

STABILTY CLASS G

Wind Speed (MPH) -> Sector	(1) CALM	(2) 1.0 - 3.5	(3) 3.6 - 7.5	(4) 7.6 - 12.5	(5) 12.6 - 18.5	(6) 18.6 - 24.5	(7) 24.6 - 32.5	(8) 32.6 +	Total	% Of Total	Avg. Speed
N	0	8	10	0	0	0	0	0	18	11.5%	3.9
NNE	0	9	10	0	0	0	0	0	19	12.1%	4.1
NE	0	7	17	1	0	0	0	0	25	15.9%	4.8
ENE	0	6	20	0	0	0	0	0	26	16.6%	4.4
E	0	5	8	0	0	0	0	0	13	8.3%	4.1
ESE	0	3	4	0	0	0	0	0	7	4.5%	4.0
SE	0	4	3	0	0	0	0	0	7	4.5%	3.8
SSE	0	2	5	0	0	0	0	0	7	4.5%	4.4
S	0	2	0	0	0	0	0	0	2	1.3%	2.7
SSW	0	1	0	0	0	0	0	0	1	0.6%	3.2
SW	0	0	0	0	0	0	0	0	0	0.0%	0.0
WSW	0	1	1	0	0	0	0	0	2	1.3%	3.6
W	0	1	4	0	0	0	0	0	5	3.2%	5.2
WNW	0	3	6	0	0	0	0	0	9	5.7%	3.6
NW	0	3	3	1	0	0	0	0	7	4.5%	4.2
NNW	0	4	5	0	0	0	0	0	9	5.7%	3.6
Total	0	59	96	2	0	0	0	0	157		
% Of Total	0.0%	37.6%	61.1%	1.3%	0.0%	0.0%	0.0%	0.0%			

Average speed for this table (MPH): 4.2

Second Quarter 2004

Joint Frequency Tables

Joint Frequency Table

From : 04/01/2004 00:00 **To :** 06/30/2004 23:00

PRIMARY TOWER

ALL STABILITY CLASSES COMBINED

Wind Speed (MPH) -> / Sector	(1) CALM	(2) 1.0 - 3.5	(3) 3.6 - 7.5	(4) 7.6 - 12.5	(5) 12.6 - 18.5	(6) 18.6 - 24.5	(7) 24.6 - 32.5	(8) 32.6 +	Total	% Of Total	Avg. Speed
N	0	9	27	30	20	1	1	0	88	4.2%	9.2
NNE	0	10	27	18	9	1	0	0	65	3.1%	7.8
NE	0	7	36	17	9	0	0	0	69	3.3%	7.6
ENE	0	13	31	15	1	1	0	0	61	2.9%	6.1
E	0	19	28	24	6	0	0	0	77	3.7%	6.6
ESE	0	11	56	45	24	5	1	0	142	6.7%	8.9
SE	0	12	160	141	108	9	0	0	430	20.4%	9.6
SSE	0	6	110	287	167	5	0	0	575	27.3%	10.7
S	0	1	39	203	112	0	0	0	355	16.8%	11.1
SSW	0	1	35	28	0	0	0	0	64	3.0%	7.3
SW	0	1	10	12	1	0	0	0	24	1.1%	7.6
WSW	0	2	7	3	0	0	0	0	12	0.6%	6.0
W	0	2	8	2	0	0	0	0	12	0.6%	5.6
WNW	0	14	9	3	0	0	0	0	26	1.2%	4.2
NW	0	10	17	13	3	0	0	0	43	2.0%	6.7
NNW	0	10	18	21	17	0	0	0	66	3.1%	9.0
Total	0	128	618	862	477	22	2	0	2109		
% Of Total	0.0%	6.1%	29.3%	40.9%	22.6%	1.0%	0.1%	0.0%			

Average speed for this table (MPH): 9.4
Hours in above table with variable direction : 0
Total number of CALMs : 0
Total number of Invalid hours : 75
Total number of Valid hours : 2109
Total number of hours for period : 2184

Joint Frequency Table

From : 04/01/2004 00:00 **To :** 06/30/2004 23:00

PRIMARY TOWER

STABILTY CLASS A

Wind Speed (MPH) -> Sector	(1) CALM	(2) 1.0 - 3.5	(3) 3.6 - 7.5	(4) 7.6 - 12.5	(5) 12.6 - 18.5	(6) 18.6 - 24.5	(7) 24.6 - 32.5	(8) 32.6 +	Total	% Of Total	Avg. Speed
N	0	0	0	0	1	0	0	0	1	0.4%	17.6
NNE	0	0	0	0	0	0	0	0	0	0.0%	0.0
NE	0	0	2	0	0	0	0	0	2	0.8%	6.9
ENE	0	0	1	3	0	0	0	0	4	1.6%	8.7
E	0	0	0	0	0	0	0	0	0	0.0%	0.0
ESE	0	0	2	1	1	2	0	0	6	2.4%	13.2
SE	0	0	1	12	14	2	0	0	29	11.4%	13.5
SSE	0	1	1	24	45	2	0	0	73	28.6%	13.7
S	0	0	4	58	49	0	0	0	111	43.5%	12.0
SSW	0	1	4	8	0	0	0	0	13	5.1%	7.8
SW	0	1	1	2	0	0	0	0	4	1.6%	5.9
WSW	0	0	2	0	0	0	0	0	2	0.8%	5.9
W	0	0	0	0	0	0	0	0	0	0.0%	0.0
WNW	0	0	2	0	0	0	0	0	2	0.8%	4.6
NW	0	0	0	0	1	0	0	0	1	0.4%	15.0
NNW	0	0	0	7	0	0	0	0	7	2.7%	11.0
Total	0	3	20	115	111	6	0	0	255		
% Of Total	0.0%	1.2%	7.8%	45.1%	43.5%	.2.4%	0.0%	0.0%			

Average speed for this table (MPH): 12.2

Joint Frequency Table

From : 04/01/2004 00:00 **To :** 06/30/2004 23:00

PRIMARY TOWER

STABILTY CLASS B

Wind Speed (MPH) -> Sector	(1) CALM	(2) 1.0 - 3.5	(3) 3.6 - 7.5	(4) 7.6 - 12.5	(5) 12.6 - 18.5	(6) 18.6 - 24.5	(7) 24.6 - 32.5	(8) 32.6 +	Total	% Of Total	Avg. Speed
N	0	0	0	4	5	0	0	0	9	7.6%	13.9
NNE	0	0	2	2	0	0	0	0	4	3.4%	7.6
NE	0	0	1	0	0	0	0	0	1	0.8%	6.3
ENE	0	1	3	1	0	0	0	0	5	4.2%	5.1
E	0	0	0	1	0	0	0	0	1	0.8%	7.8
ESE	0	0	0	4	3	1	0	0	8	6.7%	13.1
SE	0	0	0	9	6	0	0	0	15	12.6%	12.2
SSE	0	0	0	11	17	0	0	0	28	23.5%	13.4
S	0	0	1	18	12	0	0	0	31	26.1%	11.8
SSW	0	0	2	3	0	0	0	0	5	4.2%	8.3
SW	0	0	1	0	0	0	0	0	1	0.8%	4.8
WSW	0	1	2	0	0	0	0	0	3	2.5%	4.7
W	0	0	1	0	0	0	0	0	1	0.8%	6.4
WNW	0	0	1	0	0	0	0	0	1	0.8%	3.6
NW	0	0	1	0	0	0	0	0	1	0.8%	4.9
NNW	0	2	1	2	0	0	0	0	5	4.2%	5.6
Total	0	4	16	55	43	1	0	0	119		
% Of Total	0.0%	3.4%	13.4%	46.2%	36.1%	0.8%	0.0%	0.0%			

Average speed for this table (MPH): 11.1

Joint Frequency Table

From : 04/01/2004 00:00 **To :** 06/30/2004 23:00

PRIMARY TOWER

STABILTY CLASS C

Wind Speed (MPH) -> Sector	(1) CALM	(2) 1.0 - 3.5	(3) 3.6 - 7.5	(4) 7.6 - 12.5	(5) 12.6 - 18.5	(6) 18.6 - 24.5	(7) 24.6 - 32.5	(8) 32.6 +	Total	% Of Total	Avg. Speed
N	0	1	2	1	3	0	0	0	7	4.5%	8.9
NNE	0	0	0	2	4	0	0	0	6	3.9%	12.0
NE	0	0	3	5	0	0	0	0	8	5.2%	9.2
ENE	0	0	1	0	0	0	0	0	1	0.6%	6.4
E	0	0	1	1	0	0	0	0	2	1.3%	9.3
ESE	0	0	1	5	6	1	0	0	13	8.4%	13.7
SE	0	0	2	12	10	2	0	0	26	16.8%	12.8
SSE	0	0	2	30	15	0	0	0	47	30.3%	11.5
S	0	0	1	17	11	0	0	0	29	18.7%	11.5
SSW	0	0	3	1	0	0	0	0	4	2.6%	6.4
SW	0	0	1	1	0	0	0	0	2	1.3%	6.6
WSW	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
WNW	0	1	3	0	0	0	0	0	4	2.6%	4.2
NW	0	0	0	0	0	0	0	0	0	0.0%	0.0
NNW	0	1	1	1	3	0	0	0	6	3.9%	9.9
Total	0	3	21	76	52	3	0	0	155		
% Of Total	0.0%	1.9%	13.5%	49.0%	33.5%	1.9%	0.0%	0.0%			

Average speed for this table (MPH): 11.2

Joint Frequency Table

From : 04/01/2004 00:00 **To :** 06/30/2004 23:00

PRIMARY TOWER

STABILTY CLASS D

Wind Speed (MPH) -> Sector	(1) CALM	(2) 1.0 - 3.5	(3) 3.6 - 7.5	(4) 7.6 - 12.5	(5) 12.6 - 18.5	(6) 18.6 - 24.5	(7) 24.6 - 32.5	(8) 32.6 +	Total	% Of Total	Avg. Speed
N	0	0	8	20	11	1	1	0	41	6.1%	10.8
NNE	0	1	9	13	4	1	0	0	28	4.1%	9.4
NE	0	0	7	7	7	0	0	0	21	3.1%	10.4
ENE	0	0	4	6	1	1	0	0	12	1.8%	10.3
E	0	2	5	7	5	0	0	0	19	2.8%	8.9
ESE	0	0	8	18	13	0	0	0	39	5.8%	10.9
SE	0	2	26	50	71	5	0	0	154	22.7%	11.7
SSE	0	1	15	91	72	3	0	0	182	26.9%	11.9
S	0	0	13	59	34	0	0	0	106	15.7%	11.3
SSW	0	0	5	10	0	0	0	0	15	2.2%	8.2
SW	0	0	2	1	1	0	0	0	4	0.6%	8.6
WSW	0	0	1	2	0	0	0	0	3	0.4%	7.9
W	0	0	1	1	0	0	0	0	2	0.3%	8.1
WNW	0	1	1	3	0	0	0	0	5	0.7%	7.6
NW	0	3	2	10	2	0	0	0	17	2.5%	9.1
NNW	0	1	3	11	14	0	0	0	29	4.3%	11.9
Total	0	11	110	309	235	11	1	0	677		
% Of Total	0.0%	1.6%	16.2%	45.6%	34.7%	1.6%	0.1%	0.0%			

Average speed for this table (MPH): 11.1

Joint Frequency Table

From : 04/01/2004 00:00 **To :** 06/30/2004 23:00

PRIMARY TOWER

STABILTY CLASS E

Wind Speed (MPH) -> / Sector	(1) CALM	(2) 1.0 - 3.5	(3) 3.6 - 7.5	(4) 7.6 - 12.5	(5) 12.6 - 18.5	(6) 18.6 - 24.5	(7) 24.6 - 32.5	(8) 32.6 +	Total	% Of Total	Avg. Speed
N	0	3	10	5	0	0	0	0	18	2.8%	6.2
NNE	0	1	8	1	1	0	0	0	11	1.7%	7.3
NE	0	1	11	5	2	0	0	0	19	3.0%	7.7
ENE	0	3	11	5	0	0	0	0	19	3.0%	5.9
E	0	1	12	13	1	0	0	0	27	4.2%	7.6
ESE	0	4	29	17	1	1	1	0	53	8.3%	7.3
SE	0	2	78	57	7	0	0	0	144	22.6%	7.7
SSE	0	0	59	131	17	0	0	0	207	32.5%	9.0
S	0	1	20	51	6	0	0	0	78	12.2%	9.1
SSW	0	0	16	4	0	0	0	0	20	3.1%	6.2
SW	0	0	4	8	0	0	0	0	12	1.9%	8.6
WSW	0	0	1	1	0	0	0	0	2	0.3%	7.3
W	0	1	4	1	0	0	0	0	6	0.9%	5.4
WNW	0	1	1	0	0	0	0	0	2	0.3%	3.3
NW	0	3	5	3	0	0	0	0	11	1.7%	6.1
NNW	0	1	7	0	0	0	0	0	8	1.3%	5.2
Total	0	22	276	302	35	1	1	0	637		
% Of Total	0.0%	3.5%	43.3%	47.4%	5.5%	0.2%	0.2%	0.0%			

Average speed for this table (MPH): 8.0

Joint Frequency Table

From : 04/01/2004 00:00 **To :** 06/30/2004 23:00

PRIMARY TOWER

STABILTY CLASS F

Wind Speed (MPH) -> Sector	(1) CALM	(2) 1.0 - 3.5	(3) 3.6 - 7.5	(4) 7.6 - 12.5	(5) 12.6 - 18.5	(6) 18.6 - 24.5	(7) 24.6 - 32.5	(8) 32.6 +	Total	% Of Total	Avg. Speed
N	0	3	5	0	0	0	0	0	8	4.4%	4.3
NNE	0	5	5	0	0	0	0	0	10	5.5%	4.0
NE	0	2	8	0	0	0	0	0	10	5.5%	3.8
ENE	0	3	7	0	0	0	0	0	10	5.5%	3.7
E	0	6	7	2	0	0	0	0	15	8.2%	4.7
ESE	0	6	14	0	0	0	0	0	20	11.0%	4.0
SE	0	7	45	1	0	0	0	0	53	29.1%	5.0
SSE	0	4	26	0	1	0	0	0	31	17.0%	6.0
S	0	0	0	0	0	0	0	0	0	0.0%	0.0
SSW	0	0	5	2	0	0	0	0	7	3.8%	7.0
SW	0	0	1	0	0	0	0	0	1	0.5%	3.8
WSW	0	1	1	0	0	0	0	0	2	1.1%	4.2
W	0	1	0	0	0	0	0	0	1	0.5%	3.4
WNW	0	1	1	0	0	0	0	0	2	1.1%	4.6
NW	0	2	3	0	0	0	0	0	5	2.7%	3.5
NNW	0	3	4	0	0	0	0	0	7	3.8%	3.9
Total	0	44	132	5	1	0	0	0	182		
% Of Total	0.0%	24.2%	72.5%	2.7%	0.5%	0.0%	0.0%	0.0%			

Average speed for this table (MPH): 4.8

Joint Frequency Table

From : 04/01/2004 00:00 **To :** 06/30/2004 23:00

PRIMARY TOWER

STABILTY CLASS G

Wind Speed (MPH) -> Sector	(1) CALM	(2) 1.0 - 3.5	(3) 3.6 - 7.5	(4) 7.6 - 12.5	(5) 12.6 - 18.5	(6) 18.6 - 24.5	(7) 24.6 - 32.5	(8) 32.6 +	Total	% Of Total	Avg. Speed
N	0	2	2	0	0	0	0	0	4	4.8%	3.8
NNE	0	3	3	0	0	0	0	0	6	7.1%	3.5
NE	0	4	4	0	0	0	0	0	8	9.5%	3.4
ENE	0	6	4	0	0	0	0	0	10	11.9%	3.1
E	0	10	3	0	0	0	0	0	13	15.5%	3.0
ESE	0	1	2	0	0	0	0	0	3	3.6%	4.1
SE	0	1	8	0	0	0	0	0	9	10.7%	4.2
SSE	0	0	7	0	0	0	0	0	7	8.3%	6.3
S	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
SW	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
W	0	0	2	0	0	0	0	0	2	2.4%	4.4
WNW	0	10	0	0	0	0	0	0	10	11.9%	2.5
NW	0	2	6	0	0	0	0	0	8	9.5%	3.9
NNW	0	2	2	0	0	0	0	0	4	4.8%	3.6
Total	0	41	43	0	0	0	0	0	84		
% Of Total	0.0%	48.8%	51.2%	0.0%	0.0%	0.0%	0.0%	0.0%			

Average speed for this table (MPH): 3.7

Third Quarter 2004

Joint Frequency Tables

Joint Frequency Table

From : 07/01/2004 00:00 **To :** 09/30/2004 23:00

PRIMARY TOWER

ALL STABILITY CLASSES COMBINED

Wind Speed (MPH) -> / Sector	(1) CALM	(2) 1.0 - 3.5	(3) 3.6 - 7.5	(4) 7.6 - 12.5	(5) 12.6 - 18.5	(6) 18.6 - 24.5	(7) 24.6 - 32.5	(8) 32.6 +	Total	% Of Total	Avg. Speed
N	0	30	68	26	0	0	0	0	124	6.0%	5.6
NNE	0	44	97	36	0	0	0	0	177	8.6%	5.4
NE	0	60	97	39	1	0	0	0	197	9.5%	5.3
ENE	0	36	62	36	0	0	0	0	134	6.5%	5.7
E	0	22	64	30	18	0	0	0	134	6.5%	7.0
ESE	0	20	72	54	25	0	0	0	171	8.3%	7.9
SE	0	7	89	75	28	0	0	0	199	9.6%	8.2
SSE	0	3	111	159	12	0	0	0	285	13.8%	8.3
S	0	2	49	178	58	0	0	0	287	13.9%	10.1
SSW	0	4	40	56	4	0	0	0	104	5.0%	8.1
SW	0	4	21	17	1	0	0	0	43	2.1%	7.2
WSW	0	2	8	7	1	0	0	0	18	0.9%	7.5
W	0	1	11	2	5	0	0	0	19	0.9%	7.8
WNW	0	6	27	4	0	0	0	0	37	1.8%	5.3
NW	0	8	38	3	0	0	0	0	49	2.4%	5.0
NNW	0	20	53	19	0	0	0	0	92	4.4%	5.3
Total	0	269	907	741	153	0	0	0	2070		
% Of Total	0.0%	13.0%	43.8%	35.8%	7.4%	0.0%	0.0%	0.0%			

Average speed for this table (MPH):	6.9
Hours in above table with variable direction :	0
Total number of CALMs :	0
Total number of Invalid hours :	138
Total number of Valid hours :	2070
Total number of hours for period :	2208

Joint Frequency Table

From : 07/01/2004 00:00 **To :** 09/30/2004 23:00

PRIMARY TOWER

STABILTY CLASS A

Wind Speed (MPH) -> Sector	(1) CALM	(2) 1.0 - 3.5	(3) 3.6 - 7.5	(4) 7.6 - 12.5	(5) 12.6 - 18.5	(6) 18.6 - 24.5	(7) 24.6 - 32.5	(8) 32.6 +	Total	% Of Total	Avg. Speed
N	0	0	15	8	0	0	0	0	23	8.0%	7.3
NNE	0	2	8	3	0	0	0	0	13	4.5%	5.5
NE	0	0	5	6	1	0	0	0	12	4.2%	7.7
ENE	0	1	7	10	0	0	0	0	18	6.3%	8.2
E	0	0	0	3	3	0	0	0	6	2.1%	11.5
ESE	0	1	2	15	6	0	0	0	24	8.4%	11.0
SE	0	0	1	18	15	0	0	0	34	11.8%	11.6
SSE	0	0	7	19	5	0	0	0	31	10.8%	9.6
S	0	0	9	43	8	0	0	0	60	20.9%	9.9
SSW	0	1	9	8	0	0	0	0	18	6.3%	7.1
SW	0	1	9	0	0	0	0	0	10	3.5%	5.1
WSW	0	1	1	1	0	0	0	0	3	1.0%	5.7
W	0	0	3	1	0	0	0	0	4	1.4%	6.3
WNW	0	0	0	0	0	0	0	0	0	0.0%	0.0
NW	0	3	7	0	0	0	0	0	10	3.5%	4.5
NNW	0	0	12	9	0	0	0	0	21	7.3%	7.3
Total	0	10	95	144	38	0	0	0	287		
% Of Total	0.0%	3.5%	33.1%	50.2%	13.2%	0.0%	0.0%	0.0%			

Average speed for this table (MPH): 8.8

Joint Frequency Table

From : 07/01/2004 00:00 **To :** 09/30/2004 23:00

PRIMARY TOWER

STABILTY CLASS B

Wind Speed (MPH) -> Sector	(1) CALM	(2) 1.0 - 3.5	(3) 3.6 - 7.5	(4) 7.6 - 12.5	(5) 12.6 - 18.5	(6) 18.6 - 24.5	(7) 24.6 - 32.5	(8) 32.6 +	Total	% Of Total	Avg. Speed
N	0	0	1	1	0	0	0	0	2	1.8%	7.6
NNE	0	0	4	2	0	0	0	0	6	5.4%	6.7
NE	0	1	2	2	0	0	0	0	5	4.5%	7.1
ENE	0	1	3	5	0	0	0	0	9	8.1%	7.8
E	0	0	2	6	1	0	0	0	9	8.1%	9.5
ESE	0	0	0	5	4	0	0	0	9	8.1%	11.9
SE	0	0	1	9	2	0	0	0	12	10.8%	10.6
SSE	0	0	1	19	1	0	0	0	21	18.9%	9.5
S	0	0	4	16	1	0	0	0	21	18.9%	9.6
SSW	0	0	3	2	0	0	0	0	5	4.5%	7.7
SW	0	0	3	0	0	0	0	0	3	2.7%	5.5
WSW	0	0	0	1	0	0	0	0	1	0.9%	8.0
W	0	0	1	0	0	0	0	0	1	0.9%	7.3
WNW	0	0	1	0	0	0	0	0	1	0.9%	5.4
NW	0	0	0	2	0	0	0	0	2	1.8%	10.6
NNW	0	0	1	3	0	0	0	0	4	3.6%	8.7
Total	0	2	27	73	9	0	0	0	111		
% Of Total	0.0%	1.8%	24.3%	65.8%	8.1%	0.0%	0.0%	0.0%			

Average speed for this table (MPH): 9.1

Joint Frequency Table

From : 07/01/2004 00:00 **To :** 09/30/2004 23:00

PRIMARY TOWER

STABILTY CLASS C

Wind Speed (MPH) -> Sector	(1) CALM	(2) 1.0 - 3.5	(3) 3.6 - 7.5	(4) 7.6 - 12.5	(5) 12.6 - 18.5	(6) 18.6 - 24.5	(7) 24.6 - 32.5	(8) 32.6 +	Total	% Of Total	Avg. Speed
N	0	2	3	3	0	0	0	0	8	5.1%	6.6
NNE	0	0	3	5	0	0	0	0	8	5.1%	8.7
NE	0	0	5	5	0	0	0	0	10	6.4%	7.6
ENE	0	1	1	6	0	0	0	0	8	5.1%	8.4
E	0	0	2	5	2	0	0	0	9	5.8%	10.7
ESE	0	0	2	4	2	0	0	0	8	5.1%	10.8
SE	0	0	2	17	5	0	0	0	24	15.4%	10.5
SSE	0	0	4	16	1	0	0	0	21	13.5%	9.7
S	0	0	5	21	2	0	0	0	28	17.9%	9.2
SSW	0	1	4	8	0	0	0	0	13	8.3%	7.9
SW	0	1	0	2	0	0	0	0	3	1.9%	7.9
WSW	0	0	1	0	0	0	0	0	1	0.6%	5.4
W	0	0	1	0	1	0	0	0	2	1.3%	9.3
WNW	0	0	4	2	0	0	0	0	6	3.8%	6.5
NW	0	0	1	0	0	0	0	0	1	0.6%	6.2
NNW	0	0	3	3	0	0	0	0	6	3.8%	7.1
Total	0	5	41	97	13	0	0	0	156		
% Of Total	0.0%	3.2%	26.3%	62.2%	8.3%	0.0%	0.0%	0.0%			

Average speed for this table (MPH): 9.0

Joint Frequency Table

From : 07/01/2004 00:00 **To :** 09/30/2004 23:00

PRIMARY TOWER

STABILTY CLASS D

Wind Speed (MPH) -> Sector	(1) CALM	(2) 1.0 - 3.5	(3) 3.6 - 7.5	(4) 7.6 - 12.5	(5) 12.6 - 18.5	(6) 18.6 - 24.5	(7) 24.6 - 32.5	(8) 32.6 +	Total	% Of Total	Avg. Speed
N	0	5	14	8	0	0	0	0	27	4.5%	5.9
NNE	0	6	14	9	0	0	0	0	29	4.8%	6.1
NE	0	6	17	19	0	0	0	0	42	7.0%	6.7
ENE	0	6	8	8	0	0	0	0	22	3.7%	6.5
E	0	2	14	5	10	0	0	0	31	5.1%	8.7
ESE	0	4	22	24	11	0	0	0	61	10.1%	8.6
SE	0	3	20	24	6	0	0	0	53	8.8%	8.1
SSE	0	1	22	70	4	0	0	0	97	16.1%	8.9
S	0	1	14	61	47	0	0	0	123	20.4%	11.2
SSW	0	2	12	28	4	0	0	0	46	7.6%	8.9
SW	0	1	6	11	1	0	0	0	19	3.2%	8.7
WSW	0	1	4	4	1	0	0	0	10	1.7%	8.3
W	0	0	1	0	4	0	0	0	5	0.8%	12.0
WNW	0	2	8	2	0	0	0	0	12	2.0%	5.4
NW	0	0	10	0	0	0	0	0	10	1.7%	4.8
NNW	0	3	9	3	0	0	0	0	15	2.5%	5.3
Total	0	43	195	276	88	0	0	0	602		
% Of Total	0.0%	7.1%	32.4%	45.8%	14.6%	0.0%	0.0%	0.0%			

Average speed for this table (MPH): 8.5

Joint Frequency Table

From : 07/01/2004 00:00 **To :** 09/30/2004 23:00

PRIMARY TOWER

STABILTY CLASS E

Wind Speed (MPH) -> / Sector	(1) CALM	(2) 1.0 - 3.5	(3) 3.6 - 7.5	(4) 7.6 - 12.5	(5) 12.6 - 18.5	(6) 18.6 - 24.5	(7) 24.6 - 32.5	(8) 32.6 +	Total	% Of Total	Avg. Speed
N	0	1	19	5	0	0	0	0	25	6.3%	6.1
NNE	0	3	10	12	0	0	0	0	25	6.3%	6.7
NE	0	3	10	7	0	0	0	0	20	5.0%	6.4
ENE	0	0	9	3	0	0	0	0	12	3.0%	5.8
E	0	1	17	10	2	0	0	0	30	7.5%	7.3
ESE	0	1	17	5	2	0	0	0	25	6.3%	6.7
SE	0	1	38	7	0	0	0	0	46	11.6%	6.4
SSE	0	1	59	35	1	0	0	0	96	24.1%	7.1
S	0	0	16	36	0	0	0	0	52	13.1%	8.2
SSW	0	0	12	10	0	0	0	0	22	5.5%	7.7
SW	0	1	1	4	0	0	0	0	6	1.5%	7.3
WSW	0	0	1	1	0	0	0	0	2	0.5%	7.6
W	0	0	1	1	0	0	0	0	2	0.5%	6.6
WNW	0	0	2	0	0	0	0	0	2	0.5%	5.6
NW	0	2	10	1	0	0	0	0	13	3.3%	5.1
NNW	0	5	14	1	0	0	0	0	20	5.0%	4.4
Total	0	19	236	138	5	0	0	0	398		
% Of Total	0.0%	4.8%	59.3%	34.7%	1.3%	0.0%	0.0%	0.0%			

Average speed for this table (MPH): 6.8

Joint Frequency Table

From : 07/01/2004 00:00 **To :** 09/30/2004 23:00

PRIMARY TOWER

STABILTY CLASS F

Wind Speed (MPH) -> / Sector	(1) CALM	(2) 1.0 - 3.5	(3) 3.6 - 7.5	(4) 7.6 - 12.5	(5) 12.6 - 18.5	(6) 18.6 - 24.5	(7) 24.6 - 32.5	(8) 32.6 +	Total	% Of Total	Avg. Speed
N	0	12	8	1	0	0	0	0	21	8.1%	3.9
NNE	0	14	23	4	0	0	0	0	41	15.8%	4.9
NE	0	4	20	0	0	0	0	0	24	9.2%	4.7
ENE	0	8	20	4	0	0	0	0	32	12.3%	4.7
E	0	12	20	1	0	0	0	0	33	12.7%	4.3
ESE	0	13	19	1	0	0	0	0	33	12.7%	4.4
SE	0	3	24	0	0	0	0	0	27	10.4%	4.7
SSE	0	1	18	0	0	0	0	0	19	7.3%	5.5
S	0	0	1	0	0	0	0	0	1	0.4%	4.8
SSW	0	0	0	0	0	0	0	0	0	0.0%	0.0
SW	0	0	2	0	0	0	0	0	2	0.8%	4.7
WSW	0	0	1	0	0	0	0	0	1	0.4%	6.8
W	0	1	4	0	0	0	0	0	5	1.9%	4.7
WNW	0	1	3	0	0	0	0	0	4	1.5%	4.1
NW	0	2	7	0	0	0	0	0	9	3.5%	4.5
NNW	0	3	5	0	0	0	0	0	8	3.1%	3.5
Total	0	74	175	11	0	0	0	0	260		
% Of Total	0.0%	28.5%	67.3%	4.2%	0.0%	0.0%	0.0%	0.0%			

Average speed for this table (MPH): 4.6

Joint Frequency Table

From : 07/01/2004 00:00 **To :** 09/30/2004 23:00

PRIMARY TOWER

STABILITY CLASS G

Wind Speed (MPH) -> / Sector	(1) CALM	(2) 1.0 - 3.5	(3) 3.6 - 7.5	(4) 7.6 - 12.5	(5) 12.6 - 18.5	(6) 18.6 - 24.5	(7) 24.6 - 32.5	(8) 32.6 +	Total	% Of Total	Avg. Speed
N	0	10	8	0	0	0	0	0	18	7.0%	3.5
NNE	0	19	35	1	0	0	0	0	55	21.5%	4.1
NE	0	46	38	0	0	0	0	0	84	32.8%	3.8
ENE	0	19	14	0	0	0	0	0	33	12.9%	3.6
E	0	7	9	0	0	0	0	0	16	6.3%	3.7
ESE	0	1	10	0	0	0	0	0	11	4.3%	5.4
SE	0	0	3	0	0	0	0	0	3	1.2%	4.3
SSE	0	0	0	0	0	0	0	0	0	0.0%	0.0
S	0	1	0	1	0	0	0	0	2	0.8%	7.4
SSW	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
WSW	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
WNW	0	3	9	0	0	0	0	0	12	4.7%	5.1
NW	0	1	3	0	0	0	0	0	4	1.6%	4.1
NNW	0	9	9	0	0	0	0	0	18	7.0%	3.5
Total	0	116	138	2	0	0	0	0	256		
% Of Total	0.0%	45.3%	53.9%	0.8%	0.0%	0.0%	0.0%	0.0%			

Average speed for this table (MPH): 4.0

Fourth Quarter 2004

Joint Frequency Tables

From : 10/01/2004 00:00 **To :** 12/31/2004 23:00

PRIMARY TOWER

ALL STABILITY CLASSES COMBINED

Wind Speed (MPH) -> Sector	(1) CALM	(2) 1.0 - 3.5	(3) 3.6 - 7.5	(4) 7.6 - 12.5	(5) 12.6 - 18.5	(6) 18.6 - 24.5	(7) 24.6 - 32.5	(8) 32.6 +	Total	% Of Total	Avg. Speed
N	0	24	61	60	61	3	0	0	209	9.6%	9.5
NNE	0	19	76	49	35	2	0	0	181	8.3%	8.3
NE	0	19	88	52	28	0	0	0	187	8.6%	7.9
ENE	0	13	65	49	6	0	0	0	133	6.1%	7.1
E	0	12	51	54	16	0	0	0	133	6.1%	7.9
ESE	0	16	66	32	12	1	0	0	127	5.8%	7.1
SE	0	6	81	48	17	0	0	0	152	7.0%	7.8
SSE	0	8	72	97	47	0	0	0	224	10.3%	9.3
S	0	3	71	137	88	2	0	0	301	13.8%	10.6
SSW	0	0	24	41	20	0	0	0	85	3.9%	9.9
SW	0	0	12	15	3	0	0	0	30	1.4%	8.6
WSW	0	2	8	9	4	0	0	0	23	1.1%	8.2
W	0	5	14	10	3	0	0	0	32	1.5%	7.4
WNW	0	13	31	14	3	0	0	0	61	2.8%	6.3
NW	0	15	51	25	26	0	0	0	117	5.4%	8.2
NNW	0	18	72	48	34	10	1	0	183	8.4%	9.1
Total	0	173	843	740	403	18	1	0	2178		
% Of Total	0.0%	7.9%	38.7%	34.0%	18.5%	0.8%	0.0%	0.0%			

Average speed for this table (MPH): 8.7
Hours in above table with variable direction : 0
Total number of CALMs : 0
Total number of Invalid hours : 30
Total number of Valid hours : 2178
Total number of hours for period : 2208

Joint Frequency Table

From : 10/01/2004 00:00 **To :** 12/31/2004 23:00

PRIMARY TOWER

STABILTY CLASS A

Wind Speed (MPH) -> / Sector	(1) CALM	(2) 1.0 - 3.5	(3) 3.6 - 7.5	(4) 7.6 - 12.5	(5) 12.6 - 18.5	(6) 18.6 - 24.5	(7) 24.6 - 32.5	(8) 32.6 +	Total	% Of Total	Avg. Speed
N	0	0	2	3	2	0	0	0	7	5.6%	10.4
NNE	0	0	2	2	0	0	0	0	4	3.2%	8.5
NE	0	0	0	0	1	0	0	0	1	0.8%	15.1
ENE	0	0	1	2	0	0	0	0	3	2.4%	8.2
E	0	0	1	2	0	0	0	0	3	2.4%	7.8
ESE	0	0	1	1	0	0	0	0	2	1.6%	7.8
SE	0	0	2	2	1	0	0	0	5	4.0%	9.9
SSE	0	0	3	4	4	0	0	0	11	8.9%	11.1
S	0	0	1	21	18	0	0	0	40	32.3%	12.3
SSW	0	0	1	2	10	0	0	0	13	10.5%	13.4
SW	0	0	2	0	3	0	0	0	5	4.0%	11.1
WSW	0	0	0	2	0	0	0	0	2	1.6%	9.9
W	0	1	0	3	1	0	0	0	5	4.0%	9.7
WNW	0	0	0	3	0	0	0	0	3	2.4%	10.5
NW	0	1	2	4	0	0	0	0	7	5.6%	7.4
NNW	0	0	5	5	3	0	0	0	13	10.5%	9.4
Total	0	2	23	56	43	0	0	0	124		
% Of Total	0.0%	1.6%	18.5%	45.2%	34.7%	0.0%	0.0%	0.0%			

Average speed for this table (MPH): 10.9

Joint Frequency Table

From : 10/01/2004 00:00 **To :** 12/31/2004 23:00

PRIMARY TOWER

STABILTY CLASS B

Wind Speed (MPH) -> / Sector	(1) CALM	(2) 1.0 - 3.5	(3) 3.6 - 7.5	(4) 7.6 - 12.5	(5) 12.6 - 18.5	(6) 18.6 - 24.5	(7) 24.6 - 32.5	(8) 32.6 +	Total	% Of Total	Avg. Speed
N	0	0	1	2	3	0	0	0	6	7.2%	11.6
NNE	0	0	3	1	0	0	0	0	4	4.8%	6.8
NE	0	0	1	1	1	0	0	0	3	3.6%	10.3
ENE	0	0	1	1	0	0	0	0	2	2.4%	7.4
E	0	0	2	3	0	0	0	0	5	6.0%	7.7
ESE	0	0	0	4	0	0	0	0	4	4.8%	9.2
SE	0	0	2	1	2	0	0	0	5	6.0%	11.0
SSE	0	0	0	1	3	0	0	0	4	4.8%	13.0
S	0	0	0	12	8	0	0	0	20	24.1%	12.3
SSW	0	0	0	4	2	0	0	0	6	7.2%	12.3
SW	0	0	3	3	0	0	0	0	6	7.2%	7.9
WSW	0	0	0	0	0	0	0	0	0	0.0%	0.0
W	0	0	1	1	0	0	0	0	2	2.4%	9.8
WNW	0	0	0	0	0	0	0	0	0	0.0%	0.0
NW	0	1	0	5	4	0	0	0	10	12.0%	11.5
NNW	0	0	1	0	5	0	0	0	6	7.2%	13.6
Total	0	1	15	39	28	0	0	0	83		
% Of Total	0.0%	1.2%	18.1%	47.0%	33.7%	0.0%	0.0%	0.0%			

Average speed for this table (MPH): 10.9

Joint Frequency Table

From : 10/01/2004 00:00 **To :** 12/31/2004 23:00

PRIMARY TOWER

STABILTY CLASS C

Wind Speed (MPH) -> / Sector	(1) CALM	(2) 1.0 - 3.5	(3) 3.6 - 7.5	(4) 7.6 - 12.5	(5) 12.6 - 18.5	(6) 18.6 - 24.5	(7) 24.6 - 32.5	(8) 32.6 +	Total	% Of Total	Avg. Speed
N	0	0	1	4	2	1	0	0	8	8.3%	12.1
NNE	0	0	1	3	3	1	0	0	8	8.3%	12.3
NE	0	0	6	5	2	0	0	0	13	13.5%	8.4
ENE	0	0	1	0	1	0	0	0	2	2.1%	9.5
E	0	0	1	0	2	0	0	0	3	3.1%	11.4
ESE	0	0	0	0	0	0	0	0	0	0.0%	0.0
SE	0	0	1	1	3	0	0	0	5	5.2%	12.1
SSE	0	0	0	2	2	0	0	0	4	4.2%	12.4
S	0	0	2	6	7	0	0	0	15	15.6%	11.9
SSW	0	0	1	0	4	0	0	0	5	5.2%	13.2
SW	0	0	4	0	0	0	0	0	4	4.2%	6.2
WSW	0	0	1	2	0	0	0	0	3	3.1%	7.4
W	0	0	0	0	0	0	0	0	0	0.0%	0.0
WNW	0	0	4	0	0	0	0	0	4	4.2%	6.7
NW	0	0	3	3	6	0	0	0	12	12.5%	11.5
NNW	0	0	1	2	7	0	0	0	10	10.4%	13.3
Total	0	0	27	28	39	2	0	0	96		
% Of Total	0.0%	0.0%	28.1%	29.2%	40.6%	2.1%	0.0%	0.0%			

Average speed for this table (MPH): 11.0

Joint Frequency Table

From : 10/01/2004 00:00 **To :** 12/31/2004 23:00

PRIMARY TOWER

STABILTY CLASS D

Wind Speed (MPH) -> / Sector	(1) CALM	(2) 1.0 - 3.5	(3) 3.6 - 7.5	(4) 7.6 - 12.5	(5) 12.6 - 18.5	(6) 18.6 - 24.5	(7) 24.6 - 32.5	(8) 32.6 +	Total	% Of Total	Avg. Speed
N	0	5	18	30	44	2	0	0	99	12.9%	11.4
NNE	0	2	23	35	29	1	0	0	90	11.7%	10.2
NE	0	4	34	24	20	0	0	0	82	10.6%	9.1
ENE	0	3	25	24	5	0	0	0	57	7.4%	8.0
E	0	3	7	7	8	0	0	0	25	3.2%	9.6
ESE	0	2	7	8	11	0	0	0	28	3.6%	10.4
SE	0	0	14	22	10	0	0	0	46	6.0%	9.7
SSE	0	3	10	35	34	0	0	0	82	10.6%	11.2
S	0	0	15	45	40	2	0	0	102	13.2%	11.8
SSW	0	0	6	6	0	0	0	0	12	1.6%	8.0
SW	0	0	2	5	0	0	0	0	7	0.9%	8.4
WSW	0	0	3	0	0	0	0	0	3	0.4%	4.8
W	0	1	2	0	1	0	0	0	4	0.5%	7.3
WNW	0	2	4	8	2	0	0	0	16	2.1%	8.6
NW	0	5	16	6	15	0	0	0	42	5.5%	9.4
NNW	0	1	20	29	16	8	1	0	75	9.7%	11.1
Total	0	31	206	284	235	13	1	0	770		
% Of Total	0.0%	4.0%	26.8%	36.9%	30.5%	1.7%	0.1%	0.0%			

Average speed for this table (MPH): 10.3

Joint Frequency Table

From : 10/01/2004 00:00 **To :** 12/31/2004 23:00

PRIMARY TOWER

STABILTY CLASS E

Wind Speed (MPH) -> / Sector	(1) CALM	(2) 1.0 - 3.5	(3) 3.6 - 7.5	(4) 7.6 - 12.5	(5) 12.6 - 18.5	(6) 18.6 - 24.5	(7) 24.6 - 32.5	(8) 32.6 +	Total	% Of Total	Avg. Speed
N	0	6	26	18	10	0	0	0	60	9.2%	8.2
NNE	0	5	26	8	3	0	0	0	42	6.5%	6.8
NE	0	4	28	14	4	0	0	0	50	7.7%	7.6
ENE	0	0	17	17	0	0	0	0	34	5.2%	7.8
E	0	3	16	35	6	0	0	0	60	9.2%	8.7
ESE	0	4	18	19	1	1	0	0	43	6.6%	7.9
SE	0	0	22	20	1	0	0	0	43	6.6%	7.5
SSE	0	0	26	52	4	0	0	0	82	12.6%	8.8
S	0	0	30	47	15	0	0	0	92	14.2%	9.5
SSW	0	0	13	26	4	0	0	0	43	6.6%	9.0
SW	0	0	1	5	0	0	0	0	6	0.9%	8.8
WSW	0	1	2	4	2	0	0	0	9	1.4%	9.1
W	0	1	2	3	1	0	0	0	7	1.1%	8.0
WNW	0	2	5	3	1	0	0	0	11	1.7%	6.9
NW	0	0	14	7	1	0	0	0	22	3.4%	7.3
NNW	0	3	27	10	3	2	0	0	45	6.9%	7.5
Total	0	29	273	288	56	3	0	0	649		
% Of Total	0.0%	4.5%	42.1%	44.4%	8.6%	0.5%	0.0%	0.0%			

Average speed for this table (MPH): 8.2

Joint Frequency Table

From : 10/01/2004 00:00 **To :** 12/31/2004 23:00

PRIMARY TOWER

STABILTY CLASS F

Wind Speed (MPH) -> / Sector	(1) CALM	(2) 1.0 - 3.5	(3) 3.6 - 7.5	(4) 7.6 - 12.5	(5) 12.6 - 18.5	(6) 18.6 - 24.5	(7) 24.6 - 32.5	(8) 32.6 +	Total	% Of Total	Avg. Speed
N	0	2	7	1	0	0	0	0	10	4.3%	5.4
NNE	0	2	13	0	0	0	0	0	15	6.4%	5.2
NE	0	2	10	5	0	0	0	0	17	7.3%	5.9
ENE	0	1	8	4	0	0	0	0	13	5.6%	5.6
E	0	0	16	7	0	0	0	0	23	9.9%	5.9
ESE	0	3	28	0	0	0	0	0	31	13.3%	4.6
SE	0	2	27	2	0	0	0	0	31	13.3%	5.6
SSE	0	2	27	3	0	0	0	0	32	13.7%	5.8
S	0	3	21	6	0	0	0	0	30	12.9%	6.5
SSW	0	0	3	3	0	0	0	0	6	2.6%	7.9
SW	0	0	0	2	0	0	0	0	2	0.9%	9.4
WSW	0	0	2	1	2	0	0	0	5	2.1%	9.7
W	0	1	4	0	0	0	0	0	5	2.1%	4.5
WNW	0	2	3	0	0	0	0	0	5	2.1%	4.0
NW	0	0	2	0	0	0	0	0	2	0.9%	5.7
NNW	0	2	4	0	0	0	0	0	6	2.6%	4.4
Total	0	22	175	34	2	0	0	0	233		
% Of Total	0.0%	9.4%	75.1%	14.6%	0.9%	0.0%	0.0%	0.0%			

Average speed for this table (MPH): 5.7

Joint Frequency Table

From : 10/01/2004 00:00 **To :** 12/31/2004 23:00

PRIMARY TOWER

STABILTY CLASS G

Wind Speed (MPH) -> Sector	(1) CALM	(2) 1.0 - 3.5	(3) 3.6 - 7.5	(4) 7.6 - 12.5	(5) 12.6 - 18.5	(6) 18.6 - 24.5	(7) 24.6 - 32.5	(8) 32.6 +	Total	% Of Total	Avg. Speed
N	0	11	6	2	0	0	0	0	19	8.5%	3.7
NNE	0	10	8	0	0	0	0	0	18	8.1%	3.6
NE	0	9	9	3	0	0	0	0	21	9.4%	4.5
ENE	0	9	12	1	0	0	0	0	22	9.9%	4.0
E	0	6	8	0	0	0	0	0	14	6.3%	4.1
ESE	0	7	12	0	0	0	0	0	19	8.5%	3.8
SE	0	4	13	0	0	0	0	0	17	7.6%	4.7
SSE	0	3	6	0	0	0	0	0	9	4.0%	4.3
S	0	0	2	0	0	0	0	0	2	0.9%	4.5
SSW	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
WSW	0	1	0	0	0	0	0	0	1	0.4%	2.3
W	0	1	5	3	0	0	0	0	9	4.0%	6.7
WNW	0	7	15	0	0	0	0	0	22	9.9%	4.2
NW	0	8	14	0	0	0	0	0	22	9.9%	3.8
NNW	0	12	14	2	0	0	0	0	28	12.6%	4.4
Total	0	88	124	11	0	0	0	0	223		
% Of Total	0.0%	39.5%	55.6%	4.9%	0.0%	0.0%	0.0%	0.0%			

Average speed for this table (MPH): 4.2

First Quarter 2004

Batch Releases

Joint Frequency Tables

From: 03/31/2004 12:00 to 03/31/2004 23:00

Joint Frequency Table- Batch Release Hours

From 01/01/2004 00:00 To 03/31/2004 23:00

ALL STABILITY CLASSES COMBINED

Wind Speed (MPH)→ Sector	calm	1- 3.5	3.6- 7.5	7.6- 12.5	12.6- 18.5	18.6- 24.5	24.6- 32.5	>32.5	Total	%total	avg speed
N	0	0	0	0	0	0	0	0	0	0.0%	
NNE	0	0	0	0	0	0	0	0	0	0.0%	
NE	0	0	0	0	0	0	0	0	0	0.0%	
ENE	0	0	0	0	0	0	0	0	0	0.0%	
ENE	0	0	0	0	0	0	0	0	0	0.0%	
ESE	0	0	0	0	0	0	0	0	0	0.0%	
SE	0	0	0	0	0	0	0	0	0	0.0%	
SSE	0	0	1	1	0	0	0	0	2	16.7%	7.8
S	0	0	3	1	0	0	0	0	4	33.3%	6.7
SSW	0	0	2	1	0	0	0	0	3	25.0%	7.1
SW	0	0	0	0	0	0	0	0	0	0.0%	
WSW	0	0	0	0	0	0	0	0	0	0.0%	
WSW	0	0	1	0	0	0	0	0	1	8.3%	5.6
WNW	0	0	1	0	0	0	0	0	1	8.3%	5.6
NW	0	0	0	0	0	0	0	0	0	0.0%	
NNW	0	0	1	0	0	0	0	0	1	8.3%	5.6
Total	**0**	**0**	**9**	**3**	**0**	**0**	**0**	**0**	**12**		
% total	0.0%	0.0%	75.0%	25.0%	0.0%	0.0%	0.0%	0.0%			
Average speed of this table (MPH):				6.7							
Total number of CALMS:				0							
Total number of Invalid hours:				0							
Total number of Valid hours:				12							
Total number of hours for period:				12							

Joint Frequency Table- Batch Release Hours

From 01/01/2004 00:00 To 03/31/2004 23:00

STABILITY CLASS A

	Stability Class A										
Wind Speed (MPH) Sector	calm	1- 3.5	3.6- 7.5	7.6- 12.5	12.6- 18.5	18.6- 24.5	24.6- 32.5	>32.5	Total	%total	avg speed
N	0	0	0	0	0	0	0	0	0	0.0%	
NNE	0	0	0	0	0	0	0	0	0	0.0%	
NE	0	0	0	0	0	0	0	0	0	0.0%	
ENE	0	0	0	0	0	0	0	0	0	0.0%	
ENE	0	0	0	0	0	0	0	0	0	0.0%	
ESE	0	0	0	0	0	0	0	0	0	0.0%	
SE	0	0	0	1	0	0	0	0	1	25.0%	10.1
SSE	0	0	0	0	0	0	0	0	0	0.0%	
S	0	0	0	0	0	0	0	0	0	0.0%	
SSW	0	0	0	0	0	0	0	0	0	0.0%	
SW	0	0	0	0	0	0	0	0	0	0.0%	
WSW	0	0	0	0	0	0	0	0	0	0.0%	
WSW	0	0	1	0	0	0	0	0	1	25.0%	5.6
WNW	0	0	1	0	0	0	0	0	1	25.0%	5.6
NW	0	0	0	0	0	0	0	0	0	0.0%	
NNW	0	0	1	0	0	0	0	0	1	25.0%	5.6
Total	0	0	3	1	0	0	0	0	4		
% total	0.0%	0.0%	75.0%	25.0%	0.0%	0.0%	0.0%	0.0%			
Average speed of this table (MPH):				6.7							

Joint Frequency Table- Batch Release Hours

From 01/01/2004 00:00 To 03/31/2004 23:00

STABILITY CLASS B

Wind Speed (MPH) Sector	calm	1- 3.5	3.6- 7.5	7.6- 12.5	12.6- 18.5	18.6- 24.5	24.6- 32.5	>32.5	Total	%total	avg speed
N	0	0	0	0	0	0	0	0	0	0.0%	
NNE	0	0	0	0	0	0	0	0	0	0.0%	
NE	0	0	0	0	0	0	0	0	0	0.0%	
ENE	0	0	0	0	0	0	0	0	0	0.0%	
ENE	0	0	0	0	0	0	0	0	0	0.0%	
ESE	0	0	0	0	0	0	0	0	0	0.0%	
SE	0	0	0	0	0	0	0	0	0	0.0%	
SSE	0	0	0	1	0	0	0	0	1	100.0%	10.1
S	0	0	0	0	0	0	0	0	0	0.0%	
SSW	0	0	0	0	0	0	0	0	0	0.0%	
SW	0	0	0	0	0	0	0	0	0	0.0%	
WSW	0	0	0	0	0	0	0	0	0	0.0%	
WSW	0	0	0	0	0	0	0	0	0	0.0%	
WNW	0	0	0	0	0	0	0	0	0	0.0%	
NW	0	0	0	0	0	0	0	0	0	0.0%	
NNW	0	0	0	0	0	0	0	0	0	0.0%	
Total	0	0	0	1	0	0	0	0	1		
% total	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%			
Average speed of this table (MPH):				10.1							

Joint Frequency Table- Batch Release Hours

From 01/01/2004 00:00 To 03/31/2004 23:00

STABILITY CLASS C

Wind Speed (MPH) Sector	calm	1- 3.5	3.6- 7.5	7.6- 12.5	12.6- 18.5	18.6- 24.5	24.6- 32.5	>32.5	Total	%total	avg speed
N	0	0	0	0	0	0	0	0	0	0.0%	
NNE	0	0	0	0	0	0	0	0	0	0.0%	
NE	0	0	0	0	0	0	0	0	0	0.0%	
ENE	0	0	0	0	0	0	0	0	0	0.0%	
ENE	0	0	0	0	0	0	0	0	0	0.0%	
ESE	0	0	0	0	0	0	0	0	0	0.0%	
SE	0	0	0	0	0	0	0	0	0	0.0%	
SSE	0	0	0	0	0	0	0	0	0	0.0%	
S	0	0	0	0	0	0	0	0	0	0.0%	
SSW	0	0	0	0	0	0	0	0	0	0.0%	
SW	0	0	0	0	0	0	0	0	0	0.0%	
WSW	0	0	0	0	0	0	0	0	0	0.0%	
WSW	0	0	0	0	0	0	0	0	0	0.0%	
WNW	0	0	0	0	0	0	0	0	0	0.0%	
NW	0	0	0	0	0	0	0	0	0	0.0%	
NNW	0	0	0	0	0	0	0	0	0	0.0%	
Total	0	0	0	0	0	0	0	0	0		
% total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
Average speed of this table (MPH):				0.0							

Joint Frequency Table- Batch Release Hours

From 01/01/2004 00:00 To 03/31/2004 23:00

STABILITY CLASS D

Wind Speed (MPH) Sector	calm	1- 3.5	3.6- 7.5	7.6- 12.5	12.6- 18.5	18.6- 24.5	24.6- 32.5	>32.5	Total	%total	avg speed
N	0	0	0	0	0	0	0	0	0	0.0%	
NNE	0	0	0	0	0	0	0	0	0	0.0%	
NE	0	0	0	0	0	0	0	0	0	0.0%	
ENE	0	0	0	0	0	0	0	0	0	0.0%	
ENE	0	0	0	0	0	0	0	0	0	0.0%	
ESE	0	0	0	0	0	0	0	0	0	0.0%	
SE	0	0	0	0	0	0	0	0	0	0.0%	
SSE	0	0	0	0	0	0	0	0	0	0.0%	
S	0	0	0	1	0	0	0	0	1	100.0%	10.1
SSW	0	0	0	0	0	0	0	0	0	0.0%	
SW	0	0	0	0	0	0	0	0	0	0.0%	
WSW	0	0	0	0	0	0	0	0	0	0.0%	
WSW	0	0	0	0	0	0	0	0	0	0.0%	
WNW	0	0	0	0	0	0	0	0	0	0.0%	
NW	0	0	0	0	0	0	0	0	0	0.0%	
NNW	0	0	0	0	0	0	0	0	0	0.0%	
Total	0	0	0	1	0	0	0	0	1		
% total	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%			
Average speed of this table (MPH):				10.1							

Joint Frequency Table- Batch Release Hours

From 01/01/2004 00:00 To 03/31/2004 23:00

STABILITY CLASS E

Wind Speed (MPH) Sector	calm	1- 3.5	3.6- 7.5	7.6- 12.5	12.6- 18.5	18.6- 24.5	24.6- 32.5	>32.5	Total	%total	avg speed
N	0	0	0	0	0	0	0	0	0	0.0%	
NNE	0	0	0	0	0	0	0	0	0	0.0%	
NE	0	0	0	0	0	0	0	0	0	0.0%	
ENE	0	0	0	0	0	0	0	0	0	0.0%	
ENE	0	0	0	0	0	0	0	0	0	0.0%	
ESE	0	0	0	0	0	0	0	0	0	0.0%	
SE	0	0	0	0	0	0	0	0	0	0.0%	
SSE	0	0	0	0	0	0	0	0	0	0.0%	
S	0	0	1	0	0	0	0	0	1	100.0%	5.6
SSW	0	0	0	0	0	0	0	0	0	0.0%	
SW	0	0	0	0	0	0	0	0	0	0.0%	
WSW	0	0	0	0	0	0	0	0	0	0.0%	
WSW	0	0	0	0	0	0	0	0	0	0.0%	
WNW	0	0	0	0	0	0	0	0	0	0.0%	
NW	0	0	0	0	0	0	0	0	0	0.0%	
NNW	0	0	0	0	0	0	0	0	0	0.0%	
Total	0	0	1	0	0	0	0	0	1		
% total	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
Average speed of this table (MPH):				5.6							

Joint Frequency Table- Batch Release Hours

From 01/01/2004 00:00 To 03/31/2004 23:00

STABILITY CLASS F

Wind Speed (MPH) Sector	calm	1- 3.5	3.6- 7.5	7.6- 12.5	12.6- 18.5	18.6- 24.5	24.6- 32.5	>32.5	Total	%total	avg speed
N	0	0	0	0	0	0	0	0	0	0.0%	
NNE	0	0	0	0	0	0	0	0	0	0.0%	
NE	0	0	0	0	0	0	0	0	0	0.0%	
ENE	0	0	0	0	0	0	0	0	0	0.0%	
ENE	0	0	0	0	0	0	0	0	0	0.0%	
ESE	0	0	0	0	0	0	0	0	0	0.0%	
SE	0	0	0	0	0	0	0	0	0	0.0%	
SSE	0	0	2	0	0	0	0	0	2	66.7%	5.6
S	0	0	1	0	0	0	0	0	1	33.3%	5.6
SSW	0	0	0	0	0	0	0	0	0	0.0%	
SW	0	0	0	0	0	0	0	0	0	0.0%	
WSW	0	0	0	0	0	0	0	0	0	0.0%	
WSW	0	0	0	0	0	0	0	0	0	0.0%	
WNW	0	0	0	0	0	0	0	0	0	0.0%	
NW	0	0	0	0	0	0	0	0	0	0.0%	
NNW	0	0	0	0	0	0	0	0	0	0.0%	
Total	0	0	3	0	0	0	0	0	3		
% total	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
Average speed of this table (MPH):				5.6							

Joint Frequency Table- Batch Release Hours

From 01/01/2004 00:00 To 03/31/2004 23:00

STABILITY CLASS G

Wind Speed (MPH) Sector	calm	1- 3.5	3.6- 7.5	7.6- 12.5	12.6- 18.5	18.6- 24.5	24.6- 32.5	>32.5	Total	%total	avg speed
N	0	0	0	0	0	0	0	0	0	0.0%	
NNE	0	0	0	0	0	0	0	0	0	0.0%	
NE	0	0	0	0	0	0	0	0	0	0.0%	
ENE	0	0	0	0	0	0	0	0	0	0.0%	
ENE	0	0	0	0	0	0	0	0	0	0.0%	
ESE	0	0	0	0	0	0	0	0	0	0.0%	
SE	0	0	1	0	0	0	0	0	1	50.0%	5.6
SSE	0	0	1	0	0	0	0	0	1	50.0%	5.6
S	0	0	0	0	0	0	0	0	0	0.0%	
SSW	0	0	0	0	0	0	0	0	0	0.0%	
SW	0	0	0	0	0	0	0	0	0	0.0%	
WSW	0	0	0	0	0	0	0	0	0	0.0%	
WSW	0	0	0	0	0	0	0	0	0	0.0%	
WNW	0	0	0	0	0	0	0	0	0	0.0%	
NW	0	0	0	0	0	0	0	0	0	0.0%	
NNW	0	0	0	0	0	0	0	0	0	0.0%	
Total	0	0	2	0	0	0	0	0	2		
% total	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
Average speed of this table (MPH):				5.6							

Second Quarter 2004

Batch Releases

Joint Frequency Tables

From: 04/01/2004 00:00 To 04/06/2004 11:00
From: 04/07/2004 23:00 To 04/08/2004 07:00
From: 04/09/2004 20:00 To 04/09/2004 21:00
From: 04/09/2004 23:00 To 04/10/2004 08:00
From: 04/10/2004 22:00 To 04/24/2004 22:00

Joint Frequency Table- Batch Release Hours

From 04/01/2004 00:00 To 06/30/2004 23:00

ALL STABILITY CLASSES COMBINED

Wind Speed (MPH) Sector	calm	1- 3.5	3.6- 7.5	7.6- 12.5	12.6- 18.5	18.6- 24.5	24.6- 32.5	>32.5	Total	%total	avg speed
N	0	3	7	6	6	1	0	0	23	4.8%	9.6
NNE	0	2	4	2	2	0	0	0	10	2.1%	7.8
NE	0	5	8	6	2	0	0	0	21	4.4%	7.0
ENE	0	2	7	6	0	0	0	0	15	3.1%	6.9
ENE	0	4	3	12	1	0	0	0	20	4.2%	8.1
ESE	0	0	13	11	15	5	1	0	45	9.4%	12.3
SE	0	3	35	14	25	6	0	0	83	17.3%	10.4
SSE	0	2	23	39	60	4	0	0	128	26.7%	12.1
S	0	0	6	33	17	0	0	0	56	11.7%	11.2
SSW	0	0	5	5	0	0	0	0	10	2.1%	7.8
SW	0	0	2	3	1	0	0	0	6	1.3%	9.5
WSW	0	0	1	0	0	0	0	0	1	0.2%	5.6
WSW	0	1	1	1	0	0	0	0	3	0.6%	6.0
WNW	0	4	0	1	0	0	0	0	5	1.0%	3.8
NW	0	4	8	8	2	0	0	0	22	4.6%	7.5
NNW	0	2	4	15	10	0	0	0	31	6.5%	10.7
Total	**0**	**32**	**127**	**162**	**141**	**16**	**1**	**0**	**479**		
% total	0.0%	6.7%	26.5%	33.8%	29.4%	3.3%	0.2%	0.0%			
Average speed of this table (MPH):				10.3							
Total number of CALMS:				0							
Total number of Invalid hours:				10							
Total number of Valid hours:				479							
Total number of hours for period:				489							

Joint Frequency Table- Batch Release Hours

From 04/01/2004 00:00 To 06/30/2004 23:00

STABILITY CLASS A

Wind Speed (MPH) Sector	calm	1- 3.5	3.6- 7.5	7.6- 12.5	12.6- 18.5	18.6- 24.5	24.6- 32.5	>32.5	Total	%total	avg speed
N	0	0	0	0	0	0	0	0	0	0.0%	
NNE	0	0	0	0	0	0	0	0	0	0.0%	
NE	0	0	1	0	0	0	0	0	1	1.8%	5.6
ENE	0	0	0	2	0	0	0	0	2	3.6%	10.1
ENE	0	0	0	0	0	0	0	0	0	0.0%	
ESE	0	0	1	0	1	2	0	0	4	7.3%	16.1
SE	0	0	0	0	3	2	0	0	5	9.1%	18.0
SSE	0	0	0	1	15	2	0	0	18	32.7%	15.9
S	0	0	2	8	4	0	0	0	14	25.5%	11.0
SSW	0	0	1	3	0	0	0	0	4	7.3%	8.9
SW	0	0	0	0	0	0	0	0	0	0.0%	
WSW	0	0	0	0	0	0	0	0	0	0.0%	
WSW	0	0	0	0	0	0	0	0	0	0.0%	
WNW	0	0	0	0	0	0	0	0	0	0.0%	
NW	0	0	0	0	1	0	0	0	1	1.8%	15.6
NNW	0	0	0	6	0	0	0	0	6	10.9%	10.1
Total	0	0	5	20	24	6	0	0	55		
% total	0.0%	0.0%	9.1%	36.4%	43.6%	10.9%	0.0%	0.0%			
Average speed of this table (MPH):				13.6							

Joint Frequency Table- Batch Release Hours

From 04/01/2004 00:00 To 06/30/2004 23:00

STABILITY CLASS B

Wind Speed (MPH) Sector	calm	1- 3.5	3.6- 7.5	7.6- 12.5	12.6- 18.5	18.6- 24.5	24.6- 32.5	>32.5	Total	%total	avg speed
N	0	0	0	0	0	0	0	0	0	0.0%	
NNE	0	0	0	0	0	0	0	0	0	0.0%	
NE	0	0	0	0	0	0	0	0	0	0.0%	
ENE	0	0	0	0	0	0	0	0	0	0.0%	
ENE	0	0	0	0	0	0	0	0	0	0.0%	
ESE	0	0	0	2	2	1	0	0	5	19.2%	14.6
SE	0	0	0	0	1	0	0	0	1	3.8%	15.6
SSE	0	0	0	3	7	0	0	0	10	38.5%	13.9
S	0	0	0	4	2	0	0	0	6	23.1%	11.9
SSW	0	0	1	0	0	0	0	0	1	3.8%	5.6
SW	0	0	0	0	0	0	0	0	0	0.0%	
WSW	0	0	0	0	0	0	0	0	0	0.0%	
WSW	0	0	0	0	0	0	0	0	0	0.0%	
WNW	0	0	0	0	0	0	0	0	0	0.0%	
NW	0	0	0	0	0	0	0	0	0	0.0%	
NNW	0	0	1	2	0	0	0	0	3	11.5%	8.6
Total	**0**	**0**	**2**	**11**	**12**	**1**	**0**	**0**	**26**		
% total	0.0%	0.0%	7.7%	42.3%	46.2%	3.8%	0.0%	0.0%			
Average speed of this table (MPH):				12.9							

Joint Frequency Table- Batch Release Hours

From 04/01/2004 00:00 To 06/30/2004 23:00

STABILITY CLASS C

Wind Speed (MPH) Sector	calm	1- 3.5	3.6- 7.5	7.6- 12.5	12.6- 18.5	18.6- 24.5	24.6- 32.5	>32.5	Total	%total	avg speed
N	0	0	1	0	0	0	0	0	1	3.7%	5.6
NNE	0	0	0	0	0	0	0	0	0	0.0%	
NE	0	0	0	2	0	0	0	0	2	7.4%	10.1
ENE	0	0	0	0	0	0	0	0	0	0.0%	
ENE	0	0	0	1	0	0	0	0	1	3.7%	10.1
ESE	0	0	0	1	3	1	0	0	5	18.5%	15.7
SE	0	0	0	0	1	0	0	0	1	3.7%	15.6
SSE	0	0	1	0	5	0	0	0	6	22.2%	13.9
S	0	0	0	2	3	0	0	0	5	18.5%	13.4
SSW	0	0	1	0	0	0	0	0	1	3.7%	5.6
SW	0	0	0	0	0	0	0	0	0	0.0%	
WSW	0	0	0	0	0	0	0	0	0	0.0%	
WSW	0	0	0	0	0	0	0	0	0	0.0%	
WNW	0	0	0	0	0	0	0	0	0	0.0%	
NW	0	0	0	0	0	0	0	0	0	0.0%	
NNW	0	1	0	1	3	0	0	0	5	18.5%	11.8
Total	**0**	**1**	**3**	**7**	**15**	**1**	**0**	**0**	**27**		
% total	0.0%	3.7%	11.1%	25.9%	55.6%	3.7%	0.0%	0.0%			
Average speed of this table (MPH):				12.8							

Joint Frequency Table- Batch Release Hours

From 04/01/2004 00:00 To 06/30/2004 23:00

STABILITY CLASS D

Wind Speed (MPH) Sector	calm	1- 3.5	3.6- 7.5	7.6- 12.5	12.6- 18.5	18.6- 24.5	24.6- 32.5	>32.5	Total	%total	avg speed
N	0	0	0	3	6	1	0	0	10	6.5%	14.5
NNE	0	0	0	1	1	0	0	0	2	1.3%	12.8
NE	0	0	1	2	0	0	0	0	3	2.0%	8.6
ENE	0	0	1	2	0	0	0	0	3	2.0%	8.6
ENE	0	1	0	4	1	0	0	0	6	3.9%	9.7
ESE	0	0	2	4	8	0	0	0	14	9.2%	12.6
SE	0	0	0	7	19	4	0	0	30	19.6%	15.1
SSE	0	0	1	14	26	2	0	0	43	28.1%	13.8
S	0	0	1	5	7	0	0	0	13	8.5%	12.7
SSW	0	0	0	0	0	0	0	0	0	0.0%	
SW	0	0	1	0	1	0	0	0	2	1.3%	10.6
WSW	0	0	1	0	0	0	0	0	1	0.7%	5.6
WSW	0	0	0	0	0	0	0	0	0	0.0%	
WNW	0	0	0	1	0	0	0	0	1	0.7%	10.1
NW	0	1	2	8	1	0	0	0	12	7.8%	9.1
NNW	0	0	0	6	7	0	0	0	13	8.5%	13.0
Total	**0**	**2**	**10**	**57**	**77**	**7**	**0**	**0**	**153**		
% total	0.0%	1.3%	6.5%	37.3%	50.3%	4.6%	0.0%	0.0%			
Average speed of this table (MPH):				12.9							

Joint Frequency Table- Batch Release Hours

From 04/01/2004 00:00 To 06/30/2004 23:00

STABILITY CLASS E

Wind Speed (MPH) Sector	calm	1- 3.5	3.6- 7.5	7.6- 12.5	12.6- 18.5	18.6- 24.5	24.6- 32.5	>32.5	Total	%total	avg speed
N	0	0	3	3	0	0	0	0	6	5.6%	7.8
NNE	0	0	1	1	1	0	0	0	3	2.8%	10.4
NE	0	1	2	2	2	0	0	0	7	6.5%	9.2
ENE	0	0	2	2	0	0	0	0	4	3.7%	7.8
ENE	0	0	1	7	0	0	0	0	8	7.5%	9.5
ESE	0	0	3	4	1	1	1	0	10	9.3%	12.3
SE	0	0	7	7	1	0	0	0	15	14.0%	8.3
SSE	0	0	3	21	6	0	0	0	30	28.0%	10.7
S	0	0	3	14	1	0	0	0	18	16.8%	9.6
SSW	0	0	1	0	0	0	0	0	1	0.9%	5.6
SW	0	0	0	3	0	0	0	0	3	2.8%	10.1
WSW	0	0	0	0	0	0	0	0	0	0.0%	
WSW	0	0	0	1	0	0	0	0	1	0.9%	10.1
WNW	0	0	0	0	0	0	0	0	0	0.0%	
NW	0	0	1	0	0	0	0	0	1	0.9%	5.6
NNW	0	0	0	0	0	0	0	0	0	0.0%	
Total	0	1	27	65	12	1	1	0	107		
% total	0.0%	0.9%	25.2%	60.7%	11.2%	0.9%	0.9%	0.0%			
Average speed of this table (MPH):				9.5							

Joint Frequency Table- Batch Release Hours

From 04/01/2004 00:00 To 06/30/2004 23:00

STABILITY CLASS F

Wind Speed (MPH) Sector	calm	1- 3.5	3.6- 7.5	7.6- 12.5	12.6- 18.5	18.6- 24.5	24.6- 32.5	>32.5	Total	%total	avg speed
N	0	1	3	0	0	0	0	0	4	5.8%	4.7
NNE	0	1	1	0	0	0	0	0	2	2.9%	3.9
NE	0	0	2	0	0	0	0	0	2	2.9%	5.6
ENE	0	0	1	0	0	0	0	0	1	1.4%	5.6
ENE	0	0	1	0	0	0	0	0	1	1.4%	5.6
ESE	0	0	5	0	0	0	0	0	5	7.2%	5.6
SE	0	3	22	0	0	0	0	0	25	36.2%	5.2
SSE	0	2	14	0	1	0	0	0	17	24.6%	5.8
S	0	0	0	0	0	0	0	0	0	0.0%	
SSW	0	0	1	2	0	0	0	0	3	4.3%	8.6
SW	0	0	1	0	0	0	0	0	1	1.4%	5.6
WSW	0	0	0	0	0	0	0	0	0	0.0%	
WSW	0	1	0	0	0	0	0	0	1	1.4%	2.3
WNW	0	0	0	0	0	0	0	0	0	0.0%	
NW	0	1	2	0	0	0	0	0	3	4.3%	4.5
NNW	0	1	3	0	0	0	0	0	4	5.8%	4.7
Total	0	10	56	2	1	0	0	0	69		
% total	0.0%	14.5%	81.2%	2.9%	1.4%	0.0%	0.0%	0.0%			
Average speed of this table (MPH):				5.4							

Joint Frequency Table- Batch Release Hours

From 04/01/2004 00:00 To 06/30/2004 23:00

STABILITY CLASS G

Wind Speed (MPH) Sector	calm	1- 3.5	3.6- 7.5	7.6- 12.5	12.6- 18.5	18.6- 24.5	24.6- 32.5	>32.5	Total	%total	avg speed
N	0	2	0	0	0	0	0	0	2	4.8%	2.3
NNE	0	1	2	0	0	0	0	0	3	7.1%	4.5
NE	0	4	2	0	0	0	0	0	6	14.3%	3.4
ENE	0	2	3	0	0	0	0	0	5	11.9%	4.2
ENE	0	3	1	0	0	0	0	0	4	9.5%	3.1
ESE	0	0	2	0	0	0	0	0	2	4.8%	5.6
SE	0	0	6	0	0	0	0	0	6	14.3%	5.6
SSE	0	0	4	0	0	0	0	0	4	9.5%	5.6
S	0	0	0	0	0	0	0	0	0	0.0%	
SSW	0	0	0	0	0	0	0	0	0	0.0%	
SW	0	0	0	0	0	0	0	0	0	0.0%	
WSW	0	0	0	0	0	0	0	0	0	0.0%	
WSW	0	0	1	0	0	0	0	0	1	2.4%	5.6
WNW	0	4	0	0	0	0	0	0	4	9.5%	2.3
NW	0	2	3	0	0	0	0	0	5	11.9%	4.2
NNW	0	0	0	0	0	0	0	0	0	0.0%	
Total	0	18	24	0	0	0	0	0	42		
% total	0.0%	42.9%	57.1%	0.0%	0.0%	0.0%	0.0%	0.0%			
Average speed of this table (MPH):				3.7							

Third Quarter 2004

Batch Releases

Joint Frequency Tables

NO batch releases for this period.

Fourth Quarter 2004

Batch Releases

Joint Frequency Tables

NO batch releases for this period.

NUCLEAR OPERATING COMPANY

WE

STP