Completed by Generation in accordance with Technical Specifications for United States Nuclear Regulatory Commission License Nos. NPF-76 & NPF-80 April 2006

Authored by:

Kim W. Reynolds Staff Nuclear Chemist Chemistry Division

Technical Review:

Gordon E. Williams, CHP Health Physicist Health Physics Division

Approved by:

Richard A. Gangluff Manager Chemistry Division

2005 Radioactive Effluent Release Report

SOUTH TEXAS PROJECT ELECTRIC GENERATING STATION

RADIOACTIVE EFFLUENT RELEASE REPORT

2005

TABLE OF CONTENTS

PAGE

SUMMARY TAB

Summar	y and Introduction	************************			1-1
EFFLUEN	T PROGRAM TAB		an a		
Supplem	ental Information for Ef	filuent and Wast	te Disposal		2-1
R E A N E S S R N L L	Regulatory Limits Effluent Concentrations Limit Average Energy (Million Elec Aeasurement and Approxima Batch Releases Abnormal (Unplanned) Relea Estimate of Total Error Folid Waste Shipments Radiological Impact on Man Aeteorological Data Lower Limit of Detection Dose to Members of the Public	ts ctron Volts/Disinte ations of Total Acti ases	gration) vity		
Technica Requirer	al Specifications and Offsments	site Dose Calcul:	ation Manual Con	trols Reporting	3-1
C A R L G U A R	Offsite Dose Calculation Man Annual Land Use Census Radioactive Waste Treatment noperable Effluent Monitorin Gas Storage Tank Curie Limi Inprotected Outdoor Tank Cu Abnormal (Unplanned) Relea Radioactive Waste Process Co	nual Changes System Design Mong Instrumentation t Violation Descrip urie Limit Violation se Description ontrol Program Cha	odification Description Explanation otion n Description anges	on	

RADIOLOGICAL DATA TAB

Gaseous Effluents 4-1
Liquid Effluents
Solid Waste and Irradiated Fuel Shipments

2005

TABLE OF CONTENTS

PAGE

. . ·

DOSE DATA TAB

Dose Accumulations				
Results of the Protected Area Direct Radiation Measurement Pro	ogram 8-1			
METEOROLOGICAL DATA TAB	an a			
Joint Frequency Tables				
Joint Frequency Tables for First Quarter				
Joint Frequency Tables for Second Quarter				
Joint Frequency Tables for Third Quarter				
Joint Frequency Tables for Fourth Quarter				
Joint Frequency Tables for First Quarter Batch Release				
Joint Frequency Tables for Second Quarter Batch Release				
Joint Frequency Tables for Third Quarter Batch Release				
Joint Frequency Tables for Fourth Quarter Batch Release				
OFFSITE DOSE CALCULATION MANUAL TAB				

Offsite Dose Calculation Manual Revision 13.....

.

. .

RADIOACTIVE EFFLUENT RELEASE REPORT

2005

Report Summary

During 2005, 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 2005 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 2005, 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 0.07% of the limits of 40 C.F.R. §190. Based on our 2005 Land Use Census, real individuals reside in the West by Southwest 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 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. This estimated total body dose is calculated using models and exposure pathways described in our Offsite Dose

Calculation Manual for a hypothetical individual <u>offsite</u>. Other dose estimates for Members of the Public <u>onsite</u> are listed in the report using exposure pathways not addressed by standard dose calculation methods.

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 2005. 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 the South Texas Project is required to evaluate radioactive material 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 credible paths for radioactive material to reach a member of the public, such as consumption of vegetables from a garden, fish from the river,

RADIOACTIVE EFFLUENT RELEASE REPORT

2005

SOUTH TEXAS PROJECT Introduction and Summary

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, 2005, through December 31, 2005, 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 2005. Liquid effluents are discharged to the onsite 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	1.4E+02
PARTICULATE AND IODINES	GAS	OFFSITE	6.0E+09	4.3E-03
TRITTUM	GAS	OFFSITE	6.0E+09	2.1E+02
TRITIUM	LIQUID	OFFSITE	4.8E+06	2.5E+02
FISSION AND ACTIVATION PRODUCTS	LIQUID	OFFSITE	4.8E+06	4.3E-04
TRIITUM	LIQUID	ON-SITE	5.3E+04	1.9E+03
FISSION AND ACTIVATION PRODUCTS ⁽¹⁾	LIQUID	ON-SITE	5.3E+04	7.6E-02
SPENT RESINS AND FILTERS	SOLID	FOR BURIAL	6.8E+00	2.8E+02
DRY COMPRESSIBLE WASTE	SOLID	FOR BURIAL	2.7E+01	2.6E+00
OTHER WASTE (SECONDARY RESIN, CHARCOAL, AND FILTER CAKE)	SOLID	FOR BURIAL	2.4E+00	1.1E-04

⁽¹⁾Excludes 1.3 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).

1-4

 RADIOACTIVE EFFLUENT RELEASE REPORT
 2005

and when the second second

Supplemental Information for Effluent and Waste Disposal

المهور المي المراجع المحمد المراجع المعالم المواجع المراجع المراجع المراجع المراجع المحمد المواكر المراجع المحم المحمد المحمد المحمد المراجع المراجع المحمد المح المحمد المحمد

a series provide a series and seri A series and A series and series and

a segura de la composición de la compo A segura de la composición de la composi A segura de la composición de la composi

Supplemental Information for Effluent and Waste Disposal

The South Texas Project Electric Generating Station is located on 49,500,000 square meters (12,220 acres) in Matagorda County, Texas, approximately 24,000 meters (15 miles) southwest of Bay City along the west bank of the Colorado River. Until early 2005, the South Texas Project was jointly owned by Texas Genco LP, AEP Texas Central Company, the City of Austin and the City of San Antonio. In early 2005, the AEP Texas Central Company interest in the South Texas Project was transferred to Texas Genco LP 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 2005.

Reactor Coolant Liquid including tritium, fission products (excluding radioiodines), and corrosion and activation products

E-bar (Million Electron Volts/Disintegration)	n La china	di e e	0.315 *	Unit 1
	·* / · · · ·		0.0632 *	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.

Gaseous Effluents only Noble Gases

E-bar (Million Electron Volts/Disintegration)	0.267	Unit 1
	0.234	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 Gaseous Releases from the Reactor Containment Building

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 is 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 radioactive material 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. Continuous sampling for particulates and iodine is also performed on effluent streams. These samples are analyzed for tritium and gamma radionuclides, as described above for gaseous 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.

Secondary liquid grab samples in conjunction with the mass of the secondary coolant lost are used for quantifying secondary steam releases. The radioactive material in the steam is based on grab sample results of the secondary liquid. The secondary liquid is analyzed for gamma emitters and tritium.

Liquid Effluents

Analytical Methods For Liquid Releases

Supplemental Information for Effluent and Waste Disposal

Liquid batch releases include waste liquid treated by the liquid waste processing system and secondary chemical regeneration 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 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 radioactive material concentrations. Batch times represent the actual period of releases and the periods that the purge valves were open.

Liquid (Unit 1)

Γ	Liquid (Unit 1)	Quarter 1	Quarter 2	Quarter 3	Quarter 4
a.	Number of batch releases	23	17	22	2
b.	Total time period for batch releases (minutes)	1516	1098	1504	120
c.	Maximum time period for a batch release (minutes)	75	71	71	69
d.	Average time period for batch releases (minutes)	66	65	68	60
e.	Minimum time period for a batch release (minutes)	49	- 33	63	51

2-5

Supplemental Information for Effluent and Waste Disposal

Gaseous (Unit 1)

	Gaseous (Unit 1)	Quarter 1	Quarter 2	Quarter 3	Quarter 4
a.	Number of batch releases	10	3	0	0
b.	Total time period for batch releases (minutes)	27420	19500	0	0
c.	Maximum time period for a batch release (minutes)	7680	9720	0	0
d.	Average time period for batch releases (minutes)	2742	6500	0	0
e.	Minimum time period for a batch release (minutes)	120	480	0	0

Liquid (Unit 2)

	Liquid (Unit 2)	Quarter 1	Quarter 2	Quarter 3	Quarter 4
a.	Number of batch releases	35	15	29	23
b.	Total time period for batch releases (minutes)	2109	940	1791	1310
c.	Maximum time period for a batch release (minutes)	64	65	.66	63
d.	Average time period for batch releases (minutes)	60	63	62	57
e.	Minimum time period for a batch release (minutes)	47	57	34	30

Gaseous (Unit 2)

	Gaseous (Unit 2)	Quarter 1	Quarter 2	Quarter 3	Quarter 4
a. 1	Number of batch releases	4	0	1	10
b.	Total time period for batch releases (minutes)	5880	0	360	37920
c.	Maximum time period for a batch release (minutes)	4320	0	360	10620
d.	Average time period for batch releases (minutes)	1470	0	360	3792
e.	Minimum time period for a batch release (minutes)	180	0	360	240

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 \pm 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 $\pm 10\%$.

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 (less than 10	Activation Gases Low Activity microcurie per second)		· · · · ·	<u>+</u> 100%
Fission and (greater than	Activation Gases High Activity or equal to 10 microcurie per second)	· · · ·		<u>+</u> 20%
Iodines		• • •	• •	<u>+</u> 25%
Particulates		•		<u>+</u> 25%
Tritium	e de la companya de La companya de la comp	<i>,</i>	1	<u>+</u> 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 \pm 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 eighteen 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.

 $[2, \gamma_{1}]$

 $\frac{\partial r}{\partial t} = \frac{\partial r}{\partial t} = \frac{\partial r}{\partial t} + \frac{\partial r}{\partial t} +$

Radiological Impact on Man

The data for the period January 1, 2005, through December 31, 2005, 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 2005. 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 2005 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 2005. These dilution water flows were also used for estimating individual dose due to shoreline deposits. The radioactive material reported in the Liquid Effluent tables is the amount released to the Main Cooling Reservoir and does not contribute to dose until the radioactive material is released to unrestricted areas. In order to estimate the doses due to liquid effluents, the radioactive material reported must be adjusted by the values listed in the Offsite Dose Calculation Manual, Table B4-1, "Radionuclide Fractions N(i), Reaching Off-site Bodies of Water".

Meteorological Data

The 2005 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 radioactive material 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 2005, 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 2005 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 2005 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 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 0.20 millirem from radioactive effluents due to inhalation and immersion. This dose plus the direct radiation dose would yield 0.20 millirem, a small fraction of 10 C.F.R. §20.1301 annual limit.

Dose to Member of the Public from Radioactive Effluents Outside the Site Boundary using ODCM Exposure Pathways

During 2005, 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 0.07% of the limits of 40 C.F.R. §190. Based on our 2005 Land Use Census, real individuals reside in the West by Southwest 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. This estimated total body dose is calculated

using models and exposure pathways described in our Offsite Dose Calculation Manual for a hypothetical individual <u>offsite</u>. Other dose estimates for Members of the Public <u>onsite</u> are listed in the report using exposure pathways not addressed by standard dose calculation methods.

Dose to Member of the Public from Radioactive Effluents Outside the Site Boundary using Liquid to Gaseous Receptor Exposure Pathways

Consistent with normal operation of the units, approximately nineteen hundred curies of tritium were released to the Main Cooling Reservoir during 2005. Our ODCM models liquid, gaseous, and direct dose exposure pathways separately and lists methods for dose calculations using models and assumptions specified in Regulatory Guides issued by the Nuclear Regulatory Commission. The models used by our ODCM and NRC Regulatory Guides assume that radioactive material released in liquid effluent remains in liquid and any receptors are exposed via liquid pathways. Since some portion of the tritium released in liquid effluents evaporates from the main cooling reservoir, this section is included to provide an estimate of offsite dose from that gaseous source which is not modeled under our current licensing requirements. The Environmental Protection Agency has a code, Iclt3, approved to calculate airborne concentrations in regions around one or more area sources. Our main cooling reservoir with a surface area of about 28,300,000 square meters (7000 acres) is an area source and contributes tritium to the atmosphere. The atmospheric dispersion factor for the WSW sector at 4000 meters was estimated to be 4.01E-07 seconds per cubic meter using this EPA model and 2004 meteorological data. The product of X/O, tritium released to the MCR, and dose factor (87.9 millirem-cubic meter per second-curie) generated an estimated whole body dose of 0.07 millirem, a small fraction of the limits of 40 C.F.R. §190. A more complete description of the tritium dose to gaseous receptors from liquid effluent was evaluated by Condition Report 05-8815.

Sewage Sludge Land Farming

Sewage sludge removed from the West Sanitary Waste Treatment System was beneficially land applied onsite during 2005. This beneficial land application is not a radioactive effluent and is only reported to document this activity. The amount of radioactive material contained in the sludge was approximately 59 microcuries. This radioactive material includes nuclides of Cobalt-60 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 November 2005 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).

2-10

ALC: N. P.

and a start of the st A start of the start

2005

and the product of the second s

. **Technical Specifications and Offsite Dose Calculation Manual**

Controls Reporting Requirements

and the second second

and the second second

Technical Specifications and Offsite Dose Calculation Manual Controls Reporting Requirements

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

The ODCM must be formally reviewed at least once every 24-months. This review typically occurs in the fall in conjunction with the annual land use census. Any recommended changes identified since the last revision are considered at that time. Several changes to Revision 12 of the ODCM have been suggested over the past 24-months and include changes to sample location descriptions associated with the Radiological Environmental Monitoring Program (REMP). In addition, Licensing and Quality identified some corrections during the review and comment process.

The changes are summarized as follows:.

Replaced a reference to Technical Specification 6.14 with Technical Specification 6.8.3.n in a note to Table B5-1 of Part B that was not previously identified.

Some references in the ODCM were to the East *Branch* Little Robbins Slough rather than the East Fork. The UFSAR refers to East Fork so all occurrences of the name were changed to East Fork Little Robbins Slough.

TLD stations 38 and 40 in Table B5-3 were previously identified as necessary to meet the minimum sampling requirements of Table B5-1. That identification was removed by changing the type face from bold to normal.

A new water sampling station, #245, was added.

Some spelling errors were corrected.

These changes do not affect the methods used to calculate offsite doses or set points for effluent monitors. The changes do not affect STP's ability to meet the level of radioactive effluent control required by 10CFR20.1302, 40CFR190, 10CFR50.36a, and Appendix I to 10CFR50.

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

The Land Use Census identified one resident in the east north east sector at 7200 meters (4.5 miles). Additionally the resident located in the west by northwest sector distance to the resident was more accurately measured resulting in a change of distance from the plant from 7200 to 6400 meters (4.5 to 4.0 miles). The changes of the residents locations will be included in the next revision of the ODCM and is tracked by condition report 06-5126.

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 2005, inoperable liquid effluent monitoring instruments were corrected within the time specified in Sections 3.3.3.10 of Offsite Dose Calculation Manual Controls.

For 2005, 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.

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

There are no Unprotected Outdoor Tanks at South Texas Project Electric Generating Station. Therefore the quantity of radioactive material in any unprotected outdoor tank did not exceed the limit set forh in Section 3.11.1.4 of Technical Specifications.

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.

2005

÷

GASEOUS EFFLUENTS

.

4-1

SOUTH TEXAS PROJECT Gaseous Effluents

STP NUCLEAR OPERATING COMPANY SEMIANNUAL SUMMATION OF ALL RELEASES BY QUARTER ALL AIRBORNE EFFLUENTS Unit: 1

2005

Starting: 1-Jan-2005 Ending: 30-Jun-2005

TYPE OF EFFLUENT	UNITS	QUARTER 1	QUARTER 2	EST. TOT ERROR %
A. FISSION & ACTIVATION PRODUCTS				
1. TOTAL RELEASE	CURIES	3.26E+01	1.75E+01	100
2. AVERAGE RELEASE RATE FOR PERIOD	uCi/sec	4.19E+00	2.22E+00	
3. PERCENT OF LIMIT (9.60E+04 uCi/sec)	%	4.36E-03	2.31E-03	
B. RADIOIODINES				
1. IODINE-131	CURIES	1.49E-06	1.54E-06	25
2. AVERAGE RELEASE RATE FOR PERIOD	uCi/sec	1.92E-07	1.95E-07	
3. PERCENT OF LIMIT (4.00E-02 uCi/sec)	%	4.79E-04	4.88E-04	
C. PARTICULATES		· 新新教育学校学校		
1. PARTICULATES(HALF- LIVES>8 DAYS)	CURIES	8.05E-04	6.38E-04	25
2. AVERAGE RELEASE RATE FOR PERIOD	uCi/sec	1.04E-04	8.12E-05	
3. PERCENT OF LIMIT (3.00E-01 uCi/sec)	%	3.45E-02	2.71E-02	
4. GROSS ALPHA RADIOACTIVITY	CURIES	0.00E+00	0.00E+00	
D. TRITIUM		化,在这些主义不同时		
1. TOTAL RELEASE	%	2.11E+01	1.18E+01	50
2. AVERAGE RELEASE RATE FOR PERIOD	uCi/sec	2.71E+00	1.51E+00	
3. PERCENT OF LIMIT (1.80E+05 uCi/sec)	%	1.50E-03	8.36E-04	

RADIOACTIVE EFFLUENT RELEASE REPORT

2005

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 2005

		CONTINUOUS MODE		BATCH MODE	
NUCLIDES RELEASED	UNITS	QUARTER 1	QUARTER 2	QUARTER 1	QUARTER 2
FISSION GASES					
Argon-41	CURIES	8.40E-01	4.75E-01	1.74E+00	0.00E+00
Xenon-133	CURIES	2.02E+01	1.45E+01	9.79E+00	2.51E+00
TOTAL FOR PERIOD	CURIES	2.10E+01	1.49E+01	1.15E+01	2.51E+00
IODINES					
Iodine-131	CURIES	6.25E-08	6.86E-08	1.43E-06	-1.47E-06
Iodine-133	CURIES	0.00E+00	2.59E-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	6.25E-08	3.27E-07	1.43E-06	1.47E-06
PARTICULATES					
Beryllium-7	CURIES	3.30E-05	3.43E-05	2.18E-06	1.73E-06
Cobalt-57	CURIES	5.65E-08	0.00E+00	7.83E-07	3.03E-07
Cobalt-58	CURIES	2.47E-05	3.26E-05	2.54E-04	2.53E-04
Cobalt-60	CURIES	3.53E-06	6.04E-06	3.01E-05	2.57E-05
Chromium-51	CURIES	4.13E-05	1.11E-05	3.60E-04	2.28E-04
Cesium-137	CURIES	5.22E-09	1.74E-09	0.00E+00	0.00E+00
Iron-59	CURIES	4.94E-07	0.00E+00	9.46E-06	5.34E-06
Mercury-203	CURIES	2.86E-08	0.00E+00	2.39E-07	4.32E-07
Manganese-54	CURIES	1.38E-06	7.99E-07	1.37E-05	1.41E-05
Niobium-95	CURIES	1.81E-06	9.14E-07	1.62E-05	1.61E-05
Zirconium-95	CURIES	1.51E-06	7.53E-09	1.01E-05	7.57E-06
TOTAL FOR PERIOD	CURIES	1.08E-04	8.58E-05	6.97E-04	5.52E-04
OTHER					
Hydrogen-3 (Tritium)	CURIES	1.29E+01	1.03E+01	8.12E+00	1.49E+00
TOTAL FOR PERIOD	CURIES	1.29E+01	1.03E+01	8.12E+00	1.49E+00

SOUTH TEXAS PROJECT Gaseous Effluents

.

STP NUCLEAR OPERATING COMPANY SEMIANNUAL SUMMATION OF ALL RELEASES BY QUARTER ALL AIRBORNE EFFLUENTS

Unit: 1

4

Starting: 1-Jul-2005 Ending: 31-Dec-2005

. .

	• •	· · · ·		
TYPE OF EFFLUENT	UNITS	QUARTER 3	QUARTER 4	EST. TOT ERROR %
A. FISSION & ACTIVATION PRODUCTS				
1. TOTAL RELEASE	CURIES	1.11E+01	1.06E+01	100
2. AVERAGE RELEASE RATE FOR PERIOD	uCi/sec	1.40E+00	1.33E+00	
3. PERCENT OF LIMIT (9.60E+04 uCi/sec)	%	1.46E-03	1.39E-03	- x
B. RADIOIODINES				
1. IODINE-131	CURIES	9.34E-07	0.00E+00	25
2. AVERAGE RELEASE RATE FOR PERIOD	uCi/sec	1.18E-07	0.00E+00	
3. PERCENT OF LIMIT (4.00E-02 uCi/sec)	%	2.94E-04	0.00E+00	
C. PARTICULATES	和影響是影響的			
1. PARTICULATES(HALF- LIVES>8 DAYS)	CURIES	3.59E-05	3.26E-05	25
2. AVERAGE RELEASE RATE FOR PERIOD	uCi/sec	4.51E-06	4.10E-06	
3. PERCENT OF LIMIT (3.00E-01 uCi/sec)	%	1.50E-03	1.37E-03	
4. GROSS ALPHA RADIOACTIVITY	CURIES	0.00E+00	0.00E+00	
D. TRITIUM				
1. TOTAL RELEASE	%	3.10E+01	2.33E+01	50
2. AVERAGE RELEASE RATE FOR PERIOD	uCi/sec	3.90E+00	2.93E+00	
3. PERCENT OF LIMIT (1.80E+05 uCi/sec)	%	2.17E-03	1.63E-03	

RADIOACTIVE EFFLUENT RELEASE REPORT

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 2005

r.		CONTINUOUS MODE		BATCH MODE	
NUCLIDES RELEASED	UNITS	QUARTER 3	QUARTER 4	QUARTER 3	QUARTER 4
FISSION GASES					
Argon-41	CURIES	3.35E-01	5.51E-01	0.00E+00	0.00E+00
Xenon-133	CURIES	1.08E+01	1.00E+01	0.00E+00	0.00E+00
TOTAL FOR PERIOD	CURIES	1.11E+01	1.06E+01	0.00E+00	0.00E+00
IODINES					
Iodine-131	CURIES	9.34E-07	0.00E+00	0.00E+00	0.00E+00
Iodine-133	CURIES	3.49E-06	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	4.42E-06	0.00E+00	0.00E+00	0.00E+00
PARTICULATES					
Beryllium-7	CURIES	3.03E-05	3.26E-05	0.00E+00	0.00E+00
Cobalt-58	CURIES	4.87E-06	0.00E+00	0.00E+00	0.00E+00
Cobalt-60	CURIES	5.49E-07	0.00E+00	0.00E+00	0.00E+00
Cesium-137	CURIES	4.57E-09	0.00E+00	0.00E+00	0.00E+00
Manganese-54	CURIES	1.22E-07	0.00E+00	0.00E+00	0.00E+00
TOTAL FOR PERIOD	CURIES	3.59E-05	3.26E-05	0.00E+00) 0.00E+00
OTHER					
Hydrogen-3 (Tritium)	CURIES	3.10E+01	2.33E+01	0.00E+00	0.00E+00
TOTAL FOR PERIOD	CURIES	3.10E+01	2.33E+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-2005 Ending: 30-Jun-2005

TYPE OF EFFLUENT	UNITS	QUARTER 1	QUARTER 2	EST. TOT ERROR %
A. FISSION & ACTIVATION				
PRODUCTS				
1. TOTAL RELEASE	CURIES	2.60E+01	1.03E+00	100
2. AVERAGE RELEASE RATE FOR PERIOD	uCi/sec	3.34E+00	1.30E-01	
3. PERCENT OF LIMIT (9.60E+04 uCi/sec)	%	3.48E-03	1.36E-04	
B. RADIOIODINES				
1. IODINE-131	CURIES	1.55E-06	2.50E-06	25
2. AVERAGE RELEASE RATE FOR PERIOD	uCi/sec	1.99E-07	3.18E-07	
3. PERCENT OF LIMIT (4.00E-02 uCi/sec)	%	4.98E-04	7.96E-04	
C. PARTICULATES				
1. PARTICULATES(HALF- LIVES>8 DAYS)	CURIES	6.03E-05	2.95E-05	25
2. AVERAGE RELEASE RATE FOR PERIOD	uCi/sec	7.75E-06	3.75E-06	
3. PERCENT OF LIMIT (3.00E-01 uCi/sec)	%	2.58E-03	1.25E-03	
4. GROSS ALPHA RADIOACTIVITY	CURIES	0.00E+00	0.00E+00	
D. TRITIUM				
1. TOTAL RELEASE	%	7.51E+01	1.77E+01	50
2. AVERAGE RELEASE RATE FOR PERIOD	uCi/sec	9.66E+00	2.25E+00	
3. PERCENT OF LIMIT (1.80E+05 uCi/sec)	%	5.37E-03	1.25E-03	

2005

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 PARTICULATESREPORTING PERIOD:QUARTER # 1 AND QUARTER # 2 YEAR 2005

		CONTINUOUS MODE		BATCH MODE	
NUCLIDES RELEASED	UNITS	QUARTER 1	QUARTER 2	QUARTER 1	QUARTER 2
FISSION GASES					
Argon-41	CURIES	7.44E-01	2.41E-01	0.00E+00	0.00E+00
Krypton-85	CURIES	2.66E-01	0.00E+00	0.00E+00	0.00E+00
Xenon-131M	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xenon-133	CURIES	2.29E+01	7.84E-01	8.30E-01	0.00E+00
Xenon-133M	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xenon-135	CURIES	2.16E-02	0.00E+00	1.21E+00	0.00E+00
TOTAL FOR PERIOD	CURIES	2.40E+01	1.02E+00	2.04E+00	0.00E+00
IODINES					
Iodine-131	CURIES	3.90E-07	2.50E-06	1.16E-06	0.00E+00
Iodine-133	CURIES	5.07E-07	1.69E-08	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	8.97E-07	2.52E-06	1.16E-06	0.00E+00
PARTICULATES					
Beryllium-7	CURIES	3.43E-05	2.84E-05	1.29E-05	0.00E+00
Cobalt-58	CURIES	7.77E-07	0.00E+00	4.33E-06	0.00E+00
Chromium-51	CURIES	1.35E-07	0.00E+00	4.27E-06	0.00E+00
Cesium-137	CURIES	5.73E-07	0.00E+00	0.00E+00	0.00E+00
Mercury-203	CURIES	1.14E-06	1.10E-06	1.68E-06	0.00E+00
Manganese-54	CURIES	4.14E-09	0.00E+00	0.00E+00	0.00E+00
Niobium-95	CURIES	6.51E-09	0.00E+00	2.05E-07	0.00E+00
TOTAL FOR PERIOD	CURIES	3.69E-05	2.95E-05	2.34E-05	0.00E+00
OTHER					
Hydrogen-3 (Tritium)	CURIES	4.32E+01	1.77E+01	3.19E+01	0.00E+00
TOTAL FOR PERIOD	CURIES	4.32E+01	1.77E+01	3.19E+01	0.00E+00

STP NUCLEAR OPERATING COMPANY SEMIANNUAL SUMMATION OF ALL RELEASES BY QUARTER ALL AIRBORNE EFFLUENTS

Unit: 2

Starting: 1-Jul-2005 Ending: 31-Dec-2005

			· · ·	·
TYPE OF EFFLUENT	UNITS	QUARTER 3	QUARTER 4	EST. TOT ERROR %
A. FISSION & ACTIVATION PRODUCTS				
1. TOTAL RELEASE	CURIES	6.61E-01	3.86E+01	100
2. AVERAGE RELEASE RATE FOR PERIOD	uCi/sec	8.32E-02	4.85E+00	
3. PERCENT OF LIMIT (9.60E+04 uCi/sec)	%	8.67E-05	5.05E-03	
B. RADIOIODINES	· · · · · · · · · · · · · · · · · · ·		認識情報はおけていた	
1. IODINE-131	CURIES	2.80E-05	9.95E-04	25
2. AVERAGE RELEASE RATE FOR PERIOD	uCi/sec	3.52E-06	1.25E-04	
3. PERCENT OF LIMIT (4.00E-02 uCi/sec)	%	8.81E-03	3.13E-01	
C. PARTICULATES				
1. PARTICULATES(HALF- LIVES>8 DAYS)	CURIES	1.04E-05	1.56E-03	25
2. AVERAGE RELEASE RATE FOR PERIOD	uCi/sec	1.31E-06	1.97E-04	
3. PERCENT OF LIMIT (3.00E-01 uCi/sec)	%	4.37E-04	6.56E-02	·
4. GROSS ALPHA RADIOACTIVITY	CURIES	0.00E+00	0.00E+00	
D. TRITIUM		En la catilita		行行真正相关
1. TOTAL RELEASE	%	1.13E+01	1.91E+01	50
2. AVERAGE RELEASE RATE FOR PERIOD	uCi/sec	1.42E+00	2.40E+00	
3. PERCENT OF LIMIT (1.80E+05 uCi/sec)	%	7.87E-04	1.33E-03	

RADIOACTIVE EFFLUENT RELEASE REPORT

2005

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 2005

		CONTINUOUS MODE		BATCH MODE	
NUCLIDES RELEASED	UNITS	QUARTER 3	QUARTER 4	QUARTER 3	QUARTER 4
FISSION GASES					
Argon-41	CURIES	2.21E-01	2.69E-01	7.62E-02	2.79E-01
Krypton-85	CURIES	0.00E+00	0.00E+00	0.00E+00	5.64E-02
Xenon-131M	CURIES	0.00E+00	0.00E+00	0.00E+00	9.91E-02
Xenon-133	CURIES	2.21E-01	1.24E+01	1.39E-01	2.49E+01
Xenon-133M	CURIES	0.00E+00	0.00E+00	0.00E+00	2.74E-01
Xenon-135	CURIES	4.18E-03	3.48E-04	1.11E-03	3.37E-01
TOTAL FOR PERIOD	CURIES	4.45E-01	1.26E+01	2.16E-01	2.59E+01
IODINES					
Iodine-131	CURIES	2.77E-05	1.95E-04	2.78E-07	8.00E-04
Iodine-133	CURIES	3.94E-06	2.63E-06	3.43E-07	4.47E-05
Iodine-135	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TOTAL FOR PERIOD	CURIES	3.17E-05	1.97E-04	6.21E-07	8.45E-04
PARTICULATES					
Beryllium-7	CURIES	1.03E-05	1.37E-05	0.00E+00	0.00E+00
Cobalt-57	CURIES	0.00E+00	0.00E+00	0.00E+00	9.70E-07
Cobalt-58	CURIES	1.99E-08	1.55E-04	1.33E-08	4.80E-04
Cobalt-60	CURIES	0.00E+00	9.52E-06	0.00E+00	4.27E-05
Chromium-51	CURIES	3.90E-08	1.84E-04	2.60E-08	5.80E-04
Cesium-134	CURIES	0.00E+00	1.86E-09	0.00E+00	0.00E+00
Cesium-137	CURIES	0.00E+00	1.20E-07	0.00E+00	8.42E-07
Iron-59	CURIES	0.00E+00	2.39E-06	0.00E+00	1.05E-05
Manganese-54	CURIES	1.60E-09	9.73E-06	1.07E-09	3.08E-05
Niobium-95	CURIES	1.40E-09	6.18E-06	9.35E-10	2.32E-05
Zirconium-95	CURIES	0.00E+00	1.49E-06	0.00E+00	1.17E-05
TOTAL FOR PERIOD	CURIES	1.04E-05	3.83E-04	4.13E-08	1.18E-03
OTHER					
Hydrogen-3 (Tritium)	CURIES	1.12E+01	4.08E+00	7.30E-02	1.50E+01
TOTAL FOR PERIOD	CURIES	1.12E+01	4.08E+00	7.30E-02	1.50E+01

STP NUCLEAR OPERATING COMPANY Unit 1 plus 2 Total

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

		1 2005		
NUCLIDES DELEASED	UNITS	UNIT 1 2005	UNIT 2 2005	TOTAL 2005
RELEASED	ant i shaƙaratat	2003		
FISSION GASES			(a) A first state of the second state of th	
Argon-41	CURIES	3.940E+00	1.827E+00	5.767E+00
Krypton-85	CURIES	0.000E+00	3.225E-01	3.225E-01
Xenon-131M	CURIES	0.000E+00	9.910E-02	9.910E-02
Xenon-133	CURIES	6.759E+01	6.216E+01	1.297E+02
Xenon-133M	CURIES	0.000E+00	2.737E-01	2.737E-01
Xenon-135	CURIES	0.000E+00	1.571E+00	1.571E+00
TOTAL FOR PERIOD	CURIES	7.153E+01	6.625E+01	1.378E+02
IODINES				
Iodine-131	CURIES	3.961E-06	1.027E-03	1.031E-03
Iodine-133	CURIES	3.748E-06	5.213E-05	5.588E-05
Iodine-135	CURIES	0.000E+00	0.000E+00	0.000E+00
TOTAL FOR PERIOD	CURIES	7.709E-06	1.079E-03	1.087E-03
PARTICULATES				
Beryllium-7	CURIES	1.336E-04	9.961E-05	2.332E-04
Cobalt-57	CURIES	1.143E-06	9.698E-07	2.112E-06
Cobalt-58	CURIES	5.694E-04	6.405E-04	1.210E-03
Cobalt-60	CURIES	6.599E-05	5.220E-05	1.182E-04
Chromium-51	CURIES	6.409E-04	7.685E-04	1.409E-03
Cesium-134	CURIES	0.000E+00	1.862E-09	1.862E-09
Cesium-137	CURIES	1.153E-08	1.536E-06	1.547E-06
Iron-59	CURIES	1.529E-05	1.291E-05	2.820E-05
Mercury-203	CURIES	6.998E-07	3.931E-06	4.631E-06
Manganese-54	CURIES	3.012E-05	4.056E-05	• 7.067E-05
Niobium-95	CURIES	3.499E-05	2.961E-05	6.460E-05
Zirconium-95	CURIES	1.919E-05	1.323E-05	3.242E-05
TOTAL FOR PERIOD	CURIES	1.511E-03	1.664E-03	3.175E-03
OTHER				
Hydrogen-3 (Tritium)	CURIES	8.696E+01	1.231E+02	2.100E+02
TOTAL FOR PERIOD	CURIES	8.696E+01	1.231E+02	2.100E+02

4-10

SOUTH TEXAS PROJECT Liquid Effluents

LIQUID EFFLUENTS

2005

5-1

STP NUCLEAR OPERATING COMPANY SEMIANNUAL SUMMATION OF ALL RELEASES BY QUARTER ALL LIQUID EFFLUENTS Unit: 1

Starting: 1-Jan-2005 Ending : 30-Jun-2005

TYPE OF EFFLUENT	UNITS	QUARTER 1	QUARTER 2	EST. TOT ERROR %
A. FISSION & ACTIVATION PRODUCTS				
1. TOTAL RELEASE (NOT INCLUDING TRITIUM, GASES, ALPHA)	CURIES	8.171E-03	6.558E-03	10
2. AVERAGE DILUTED CONCENTRATION DURING PERIOD	uCi/mL	4.480E-09	4.218E-09	
3. PERCENT OF EC* LIMIT (FRACTIONAL)	%	8.881E-03	3.738E-03	
B. TRITIUM	建建的短期外的			
1. TOTAL RELEASE	CURIES	2.301E+02	3.957E+01	10
2. AVERAGE DILUTED CONCENTRATION DURING PERIOD	uCi/mL	1.262E-04	2.545E-05	
3. % OF LIMIT (1.00E-02 uCi/mL)	%	1.261E+00	2.545E-01	
C. DISSOLVED AND ENTRAINED GASES				
1. TOTAL RELEASE	CURIES	9.606E-04	1.385E-04	10
2. AVERAGE DILUTED CONCENTRATION DURING PERIOD	uCi/mL	5.267E-10	8.907E-11	
3. PERCENT OF LIMIT (2.00E-04 uCi/mL)	%	2.633E-04	4.455E-05	
D. GROSS ALPHA RADIOACTIVITY				
1. TOTAL RELEASE	CURIES	0.000E+00	0.000E+00	10
E. WASTE VOL RELEASED	的基本很多的行为	eet the least	制度的例如。例如是	"我们请你们
1. TOTAL PRE-DILUTION VOLUME	LITERS	7.893E+06	6.908E+06	1
2. BATCH PRE-DILUTION VOLUME	LITERS	1.216E+06	8.707E+05	1
F. VOLUME OF DILUTION WATER USED**	LITERS	1.816E+09	1.548E+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 2005

· · · · · · · · · · · · · · · · · · ·			S 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	1.36E-05	0.00E+00
Beryllium-7	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	0.00E+00
Cobalt-58	CURIES	0.00E+00	0.00E+00	2.34E-04	2.14E-03
Cobalt-60	CURIES	0.00E+00	0.00E+00	3.04E-03	9.68E-04
Chromium-51	CURIES	0.00E+00	0.00E+00	9.60E-05	5.76E-04
Cesium-134	CURIES	0.00E+00	0.00E+00	1.88E-04	7.76E-06
Cesium-137	CURIES	0.00E+00	0.00E+00	2.51E-04	2.86E-05
Iron-55	CURIES	0.00E+00	0.00E+00	1.92E-03	6.48E-04
Iron-59	CURIES	0.00E+00	0.00E+00	0.00E+00	1.96E-05
Tritium	CURIES	4.25E-02	4.24E-02	2.30E+02	3.95E+01
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
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	2.63E-04	4.65E-04
Sodium-24	CURIES	0.00E+00	0.00E+00	5.50E-07	0.00E+00
Niobium-95	CURIES	0.00E+00	0.00E+00	4.01E-06	4.08E-05
Antimony-122	CURIES	0.00E+00	0.00E+00	8.59E-05	0.00E+00
Antimony-124	CURIES	0.00E+00	0.00E+00	7.73E-05	2.06E-04
Antimony-125	CURIES	0.00E+00	0.00E+00	8.86E-04	1.36E-03
Antimony-126	CURIES	0.00E+00	0.00E+00	3.97E-06	0.00E+00
Tin-117M	CURIES	0.00E+00	0.00E+00	0.00E+00	3.09E-06
Strontium-89	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Strontium-90	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
Telurium-125M	CURIES	0.00E+00	0.00E+00	1.11E-03	0.00E+00
Tellurium-129M	CURIES	0.00E+00	0.00E+00	0.00E+00	8.69E-05
Xenon-131M	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xenon-133	CURIES	0.00E+00	0.00E+00	8.37E-04	6.95E-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	1.24E-04	6.90E-05
Zirconium-95	CURIES	0.00E+00	0.00E+00	0.00E+00	1.59E-05
TOTAL FOR PERIOD	CURIES	4.25E-02	4.24E-02	2.30E+02	3.95E+01

STP NUCLEAR OPERATING COMPANY SEMIANNUAL SUMMATION OF ALL RELEASES BY QUARTER ALL LIQUID EFFLUENTS

2005

Unit: 1

Starting: 1-Jul-2005 Ending: 31-Dec-2005

TYPE OF EFFLUENT	UNITS	QUARTER 3	QUARTER 4	EST. TOT ERROR %
A. FISSION & ACTIVATION PRODUCTS				
1. TOTAL RELEASE (NOT INCLUDING TRITIUM, GASES, ALPHA)	CURIES	9.259E-03	6.029E-04	10
2. AVERAGE DILUTED CONCENTRATION DURING PERIOD	uCi/mL	3.584E-09	3.770E-09	
3. PERCENT OF EC* LIMIT (FRACTIONAL)	%	7.928E-03	5.878E-03	
B. TRITIUM			$\left\{ \begin{array}{c} & & \\ & $	
1. TOTAL RELEASE	CURIES	1.346E+02	3.877E+00	10
2. AVERAGE DILUTED CONCENTRATION DURING PERIOD	uCi/mL	5.210E-05	2.424E-05	
3. % OF LIMIT (1.00E-02 uCi/mL)	%	5.208E-01	2.424E-01	
C. DISSOLVED AND ENTRAINED GASES				
1. TOTAL RELEASE	CURIES	3.067E-05	0.000E+00	10
2. AVERAGE DILUTED CONCENTRATION DURING PERIOD	uCi/mL	1.187E-11	0.000E+00	
3. PERCENT OF LIMIT (2.00E-04 uCi/mL)	%	5.935E-06	0.000E+00	с
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	1.037E+07	5.929E+06	1
2. BATCH PRE-DILUTION VOLUME	LITERS	1.234E+06	8.032E+04	. 1
F. VOLUME OF DILUTION WATER USED**	LITERS	2.573E+09	1.540E+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.

SOUTH TEXAS PROJECT

Liquid Effluents

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 2005

2005

<u>.</u>		CONTINUOUS RELEASES		BATCH RELEASES	
NUCLIDES RELEASED	UNITS	QUARTER 3	QUARTER 4	QUARTER 3	QUARTER 4
ALL NUCLIDES			and the second		
Silver-110M	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Beryllium-7	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cobalt-57	CURIES	0.00E+00	0.00E+00	1.07E-05	0.00E+00
Cobalt-58	CURIES	0.00E+00	0.00E+00	2.68E-03	7.19E-05
Cobalt-60	CURIES	0.00E+00	0.00E+00	2.50E-03	1.34E-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	3.93E-04	1.22E-05
Cesium-137	CURIES	0.00E+00	0.00E+00	5.71E-04	2.29E-05
Iron-55	CURIES	0.00E+00	0.00E+00	1.36E-03	.1.21E-04
Iron-59	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tritium	CURIES	1.92E-01	1.68E-01	1.34E+02	3.71E+00
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
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	1.26E-03	2.01E-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	1.27E-05	0.00E+00
Antimony-122	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Antimony-124	CURIES	0.00E+00	0.00E+00	1.38E-05	0.00E+00
Antimony-125	CURIES	0.00E+00	0.00E+00	4.63E-04	3.96E-05
Antimony-126	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tin-117M	CURIES	0.00E+00	0.00E+00	1.45E-06	0.00E+00
Strontium-89	CURIES	0.00E+00	0.00E+00	4.28E-06	5.81E-07
Strontium-90	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
Telurium-125M	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tellurium-129M	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xenon-131M	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xenon-133	CURIES	0.00E+00	0.00E+00	3.07E-05	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
TOTAL FOR PERIOD	CURIES	1.92E-01	1.68E-01	1.34E+02	3.71E+00

STP NUCLEAR OPERATING COMPANY SEMIANNUAL SUMMATION OF ALL RELEASES BY QUARTER ALL LIQUID EFFLUENTS

2005

Unit: 2

Starting: 1-Jan-2005 Ending: 30-Jun-2005

TYPE OF EFFLUENT	UNITS	QUARTER 1	QUARTER 2	EST. TOT ERROR %
A. FISSION & ACTIVATION PRODUCTS				
1. TOTAL RELEASE (NOT INCLUDING TRITIUM, GASES, ALPHA)	CURIES	1.705E-02	4.744E-03	10
2. AVERAGE DILUTED CONCENTRATION DURING PERIOD	uCi/mL	9.348E-09	3.051E-09	
3. PERCENT OF EC* LIMIT (FRACTIONAL)	%	1.018E-02	3.754E-03	
B. TRITIUM	くらか(新聞学の)から人生 会社の1995年1月1日 - 1995年1月1日 日本市会社の1995年1月1日			
1. TOTAL RELEASE	CURIES	8.257E+02	3.082E+02	10
2. AVERAGE DILUTED CONCENTRATION DURING PERIOD	uCi/mL	4.527E-04	1.982E-04	
3. % OF LIMIT (1.00E-02 uCi/mL)	%	3.045E+00	1.977E+00	
C. DISSOLVED AND ENTRAINED GASES				
1. TOTAL RELEASE	CURIES	4.337E-03	1.723E-02	10
2. AVERAGE DILUTED CONCENTRATION DURING PERIOD	uCi/mL	2.378E-09	1.108E-08	
3. PERCENT OF LIMIT (2.00E-04 uCi/mL)	%	7.996E-04	5.525E-03	
D. GROSS ALPHA				
1. TOTAL RELEASE	CURIES	0.000E+00	0 000E+00	10
E. WASTE VOL RELEASED				
1. TOTAL PRE-DILUTION VOLUME	LITERS	5.413E+06	3.698E+06	1
2. BATCH PRE-DILUTION VOLUME	LITERS	1.886E+06	8.348E+05	1
F. VOLUME OF DILUTION WATER USED**	LITERS	2.706E+09	1.555E+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.
RADIOACTIVE EFFLUENT RELEASE 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 2005

		CONTINUOU	S 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	3.77E-06	0.00E+00
Beryllium-7	CURIES	0.00E+00	0.00E+00	3.21E-05	0.00E+00
Cobalt-57	CURIES	0.00E+00	0.00E+00	5.65E-05	1.46E-06
Cobalt-58	CURIES	0.00E+00	0.00E+00	5.61E-03	1.62E-04
Cobalt-60	CURIES	0.00E+00	0.00E+00	5.29E-03	1.11E-03
Chromium-51	CURIES	0.00E+00	0.00E+00	5.93E-06	7.64E-05
Cesium-134	CURIES	0.00E+00	0.00E+00	1.24E-04	2.38E-05
Cesium-137	CURIES	0.00E+00	0.00E+00	5.01E-04	9.88E-05
Iron-55	CURIES	0.00E+00	0.00E+00	4.50E-03	1.68E-03
Iron-59	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tritium	CURIES	1.61E-02	4.34E-02	8.26E+02	3.08E+02
Iodine-131	CURIES	0.00E+00	0.00E+00	0.00E+00	1.02E-05
Iodine-133	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
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	2.71E-06
Manganese-54	CURIES	0.00E+00	0.00E+00	2.27E-04	8.43E-04
Sodium-24	CURIES	0.00E+00	0.00E+00	2.28E-06	0.00E+00
Niobium-95	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Antimony-122	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Antimony-124	CURIES	0.00E+00	0.00E+00	1.60E-05	0.00E+00
Antimony-125	CURIES	0.00E+00	0.00E+00	6.86E-04	7.18E-04
Antimony-126	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tin-117M	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Strontium-89	CURIES	0.00E+00	0.00E+00	0.00E+00	8.33E-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	1.30E-06	3.60E-06
Telurium-125M	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tellurium-129M	CURIES	0.00E+00	* 0.00E+00	0.00E+00	0.00E+00
Xenon-131M	CURIES	0.00E+00	0.00E+00	0.00E+00	6.75E-05
Xenon-133	CURIES	0.00E+00	0.00E+00	4.11E-03	1.69E-02
Xenon-133M	CURIES	0.00E+00	0.00E+00	2.49E-05	1.63E-04
Xenon-135	CURIES	0.00E+00	0.00E+00	1.98E-04	5.60E-05
Zirconium-95	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TOTAL FOR PERIOD	CURIES	1.61E-02	4.34E-02	8.26E+02	3.08E+02

RADIOACTIVE EFFLUENT RELEASE REPORT

501_LIQUID EFFLUENTS_r0.doc

STP NUCLEAR OPERATING COMPANY SEMIANNUAL SUMMATION OF ALL RELEASES BY QUARTER ALL LIQUID EFFLUENTS

2005

Unit: 2

Starting: 1-Jul-2005 Ending: 31-Dec-2005

TYPE OF EFFLUENT	UNITS	QUARTER 3	QUARTER 4	EST. TOT ERROR %
A. FISSION & ACTIVATION PRODUCTS				
1. TOTAL RELEASE (NOT INCLUDING TRITIUM, GASES, ALPHA)	CURIES	1.515E-02	1.507E-02	10
2. AVERAGE DILUTED CONCENTRATION DURING PERIOD	uCi/mL	5.864E-09	9.423E-08	
3. PERCENT OF EC* LIMIT (FRACTIONAL)	%	6.060E-03	8.982E-03	
B. TRITIUM				
1. TOTAL RELEASE	CURIES	2.628E+02	1.227E+02	10
2. AVERAGE DILUTED CONCENTRATION DURING PERIOD	uCi/mL	1.017E-04	7.672E-04	
3. % OF LIMIT (1.00E-02 uCi/mL)	%	9.236E-01	8.239E-01	
C. DISSOLVED AND ENTRAINED GASES		· · · · · · · · · · · · · · · · · · ·		
1. TOTAL RELEASE	CURIES	1.885E-01	1.050E+00	10
2. AVERAGE DILUTED CONCENTRATION DURING PERIOD	uCi/mL	7.297E-08	6.565E-06	
3. PERCENT OF LIMIT (2.00E-04 uCi/mL)	%	3.313E-02	3.524E-01	
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	9.028E+06	4.068E+06	1
2. BATCH PRE-DILUTION VOLUME	LITERS	1.601E+06	1.166E+06	1
F. VOLUME OF DILUTION WATER USED**	LITERS	2.836E+09	1.486E+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 # 3 AND QUARTER # 4 YEAR 2005

		CONTINUOUS RELEASES		BATCH R	ELEASES
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
Beryllium-7	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	0.00E+00
Cobalt-58	CURIES	0.00E+00	0.00E+00	4.33E-04	2.62E-03
Cobalt-60	CURIES	0.00E+00	0.00E+00	3.61E-03	9.86E-04
Chromium-51	CURIES	0.00E+00	0.00E+00	5.44E-04	3.80E-03
Cesium-134	CURIES	0.00E+00	0.00E+00	1.80E-05	6.08E-07
Cesium-137	CURIES	0.00E+00	0.00E+00	6.34E-05	9.78E-06
Iron-55	CURIES	0.00E+00	0.00E+00	2.58E-03	1.42E-03
Iron-59	CURIES	0.00E+00	0.00E+00	0.00E+00	6.60E-05
Tritium	CURIES	6.68E-02	1.74E-02	2.63E+02	1.23E+02
Iodine-131	CURIES	0.00E+00	0.00E+00	1.24E-05	5.66E-04
Iodine-133	CURIES	0.00E+00	0.00E+00	0.00E+00	7.59E-06
Krypton-85	CURIES	0.00E+00	0.00E+00	3.42E-04	4.50E-03
Krypton-85M	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Manganese-54	CURIES	0.00E+00	0.00E+00	4.72E-04	1.33E-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	1.81E-05	1.78E-04
Antimony-122	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	9.92E-04	1.18E-04
Antimony-126	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tin-117M	CURIES	0.00E+00	0.00E+00	0.00E+00	2.32E-06
Strontium-89	CURIES	0.00E+00	0.00E+00	6.45E-06	3.02E-06
Strontium-90	CURIES	0.00E+00	0.00E+00	2.98E-06	0.00E+00
Technetium-99M	CURIES	0.00E+00	0.00E+00	0.00E+00	9.06E-06
Telurium-125M	CURIES	0.00E+00	0.00E+00	6.40E-03	5.04E-03
Tellurium-129M	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xenon-131M	CURIES	0.00E+00	0.00E+00	3.26E-03	2.12E-02
Xenon-133	CURIES	0.00E+00	0.00E+00	1.84E-01	1.01E+00
Xenon-133M	CURIES	0.00E+00	0.00E+00	9.94E-04	1.44E-02
Xenon-135	CURIES	0.00E+00	0.00E+00	1.51E-05	4.66E-03
Zirconium-95	CURIES	0.00E+00	0.00E+00	2.36E-06	1.11E-04
TOTAL FOR PERIOD	CURIES	6.68E-02	1.74E-02	2.63E+02	1.24E+02

STP NUCLEAR OPERATING COMPANY

2005

Unit 1 plus 2 Total

REPORT CATEGORY:

ANNUAL LIQUID RELEASES. TOTALS FOR EACH NUCLIDE RELEASED. FOR ALL OF 2005

.

NUCLIDES	IDUTO	UNIT 1	UNIT 2	TOTAL
RELEASED	UNIIS	2005	2005	2005
ALL NUCLIDES				
Silver-110M	CURIES	1.36E-05	3.77E-06	1.74E-05
Beryllium-7	CURIES	0.00E+00	3.21E-05	3.21E-05
Cobalt-57	CURIES	1.07E-05	5.80E-05	6.87E-05
Cobalt-58	CURIES	5.12E-03	8.82E-03	1.39E-02
Cobalt-60	CURIES	6.64E-03	1.10E-02	1.76E-02
Chromium-51	CURIES	6.72E-04	4.43E-03	5.10E-03
Cesium-134	CURIES	6.01E-04	1.66E-04	7.67E-04
Cesium-137	CURIES	8.73E-04	6.73E-04	1.55E-03
Iron-55	CURIES	4.04E-03	1.02E-02	1.42E-02
Iron-59	CURIES	1.96E-05	6.60E-05	8.55E-05
Tritium	CURIES	4.08E+02	1.52E+03	1.93E+03
Iodine-131	CURIES	0.00E+00	5.89E-04	5.89E-04
Iodine-133	CURIES	0.00E+00	7.59E-06	7.59E-06
Krypton-85	CURIES	0.00E+00	4.84E-03	4.84E-03
Krypton-85M	CURIES	0.00E+00	2.71E-06	2.71E-06
Manganese-54	CURIES	2.19E-03	1.68E-03	3.86E-03
Sodium-24	CURIES	5.50E-07	2.28E-06	2.83E-06
Niobium-95	CURIES	5.75E-05	1.96E-04	2.54E-04
Antimony-122	CURIES	8.59E-05	0.00E+00	8.59E-05
Antimony-124	CURIES	2.97E-04	1.60E-05	3.13E-04
Antimony-125	CURIES	2.74E-03	2.51E-03	5.26E-03
Antimony-126	CURIES	3.97E-06	0.00E+00	3.97E-06
Tin-117M	CURIES	4.54E-06	2.32E-06	6.86E-06
Strontium-89	CURIES	4.86E-06	1.78E-05	2.27E-05
Strontium-90	CURIES	0.00E+00	2.98E-06	2.98E-06
Technetium-99M	CURIES	0.00E+00	1.40E-05	1.40E-05
Telurium-125M	CURIES	1.11E-03	1.14E-02	1.25E-02
Tellurium-129M	CURIES	8.69E-05	0.00E+00	8.69E-05
Xenon-131M	CURIES	0.00E+00	2.45E-02	2.45E-02
Xenon-133	CURIES	9.37E-04	1.21E+00	1.21E+00
Xenon-133M	CURIES	0.00E+00	1.55E-02	1.55E-02
Xenon-135	CURIES	1.93E-04	4.93E-03	5.12E-03
Zirconium-95	CURIES	1.59E-05	1.13E-04	1.29E-04
TOTAL FOR PERIOD	CURIES	4.08E+02	1.52E+03	1.93E+03
TOTAL Noble Gases	CURIES	1.13E-03	1.26E+00	1.26E+00
TOTAL Excluding	CURIES			
Tritium & Noble Gases		2.46E-02	5.20E-02	7.65E-02

Solid Waste and Irradiated Fuel Shipments

2005

SOUTH TEXAS PROJECT 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 E	Error, %
a. Spent resins, filter sludges,	m ³	1.29E+01	6.77E+00	-1.0E+00	+1.0E+00
evaporator bottoms, etc.	Ci	2.78E+02	2.77E+02	-5.0E+01	+1.0E+02
b. Dry compressible waste,	m ³	6.19E+02	2.71E+01	-1.0E+00	+1.0E+00
contaminated equip., etc.	Ci	4.94E-01	2.63E+00	-6.6E+01	+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	1.51E+01	2.38E+00	-1.0E+00	+1.0E+00
	Ci	1.64E-04	1.14E-04	-5.0E+01	+1.0E+02

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

a. Spent resins, filters, evaporator bottoms, etc.		
Nickel-63	%	4.66 E+01
Iron-55	%	2.44 E+0
Cobalt-60	%	1.07 E+0
Cesium-137	%	7.10 E+0
Tritium	%	5.60 E+0
Cesium-134	%	3.50 E+0
Manganese-54	%	9.70 E-0
Antimony-125	%	4.00 E-0
Cobalt-58	%	3.00 E-0

b. Dry compressible waste, contaminated equip., etc.		
Cobalt-58	%	4.30 E+01
Chromium-51	%	2.77 E+01
Iron-55	%	1.10 E+01
Niobium-95	%	4.10 E+00
Cobalt-60	%	3.82 E+00
Nickel-63	%	2.96 E+00
Antimony-124	%	1.95 E+00
Zirconium-95	%	1.85 E+00
Manganese-54	%	1.27 E+00
Iron-59	%	8.30 E-01
Antimony-125	%	5.60 E-01
Silver-110m	%	4.80 E-01

c. N/A	· · · · · · · · · · · · · · · · · · ·	 N/A	N/A

d. Other (secondary DE and HVAC charcoal)		
Tritium	%	3.06 E+01
Iron-55	%	2.53 E+01
Cesium-137	%	9.38 E+00
Cobalt-60	%	9.23 E+00

RADIOACTIVE EFFLUENT RELEASE REPORT

2005

SOUTH TEXAS PROJECT Solid Waste and Irradiated Fuel Shipments

d. Other (secondary DE and HVAC charcoal)		
Cerium-144	%	8.57 E+00
Nickel-63	%	7.58 E+00
Cobalt-58	%	3.47 E+00
Cesium-134	%	2.63 E+00
Manganese-54	%	1.65 E+00
Antimony-125	%	1.40 E+00

3. Solid Waste Disposition:

Number of Shipments	Mode of	Destination
	Transportation	
4	Truck	Studsvik Processing Facility, LLC
		151 TC Runnion Rd.
		Erwin, Tn 37650
12	Truck	GTS-Duratek
		1560 Bear Creek Road
		Oak Ridge, TN 37830
1	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: General Design, High-Integrity Containers, and Type A casks

- 6. Solidifying Agent: N/A
- B. IRRADIATED FUEL SHIPMENTS (Disposal) No shipments made during this period.

6-3

1

٠

2005

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-2005 Ending: 31-Dec-2005

2005

EFFLUENT	APPLICABLE ORGAN	ESTIMATED DOSE (mrem)	AGE GROUP	LOCATION DIST DIR (m) (TOWARD)	% OF APPLICABLE LIMIT	LIMIT (mrad or mrem)
		All Strack Ly at (1		나라는 가 소문을 가 물을 받았다.		k, galantin A
LIQUID	TOTAL BODY	2.36E-03	ADULT	RECEPTOR 3 ⁽⁵⁾	7.87E-02	3.0
LIQUID	GI-TRACT	2.45E-03	ADULT	RECEPTOR 3 ⁽⁵⁾	2.45E-02	10.0
	na an Ar R _{an} an Araba (an Araba) (an Araba)			2019년 - 11월 21일 11월 21일 - 11월 21일 11월 21일 - 11월 21일		
NOBLE GAS	AIR DOSE (gamma-mrad)	2.65E-03		1900m ESE	2.65E-02	10.0
NOBLE GAS	AIR DOSE (beta-mrad)	2.29E-03		1720m NW	1.15E-02	20.0
	建 的 化化合金 建金属	244号 图形中中国				- 200 (n
NOBLE GAS	TOTAL BODY	1.755E-03	ALL ⁽¹⁾	1900m ESE	3.50E-02	5.0
NOBLE GAS	TOTAL BODY	3.39E-04	ALL ⁽²⁾	5600m ESE	6.78E-03	5.0
	7 Maria de La Carto		和自己自己的情况。	記念された意識		F. E. S.
NOBLE GAS	SKIN	2.90E-03	ALL ⁽¹⁾	1900m ESE	1.94E-02	15.0
NOBLE GAS	SKIN	5.64E-04	ALL ⁽²⁾	5600m ESE	3.76E-03	15.0
		Line Andrews av	<u>长小时间那种运行</u>		化和非优化和加加	
IODINE, PARTICULATES & TRITIUM	GI-TRACT	1.14E-02	CHILD ⁽¹⁾	1720m NW	7.63E-02	15.0
IODINE, PARTICULATES & TRITIUM	GI-TRACT	2.03E-03	CHILD ⁽²⁾	4000m WSW	1.35E-02	15.0

SUMMARY OF POPULATION DOSES FOR 2005								
EFFLUENT APPLICABLE ORGAN ESTIMATED AVERAGE DOSE TO POPULATION DOSE (person-rem) POPULATION (rem per person)								
LIQUID	TOTAL BODY	4.2E-04	7.4E-08 ⁽³⁾					
GASEOUS	TOTAL BODY	1.3E-02	1.4E-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.

RADIOACTIVE EFFLUENT RELEASE REPORT

STP NUCLEAR OPERATING COMPANY SUMMARY OF MAXIMUM INDIVIDUAL DOSES Unit: 2 TOTAL ACCUMULATION FOR PERIODS: for LIQUID, GASEOUS, AND AIR Starting: 1-Jan-2005 Ending: 31-Dec-2005

2005

EFFLUENT	APPLICABLE ORGAN	ESTIMATED DOSE (mrem)	AGE GROUP	LOCATION DIST DIR (m) (TOWARD)	% OF APPLICABL E LIMIT	LIMIT (mrad or mrem)
			ماندگرد بیسی بیران بر در آیادی از ماراند. از این از میراند از ماراند از ماراند از ا		an and he was the second s	
LIQUID	TOTAL BODY	8.75E-03	ADULT	RECEPTOR 3 ⁽⁵⁾	2.92E-01	3.0
LIQUID	GI-TRACT	8.90E-03	ADULT	RECEPTOR 3 ⁽⁵⁾	8.90E-02	10.0
			均122-121-221	sign freide	这个计算机的问题。	
NOBLE GAS	AIR DOSE (gamma-mrad)	8.98E-04	· · ·	2160m W	8.98E-03	10.0
NOBLE GAS	AIR DOSE (beta-mrad)	1.43E-03		2880m WSW	7.15E-03	20.0
	化物研究上的重量的					
NOBLE GAS	TOTAL BODY	5.71E-04	ALL ⁽¹⁾	1540m NNW	1.14E-02	5.0
NOBLE GAS	TOTAL BODY	2.77E-04	ALL ⁽²⁾	4000m WSW	5.54E-03	5.0
NOBLE GAS	SKIN	1.23E-03	ALL ⁽¹⁾	2160m W	8.18E-03	15.0
NOBLE GAS	SKIN	6.88E-04	ALL ⁽²⁾	4000m WSW	4.59E-03	15.0
	ten ista				9 - F - S	
IODINE, PARTICULATES & TRITIUM	THYROID	1.26E-02	CHILD ⁽¹⁾	2160m W	8.39E-02	15.0
IODINE, PARTICULATES & TRITIUM	THYROID	5.97E-03	CHILD ⁽²⁾	4000m WSW	3.98E-02	15.0

	SUMMARY OF POP	ULATION DOSES F	OR 2005				
EFFLUENT	EFFLUENT APPLICABLE ORGAN ESTIMATED AVERAGE DOSE TO POPULATION DOSE (person-rem) POPULATION (rem per person)						
LIQUID	TOTAL BODY	8.6E-04	1.6E-07 ⁽³⁾				
GASEOUS	TOTAL BODY	1.5E-02	1.5E-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.

7-3

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-2005 Ending: 31-Dec-2005

2005

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)
			a transformation of			
LIQUID	TOTAL BODY	2.36E-03	8.75E-03	1.11E-02	ADULT	RECEPTOR 3 ⁽⁵⁾
LIQUID	GI-TRACT	2.45E-03	8.90E-03	1.14E-02	ADULT	RECEPTOR 3 ⁽⁵⁾
建酸磷酸化成素酸浓缩		的复数输出的指示	Yasestree (K			北京和南京和
NOBLE GAS	AIR DOSE (gamma-mrad)	2.65E-03	7.18E-05	2.72E-03		1900m ESE
NOBLE GAS	AIR DOSE (beta-mrad)	2.14E-03	1.07E-03	3.21E-03		1540m NNW
	和中国语行的资源等的		有能的有关,这些法		家田生 地行行。	
NOBLE GAS	TOTAL BODY	1.75E-03	4.23E-05	1.79E-03	ALL ⁽¹⁾	1900m ESE
NOBLE GAS	TOTAL BODY	1.70E-04	2.77E-04	4.48E-04	ALL ⁽²⁾	4000m WSW
			Weinstein 2014	NO CONTRACTOR OF	Hereits Base	的代表的建築的建
NOBLE GAS	SKIN	2.90E-03	1.15E-04	3.02E-03	ALL ⁽¹⁾	1900m ESE
NOBLE GAS	SKIN	3.73E-04	6.88E-04	1.06E-03	ALL ⁽²⁾	4000m WSW
	en provinski skolet	H ARANA ANA	사회가 이 가 가 가 가 가 있다. 사회가 제품 이 가 가 가 가 가 가 있다.	uth reach <mark>amaile</mark>		会社會 包裹 打整
IODINE, PARTICULATES & TRITIUM	THYROID	1.14E-02	1.09E-02	2.23E-02	CHILD ⁽¹⁾	1720m NW
IODINE, PARTICULATES & TRITIUM	THYROID	2.02E-03	5.97E-03	7.99E-03	CHILD ⁽²⁾	4000m WSW
IODINE, PARTICULATES & TRITIUM	TOTAL BODY	1.56E-03	3.71E-03	5.27E-03	ADULT ⁽²⁾	4000m WSW

SUMMARY OF POPULATION DOSES FOR 2005									
EFFLUENT	APPLICABLE ORGAN	TOTAL 1+2 ESTIMATED POPULATION DOSE (person-rem)	TOTAL 1+2 AVERAGE DOSE TO POPULATION (rem per person)						
LIQUID	TOTAL BODY	1.3E-03	2.4E-07 ⁽³⁾						
GASEOUS	TOTAL BODY	2.9E-02	1.4E-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.

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

RADIOACTIVE EFFLUENT RELEASE REPORT

SOUTH TEXAS PROJECT Results of the Protected Area Direct Radiation Measurement

111

RESULTS OF THE PROTECTED AREA DIRECT RADIATION MEASUREMENTS PROGRAM

2005

SOUTH TEXAS PROJECT Results of the Protected Area Direct Radiation Measurement

Table 8-1

2005

2005 STPEGS PROTECTED AREA THERMOLUMINESCENT DOSIMETER MONITORING									
STATIONS									
Station	1st Qtr	1st Qtr 2nd Qtr 3rd Qtr 4th Qtr Average Average							
Number	Average	Average	Average	Average	Rate	Net Rate			
	(mR) (2)	(mR) (2)	(mR) (2)	(mR) (2)	(mR/Qtr) (2)	(mR/hour)			
1	15.1	15.0	12.2	13.1	13.9	0.0			
2	15.9	14.7	12.0	12.5	13.8	0.0			
3	15.8	14.4	12.5	12.9	13.9	0.0			
4	14.6	14.5	12.0	12.6	13.4	0.0			
5	15.7	15.2	12.2	13.2	14.1	0.0			
6	16.8	15.4	13.1	13.9	14.8	0.0			
7	16.0	15.1	12.6	14.1	14.5	0.0			
8	15.5	13.6	12.0	12.5	13.4	0.0			
9	14.7	13.7	11.5	11.6	12.9	0.0			
10	14.6	12.9	11.2	11.4	12.5	0.0			
11	13.8	12.6	10.5	10.7	11.9	0.0			
12	13.9	13.7	11.2	11.3	12.5	0.0			
13	14.5	13.6	11.8	12.1	13.0	0.0			
14	14.2	13.6	11.1	11.6	12.6	0.0			
15	15.0	14.6	11.7	12.3	13.4	0.0			
16	14.7	13.1	10.9	12.1	12.7	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 2005 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 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 exposure rate at the site boundary due to radioactive waste processing activities on the south sides to the Units. Waste processing activities during 2005 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

SOUTH TEXAS PROJECT Results of the Protected Area Direct Radiation Measurement



2005



200'

RADIOACTIVE EFFLUENT RELEASE REPORT

SOUTH TEXAS PROJECT Joint Frequency Tables

JOINT FREQUENCY TABLES

2005

Joint Frequency Tables

First Quarter 2005

Joint Frequency Table

From : 01/01/2005 00:00 **To** : 03/31/2005 23:00

PRIMARY TOWER

9-2

First Quarter 2005

Joint Frequency Tables

Joint Frequency Table

<u>From</u>: 01/01/2005 00:00 <u>To</u>: 03/31/2005 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	1	1	0	0	0	2	1.18	13.4
NNE	0	• 0	3	5	3	ð	0	0	11	6.1%	10.3
NE	0	0	4	1	0	0	0	0	5	2.8%	6.7
ENE	0	0	0	0	0	0	0	. 0	0	0.0%	0.0
E	0	0	0	0	0	0	0	0	0	0.0%	0.0
ESE	0	0	2	1	1	0	0	0	4	2.28	8.8
SE	0	0	0	2	3	0	0	0	5	2.8%	11.9
SSE	0	0	2	3	7	0	0	0	12	6.6%	12.7
S.	0	0	6	21	9	0	0	0	36	19.9%	10.6
SSW	0	0	5.	27	13	. 0	0	0	45	24.9%	11.0
SW	0	1	3	12	12	1	0	0	29	16.0%	11.9
WSW	0	0	. 0	3	1	0	0	0	4	2.28	12.8
W	0	0	0	0	0	0	0	0	0	0.0%	0.0
WNW	0	0	2	2	0	0	0	0	4	2.2%	8.1
NW	0	0	2	9	2	5	0	0	18	9.9%	13.1
NNW	. 0	0	0	5	0	· 1	0	. 0	6	3.3%	11.0
Total	0	1	29	92	52	7	0	0	181		
% Of Total	0.0%	0.6%	16.0%	50.8%	28.7%	3.9%	0.0%	0.0%			

Average speed for this table (MPH):		11.2	
Hours in above table with variable direction	:	0	
Total number of CALMs :		0	
Total number of Invalid hours :		3	
Total number of Valid hours :		2157	
Total number of hours for period :		2160	

South Texas Project

Joint Frequency Tables

2005

First Quarter 2005

Joint Frequency Table

From : 01/01/2005 00:00 To : 03/31/2005 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	3	2	0	0	0	5	6.9%	11.5
NNE	0	0	1	2	1	0	0	0	4	5.6%	10.4
NE	0	0	2	2	1	0	0	0	5	6.9%	8.8
ENE	0	0	2	0	0	0	0	0	2	2.88	6.2
Е	0	0	0	2	1	0	0	0	3	4.2%	13.2
ESE	0	0	1	0	1	0	0	0	2	2.8%	9.9
SE	0	0	0	5	2	0	0	0	7	9.7%	11.0
SSE	0	0	1	3	5	0	0	0	9	12.5%	12.5
S	0	0	0	4	0	1	0	0	5	6 .9%	12.5
SSW	0	0	4	2	0	0	0	0	6	8.3%	7.9
SW	0	0	0	0	1	0	0	0	1	1.4%	15.7
WSW	. 0	0	1	1	0	0	0	0	2	2.8%	8.0
W	0	0	1	0	2	0	0	0	3	4.2%	10.2
WNW	0	0	2	0	0	0	0	0	2	2.8%	5.3
NW	0	1	2	3	2	0	0	0	8	11.1%	9.8
NNW	0	0	1	3	3	1	0	0	8	11.1%	11.8
Total	0	1	18	30	21	2	0	0	72	1	
% Of Total	0.0%	1.4%	25.0%	41.7%	29.2%	2.8%	0.0%	0.0%			

Average speed for this table (MPH):		10.6	
Hours in above table with variable direction	:	0	
Total number of CALMs :		0	
Total number of Invalid hours :		3	
Total number of Valid hours :		2157	
Total number of hours for period :	,	2160	

First Quarter 2005

Joint Frequency Table

From : 01/01/2005 00:00 To : 03/31/2005 23:00

PRIMARY TOWER

STABILTY CLASS C

Wind Speed (MPH) ->	(1) CALM	(2) 1.0	(3) 3.6	(4) 7.6	(5) 12,6	(6) 18.6	(7) 24.6	(8) 32.6 +	met e l	۹ <i>۵</i> ۴	•
Sector		- 3.5	- 7.5	- 12.5	- 18.5	- 24.5	- 32.5		IOCAL	Total	Avg. Speed
N	0	0	0	3	2	0	0	0	5	4.7%	12.2
NNE	0	0	3	4	3	0	0	0	10	9.38	10.1
NE	• 0	0	1	3	3	0	0	0	7	6.5%	11.2
ENE	0	0	2	2	2	0	0	0	6	5.6%	10.3
E	0	0	1	3	7	0	0	0	11	10.3%	12.2
ESE	0	0	1	7	2	0	0	0	10	9.38	10.1
SE	0	1	1	5	3	0	0	0	10	9.3%	9.8
SSE	0	0	2	0	7	0	0	0	9	8.4%	13.1
S	0	0	1	3	3	2	0	0	9	8.4%	13.8
SSW	0	0	1	3	1	0	0	0	5	4.78	9.4
SW	0	0	1	2	0	0	0	0	3	2.8%	8.4
WSW	0	0	1	0	0	0	0	0	1	0.98	6.6
W	0	0	0	0	0	0	0	0	0	0.0%	0.0
WNW	0	0	0	1	0	0	0	0	1	0.9%	11.3
NW	0	1	0	1	3	0	0	0	5	4.78	11.6
NNW	0	1	2	7	2	3	· 0	0	15	14.0%	12.0
Total	0	3	17	44	38	5	0	0	107		
% Of Total	0.0%	2.8%	15.9%	41.1%	35.5%	4.7%	0.0%	0.0%			

Average speed for this table (MPH):	11.3
Hours in above table with variable direction :	: 0
Total number of CALMs :	0
Total number of Invalid hours :	3
Total number of Valid hours :	2157
Total number of hours for period :	2160

9-5

Joint Frequency Tables

First Quarter 2005

Joint Frequency Table

From : 01/01/2005 00:00 To : 03/31/2005 23:00

· · · [1]

PRIMARY TOWER

STABILTY CLASS D

Wind Speed (MPH) ->	(1) CALM	(2) 1.0	(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	Avg.
Sector		- 3.5	- 1.5	- 12.5	- 10.5	- 24.0	- 02.0			Total	Speed
N	0	2	11	53	39	2	0	0	107	14.4%	11.4
NNE	0	1	23	59	39	1	0	0	123	16.5%	10.7
NE	0	1	22	52	11	0	0	0	86	11.5%	9.6
ENE	0	1	10	26	15	0	0	0	52	7.0%	10.6
Е	0	2	8	18	18	2	0	0	48	6.4%	11.0
ESE	0	2	6	34	12	1	0	0	55	7.4%	10.5
SE	0	1	5	35	20	0	0	0	61	8.2%	10.8
SSE	0	0	8	27	19	0	0	0	54	7.2%	11.4
S	0	0	6	12	11	0	0	0	29	3.9%	11.2
SSW	0	0	10	4	0	0	0	0	14	1.9%	6.8
SW	0	0	2	9	5	0	0	0	16	2.1%	10.6
WSW	0	0	1	3	0	0	0	· 0	4	0.5%	7.8
W	0	0	0	3	0	0	0	0	3	0.4%	9.2
WNŴ	0	0	0	1	0	0	0	0	1	0.1%	9.2
NW	0	0	3	2	5	1	0	, 0	11	1.5%	12.1
NNW	0	0	10	38	25	8	0	0	81	10.9%	12.0
Total	. 0	10	125	376	219	15	0	0	745		
% Of Total	0.0%	1.3%	16.8%	50.5%	29.4%	2.0%	0.0%	° 0.0%	-		

Average speed for this table (MPH):	10.8
Hours in above table with variable direction :	0
Total number of CALMs :	0
Total number of Invalid hours :	3
Total number of Valid hours :	2157
Total number of hours for period :	2160

Radioactive Release Effluent Report - RDRJFC

2005

First Quarter 2005

Joint Frequency Table

<u>From</u>: 01/01/2005 00:00 <u>To</u>: 03/31/2005 23:00

PRIMARY TOWER

STABILTY CLASS E

Wind Speed (MPH) ->	(1) CALM	(2) 1.0	(3) 3.6	(4) 7.6	(5) 12.6	(6) 18.6	(7) 24.6	(8) 32.6 +	Total	\$ OF	2
Sector		- 3.5	- 7.5	- 12.5	- 18.5	- 24.5	- 32.5		IOCAL	Total	Speed
N	0	6	20	21	22	0	0	0	69	9.1%	9.9
NNE	0	1	23	43	1	0	0	0	68	9.0%	8.0
NE	0	7	20	17	1	0	0	0	45	5.9%	6.9
ENE	0	3	30	16	0	0	0	0	49	6.5%	6.7
Е	0	4	26	20	1	0	0	0	51	6.7%	7.4
ESE	0	2	29	39	2	0	0	0	72	9.5%	8.1
SE	0	2	41	60	5	0	0	0	108	14.2%	8.4
SSE	0	2	36	52	19	1	0	0	110	14.5%	9.1
S	0	5	22	16	5	0	0	0	48	6.3%	7.5
SSW	0	6	32	19	1	0	0	0	58	7.7%	6.9
SW	0	1	· 11	16	0	0	0	0	28	3.7%	8.2
WSW	0	. 0	6	4	0	0	0	0	10	1.3%	7.8
W	0	. 0	3	1	0	0	0	0	4	0.5%	5.4
WNW	0	1	0	0	0	0	0	0	1	0.1%	2.8
NW	0	2	5	0	4	1	0	0	12	1.6%	10.1
NNW	0	3	7	8	7	0	0	0	25	3.3%	9.0
Total	0	45	311	332	68	2	0	0	758	÷.,	
¥ Of Total	0.0%	5.9%	41.0%	43.8%	9.0%	0.3%	0.0%	0.0%		<i>,</i>	

Average speed for this table (MPH):	8.1
Hours in above table with variable direction :	· 0
Total number of CALMs :	0
Total number of Invalid hours :	3
Total number of Valid hours :	2157
Total number of hours for period :	2160

.

Joint Frequency Tables

First Quarter 2005

Joint Frequency Table

From : 01/01/2005 00:00 To : 03/31/2005 23:00

PRIMARY TOWER

STABILTY CLASS F

Wind Speed (MPH) ->	(1) CALM	(2) 1.0	(3) 3.6	(4) 7.6	(5) 12.6	(6) 18.6	(7) 24.6	(8) 32.6 +	Total	% Of	Avg.
Sector		- 3.5	- 7. 5	- 12.5	- 18.5	- 24.5	- 32.5			Total	Speed
N	0	2	9	1	. 0	0	0	0	12	6.8%	5.0
NNE	0	4	15	6	0	0	0	• 0	25	14.2%	6.1
NE	0	5	11	5	0	0	0	0	21	11.9%	5.3
ENE	0	8	14	1	0	0	0	0	23	13.1%	4.4
E	0	3	11	2	0	0	0	0	16	9.1%	5.2
ESE	0	5	8	, 1	0	0	. 0	· 0	14	8.0%	4.7
SE	0	2	11	0	0	0	0	0	13	7.4%	4.9
SSE	0	2	13	3	0	0	0	0	18	10.2%	6.3
S	0	1	6	1	0	0	0	0	8	4.5%	5.6
SSW	0	2	4	0	0	0	0	0	6	3.4%	4.5
SW	0	0	. 3	0	0	0	. 0	0	3	1.7%	6.4
WSW	0	0	0	0	0	0	0	0	0	0.0%	0.0
W	0	1	1	0	0	0	0	0	2	1.1%	3.4
WNW	0	1	2	0	0	0	0	0	3	1.7%	4.8
NW	0	1	2	1	0	0	0	0	4	2.3%	6.1
NNW	0	6	2	0	0	0	0	0	8	4.5%	3.1
Total	0	43	112	21	0	. 0	. 0	0	176		
% Of Total	0.0%	24.4%	63.6%	11.9%	0.0%	0.0%	0.0%	0.0%			7

Average speed for this table (MPH):		5.2	
Hours in above table with variable direction	:	0	
Total number of CALMs :		0	
Total number of Invalid hours :		3	
Total number of Valid hours :		2157	
Total number of hours for period :		2160	

2005

Joint Frequency Tables

First Quarter 2005

.005

Joint Frequency Table

<u>From</u>: 01/01/2005 00:00 <u>To</u>: 03/31/2005 23:00

PRIMARY TOWER

STABILTY CLASS G

Wind Speed (MPH) ->	(1) CALM	(2) 1.0	(3) 3.6	(4) 7.6	(5) 12.6	(6) 18.6	(7) 24.6	(8) 32.6 +	metel	4 of	N
Sector		- 3.5	- 7.5	- 12.5	- 18.5	- 24.5	- 32.5	-	IOCAL	Total	Avg. Speed
N	·. 0	2	4	0	0	0	0	0	6	5.1%	4.5
NNE	0	4	2	0	0	0	0	0	6	5.1%	3.2
NE	0	5	6	0	0	0	0	0	11	9.3%	3.5
ENE	0	8	7	0	0	0	0	0	15	12.7%	3.7
E	· 0	4	2	0	0	0	· 0	0	6	5.1%	3.5
ESE	0	9	3	1	0	0	0	0	13	11.0%	3.8
SE	0	4	3	0	0	0	0	0	7	5.9%	3.5
SSE	0	4	9	1	0	0	0	0	14	11.98	5.2
S	0	2	1	0	0	0	0	0	3	2.5%	3.6
SSW	0	2	0	0	0	0	0	0	2	1.7%	2.6
SW	0	2	0	0	0.	0	0	0	2	1.7%	1.8
WSW	0	4	0	0	0	0	0	0	4	3.4%	2.0
W	0	5	4	0	0	0	0	0	9	7.6%	3.6
WNW	0	6	1	0	0	0	0	0	7	5.9%	2.6
NW	0	3	4	0	0	0	0	0	7	5.9%	3.7
NNW	0	4	2	0.	0	0	0	0	6	5.1%	3.7
Total	0	68	48	2	0	0	0	0	118		
% Of Total	0.0%	57.6%	40.7%	1.7%	0.0%	0.0%	0.0%	0.0%			

Average speed for this table (MPH):	3.7	
Hours in above table with variable direction :	- 0	
Total number of CALMs :	0	
Total number of Invalid hours :	3	
Total number of Valid hours :	2157	
Total number of hours for period :	2160	

Joint Frequency Tables

First Quarter 2005

Joint Frequency Table

From :: 01/01/2005 00:00 **To** : 03/31/2005 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	12	44	82	66	2	0	0	206	9.6%	10.4
NNE	0	10	70	119	47	1	0	0	247	11.5%	9.3
NE	0	18	66	80	16	0	0	0	180	8.3%	8.0
ENE	0	20	65	45	17	0	0	0	147	6.8%	7.5
E	0	13	48	45	27	2	0	0	135	6.3%	8.8
ESE	0	18	50	83	18	1	0	0	170	7.9%	8.4
SE	0	10	61	107	33	0	0	0	211	9.8%	8.9
SSE	0	8	71	89	57	1	0	0	226	10.5%	9.7
S	0	8	42	57	28	3	0	0	138	6.4%	9.5
SSW	0	10	56	55	15	0	0	0	136	6.3%	8.2
SW	0	4	20	39	18	1	0	0	82	3.8%	9.9
WSW	0	4	9	11	1	0	0	0	25	1.2%	7.6
W	0	6	9	4	2	0	0	0	21	1.0%	5.6
WNW	0	8	7	4	0	0	0	0	19	0.9%	5.2
NW	0	8	18	16	16	7	0	0	65	3.0%	10.4
NNW	0	14	24	61	37	13	0	0	149	6.9%	10.6
Total	0	171	660	897	398	31	0	0	2157		
% Of Total	0.0%	7.9%	30.6%	41.6%	18.5%	1.4%	0.0%	0.0%			

Average speed for this table (MPH):	9.1	
Hours in above table with variable direction :	0	
Total number of CALMs :	0	
Total number of Invalid hours :	3	
Total number of Valid hours :	2157	
Total number of hours for period :	2160	

Radioactive Release Effluent Report - RDRJFC

Joint Frequency Tables

Second Quarter 2005

Joint Frequency Table

<u>From</u>: 04/01/2005 00:00 <u>To</u>: 06/30/2005 23:00

PRIMARY TOWER

9-11

Joint Frequency Tables

Second Quarter 2005

Joint Frequency Table

From : 04/01/2005 00:00 To : 06/30/2005 23:00

PRIMARY TOWER

STABILTY CLASS A

Wind Speed (MPH) ->	(1) CALM	(2) 1.0	(3) 3.6	(4) 7.6	(5) 12.6 - 18 5	(6) 18.6 - 24 5	(7) 24.6 - 32 5	(8) 32.6 +	Total	% Of	Avg.
Sector		- 0.0	-1.5	- 12.0	- 10.0	- 24.0	02.0			Total	Speed
N	0	0	3	3	0	0	0	0	6	6.4%	7.1
NNE	0	1	2	0	0	0	0	0	3	3.2%	4.3
NE	0	0	6	1	0	0	0	0	7	7.4%	5.8
ENE	0	2	7	0	0	0	0	0	9	9.6%	5.4
E	0	0	2	0	0	0	0	0	2	2.1%	4.7
ESE	0	0	0	1	. 0	0	0	0	1	1.1%	8.6
SE	0	1	0	6	2	0	0	0	9	9.6%	10.5
SSE	0	0	5	0	5	0	0	. 0	10	10.6%	11.1
S	0	0	2	12	0	0	0	0	14	14.9%	10.4
SSW	0	0	4	3	2	0	0	0	9	9.6%	9.3
SW	0	0	0	0	0	0	0	0	0	0.0%	0.0
WSW	0	0	3	0	0	0	0	0	3	3.2%	4.8
W ·	0	0	0	0	0	0	0	0	0	0.0%	0.0
WNW	0	0	2	0	0	0	0	0	2	2.1%	5.0
NW	0	0	0	3	1	0	0	0	4	4.3%	11.6
NNW	0	0	5	6	1	3	0	0	15	16.0%	10.7
Total	0	4	41	35	11	3	0	0	94		
∛ Of Total	0.0%	4.3%	43.6%	37.2%	11.7%	3.2%	0.0%	0.0%			

Average speed for this table (MPH):		8.8
Hours in above table with variable direction	:	0
Total number of CALMs :		0
Total number of Invalid hours :		318
Total number of Valid hours :		1866
Total number of hours for period :		2184

Joint Frequency Tables

Second Quarter 2005

Joint Frequency Table

<u>From</u>: 04/01/2005 00:00 <u>To</u>: 06/30/2005 23:00

PRIMARY TOWER

STABILTY CLASS B

Wind Speed (MPH) ->	(1) CALM	(2) 1.0	(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	Avg.
Sector		- 3.5	- 1.5	- 12.5	- 10.5	- 24.5	- 02.0			Total	Speed
N	0	0	2	1	0	0	0	0	3	4.7%	6.5
NNE	0	0	2	3	0	0	0	0	5	7.8%	7.7
NE	0	0	0	2	0	0	0	0	2	3.1%	8.5
ENE	0	0	1	0	0	0	0	0	1	1.6%	6.8
E	0	0	1	1	0	0	Ũ	_ 0	2	3.1%	8.7
ESE	0	0	2	0	2	0	0	0	4	6.3%	10.7
SE	0	0	1	1	9	0	0	0	11	17.2%	14.0
SSE	0	0	0	3	0	0	0	0	3	4.7%	8.8
S	0	0	1	3	0	0	0	0	4	6.3%	7.7
SSW	0	0	6	5	0	0	0	0	11	17.2%	7.3
SW	0	0	1	0	0	0	0	0	1	1.6%	6.7
WSW	0	0	1	· 1	0	0	0	0	2	3.1%	7.3
W	0	0	1	0	0	0	0	0	1	1.6%	6.9
WNW	0	0	2	1	1	0	0	0	4	6.3%	9.3
NW	0	0	0	4	2	0	0	0	6	9.48	10.5
NNW	0	0	0	2	0	2	0	0	4	6.3%	16.0
Total	0	0	21	27	14	2	0	0	64		
∜ Of Total	0.0%	0.0%	32.8%	42.2%	21.9%	· 3.1%	0.0%	0.0%			

Average speed for this table (MPH):	9.8
Hours in above table with variable direction :	0
Total number of CALMs :	0
Total number of Invalid hours :	318
Total number of Valid hours :	1866
Total number of hours for period :	2184

Second Quarter 2005

Joint Frequency Table

From: 04/01/2005 00:00 **To**: 06/30/2005 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	_ 2	1	3	0	0	• 0	6	3.0%	10.5
NNE	0	0	0	2	0	0	0	0	2	1.0%	9.3
NE	0	0	1	1	0	0	0	0	2	1.0%	6.1
ENE	0	0	2	1	0	0	0	0	3	1.5%	5.3
Е	0	0	1	1	0	0	0	0	2	1.0%	8.6
ESE	0	0	0	4	13	0	0	0	17	8.4%	13.5
SE	0	0	1	33	35	0	0	0	69	34.0%	12.5
SSE	0	0	1	20	4	0	0	0	25	12.3%	11.2
S	0	0	5	34	0	0	0	0	39	19.2%	9.1
SSW	0	0	4	17	0	0	0	0	21	10.3%	9.1
SW	0	0	1	1	0	0	0	0	2	1.0%	8.8
WSW	0	0	0	0	0	0	0	0	0	0.0%	0.0
W	0	0	0	4	0	0	0	0	4	2.0%	10.0
WNW	0	0	2	2	1	0	0	0	5	2.5%	10.3
NW	0	0	0	0	2	0	0	0	2	1.0%	15.1
NNW	0	0	0	2	1	1	0	0	4	2.0%	13.9
Total	0	0	20	123	59	1	0	0	203		
ቼ Of Total	0.0%	0.0%	9.9%	60.6%	29.1%	0.5%	0.0%	0.0%			

Average speed for this table (MPH):	11.0
Hours in above table with variable direction :	0
Total number of CALMs :	0
Total number of Invalid hours :	318
Total number of Valid hours :	1866
Total number of hours for period :	2184

2005

Second Quarter 2005

Joint Frequency Table

<u>From</u>: 04/01/2005 00:00 <u>To</u>: 06/30/2005 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	• 6	9	3	5	0	0	0	23	2.5%	7.2
NNE	0	8	25	3	0	0	0	0	36	4.0%	4.7
NE	0	10	27	0	1	0	0	• 0	38	4.2%	4.6
ENE	0	4	15	5	· 0	0	0	0	24	2.7%	5.7
Е	. 0	1	11	10	1	0	0	0	23	2.5%	7.6
ESE	0	3	19	33	32	0	0	0	87	9.6%	10.6
SE	0	2	44	120	90	0	0	0	256	28.3%	11.0
SSE	· 0	1	34	92	38	0	0	0	165	18.3%	10.3
S	0	0	· 19	88	11.	2	0	0	120	13.3%	10.0
SSW	0	0	23	33	0	0	0	0	56	6.2%	8.2
SW	0	0	2	12	1	0	0	0	15	1.7%	9.6
WSW	0	0	3	1	0	0	0	0	4	0.4%	6.5
W	0	1	3	1	0	0	0	0	5	0.6%	6.7
WNW	0	0	7	2	2	0	0	0	11	1.2%	7.4
NW	0	1	6	8	6	0	0	0	21	2.3%	9.8
NNW	0	4	9	2	1	4	0	0	20	2.2%	8.6
Total	· 0	41	256	413	188	. 6	0	0	904		
% Of Total	0.0%	4.5%	28.3%	45.7%	20.8%	0.7%	0.0%	0.0%			

Average speed for this table (MPH):		9.5	
Hours in above table with variable direction	:	0	
Total number of CALMs :		0	
Total number of Invalid hours :		318	
Total number of Valid hours :		1866	
Total number of hours for period :		2184	

South Texas Project

Second Quarter 2005

: •

1 de la

2005

Joint Frequency Table

From: 04/01/2005 00:00 **To**: 06/30/2005 23:00

PRIMARY TOWER

STABILTY CLASS E

Wind Speed (MPH) ->	(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.
Sector											
N	0	0	5	8	4	0	0	0	17	5.8%	9.7
NNE	0	1	5	1	2	0	0	· 0	9	3.1%	6.8
NE	0	4	9	0	0	0	0	0	13	4.5%	4.3
ENE	0	1	7	0	0	0	0	0	8	2.7%	4.8
Е	0	0	5	0	0	0	0	0	5	1.7%	5.9
ESE	0	0	29	14	1	0	0	0	44	15.1%	7.2
SE	0	0	29	47	· 8	0	0	0	84	28.8%	8.5
SSE	0	1	26	36	1	0	0	0	64	21.9%	7.7
S	0	0	5	6	0	0	0	0	11	3.8%	7.6
SSW	0	0	6	3	0	0	0	· 0	9	3.1%	7.3
SW	0	0	4	2	1	0	0	0	7	2.4%	7.8
WSW	0	0	1	1	0	0	0	0	2	0.7%	7.8
W	0	0	0	0	0	0	0	0	0	0.0%	0.0
WNW	0	1	1	2	0	0	0	0	4	1.4%	6.6
NW	0	0	1	3	1	0	0	0	5	1.7%	9.1
NNW	0	2	2	4	2	0	0	0	10	3.4%	8.3
Total	0	10	135	127	20	. 0	0	0	292		
% Of Total	0.0%	3.4%	46.2%	43.5%	6.8%	0.0%	0.0%	0.0%	-		

Average speed for this table (MPH):7.7Hours in above table with variable direction :0Total number of CALMs :0Total number of Invalid hours :318Total number of Valid hours :1866Total number of hours for period :2184

Joint Frequency Tables

Second Quarter 2005

1 1

Joint Frequency Table

<u>From</u>: 04/01/2005 00:00 <u>To</u>: 06/30/2005 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	0	. 7	1	0	0	0	0	8	5.6%	6.4
NNE	· 0	4	6	4	0	0	0	0	14	9.9%	5.4
NE	0	1	1	0	0	0	0	· 0	2	1.4%	3.5
ENE	0	4	: 2	0	0	0	0	0	6	4.2%	3.2
E	0	9	9	0	0	0	0	. 0	18	12.7%	3.7
ESE	0	5	12	0	0	0	0	0	17	12.0%	4.3
SE	0	3	23	2	0	0	0	0	28	19.7%	4.9
SSE	0	2	15	0	0	0	0	0	17	12.0%	5.0
S	0	0	5	• 0	0	0	0	0	5	3.5%	4.3
SSW	0	1	8	0	• 0	0	0	0	9	6.3%	5.1
SW	0	0	0	0	0	0	0	0	0	0.0%	0.0
WSW	0	1	1	0	0	0	0	0	2	1.4%	3.0
W	0	1	0	0	0	0	0	0	1	0.7%	3.4
WNW	0	1	1	0	0	0	0	0	2	1.4%	5.0
NW	. 0	1	4	3	• 0	0	• 0	0	8	5.6%	6.5
NNW	0	0	5	0	0	0	0	0.	5	3.5%	6.2
Total	0	33	99	10	0	0	0	0	142		
% Of Total	0.0%	23.2%	69.7%	7.0%	0.0%	0.0%	0.0%	0.0%		÷.,	

Average speed for this table (MPH):	4.8	
Hours in above table with variable direction	: 0	
Total number of CALMs :	0	
Total number of Invalid hours :	318	
Total number of Valid hours :	1866	
Total number of hours for period :	2184	

Joint Frequency Tables

Second Quarter 2005

Joint Frequency Table

From : 04/01/2005 00:00 To : 06/30/2005 23:00

PRIMARY TOWER

STABILTY CLASS G

Wind Speed (MPH) ->	(1) CALM	(2) 1.0	(3) 3.6 7.5	(4) 7.6	(5) 12.6 - 18.5	(6) 18.6 - 24.5	(7) 24.6	(8) 32.6 +	Total	% Of	Avg.
Sector		- 3.5	- 7.5	- 12.J	- 10.5	- 24.5	- 52.5			Total	Speed
N	0	4	2	0	0	0	0	0	6	3.6%	3.4
NNE	0	23	9	0	0	0	0	0	32	19.2%	3.5
NE	0	26	12	0	0	0	0	0	38	22.8%	3.3
ENE	0	9	12	0	0	0	0	0	21	12.6%	3.3
E	0	10	6	0	0	0	0	0	16	9.6%	3.3
ESE	0	7	9	0	0	0	0	0	16	9.6%	3.7
SE	0	4	6	0	0	0	0	0	10	6.0%	3.6
SSE	0	0	3	0	0	0	0	0	3	1.8%	4.4
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	0	0	0	0	0	0	0	0.0%	0.0
WNW	0	5	4	0	0	0	0	0	9	5.4%	3.2
NW	0	2	10	0	0	0	• 0	0	12	7.2%	3.9
NNW	0	2	2	0	0	0	0	0	4	2.4%	3.3
Total	0	92	75	0	0	· 0	0	0	167		
% Of Total	0.0%	55.1%	44.9%	0.0%	0.0%	0.0%	0.0%	0.0%	• . •		

Average speed for this table (MPH):	3.4	
Hours in above table with variable direction :	: 0	
Total number of CALMs :	0	
Total number of Invalid hours :	318	÷
Total number of Valid hours :	1866	
Total number of hours for period :	2184	

2005

Joint Frequency Tables

Second Quarter 2005

Joint Frequency Table

From: 04/01/2005 00:00 **To**: 06/30/2005 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	10	30	17	12	0	0	0	69	3.7%	7.6
NNE	0	37	49	13	2	0	0	0	101	5.4%	4.8
NE	0	41	56	4	1	0	0	0	102	5.5%	4.2
ENE	0	20	46	6	0	0	0	0	72	3.9%	4.7
Е	0	20	35	12	1	0	0	0	68	3.6%	5.4
ESE	0	15	71	52	48	0	0	0	186	10.0%	8.9
SE	0	10	104	209	144	0	0	0	467	25.0%	10.3
SSE	0	4	84	151	48	0	0	0	287	15.4%	9.4
S	0	0	37	143	11	2	0	0	193	10.3%	9.5
SSW	0	1	51	61	2	0	0	0	115	6.2%	8.1
SW	0	0	8	15	2	0	0	0	25	1.3%	8.9
WSW	0	1	9	3	0	0	0	0	13	0.7%	5.9
W	0	2	4	5	0	0	0	0	11	0.6%	7.6
WNW	0	7	19	7	4	0	0	0	37	2.0%	6.6
NW	0	4	21	21	12	0	0	0	58	3.1%	8.4
NNW	0	8	23	16	5	10	0	0	62	3.3%	9.3
Total	0	180	647	735	292	12	0	0	1866	· · · · ·	
% Of Total	0.0%	9.6%	34.7%	39.4%	15.6%	0.6%	0.0%	0.0%			

Average speed for this table (MPH):	8.3
Hours in above table with variable direction :	0
Total number of CALMs :	0
Total number of Invalid hours :	318
Total number of Valid hours :	1866
Total number of hours for period :	2184

PRIMARY TOWER

Joint Frequency Table

Third Quarter 2005

2005

South Texas Project

Joint Frequency Tables

Third Quarter 2005

Joint Frequency Table

<u>From</u>: 07/01/2005 00:00 <u>To</u>: 09/30/2005 23:00

PRIMARY TOWER

STABILTY CLASS A

Wind Speed (MPH) ->	(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.
Sector											
N	0	12	9	0	0	0	0	0	21	10.6%	3.5
NNE	0	10	26	0	0	0	0	0	36	18.2%	4.4
NE	0	11	10	0	0	. 0	0	0	21	10.6%	3.7
ENE	0	4	5	1	0	0	0	0	10	5.1%	4.5
Е	0	5	4	1	0	0	0	0	10	5.1%	4.2
ESE	0	3	12	2	0	0	0	0	17	8.6%	5.4
SE	0	2	4	0	0	0	0	. 0	6	3.0%	4.7
SSE	0	2	12	2	0	0	0	0	16	8.1%	5.4
S	0	0	4	3	0	0	0	0	7	3.5%	7.3
SSW	0	0	11	0	0	0	0	0	11	5.6%	5.2
SW	0	4	6	0	0	0	0	0	10	5.1%	4.4
WSW	0	4	2	0	0	0	0	0	6	3.0%	2.9
W.	0	1	1	0	0	0	0	0	2	1.0%	4.2
WNW	0	1	1	0	0	0	0	0	2	1.0%	3.0
NW	0	2	1	2	0	0	0	0	5	2.5%	6.5
NNW	0	9	9	0	0	0	0	0	18	9.18	3.6
Total	0	70	117	11	0	0	0	0	198		
% Of Total	0.0%	35.4%	59.1%	5.6%	0.0%	0.0%	0.0%	0.0%			

Average speed for this table (MPH):	4.5
Hours in above table with variable direction :	0
Total number of CALMs :	2
Total number of Invalid hours :	51
Total number of Valid hours :	2157
Total number of hours for period :	2208

9-22

Third Quarter 2005

2005

Joint Frequency Table

From : 07/01/2005 00:00 To : 09/30/2005 23:00

PRIMARY TOWER

STABILTY CLASS B

Wind Speed (MPH) ->	(1) CALM	(2) 1.0	(3) 3.6	(4) 7.6	(5) 12.6	(6) 18.6	(7) 24.6 22.5	(8) 32.6 +	Total	% Of	Avg.
Sector		- 3.5	- 7.5	- 12.3	- 10.0	- 24.3	- 32.5			Total	Speed
N	0	2	17	5	0	0	0	0	24	18.2%	6.1
NNE	0	2	12	0	0	0	0	0	14	10.6%	5.6
NE	0	2	5	0	0	0	0	· 0	7	5.3%	4.8
ENE	0	1	2	2	0	0	0	0	5	3.8%	6.8
E	0	2	5	4	1	0	0	0	12	9.1%	6.4
ESE	0	0	4	6	0	0	0	0	10	7.6%	7.9
SE	0	0	5	9	0	0	0	0	14	10.6%	8.2
SSE	0	0	5	1	0	0	0	0	6	4.5%	5.5
S	0	0	14	4	0	0	0	0	18	13.6%	6.9
SSW	0	0	3	3	0	0	0	0	6	4.5%	7.3
SW	0	0	3	0	0	0	0	0	3	2.3%	5.9
WSW	0	0	3	0	0	0	0	0	3	2.3%	5.7
W	0	0	0	0	0	0	0	0	0	0.0%	0.0
WNW	0	1	0	0	0	0	0	0	1	0.8%	3.4
NW	0	2	0	0	0	0	0	0	2	1.5%	3.0
NNW	0	0	4	3	0	0	0	0	7	5.3%	7.1
Total	0	12	82	37	1	0	· 0	0	132	· .	
% Of Total	0.0%	9.1%	62.1%	28.0%	0.8%	0.0%	0.0%	0.0%	*		

Average speed for this table (MPH):	1.1	6.5
Hours in above table with variable direction	:	0
Total number of CALMs :		2
Total number of Invalid hours :		51
Total number of Valid hours :		2157
Total number of hours for period :		2208

Joint Frequency Tables
Third Quarter 2005

Joint Frequency Table

From: 07/01/2005 00:00 **To**: 09/30/2005 23:00

PRIMARY TOWER

STABILTY CLASS C

Wind Speed (MPH) ->	(1) CALM	(2) 1.0	(3) 3.6	(4) 7.6	(5) 12.6	(6) 18.6	(7) 24.6	(8) 32.6 +	Total	∜ Of	Avg.
Sector		- 3.5	- 7.5	- 12.3	- 10.5	- 24.3	- 32.5			Total	Speed
N	. 0	9	10	7	9	0	0	0	35	10.1%	8.0
NNE	0	13	12	5	0	0	0	0	30	8.7%	4.6
NE	0	6	7	6	0	0	0	0	19	5.5%	6.1
ENE	0	1	5	6	1	0	0	0	13	3.8%	7.4
Е	0	1	3	10	2	0	0	0	16	4.6%	8.5
ESE	0	0	2	9	1	0	0	0	12	3.5%	9.1
SE	0	5	8	26	2	0	0	0	41	11.9%	8.2
SSE	. 0	0	10	40	1	0	0	0	51	14.8%	8.9
S	0	0	16	. 30	0	0	0	0	46	13.3%	8.2
SSW	0	0	11	28	0	0	0	0	39	11.3%	8.4
SW	0	0	5	2	1	0	0	0	8	2.3%	7.9
WSW	0	0	3	0	0	0	0	0	3	0.9%	5.7
W	. 0	0	1	0	0	0	0	0	1	0.3%	4.5
WNW	0	1	4	0	0	0	0	0	5	1.4%	5.3
NW	0	2	4	1	0	0	0	0	7	2.0%	4.8
NNW	0	3	13	3	0	0	. 0	0	19	5.5%	5.6
Total	0	41	114	173	17	0	0	0	345		
% Of Total	0.0%	11.9%	33.0%	50.1%	4.9%	0.0%	0.0%	0.0%			

Average speed for this table (MPH):		7.6
Hours in above table with variable direction	:	0
Total number of CALMs :		2
Total number of Invalid hours :		51
Total number of Valid hours :		2157
Total number of hours for period :		2208

9-23

Third Quarter 2005

Joint Frequency Table

<u>From</u>: 07/01/2005 00:00 <u>To</u>: 09/30/2005 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	12	17	2	1	0	0	0	32	3.3%	4.7
NNE	0	26	34	10	1	0	0	0	71	7.4%	5.3
NE	0	22	31	6	2	0	0	0	61	6.3%	4.9
ENE	0	20	9	4	1	0	0	0	34	3.5%	4.2
E	0	27	7	18	1	0	0	0	53	5.5%	5.7
ESE	0	21	11	28	6	0	0	0	66	6.8%	7.5
SE	0	23	53	38	2	0	0	0	116	12.0%	6.3
SSE	0	6	82	64	3	0	0	0	155	16.1%	7.4
S	0	1	55	133	2	0	0	0	191	19.8%	8.7
SSW	0	0	52	40	1	. 0	0	0	93	9.6%	7.5
SW	0	0	10	11	1	0	0	0	22	2.3%	8.2
WSW	0	0	0	0	0	0	0	0	0	0.0%	0.0
W	0	3	1	1	6	0	0	0	11	1.1%	10.1
WNW	0	2	3	2	2	0	0	0	9	0.9%	8.1
NW	0	3	9	0	3	1	0	0	16	1.7%	7.1
NNW	0	15	18	1	1	0	0	0	35	3.6%	4.8
Total	0	181	- 392	358	33	1	0	0	965		
% Of Total	0.0%	18.8%	40.6%	37.1%	3.4%	0.1%	0.0%	0.0%			

Average speed for this table (MPH):	6.9
Hours in above table with variable direction :	: 0
Total number of CALMs :	2
Total number of Invalid hours :	51
Total number of Valid hours :	2157
Total number of hours for period :	2208

Third Quarter 2005

Joint Frequency Table

From: 07/01/2005 00:00 **To**: 09/30/2005 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	0	0	0	0	0	0	1	0.4%	2.0
NNE	0	10	18	2	0	0	0	0	30	11.2%	4.5
NE	0	7	8	2	0	0	0	0	17	6.3%	4.4
ENE	0	7	13	0	0	0	0	< O	20	7.4%	4.1
Е	0	3	21	2	0	0	0	. О	26	9.7%	5.1
ESE	0	11	20	4	0	0	0	0	35	13.0%	5.1
SE	0	18	82	1	0	0	0	0	101	37.5%	4.6
SSE	0	4	28	0	0	0	0	0	32	11.9%	5.1
S	0	0	1	0	0	0	0	0	1	0.4%	4.7
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	1	1	0	0	0	0	0	2	0.7%	3.5
NW	0	1	1	0	0	0	0	0	2	0.7%	3.8
NNW	0	0	2	0	0	, O	0	a O	2	0.7%	4.6
Total	• 0	63	195	11	0	0	0	· · 0	269		
% Of Total	0.0%	23.4%	72.5%	4.1%	0.0%	0.0%	0.0%	0.0%			

Average speed for this table (MPH):	4.7	
Hours in above table with variable direction :	0	
Total number of CALMs :	2	
Total number of Invalid hours :	51	
Total number of Valid hours :	2157	
Total number of hours for period :	2208	

Third Quarter 2005

Joint Frequency Table

From : 07/01/2005 00:00 To : 09/30/2005 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	18	4	0	2	0	0	0	24	9.7%	4.0
		06		4	-	0			20	10 10	2.0
NNE	U	20	3		0	U	U	U		12.18	5.0
NE	0	24	2	0	0	0	0	0	26	10.5%	2.8
ENE	0	22	4	0	0	0	0	0	26	10.5%	2.9
Е	0	26	5	0	0	0	0	0	31	12.5%	2.6
ESE	0	13	8	0	0	0	0	0	21	8.5%	3.1
SE	1	9	8	0	0	0	0	0	18	7.3%	3.4
SSE	0	6	3	1	0	0	0	0	10	4.0%	4.3
S	0	1	8	0	0	0	0	0	9	3.6%	5.2
SSW	0	0	8	0	0	0	0	0	8	3.2%	6.1
SW	0	0	3	0	0	0	0	0	3	1.2%	6.4
WSW	0	1	3	0	0	0	0	0	4	1.6%	4.0
W	0	2	3	0	0	0	0	0	5	2.0%	3.5
WNW	1	5	2	0	0	0	0	0	8	3.2%	2.4
NW	0	7	1	0	1	0	0	0	9	3.6%	3.7
NNW	0	13	2	0	1	0	0	0	16	6.5%	3.6
Total	2	173	67	2	4	0	0	0	248		
∜ Of Total	0.8%	69.8%	27.0%	0.8%	1.6%	0.0%	0.0%	0.0%			

Average speed for this table (MPH):	3.4
Hours in above table with variable direction :	0
Total number of CALMs :	2
Total number of Invalid hours :	51
Total number of Valid hours :	2157
Total number of hours for period :	2208

Third Quarter 2005

Joint Frequency Table

<u>From</u>: 07/01/2005 00:00 <u>To</u>: 09/30/2005 23:00

PRIMARY TOWER

STABILTY CLASS G

Wind Speed (MPH) ->	(1) CALM	(2) 1.0	(3) 3.6	(4) 7.6	(5) 12.6	(6) 18.6	(7) 24.6	(8) 32.6 +	Total % Of	Ανα
Sector		- 3.5	- 7.5	- 12.5	- 18.5	- 24.5	- 32.5		Total	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
Е	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
W	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	
% Of Total	******	******	******	*******	******	******	******	******		

Average speed for this table (MPH):		0.0	
Hours in above table with variable direction	:	0	
Total number of CALMs :		2	
Total number of Invalid hours :		51	
Total number of Valid hours :		2157	
Total number of hours for period :		2208	

2005

Joint Frequency Tables

Third Quarter 2005 Joint Frequency Table

<u>From</u>: 07/01/2005 00:00 <u>To</u>: 09/30/2005 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	54	57	14	12	0	0	0	137	6.4%	5.5
NNE	0	87	105	18	1	0	0	0	211	9.8%	4.6
NE	0	72	63	14	2	0	0	0	151	7.0%	4.5
ENE	0	55	38	13	2	0	0	• 0	108	5.0%	4.4
E	0	64	45	35	4	0	0	0	148	6.9%	5.2
ESE	0	48	57	49	7	0	0	0	161	7.5%	6.3
SE	1	57	160	74	4	0	0	0	296	13.7%	5.8
SSE	0	18	140	108	4	0	0	0	270	12.5%	7.1
S	0	2	98	170	2	0	0	0	272	12.6%	8.3
SSW	0	0	85	71	1	0	0	0	157	7.3%	7.5
SW	0	4	27	13	2	0	0	0	46	2.1%	7.1
WSW	0	5	11	0	0	0	0	0	16	0.7%	4.2
W	0	6	6	1	6	0	0	0	19	0.9%	7.4
WNW	1	11	11	2	2	0	0	0	27	1.3%	5.0
NW	0	17	16	3	4	1	0	0	41	1.9%	5.5
NNW	0	40	48	7	2	0	0	0	97	4.5%	4.7
Total	2	540	967	592	55	1	0	0	2157		
% Of Total	0.1%	25.0%	44.8%	27.4%	2.5%	0.0%	0.0%	0.0%			

Average speed for this table (MPH):	•	6.1
Hours in above table with variable direction :		0
Total number of CALMs :		2.
Total number of Invalid hours :		51
Total number of Valid hours :		2157
Total number of hours for period :		2208

Radioactive Release Effluent Report - RDRJFC

Fourth Quarter 2005

. . t

Joint Frequency Tables

Joint Frequency Table

From : 10/01/2005 00:00 To : 12/31/2005 23:00

PRIMARY TOWER

9-29

Fourth Quarter 2005

Joint Frequency Table

<u>From</u>: 10/01/2005 00:00 <u>To</u>: 12/31/2005 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	1	9	0	0	0	0	0	10	13.7%	4.6
NNE	0	2	6	0	0	0	0	0	8	11.0%	4.2
NE	0	1	5	0	0	0	0	0	6	8.2%	4.5
ENE	0	1	8	0	0	0	0	0	9	12.3%	4.8
E	0	2	3	0	0	0	0	0	5	6.8%	3.8
ESE	0	0	6	0	0	0	0	0	6	8.2%	5.4
SE	0	1	4	0	0	0	0	0	5	6.8%	4.6
SSE	0	0	1	0	0	0	0	0	1	1.4%	7.3
S	0	0	3	0	0	0	0	0	3	4.1%	4.8
SSW	0	1	5	1	0	0	0	0	7	9.6%	4.3
SW	0	0	3	0	0	0	0	0	3	4.1%	4.1
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	0	0	1	0	0	0	0	1	1.48	9.5
NW	0	1	3	0	0	0	0	0	4	5.5%	4.1
NNW	0	0	5	0	0	0	0	0	5	6.8%	5.3
Total	0	່ 10	61	2	0	0	0	0	73		
% Of Total	0.0%	13.7%	83.6%	2.7%	0.0%	0.0%	0.0%	0.0%			

Average speed for this table (MPH):	4.7
Hours in above table with variable direction :	0
Total number of CALMs :	21
Total number of Invalid hours :	1
Total number of Valid hours :	2207
Total number of hours for period :	2208

Fourth Quarter 2005

Joint Frequency Table

From: 10/01/2005 00:00 **To**: 12/31/2005 23:00

PRIMARY TOWER

STABILTY CLASS B

Wind Speed (MPH) ->	(1) CALM	(2) 1.0	(3) 3.6	(4) 7.6	(5) 12.6	(6) 18.6	(7) 24.6	(8) 32.6 +	Total	% Of	Ava.
Sector		- 3.5	- 7.5	- 12.5	- 18.5	- 24.5	- 32.5			Total	Speed
N	0	1	. 4	5	3	0	0	0	13	20.0%	9.6
NNE	0	0	9	2	0	0	0	0	11	16.9%	6.1
NE	0	• 0	2	1	0	0	0	0	3	4.6%	5.6
ENE	0	0	4	0	0	0	0	0	4	6.2%	6.4
E	0	2	2	1	0	0	0	0	5	7.7%	4.5
ESE	0	2	· 1	2	0	0	0	0	5	7.7%	5.7
SE	0	0	1	0	0	0	0	0	1	1.5%	4.2
SSE	0	0	0	1	0	0	0	0	1	1.5%	8.0
S	0	0	5	0	0	0	0	0	5	7.7%	4.8
SSW	0	1	2	0	0	0	0	0	3	4.6%	4.8
SW	0	0	0	0	0	0	0	0	0	0.0%	0.0
WSW	0	0	· 1	0	0	0	0	0	1	1.5%	3.6
W	0	0	0	0	0	0	0	0	0	0.0%	0.0
WNW	0	0	1	0	0	0	0	0	1	1.5%	5.5
NW.	0	0	4	• 0	0	0	0	0	4	6.2%	5.1
NNW	0	1	7	0	: 0	0	0	0	8	12.3%	5.2
Total	0	7	43	12	3	0	0	0	65		
% Of Total	0.0%	10.8%	66.2%	18.5%	4.6%	0.0%	0.0%	0.0%			

Average speed for this table (MPH):	6.2
Hours in above table with variable direction :	0
Total number of CALMs :	21
Total number of Invalid hours :	1
Total number of Valid hours :	2207
Total number of hours for period :	2208

Fourth Quarter 2005

Joint Frequency Table

From: 10/01/2005 00:00 **To**: 12/31/2005 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	3	10	15	17	0	0	0	45	19.5%	10.2
NNE	0	0	9	17	0	0	0	0	26	11.3%	7.8
NE	. 0	1	4	11	0	0	0	0	16	6.9%	8.4
ENE	0	1	4	9	1	0	0	0	15	6.5%	8.4
Е	0	1	0	5	0	0	0	0	6	2.6%	8.6
ESE	0	1	2	10	1	0	0	0	14	6.1%	9.0
SE	0	1	1	14	2	0	0	0	18	7.8%	9.1
SSE	0	1	3	3	0	0	0	0	7	3.0%	6.9
S	0	1	9	0	0	0	0	0	10	4.3%	6.1
SSW	0	0	9	2	0	0	0	0	11	4.8%	6.5
SW	0	0	2	0	0	0	0	0	2	0.9%	5.3
WSW	0	1	0	0	0	0	0	0	1	0.4%	2.6
W	0	0	0	1	0	0	0	0	1	0.4%	9.1
WNW	0	1	1	1	1	0	0	0	4	1.7%	8.5
NW	0	1	3	1	0	0	0	0	5	2.2%	5.3
NNW	0	2	8	28	11	1	0	0	50	21.6%	10.8
Total	0	15	65	117	33	1	0	0	231		
% Of Total	0.0%	6.5%	28.1%	50.6%	14.3%	0.4%	0.0%	0.0%			

Average speed for this table (MPH):	9.0
Hours in above table with variable direction :	· • 0
Total number of CALMs :	21
Total number of Invalid hours :	1
Total number of Valid hours :	2207
Total number of hours for period :	2208

Fourth Quarter 2005

Joint Frequency Table

From : 10/01/2005 00:00 To : 12/31/2005 23:00

PRIMARY TOWER

STABILTY CLASS D

Wind Speed (MPH) ->	(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
Sector									1.0.1		
N	1	14	36	30	1/	3	0	0	101	9.68	8.5
NNE	1	21	46	44	9	· 0	0	0	121	11.4%	7.1
NE	0	12	30	35	16	0	0	0	93	8.8%	8.3
ENE	1	13	22	22	- 2	0	0	0	60	5.7%	7.0
Е	0	19	12	25	14	Q	0	0	70	6.6%	7.8
ESE	0	8	9	25	21	0	0	0	63	6.0%	9.6
SE	· 0	7	11	32	8	0	0	0	58	5.5%	8.7
SSE	0	5	31	22	2	· 0	0	0	60	5.7%	7.2
S	0	5	50	76	16	0	0	0	147	13.9%	8.7
SSW	0	0	21	46	6	0	0	0	73	6.9%	8.9
SW	0	1	6	10	10	0	0	0	27	2.6%	10.5
WSW	0	0	6	2	2	0	0	0	10	0.9%	8.4
W	0	6	4	1	0	0	0	0	11	1.0%	4.3
WNW	0	6	3	3	0	0	0	0	12	1.1%	4.8
NW	1	4	8	15	3	0	0	0	31	2.9%	7.9
NNW	2	17	35	43	22	1	0	0	120	11.4%	8.7
Total	6	138	330	431	148	4	0	0	1057		
% Of Total	0.6%	13.1%	31.2%	40.8%	14.0%	0.4%	0.0%	• 0.0%	× .		

Average speed for this table (MPH):		.2
Hours in above table with variable direction	:	0
Total number of CALMs :		21
Total number of Invalid hours :		1
Total number of Valid hours :	22	07
Total number of hours for period :	22	08

Fourth Quarter 2005

Joint Frequency Table

<u>From</u>: 10/01/2005 00:00 <u>To</u>: 12/31/2005 23:00

PRIMARY TOWER

STABILTY CLASS E

Wind Speed (MPH) ->	(1) CALM	(2) 1.0	(3) 3.6	(4) 7.6	(5) 12.6	(6) 18.6	(7) 24.6	(8) 32.6 +	Matal	e set su	
Sector		- 3.5	- 7.5	- 12.5	- 18.5	- 24.5	- 32.5		TOTAL	Total	Avg. Speed
N	0	1	13	1	0	0	0	0	15	2.8%	5.3
NNE	0	7	40	21	0	0	0	0	68	12.5%	6.2
NE	1	20	61	24	2	0	0	0	108	19.9%	5.8
ENE	1	9	48	16	0	0	0	0	74	13.6%	6.1
Е	1	8	32	2	0	0	0	0	43	7.9%	4.7
ESE	0	7	31	11	0	0	0	0	49	9.0%	5.9
SE	2	6	44	7	0	0	0	0	59	10.9%	5.1
SSE	0	3	40	3	0	0	0	0	46	8.5%	5.3
S	0	0	8	. 6	0	0	0	0	14	2.6%	7.5
SSW	0	1	1	0	0	• 0	0	0	2	0.4%	3.4
SW	0	1	0	0	0	0	0	0	1	0.2%	3.1
WSW	0	1	0	0	0	0	0	0	1	0.2%	3.3
W	0	2	5	0	0	0	0	0	7	1.3%	4.6
WNW	0	4	17	0	0	0	0	0	21	3.9%	4.9
NW	0	5	8	1	0	0	0	0	14	2.6%	4.5
NNW	1	6	14	0	0	0	0	0	21	3.9%	4.0
Total	6	81	362	92	2	0	0	0	543		
% Of Total	1.1%	14.9%	66.7%	16.9%	0.4%	0.0%	0.0%	0.0%			

`

Fourth Quarter 2005

Joint Frequency Table

From : 10/01/2005 00:00 **To** : 12/31/2005 23:00

PRIMARY TOWER

STABILTY CLASS F

Wind Speed (MPH) ->	(1) CALM	(2) 1.0	(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	Avg.
Sector		- 0.0	-7.0	- 12.0	- 10.0	- 24.0	- 52.5			Total	Speed
N	1	11	7	11	17	1	0	0	48	20.4%	9.5
NNE	3	17,	10	0	0	0	0	0	30	12.8%	2.9
NE	1	14	12	0	0	0	0	0	27	11.5%	3.2
ENE	0	7	11	0	0	0	0	0	18	7.7%	3.7
E	1	11	11	0	0	0	0	0	23	9.8%	3.6
ESE	0	9	9	0	0	0	0	0	18	7.7%	3.9
SE	1	7	4	0	0	0	0	0	12	5.1%	3.1
SSE	0	1	2	0	0	0	0	0	3	1.3%	4.3
S	0	3	1	0	0	0	0	0	4	1.7%	3.4
SSW	0	0	1	1	0	0	0	0	2	0.9%	7.0
SW	0	0	0	0	0	0	0	0	0	0.0%	0.0
WSW	0	2	0	. 0	· 0	0	0	0	2	0.9%	2.0
W	0	7	0	0	0	0	0	0	7	3.0%	2.9
WNW	0	4	2	0	0	0	0	0	6	2.6%	2.9
NW	0	3	5	0	0	0	0	0	8	3.48	4.0
NNW	2	9	8	6	2	0	0	0	27	11.5%	5.7
Total	9	105	83	18	19	1	0	0	235		
% Of Total	3.8%	44.7%	35.3%	7.7%	8.1%	0.4%	0.0%	0.0%			

Average speed for this table (MPH):	4.9
Hours in above table with variable direction :	0
Total number of CALMs :	21
Total number of Invalid hours :	1
Total number of Valid hours :	2207
Total number of hours for period :	2208

Fourth Quarter 2005

Joint Frequency Table

From : 10/01/2005 00:00 To : 12/31/2005 23:00

PRIMARY TOWER

STABILTY CLASS G

Wind Speed (MPH) ->	(1) CALM	(2) 1.0	(3) 3.6	(4) 7.6	(5) 12.6	(6) 18.6 24.5	(7) 24.6 22.5	(8) 32.6 +	Total	% Of	Avg.
Sector		- 3.5	- 7.5	- 12.3	- 10.5	- 24.3	- 32.5	77 FOR ANALASI (1) 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		Total	Speed
N	0	0	0	0	0	0	0	0	0	0.0%	0.0
NNE	0	0	0	0	0	0	0	0	0	0.0%	0.0
NE	0	0	1	0	0	0	0	0	1	33.3%	4.0
ENE	0	0	0	0	0	0	0	0	0	0.0%	0.0
E	0	0	0	0	0	0	0	0	0	0.0%	0.0
ESE	0	0	1	0	0	0	0	0	1	33.3%	4.5
SE	0	0	0	0	0	0	0	0	0	0.0%	0.0
SSE	0	0	0	0	0	0	0	0	0	0.0%	0.0
S	0	0	0	0	0	0	0	0	0	0.08	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	0	0	0	0	0	0	0	0.0%	0.0
WNW	0	0	0	0	0	0	0	0	0	0.0%	0.0
NW	0	0	1	0	0	0	0	0	1	33.3%	3.9
NNW	0	0	0	0	0	0	0	0	0	0.0%	0.0
Total	· 0	0	3	0	0	0	0	0	3		
% Of Total	0.0%	0.0%	******	0.0%	0.0%	0.0%	0.0%	0.0%			

Average speed for this table (MPH):		4.1
Hours in above table with variable direction	:	0
Total number of CALMs :		21
Total number of Invalid hours :		1
Total number of Valid hours :		2207
Total number of hours for period :		2208

ł

Fourth Quarter 2005

Joint Frequency Table

<u>From</u>: 10/01/2005 00:00 <u>To</u>: 12/31/2005 23:00

PRIMARY TOWER

ALL STABILITY CLASSES COMBINED

Wind Speed (MPH) ->	(1) CALM	(2) 1.0	(3) 3.6	(4) 7.6 - 12 5	(5) 12.6	(6) 18.6 - 24.5	(7) 24.6 - 32.5	(8) 32.6 +	Total	€ Of	Avg.
Sector		- 0.0	- 1.0	- 12,0	10.0	24.0	02.0			Total	Speed
N	2	31	79	62	54	4	0	0	232	10.5%	8.7
NNE	4	47	120	84	9	0	0	0	264	12.0%	6.3
NE	2	48	115	71	18	0	0	0	254	11.5%	6.5
ENE	2	31	97	47	3	0	0	0	180	8.2%	6.3
Е	2	43	60	33	14	0	0	0	152	6.9%	6.1
ESE	0	27	59	48	22	0	0	0	156	7.1%	7.4
SE	3	22	65	53	10	0	0	0	153	6.9%	6.7
SSE	0	10	77	29	2	0	0	0	118	5.3%	6.4
S	0	9	76	82	16	0	0	0	183	8.3%	8.2
SSW	0	3	39	50	6	0	0	0	98	4.4%	8.0
SW	0	2	11	10	10	0	0	0	33	1.5%	9.3
WSW	0	4	7	2	2	0	0	0	15	0.7%	6.5
W	0	15	9	2	0	0	0	0	26	1.2%	4.2
WNW	0	15	24	5	1	0	0	0	45	2.0%	5.1
NW	1	14	32	17	3	0	0	0	67	3.0%	6.1
NNW	5	35	77	77	35	2	0	0	231	10.5%	8.2
Total	21	356	947	672	205	6	0	0	2207		
% Of Total	1.0%	16.1%	42.9%	30.4%	9.3%	0.3%	0.0%	0.0%			

Average speed for this table (MPH):	7.1
Hours in above table with variable direction :	0
Total number of CALMs :	21
Total number of Invalid hours :	1
Total number of Valid hours :	2207
Total number of hours for period :	2208

Batch Release

First Quarter 2005

Joint Frequency Table - Batch Release Hours

From : 01/01/2005 00:00 To : 03/31/2005 23:00

PRIMARY TOWER

Radioactive Release Effluent Report - RDRJFB

2005

Batch Release

First Quarter 2005

Joint Frequency Tables

Joint Frequency Table - Batch Release Hours

From : 01/01/2005 00:00 To : 03/31/2005 23:00

PRIMARY TOWER

STABILTY CLASS A

Wind Speed (MPH) ->	(1) CALM	(2) 1.0	(3) 3.6	(4) 7.6	(5) 12.6	(6) 18.6	(7) 24.6	(8) 32.6 +	Total	% Of	Avg.
Sector		- 3.5	- 1.5	- 12.5	- 16.5	- 24.0	- 32.3			Total	Speed
N	0	0	0	0	0	0	0	0	0	0.08	0.0
NNE	0	0	0	2	1	0	0	0	3	4.58	11.3
NE	0	0	3	0	0	0	0	0	3	4.5%	5.8
ENE	0	0	0	0	0	0	0	0	0	0.0%	0.0
E	0	0	0	0	0	0	0	0	0	0.0%	0.0
ESE	0	0	1	0	0	0	0	• 0	1	1.5%	5.0
SE	0	0	0	1	2	. 0	0	0	3	4.5%	12.4
SSE	0	0	0	2	5	0	0	0	7	10.6%	14.3
S	0	0	1	7	0	. 0	0	0	8	12.1%	10.0
SSW	0	0	2	16	5	0	0	0	23	34.8%	10.8
SW	0	1	2	· 1	4	1	0	0	9	13.6%	12.4
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	0	0	2	0	0	0	0	2	3.0%	10.5
NW	0	0	0	0	1	5	0	0	6.	9.1%	19.9
NNW	0	0	0	1	0	0	0	0	1	1.58	9.2
Total	0	1	9	32	18	6	0	0	66		
% Of Total	0.0%	1.5%	13.6%	48.5%	27.3%	9.1%	0.0%	0.0%			

Average speed for this table (MPH):11.9Hours in above table with variable direction :0Total number of CALMs :0Total number of Invalid hours :1Total number of Valid hours :554Total number of hours for period :555

First Quarter 2005

Joint Frequency Tables

Joint Frequency Table - Batch Release Hours

<u>From</u>: 01/01/2005 00:00 <u>To</u>: 03/31/2005 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	0	0	0	0	0	0	0.0%	0.0
NNE	0	0	1	0	1	0	0	0	2	7.1%	10.0
NE	0	0	2	2	1	0	0	0	5	17.9%	8.8
ENE	0	0	0	0	0	0	0	0	0	0.0%	0.0
Е	0	0	0	0	0	0	0	0	0	0.0%	0.0
ESE	0	0	1	0	0	0	0	0	1	3.6%	5.5
SE	0	0	0	4	2	0	0	0	6	21.4%	11.2
SSE	0	0	1	0	3	0	0	0	4	14.3%	14.0
S	0	0	0	2	0	0	0	0	2	7.1%	11.0
SSW	0	0	0	1	0	0	0	0	1	3.6%	10.0
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	1	0	0	0	0	0	1	3.6%	5.4
WNW	0	0	0	0	0	0	0	0	0	0.0%	0.0
NW	0	0	0	3	2	0	0	0	5	17.9%	12.6
NNW	0	0	0	0	1	0	0	0	1	3.6%	13.7
Total	0	0	6	12	10	0	0	0	28		
% Of Total	0.0%	0.0%	21.4%	42.9%	35.7%	0.0%	0.0%	0.0%			

	11.0	
:	0	
	0	
	1	
	554	
	555	
	:	11.0 : 0 0 1 554 555

Batch Release

First Quarter 2005

Joint Frequency Table - Batch Release Hours

<u>From</u>: 01/01/2005 00:00 <u>To</u>: 03/31/2005 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	1	0	0	0	0	1	2.3%	11.1
NNE	0	0	1	1	1	0	0	0	3	7.0%	10.3
NE	0	0	0	2	3	0	0	0	5	11.6%	13.0
ENE	0	0	2	1	0	0	0	0	3	7.0%	8.1
E	0	0	. 1	0	0	0	0	0	1	2.3%	6.9
ESE	0	. 0	1	5	0	0	0	0	6	14.0%	8.4
SE	0	0	1	4	2	0	0	0	7	16.3%	10.6
SSE	0	0	1	0	3	0	0	0	4	9.3%	13.8
S	0	0	0	1	0	0	0	0	1	2.3%	10.3
SSW	0	0	1	1	1	0	0	0	3	7.0%	9.8
SW	0	0	1	1	0	0	0	0	2	4.78	6.4
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	0	0	0	0	0	0	0	0	0.0%	0.0
NW	0	0	0	1	3	0	0	0	4	9.3%	13.7
NNW	0	1	0	2	.0	0	0	0	3	7.0%	8.3
Total	0	1	9	20	13	0	0	0	43		
% Of Total	0.0%	2.3%	20.9%	46.5%	30.2%	0.0%	0.0%	0.0%			

Average speed for this table (MPH):		10.4
Hours in above table with variable direction	:	0
Total number of CALMs :		0
Total number of Invalid hours :		1
Total number of Valid hours :		554
Total number of hours for period :		555

Joint Frequency Tables

First Quarter 2005 Joint Frequency Table - Batch Release Hours

<u>From</u>: 01/01/2005 00:00 <u>To</u>: 03/31/2005 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	0	3	6	0	0	0	9	6.5%	13.1
NNE	0	0	0	9	5	0	0	0	14	10.1%	12.6
NE	0	0	10	8	. 4	0	0	0	22	15.9%	9.0
ENE	0	1	4	0	0	0	0	. 0	5	3.6%	5.5
E	0	1	3	2	0	0	0	0	6	4.3%	6.3
ESE	0	0	1	7	0	0	0	0	8	5.8%	9.1
SE	0	1	4	15	11	0	0	0	31	22.5%	10.5
SSE	0	0	1	4	4	0	0	0	9	6.5%	11.9
S	0	0	1	0	2	0	0	0	3	2.2%	11.1
SSW	0	0	1	2	0	0	0	0	3	2.2%	6.8
SW	0	0	2	4	3	0	0	0	9	6.5%	10.6
WSW	0	0	0	2	0	0	0	0	2	1.4%	8.0
W	0	0	0	2	0	0	0	0	2	1.4%	8.7
WNW	0	0	0	0	0	0	0	0	0	0.0%	0.0
NW	0	0	1	1	5	1	0	0	8	5.8%	14.3
NNW	0	0	0	2	5	0	0	0	7	5.1%	14.1
Total	0	3	28	61	45	1	0	. 0	138		
% Of Total	0.0%	2.2%	20.3%	44.2%	32.6%	0.7%	0.0%	0.0%			·

Average speed for this table (MPH):	10.6
Hours in above table with variable direction :	0
Total number of CALMs :	0
Total number of Invalid hours :	1
Total number of Valid hours :	554
Total number of hours for period :	555

Radioactive Release Effluent Report - RDRJFB

2005

Joint Frequency Tables

Batch Release

First Quarter 2005

Joint Frequency Table - Batch Release Hours

From: 01/01/2005 00:00 **To**: 03/31/2005 23:00

PRIMARY TOWER

STABILTY CLASS E

Wind Speed (MPH) ->	(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.
Sector											
N	0	1	3	7	5	0	0	0	16	8.9%	10.6
NNE	0	• 0	2	1	0	0	0	- 0	3	1.7%	7.1
NE	0	3	. 5	0	0	0	0	0	8	4.4%	4.2
ENE	0	1	10	1	0	. 0	0	0	12	6.7%	5.6
E	0	0	9	4	0	0	0	0	13	7.2%	6.5
ESE	0	0	8	5	0	0	0	0	13	7.28	7.4
SE	0	0	9	13	0	0	0	0	22	12.2%	8.2
SSE	0	1	6	17	2	1	0	0	27	15.0%	8.9
S	0	2	7	5	4	0	0	0	18	10.0%	8.1
SSW	0	· 1	8	9	1	0	0	0	19	10.6%	7.9
SW	0	0	6	6	0	0	0	0	12	6.7%	8.4
WSW	0	0	1	1	0	0	0	0	2	1.1%	6.4
W	0	0	1	1	0	0	0	0	2	1.1%	6.7
WNW	0	0	· 0	0	0	0	0	0	0	0.0%	0.0
NW	0	0	0	0	3	1	0	0	4	2.2%	18.2
NNW	0	0	2	4	3	0	0	0	9	5.0%	10.7
Total	Ő	9	77	74	18	2	0	0	180		
∛ Of Total	0.0%	5.0%	42.8%	41.1%	10.0%	1.1%	0.0%	0.0%			

Average speed for this table (MPH):	8.2
Hours in above table with variable direction :	0
Total number of CALMs :	0
Total number of Invalid hours :	1
Total number of Valid hours :	554
Total number of hours for period :	555

2005

Joint Frequency Tables

First Quarter 2005

Joint Frequency Table - Batch Release Hours

From : 01/01/2005 00:00 To : 03/31/2005 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	0	5	0	0	0	0	0	5	8.3%	4.8
	•			0	0		•			15 0%	6.2
NNE	0	0	7	2	0	0	0	0		13.08	0.2
NE	0	0	1	1	0	0	• 0	0	2	3.3%	6.4
ENE	0	1	4	0	0	0	0	0	5	8.3%	4.3
Е	0	0	6	2	0	0	: 0	0	8	13.3%	6.3
ESE	0	3	2	1	0	0	0	0	6	10.0%	4.5
SE	0	2	5	0	0	0	0	0	7	11.7%	4.5
SSE	0	0	8	3	0	0	0	0	11	18.3%	6.8
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	3	0	0	0	0	0	· 3	5.0%	6.4
WSW	0	0	0	0	0	0	0	0	0	0.0%	0.0
W	0	0	1	0	0	0	0	0	1	1.7%	4.1
WNW	0	0	1	0	0	0	0	0	1	1.7%	7.5
NW	0	1	1	0	0	0	0	0	2	3.3%	4.7
NNW	0	0	0	0	0	0	0	0	0	0.0%	0.0
Total	0	7	44	9	0	0	0	0	60		
% Of Total	0.0%	11.7%	73.3%	15.0%	0.0%	0.0%	0.0%	0.0%			

Average speed for this table (MPH):		5.6	
Hours in above table with variable direction	:	0	
Total number of CALMs :		0	
Total number of Invalid hours :		1	
Total number of Valid hours :		554	
Total number of hours for period :		555	

2005

Joint Frequency Tables

Batch Release

First Quarter 2005

Joint Frequency Table - Batch Release Hours

From : 01/01/2005 00:00 To : 03/31/2005 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	% Óf Total	Avg. Speed
N	0	1	1	0	0	0	0	0	2	5.1%	4.3
NNE	0	1	0	0	0	0	0	0	1	2.6%	3.0
NE	0	1	0	0	0	0	· 0	0	1	2.6%	2.0
ENE	0	2	0	0	0	0	· 0	0	2	5.1%	3.0
E	0	0	1	0	0	0	0	0	1	2.6%	4.4
ESE	0	4	2	1	0	0	0	0	7	17.9%	4.9
SE	0	2	0	0	0	0	0	0	2	5.1%	2.7
SSE	0	1	1	0	0	· 0	0	0	2	5.1%	3.7
S	0	0	0	0	0	0	0	0	0	0.0%	0.0
SSW	0	2	0	0	0	0	0	0	2	5.1%	2.6
SW	0	2	0	0	0	0	0	0	2	5.1%	1.8
WSW	0	2	0	0	0	0	. 0	0	2	5.1%	2.3
W	0	1	1	0	0	0	0	0	2	5.1%	2.7
WNW	0	3	1	0	0	0	• 0	0	4	10.3%	3.0
NW	0	1	2	0	0	0	0	0	3	7.7%	3.3
NNW	0	4	2	0	- O	0	0	0	6	15.4%	3.7
Total	0	27	11	1	0	0	0	0	39		
% Of Total	0.0%	69.2%	28.2%	2.6%	0.0%	0.0%	0.0%	0.0%			

Average speed for this table (MPH):3.4Hours in above table with variable direction :0Total number of CALMs :0Total number of Invalid hours :1Total number of Valid hours :554Total number of hours for period :555

2005

Joint Frequency Tables

First Quarter 2005 Joint Frequency Table - Batch Release Hours

From : 01/01/2005 00:00 To : 03/31/2005 23:00

PRIMARY TOWER

ALL STABILITY CLASSES COMBINED

Wind Speed (MPH) →	(1) CALM	(2) 1.0	(3) 3.6	(4) 7.6	(5) 12.6	(6) 18.6	(7) 24.6	(8) 32.6 +	Total	∜ Of	Avg.
Sector		- 3.5	- 7.5	- 12.5	- 18.5	- 24.5	- 32.5			Total	Speed
N	0	2	9	11	11	0	0	0	33	6.0%	10.0
NNE	0	1	11	15	8	0	0	0	35	6.3%	9.8
NE	0	4	21	13	8	0	0	0	46	8.3%	8.1
ENE	0	5	20	2	0	0	0	0	27	4.9%	5.4
E	0	1	20	8	0	0	0	0	29	5.2%	6.3
ESE	0	7	16	19	0	0	0	0	42	7.6%	6.9
SE	0	5	19	37	17	0	0	0	78	14.1%	9.2
SSE	0	2	18	26	17	1	0	0	64	11.6%	10.0
S	0	2	9	15	6	0	0	0	32	5.8%	9.1
SSW	0	3	12	29	7	0	0	0	51	9.2%	9.1
SW	. 0	3	14	12	7	1	0	0	37	6.78	9.3
WSW	0	2	1	3	0	0	0	0	6	1.18	5.5
W	0	1	4	3	0	0	0	0	8	1.4%	5.7
WNW	0	3	2	2	0	0	0	0	· 7	1.3%	5.8
NW	0	2	4	5	14	7	0	0	32	5.8%	13.9
NNW	0	5	4	9	9	0	0	0	27	4.9%	9.8
Total	0	48	184	209	104	9	0	0	554		
% Of Total	0.0%	8.7%	33.2%	37.7%	18.8%	1.6%	0.0%	0.0%			

Average speed for this table (MPH):	8.9
Hours in above table with variable direction :	0
Total number of CALMs :	0
Total number of Invalid hours :	1
Total number of Valid hours :	554
Total number of hours for period :	555

tadioactive Release E	Iffuent Report - RDRJFB 2005	South Texas Project
Batch Release	Second Quarter 2005	Joint Frequency Tables
	<u>Joint Frequency Table - Batch Release Hours</u>	
أريله	From \cdot 04/01/2005 00:00 To \cdot 06/30/2005 23:00	

t

Joint Frequency Tables

Second Quarter 2005

Joint Frequency Table - Batch Release Hours

From : 04/01/2005 00:00 To : 06/30/2005 23:00

PRIMARY TOWER

STABILTY CLASS A

Wind Speed (MPH) ->	(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	Avg.
Sector										TOLAL	speed
N	0	0	0	0	0	0	0	0	0	0.0%	0.0
NNE	0	0	2	0	0	0	0	0	2	6.1%	4.8
NE	0	0	0	0	0	0	0	0	0	0.0%	0.0
ENE	0	0	1	0	0	0	0	0	1	3.0%	5.4
E	0	0	0	0	0	0	0	0	0	0.0%	0.0
ESE	0	0	0	0	0	0	0	0	0	0.0%	0.0
SE	0	0	0	0	1	0	0	0	1	3.0%	17.4
SSE	0	0	0	0	4	0	0	0	4	12.1%	16.7
S	0	0	0	8	0	0	0	0	8	24.2%	11.5
SSW	0	0	0	2	0	0	0	0	2	6.1%	9.7
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	0.08	0.0
WNW	0	0	1	0	0	. 0	0	0	· 1	3.0%	4.5
NW	0	0	0	3	1	0	0	0	4	12.1%	11.6
NNW	0	0	1	5	1	3	0	0	10	30.3%	13.1
Total	0	0	5	18	7	3	0	0	33		
% Of Total	0.0%	0.0%	15.2%	54.5%	21.2%	9.1%	0.0%	0.0%			

Average speed for this table (MPH):	11.9
Hours in above table with variable direction :	0
Total number of CALMs :	0
Total number of Invalid hours :	0
Total number of Valid hours :	325
Total number of hours for period :	325

Radioactive Release Effluent Report - RDRJFB

Batch Release

2005

Joint Frequency Tables

Second Quarter 2005

Joint Frequency Table - Batch Release Hours

From : 04/01/2005 00:00 **To** : 06/30/2005 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	1	0	0	0	0	3	18.8%	6.5
NNE	0	0	0	0	0	0	0	0	0	0.0%	0.0
NE	0	0	0	0	. 0	0	0	0	0	0.0%	0.0
ENE	0	0	0	0	0	0	0	0	0	0.0%	0.0
E	0	0	0	0	0	0	0	0	0	0.0%	0.0
ESE	0	0	0	0	0	0	0	0	0	0.0%	0.0
SE	0	0	0	0	2	0	0	0	2	12.5%	17.0
SSE	0	0	0	0	0	0	0	0	0	0.0%	0.0
S	0	0	0	0	0	0	0	0	0	0.0%	0.0
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	0	1	1	1	0	0	0	3	18.8%	10.1
NW	0	0	0	2	2	0	0	0	4	25.0%	11.6
NNW	0	0	0	2	0	2	0	0	4	25.0%	16.0
Total	0	0	3	6	5	2	0	0	16		
% Of Total	0.0%	0.0%	18.8%	37.5%	31.3%	12.5%	0.0%	0.0%		,	

Average speed for this table (MPH):	12.1
Hours in above table with variable direction :	0
Total number of CALMs :	0
Total number of Invalid hours :	. 0
Total number of Valid hours :	325
Total number of hours for period :	325

2005

Joint Frequency Tables

Second Quarter 2005

Joint Frequency Table - Batch Release Hours

From: 04/01/2005 00:00 **To**: 06/30/2005 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	0	0	0	0	0	1	6.38	7.1
NNE	0	0	0	0	0	0	0	0	0	0.0%	0.0
NE	0	0	0	0	0	0	0	0	0	0.0%	0.0
ENE	0	0	0	0	0	0	0	0	0	0.0%	0.0
E	0	0	0	0	0	0	0	0	0.	0.08	0.0
ESE	0	0	0	0	1	0	0	0	1	6.3%	14.3
SE	0	0	0	0	2	0	0	0	2	12.5%	17.0
SSE	0	0	0	0	1	0	0	0	1	6.3%	14.9
S	0	0	0	1	0	0	0	0	1	6.3%	8.6
SSW	0	0	0	1	0	·0	0	0	1	6.3%	8.2
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	0	1	2	1	0	0	0	4	25.0%	11.2
NW	0	0	0	0	2	0	0	0	2	12.5%	15.1
NNW	0	0	0	1	1	1	0	0	3	18.8%	15.8
Total	0	0	2	5	8	1	0	. 0	16		
% Of Total	0.0%	0.0%	12.5%	31.3%	50.0%	6.3%	0.0%	0.0%			

Average speed for this table (MPH):	13.1
Hours in above table with variable direction :	0
models in above cable with valiable direction .	5 0
	0
Total number of Invalid hours :	225
Total number of Valid hours :	325
Total number of hours for period :	325

Radioactive Release Effluent Report - RDRJFB

2005

Batch Release

Second Quarter 2005

Joint Frequency Table - Batch Release Hours

<u>From</u>: 04/01/2005 00:00 <u>To</u>: 06/30/2005 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	3	0	0	0	0	0	3	2.6%	5.4
NNE	0	0	- 4	0	0	0	0	0	4	3.5%	5.8
NE	0	0	4	0	0	0	0	0	4	3.5%	5.9
ENE	0	0	1	0	0	0	0	. 0	1	0.9%	3.9
Е	0	0	0	. 0	0	0	0	0	0	0.0%	0.0
ESE	0	0	0	0	6	0	0	0	6	5.2%	14.6
SE	0	0	0	9	24	0	0	0	33	28.7%	14.3
SSE	0	0	0	9	13	0	0	0	22	19.1%	13.2
S	0	. 0	0	3	5	2	0	0	10	8.7%	15.7
SSW	0	0	2	3	0	0	0	0	5	4.3%	7.8
SW	0	0	1	2	0	0	0	0	3	2.6%	8.4
WSW	0	0	3	0	0	0	0	0	3	2.6%	5.8
W	0	0	1	0	0	0	0	0	1	0.9%	6.5
WNW	0	0	1	1	2	0	0	0	4	3.5%	10.3
NW	. 0	0	1	5	4	0	0	0	10	8.7%	12.2
NNW	0	0	1	1	0	4	0	0	6	5.2%	16.6
Total	0	0	22	33	54	6	0	0	115		
% Of Total	0.0%	0.0%	19.1%	28.7%	47.0%	5.2%	0.0%	0.0%			

Average speed for this table (MPH):		12.4
Hours in above table with variable direction	:	0
Total number of CALMs :		0
Total number of Invalid hours :		0
Total number of Valid hours :		325
Total number of hours for period :		325

Joint Frequency Tables

Second Quarter 2005

Joint Frequency Table - Batch Release Hours

<u>From</u>: 04/01/2005 00:00 <u>To</u>: 06/30/2005 23:00

PRIMARY TOWER

STABILTY CLASS E

Wind Speed (MPH) ->	(1) CALM	(2) 1.0	(3) 3.6	(4) 7.6	(5) 12.6	(6) 18.6 - 24.5	(7) 24.6	(8) 32.6 +	Total	% Of	Avg.
Sector		- 0.0	- 1.0	- 12.0	- 10.0	- 24.0	- 02.0			Total	Speed
N	0	0	1	2	0	0	0	0	3	6.3%	9.9
NNE	0	0	0	0	0	0	0	0	0	0.0%	0.0
NE	0	0	0	0	0	0	0	0	0	0.0%	0.0
ENE	0	_1	0	0	0	0	0	0	1	2.1%	3.4
Е	0	0	0	0	0	0	0	0	0	0.0%	0.0
ESE	0	0	0	0	0	0	0	0	0	0.0%	0.0
SE	0	0	0	4	8	0	0	0	12	25.0%	12.3
SSE	0	0	2	11	. 1	0	0	• 0	14	29.2%	9.1
S	0	0	0	1	0	0	0	0	1	2.1%	8.4
SSW	0	0	1	1	0	0	0	0	2	4.2%	7.7
SW	0	0	1	0	. 0	0	0	0	1	2.1%	5.3
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	0	0	1	0	0	0	0	1	2.18	11.0
NW	0	0	1	3	1	0	0	0	5	10.4%	9.1
NNW	0	0	2	4	2	0	0	0	8	16.7%	9.9
Total	0	1	8	27	12	0	0	0	48		
% Of Total	0.0%	2.1%	16.7%	56.3%	25.0%	0.0%	0.0%	0.0%			

Average speed for this table (MPH):	9.8	
Hours in above table with variable direction :	0	
Total number of CALMs :	0	
Total number of Invalid hours :	. 0	
Total number of Valid hours :	325	
Total number of hours for period :	325	

Second Quarter 2005

Joint Frequency Tables

Joint Frequency Table - Batch Release Hours

From : 04/01/2005 00:00 To : 06/30/2005 23:00

PRIMARY TOWER

STABILTY CLASS F

Wind Speed (MPH) →	(1) CALM	(2) 1.0 3.5	(3) 3.6	(4) 7.6	(5) 12.6 - 18.5	(6) 18.6 - 24.5	(7) 24.6	(8) 32.6 +	Total	∛ Of [`]	Avg.
Sector	•	- 3.5	-7.5	- 12.5	- 10.5	- 24.5	- 32.5			Total	Speed
N	0	. 0	4	1	0	0	0	0	5	12.2%	6.1
NNE	0	0	1	3	0	0	0	0	4	9.8%	7.7
NE	0	0	0	0	0	0	0	0	0	0.0%	0.0
ENE	0	0	0	0	0	0	0	0	0	0.0%	0.0
E	0	0	0	0	0	0	0	0	0	0.0%	0.0
ESE	0	. 0	0	0	0	0	0	0	0	0.0%	0.0
SE	0	0	1	0	0	0	0	0	1	2.4%	4.0
SSE	0	2	1	0	. 0	0	0	0	3	7.3%	3.8
S	0	0	5	0	0	0	0	0	5	12.2%	4.3
SSW	0	1	7	0	0	0	0	0	8	19.5%	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	2.48	3.4
WNW	0	1	1	0	0	0	0	0	2	4.9%	5.0
NW	0	1	3	3	0	0	0	0	7	17.1%	6.6
NNW	0	0	5	0	0	0	0	0	5	12.2%	6.2
Total	0	6	28	7	0	0	0	0	41		
% Of Total	0.0%	14.6%	68.3%	17.1%	0.0%	0.0%	0.0%	0.0%	i		

Average speed for this table (MPH):		`	5.6
Hours in above table with variable direction	:		0
Total number of CALMs :			0
Total number of Invalid hours :			. 0
Total number of Valid hours :			325
Total number of hours for period :			325

2005

Second Quarter 2005

Joint Frequency Tables

Joint Frequency Table - Batch Release Hours

From : 04/01/2005 00:00 To : 06/30/2005 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	0		0	0	0	4	7.1%	· 3.9
	U	2	٤.	U	U	U	U			10 70	5 7
NNE	0	1	5	0	0	0	0	0	6	10./*	5.7
NE	0	1	2	0	0	0	0	0	3	5.4%	4.6
ENE	0	0	3	0	0	0	0	0	3	5.4%	3.9
E	0	1	0	0	0	0	0	0	1	1.8%	3.4
ESE	0	1	4	0	0	0	0	0	5	8.9%	4.8
SE	0	1	5	0	0	0	0	0	6	10.7%	4.0
SSE	0	0	3	0	0	0	0	0	3	5.4%	4.4
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	0	0	0	0	0	0	0	0.0%	0.0
WNW	0	5	4	0	0	0	0	0	9	16.1%	3.2
NW	0	2	10	0	0	0	0	0	12	21.4%	3.9
NNW	0	2	2	0	0	0	0	0	4	7.1%	3.3
Total	0	16	40	0	0	0	0	0	56		
% Of Total	0.0%	28.6%	71.4%	0.0%	0.0%	0.0%	0.0%	0.0%			

Average speed for this table (MPH):	4.1	
Hours in above table with variable direction :	0	
Total number of CALMs :	0	
Total number of Invalid hours :	0	
Total number of Valid hours :	325	
Total number of hours for period :	325	

Radioactive Release Effluent Report - RDRJFBA

Batch Release

2005

Joint Frequency Tables

Second Quarter 2005

Joint Frequency Table - Batch Release Hours

From: 04/01/2005 00:00 **To**: 06/30/2005 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	2	13	4	0	0	0	0	19	5.8%	6.2
NNE	0	1	12	3	0	0	0	0	16	4.9%	6.1
NE	0	1	6	0	0	0	0	0	7	2.2%	5.3
ENE	0	1	5	0	0	0	0	0	6	1.8%	4.1
Е	0	· 1	0	0	0	0	0	0	1	0.3%	3.4
ESE	0	1	4	0	7	0	0	0	12	3.7%	10.5
SE	0	1	6	13	37	0	0	0	57	17.5%	12.9
SSE	0	2	6	20	19	0	0	0	47	14.5%	11.1
S	0	0	5	13	5	2	0	0	25	7.7%	11.5
SSW	0	1	10	7	0	0	0	0	18	5.5%	6.8
SW	0	0	2	2	0	0	0	0	4	1.2%	7.6
WSW	0	0	3	0	0	0	0	0	3	0.9%	5.8
W	0	1	1	0	0	0	0	0	2	0.6%	5.0
WNW	0	6	9	5	4	0	0	0	24	7.4%	7.1
NW	0	3	15	16	10	0	0	0	44	13.5%	8.7
NNW	0	2	11	13	4	10	0	0	40	12.3%	11.6
Total	0	23	108	96	86	12	0	0	325		······
ቼ Of Total	0.0%	7.1%	33.2%	29.5%	26.5%	3.7%	0.0%	0.0%			

Average speed for this table (MPH):	9.7	
Hours in above table with variable direction :	0	
Total number of CALMs :	0	
Total number of Invalid hours :	0	
Total number of Valid hours :	325	
Total number of hours for period :	325	

Third Quarter 2005

. . .

Joint Frequency Tables

Joint Frequency Table - Batch Release Hours

From : 07/01/2005 00:00 To : 09/30/2005 23:00

PRIMARY TOWER

Radioactive Release Effluent Report - RDRJFB

2005

Batch Release

Third Quarter 2005

Joint Frequency Tables

Joint Frequency Table - Batch Release Hours

From : 07/01/2005 00:00 To : 09/30/2005 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	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
E	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
W	. 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	
% Of Total	*******	*******	******	*******	*******	*******	*******	*******		

Average speed for this table (MPH):0.0Hours in above table with variable direction :0Total number of CALMs :0Total number of Invalid hours :0Total number of Valid hours :6Total number of hours for period :6

2005

Joint Frequency Tables

Third Quarter 2005

Joint Frequency Table - Batch Release Hours

From : 07/01/2005 00:00 To : 09/30/2005 23:00

PRIMARY TOWER

STABILTY CLASS B

Wind Speed (MPH) ->	(1) CALM	(2) 1.0	(3) 3.6	(4) 7.6	(5) 12.6	(6) 18.6	(7) 24.6	(8) 32.6 +	Total	% Of	Avg.
Sector		- 3.5	- 7.5	- 12.5	- 18.5	- 24.5	- 32.5			Total	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
E	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
W	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		
% Of Total	*******	******	*******	*******	*******	********	*******	*******		• •	

0.0
0
0
0
6
6
2005

Batch Release

Third Quarter 2005

Joint Frequency Table - Batch Release Hours

From : 07/01/2005 00:00 To : 09/30/2005 23:00

PRIMARY TOWER

STABILTY CLASS C

Wind Speed (MPH) ->	(1) CALM	(2) 1.0 2.5	(3) 3.6 - 7.5	(4) 7.6	(5) 12.6	(6) 18.6 - 24.5	(7) 24.6	(8) 32.6 +	Total % Of	Avg.
Sector		- 3.5	- 7.5	- 12.3	- 10.5	- 24.5	- 52.5		Total	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
E	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
W	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	Q	0	0	0	0	0	0 *****	• 0.0
NNW	0	0	Ó	0	. 0	0	0	0	0 *****	• 0.0
Total	0	0	0	0	0	0	0	0	0	
୫ Of Total	*******	*******	*******	*******	*******	*******	*******	******		

Average speed for this table (MPH):0.0Hours in above table with variable direction :0Total number of CALMs :0Total number of Invalid hours :0Total number of Valid hours :6Total number of hours for period :6

Joint Frequency Tables

Third Quarter 2005

Joint Frequency Table - Batch Release Hours

From: 07/01/2005 00:00 **To**: 09/30/2005 23:00

PRIMARY TOWER

STABILTY CLASS D

Wind Speed (MPH) ->	(1) CALM	(2) 1.0	(3) 3.6	(4) 7.6	(5) 12.6	(6) 18.6	(7) 24.6	(8) 32.6 +	Total	∛ Of	Avg.
Sector		- 3.5	- 7.5	- 12.5	- 18.5	- 24.5	- 32.5			Total	Speed
N	0	0	0	0	0	0	0	0	0 '	*****	0.0
NNE	0	0	0	0	0	0	0	0	0 7	*****	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
Е	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
W	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		
% Of Total	*******	******	******	*******	*******	******	******	******			

Average speed for this table (MPH):	0.0
Hours in above table with variable direction :	0
Total number of CALMs :	0
Total number of Invalid hours :	0
Total number of Valid hours :	6
Total number of hours for period :	6

2005

Joint Frequency Tables

Batch Release

Third Quarter 2005

Joint Frequency Table - Batch Release Hours

From : 07/01/2005 00:00 To : 09/30/2005 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	0	0	0	0	0	0	0	0	0.0%	0.0
NNE	0	0	0	0	0	0	0	0	0	0.0%	0.0
NE	0	0	0	0	0	0	0	0	0	0.0%	0.0
ENE	0	0	0	0	0	0	0	0	0	0.0%	0.0
E	0	0	4	1	0	0	0	0	5	83.3%	6.9
ESE	0	0	0	1	0	0	0	0	1	16.7%	9.5
SE	0	0	0	0	0	0	0	0	0	0.0%	0.0
SSE	0	0	0	0	0	0	0	. 0	0	0.0%	0.0
Ś	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	0	0	0	0	0	0	0	0.0%	0.0
WNW	0	0	0	0	0	0	0	0	0	0.0%	0.0
NW	0	0	· 0	0	0	0	0	0	0	0.0%	0.0
NNW	0	0	0	0	0	:. O	0	0	0	0.0%	0.0
Total	0	0	4	2	0	0	0	0	6		
% Of Total	0.0%	0.0%	66.7%	33.3%	0.0%	0.0%	0.0%	0.0%			

Average speed for this table (MPH):7.3Hours in above table with variable direction :0Total number of CALMs :0Total number of Invalid hours :0Total number of Valid hours :6Total number of hours for period :6

9-61

Joint Frequency Tables

Third Quarter 2005

Joint Frequency Table - Batch Release Hours

From: 07/01/2005 00:00 **To**: 09/30/2005 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	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
E	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
W	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		
% Of Total	*******	******	*******	*******	******	******	*******	*******			

Average speed for this table (MPH):0.0Hours in above table with variable direction :0Total number of CALMs :0Total number of Invalid hours :0Total number of Valid hours :6Total number of hours for period :6

2005

Batch Release

Third Quarter 2005

Joint Frequency Tables

Joint Frequency Table - Batch Release Hours

From : 07/01/2005 00:00 To : 09/30/2005 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		0		0		0 *****	0.0
	0	U	U	U	U	U	U	U	~ ~ · · · · · · · ·	
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
E	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
Ŵ	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
Total	0	0	0	0	0	· 0	0	0	0	
% Of Total	*******	*******	*******	******	******	******	*******	*******		

Average speed for this table (MPH):	0.0
Hours in above table with variable direction :	0
Total number of CALMs :	0
Total number of Invalid hours :	0
Total number of Valid hours :	6
Total number of hours for period :	6

Wind Speed

% Of

Total

0.0%

Average speed for this table (MPH):

(MPH) ->

Sector

Batch Release

0.0%

0.0%

0.0%

7.3

0

0 0

6

6

0.0%

9-64	

Total number of CALMs : Total number of Invalid hours : Total number of Valid hours : Total number of hours for period :

0.0%

Hours in above table with variable direction :

66.7%

33.3%

									-	
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%
Е	0	0	4	1	0	0	0	0	5	83.3%
ESE	0	0	0	1	0	0	0	0	1	16.7%
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	<i>'</i> 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%
W	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	٥	0		2	<u>،</u>	0	٥	0	6	

ALL STABILITY CLASSES COMBINED

(5)

12.6

- 18.5

(6)

18.6

- 24.5

(7)

24.6

- 32.5

(8)

32.6+

(4)

7.6

- 12.5

(3) 3.6

- 7.5

(2) 1.0

- 3.5

(1)

ĊÁLM

2005

Third Quarter 2005

Joint Frequency Table - Batch Release Hours

From : 07/01/2005 00:00 To : 09/30/2005 23:00

PRIMARY TOWER

Joint Frequency Tables

Total % Of

Total

Avg.

Speed

0.0 0.0 0.0 0.0 6.9 9.5 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

South Texas Project

Radioactive Release	Effluent Report -	RDRJFB
---------------------	-------------------	--------

Fourth Quarter 2005

Joint Frequency Table - Batch Release Hours

From : 10/01/2005 00:00 To : 12/31/2005 23:00

PRIMARY TOWER

Fourth Quarter 2005

Joint Frequency Tables

Joint Frequency Table - Batch Release Hours

From : 10/01/2005 00:00 To : 12/31/2005 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	4	0	0	0	0	0	4	12.1%	4.5
NNE	0	0	3	0	0	0	0	0	3	9.1%	4.6
NE	0	1	3	0	0	0	0	0	4	12.1%	3.8
ENE	0	1	6	0	0	0	0	0	7	21.2%	4.8
E	0	1	0	0	0	0	0	0	1	3.0%	1.7
ESE	0	0	3	0	0	0	0	0	3	9.1%	5.2
SE	0	0	0	0	0	0	0	0	0	0.0%	0.0
SSE	0	0	0	0	0	0	0	0	0	0.0%	0.0
S	0	0	1	0	0	0	0	0	1	3.0%	5.0
SSW	0	0	3	0	0	0	0	0	3	9.1%	4.0
SW	0	0	1	0	0	0	0	0	1	3.0%	4.7
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	0	0	0	0	0	0	0	0	0.0%	0.0
NW	0	1	0	0	0	0	0	0	1	3.0%	2.0
NNW	0	0	5	0	0	0	0	0	5	15.2%	5.3
Total	0	4	29	. 0	0	0	0	0	33		
% Of Total	0.0%	12.1%	87.9%	0.0%	0.0%	0.0%	0.0%	0.0%			

Average speed for this table (MPH):	4.5	
Hours in above table with variable direction :	0	
Total number of CALMs :	18	
Total number of Invalid hours :	1	
Total number of Valid hours :	631	
Total number of hours for period :	632	

2005

Batch Release

Fourth Quarter 2005

Joint Frequency Table - Batch Release Hours

<u>From :</u> 10/01/2005 00:00 <u>To :</u> 12/31/2005 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	3	0.	0	0	0	4	16.0%	10.2
NNE	0	0	6	2	0	. 0	0	0	8	32.0%	6.5
NE	0	0	1	0	0	0	0	0	1	4.0%	5.0
ENE	0	0	· 1	0	0	0	0	0	1	4.0%	7.3
E	0	0	0	1	0	0	0	0	1	4.0%	7.6
ESE	0	0	1	1	0	0	0	0	2	8.0%	7.5
SE	0	0	0	0	0	0	0	0	0	0.0%	0.0
SSE	0	0	0	1	0	0	0	0	1	4.0%	8.0
S	0	0	1	0	0	0	0	0	1	4.0%	5.2
SSW	0	0	. 2	0	0	0	0	0	2	8.0%	5.4
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	0	0	0	0	0	0	0	0	0.0%	0.0
NW	0	0	0	0	0,	0	0	0	0	0.0%	0.0
NNW	0	1	3	0	0	• • 0 •	0	0	4	16.0%	4.6
Total	0	1	16	8	···· 0	0	0	0	25		
% Of Total	0.0%	4.0%	64.0%	32.0%	0.0%	0.0%	0.0%	0.0%			

Average speed for this table (MPH):	6.8	
Hours in above table with variable direction :	0	
Total number of CALMs :	18	
Total number of Invalid hours :	1	
Total number of Valid hours :	631	
Total number of hours for period :	632	

Joint Frequency Tables

Fourth Quarter 2005

Joint Frequency Table - Batch Release Hours

<u>From</u>: 10/01/2005 00:00 <u>To</u>: 12/31/2005 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	3	5	5	0	0	0	0	13	14.3%	6.8
NNE	0	0	6	12	0	0	0	0	18	19.8%	7.9
NE	0	0	0	5	0	0	0	0	5	5.5%	9.9
ENE	0	0	2	6	0	0	0	· 0	8	8.8%	8.1
Е	0	1	0	2	0	0	0	0	3	3.3%	6.7
ESE	0	0	0	4	0	0	0	· 0	4	4.4%	10.6
SE	0	0	1	10	0	0	0	0	11	12.1%	9.0
SSE	0	0	1	2	0	0	0	0	3	3.3%	8.2
S	0	1	6	0	0	0	0	0	7	7.78	6.1
SSW	0	0	5	0	0	0	0	0	5	5.5%	6.4
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	0	0	0	0	0	0	0	0	0.0%	0.0
NW	0	1	0	0	0	0	0	. 0	1	1.1%	3.0
NNW	0	1	0	12	0	0	0	0	13	14.3%	9.8
Total	0	7	26	58	0	0	0	0	91		
% Of Total	0.0%	7.7%	28.6%	63.7%	0.0%	0.0%	0.0%	0.0%			

Average speed for this table (MPH):		8.1	
Hours in above table with variable direction	:	0	
Total number of CALMs :		18	
Total number of Invalid hours :		1	
Total number of Valid hours :		631	
Total number of hours for period :		632	

2005

Batch Release

Fourth Quarter 2005

Joint Frequency Table - Batch Release Hours

From: 10/01/2005 00:00 **To**: 12/31/2005 23:00

PRIMARY TOWER

STABILTY CLASS D

Wind Speed (MPH) ->	(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	۹ Of	Avg.
Sector		••••	,,							Total	Speed
N	1	7	9	3	6	0	0	0	26	12.0%	7.1
NNE	1	11	15	3	0	0	0	0	30	13.8%	4.7
NE	0	2	10	10	1	0	0	0	23	10.6%	7.2
ENE	1	1	9	5	1	0	0	0	17	7.8%	7.3
E	0	5	2	13	12	0	0	0	32	14.7%	10.1
ESE	0	1	1	8	11	0	0	0	21	9.7%	11.8
SE	0	2	2	7	1	0	0	0	12	5.5%	8.5
SSE	0	1	4	3	· 1	0	Q	0	9	4.1%	7.9
S	0	0	5	8	0	0	0	0	13	6.0%	8.5
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	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	0	0	0	0	0	0	0	0	0.0%	0.0
NW	1	1	1	2	0	0	0	0	5	2.3%	5.5
NNW	2	10	5	12	·`0	0	0	0	29	13.4%	5.9
Total	6	41	63	74	33	0	0	0	217		
% Of Total	2.8%	18.9%	29.0%	34.1%	15.2%	0.0%	0.0%	0.0%			

Average speed for this table (MPH):7.7Hours in above table with variable direction :0Total number of CALMs :18Total number of Invalid hours :1Total number of Valid hours :631Total number of hours for period :632

Joint Frequency Tables

Fourth Quarter 2005

Joint Frequency Table - Batch Release Hours

<u>From</u>: 10/01/2005 00:00 <u>To</u>: 12/31/2005 23:00

PRIMARY TOWER

STABILTY CLASS E

Wind Speed (MPH) →	(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.
Sector										iocui	speed
N	0	1	2	0	0	0	0	0	3	1.6%	3.6
NNE	0	6	19	6	0	0	0	0	31	16.3%	5.7
NE	1	10	38	17	0	0	0	0	66	34.7%	5.9
ENE	1	2	28	2	0	0	0	0	33	17.4%	5.1
Е	1	1	10	1	0	0	0	0	13	6.8%	5.0
ESE	0	2	6	1	0	0	0	0	9	4.7%	5.1
SE	2	1	16	0	0	0	0	0	19	10.0%	4.3
SSE	0	0	10	0	0	0	0	0	10	5.3%	4.9
S	0	0	0	0	0	0	0	0	0	0.08	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	0	0	0	0	0	0	0	0.0%	0.0
WNW	0	0	0	0	0	0	0	0	0	0.0%	0.0
NW	0	2	0	0	0	0	0	0	2	1.1%	3.5
NNW	1	2	1	0	0	0	0	0	4	2.1%	1.9
Total	6	27	130	27	0	0	0	0	190		
% Of Total	3.2%	14.2%	68.4%	14.2%	0.0%	0.0%	0.0%	0.0%			

Average speed for this table (MPH):	5.3
Hours in above table with variable direction :	0
Total number of CALMs :	18
Total number of Invalid hours :	1
Total number of Valid hours :	631
Total number of hours for period :	632

Batch Release

2005

Joint Frequency Tables

Fourth Quarter 2005

Joint Frequency Table - Batch Release Hours

From: 10/01/2005 00:00 **To**: 12/31/2005 23:00

PRIMARY TOWER

STABILTY CLASS F

Wind Speed (MPH) ->	(1) CALM	(2) 1.0 2.5	(3) 3.6 7.5	(4) 7.6	(5) 12.6	(6) 18.6	(7) 24.6 - 32.5	(8) 32.6 +	Total	% Of	Avg.
Sector		- 3.5	- 7.5	- 12.5	- 10.5	- 24.5	- 52.5			Total	Speed
N	1	3	2	2	4	0	0	0	12	16.2%	8.4
NNE	3	3	6	0	0	0	0	0	12	16.2%	2.8
NE	0	4	6	0	0	0	0	0	10	13.5%	3.6
ENE	0	2	4	0	0	0	0	0	6	8.1%	4.0
Е	0	2	6	0	0	0	0	0	8	10.8%	4.4
ESE	0	2	6	0	0	0	0	0	8	10.8%	4.8
SE	0	3	3	0	0	0	0	0	6	8.1%	3.8
SSE	0	0	0	0	0	0	0	0	0	0.0%	0.0
S	0	2	0	0	0	0	0	0	2	2.7%	2.7
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	0	1	0	0	0	· 0	0	1	1.4%	3.8
NW	0	1	3	0	0	0	0	0	4	5.4%	4.7
NNW	2	2	1	0	0	· 0	0	0	5	6.8%	1.7
Total	6	24	38	2	4	0	0	0	74		
% Of Total	8.1%	32.4%	51.4%	2.7%	5.4%	0.0%	0.0%	0.0%			

Average speed for this table-(MPH):		4.4
Hours in above table with variable direction	:	0
Total number of CALMs :		18
Total number of Invalid hours :		1
Total number of Valid hours :		631
Total number of hours for period :		632

2005

Joint Frequency Tables

Fourth Quarter 2005

Joint Frequency Table - Batch Release Hours

<u>From</u>: 10/01/2005 00:00 <u>To</u>: 12/31/2005 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	0	0	0	0	0	0	0	0	0.0%	0.0
NNE	0	0	0	0	0	0	0	0	0	0.0%	0.0
NE	0	0	1	0	0	0	0	0	1	*****	4.0
ENE	0	0	0	0	0	0	0	0	0	0.0%	0.0
E	0	0	0	0	0	0	0	0	0	0.0%	0.0
ESE	0	0	0	0	0	0	0	0	0	0.0%	0.0
SE	0	·0	0	0	0	0	0	0	0	0.0%	0.0
SSE	0	0	0	0	0	0	0	0	0	0.0%	0.0
S	0	0	0	0	0	0	0	0	0	0.0%	0.0
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
Ŵ	0	0	0	0	0	0	0	0	0	0.08	0.0
WNW	0	0	· 0	0	0	0	0	0	0	0.0%	0.0
NW	0	0	0	0	. 0	0	0	0	0	0.0%	0.0
NNW	0	0	0	0	0	0	0	0	0	0.0%	0.0
Total	0	0	1	0	0	0	0	0	1		
% Of Total	0.0%	0.0%	*******	0.0%	0.0%	0.0%	0.0%	0.0%			

Average speed for this table (MPH):	4.0	
Hours in above table with variable direction :	0	
Total number of CALMs :	18	
Total number of Invalid hours :	1	
Total number of Valid hours :	631	
Total number of hours for period :	632	

Batch Release

2005

Joint Frequency Tables

Fourth Quarter 2005

Joint Frequency Table - Batch Release Hours

<u>From</u>: 10/01/2005 00:00 <u>To</u>: 12/31/2005 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	2	14	23	13	10	0	0	0	62	9.8%	7.2
NNE	4	20	55	23	0	0	0	0	102	16.2%	5.5
NE	1	17	59	32	1	0	0	0	110	17.4%	6.1
ENE	2	6	50	13	1	0	0	0	72	11.4%	5.9
E	1	10	18	17	12	0	0	0	58	9.2%	7.8
ESE	0	5	17	14	11	0	0	0	47	7.4%	8.6
SE	2	6	22	17	1	0	0	0	48	7.6%	6.3
SSE	0	1	15	6	1	0	0	0	23	3.6%	6.6
S	0	3	13	8	0	0	0	0	24	3.8%	7.0
SSW	0	0	10	0	0	0	0	0	10	1.6%	5.5
SW	0	0	1	0	0	0	0	0	1	0.2%	4.7
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	0	1	0	0	0	0	0	1	0.2%	3.8
NW	1	6	4	2	. 0	0	0	0	13	2.1%	4.5
NNW	5	16	15	24	. 0	0	0	0	60	9.5%	6.0
Total	18	104	303	169	37	0	0	0	631		
% Of Total	2.9%	16.5%	48.0%	26.8%	5.9%	0.0%	0.0%	0.0%			

Average speed for this table (MPH):	6.4
Hours in above table with variable direction :	0
Total number of CALMs :	18
Total number of Invalid hours :	1
Total number of Valid hours :	631
Total number of hours for period :	632

9-73