2003 ANNUAL EFFLUENT RELEASE REPORT

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ATTACHMENT 1 – Radwaste Process Control Program (PCP) I

ATTACHMENT 2 – Offsite Dose Calculation Manual (ODCM) II

I. INTRODUCTION

This is the annual Radioactive Effluent Release Report for the period of January 1, 2003 through December 31, 2003. This report is submitted in accordance with Technical Specification 5.6.3 of Appendix A to River Bend Station (RBS) License Number NPF-47.

There are three corrections to be noted in previous submittals. The 2001 Annual Radiological Effluent Report contained a typgraphical error in the header of the report. The preparation date was shown as April 19, 2001 instead of April 19, 2002. In 2002, the Sr-89 and Sr-90 analysis method for liquids and gases should have been reported as using Scintillation techniques (Chrenkov counting) instead of a gas flow proportional counting.

II. SUPPLEMENTAL INFORMATION

A. Regulatory Limits

1. 10CFR50, Appendix I Limits

a. Fission and Activation Gases

In accordance with Technical Requirement 3.11.2.2, the air dose due to noble gases released in gaseous effluent to areas at and beyond the SITE BOUNDARY shall be limited to:

$D_{Gamma\text{-}Air}$ = gamma air dose from radioactive noble gases in millirad (mrad)

$$= 3.17E\text{-}8 \sum_{i=1}^{n} M_i \overline{(X/Q)} Q_i \quad \leq 5 \text{ mrads/qtr}, \leq 10 \text{ mrads/yr}$$

$D_{Beta\text{-}Air}$ = beta air dose from radioactive noble gases in millirad (mrad)

$$= 3.17E\text{-}8 \sum_{i=1}^{n} N_i \overline{(X/Q)} Q_i \quad \leq 10 \text{ mrads/qtr}, \leq 20 \text{ mrads/yr}$$

b. Radioiodine (I-131 & I-133) and Particulate

In accordance with Technical Requirement 3.11.2.3, the dose to a MEMBER OF THE PUBLIC from iodine-131, iodine-133, tritium and all radionuclides in particulate form with half-lives greater than 8 days, in gaseous effluent releases to areas at and beyond the SITE BOUNDARY shall be limited to:

$D_{I\&8DP\tau}$ = Dose in mrem to the organ (τ) for the age group of interest from radioiodine (I-131, I-133, tritium, and 8 day particulate via the pathway of interest.

$$= 3.17E\text{-}08 (F_o) \sum_{I=1}^{n} P_{i\tau} (X/Q) Q_i \quad \underline{\text{and}}$$

$$= 3.17E\text{-}08\ (F_o) \sum_{I=1}^{n} R_{i\tau}\ (D/Q)\ Q_i \quad \underline{\text{and}}$$

$$D_\tau = \sum_{z=1}^{n} D_{I\&8DP\tau} \quad \leq 7.5 \text{ mrem/qtr}, \leq 15 \text{ mrem/yr}$$

(above terms defined in the RBS ODCM)

c. Liquid Effluent

In accordance with Technical Requirement 3.11.1.2, the dose or dose commitment to a MEMBER OF THE PUBLIC from radioactive materials in liquid effluent released to UNRESTRICTED AREAS shall be limited to:

$$D_{i\tau} = \frac{A_{i\tau}\ \Delta t\ Q_i}{(DF)\ D_w}$$

and

$$D_{TOTAL\tau} = \sum_{i=1}^{n} D_{i\tau}$$

$D_{TOTAL\tau}$ = Total dose commitment to the organ (τ) due to all releases during the desired time interval in mrem

and

D_{TOTAL}	Total Body	$\leq$ 1.5 mrem/qtr $\leq$ 3 mrem/yr
D_{TOTAL}	Any Organ	$\leq$ 5 mrem/qtr $\leq$ 10 mrem/yr

(above terms defined in RBS ODCM)

2. 40CFR190 Limits

In accordance with Technical Requirement 3.11.4, the annual (calendar year) dose or dose commitment to any MEMBER OF THE PUBLIC, due to releases of radioactivity and to radiation from uranium fuel cycle sources, shall be limited to:

$\leq$ 25 mrem to the total body or any organ (except the thyroid)

$\leq$ 75 mrem to the thyroid

3. Miscellaneous Limits

a. Technical Requirement 3.11.2.1 - Fission and Activation Gases

In accordance with Technical Requirement 3.11.2.1, the dose rate due to radioactive materials released in gaseous effluents from the site to areas at and beyond the SITE BOUNDARY shall be less than or equal to 500 millirems/year (mrem/yr) to the total body and less than or equal to 3000 mrem/yr to the skin:

DR_{TB} = Dose rate to the total body in mrem/yr

$$= \sum_{i=1}^{n} K_i \ \overline{(X/Q)} \ \dot{Q}_i \leq 500 \text{ mrem/yr and}$$

DR_{SKIN}= Dose rate to the skin in mrem/yr

$$= \sum_{i=1}^{n} L_i + 1.1M_i \ \overline{(X/Q)} \ \dot{Q}_i \leq 3000 \text{ mrem/yr}$$

(above terms defined in RBS ODCM)

b. Technical Requirement 3.11.2.1 - Radioiodine (I-131 & I-133) and Particulate

In accordance with Technical Requirement 3.11.2.1, the dose rate due to iodine-131, iodine-133, tritium, and all radionuclides in particulate form with half-lives greater than 8 days released in gaseous effluents from the site to areas at and beyond the SITE BOUNDARY shall be limited to less than or equal to 1500 mrem/yr to any organ:

$DR_{I\&8DP\tau}$ = Dose rate to the organ τ for the age pathway group of interest from Radioiodine (I-131 & I-133)s, tritium, and 8 day particulate via the inhalation pathway in mrem/yr.

$$= \sum_{i=1}^{n} P_i \ \overline{(X/Q)} \ \dot{Q}_i \leq 1500 \text{ mrem/yr}$$

(above terms defined in RBS ODCM)

c. Technical Requirement 3.11.1.1 - Liquid Effluent

In accordance with Technical Requirement 3.11.1.1, the concentration of radioactive material released in liquid effluent to UNRESTRICTED

AREAS shall be limited to ten times the concentrations specified in 10CFR20, Appendix B, Table 2, 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 microcuries/milliliter total activity.

d. Technical Requirement 3.11.2.5 - Ventilation Exhaust Treatment System

In accordance with Technical Requirement 3.11.2.5, the VENTILATION EXHAUST TREATMENT SYSTEM shall be used to reduce radioactive materials in gaseous waste prior to their discharge when the projected doses, due to gaseous effluent releases to areas and beyond the SITE BOUNDARY would exceed 0.3 mrem to any organ in a 31-day period.

e. Technical Requirement 3.11.1.3 - Liquid Radwaste Treatment System

In accordance with Technical Requirement 3.11.1.3, the liquid radwaste treatment system shall be used to reduce the radioactive materials in liquid waste prior to their discharge when the projected doses, due to the liquid effluent, to UNRESTRICTED AREAS would exceed 0.06 mrem to the total body or 0.2 mrem to any organ in a 31-day period.

B. Effluent Concentration Limits

1. Gaseous Releases

The concentrations of radioactive gaseous releases are based on the dose rate restrictions in RBS Technical Requirements, rather than the Effluent Concentration Limits (ECL) listed in 10CFR20 Appendix B, Table 2, Column 1.

2. Liquid Releases

The Effluent Concentration Limits of radioactive materials in liquid effluent is limited to ten times 10CFR20, Appendix B, Table 2, Column 2.

C. Measurements and Approximations of Total Radioactivity

1. Gaseous Effluent

a. Fission and Activation Gases

Periodic grab samples are obtained from the Main Plant Exhaust Duct, Fuel Building Exhaust Vent and Radwaste Building Exhaust Vent. These samples are analyzed utilizing high purity germanium detectors coupled to computerized pulse height analyzers. The sampling and analysis frequencies are described in Table 1.

Sampling and analysis of these effluent streams provide noble gas radionuclide relative abundance that can then be applied to the noble gas gross activity and gross activity release rate to obtain nuclide specific activities and release rates. The noble gas gross activity released within a specific time period is determined by integrating the stack monitor release rate over the considered time period. If no activity was detected between the stack grab sample and a significant increase in hourly averages was recorded, the nuclide relative abundance of the last sample (or the last similar event) which indicated the presence of activity was utilized to obtain nuclide specific activities. Correction factors for the monitors are derived and applied for each sampling period whenever noble gas radionuclides are detected in the effluent stream.

b. Particulate and Radioiodine (I-131 & I-133)

Particulates and Radioiodine (I-131 & I-133) are continuously sampled from the three release points utilizing a particulate filter and charcoal cartridge in line with a sample pump (stack monitor pump). These filters and charcoal cartridges are removed and analyzed in accordance with the frequencies specified in Table 1. Analysis is performed to identify and quantify radionuclides utilizing high purity germanium detectors coupled to computerized pulse height analyzers. Given the nuclide specific activity concentrations, process flow rate, and time which the sample covered; the nuclide specific activity released to the environment can be obtained. Due to the continuous sampling process, it is assumed that the radioactive material is released to the environment at a constant rate within the sampling period. Sr-89 and Sr-90 are quantitatively analyzed by counting by Scintillation techniques (Chrenkov counting). Gross alpha analysis is performed using a zinc sulfide scintillation counter.

c. Tritium

Tritium grab samples are obtained from the three release points at the specified frequencies listed in Table 1 utilizing an ice bath condensation collection method. The collected sample is then analyzed utilizing a Liquid Scintillation Counter. Given the tritium concentration, process flow rate, and time period for which the sample is obtained, the tritium activity released to the environment can be determined. Due to the frequency of sampling, it is assumed that the tritium is released to the environment at a constant rate within the time period for which the sample is obtained.

2. Liquid Effluent

Representative grab samples are obtained from the appropriate sample recovery tank and analyzed prior to release of the tank in accordance with the frequencies listed in Table 2. Analysis for gamma emitting nuclides (including dissolved and entrained noble gases) is performed utilizing a high resolution germanium detector coupled to a computerized pulse height analyzer. Tritium

concentration is determined utilizing a liquid scintillation counter. Sr-89 and Sr-90 are quantitatively analyzed by Scintillation techniques (Chrenkov counting). Fe-55 is counted with a liquid scintillation counter after digestion of the iron. Gross alpha analysis is performed using a zinc sulfide scintillation counter.

Given the nuclide specific activity concentration and total volume of the tank that was released, the activity of each nuclide released to the environment can be determined.

D. Batch Releases

1. Liquid Effluents - BATCH MODE

EFFLUENT AND WASTE DISPOSAL REPORT
SUPPLEMENTAL INFORMATION
LIQUID EFFLUENTS - BATCH MODE

REPORT FOR 2003	Units	QTR 1	QTR 2	QTR 3	QTR 4	YEAR
Number of releases		70	113	90	21	294
Total release time	minutes	2.58E+04	3.96E+04	3.00E+04	7.27E+03	1.03E+05
Maximum release time	minutes	5.25E+02	8.78E+02	3.72E+02	3.69E+02	8.78E+02
Average release time	minutes	3.69E+02	3.50E+02	3.34E+02	3.46E+02	3.49E+02
Minimum release time	minutes	0.00E+00	1.00E+00	0.00E+00	3.28E+02	0.00E+00

		QTR 1	QTR 2	QTR 3	QTR 4
Average Miss. River stream flow during periods of release of effluent into a flowing stream	ft^3/ sec	602,722	649,868	368,196	351,957

The Mississippi River stream flow is obtained by averaging data from the U. S. Army Corp of Engineers flow gauge at Tarbert Landing.

2. Gaseous Effluents – BATCH MODE

There were no batch releases of gaseous effluents from River Bend Station during 2003.

EFFLUENT AND WASTE DISPOSAL REPORT
SUPPLEMENTAL INFORMATION
GASEOUS EFFLUENTS - BATCH MODE

REPORT FOR 2003	Units	QTR 1	QTR 2	QTR 3	QTR 4	YEAR
Number of releases		0	0	0	0	0
Total release time	minutes	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Maximum release time	minutes	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Average release time	minutes	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Minimum release time	minutes	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

E. Abnormal Releases

There were no abnormal releases during the reporting period of January 1, 2003 through December 31, 2003.

F. Estimate of Total Error

1. Liquid

The maximum error associated with sample collection, laboratory analysis, and discharge volume is collectively estimated to be:

Fission and Activation Products	: ± 14.2%
Tritium	: ± 14.2%
Dissolved and Entrained Noble Gases	: ± 14.2%
Gross Alpha Radioactivity	: ± 14.2%

2. Gaseous

The maximum errors (not including sample line loss) associated with sample flow, process flow, sample collection, monitor accuracy and laboratory analysis are collectively estimated to be:

Noble Gases	: ± 37.0%
Iodines	: ± 18.6%
Particulate	: ± 18.6%
Tritium	: ± 18.2%

3. Determination of Total Error

The total error (i.e., collective error due to sample collection, laboratory analysis, sample flow, process flow, monitor accuracy, etc.) is calculated using the following equation:

$$E_T = \sqrt{((E_1)^2 + (E_2)^2 + ...(E_n)^2)}$$

where:

E_T = total error

$E_1, E_2 ...E_n$ = individual errors due to sample collection, laboratory analysis, sample flow, process flow, monitor accuracy, etc.

III. GASEOUS EFFLUENT SUMMARY INFORMATION

Refer to the Table 3 series for "Summation of All Releases" and "Nuclides Released", respectively. It should be noted that an entry of "0.00E+00" Curie (Ci) or microcurie/second (uCi/sec) in this section indicates that the concentration of the particular radionuclide was below the Lower Limit of Detection (LLD) as listed in Table 1. Also, any nuclide not appearing in the tables was < LLD for all four quarters.

IV. LIQUID EFFLUENT SUMMARY INFORMATION

Refer to the Table 4 series for "Summation of All Releases and Nuclides Released". It should be noted that an entry of "0.00E+00" Ci or uCi/ml in this section indicates that the concentration of the particular radionuclide was below the Lower Limit of Detection (LLD) as listed in Table 2. Also, any nuclide not appearing in the tables was < LLD for all four quarters.

V. SOLID WASTE

Refer to Table 7, for "Solid Waste and Irradiated Fuel Shipments".

VI. RADIOLOGICAL IMPACT ON MAN (40CFR190 compliance)

An assessment was made of radiation doses to the likely most-exposed member of the public from River Bend and other nearby uranium fuel cycle sources (none within five miles). The annual (calendar year) dose or dose commitment to any MEMBER OF THE PUBLIC, due to releases of radioactivity and to radiation from uranium fuel cycle sources, shall be limited to less than or equal to 25 mrem to the total body or any organ, except the thyroid, which shall be limited to less than or equal to 75 mrem.

Total Body	=	4.60E-01 mrem
Skin	=	5.95E-01 mrem
Thyroid	=	6.63E-01 mrem
Other Organ	=	4.62E-01 mrem

In addition, an assessment of doses was made for members of the public due to their activities inside the site boundary. Parameters and assumptions utilized to make this determination can be found in Table 9. The results of the calculations can be found in Table 10. The maximally exposed member of the public on site was the lawn service provider who works around the General Services Building lawn twelve hours per day, three days per month, ten months per year. It should be noted that liquid effluent pathway dose was not considered since these individuals would not engage in activities that would allow exposure to this pathway.

VII. METEOROLOGICAL DATA

See Tables 11 and 12 for the cumulative joint frequency distributions and annual average data for continuous releases. The meterological recovery for 2003 was 92%.

VIII. RADIOACTIVE LIQUID EFFLUENT MONITORING INSTRUMENTATION OPERABILITY

The minimum number of channels required to be OPERABLE as described in Table 3.3.11.2-1 of Technical Requirement 3.3.11.2 were, if inoperable at any time in the period 1/1/03 through 12/31/03, restored to operable status within the required time. Reporting of these inoperable channels in this report is, therefore, not required.

IX. RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION OPERABILITY

The minimum number of channels required to be OPERABLE as described in Table 3.3.11.3-1 of Technical Requirement 3.3.11.3 were, if inoperable at any time in the period 1/1/03 through 12/31/03, restored to operable status within the required time. Reporting of inoperable channels is therefore not required in this report.

X. LIQUID HOLD UP TANKS

The maximum quantity of radioactive material, excluding tritium and dissolved or entrained noble gases, contained in any unprotected outdoor tank during the period of 1/1/03 through 12/31/03 was less than or equal to the 10 curie limit as required by Technical Specification 5.5.8.b.

XI. RADIOLOGICAL ENVIRONMENTAL MONITORING

There were no changes in radiological environmental monitoring locations during the reporting period 1/1/03 through 12/31/03.

XII. LAND USE CENSUS

The Land Use Census, as required by Technical Requirement 3.12.2 is performed every two years and was not scheduled to be performed in 2003. The next performance of the Land Use Census is scheduled for 2004.

XIII. OFFSITE DOSE CALCULATION MANUAL (ODCM)

A revision to the ODCM was made in 2003. A copy of the ODCM is located in Attachment 2 of this document. Each change, except where information was deleted (see below for summary), is identified by markings in the margin of the affected pages, clearly indicating the area of the page that was changed, and indicate the date (i.e., month and year) the change was implemented. All changes were implemented in March 2003.

1. Attachment 14 – added a statement to evaluate the National Guard and/or State Police dose while they are stationed on site as members of the public.
2. Steps 7.2 and 7.3 – changed the parts of these sections that refer to 10CFR20 (as applicable) to TRM 3.11.1.1 to denote the change to ten times the ECL limit.
3. Step 7.2.2.1 – change the ECLi reference from Appendix A to Attachment 2.
4. Formula 7.2.2.1-1 – added a minus (-) sign in the denominator to the fl calculation.

XIV. MAJOR CHANGES TO RADIOACTIVE LIQUID, GASEOUS, AND SOLID WASTE TREATMENT SYSTEMS

There were no major changes to the radioactive liquid, gaseous, and solid waste treatment systems for the period of 1/1/03 through 12/31/03.

XV. PROCESS CONTROL PROGRAM (PCP)

The following changes to the PCP (Nuclear Management Manual RW-105) were implemented at RBS on 1/2/03. This change was actually reported in the 2002 annual effluent report because it was approved at the corporate level on 12/30/02. Below is a summary of the changes to the PCP:

- Change the procedure classification to Quality vs Non-Quality
- Addition of vendor requirement for placement on QSL when performing services under 10CFR61 and 10CFR71 requirements
- Updated Section 8 to include all EN-S site commitments

These changes are editorial in nature and did not reduce the overall conformance of the solidified waste product to existing criteria for solid wastes.

No additional changes were made in 2003. Attached is a copy of the PCP.

TABLE 1
Effluent and Waste Disposal Annual Report 2003 Year
RADIOACTIVE GASEOUS WASTE SAMPLING AND ANALYSIS PROGRAM

Gaseous Release Type	Sampling Frequency	Minimum Analysis Frequency	Type of Activity Analysis	Lower Limit of Detection (LLD) uCi/ml
A. Main Plant Exhaust Duct	M Grab Sample	M	Principal Gamma Emitters H-3	1.00E-04 1.00E-06
B. Fuel Building Ventilation Exhaust Duct	M Grab Sample	M	Principal Gamma Emitters H-3	1.00E-04 1.00E-06
C. Radwaste Building Ventilation Exhaust Duct	M Grab Sample	M	Principal Gamma Emitters	1.00E-04
D. All Release Types as listed in A, B, & C above	Continuous	W Charcoal Sample	I-131 I-133	1.00E-12 1.00E-10
	Continuous	W Particulate Sample	Principal Gamma Emitters (I-131, Others)	1.00E-11
	Continuous	M Composite Particulate Sample	Gross Alpha	1.00E-11
	Continuous	Q Composite Particulate Sample	Sr-89, Sr-90	1.00E-11
	Continuous	Noble Gas Monitor	Noble Gases Gross Beta or Gamma	1.00E-06

W = At least once per 7 days
M = At least once per 31 days
Q = At least once per 92 days

TABLE 2
Effluent and Waste Disposal Annual Report 2003 Year
RADIOACTIVE LIQUID WASTE SAMPLING AND ANALYSIS PROGRAM

Liquid Release Type	Sampling Frequency	Minimum Analysis Frequency	Type of Activity Analysis	Lower Limit of Detection (LLD) uCi/ml
A. Batch Waste Release (Liquid Radwaste Recovery Sample Tanks)	P Each Batch	P Each Batch	Principal Gamma Emitters: except for Ce-144 I-131	5.00E-07 5.00E-06 1.00E-06
	P One Batch/M	M	Dissolved and Entrained Gases (Gamma Emitters)	1.00E-05
	P Each Batch	M Composite	H-3 Gross Alpha	1.00E-05 1.00E-07
	P Each Batch	Q Composite	Sr-89, Sr-90 Fe-55	5.00E-08 1.00E-06

P = Prior to each radioactive release
M = At least once per 31 days
Q = At least once per 92 days

EFFLUENT AND WASTE DISPOSAL REPORT
TABLE 3A
GASEOUS EFFLUENTS - SUMMATION OF ALL RELEASES

REPORT FOR 2003	Units	QTR 1	QTR 2	QTR 3	QTR 4	ESTIMATE TOTAL ERROR %
Fission and Activation Gases						
1. Total Release	Ci	3.55E+02	3.30E+01	2.39E+00	1.02E+00	3.70E+01
2. Avg. Release Rate	uCi/sec	4.57E+01	4.20E+00	3.00E-01	1.29E-01	
3. % Applicable Limit	%	1.08E+00	5.38E-01	2.22E-02	1.81E-02	
Iodine-131						
1. Total Release	Ci	4.95E-03	2.71E-04	2.54E-04	1.77E-04	1.86E+01
2. Avg. Release Rate	uCi/sec	6.37E-04	3.45E-05	3.19E-05	2.23E-05	
3. % Applicable Limit	% (2)	2.18E+00	2.09E-01	1.08E-01	7.55E-01	
Particulates Half Life >= 8 days						
1. Total Release	Ci	3.02E-04	2.23E-04	7.18E-04	1.37E-03	1.86E+01
2. Avg. Release Rate	uCi/sec	3.88E-05	2.84E-05	9.03E-05	1.72E-04	
3. % Applicable Limit	% (2)	1.54E-01	4.07E-02	5.26E-02	9.38E-02	
Tritium						
1. Total Release	Ci	7.80E+00	3.32E+00	4.02E+00	6.64E+00	1.82E+01
2. Avg. Release Rate	uCi/sec	1.00E+00	4.22E-01	5.05E-01	8.35E-01	
3. % Applicable Limit	% (2)	2.28E-01	7.29E-02	8.78E-02	1.13E-01	

1. Either the gamma air dose limit of 5 mrads/qtr or beta air dose limit of 10 mrads/qtr (T.R. 3.11.2.2.a), which ever is most limiting.

2. The % of applicable limit is determined by comparing the dose contribution to the critical organ limits of TRM 3.11.2.3

EFFLUENT AND WASTE DISPOSAL REPORT
TABLE 3B
GASEOUS EFFLUENTS - GROUND RELEASES - CONTINUOUS MODE

REPORT FOR 2003	Units	QTR 1	QTR 2	QTR 3	QTR 4	YEAR
Fission and Activation Gases						
XE-133	Ci	1.20E+01	2.35E+01	6.66E-01	8.23E-01	3.69E+01
XE-133M	Ci	1.79E-01	1.43E-02	0.00E+00	0.00E+00	1.94E-01
XE-135	Ci	2.14E+00	6.08E+00	1.63E-01	2.01E-01	8.59E+00
XE-135M	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Totals for Period...	Ci	1.43E+01	2.96E+01	8.29E-01	1.02E+00	4.57E+01
Iodines						
I-131	Ci	7.48E-05	9.45E-05	0.00E+00	0.00E+00	1.69E-04
I-133	Ci	2.16E-05	0.00E+00	0.00E+00	0.00E+00	2.16E-05
Totals for Period...	Ci	9.64E-05	9.45E-05	0.00E+00	0.00E+00	1.91E-04
Particulates Half Life >= 8 days						
CE-141	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CO-57	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CO-58	Ci	0.00E+00	0.00E+00	2.91E-06	0.00E+00	2.91E-06
CO-60	Ci	3.16E-05	4.26E-05	2.11E-05	2.05E-05	1.16E-04
CR-51	Ci	0.00E+00	0.00E+00	3.01E-05	0.00E+00	3.01E-05
CS-137	Ci	0.00E+00	1.22E-07	0.00E+00	0.00E+00	1.22E-07
FE-59	Ci	0.00E+00	4.88E-06	5.26E-07	0.00E+00	5.41E-06
MN-54	Ci	1.02E-05	3.67E-05	1.18E-05	6.04E-06	6.47E-05
NB-95	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ZN-65	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Totals for Period...	Ci	4.18E-05	8.43E-05	6.64E-05	2.65E-05	2.19E-04
Tritium						
H-3	Ci	3.03E+00	8.98E-01	1.09E+00	1.27E+00	6.29E+00
Totals for Period...	Ci	3.03E+00	8.98E-01	1.09E+00	1.27E+00	6.29E+00

EFFLUENT AND WASTE DISPOSAL REPORT
TABLE 3C
GASEOUS EFFLUENTS - GROUND RELEASES - BATCH MODE

REPORT FOR 2003	Units	QTR 1	QTR 2	QTR 3	QTR 4	YEAR
Fission and Activation Gases						
XE-133	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
XE-135	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
XE-135M	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Totals for Period...	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Iodines						
** No Nuclide Activities **		.....	.....	.....	.....	.....
Particulates Half Life >= 8 days						
CO-60	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MN-54	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ZN-65	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Totals for Period...	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tritium						
** No Nuclide Activities **		.....	.....	.....	.....	.....

EFFLUENT AND WASTE DISPOSAL REPORT
TABLE 3D
GASEOUS EFFLUENTS - MIXED MODE RELEASES - CONTINUOUS MODE

REPORT FOR 2003	Units	QTR 1	QTR 2	QTR 3	QTR 4	YEAR
Fission and Activation Gases						
AR-41	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
KR-85	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
KR-85M	Ci	3.58E+00	0.00E+00	5.37E-02	0.00E+00	3.64E+00
KR-87	Ci	2.18E+00	0.00E+00	5.80E-03	0.00E+00	2.18E+00
KR-88	Ci	5.36E+00	0.00E+00	7.10E-02	0.00E+00	5.43E+00
XE-131M	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
XE-133	Ci	2.30E+02	2.73E+00	2.72E-01	0.00E+00	2.33E+02
XE-133M	Ci	4.31E+00	0.00E+00	0.00E+00	0.00E+00	4.31E+00
XE-135	Ci	7.80E+01	7.36E-01	1.08E+00	0.00E+00	7.98E+01
XE-135M	Ci	1.52E+01	0.00E+00	7.83E-02	0.00E+00	1.53E+01
XE-137	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
XE-138	Ci	2.62E+00	0.00E+00	0.00E+00	0.00E+00	2.62E+00
Totals for Period...	Ci	3.41E+02	3.47E+00	1.56E+00	0.00E+00	3.46E+02
Iodines						
I-131	Ci	4.88E-03	1.76E-04	2.54E-04	1.77E-04	5.49E-03
I-133	Ci	9.94E-03	5.20E-04	1.91E-03	1.72E-03	1.41E-02
Totals for Period...	Ci	1.48E-02	6.96E-04	2.16E-03	1.90E-03	1.96E-02
Particulates Half Life >= 8 days						
BA-140	Ci	3.99E-05	0.00E+00	0.00E+00	7.30E-05	1.13E-04
CE-139	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CO-58	Ci	0.00E+00	0.00E+00	1.95E-05	1.47E-04	1.66E-04
CO-60	Ci	1.26E-04	8.33E-05	1.15E-04	3.64E-04	6.87E-04
CR-51	Ci	0.00E+00	0.00E+00	2.63E-04	1.82E-06	2.65E-04
CS-134	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CS-137	Ci	1.45E-05	0.00E+00	0.00E+00	0.00E+00	1.45E-05
FE-59	Ci	0.00E+00	0.00E+00	2.43E-05	0.00E+00	2.43E-05
MN-54	Ci	1.58E-05	3.37E-05	7.48E-05	1.15E-04	2.39E-04
SR-89	Ci	6.38E-05	1.68E-05	2.82E-05	3.90E-05	1.48E-04
ZN-65	Ci	0.00E+00	5.19E-06	1.27E-04	6.02E-04	7.35E-04
Totals for Period...	Ci	2.60E-04	1.39E-04	6.52E-04	1.34E-03	2.39E-03
Tritium						
H-3	Ci	4.76E+00	2.42E+00	2.93E+00	5.37E+00	1.55E+01
Totals for Period...	Ci	4.76E+00	2.42E+00	2.93E+00	5.37E+00	1.55E+01

EFFLUENT AND WASTE DISPOSAL REPORT
SUPPLEMENTAL INFORMATION
GASEOUS EFFLUENTS - BATCH MODE
Table 3E

REPORT FOR 2003	Units	QTR 1	QTR 2	QTR 3	QTR 4	YEAR
Number of releases		0	0	0	0	0
Total release time	minutes	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Maximum release time	minutes	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Average release time	minutes	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Minimum release time	minutes	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

EFFLUENT AND WASTE DISPOSAL REPORT
TABLE 4A
LIQUID EFFLUENTS - SUMMATION OF ALL RELEASES

REPORT FOR 2003	Units	QTR 1	QTR 2	QTR 3	QTR 4	ESTIMATE TOTAL ERROR %
Fission and Activation Products						
1. Total Release	Ci	4.19E-01	2.87E+00	4.23E-01	2.59E-01	1.42E+01
2. Avg. Diluted Conc.	uCi/ml	2.97E-07	2.02E-06	2.86E-07	1.80E-07	
3. % Applicable Limit	% (1)	4.82E+00	5.34E+00	6.04E+00	1.30E+00	
Tritium						
1. Total Release	Ci	5.26E+01	7.72E+01	3.32E+01	1.13E+01	1.42E+01
2. Avg. Diluted Conc.	uCi/ml	3.73E-05	5.43E-05	2.24E-05	7.85E-06	
3. % Applicable Limit	% (1)	2.20E-03	4.88E-03	1.54E-03	1.31E-04	
Dissolved and Entrained Gases						
1. Total Release	Ci	4.96E-02	2.85E-03	1.16E-03	7.40E-05	1.42E+01
2. Avg. Diluted Conc.	uCi/ml	3.53E-08	2.00E-09	7.83E-10	5.15E-11	
3. % Applicable Limit	%	1.77E-02	1.00E-03	3.92E-04	2.59E-05	
Gross Alpha Radioactivity						
1. Total Release	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E+01
Volume of liquid waste	liters	3.83E+06	6.42E+06	4.93E+06	1.19E+06	
Volume of dil. water	liters	1.40E+09	1.42E+09	1.48E+09	1.43E+09	5.70E-01

(1) The most limiting dose compared to the total body and critical organ limits of TRM 3.11.1.2.a.

(2) Technical Requirement 3.11.1.1 limit of 2.00E-04 uCi/ml for dissolved or entrained noble gases in liquid effluent.

EFFLUENT AND WASTE DISPOSAL REPORT
TABLE 4B
LIQUID EFFLUENTS - CONTINUOUS MODE

REPORT FOR 2003	Units	QTR 1	QTR 2	QTR 3	QTR 4	YEAR
Fission and Activation Products						
** No Nuclide Activities **	.....	.....	.....	.....	.....	.....
Tritium						
** No Nuclide Activities **	.....	.....	.....	.....	.....	.....
Dissolved and Entrained Gases						
** No Nuclide Activities **	.....	.....	.....	.....	.....	.....
Gross Alpha Radioactivity						
** No Nuclide Activities **	.....	.....	.....	.....	.....	.....

EFFLUENT AND WASTE DISPOSAL REPORT
TABLE 4C
LIQUID EFFLUENTS - BATCH MODE

REPORT FOR 2003	Units	QTR 1	QTR 2	QTR 3	QTR 4	YEAR
Fission and Activation Products						
AG-110M	Ci	6.84E-03	8.50E-03	1.33E-03	1.15E-03	1.78E-02
CE-141	Ci	8.64E-04	7.40E-05	0.00E+00	0.00E+00	9.38E-04
CO-58	Ci	2.67E-03	1.78E-02	1.77E-03	1.09E-03	2.34E-02
CO-60	Ci	6.05E-02	4.04E-01	8.57E-02	7.48E-02	6.25E-01
CR-51	Ci	1.74E-02	4.53E-02	2.07E-03	9.33E-03	7.41E-02
CS-137	Ci	1.42E-04	5.64E-05	0.00E+00	0.00E+00	1.99E-04
FE-55	Ci	1.41E-01	1.09E+00	1.54E-01	1.75E-02	1.40E+00
FE-59	Ci	3.40E-02	1.92E-01	1.03E-02	6.11E-03	2.42E-01
I-131	Ci	2.23E-03	4.62E-04	0.00E+00	1.39E-05	2.70E-03
I-133	Ci	3.63E-06	0.00E+00	0.00E+00	0.00E+00	3.63E-06
LA-140	Ci	7.32E-04	1.21E-03	1.05E-03	3.08E-04	3.30E-03
MN-54	Ci	1.39E-01	1.03E+00	1.56E-01	1.40E-01	1.47E+00
MO-99	Ci	1.64E-05	0.00E+00	7.61E-06	1.25E-05	3.66E-05
NA-24	Ci	0.00E+00	1.18E-04	0.00E+00	0.00E+00	1.18E-04
NB-95	Ci	8.87E-04	6.85E-03	3.35E-04	2.11E-04	8.29E-03
NB-97	Ci	5.51E-06	3.16E-04	2.25E-04	2.62E-05	5.73E-04
NP-239	Ci	3.48E-05	0.00E+00	0.00E+00	0.00E+00	3.48E-05
RU-105	Ci	6.20E-04	0.00E+00	0.00E+00	0.00E+00	6.20E-04
RU-106	Ci	1.54E-04	0.00E+00	0.00E+00	0.00E+00	1.54E-04
SB-124	Ci	2.34E-03	1.44E-02	9.00E-04	6.05E-04	1.83E-02
SB-125	Ci	2.03E-04	4.30E-03	6.98E-04	1.17E-03	6.37E-03
SN-113	Ci	1.61E-03	1.08E-02	1.26E-03	9.92E-04	1.46E-02
SR-89	Ci	0.00E+00	5.45E-04	0.00E+00	0.00E+00	5.45E-04
SR-92	Ci	2.58E-03	7.90E-03	4.85E-04	4.83E-04	1.14E-02
TC-99M	Ci	1.85E-05	0.00E+00	8.55E-06	1.35E-05	4.06E-05
ZN-65	Ci	4.06E-03	3.54E-02	6.64E-03	5.05E-03	5.12E-02
ZR-95	Ci	1.83E-04	1.69E-03	3.25E-05	1.88E-05	1.92E-03
ZR-97	Ci	1.68E-04	4.09E-05	0.00E+00	0.00E+00	2.09E-04
Totals for Period...	Ci	4.18E-01	2.87E+00	4.23E-01	2.59E-01	3.97E+00
Tritium						
H-3	Ci	5.26E+01	7.72E+01	3.32E+01	1.13E+01	1.74E+02
Totals for Period...	Ci	5.26E+01	7.72E+01	3.32E+01	1.13E+01	1.74E+02
Dissolved and Entrained Gases						
XE-131M	Ci	4.09E-04	0.00E+00	0.00E+00	0.00E+00	4.09E-04
XE-133	Ci	4.44E-02	1.98E-03	5.41E-04	2.57E-05	4.69E-02
XE-133M	Ci	9.66E-04	0.00E+00	0.00E+00	0.00E+00	9.66E-04
XE-135	Ci	3.88E-03	8.66E-04	6.18E-04	4.83E-05	5.41E-03
Totals for Period...	Ci	4.97E-02	2.85E-03	1.16E-03	7.40E-05	5.37E-02
Gross Alpha Radioactivity						
** No Nuclide Activities **		.....	.....	.....	.....	.....

TABLE 5
Effluent and Waste Disposal Annual Report 2003 Year
Solid Waste and Irradiated Fuel Shipments
Reporting Period from 01/01/03 to 12/31/03

A. Solid Waste Shipped for Burial or Disposal (Not Irradiated Fuel)

1. Type of Waste	Units	12 Month Period	Waste Class	Estimated Error %
Spent Resins, Filter Sludges, Evaporator Bottoms, Etc.	m3	3.68E+01	A	See Below
	Ci	3.48E+02		
	m3	3.54E+00	B	See Below
	Ci	1.59E+02		
	m3	1.66E+00	C	See Below
	Ci	1.44E+02		
Dry Compressible Wastes, Contaminated Equipment, Etc.	m3	6.41E+01	A	See Below
	Ci	5.14E+01		
Irradiated Components, Control Rods, Etc.	m3	0.00E+00	N/A	N/A
	Ci	0.00E+00		
Other	m3	0.00E+00	N/A	See Below
	Ci	0.00E+00		

Note: Volume considered being the total disposal volume of the container.

Radwaste Estimated Error %:
Waste types considered are processed solid waste (i.e. resin, filter media) and non-compactible/compactible dry active waste.

1. Possible Errors
   a. Volume
   b. Representative Sampling
   c. Instrument/Counting
   d. Dose to Curie Calculations

2. Volume Error
   Level indication for processed resins can be determined to +/- 0.5 inches. This correlates to approximately 1.0%. Container manufacturer stated design tolerance allows for 1.0% deviation from container dimensions. Volume error is not applicable to dry active waste.

3. Representative Sampling Error
   Sampling error for processed resins is based upon obtaining a representative sample from the waste being processed using an iso-lock sampler. Sampling error from dry active waste is based upon obtaining a representative sample from the material being packaged. This error is estimated to be +/- 10% for all waste types, which is consistent with industry standards.

4. Instrument/Counting Error

The error caused by sample geometry, counting time, sample activity and instrument background is estimated to be +/- 10%. The error for radiological survey instrumentation is estimated to be +/- 20%. This error is applicable to all waste types.

5. Dose to Curie Calculations Error

The Dose to Curie method used to calculate activity suffers from analytical accuracy in that certain important parameters are neglected. These parameters are geometry of package, measuring instrument characteristics, build-up, internal attenuation effect, and external media attenuation. An activity correction factor is applied to provide adjustment for these factors. This error is applicable to all waste types.

2. Estimates of Major Nuclides by Waste Stream

Resins, Filters and Evaporator Bottoms, Etc. (Min 1%)		Dry Compressible Wastes, Contaminated Equipment, Etc. (Min 1%)		Other (Min 1%)	
Isotope	**% Abundance**	**Isotope**	**% Abundance**	**Isotope**	**% Abundance**
Mn-54	8.321	Mn-54	8.613	N/A	N/A
Fe-55	68.384	Fe-55	75.196		
Co-60	15.576	Fe-59	4.300		
Zn-65	2.205	C0-60	10.148		
Cs-137	1.178				
Ce-144	2.089				

Determined by Measurement & Correlation.
Packaged in Strong, Tight Liners.
No Solidification Agent or Absorbent Used.
No Irradiated Components, Control Rods, Etc. were shipped in 2003.

3. Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
12	Truck	Barnwell, SC
118	Truck	Clive, UT

B. Irradiated Fuel Shipments Disposition

No Irradiated Components, Control Rods, Etc. were shipped in 2003.

Number of Shipments	Mode of Transportation	Destination
0	N/A	N/A

TABLE 6
Effluent and Waste Disposal Annual Report 2003 Year
Maximum Individual Doses Due to
Noble Gas Releases

	Critical Sector	Critical Distance	Gamma Dose* (mrad)	Beta Dose * (mrad)
1st Quarter	**WNW**	**994m**	**5.39E-02**	**7.75E-02**
2nd Quarter	**WNW**	**994m**	**2.69E-02**	**5.34E-02**
3rd Quarter	**WNW**	**994m**	**1.11E-03**	**1.82E-03**
4th Quarter	**WNW**	**994m**	**9.04E-04**	**1.81E-03**
Annual Total	**WNW**	**994m**	**8.28E-02**	**1.35E-01**

* All age groups equally exposed

TABLE 7
Effluent and Waste Disposal Annual Report 2003 Year
Maximum Individual Doses Due To
Gaseous Releases (H3, Radioiodine (I-131 & I-133) and Particulates)

Significant Organ Dose (mrem)					
	Critical Sector	**Critical Distance**	**Critical Age Group**	**Critical Organ**	**Critical Dose**
1st Quarter	WNW	994m	Child	Thyroid	1.92E-01
2nd Quarter	WNW	994m	Child	Thyroid	2.42E-02
3rd Quarter	WNW	994m	Child	Thyroid	1.86E-02
4th Quarter	WNW	994m	Child	Thyroid	2.12E-02
Annual Total	WNW	994m	Child	Thyroid	2.56E-01

TABLE 8
Effluent and Waste Disposal Annual Report 2003 Year
Maximum Individual Doses Due to Liquid Releases

Critical Receptor: Edge of Initial Mixing Zone

	Total Body Dose (mrem)		Significant Organ Dose (mrem)		
	Critical Age	**Dose**	**Critical Age**	**Critical Organ**	**Dose**
1st Quarter	Adult	1.61E-02	Adult	GI Tract	2.41E-01
2nd Quarter	Adult	1.78E-01	Adult	GI Tract	2.67E+00
3rd Quarter	Adult	1.97E-02	Adult	GI Tract	2.92E-01
4th Quarter	Adult	4.28E-03	Adult	GI Tract	6.48E-02
Annual Total	Adult	1.63E-01	Adult	GI Tract	2.44E+00

TABLE 9
Effluent and Waste Disposal Annual Report 2003 Year
ASSUMPTIONS/PARAMETERS FOR DOSES TO A MEMBER OF THE PUBLIC INSIDE SITE BOUNDARY

MEMBER OF THE PUBLIC	LOCATION	DISTANCE[1] METERS	SECTOR	DURATION (HR/YEAR)
Delivery Drivers	North Parking Lot	275	N	1.25E+02[2]
Lawn Service Provider	General Services Building	115	ENE	3.60E+02[3]
People Entering Site Without Consent	Alligator Bayou	2500	SW	4.00E+01
National Guard	Activity Center	994	WNW	1.20E+03[5]

(1) The approximate distances from main plant vent exhaust to location.
(2) A delivery driver is assumed to be on site 0.50/hr per day, 5 days per week, 50 weeks per year. The adult age group is the only age group considered in this category.
(3) Lawn Service Provider works around the site 12 hours/week, three weeks per month, 10 months per year. The dispersion information is conservatively taken as if all work was performed on the General Services Building lawn. The adult age group is the only age group considered in this category.
(4) Liquid pathways dose is not considered due to the nature of activities that individuals are engaged in.
(5) National Guard/State Police are being evaluated, if applicable, for dose while stationed on site as members of the public. The adult age group is the only age group considered in this category.

TABLE 10
Effluent and Waste Disposal Annual Report 2003 Year

DOSES TO MEMBERS OF THE PUBLIC ON SITE

FROM GASEOUS RELEASES 2003

Dose calc based on Durations	Critical Organ Dose Annual (mrem)	Gamma Dose Annual (mrad)	Beta Dose Annual (mrad)	Annual Duration Factor
Delivery Drivers	1.22E-02	3.30E-02	4.30E-02	1.43E-02
Lawn Service Provider	1.10E-01	3.44E-01	4.48E-01	4.11E-02
Alligator Bayou	7.12E-05	2.21E-04	2.88E-04	4.57E-03
National Guard	2.68E-02	8.08E-02	1.05E-01	1.37E-01

Table 11
Effluent and Waste Disposal Annual Report 2003 Year
Meteorological Data - Joint Frequency Tables

RIVER BEND STATION
JOINT FREQUENCY TABLE
ALL STABILITY CLASSES

FROM 1/ 1/03 0:00 TO 3/31/03 23:00

PRIMARY SENSORS - 30 FOOT

WIND SPEED (METERS/SECOND)

WIND DIR	.22-.50	.51-.75	.76-1.0	1.1-1.5	1.6-2.0	2.1-3.0	3.1-5.0	5.1-7.0	7.1-10.0	10.1-13.0	13.1-18.0	>18	TOT.
N	6	5	17	17	32	79	55	1	0	0	0	0	212
NNE	6	8	8	37	56	34	4	0	0	0	0	0	153
NE	3	11	25	45	38	32	1	0	0	0	0	0	155
ENE	6	21	14	27	9	7	3	0	0	0	0	0	87
E	1	19	14	16	4	4	2	0	0	0	0	0	60
ESE	3	8	20	29	15	5	0	0	0	0	0	0	80
SE	2	6	13	45	33	27	1	0	0	0	0	0	127
SSE	0	2	3	13	6	32	19	0	0	0	0	0	75
S	0	1	4	13	28	42	32	6	0	0	0	0	126
SSW	0	2	3	13	12	33	38	1	0	0	0	0	102
SW	2	1	6	12	10	23	17	1	0	0	0	0	72
WSW	1	4	5	4	7	27	4	0	0	0	0	0	52
W	0	9	8	8	5	17	5	0	0	0	0	0	52
WNW	4	18	8	7	6	15	8	0	0	0	0	0	66
NW	5	5	13	12	16	34	16	0	0	0	0	0	101
NNW	4	4	13	23	20	53	40	0	0	0	0	0	157
TOTAL	43	124	174	321	297	464	245	9	0	0	0	0	1677

NUMBER OF CALMS: 3
NUMBER OF INVALID HOURS: 480
NUMBER OF VALID HOURS: 1680
TOTAL HOURS FOR THE PERIOD: 2160

RIVER BEND STATION
JOINT FREQUENCY TABLE
STABILITY CLASS A

FROM 1/ 1/03 0:00 TO 3/31/03 23:00

PRIMARY SENSORS - 30 FOOT

WIND SPEED (METERS/SECOND)

WIND DIR	.22-.50	.51-.75	.76-1.0	1.1-1.5	1.6-2.0	2.1-3.0	3.1-5.0	5.1-7.0	7.1-10.0	10.1-13.0	13.1-18.0	>18	TOT.
N	0	0	0	0	0	5	1	0	0	0	0	0	6
NNE	0	1	0	0	0	0	1	0	0	0	0	0	2
NE	0	0	0	1	0	5	0	0	0	0	0	0	6
ENE	0	0	3	0	0	2	0	0	0	0	0	0	5
E	0	0	0	0	0	2	0	0	0	0	0	0	2
ESE	0	0	0	3	3	4	0	0	0	0	0	0	10
SE	0	0	0	0	2	6	0	0	0	0	0	0	8
SSE	0	0	0	1	0	0	1	0	0	0	0	0	2
S	0	0	0	1	0	0	0	2	0	0	0	0	3
SSW	0	0	0	1	0	1	0	0	0	0	0	0	2
SW	0	0	0	1	0	1	1	0	0	0	0	0	3
WSW	0	0	1	1	0	0	0	0	0	0	0	0	2
W	0	0	2	0	0	0	0	0	0	0	0	0	2
WNW	0	0	0	1	0	0	2	0	0	0	0	0	3
NW	0	0	0	0	1	1	1	0	0	0	0	0	3
NNW	0	0	0	0	1	1	1	0	0	0	0	0	3
TOTAL	0	1	6	10	7	28	8	2	0	0	0	0	62

NUMBER OF CALMS: 0
NUMBER OF INVALID HOURS: 0
NUMBER OF VALID HOURS: 62
TOTAL HOURS FOR THE PERIOD: 62

RIVER BEND STATION
JOINT FREQUENCY TABLE
STABILITY CLASS B

FROM 1/ 1/03 0:00 TO 3/31/03 23:00

PRIMARY SENSORS - 30 FOOT

WIND SPEED (METERS/SECOND)

WIND DIR	.22-.50	.51-.75	.76-1.0	1.1-1.5	1.6-2.0	2.1-3.0	3.1-5.0	5.1-7.0	7.1-10.0	10.1-13.0	13.1-18.0	>18	TOT.
N	0	0	0	0	3	3	6	0	0	0	0	0	12
NNE	0	0	0	0	3	0	0	0	0	0	0	0	3
NE	0	0	0	0	2	4	0	0	0	0	0	0	6
ENE	0	0	0	0	0	0	1	0	0	0	0	0	1
E	0	0	0	4	0	1	0	0	0	0	0	0	5
ESE	0	0	0	0	5	0	0	0	0	0	0	0	5
SE	0	0	0	4	2	3	0	0	0	0	0	0	9
SSE	0	0	0	1	1	5	0	0	0	0	0	0	7
S	0	1	0	1	0	3	6	0	0	0	0	0	11
SSW	0	0	0	1	1	2	2	1	0	0	0	0	7
SW	0	0	0	0	0	1	4	0	0	0	0	0	5
WSW	0	0	0	0	0	6	2	0	0	0	0	0	8
W	0	0	0	2	0	2	0	0	0	0	0	0	4
WNW	0	0	0	0	0	1	1	0	0	0	0	0	2
NW	0	0	0	0	1	1	0	0	0	0	0	0	2
NNW	1	0	0	0	1	2	4	0	0	0	0	0	8
TOTAL	1	1	0	13	19	34	26	1	0	0	0	0	95

NUMBER OF CALMS: 0
NUMBER OF INVALID HOURS: 0
NUMBER OF VALID HOURS: 95
TOTAL HOURS FOR THE PERIOD: 95

RIVER BEND STATION
JOINT FREQUENCY TABLE
STABILITY CLASS C

FROM 1/ 1/03 0:00 TO 3/31/03 23:00

PRIMARY SENSORS - 30 FOOT

WIND SPEED (METERS/SECOND)

WIND DIR	.22-.50	.51-.75	.76-1.0	1.1-1.5	1.6-2.0	2.1-3.0	3.1-5.0	5.1-7.0	7.1-10.0	10.1-13.0	13.1-18.0	>18	TOT.
N	0	0	0	0	0	3	8	0	0	0	0	0	11
NNE	0	1	0	1	4	2	0	0	0	0	0	0	8
NE	0	0	1	1	3	6	0	0	0	0	0	0	11
ENE	0	0	0	3	4	0	0	0	0	0	0	0	7
E	0	0	0	1	2	0	0	0	0	0	0	0	3
ESE	0	0	0	0	0	0	0	0	0	0	0	0	0
SE	0	0	0	1	0	0	0	0	0	0	0	0	1
SSE	0	0	0	0	0	5	1	0	0	0	0	0	6
S	0	0	0	0	2	2	5	1	0	0	0	0	10
SSW	0	0	0	1	0	1	4	0	0	0	0	0	6
SW	0	0	0	0	0	2	1	1	0	0	0	0	4
WSW	0	0	0	0	0	4	1	0	0	0	0	0	5
W	0	0	0	0	0	3	0	0	0	0	0	0	3
WNW	0	1	0	0	0	0	0	0	0	0	0	0	1
NW	1	0	0	0	1	2	0	0	0	0	0	0	4
NNW	0	0	0	0	0	3	2	0	0	0	0	0	5
TOTAL	1	2	1	8	16	33	22	2	0	0	0	0	85

NUMBER OF CALMS: 0
NUMBER OF INVALID HOURS: 0
NUMBER OF VALID HOURS: 85
TOTAL HOURS FOR THE PERIOD: 85

RIVER BEND STATION
JOINT FREQUENCY TABLE
STABILITY CLASS D

FROM 1/ 1/03 0:00 TO 3/31/03 23:00

PRIMARY SENSORS - 30 FOOT

WIND SPEED (METERS/SECOND)

WIND DIR	.22- .50	.51- .75	.76- 1.0	1.1- 1.5	1.6- 2.0	2.1- 3.0	3.1- 5.0	5.1- 7.0	7.1- 10.0	10.1- 13.0	13.1- 18.0	>18	TOT.
N	0	0	2	5	23	52	36	1	0	0	0	0	119
NNE	0	0	1	19	41	27	2	0	0	0	0	0	90
NE	0	2	3	13	21	11	1	0	0	0	0	0	51
ENE	0	0	1	21	2	5	2	0	0	0	0	0	31
E	0	0	2	7	0	1	0	0	0	0	0	0	10
ESE	0	1	5	10	5	0	0	0	0	0	0	0	21
SE	0	0	4	6	13	6	1	0	0	0	0	0	30
SSE	0	1	0	5	2	16	15	0	0	0	0	0	39
S	0	0	1	3	11	30	17	3	0	0	0	0	65
SSW	0	0	0	3	6	19	20	0	0	0	0	0	48
SW	0	0	1	2	6	15	8	0	0	0	0	0	32
WSW	0	1	1	2	6	12	0	0	0	0	0	0	22
W	0	1	1	2	4	10	1	0	0	0	0	0	19
WNW	0	1	2	2	6	11	4	0	0	0	0	0	26
NW	0	0	1	3	11	24	10	0	0	0	0	0	49
NNW	0	0	0	6	12	39	28	0	0	0	0	0	85
TOTAL	0	7	25	109	169	278	145	4	0	0	0	0	737

NUMBER OF CALMS: 0
NUMBER OF INVALID HOURS: 0
NUMBER OF VALID HOURS: 737
TOTAL HOURS FOR THE PERIOD: 737

RIVER BEND STATION
JOINT FREQUENCY TABLE
STABILITY CLASS E

FROM 1/ 1/03 0:00 TO 3/31/03 23:00

PRIMARY SENSORS - 30 FOOT

WIND SPEED (METERS/SECOND)

WIND DIR	.22-.50	.51-.75	.76-1.0	1.1-1.5	1.6-2.0	2.1-3.0	3.1-5.0	5.1-7.0	7.1-10.0	10.1-13.0	13.1-18.0	>18	TOT.
N	1	0	5	11	4	14	4	0	0	0	0	0	39
NNE	0	0	6	13	7	2	1	0	0	0	0	0	29
NE	0	1	19	26	10	6	0	0	0	0	0	0	62
ENE	0	0	2	3	3	0	0	0	0	0	0	0	8
E	0	4	4	3	2	0	2	0	0	0	0	0	15
ESE	1	3	8	13	0	1	0	0	0	0	0	0	26
SE	0	2	4	16	15	12	0	0	0	0	0	0	49
SSE	0	0	0	5	3	6	2	0	0	0	0	0	16
S	0	0	2	4	15	5	4	0	0	0	0	0	30
SSW	0	0	2	2	4	8	11	0	0	0	0	0	27
SW	0	0	2	6	3	3	3	0	0	0	0	0	17
WSW	0	1	2	1	1	3	0	0	0	0	0	0	8
W	0	2	2	2	1	1	4	0	0	0	0	0	12
WNW	0	1	0	4	0	2	1	0	0	0	0	0	8
NW	0	0	2	7	1	5	5	0	0	0	0	0	20
NNW	1	0	4	16	4	6	5	0	0	0	0	0	36
TOTAL	3	14	64	132	73	74	42	0	0	0	0	0	402

NUMBER OF CALMS: 0
NUMBER OF INVALID HOURS: 0
NUMBER OF VALID HOURS: 402
TOTAL HOURS FOR THE PERIOD: 402

RIVER BEND STATION
JOINT FREQUENCY TABLE
STABILITY CLASS F

FROM 1/ 1/03 0:00 TO 3/31/03 23:00

PRIMARY SENSORS - 30 FOOT

WIND SPEED (METERS/SECOND)

WIND DIR	.22-.50	.51-.75	.76-1.0	1.1-1.5	1.6-2.0	2.1-3.0	3.1-5.0	5.1-7.0	7.1-10.0	10.1-13.0	13.1-18.0	>18	TOT.
N	2	3	9	1	2	2	0	0	0	0	0	0	19
NNE	0	1	0	4	0	3	0	0	0	0	0	0	8
NE	0	2	1	3	2	0	0	0	0	0	0	0	8
ENE	0	4	2	0	0	0	0	0	0	0	0	0	6
E	0	6	3	1	0	0	0	0	0	0	0	0	10
ESE	1	3	6	3	2	0	0	0	0	0	0	0	15
SE	2	3	3	6	1	0	0	0	0	0	0	0	15
SSE	0	0	1	1	0	0	0	0	0	0	0	0	2
S	0	0	1	4	0	2	0	0	0	0	0	0	7
SSW	0	1	1	5	1	1	1	0	0	0	0	0	10
SW	1	1	3	2	1	1	0	0	0	0	0	0	9
WSW	0	2	1	0	0	2	1	0	0	0	0	0	6
W	0	1	2	1	0	1	0	0	0	0	0	0	5
WNW	2	5	3	0	0	1	0	0	0	0	0	0	11
NW	2	2	5	1	0	1	0	0	0	0	0	0	11
NNW	1	0	6	1	1	2	0	0	0	0	0	0	11
TOTAL	11	34	47	33	10	16	2	0	0	0	0	0	153

NUMBER OF CALMS: 0
NUMBER OF INVALID HOURS: 0
NUMBER OF VALID HOURS: 153

TOTAL HOURS FOR THE PERIOD: 153

RIVER BEND STATION
JOINT FREQUENCY TABLE
STABILITY CLASS G

FROM 1/ 1/03 0:00 TO 3/31/03 23:00

PRIMARY SENSORS - 30 FOOT

WIND SPEED (METERS/SECOND)

WIND DIR	.22- .50	.51- .75	.76- 1.0	1.1- 1.5	1.6- 2.0	2.1- 3.0	3.1- 5.0	5.1- 7.0	7.1- 10.0	10.1- 13.0	13.1- 18.0	>18	TOT.
N	3	2	1	0	0	0	0	0	0	0	0	0	6
NNE	6	5	1	0	1	0	0	0	0	0	0	0	13
NE	3	6	1	1	0	0	0	0	0	0	0	0	11
ENE	6	17	6	0	0	0	0	0	0	0	0	0	29
E	1	9	5	0	0	0	0	0	0	0	0	0	15
ESE	1	1	1	0	0	0	0	0	0	0	0	0	3
SE	0	1	2	12	0	0	0	0	0	0	0	0	15
SSE	0	1	2	0	0	0	0	0	0	0	0	0	3
S	0	0	0	0	0	0	0	0	0	0	0	0	0
SSW	0	1	0	0	0	1	0	0	0	0	0	0	2
SW	1	0	0	1	0	0	0	0	0	0	0	0	2
WSW	1	0	0	0	0	0	0	0	0	0	0	0	1
W	0	5	1	1	0	0	0	0	0	0	0	0	7
WNW	2	10	3	0	0	0	0	0	0	0	0	0	15
NW	2	3	5	1	1	0	0	0	0	0	0	0	12
NNW	1	4	3	0	1	0	0	0	0	0	0	0	9
TOTAL	27	65	31	16	3	1	0	0	0	0	0	0	143

NUMBER OF CALMS: 3
NUMBER OF INVALID HOURS: 0
NUMBER OF VALID HOURS: 146
TOTAL HOURS FOR THE PERIOD: 146

RIVER BEND STATION
JOINT FREQUENCY TABLE
ALL STABILITY CLASSES

FROM 1/ 1/03 0:00 TO 3/31/03 23:00

PRIMARY SENSORS - 150 FOOT

WIND SPEED (METERS/SECOND)

WIND DIR	.22-.50	.51-.75	.76-1.0	1.1-1.5	1.6-2.0	2.1-3.0	3.1-5.0	5.1-7.0	7.1-10.0	10.1-13.0	13.1-18.0	>18	TOT.
N	0	0	0	4	17	37	105	27	1	0	0	0	191
NNE	0	0	4	2	15	77	67	3	0	0	0	0	168
NE	0	1	0	6	4	50	101	5	0	0	0	0	167
ENE	0	0	0	24	11	25	21	6	2	0	0	0	89
E	0	0	0	2	12	31	14	1	1	0	0	0	61
ESE	0	0	0	4	9	24	77	4	0	0	0	0	118
SE	0	0	1	2	3	22	41	3	0	0	0	0	72
SSE	0	0	0	3	8	10	49	6	0	0	0	0	76
S	0	0	1	2	2	34	71	9	3	0	0	0	122
SSW	0	0	0	1	0	18	78	19	0	0	0	0	116
SW	0	1	0	4	5	22	34	14	2	0	0	0	82
WSW	0	0	0	0	12	21	42	3	0	0	0	0	78
W	0	0	1	3	7	23	26	2	0	0	0	0	62
WNW	0	0	0	4	6	17	20	7	0	0	0	0	54
NW	0	0	0	2	5	31	33	11	2	0	0	0	84
NNW	0	1	0	1	4	48	70	15	1	0	0	0	140
TOTAL	0	3	7	64	120	490	849	135	12	0	0	0	1680

NUMBER OF CALMS: 0
NUMBER OF INVALID HOURS: 480
NUMBER OF VALID HOURS: 1680
TOTAL HOURS FOR THE PERIOD: 2160

RIVER BEND STATION
JOINT FREQUENCY TABLE
STABILITY CLASS A

FROM 1/ 1/03 0:00 TO 3/31/03 23:00

PRIMARY SENSORS - 150 FOOT

WIND SPEED (METERS/SECOND)

WIND DIR	.22-.50	.51-.75	.76-1.0	1.1-1.5	1.6-2.0	2.1-3.0	3.1-5.0	5.1-7.0	7.1-10.0	10.1-13.0	13.1-18.0	>18	TOT.
N	0	0	0	0	0	1	6	0	0	0	0	0	7
NNE	0	0	0	0	1	0	1	0	0	0	0	0	2
NE	0	0	0	0	0	4	3	1	0	0	0	0	8
ENE	0	0	0	0	0	0	2	0	2	0	0	0	4
E	0	0	0	0	1	1	1	0	1	0	0	0	4
ESE	0	0	0	0	1	2	6	2	0	0	0	0	11
SE	0	0	0	0	0	3	2	0	0	0	0	0	5
SSE	0	0	0	1	0	0	0	1	0	0	0	0	2
S	0	0	0	0	0	1	0	0	2	0	0	0	3
SSW	0	0	0	0	0	0	1	0	0	0	0	0	1
SW	0	0	0	0	0	1	1	0	0	0	0	0	2
WSW	0	0	0	0	1	0	1	0	0	0	0	0	2
W	0	0	0	2	0	0	0	0	0	0	0	0	2
WNW	0	0	0	0	1	0	0	2	0	0	0	0	3
NW	0	0	0	0	0	3	0	2	0	0	0	0	5
NNW	0	0	0	0	0	1	0	0	0	0	0	0	1
TOTAL	0	0	0	3	5	17	24	8	5	0	0	0	62

NUMBER OF CALMS: 0
NUMBER OF INVALID HOURS: 0
NUMBER OF VALID HOURS: 62
TOTAL HOURS FOR THE PERIOD: 62

RIVER BEND STATION
JOINT FREQUENCY TABLE
STABILITY CLASS B

FROM 1/ 1/03 0:00 TO 3/31/03 23:00

PRIMARY SENSORS - 150 FOOT

WIND SPEED (METERS/SECOND)

WIND DIR	.22- .50	.51- .75	.76- 1.0	1.1- 1.5	1.6- 2.0	2.1- 3.0	3.1- 5.0	5.1- 7.0	7.1- 10.0	10.1- 13.0	13.1- 18.0	>18	TOT.
N	0	0	0	0	1	0	8	2	0	0	0	0	11
NNE	0	0	0	0	0	4	1	0	0	0	0	0	5
NE	0	0	0	0	0	0	6	0	0	0	0	0	6
ENE	0	0	0	0	0	0	1	1	0	0	0	0	2
E	0	0	0	0	1	3	3	0	0	0	0	0	7
ESE	0	0	0	0	0	4	2	0	0	0	0	0	6
SE	0	0	0	0	1	2	4	0	0	0	0	0	7
SSE	0	0	0	0	1	1	5	0	0	0	0	0	7
S	0	0	1	0	0	2	7	1	0	0	0	0	11
SSW	0	0	0	0	0	0	3	2	0	0	0	0	5
SW	0	0	0	0	0	1	0	4	0	0	0	0	5
WSW	0	0	0	0	0	0	10	0	0	0	0	0	10
W	0	0	0	1	1	0	0	0	0	0	0	0	2
WNW	0	0	0	0	0	0	2	1	0	0	0	0	3
NW	0	0	0	0	0	1	1	0	0	0	0	0	2
NNW	0	0	0	0	0	1	4	1	0	0	0	0	6
TOTAL	0	0	1	1	5	19	57	12	0	0	0	0	95

NUMBER OF CALMS: 0
NUMBER OF INVALID HOURS: 0
NUMBER OF VALID HOURS: 95
TOTAL HOURS FOR THE PERIOD: 95

RIVER BEND STATION
JOINT FREQUENCY TABLE
STABILITY CLASS C

FROM 1/ 1/03 0:00 TO 3/31/03 23:00

PRIMARY SENSORS - 150 FOOT

WIND SPEED (METERS/SECOND)

WIND DIR	.22-.50	.51-.75	.76-1.0	1.1-1.5	1.6-2.0	2.1-3.0	3.1-5.0	5.1-7.0	7.1-10.0	10.1-13.0	13.1-18.0	>18	TOT.
N	0	0	0	2	0	0	7	4	0	0	0	0	13
NNE	0	0	0	0	1	4	1	0	0	0	0	0	6
NE	0	0	0	0	1	6	4	1	0	0	0	0	12
ENE	0	0	0	1	1	1	6	0	0	0	0	0	9
E	0	0	0	0	1	1	0	0	0	0	0	0	2
ESE	0	0	0	0	1	1	0	0	0	0	0	0	2
SE	0	0	0	0	0	0	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	6	0	0	0	0	0	6
S	0	0	0	0	0	3	5	2	0	0	0	0	10
SSW	0	0	0	0	0	0	5	0	0	0	0	0	5
SW	0	0	0	0	0	2	1	1	1	0	0	0	5
WSW	0	0	0	0	0	0	5	0	0	0	0	0	5
W	0	0	0	0	0	0	3	0	0	0	0	0	3
WNW	0	0	0	0	0	0	1	0	0	0	0	0	1
NW	0	0	0	0	0	1	1	0	0	0	0	0	2
NNW	0	0	0	0	0	1	3	0	0	0	0	0	4
TOTAL	0	0	0	3	5	20	48	8	1	0	0	0	85

NUMBER OF CALMS: 0
NUMBER OF INVALID HOURS: 0
NUMBER OF VALID HOURS: 85
TOTAL HOURS FOR THE PERIOD: 85

RIVER BEND STATION
JOINT FREQUENCY TABLE
STABILITY CLASS D

FROM 1/ 1/03 0:00 TO 3/31/03 23:00

PRIMARY SENSORS - 150 FOOT

WIND SPEED (METERS/SECOND)

WIND DIR	.22-.50	.51-.75	.76-1.0	1.1-1.5	1.6-2.0	2.1-3.0	3.1-5.0	5.1-7.0	7.1-10.0	10.1-13.0	13.1-18.0	>18	TOT.
N	0	0	0	0	4	16	64	20	1	0	0	0	105
NNE	0	0	1	0	9	34	46	3	0	0	0	0	93
NE	0	1	0	5	2	20	42	2	0	0	0	0	72
ENE	0	0	0	5	6	10	9	4	0	0	0	0	34
E	0	0	0	1	3	7	2	1	0	0	0	0	14
ESE	0	0	0	4	7	5	15	0	0	0	0	0	31
SE	0	0	1	0	2	6	9	1	0	0	0	0	19
SSE	0	0	0	1	3	2	22	5	0	0	0	0	33
S	0	0	0	1	0	14	35	4	1	0	0	0	55
SSW	0	0	0	1	0	5	36	10	0	0	0	0	52
SW	0	0	0	1	1	8	17	7	1	0	0	0	35
WSW	0	0	0	0	1	5	14	2	0	0	0	0	22
W	0	0	0	0	1	8	12	2	0	0	0	0	23
WNW	0	0	0	0	1	8	11	4	0	0	0	0	24
NW	0	0	0	1	3	17	21	5	2	0	0	0	49
NNW	0	1	0	0	2	18	40	14	1	0	0	0	76
TOTAL	0	2	2	20	45	183	395	84	6	0	0	0	737

NUMBER OF CALMS: 0
NUMBER OF INVALID HOURS: 0
NUMBER OF VALID HOURS: 737
TOTAL HOURS FOR THE PERIOD: 737

RIVER BEND STATION
JOINT FREQUENCY TABLE
STABILITY CLASS E

FROM 1/ 1/03 0:00 TO 3/31/03 23:00

PRIMARY SENSORS - 150 FOOT

WIND SPEED (METERS/SECOND)

WIND DIR	.22-.50	.51-.75	.76-1.0	1.1-1.5	1.6-2.0	2.1-3.0	3.1-5.0	5.1-7.0	7.1-10.0	10.1-13.0	13.1-18.0	>18	TOT.
N	0	0	0	0	1	14	18	1	0	0	0	0	34
NNE	0	0	1	1	0	20	15	0	0	0	0	0	37
NE	0	0	0	1	1	14	40	1	0	0	0	0	57
ENE	0	0	0	17	2	4	2	1	0	0	0	0	26
E	0	0	0	0	1	8	4	0	0	0	0	0	13
ESE	0	0	0	0	0	5	25	2	0	0	0	0	32
SE	0	0	0	1	0	7	22	2	0	0	0	0	32
SSE	0	0	0	1	3	3	11	0	0	0	0	0	18
S	0	0	0	0	2	4	18	2	0	0	0	0	26
SSW	0	0	0	0	0	2	25	7	0	0	0	0	34
SW	0	0	0	0	0	4	11	2	0	0	0	0	17
WSW	0	0	0	0	2	4	7	1	0	0	0	0	14
W	0	0	0	0	1	2	4	0	0	0	0	0	7
WNW	0	0	0	1	1	2	4	0	0	0	0	0	8
NW	0	0	0	1	1	2	9	4	0	0	0	0	17
NNW	0	0	0	0	0	13	17	0	0	0	0	0	30
TOTAL	0	0	1	23	15	108	232	23	0	0	0	0	402

NUMBER OF CALMS: 0
NUMBER OF INVALID HOURS: 0
NUMBER OF VALID HOURS: 402
TOTAL HOURS FOR THE PERIOD: 402

RIVER BEND STATION
JOINT FREQUENCY TABLE
STABILITY CLASS F

FROM 1/ 1/03 0:00 TO 3/31/03 23:00

PRIMARY SENSORS - 150 FOOT

WIND SPEED (METERS/SECOND)

WIND DIR	.22-.50	.51-.75	.76-1.0	1.1-1.5	1.6-2.0	2.1-3.0	3.1-5.0	5.1-7.0	7.1-10.0	10.1-13.0	13.1-18.0	>18	TOT.
N	0	0	0	2	10	4	2	0	0	0	0	0	18
NNE	0	0	1	0	1	9	3	0	0	0	0	0	14
NE	0	0	0	0	0	5	3	0	0	0	0	0	8
ENE	0	0	0	0	0	5	1	0	0	0	0	0	6
E	0	0	0	0	3	6	3	0	0	0	0	0	12
ESE	0	0	0	0	0	5	11	0	0	0	0	0	16
SE	0	0	0	1	0	4	2	0	0	0	0	0	7
SSE	0	0	0	0	0	1	2	0	0	0	0	0	3
S	0	0	0	1	0	5	4	0	0	0	0	0	10
SSW	0	0	0	0	0	5	7	0	0	0	0	0	12
SW	0	0	0	0	3	3	4	0	0	0	0	0	10
WSW	0	0	0	0	0	5	5	0	0	0	0	0	10
W	0	0	1	0	1	5	1	0	0	0	0	0	8
WNW	0	0	0	0	0	4	1	0	0	0	0	0	5
NW	0	0	0	0	0	3	1	0	0	0	0	0	4
NNW	0	0	0	0	2	5	3	0	0	0	0	0	10
TOTAL	0	0	2	4	20	74	53	0	0	0	0	0	153

NUMBER OF CALMS: 0
NUMBER OF INVALID HOURS: 0
NUMBER OF VALID HOURS: 153
TOTAL HOURS FOR THE PERIOD: 153

RIVER BEND STATION
JOINT FREQUENCY TABLE
STABILITY CLASS G

FROM 1/ 1/03 0:00 TO 3/31/03 23:00

PRIMARY SENSORS - 150 FOOT

WIND SPEED (METERS/SECOND)

WIND DIR	.22- .50	.51- .75	.76- 1.0	1.1- 1.5	1.6- 2.0	2.1- 3.0	3.1- 5.0	5.1- 7.0	7.1- 10.0	10.1- 13.0	13.1- 18.0	>18	TOT.
N	0	0	0	0	1	2	0	0	0	0	0	0	3
NNE	0	0	1	1	3	6	0	0	0	0	0	0	11
NE	0	0	0	0	0	1	3	0	0	0	0	0	4
ENE	0	0	0	1	2	5	0	0	0	0	0	0	8
E	0	0	0	1	2	5	1	0	0	0	0	0	9
ESE	0	0	0	0	0	2	18	0	0	0	0	0	20
SE	0	0	0	0	0	0	2	0	0	0	0	0	2
SSE	0	0	0	0	1	3	3	0	0	0	0	0	7
S	0	0	0	0	0	5	2	0	0	0	0	0	7
SSW	0	0	0	0	0	6	1	0	0	0	0	0	7
SW	0	1	0	3	1	3	0	0	0	0	0	0	8
WSW	0	0	0	0	8	7	0	0	0	0	0	0	15
W	0	0	0	0	3	8	6	0	0	0	0	0	17
WNW	0	0	0	3	3	3	1	0	0	0	0	0	10
NW	0	0	0	0	1	4	0	0	0	0	0	0	5
NNW	0	0	0	1	0	9	3	0	0	0	0	0	13
TOTAL	0	1	1	10	25	69	40	0	0	0	0	0	146

NUMBER OF CALMS: 0
NUMBER OF INVALID HOURS: 0
NUMBER OF VALID HOURS: 146
TOTAL HOURS FOR THE PERIOD: 146

RIVER BEND STATION
JOINT FREQUENCY TABLE
ALL STABILITY CLASSES

FROM 4/ 1/03 0:00 TO 6/30/03 23:00

PRIMARY SENSORS - 30 FOOT

WIND SPEED (METERS/SECOND)

WIND DIR	.22-.50	.51-.75	.76-1.0	1.1-1.5	1.6-2.0	2.1-3.0	3.1-5.0	5.1-7.0	7.1-10.0	10.1-13.0	13.1-18.0	>18	TOT.
N	18	10	15	42	38	24	12	0	0	0	0	0	159
NNE	10	19	18	44	20	12	1	0	0	0	0	0	124
NE	9	11	13	33	19	8	0	1	0	0	0	0	94
ENE	5	13	12	19	11	3	0	0	1	0	0	1	65
E	4	11	10	13	11	3	1	0	0	0	0	0	53
ESE	3	14	18	30	20	4	0	0	0	0	0	0	89
SE	3	9	27	50	42	39	5	0	0	0	0	0	175
SSE	0	8	11	33	35	66	33	0	0	0	0	0	186
S	2	2	9	18	42	83	116	14	0	0	0	0	286
SSW	4	5	12	16	33	24	25	0	0	0	0	0	119
SW	0	5	8	19	14	18	3	0	0	0	0	0	67
WSW	4	11	17	8	17	19	0	0	0	0	0	0	76
W	2	11	6	10	14	33	0	0	0	0	0	0	76
WNW	6	24	12	23	17	25	3	0	0	0	0	0	110
NW	12	31	13	25	21	19	14	0	0	0	0	0	135
NNW	3	22	20	19	21	32	16	0	0	0	0	0	133
TOTAL	85	206	221	402	375	412	229	15	1	0	0	1	1947

NUMBER OF CALMS: 2
NUMBER OF INVALID HOURS: 235
NUMBER OF VALID HOURS: 1949
TOTAL HOURS FOR THE PERIOD: 2184

RIVER BEND STATION
JOINT FREQUENCY TABLE
STABILITY CLASS A

FROM 4/ 1/03 0:00 TO 6/30/03 23:00

PRIMARY SENSORS - 30 FOOT

WIND SPEED (METERS/SECOND)

WIND DIR	.22-.50	.51-.75	.76-1.0	1.1-1.5	1.6-2.0	2.1-3.0	3.1-5.0	5.1-7.0	7.1-10.0	10.1-13.0	13.1-18.0	>18	TOT.
N	0	0	2	3	1	3	4	0	0	0	0	0	13
NNE	0	3	1	5	4	6	0	0	0	0	0	0	19
NE	0	0	0	3	10	0	0	0	0	0	0	0	13
ENE	0	0	1	2	4	1	0	0	1	0	0	1	10
E	0	0	0	1	2	2	0	0	0	0	0	0	5
ESE	0	4	2	0	5	2	0	0	0	0	0	0	13
SE	0	2	6	4	4	14	2	0	0	0	0	0	32
SSE	0	0	2	2	1	2	5	0	0	0	0	0	12
S	0	0	1	3	4	4	20	3	0	0	0	0	35
SSW	0	0	0	0	1	0	3	0	0	0	0	0	4
SW	0	0	1	1	0	0	3	0	0	0	0	0	5
WSW	0	0	0	0	0	1	0	0	0	0	0	0	1
W	0	0	0	0	0	3	0	0	0	0	0	0	3
WNW	0	0	1	1	0	7	1	0	0	0	0	0	10
NW	1	0	0	3	1	5	5	0	0	0	0	0	15
NNW	0	0	0	1	1	3	6	0	0	0	0	0	11
TOTAL	1	9	17	29	38	53	49	3	1	0	0	1	201

NUMBER OF CALMS: 0
NUMBER OF INVALID HOURS: 0
NUMBER OF VALID HOURS: 201
TOTAL HOURS FOR THE PERIOD: 201

RIVER BEND STATION
JOINT FREQUENCY TABLE
STABILITY CLASS B

FROM 4/ 1/03 0:00 TO 6/30/03 23:00

PRIMARY SENSORS - 30 FOOT

WIND SPEED (METERS/SECOND)

WIND DIR	.22-.50	.51-.75	.76-1.0	1.1-1.5	1.6-2.0	2.1-3.0	3.1-5.0	5.1-7.0	7.1-10.0	10.1-13.0	13.1-18.0	>18	TOT.
N	0	0	2	2	6	7	2	0	0	0	0	0	19
NNE	0	0	0	3	3	2	0	0	0	0	0	0	8
NE	0	0	0	2	3	2	0	1	0	0	0	0	8
ENE	0	0	0	0	1	0	0	0	0	0	0	0	1
E	0	0	0	2	0	0	0	0	0	0	0	0	2
ESE	0	0	1	1	4	2	0	0	0	0	0	0	8
SE	0	0	2	1	3	6	0	0	0	0	0	0	12
SSE	0	0	0	1	6	6	4	0	0	0	0	0	17
S	0	0	0	2	3	10	24	3	0	0	0	0	42
SSW	0	0	2	0	1	5	3	0	0	0	0	0	11
SW	0	0	0	1	0	8	0	0	0	0	0	0	9
WSW	0	0	1	1	4	6	0	0	0	0	0	0	12
W	0	0	0	0	2	15	0	0	0	0	0	0	17
WNW	0	0	0	0	3	10	2	0	0	0	0	0	15
NW	0	0	0	0	2	4	4	0	0	0	0	0	10
NNW	0	0	0	1	2	16	6	0	0	0	0	0	25
TOTAL	0	0	8	17	43	99	45	4	0	0	0	0	216

NUMBER OF CALMS: 0
NUMBER OF INVALID HOURS: 0
NUMBER OF VALID HOURS: 216
TOTAL HOURS FOR THE PERIOD: 216

RIVER BEND STATION
JOINT FREQUENCY TABLE
STABILITY CLASS C

FROM 4/ 1/03 0:00 TO 6/30/03 23:00

PRIMARY SENSORS - 30 FOOT

WIND SPEED (METERS/SECOND)

WIND DIR	.22-.50	.51-.75	.76-1.0	1.1-1.5	1.6-2.0	2.1-3.0	3.1-5.0	5.1-7.0	7.1-10.0	10.1-13.0	13.1-18.0	>18	TOT.
N	0	0	0	1	3	2	0	0	0	0	0	0	6
NNE	0	0	0	4	3	0	0	0	0	0	0	0	7
NE	0	0	1	2	0	1	0	0	0	0	0	0	4
ENE	0	0	0	1	1	1	0	0	0	0	0	0	3
E	1	0	0	1	2	0	0	0	0	0	0	0	4
ESE	0	1	0	1	2	0	0	0	0	0	0	0	4
SE	0	0	1	3	5	2	0	0	0	0	0	0	11
SSE	0	0	0	0	1	8	3	0	0	0	0	0	12
S	0	0	1	1	2	8	17	1	0	0	0	0	30
SSW	0	0	0	0	0	4	4	0	0	0	0	0	8
SW	0	0	0	0	0	3	0	0	0	0	0	0	3
WSW	0	0	0	0	3	1	0	0	0	0	0	0	4
W	0	0	0	0	4	9	0	0	0	0	0	0	13
WNW	0	0	0	0	4	2	0	0	0	0	0	0	6
NW	0	0	0	1	5	2	1	0	0	0	0	0	9
NNW	0	0	1	0	4	0	0	0	0	0	0	0	5
TOTAL	1	1	4	15	39	43	25	1	0	0	0	0	129

NUMBER OF CALMS: 0
NUMBER OF INVALID HOURS: 0
NUMBER OF VALID HOURS: 129
TOTAL HOURS FOR THE PERIOD: 129

RIVER BEND STATION
JOINT FREQUENCY TABLE
STABILITY CLASS D

FROM 4/ 1/03 0:00 TO 6/30/03 23:00

PRIMARY SENSORS - 30 FOOT

WIND SPEED (METERS/SECOND)

WIND DIR	.22- .50	.51- .75	.76- 1.0	1.1- 1.5	1.6- 2.0	2.1- 3.0	3.1- 5.0	5.1- 7.0	7.1- 10.0	10.1- 13.0	13.1- 18.0	>18	TOT.
N	0	0	1	10	19	12	4	0	0	0	0	0	46
NNE	0	1	5	7	8	3	0	0	0	0	0	0	24
NE	0	5	6	16	5	4	0	0	0	0	0	0	36
ENE	0	0	4	7	3	1	0	0	0	0	0	0	15
E	1	0	6	7	5	1	1	0	0	0	0	0	21
ESE	0	2	6	18	5	0	0	0	0	0	0	0	31
SE	0	1	6	19	23	10	3	0	0	0	0	0	62
SSE	0	1	2	4	16	45	21	0	0	0	0	0	89
S	0	0	2	4	16	54	47	5	0	0	0	0	128
SSW	1	1	3	2	13	14	14	0	0	0	0	0	48
SW	0	0	0	8	12	7	0	0	0	0	0	0	27
WSW	0	4	4	5	10	10	0	0	0	0	0	0	33
W	0	0	2	8	6	6	0	0	0	0	0	0	22
WNW	0	3	3	8	9	4	0	0	0	0	0	0	27
NW	2	1	4	12	11	6	3	0	0	0	0	0	39
NNW	0	2	4	4	7	12	3	0	0	0	0	0	32
TOTAL	4	21	58	139	168	189	96	5	0	0	0	0	680

NUMBER OF CALMS: 1
NUMBER OF INVALID HOURS: 0
NUMBER OF VALID HOURS: 681
TOTAL HOURS FOR THE PERIOD: 681

RIVER BEND STATION
JOINT FREQUENCY TABLE
STABILITY CLASS E

FROM 4/ 1/03 0:00 TO 6/30/03 23:00

PRIMARY SENSORS - 30 FOOT

WIND SPEED (METERS/SECOND)

WIND DIR	.22-.50	.51-.75	.76-1.0	1.1-1.5	1.6-2.0	2.1-3.0	3.1-5.0	5.1-7.0	7.1-10.0	10.1-13.0	13.1-18.0	>18	TOT.
N	3	2	5	12	7	0	2	0	0	0	0	0	31
NNE	0	3	6	18	2	1	1	0	0	0	0	0	31
NE	1	3	4	9	1	1	0	0	0	0	0	0	19
ENE	1	4	4	9	0	0	0	0	0	0	0	0	18
E	1	7	4	2	2	0	0	0	0	0	0	0	16
ESE	1	4	8	10	4	0	0	0	0	0	0	0	27
SE	0	4	10	15	6	7	0	0	0	0	0	0	42
SSE	0	3	4	20	11	5	0	0	0	0	0	0	43
S	1	0	3	6	17	7	5	0	0	0	0	0	39
SSW	0	2	3	14	18	1	1	0	0	0	0	0	39
SW	0	2	3	8	2	0	0	0	0	0	0	0	15
WSW	1	3	8	1	0	1	0	0	0	0	0	0	14
W	2	4	3	2	2	0	0	0	0	0	0	0	13
WNW	3	7	2	12	1	2	0	0	0	0	0	0	27
NW	2	1	2	5	2	2	1	0	0	0	0	0	15
NNW	1	3	2	6	6	1	1	0	0	0	0	0	20
TOTAL	17	52	71	149	81	28	11	0	0	0	0	0	409

NUMBER OF CALMS: 0
NUMBER OF INVALID HOURS: 0
NUMBER OF VALID HOURS: 409
TOTAL HOURS FOR THE PERIOD: 409

RIVER BEND STATION
JOINT FREQUENCY TABLE
STABILITY CLASS F

FROM 4/ 1/03 0:00 TO 6/30/03 23:00

PRIMARY SENSORS - 30 FOOT

WIND SPEED (METERS/SECOND)

WIND DIR	.22-.50	.51-.75	.76-1.0	1.1-1.5	1.6-2.0	2.1-3.0	3.1-5.0	5.1-7.0	7.1-10.0	10.1-13.0	13.1-18.0	>18	TOT.
N	3	2	0	7	2	0	0	0	0	0	0	0	14
NNE	0	5	4	6	0	0	0	0	0	0	0	0	15
NE	1	1	0	1	0	0	0	0	0	0	0	0	3
ENE	1	2	0	0	2	0	0	0	0	0	0	0	5
E	0	4	0	0	0	0	0	0	0	0	0	0	4
ESE	0	1	1	0	0	0	0	0	0	0	0	0	2
SE	2	2	1	7	1	0	0	0	0	0	0	0	13
SSE	0	3	2	5	0	0	0	0	0	0	0	0	10
S	1	2	1	2	0	0	0	1	0	0	0	0	7
SSW	1	2	4	0	0	0	0	0	0	0	0	0	7
SW	0	1	2	1	0	0	0	0	0	0	0	0	4
WSW	1	1	1	1	0	0	0	0	0	0	0	0	4
W	0	3	0	0	0	0	0	0	0	0	0	0	3
WNW	1	4	2	1	0	0	0	0	0	0	0	0	8
NW	3	3	3	4	0	0	0	0	0	0	0	0	13
NNW	0	3	1	6	1	0	0	0	0	0	0	0	11
TOTAL	14	39	22	41	6	0	0	1	0	0	0	0	123

NUMBER OF CALMS: 0
NUMBER OF INVALID HOURS: 0
NUMBER OF VALID HOURS: 123
TOTAL HOURS FOR THE PERIOD: 123

RIVER BEND STATION
JOINT FREQUENCY TABLE
STABILITY CLASS G

FROM 4/ 1/03 0:00 TO 6/30/03 23:00

PRIMARY SENSORS - 30 FOOT

WIND SPEED (METERS/SECOND)

WIND DIR	.22-.50	.51-.75	.76-1.0	1.1-1.5	1.6-2.0	2.1-3.0	3.1-5.0	5.1-7.0	7.1-10.0	10.1-13.0	13.1-18.0	>18	TOT.
N	12	6	5	7	0	0	0	0	0	0	0	0	30
NNE	10	7	2	1	0	0	0	0	0	0	0	0	20
NE	7	2	2	0	0	0	0	0	0	0	0	0	11
ENE	3	7	3	0	0	0	0	0	0	0	0	0	13
E	1	0	0	0	0	0	0	0	0	0	0	0	1
ESE	2	2	0	0	0	0	0	0	0	0	0	0	4
SE	1	0	1	1	0	0	0	0	0	0	0	0	3
SSE	0	1	1	1	0	0	0	0	0	0	0	0	3
S	0	0	1	0	0	0	3	1	0	0	0	0	5
SSW	2	0	0	0	0	0	0	0	0	0	0	0	2
SW	0	2	2	0	0	0	0	0	0	0	0	0	4
WSW	2	3	3	0	0	0	0	0	0	0	0	0	8
W	0	4	1	0	0	0	0	0	0	0	0	0	5
WNW	2	10	4	1	0	0	0	0	0	0	0	0	17
NW	4	26	4	0	0	0	0	0	0	0	0	0	34
NNW	2	14	12	1	0	0	0	0	0	0	0	0	29
TOTAL	48	84	41	12	0	0	3	1	0	0	0	0	189

NUMBER OF CALMS: 1
NUMBER OF INVALID HOURS: 0
NUMBER OF VALID HOURS: 190
TOTAL HOURS FOR THE PERIOD: 190

RIVER BEND STATION
JOINT FREQUENCY TABLE
ALL STABILITY CLASSES

FROM 4/ 1/03 0:00 TO 6/30/03 23:00

PRIMARY SENSORS - 150 FOOT

WIND SPEED (METERS/SECOND)

WIND DIR	.22-.50	.51-.75	.76-1.0	1.1-1.5	1.6-2.0	2.1-3.0	3.1-5.0	5.1-7.0	7.1-10.0	10.1-13.0	13.1-18.0	>18	TOT.
N	1	1	2	7	15	35	48	1	0	0	0	0	110
NNE	0	1	2	15	22	38	28	2	0	0	0	0	108
NE	0	0	5	7	19	41	48	4	0	0	0	0	124
ENE	0	0	0	12	15	36	58	6	2	0	0	1	130
E	0	1	4	15	14	26	26	2	0	0	0	0	88
ESE	0	1	2	7	8	42	94	7	0	0	0	0	161
SE	1	0	1	4	9	36	68	10	0	0	0	0	129
SSE	0	0	1	7	7	38	82	15	0	0	0	0	150
S	0	0	0	3	12	48	139	73	2	0	0	0	277
SSW	0	0	2	4	10	25	59	19	0	0	0	0	119
SW	0	0	1	4	12	28	29	0	0	0	0	0	74
WSW	0	0	2	6	10	44	17	0	0	0	0	0	79
W	0	1	1	7	13	59	25	1	0	0	0	0	107
WNW	0	1	2	8	20	41	28	0	0	0	0	0	100
NW	0	0	1	8	11	34	36	8	0	0	0	0	98
NNW	0	0	1	4	10	25	52	2	0	0	0	0	94
TOTAL	2	6	27	118	207	596	837	150	4	0	0	1	1948

NUMBER OF CALMS: 1
NUMBER OF INVALID HOURS: 235
NUMBER OF VALID HOURS: 1949
TOTAL HOURS FOR THE PERIOD: 2184

RIVER BEND STATION
JOINT FREQUENCY TABLE
STABILITY CLASS A

FROM 4/ 1/03 0:00 TO 6/30/03 23:00

PRIMARY SENSORS - 150 FOOT

WIND SPEED (METERS/SECOND)

WIND DIR	.22- .50	.51- .75	.76- 1.0	1.1- 1.5	1.6- 2.0	2.1- 3.0	3.1- 5.0	5.1- 7.0	7.1- 10.0	10.1- 13.0	13.1- 18.0	>18	TOT.
N	0	0	0	0	0	2	7	0	0	0	0	0	9
NNE	0	0	0	2	1	7	2	0	0	0	0	0	12
NE	0	0	1	0	4	8	9	1	0	0	0	0	23
ENE	0	0	0	0	0	3	10	0	1	0	0	1	15
E	0	0	0	0	0	2	6	0	0	0	0	0	8
ESE	0	0	1	0	0	7	14	2	0	0	0	0	24
SE	0	0	0	0	2	5	9	2	0	0	0	0	18
SSE	0	0	1	0	2	1	1	3	0	0	0	0	8
S	0	0	0	1	4	3	15	13	0	0	0	0	36
SSW	0	0	0	1	0	1	0	2	0	0	0	0	4
SW	0	0	0	1	0	1	4	0	0	0	0	0	6
WSW	0	0	0	0	0	0	2	0	0	0	0	0	2
W	0	0	0	0	0	0	3	1	0	0	0	0	4
WNW	0	0	0	0	0	1	8	0	0	0	0	0	9
NW	0	0	0	0	0	3	11	2	0	0	0	0	16
NNW	0	0	0	0	0	2	5	0	0	0	0	0	7
TOTAL	0	0	3	5	13	46	106	26	1	0	0	1	201

NUMBER OF CALMS: 0
NUMBER OF INVALID HOURS: 0
NUMBER OF VALID HOURS: 201
TOTAL HOURS FOR THE PERIOD: 201

RIVER BEND STATION
JOINT FREQUENCY TABLE
STABILITY CLASS B

FROM 4/ 1/03 0:00 TO 6/30/03 23:00

PRIMARY SENSORS - 150 FOOT

WIND SPEED (METERS/SECOND)

WIND DIR	.22- .50	.51- .75	.76- 1.0	1.1- 1.5	1.6- 2.0	2.1- 3.0	3.1- 5.0	5.1- 7.0	7.1- 10.0	10.1- 13.0	13.1- 18.0	>18	TOT.
N	0	0	0	0	1	5	7	0	0	0	0	0	13
NNE	0	0	0	1	1	7	1	0	0	0	0	0	10
NE	0	0	0	0	0	5	3	0	0	0	0	0	8
ENE	0	0	0	0	0	2	8	0	1	0	0	0	11
E	0	0	0	0	0	2	1	0	0	0	0	0	3
ESE	0	0	0	1	0	4	8	0	0	0	0	0	13
SE	0	0	0	0	0	3	5	1	0	0	0	0	9
SSE	0	0	0	0	1	4	9	2	0	0	0	0	16
S	0	0	0	0	1	6	14	18	0	0	0	0	39
SSW	0	0	0	0	0	2	5	3	0	0	0	0	10
SW	0	0	0	0	0	0	4	0	0	0	0	0	4
WSW	0	0	0	0	1	5	8	0	0	0	0	0	14
W	0	0	0	0	0	16	9	0	0	0	0	0	25
WNW	0	0	0	0	0	4	6	0	0	0	0	0	10
NW	0	0	0	0	0	5	4	2	0	0	0	0	11
NNW	0	0	0	0	0	3	17	0	0	0	0	0	20
TOTAL	0	0	0	2	5	73	109	26	1	0	0	0	216

NUMBER OF CALMS: 0
NUMBER OF INVALID HOURS: 0
NUMBER OF VALID HOURS: 216
TOTAL HOURS FOR THE PERIOD: 216

RIVER BEND STATION
JOINT FREQUENCY TABLE
STABILITY CLASS C

FROM 4/ 1/03 0:00 TO 6/30/03 23:00

PRIMARY SENSORS - 150 FOOT

WIND SPEED (METERS/SECOND)

WIND DIR	.22- .50	.51- .75	.76- 1.0	1.1- 1.5	1.6- 2.0	2.1- 3.0	3.1- 5.0	5.1- 7.0	7.1- 10.0	10.1- 13.0	13.1- 18.0	>18	TOT.
N	0	0	0	0	1	4	1	0	0	0	0	0	6
NNE	0	0	0	0	4	3	0	0	0	0	0	0	7
NE	0	0	0	2	1	2	0	0	0	0	0	0	5
ENE	0	0	0	0	1	3	3	0	0	0	0	0	7
E	0	1	0	0	0	2	1	0	0	0	0	0	4
ESE	0	0	0	0	0	3	4	0	0	0	0	0	7
SE	0	0	0	0	2	3	1	0	0	0	0	0	6
SSE	0	0	0	0	1	2	10	2	0	0	0	0	15
S	0	0	0	0	2	5	12	8	0	0	0	0	27
SSW	0	0	0	0	0	2	3	3	0	0	0	0	8
SW	0	0	0	0	0	0	3	0	0	0	0	0	3
WSW	0	0	0	0	0	2	0	0	0	0	0	0	2
W	0	0	0	0	0	14	4	0	0	0	0	0	18
WNW	0	0	0	0	0	3	1	0	0	0	0	0	4
NW	0	0	0	0	1	5	3	0	0	0	0	0	9
NNW	0	0	0	0	0	1	0	0	0	0	0	0	1
TOTAL	0	1	0	2	13	54	46	13	0	0	0	0	129

NUMBER OF CALMS: 0
NUMBER OF INVALID HOURS: 0
NUMBER OF VALID HOURS: 129
TOTAL HOURS FOR THE PERIOD: 129

RIVER BEND STATION
JOINT FREQUENCY TABLE
STABILITY CLASS D

FROM 4/ 1/03 0:00 TO 6/30/03 23:00

PRIMARY SENSORS - 150 FOOT

WIND SPEED (METERS/SECOND)

WIND DIR	.22- .50	.51- .75	.76- 1.0	1.1- 1.5	1.6- 2.0	2.1- 3.0	3.1- 5.0	5.1- 7.0	7.1- 10.0	10.1- 13.0	13.1- 18.0	>18	TOT.
N	0	0	0	6	4	11	13	0	0	0	0	0	34
NNE	0	0	2	8	9	6	7	1	0	0	0	0	33
NE	0	0	2	3	6	14	9	1	0	0	0	0	35
ENE	0	0	0	10	6	12	14	5	0	0	0	0	47
E	0	0	1	7	1	9	14	2	0	0	0	0	34
ESE	0	0	0	4	3	12	25	2	0	0	0	0	46
SE	0	0	1	1	1	7	24	6	0	0	0	0	40
SSE	0	0	0	4	0	8	48	8	0	0	0	0	68
S	0	0	0	2	0	16	75	25	2	0	0	0	120
SSW	0	0	1	2	4	7	29	11	0	0	0	0	54
SW	0	0	0	1	7	13	6	0	0	0	0	0	27
WSW	0	0	2	5	6	17	5	0	0	0	0	0	35
W	0	0	0	4	5	12	6	0	0	0	0	0	27
WNW	0	0	0	4	7	9	3	0	0	0	0	0	23
NW	0	0	1	4	3	13	6	3	0	0	0	0	30
NNW	0	0	0	2	4	6	14	1	0	0	0	0	27
TOTAL	0	0	10	67	66	172	298	65	2	0	0	0	680

NUMBER OF CALMS: 1
NUMBER OF INVALID HOURS: 0
NUMBER OF VALID HOURS: 681
TOTAL HOURS FOR THE PERIOD: 681

RIVER BEND STATION
JOINT FREQUENCY TABLE
STABILITY CLASS E

FROM 4/ 1/03 0:00 TO 6/30/03 23:00

PRIMARY SENSORS - 150 FOOT

WIND SPEED (METERS/SECOND)

WIND DIR	.22-.50	.51-.75	.76-1.0	1.1-1.5	1.6-2.0	2.1-3.0	3.1-5.0	5.1-7.0	7.1-10.0	10.1-13.0	13.1-18.0	>18	TOT.
N	1	0	2	1	0	3	10	1	0	0	0	0	18
NNE	0	0	0	2	3	6	5	1	0	0	0	0	17
NE	0	0	2	2	5	6	14	2	0	0	0	0	31
ENE	0	0	0	1	7	14	19	1	0	0	0	0	42
E	0	0	2	3	7	8	4	0	0	0	0	0	24
ESE	0	0	0	1	3	11	27	3	0	0	0	0	45
SE	0	0	0	1	4	12	19	1	0	0	0	0	37
SSE	0	0	0	2	1	13	11	0	0	0	0	0	27
S	0	0	0	0	0	9	21	4	0	0	0	0	34
SSW	0	0	1	1	4	8	22	0	0	0	0	0	36
SW	0	0	0	2	3	6	9	0	0	0	0	0	20
WSW	0	0	0	0	0	10	0	0	0	0	0	0	10
W	0	1	0	1	3	4	2	0	0	0	0	0	11
WNW	0	0	2	2	3	14	3	0	0	0	0	0	24
NW	0	0	0	2	3	4	5	1	0	0	0	0	15
NNW	0	0	1	1	4	7	4	1	0	0	0	0	18
TOTAL	1	1	10	22	50	135	175	15	0	0	0	0	409

NUMBER OF CALMS: 0
NUMBER OF INVALID HOURS: 0
NUMBER OF VALID HOURS: 409
TOTAL HOURS FOR THE PERIOD: 409

RIVER BEND STATION
JOINT FREQUENCY TABLE
STABILITY CLASS F

FROM 4/ 1/03 0:00 TO 6/30/03 23:00

PRIMARY SENSORS - 150 FOOT

WIND SPEED (METERS/SECOND)

WIND DIR	.22-.50	.51-.75	.76-1.0	1.1-1.5	1.6-2.0	2.1-3.0	3.1-5.0	5.1-7.0	7.1-10.0	10.1-13.0	13.1-18.0	>18	TOT.
N	0	0	0	0	3	2	8	0	0	0	0	0	13
NNE	0	0	0	0	1	3	7	0	0	0	0	0	11
NE	0	0	0	0	1	3	8	0	0	0	0	0	12
ENE	0	0	0	0	0	1	3	0	0	0	0	0	4
E	0	0	1	5	3	1	0	0	0	0	0	0	10
ESE	0	0	1	0	1	1	8	0	0	0	0	0	11
SE	0	0	0	1	0	3	9	0	0	0	0	0	13
SSE	0	0	0	0	0	2	2	0	0	0	0	0	4
S	0	0	0	0	1	6	2	1	0	0	0	0	10
SSW	0	0	0	0	1	3	0	0	0	0	0	0	4
SW	0	0	0	0	2	0	1	0	0	0	0	0	3
WSW	0	0	0	0	1	2	0	0	0	0	0	0	3
W	0	0	0	1	3	0	0	0	0	0	0	0	4
WNW	0	1	0	0	2	3	0	0	0	0	0	0	6
NW	0	0	0	2	1	0	4	0	0	0	0	0	7
NNW	0	0	0	0	0	1	7	0	0	0	0	0	8
TOTAL	0	1	2	9	20	31	59	1	0	0	0	0	123

NUMBER OF CALMS: 0
NUMBER OF INVALID HOURS: 0
NUMBER OF VALID HOURS: 123
TOTAL HOURS FOR THE PERIOD: 123

RIVER BEND STATION
JOINT FREQUENCY TABLE
STABILITY CLASS G

FROM 4/ 1/03 0:00 TO 6/30/03 23:00

PRIMARY SENSORS - 150 FOOT

WIND SPEED (METERS/SECOND)

WIND DIR	.22-.50	.51-.75	.76-1.0	1.1-1.5	1.6-2.0	2.1-3.0	3.1-5.0	5.1-7.0	7.1-10.0	10.1-13.0	13.1-18.0	>18	TOT.
N	0	1	0	0	6	8	2	0	0	0	0	0	17
NNE	0	1	0	2	3	6	6	0	0	0	0	0	18
NE	0	0	0	0	2	3	5	0	0	0	0	0	10
ENE	0	0	0	1	1	1	1	0	0	0	0	0	4
E	0	0	0	0	3	2	0	0	0	0	0	0	5
ESE	0	1	0	1	1	4	8	0	0	0	0	0	15
SE	1	0	0	1	0	3	1	0	0	0	0	0	6
SSE	0	0	0	1	2	8	1	0	0	0	0	0	12
S	0	0	0	0	4	3	0	4	0	0	0	0	11
SSW	0	0	0	0	1	2	0	0	0	0	0	0	3
SW	0	0	1	0	0	8	2	0	0	0	0	0	11
WSW	0	0	0	1	2	8	2	0	0	0	0	0	13
W	0	0	1	1	2	13	1	0	0	0	0	0	18
WNW	0	0	0	2	8	7	7	0	0	0	0	0	24
NW	0	0	0	0	3	4	3	0	0	0	0	0	10
NNW	0	0	0	1	2	5	5	0	0	0	0	0	13
TOTAL	1	3	2	11	40	85	44	4	0	0	0	0	190

NUMBER OF CALMS: 0
NUMBER OF INVALID HOURS: 0
NUMBER OF VALID HOURS: 190
TOTAL HOURS FOR THE PERIOD: 190

RIVER BEND STATION
JOINT FREQUENCY TABLE
ALL STABILITY CLASSES

FROM 7/ 1/03 0:00 TO 9/30/03 23:00

PRIMARY SENSORS - 30 FOOT

WIND SPEED (METERS/SECOND)

WIND DIR	.22- .50	.51- .75	.76- 1.0	1.1- 1.5	1.6- 2.0	2.1- 3.0	3.1- 5.0	5.1- 7.0	7.1- 10.0	10.1- 13.0	13.1- 18.0	>18	TOT.
N	22	37	21	47	38	38	9	0	0	0	0	0	212
NNE	19	16	18	56	43	20	2	0	0	0	0	0	174
NE	12	27	20	32	31	12	0	0	0	0	0	0	134
ENE	6	20	25	20	9	16	0	0	0	0	0	0	96
E	10	17	15	22	10	1	0	0	0	0	0	0	75
ESE	6	29	25	28	15	1	0	0	0	0	0	0	104
SE	6	13	33	61	55	39	3	0	0	0	0	0	210
SSE	3	11	19	38	51	42	8	0	0	0	0	0	172
S	4	13	11	39	34	32	10	0	0	0	0	0	143
SSW	5	12	18	46	32	18	2	0	0	0	0	0	133
SW	4	21	23	36	26	11	0	0	0	0	0	0	121
WSW	4	15	11	20	23	27	0	0	0	0	0	0	100
W	7	16	14	17	31	38	0	0	0	0	0	0	123
WNW	7	20	16	23	24	20	4	0	0	0	0	0	114
NW	18	28	10	25	13	14	0	0	0	0	0	0	108
NNW	21	22	20	33	21	39	3	0	0	0	0	0	159
TOTAL	154	317	299	543	456	368	41	0	0	0	0	0	2178

NUMBER OF CALMS: 11
NUMBER OF INVALID HOURS: 19
NUMBER OF VALID HOURS: 2189
TOTAL HOURS FOR THE PERIOD: 2208

RIVER BEND STATION
JOINT FREQUENCY TABLE
STABILITY CLASS A

FROM 7/ 1/03 0:00 TO 9/30/03 23:00

PRIMARY SENSORS - 30 FOOT

WIND SPEED (METERS/SECOND)

WIND DIR	.22-.50	.51-.75	.76-1.0	1.1-1.5	1.6-2.0	2.1-3.0	3.1-5.0	5.1-7.0	7.1-10.0	10.1-13.0	13.1-18.0	>18	TOT.
N	0	0	0	1	5	15	5	0	0	0	0	0	26
NNE	0	0	0	0	9	8	1	0	0	0	0	0	18
NE	0	0	1	2	9	8	0	0	0	0	0	0	20
ENE	0	0	0	0	4	16	0	0	0	0	0	0	20
E	0	0	0	1	3	1	0	0	0	0	0	0	5
ESE	0	0	0	0	2	1	0	0	0	0	0	0	3
SE	0	0	0	0	6	10	2	0	0	0	0	0	18
SSE	0	0	0	0	4	11	4	0	0	0	0	0	19
S	0	0	0	0	2	10	2	0	0	0	0	0	14
SSW	0	0	0	0	0	2	0	0	0	0	0	0	2
SW	0	0	0	0	3	0	0	0	0	0	0	0	3
WSW	0	0	0	0	0	5	0	0	0	0	0	0	5
W	0	0	0	0	0	9	0	0	0	0	0	0	9
WNW	0	0	0	0	0	4	2	0	0	0	0	0	6
NW	0	0	0	0	0	3	0	0	0	0	0	0	3
NNW	0	0	0	0	1	7	0	0	0	0	0	0	8
TOTAL	0	0	1	4	48	110	16	0	0	0	0	0	179

NUMBER OF CALMS: 0
NUMBER OF INVALID HOURS: 0
NUMBER OF VALID HOURS: 179
TOTAL HOURS FOR THE PERIOD: 179

RIVER BEND STATION
JOINT FREQUENCY TABLE
STABILITY CLASS B

FROM 7/ 1/03 0:00 TO 9/30/03 23:00

PRIMARY SENSORS - 30 FOOT

WIND SPEED (METERS/SECOND)

WIND DIR	.22- .50	.51- .75	.76- 1.0	1.1- 1.5	1.6- 2.0	2.1- 3.0	3.1- 5.0	5.1- 7.0	7.1- 10.0	10.1- 13.0	13.1- 18.0	>18	TOT.
N	0	0	0	0	8	12	3	0	0	0	0	0	23
NNE	0	0	0	4	9	3	0	0	0	0	0	0	16
NE	0	0	0	3	4	0	0	0	0	0	0	0	7
ENE	0	0	0	2	1	0	0	0	0	0	0	0	3
E	0	0	0	3	0	0	0	0	0	0	0	0	3
ESE	0	0	0	3	1	0	0	0	0	0	0	0	4
SE	0	0	0	4	10	8	1	0	0	0	0	0	23
SSE	0	0	0	0	4	9	3	0	0	0	0	0	16
S	0	0	0	0	2	7	3	0	0	0	0	0	12
SSW	0	0	0	0	4	1	1	0	0	0	0	0	6
SW	0	0	0	1	2	2	0	0	0	0	0	0	5
WSW	0	0	0	0	9	18	0	0	0	0	0	0	27
W	0	0	0	1	14	24	0	0	0	0	0	0	39
WNW	0	0	0	0	9	13	2	0	0	0	0	0	24
NW	0	0	0	1	5	6	0	0	0	0	0	0	12
NNW	0	0	0	0	7	17	2	0	0	0	0	0	26
TOTAL	0	0	0	22	89	120	15	0	0	0	0	0	246

NUMBER OF CALMS: 0
NUMBER OF INVALID HOURS: 0
NUMBER OF VALID HOURS: 246
TOTAL HOURS FOR THE PERIOD: 246

RIVER BEND STATION
JOINT FREQUENCY TABLE
STABILITY CLASS C

FROM 7/ 1/03 0:00 TO 9/30/03 23:00

PRIMARY SENSORS - 30 FOOT

WIND SPEED (METERS/SECOND)

WIND DIR	.22- .50	.51- .75	.76- 1.0	1.1- 1.5	1.6- 2.0	2.1- 3.0	3.1- 5.0	5.1- 7.0	7.1- 10.0	10.1- 13.0	13.1- 18.0	>18	TOT.
N	0	0	0	0	3	4	0	0	0	0	0	0	7
NNE	0	0	0	2	2	1	0	0	0	0	0	0	5
NE	0	0	0	2	1	0	0	0	0	0	0	0	3
ENE	0	0	0	2	0	0	0	0	0	0	0	0	2
E	0	0	0	2	0	0	0	0	0	0	0	0	2
ESE	0	0	0	3	1	0	0	0	0	0	0	0	4
SE	0	0	0	0	5	3	0	0	0	0	0	0	8
SSE	0	0	1	0	5	3	0	0	0	0	0	0	9
S	0	0	0	3	4	3	0	0	0	0	0	0	10
SSW	0	0	0	0	0	2	0	0	0	0	0	0	2
SW	0	0	1	0	4	4	0	0	0	0	0	0	9
WSW	0	0	0	4	8	0	0	0	0	0	0	0	12
W	0	0	0	2	10	5	0	0	0	0	0	0	17
WNW	0	0	0	3	6	0	0	0	0	0	0	0	9
NW	0	0	0	2	2	1	0	0	0	0	0	0	5
NNW	0	0	0	1	3	4	0	0	0	0	0	0	8
TOTAL	0	0	2	26	54	30	0	0	0	0	0	0	112

NUMBER OF CALMS: 0
NUMBER OF INVALID HOURS: 0
NUMBER OF VALID HOURS: 112
TOTAL HOURS FOR THE PERIOD: 112

RIVER BEND STATION
JOINT FREQUENCY TABLE
STABILITY CLASS D

FROM 7/ 1/03 0:00 TO 9/30/03 23:00

PRIMARY SENSORS - 30 FOOT

WIND SPEED (METERS/SECOND)

WIND DIR	.22- .50	.51- .75	.76- 1.0	1.1- 1.5	1.6- 2.0	2.1- 3.0	3.1- 5.0	5.1- 7.0	7.1- 10.0	10.1- 13.0	13.1- 18.0	>18	TOT.
N	0	2	2	9	11	6	1	0	0	0	0	0	31
NNE	0	1	5	6	5	2	0	0	0	0	0	0	19
NE	0	2	2	6	5	2	0	0	0	0	0	0	17
ENE	0	3	8	10	1	0	0	0	0	0	0	0	22
E	0	1	2	9	1	0	0	0	0	0	0	0	13
ESE	0	1	10	14	9	0	0	0	0	0	0	0	34
SE	0	2	7	23	12	10	0	0	0	0	0	0	54
SSE	0	0	2	7	16	16	1	0	0	0	0	0	42
S	0	1	3	17	11	7	4	0	0	0	0	0	43
SSW	0	0	3	9	11	7	0	0	0	0	0	0	30
SW	0	1	3	12	12	5	0	0	0	0	0	0	33
WSW	0	0	2	12	6	4	0	0	0	0	0	0	24
W	0	0	4	9	6	0	0	0	0	0	0	0	19
WNW	0	0	6	10	8	3	0	0	0	0	0	0	27
NW	0	0	0	17	6	3	0	0	0	0	0	0	26
NNW	0	0	5	10	6	10	1	0	0	0	0	0	32
TOTAL	0	14	64	180	126	75	7	0	0	0	0	0	466

NUMBER OF CALMS: 0
NUMBER OF INVALID HOURS: 0
NUMBER OF VALID HOURS: 466
TOTAL HOURS FOR THE PERIOD: 466

RIVER BEND STATION
JOINT FREQUENCY TABLE
STABILITY CLASS E

FROM 7/ 1/03 0:00 TO 9/30/03 23:00

PRIMARY SENSORS - 30 FOOT

WIND SPEED (METERS/SECOND)

WIND DIR	.22- .50	.51- .75	.76- 1.0	1.1- 1.5	1.6- 2.0	2.1- 3.0	3.1- 5.0	5.1- 7.0	7.1- 10.0	10.1- 13.0	13.1- 18.0	>18	TOT.
N	1	8	6	13	6	1	0	0	0	0	0	0	35
NNE	2	5	5	24	17	6	1	0	0	0	0	0	60
NE	0	9	11	11	11	2	0	0	0	0	0	0	44
ENE	1	8	12	5	3	0	0	0	0	0	0	0	29
E	4	9	11	7	6	0	0	0	0	0	0	0	37
ESE	3	19	11	8	2	0	0	0	0	0	0	0	43
SE	4	8	22	32	22	8	0	0	0	0	0	0	96
SSE	1	7	10	28	21	3	0	0	0	0	0	0	70
S	3	7	3	19	15	4	1	0	0	0	0	0	52
SSW	0	4	12	35	17	6	1	0	0	0	0	0	75
SW	1	12	16	21	5	0	0	0	0	0	0	0	55
WSW	0	7	7	4	0	0	0	0	0	0	0	0	18
W	2	6	5	5	1	0	0	0	0	0	0	0	19
WNW	0	7	5	10	1	0	0	0	0	0	0	0	23
NW	0	0	7	5	0	0	0	0	0	0	0	0	12
NNW	6	6	2	12	4	1	0	0	0	0	0	0	31
TOTAL	28	122	145	239	131	31	3	0	0	0	0	0	699

NUMBER OF CALMS: 0
NUMBER OF INVALID HOURS: 0
NUMBER OF VALID HOURS: 699
TOTAL HOURS FOR THE PERIOD: 699

RIVER BEND STATION
JOINT FREQUENCY TABLE
STABILITY CLASS F

FROM 7/ 1/03 0:00 TO 9/30/03 23:00

PRIMARY SENSORS - 30 FOOT

WIND SPEED (METERS/SECOND)

WIND DIR	.22- .50	.51- .75	.76- 1.0	1.1- 1.5	1.6- 2.0	2.1- 3.0	3.1- 5.0	5.1- 7.0	7.1- 10.0	10.1- 13.0	13.1- 18.0	>18	TOT.
N	11	13	9	16	5	0	0	0	0	0	0	0	54
NNE	6	5	7	19	1	0	0	0	0	0	0	0	38
NE	5	10	5	7	0	0	0	0	0	0	0	0	27
ENE	2	7	4	1	0	0	0	0	0	0	0	0	14
E	3	6	2	0	0	0	0	0	0	0	0	0	11
ESE	3	9	4	0	0	0	0	0	0	0	0	0	16
SE	1	3	4	2	0	0	0	0	0	0	0	0	10
SSE	2	4	6	3	1	0	0	0	0	0	0	0	16
S	1	5	5	0	0	1	0	0	0	0	0	0	12
SSW	5	7	2	2	0	0	0	0	0	0	0	0	16
SW	3	8	3	2	0	0	0	0	0	0	0	0	16
WSW	3	8	2	0	0	0	0	0	0	0	0	0	13
W	3	10	4	0	0	0	0	0	0	0	0	0	17
WNW	3	9	2	0	0	0	0	0	0	0	0	0	14
NW	9	8	3	0	0	0	0	0	0	0	0	0	20
NNW	8	5	5	6	0	0	0	0	0	0	0	0	24
TOTAL	68	117	67	58	7	1	0	0	0	0	0	0	318

NUMBER OF CALMS: 9
NUMBER OF INVALID HOURS: 0
NUMBER OF VALID HOURS: 327
TOTAL HOURS FOR THE PERIOD: 327

RIVER BEND STATION
JOINT FREQUENCY TABLE
STABILITY CLASS G

FROM 7/ 1/03 0:00 TO 9/30/03 23:00

PRIMARY SENSORS - 30 FOOT

WIND SPEED (METERS/SECOND)

WIND DIR	.22-.50	.51-.75	.76-1.0	1.1-1.5	1.6-2.0	2.1-3.0	3.1-5.0	5.1-7.0	7.1-10.0	10.1-13.0	13.1-18.0	>18	TOT.
N	10	14	4	8	0	0	0	0	0	0	0	0	36
NNE	11	5	1	1	0	0	0	0	0	0	0	0	18
NE	7	6	1	1	1	0	0	0	0	0	0	0	16
ENE	3	2	1	0	0	0	0	0	0	0	0	0	6
E	3	1	0	0	0	0	0	0	0	0	0	0	4
ESE	0	0	0	0	0	0	0	0	0	0	0	0	0
SE	1	0	0	0	0	0	0	0	0	0	0	0	1
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	1	1	0	0	0	0	0	0	0	0	0	2
SW	0	0	0	0	0	0	0	0	0	0	0	0	0
WSW	1	0	0	0	0	0	0	0	0	0	0	0	1
W	2	0	1	0	0	0	0	0	0	0	0	0	3
WNW	4	4	3	0	0	0	0	0	0	0	0	0	11
NW	9	20	0	0	0	1	0	0	0	0	0	0	30
NNW	7	11	8	4	0	0	0	0	0	0	0	0	30
TOTAL	58	64	20	14	1	1	0	0	0	0	0	0	158

NUMBER OF CALMS: 2
NUMBER OF INVALID HOURS: 0
NUMBER OF VALID HOURS: 160
TOTAL HOURS FOR THE PERIOD: 160

RIVER BEND STATION
JOINT FREQUENCY TABLE
ALL STABILITY CLASSES

FROM 7/ 1/03 0:00 TO 9/30/03 23:00

PRIMARY SENSORS - 150 FOOT

WIND SPEED (METERS/SECOND)

WIND DIR	.22- .50	.51- .75	.76- 1.0	1.1- 1.5	1.6- 2.0	2.1- 3.0	3.1- 5.0	5.1- 7.0	7.1- 10.0	10.1- 13.0	13.1- 18.0	>18	TOT.
N	0	0	3	11	14	49	35	4	0	0	0	0	116
NNE	0	1	3	6	17	51	67	1	0	0	0	0	146
NE	0	0	3	12	25	64	86	5	0	0	0	0	195
ENE	0	0	4	16	32	62	43	7	0	1	1	1	167
E	0	0	2	30	32	29	30	1	0	0	0	0	124
ESE	0	1	3	23	28	77	133	8	0	0	0	0	273
SE	0	1	0	8	13	67	61	5	0	0	0	0	155
SSE	0	0	2	10	14	49	23	1	0	0	0	0	99
S	0	0	0	16	22	57	21	5	0	0	0	0	121
SSW	0	0	2	12	25	64	25	0	0	0	0	0	128
SW	0	1	4	5	30	55	17	0	0	0	0	0	112
WSW	0	1	2	14	34	78	16	0	0	0	0	0	145
W	0	0	2	7	21	66	33	0	0	0	0	0	129
WNW	0	1	2	8	26	39	13	1	0	0	0	0	90
NW	0	0	2	14	14	24	17	1	0	0	0	0	72
NNW	0	1	1	12	15	47	40	1	0	0	0	0	117
TOTAL	0	7	35	204	362	878	660	40	0	1	1	1	2189

NUMBER OF CALMS: 0
NUMBER OF INVALID HOURS: 19
NUMBER OF VALID HOURS: 2189
TOTAL HOURS FOR THE PERIOD: 2208

RIVER BEND STATION
JOINT FREQUENCY TABLE
STABILITY CLASS A

FROM 7/ 1/03 0:00 TO 9/30/03 23:00

PRIMARY SENSORS - 150 FOOT

WIND SPEED (METERS/SECOND)

WIND DIR	.22- .50	.51- .75	.76- 1.0	1.1- 1.5	1.6- 2.0	2.1- 3.0	3.1- 5.0	5.1- 7.0	7.1- 10.0	10.1- 13.0	13.1- 18.0	>18	TOT.
N	0	0	0	0	2	7	5	1	0	0	0	0	15
NNE	0	0	0	0	0	6	10	0	0	0	0	0	16
NE	0	0	0	1	0	14	13	1	0	0	0	0	29
ENE	0	0	0	0	0	8	12	7	0	1	0	0	28
E	0	0	0	0	0	2	4	0	0	0	0	0	6
ESE	0	0	0	0	0	4	9	2	0	0	0	0	15
SE	0	0	0	0	0	5	6	3	0	0	0	0	14
SSE	0	0	0	0	0	7	2	0	0	0	0	0	9
S	0	0	0	0	0	6	4	0	0	0	0	0	10
SSW	0	0	0	0	0	1	0	0	0	0	0	0	1
SW	0	0	0	0	1	1	0	0	0	0	0	0	2
WSW	0	0	0	0	0	5	0	0	0	0	0	0	5
W	0	0	0	0	0	3	12	0	0	0	0	0	15
WNW	0	0	0	0	0	0	2	0	0	0	0	0	2
NW	0	0	0	0	0	1	1	0	0	0	0	0	2
NNW	0	0	0	0	1	2	7	0	0	0	0	0	10
TOTAL	0	0	0	1	4	72	87	14	0	1	0	0	179

NUMBER OF CALMS: 0
NUMBER OF INVALID HOURS: 0
NUMBER OF VALID HOURS: 179
TOTAL HOURS FOR THE PERIOD: 179

RIVER BEND STATION
JOINT FREQUENCY TABLE
STABILITY CLASS B

FROM 7/ 1/03 0:00 TO 9/30/03 23:00

PRIMARY SENSORS - 150 FOOT

WIND SPEED (METERS/SECOND)

WIND DIR	.22-.50	.51-.75	.76-1.0	1.1-1.5	1.6-2.0	2.1-3.0	3.1-5.0	5.1-7.0	7.1-10.0	10.1-13.0	13.1-18.0	>18	TOT.
N	0	0	0	1	2	10	5	3	0	0	0	0	21
NNE	0	0	0	0	4	4	3	0	0	0	0	0	11
NE	0	0	0	1	5	7	3	0	0	0	0	0	16
ENE	0	0	0	0	2	2	1	0	0	0	0	0	5
E	0	0	0	0	3	0	1	0	0	0	0	0	4
ESE	0	0	0	0	3	4	14	1	0	0	0	0	22
SE	0	0	0	0	1	7	5	1	0	0	0	0	14
SSE	0	0	0	0	0	6	5	0	0	0	0	0	11
S	0	0	0	0	1	5	1	2	0	0	0	0	9
SSW	0	0	0	0	2	1	1	0	0	0	0	0	4
SW	0	0	0	0	0	3	0	0	0	0	0	0	3
WSW	0	0	0	0	5	15	10	0	0	0	0	0	30
W	0	0	0	0	3	27	15	0	0	0	0	0	45
WNW	0	0	0	0	3	12	6	1	0	0	0	0	22
NW	0	0	0	1	1	4	3	0	0	0	0	0	9
NNW	0	0	0	0	0	10	10	0	0	0	0	0	20
TOTAL	0	0	0	3	35	117	83	8	0	0	0	0	246

NUMBER OF CALMS: 0
NUMBER OF INVALID HOURS: 0
NUMBER OF VALID HOURS: 246
TOTAL HOURS FOR THE PERIOD: 246

RIVER BEND STATION
JOINT FREQUENCY TABLE
STABILITY CLASS C

FROM 7/ 1/03 0:00 TO 9/30/03 23:00

PRIMARY SENSORS - 150 FOOT

WIND SPEED (METERS/SECOND)

WIND DIR	.22- .50	.51- .75	.76- 1.0	1.1- 1.5	1.6- 2.0	2.1- 3.0	3.1- 5.0	5.1- 7.0	7.1- 10.0	10.1- 13.0	13.1- 18.0	>18	TOT.
N	0	0	0	0	0	4	2	0	0	0	0	0	6
NNE	0	0	0	0	0	1	1	0	0	0	0	0	2
NE	0	0	0	0	3	2	1	0	0	0	0	0	6
ENE	0	0	0	0	0	2	2	0	0	0	0	0	4
E	0	0	0	1	3	0	0	0	0	0	0	0	4
ESE	0	0	0	2	2	0	3	0	0	0	0	0	7
SE	0	0	0	0	0	6	3	0	0	0	0	0	9
SSE	0	0	1	0	3	3	0	0	0	0	0	0	7
S	0	0	0	1	1	4	0	0	0	0	0	0	6
SSW	0	0	0	0	0	1	1	0	0	0	0	0	2
SW	0	0	0	0	2	3	2	0	0	0	0	0	7
WSW	0	0	1	0	4	7	0	0	0	0	0	0	12
W	0	0	0	0	4	16	2	0	0	0	0	0	22
WNW	0	0	0	0	3	4	0	0	0	0	0	0	7
NW	0	0	0	1	0	2	2	0	0	0	0	0	5
NNW	0	0	0	1	1	4	0	0	0	0	0	0	6
TOTAL	0	0	2	6	26	59	19	0	0	0	0	0	112

NUMBER OF CALMS: 0
NUMBER OF INVALID HOURS: 0
NUMBER OF VALID HOURS: 112
TOTAL HOURS FOR THE PERIOD: 112

RIVER BEND STATION
JOINT FREQUENCY TABLE
STABILITY CLASS D

FROM 7/ 1/03 0:00 TO 9/30/03 23:00

PRIMARY SENSORS - 150 FOOT

WIND SPEED (METERS/SECOND)

WIND DIR	.22- .50	.51- .75	.76- 1.0	1.1- 1.5	1.6- 2.0	2.1- 3.0	3.1- 5.0	5.1- 7.0	7.1- 10.0	10.1- 13.0	13.1- 18.0	>18	TOT.
N	0	0	1	6	2	12	2	0	0	0	0	0	23
NNE	0	0	1	2	2	8	1	0	0	0	0	0	14
NE	0	0	2	5	3	8	8	1	0	0	0	0	27
ENE	0	0	0	6	5	13	8	0	0	0	1	1	34
E	0	0	1	6	5	3	11	0	0	0	0	0	26
ESE	0	0	1	9	4	13	18	2	0	0	0	0	47
SE	0	0	0	3	4	17	13	1	0	0	0	0	38
SSE	0	0	0	2	6	9	10	1	0	0	0	0	28
S	0	0	0	5	11	8	5	3	0	0	0	0	32
SSW	0	0	0	7	5	10	4	0	0	0	0	0	26
SW	0	0	2	0	8	11	8	0	0	0	0	0	29
WSW	0	1	1	5	8	16	4	0	0	0	0	0	35
W	0	0	1	3	6	11	2	0	0	0	0	0	23
WNW	0	0	1	6	13	7	1	0	0	0	0	0	28
NW	0	0	1	8	7	4	6	1	0	0	0	0	27
NNW	0	0	1	7	4	9	7	1	0	0	0	0	29
TOTAL	0	1	13	80	93	159	108	10	0	0	1	1	466

NUMBER OF CALMS: 0
NUMBER OF INVALID HOURS: 0
NUMBER OF VALID HOURS: 466
TOTAL HOURS FOR THE PERIOD: 466

RIVER BEND STATION
JOINT FREQUENCY TABLE
STABILITY CLASS E

FROM 7/ 1/03 0:00 TO 9/30/03 23:00

PRIMARY SENSORS - 150 FOOT

WIND SPEED (METERS/SECOND)

WIND DIR	.22- .50	.51- .75	.76- 1.0	1.1- 1.5	1.6- 2.0	2.1- 3.0	3.1- 5.0	5.1- 7.0	7.1- 10.0	10.1- 13.0	13.1- 18.0	>18	TOT.
N	0	0	2	1	4	6	8	0	0	0	0	0	21
NNE	0	0	0	4	6	12	22	1	0	0	0	0	45
NE	0	0	1	1	10	11	35	1	0	0	0	0	59
ENE	0	0	2	4	12	15	14	0	0	0	0	0	47
E	0	0	0	8	10	20	14	1	0	0	0	0	53
ESE	0	1	2	7	10	38	75	3	0	0	0	0	136
SE	0	0	0	1	6	18	29	0	0	0	0	0	54
SSE	0	0	0	3	1	14	5	0	0	0	0	0	23
S	0	0	0	3	4	23	9	0	0	0	0	0	39
SSW	0	0	0	2	8	42	19	0	0	0	0	0	71
SW	0	0	1	1	8	30	7	0	0	0	0	0	47
WSW	0	0	0	6	9	22	2	0	0	0	0	0	39
W	0	0	1	3	2	6	2	0	0	0	0	0	14
WNW	0	1	0	1	1	8	4	0	0	0	0	0	15
NW	0	0	0	1	2	6	3	0	0	0	0	0	12
NNW	0	1	0	3	5	10	5	0	0	0	0	0	24
TOTAL	0	3	9	49	98	281	253	6	0	0	0	0	699

NUMBER OF CALMS: 0
NUMBER OF INVALID HOURS: 0
NUMBER OF VALID HOURS: 699
TOTAL HOURS FOR THE PERIOD: 699

RIVER BEND STATION
JOINT FREQUENCY TABLE
STABILITY CLASS F

FROM 7/ 1/03 0:00 TO 9/30/03 23:00

PRIMARY SENSORS - 150 FOOT

WIND SPEED (METERS/SECOND)

WIND DIR	.22- .50	.51- .75	.76- 1.0	1.1- 1.5	1.6- 2.0	2.1- 3.0	3.1- 5.0	5.1- 7.0	7.1- 10.0	10.1- 13.0	13.1- 18.0	>18	TOT.
N	0	0	0	1	3	3	9	0	0	0	0	0	16
NNE	0	1	1	0	3	13	20	0	0	0	0	0	38
NE	0	0	0	3	2	18	20	2	0	0	0	0	45
ENE	0	0	2	6	8	9	5	0	0	0	0	0	30
E	0	0	1	8	8	2	0	0	0	0	0	0	19
ESE	0	0	0	2	7	13	14	0	0	0	0	0	36
SE	0	1	0	3	0	13	5	0	0	0	0	0	22
SSE	0	0	1	4	4	6	1	0	0	0	0	0	16
S	0	0	0	5	5	9	2	0	0	0	0	0	21
SSW	0	0	1	2	8	9	0	0	0	0	0	0	20
SW	0	0	1	3	8	7	0	0	0	0	0	0	19
WSW	0	0	0	3	3	12	0	0	0	0	0	0	18
W	0	0	0	0	3	1	0	0	0	0	0	0	4
WNW	0	0	0	0	3	4	0	0	0	0	0	0	7
NW	0	0	0	1	3	2	0	0	0	0	0	0	6
NNW	0	0	0	1	2	4	3	0	0	0	0	0	10
TOTAL	0	2	7	42	70	125	79	2	0	0	0	0	327

NUMBER OF CALMS: 0
NUMBER OF INVALID HOURS: 0
NUMBER OF VALID HOURS: 327
TOTAL HOURS FOR THE PERIOD: 327

RIVER BEND STATION
JOINT FREQUENCY TABLE
STABILITY CLASS G

FROM 7/ 1/03 0:00 TO 9/30/03 23:00

PRIMARY SENSORS - 150 FOOT

WIND SPEED (METERS/SECOND)

WIND DIR	.22- .50	.51- .75	.76- 1.0	1.1- 1.5	1.6- 2.0	2.1- 3.0	3.1- 5.0	5.1- 7.0	7.1- 10.0	10.1- 13.0	13.1- 18.0	>18	TOT.
N	0	0	0	2	1	7	4	0	0	0	0	0	14
NNE	0	0	1	0	2	7	10	0	0	0	0	0	20
NE	0	0	0	1	2	4	6	0	0	0	0	0	13
ENE	0	0	0	0	5	13	1	0	0	0	0	0	19
E	0	0	0	7	3	2	0	0	0	0	0	0	12
ESE	0	0	0	3	2	5	0	0	0	0	0	0	10
SE	0	0	0	1	2	1	0	0	0	0	0	0	4
SSE	0	0	0	1	0	4	0	0	0	0	0	0	5
S	0	0	0	2	0	2	0	0	0	0	0	0	4
SSW	0	0	1	1	2	0	0	0	0	0	0	0	4
SW	0	1	0	1	3	0	0	0	0	0	0	0	5
WSW	0	0	0	0	5	1	0	0	0	0	0	0	6
W	0	0	0	1	3	2	0	0	0	0	0	0	6
WNW	0	0	1	1	3	4	0	0	0	0	0	0	9
NW	0	0	1	2	1	5	2	0	0	0	0	0	11
NNW	0	0	0	0	2	8	8	0	0	0	0	0	18
TOTAL	0	1	4	23	36	65	31	0	0	0	0	0	160

NUMBER OF CALMS: 0
NUMBER OF INVALID HOURS: 0
NUMBER OF VALID HOURS: 160
TOTAL HOURS FOR THE PERIOD: 160

RIVER BEND STATION
JOINT FREQUENCY TABLE
ALL STABILITY CLASSES

FROM 10/ 1/03 0:00 TO 12/31/03 23:00

PRIMARY SENSORS - 30 FOOT

WIND SPEED (METERS/SECOND)

WIND DIR	.22-.50	.51-.75	.76-1.0	1.1-1.5	1.6-2.0	2.1-3.0	3.1-5.0	5.1-7.0	7.1-10.0	10.1-13.0	13.1-18.0	>18	TOT.
N	11	22	9	36	55	47	13	0	0	0	0	0	193
NNE	21	22	11	44	46	37	11	0	0	0	0	0	192
NE	25	32	5	29	48	21	1	0	0	0	0	0	161
ENE	23	34	28	23	24	10	1	0	0	0	0	0	143
E	2	17	14	32	16	1	0	0	0	0	0	0	82
ESE	3	20	31	32	32	6	0	0	0	0	0	0	124
SE	5	3	22	93	85	73	7	0	0	0	0	0	288
SSE	2	5	10	28	31	49	68	3	0	0	0	0	196
S	0	2	6	13	19	35	42	0	0	0	0	0	117
SSW	0	3	5	10	11	18	9	0	0	0	0	0	56
SW	0	1	3	6	5	3	1	0	0	0	0	0	19
WSW	0	7	10	8	3	17	0	0	0	0	0	0	45
W	2	19	8	9	10	22	1	0	0	0	0	0	71
WNW	3	31	21	18	3	17	15	0	0	0	0	0	108
NW	6	48	38	18	14	36	44	0	0	0	0	0	204
NNW	7	21	20	20	26	52	51	8	0	0	0	0	205
TOTAL	110	287	241	419	428	444	264	11	0	0	0	0	2204

NUMBER OF CALMS: 4
NUMBER OF INVALID HOURS: 0
NUMBER OF VALID HOURS: 2208
TOTAL HOURS FOR THE PERIOD: 2208

RIVER BEND STATION
JOINT FREQUENCY TABLE
STABILITY CLASS A

FROM 10/ 1/03 0:00 TO 12/31/03 23:00

PRIMARY SENSORS - 30 FOOT

WIND SPEED (METERS/SECOND)

WIND DIR	.22- .50	.51- .75	.76- 1.0	1.1- 1.5	1.6- 2.0	2.1- 3.0	3.1- 5.0	5.1- 7.0	7.1- 10.0	10.1- 13.0	13.1- 18.0	>18	TOT.
N	0	0	0	0	2	6	3	0	0	0	0	0	11
NNE	0	0	0	0	4	13	8	0	0	0	0	0	25
NE	0	0	0	0	8	7	1	0	0	0	0	0	16
ENE	0	0	0	1	8	7	0	0	0	0	0	0	16
E	0	0	0	1	7	1	0	0	0	0	0	0	9
ESE	0	0	0	3	12	2	0	0	0	0	0	0	17
SE	0	0	1	1	14	22	2	0	0	0	0	0	40
SSE	0	0	0	0	2	12	13	0	0	0	0	0	27
S	0	0	0	0	1	5	8	0	0	0	0	0	14
SSW	0	0	0	0	0	3	0	0	0	0	0	0	3
SW	0	0	0	0	0	0	0	0	0	0	0	0	0
WSW	0	0	0	0	0	3	0	0	0	0	0	0	3
W	0	0	0	0	0	2	0	0	0	0	0	0	2
WNW	0	0	0	0	0	2	2	0	0	0	0	0	4
NW	0	0	0	0	0	2	4	0	0	0	0	0	6
NNW	0	0	0	0	1	2	9	3	0	0	0	0	15
TOTAL	0	0	1	6	59	89	50	3	0	0	0	0	208

NUMBER OF CALMS: 0
NUMBER OF INVALID HOURS: 0
NUMBER OF VALID HOURS: 208
TOTAL HOURS FOR THE PERIOD: 208

RIVER BEND STATION
JOINT FREQUENCY TABLE
STABILITY CLASS B

FROM 10/ 1/03 0:00 TO 12/31/03 23:00

PRIMARY SENSORS - 30 FOOT

WIND SPEED (METERS/SECOND)

WIND DIR	.22- .50	.51- .75	.76- 1.0	1.1- 1.5	1.6- 2.0	2.1- 3.0	3.1- 5.0	5.1- 7.0	7.1- 10.0	10.1- 13.0	13.1- 18.0	>18	TOT.
N	0	0	0	0	3	5	3	0	0	0	0	0	11
NNE	0	0	0	1	4	4	0	0	0	0	0	0	9
NE	0	0	0	3	4	0	0	0	0	0	0	0	7
ENE	0	0	0	0	2	1	0	0	0	0	0	0	3
E	0	0	0	2	3	0	0	0	0	0	0	0	5
ESE	0	0	0	1	3	0	0	0	0	0	0	0	4
SE	0	0	0	1	4	10	0	0	0	0	0	0	15
SSE	0	0	0	2	8	2	13	1	0	0	0	0	26
S	0	0	0	0	1	9	8	0	0	0	0	0	18
SSW	0	0	0	0	1	8	1	0	0	0	0	0	10
SW	0	0	0	0	3	2	0	0	0	0	0	0	5
WSW	0	0	0	0	1	11	0	0	0	0	0	0	12
W	0	0	0	1	4	9	0	0	0	0	0	0	14
WNW	0	0	0	0	2	5	2	0	0	0	0	0	9
NW	0	0	0	0	0	8	8	0	0	0	0	0	16
NNW	0	0	0	0	1	10	9	1	0	0	0	0	21
TOTAL	0	0	0	11	44	84	44	2	0	0	0	0	185

NUMBER OF CALMS: 0
NUMBER OF INVALID HOURS: 0
NUMBER OF VALID HOURS: 185
TOTAL HOURS FOR THE PERIOD: 185

RIVER BEND STATION
JOINT FREQUENCY TABLE
STABILITY CLASS C

FROM 10/ 1/03 0:00 TO 12/31/03 23:00

PRIMARY SENSORS - 30 FOOT

WIND SPEED (METERS/SECOND)

WIND DIR	.22- .50	.51- .75	.76- 1.0	1.1- 1.5	1.6- 2.0	2.1- 3.0	3.1- 5.0	5.1- 7.0	7.1- 10.0	10.1- 13.0	13.1- 18.0	>18	TOT.
N	0	0	0	0	5	2	0	0	0	0	0	0	7
NNE	0	0	0	1	1	0	1	0	0	0	0	0	3
NE	0	0	0	1	1	0	0	0	0	0	0	0	2
ENE	0	0	0	0	0	0	0	0	0	0	0	0	0
E	0	0	0	1	0	0	0	0	0	0	0	0	1
ESE	0	0	0	2	0	0	0	0	0	0	0	0	2
SE	0	0	1	1	5	1	0	0	0	0	0	0	8
SSE	0	0	0	0	0	4	6	0	0	0	0	0	10
S	0	0	2	0	1	3	4	0	0	0	0	0	10
SSW	0	0	0	0	2	1	2	0	0	0	0	0	5
SW	0	0	0	0	2	0	0	0	0	0	0	0	2
WSW	0	0	0	1	1	2	0	0	0	0	0	0	4
W	0	0	0	0	3	4	0	0	0	0	0	0	7
WNW	0	0	0	1	0	2	2	0	0	0	0	0	5
NW	0	0	0	0	1	2	4	0	0	0	0	0	7
NNW	0	0	0	0	3	4	6	0	0	0	0	0	13
TOTAL	0	0	3	8	25	25	25	0	0	0	0	0	86

NUMBER OF CALMS: 0
NUMBER OF INVALID HOURS: 0
NUMBER OF VALID HOURS: 86
TOTAL HOURS FOR THE PERIOD: 86

RIVER BEND STATION
JOINT FREQUENCY TABLE
STABILITY CLASS D

FROM 10/ 1/03 0:00 TO 12/31/03 23:00

PRIMARY SENSORS - 30 FOOT

WIND SPEED (METERS/SECOND)

WIND DIR	.22- .50	.51- .75	.76- 1.0	1.1- 1.5	1.6- 2.0	2.1- 3.0	3.1- 5.0	5.1- 7.0	7.1- 10.0	10.1- 13.0	13.1- 18.0	>18	TOT.
N	0	0	2	5	28	25	6	0	0	0	0	0	66
NNE	0	1	0	3	16	7	1	0	0	0	0	0	28
NE	0	0	1	6	13	5	0	0	0	0	0	0	25
ENE	0	1	2	9	7	2	0	0	0	0	0	0	21
E	0	3	2	13	2	0	0	0	0	0	0	0	20
ESE	0	0	1	7	7	0	0	0	0	0	0	0	15
SE	0	0	0	14	19	15	3	0	0	0	0	0	51
SSE	0	0	0	5	5	13	28	2	0	0	0	0	53
S	0	0	0	1	4	13	17	0	0	0	0	0	35
SSW	0	0	0	6	4	4	2	0	0	0	0	0	16
SW	0	0	0	5	0	1	1	0	0	0	0	0	7
WSW	0	0	1	5	0	1	0	0	0	0	0	0	7
W	0	0	1	5	3	5	0	0	0	0	0	0	14
WNW	0	0	1	6	0	3	4	0	0	0	0	0	14
NW	0	0	2	3	7	19	27	0	0	0	0	0	58
NNW	0	0	0	7	5	24	27	4	0	0	0	0	67
TOTAL	0	5	13	100	120	137	116	6	0	0	0	0	497

NUMBER OF CALMS: 0
NUMBER OF INVALID HOURS: 0
NUMBER OF VALID HOURS: 497
TOTAL HOURS FOR THE PERIOD: 497

RIVER BEND STATION
JOINT FREQUENCY TABLE
STABILITY CLASS E

FROM 10/ 1/03 0:00 TO 12/31/03 23:00

PRIMARY SENSORS - 30 FOOT

WIND SPEED (METERS/SECOND)

WIND DIR	.22- .50	.51- .75	.76- 1.0	1.1- 1.5	1.6- 2.0	2.1- 3.0	3.1- 5.0	5.1- 7.0	7.1- 10.0	10.1- 13.0	13.1- 18.0	>18	TOT.
N	0	2	2	13	17	9	1	0	0	0	0	0	44
NNE	0	0	5	24	20	13	1	0	0	0	0	0	63
NE	0	0	0	9	22	9	0	0	0	0	0	0	40
ENE	0	1	7	10	6	0	1	0	0	0	0	0	25
E	0	2	7	10	4	0	0	0	0	0	0	0	23
ESE	0	5	14	12	9	4	0	0	0	0	0	0	44
SE	1	1	6	54	38	25	2	0	0	0	0	0	127
SSE	0	0	2	14	15	18	8	0	0	0	0	0	57
S	0	0	1	10	11	5	5	0	0	0	0	0	32
SSW	0	0	2	2	4	2	4	0	0	0	0	0	14
SW	0	0	1	0	0	0	0	0	0	0	0	0	1
WSW	0	1	0	1	1	0	0	0	0	0	0	0	3
W	0	1	1	2	0	2	1	0	0	0	0	0	7
WNW	0	3	1	5	1	5	5	0	0	0	0	0	20
NW	0	1	3	6	5	5	1	0	0	0	0	0	21
NNW	0	0	3	6	15	12	0	0	0	0	0	0	36
TOTAL	1	17	55	178	168	109	29	0	0	0	0	0	557

NUMBER OF CALMS: 0
NUMBER OF INVALID HOURS: 0
NUMBER OF VALID HOURS: 557
TOTAL HOURS FOR THE PERIOD: 557

RIVER BEND STATION
JOINT FREQUENCY TABLE
STABILITY CLASS F

FROM 10/ 1/03 0:00 TO 12/31/03 23:00

PRIMARY SENSORS - 30 FOOT

WIND SPEED (METERS/SECOND)

WIND DIR	.22-.50	.51-.75	.76-1.0	1.1-1.5	1.6-2.0	2.1-3.0	3.1-5.0	5.1-7.0	7.1-10.0	10.1-13.0	13.1-18.0	>18	TOT.
N	0	2	2	11	0	0	0	0	0	0	0	0	15
NNE	1	3	5	14	1	0	0	0	0	0	0	0	24
NE	2	2	2	9	0	0	0	0	0	0	0	0	15
ENE	0	2	5	2	1	0	0	0	0	0	0	0	10
E	0	6	2	4	0	0	0	0	0	0	0	0	12
ESE	0	10	13	2	1	0	0	0	0	0	0	0	26
SE	1	1	10	22	5	0	0	0	0	0	0	0	39
SSE	1	3	7	5	1	0	0	0	0	0	0	0	17
S	0	1	2	2	1	0	0	0	0	0	0	0	6
SSW	0	1	3	2	0	0	0	0	0	0	0	0	6
SW	0	0	2	1	0	0	0	0	0	0	0	0	3
WSW	0	1	4	1	0	0	0	0	0	0	0	0	6
W	1	3	3	1	0	0	0	0	0	0	0	0	8
WNW	1	3	9	4	0	0	0	0	0	0	0	0	17
NW	0	1	7	7	1	0	0	0	0	0	0	0	16
NNW	0	1	3	6	0	0	0	0	0	0	0	0	10
TOTAL	7	40	79	93	11	0	0	0	0	0	0	0	230

NUMBER OF CALMS: 0
NUMBER OF INVALID HOURS: 0
NUMBER OF VALID HOURS: 230
TOTAL HOURS FOR THE PERIOD: 230

RIVER BEND STATION
JOINT FREQUENCY TABLE
STABILITY CLASS G

FROM 10/ 1/03 0:00 TO 12/31/03 23:00

PRIMARY SENSORS - 30 FOOT

WIND SPEED (METERS/SECOND)

WIND DIR	.22- .50	.51- .75	.76- 1.0	1.1- 1.5	1.6- 2.0	2.1- 3.0	3.1- 5.0	5.1- 7.0	7.1- 10.0	10.1- 13.0	13.1- 18.0	>18	TOT.
N	11	18	3	7	0	0	0	0	0	0	0	0	39
NNE	20	18	1	1	0	0	0	0	0	0	0	0	40
NE	23	30	2	1	0	0	0	0	0	0	0	0	56
ENE	23	30	14	1	0	0	0	0	0	0	0	0	68
E	2	6	3	1	0	0	0	0	0	0	0	0	12
ESE	3	5	3	5	0	0	0	0	0	0	0	0	16
SE	3	1	4	0	0	0	0	0	0	0	0	0	8
SSE	1	2	1	2	0	0	0	0	0	0	0	0	6
S	0	1	1	0	0	0	0	0	0	0	0	0	2
SSW	0	2	0	0	0	0	0	0	0	0	0	0	2
SW	0	1	0	0	0	0	0	0	0	0	0	0	1
WSW	0	5	5	0	0	0	0	0	0	0	0	0	10
W	1	15	3	0	0	0	0	0	0	0	0	0	19
WNW	2	25	10	2	0	0	0	0	0	0	0	0	39
NW	6	46	26	2	0	0	0	0	0	0	0	0	80
NNW	7	20	14	1	1	0	0	0	0	0	0	0	43
TOTAL	102	225	90	23	1	0	0	0	0	0	0	0	441

NUMBER OF CALMS: 4
NUMBER OF INVALID HOURS: 0
NUMBER OF VALID HOURS: 445
TOTAL HOURS FOR THE PERIOD: 445

RIVER BEND STATION
JOINT FREQUENCY TABLE
ALL STABILITY CLASSES

FROM 10/ 1/03 0:00 TO 12/31/03 23:00

PRIMARY SENSORS - 150 FOOT

WIND SPEED (METERS/SECOND)

WIND DIR	.22-.50	.51-.75	.76-1.0	1.1-1.5	1.6-2.0	2.1-3.0	3.1-5.0	5.1-7.0	7.1-10.0	10.1-13.0	13.1-18.0	>18	TOT.
N	0	0	0	6	11	57	63	3	0	0	0	0	140
NNE	0	0	0	4	13	40	75	10	0	0	0	0	142
NE	0	1	1	5	11	37	121	11	0	0	0	0	187
ENE	0	1	4	5	15	57	67	11	1	0	0	0	161
E	0	1	2	3	16	53	36	6	2	0	0	0	119
ESE	0	0	2	4	10	55	166	16	0	0	0	0	253
SE	0	0	2	4	9	37	148	15	0	0	0	0	215
SSE	0	0	1	4	9	53	77	46	3	0	0	0	193
S	0	0	2	5	8	39	53	12	0	0	0	0	119
SSW	0	1	0	2	6	24	23	5	0	0	0	0	61
SW	0	0	2	4	8	23	6	1	0	0	0	0	44
WSW	0	0	0	5	6	32	15	0	0	0	0	0	58
W	0	0	0	2	12	36	37	5	1	0	0	0	93
WNW	0	0	2	2	9	35	50	24	0	0	0	0	122
NW	0	1	2	2	10	26	74	27	2	0	0	0	144
NNW	0	1	1	2	8	33	74	30	8	0	0	0	157
TOTAL	0	6	21	59	161	637	1085	222	17	0	0	0	2208

NUMBER OF CALMS: 0
NUMBER OF INVALID HOURS: 0
NUMBER OF VALID HOURS: 2208
TOTAL HOURS FOR THE PERIOD: 2208

RIVER BEND STATION
JOINT FREQUENCY TABLE
STABILITY CLASS A

FROM 10/ 1/03 0:00 TO 12/31/03 23:00

PRIMARY SENSORS - 150 FOOT

WIND SPEED (METERS/SECOND)

WIND DIR	.22-.50	.51-.75	.76-1.0	1.1-1.5	1.6-2.0	2.1-3.0	3.1-5.0	5.1-7.0	7.1-10.0	10.1-13.0	13.1-18.0	>18	TOT.
N	0	0	0	0	0	1	5	1	0	0	0	0	7
NNE	0	0	0	0	0	3	9	4	0	0	0	0	16
NE	0	0	0	0	0	10	12	3	0	0	0	0	25
ENE	0	0	0	0	2	10	10	4	0	0	0	0	26
E	0	0	0	0	1	8	4	0	0	0	0	0	13
ESE	0	0	0	1	1	14	21	1	0	0	0	0	38
SE	0	0	0	0	0	9	12	2	0	0	0	0	23
SSE	0	0	0	0	1	2	3	10	0	0	0	0	16
S	0	0	0	0	0	2	10	0	0	0	0	0	12
SSW	0	0	0	0	0	0	2	0	0	0	0	0	2
SW	0	0	0	0	0	1	0	0	0	0	0	0	1
WSW	0	0	0	0	0	0	2	0	0	0	0	0	2
W	0	0	0	0	0	0	2	0	0	0	0	0	2
WNW	0	0	0	0	0	0	5	3	0	0	0	0	8
NW	0	0	0	0	0	0	4	2	0	0	0	0	6
NNW	0	0	0	0	0	1	1	6	3	0	0	0	11
TOTAL	0	0	0	1	5	61	102	36	3	0	0	0	208

NUMBER OF CALMS: 0
NUMBER OF INVALID HOURS: 0
NUMBER OF VALID HOURS: 208
TOTAL HOURS FOR THE PERIOD: 208

RIVER BEND STATION
JOINT FREQUENCY TABLE
STABILITY CLASS B

FROM 10/ 1/03 0:00 TO 12/31/03 23:00

PRIMARY SENSORS - 150 FOOT

WIND SPEED (METERS/SECOND)

WIND DIR	.22-.50	.51-.75	.76-1.0	1.1-1.5	1.6-2.0	2.1-3.0	3.1-5.0	5.1-7.0	7.1-10.0	10.1-13.0	13.1-18.0	>18	TOT.
N	0	0	0	1	1	5	4	0	0	0	0	0	11
NNE	0	0	0	0	0	2	3	0	0	0	0	0	5
NE	0	0	0	0	0	3	5	1	0	0	0	0	9
ENE	0	0	0	0	1	4	0	1	0	0	0	0	6
E	0	0	0	0	3	1	0	0	0	0	0	0	4
ESE	0	0	0	0	3	7	9	1	0	0	0	0	20
SE	0	0	0	0	4	1	6	1	0	0	0	0	12
SSE	0	0	0	0	1	3	4	11	0	0	0	0	19
S	0	0	0	0	1	6	11	1	0	0	0	0	19
SSW	0	0	0	0	0	2	2	0	0	0	0	0	4
SW	0	0	0	0	2	3	2	0	0	0	0	0	7
WSW	0	0	0	0	0	10	2	0	0	0	0	0	12
W	0	0	0	1	2	5	6	0	0	0	0	0	14
WNW	0	0	0	0	0	6	6	4	0	0	0	0	16
NW	0	0	0	0	1	2	2	6	0	0	0	0	11
NNW	0	0	0	0	0	5	4	6	1	0	0	0	16
TOTAL	0	0	0	2	19	65	66	32	1	0	0	0	185

NUMBER OF CALMS: 0
NUMBER OF INVALID HOURS: 0
NUMBER OF VALID HOURS: 185
TOTAL HOURS FOR THE PERIOD: 185

RIVER BEND STATION
JOINT FREQUENCY TABLE
STABILITY CLASS C

FROM 10/ 1/03 0:00 TO 12/31/03 23:00

PRIMARY SENSORS - 150 FOOT

WIND SPEED (METERS/SECOND)

WIND DIR	.22-.50	.51-.75	.76-1.0	1.1-1.5	1.6-2.0	2.1-3.0	3.1-5.0	5.1-7.0	7.1-10.0	10.1-13.0	13.1-18.0	>18	TOT.
N	0	0	0	0	2	3	0	0	0	0	0	0	5
NNE	0	0	0	0	1	3	1	1	0	0	0	0	6
NE	0	0	0	0	0	0	1	0	0	0	0	0	1
ENE	0	0	0	0	1	0	0	0	0	0	0	0	1
E	0	0	0	0	1	1	1	0	0	0	0	0	3
ESE	0	0	1	1	0	2	2	0	0	0	0	0	6
SE	0	0	1	0	1	2	4	1	0	0	0	0	9
SSE	0	0	0	0	0	1	5	2	0	0	0	0	8
S	0	0	1	0	1	4	1	0	0	0	0	0	7
SSW	0	0	0	0	1	1	2	0	0	0	0	0	4
SW	0	0	0	0	0	1	0	0	0	0	0	0	1
WSW	0	0	0	0	0	4	0	0	0	0	0	0	4
W	0	0	0	0	0	5	2	1	0	0	0	0	8
WNW	0	0	0	0	1	3	3	3	0	0	0	0	10
NW	0	0	0	0	1	0	1	3	0	0	0	0	5
NNW	0	0	0	0	2	2	1	3	0	0	0	0	8
TOTAL	0	0	3	1	12	32	24	14	0	0	0	0	86

NUMBER OF CALMS: 0
NUMBER OF INVALID HOURS: 0
NUMBER OF VALID HOURS: 86
TOTAL HOURS FOR THE PERIOD: 86

RIVER BEND STATION
JOINT FREQUENCY TABLE
STABILITY CLASS D

FROM 10/ 1/03 0:00 TO 12/31/03 23:00

PRIMARY SENSORS - 150 FOOT

WIND SPEED (METERS/SECOND)

WIND DIR	.22-.50	.51-.75	.76-1.0	1.1-1.5	1.6-2.0	2.1-3.0	3.1-5.0	5.1-7.0	7.1-10.0	10.1-13.0	13.1-18.0	>18	TOT.
N	0	0	0	3	1	28	20	2	0	0	0	0	54
NNE	0	0	0	1	1	16	9	1	0	0	0	0	28
NE	0	0	1	2	8	3	20	2	0	0	0	0	36
ENE	0	1	2	0	0	7	19	1	0	0	0	0	30
E	0	0	1	3	4	5	10	0	0	0	0	0	23
ESE	0	0	0	1	2	5	23	7	0	0	0	0	38
SE	0	0	0	0	1	8	15	4	0	0	0	0	28
SSE	0	0	0	0	1	7	17	19	3	0	0	0	47
S	0	0	0	0	2	9	13	8	0	0	0	0	32
SSW	0	0	0	1	1	2	4	1	0	0	0	0	9
SW	0	0	0	3	1	2	1	1	0	0	0	0	8
WSW	0	0	0	1	2	3	0	0	0	0	0	0	6
W	0	0	0	0	4	8	8	2	0	0	0	0	22
WNW	0	0	1	1	4	0	14	8	0	0	0	0	28
NW	0	1	0	1	3	6	24	16	2	0	0	0	53
NNW	0	0	0	0	1	8	28	14	4	0	0	0	55
TOTAL	0	2	5	17	36	117	225	86	9	0	0	0	497

NUMBER OF CALMS: 0
NUMBER OF INVALID HOURS: 0
NUMBER OF VALID HOURS: 497
TOTAL HOURS FOR THE PERIOD: 497

RIVER BEND STATION
JOINT FREQUENCY TABLE
STABILITY CLASS E

FROM 10/ 1/03 0:00 TO 12/31/03 23:00

PRIMARY SENSORS - 150 FOOT

WIND SPEED (METERS/SECOND)

WIND DIR	.22-.50	.51-.75	.76-1.0	1.1-1.5	1.6-2.0	2.1-3.0	3.1-5.0	5.1-7.0	7.1-10.0	10.1-13.0	13.1-18.0	>18	TOT.
N	0	0	0	0	1	9	25	0	0	0	0	0	35
NNE	0	0	0	1	2	7	36	4	0	0	0	0	50
NE	0	0	0	0	0	8	47	2	0	0	0	0	57
ENE	0	0	0	1	5	15	22	5	1	0	0	0	49
E	0	0	0	0	3	12	13	5	2	0	0	0	35
ESE	0	0	0	0	3	14	65	4	0	0	0	0	86
SE	0	0	1	1	0	4	61	7	0	0	0	0	74
SSE	0	0	0	0	2	9	40	4	0	0	0	0	55
S	0	0	1	0	1	1	11	3	0	0	0	0	17
SSW	0	0	0	0	1	6	5	4	0	0	0	0	16
SW	0	0	0	0	0	1	0	0	0	0	0	0	1
WSW	0	0	0	0	2	3	1	0	0	0	0	0	6
W	0	0	0	0	2	2	5	2	1	0	0	0	12
WNW	0	0	0	0	0	3	8	6	0	0	0	0	17
NW	0	0	1	0	0	2	11	0	0	0	0	0	14
NNW	0	1	1	0	0	6	24	1	0	0	0	0	33
TOTAL	0	1	4	3	22	102	374	47	4	0	0	0	557

NUMBER OF CALMS: 0
NUMBER OF INVALID HOURS: 0
NUMBER OF VALID HOURS: 557
TOTAL HOURS FOR THE PERIOD: 557

RIVER BEND STATION
JOINT FREQUENCY TABLE
STABILITY CLASS F

FROM 10/ 1/03 0:00 TO 12/31/03 23:00

PRIMARY SENSORS - 150 FOOT

WIND SPEED (METERS/SECOND)

WIND DIR	.22-.50	.51-.75	.76-1.0	1.1-1.5	1.6-2.0	2.1-3.0	3.1-5.0	5.1-7.0	7.1-10.0	10.1-13.0	13.1-18.0	>18	TOT.
N	0	0	0	0	2	5	4	0	0	0	0	0	11
NNE	0	0	0	0	2	3	10	0	0	0	0	0	15
NE	0	0	0	1	1	5	15	3	0	0	0	0	25
ENE	0	0	0	4	3	4	9	0	0	0	0	0	20
E	0	0	0	0	1	2	4	1	0	0	0	0	8
ESE	0	0	0	1	1	4	31	0	0	0	0	0	37
SE	0	0	0	1	0	3	36	0	0	0	0	0	40
SSE	0	0	0	1	1	8	2	0	0	0	0	0	12
S	0	0	0	2	0	1	5	0	0	0	0	0	8
SSW	0	0	0	0	0	6	4	0	0	0	0	0	10
SW	0	0	0	0	0	2	0	0	0	0	0	0	2
WSW	0	0	0	0	0	4	2	0	0	0	0	0	6
W	0	0	0	0	1	4	2	0	0	0	0	0	7
WNW	0	0	0	0	0	4	5	0	0	0	0	0	9
NW	0	0	0	0	1	2	11	0	0	0	0	0	14
NNW	0	0	0	0	0	1	5	0	0	0	0	0	6
TOTAL	0	0	0	10	13	58	145	4	0	0	0	0	230

NUMBER OF CALMS: 0
NUMBER OF INVALID HOURS: 0
NUMBER OF VALID HOURS: 230
TOTAL HOURS FOR THE PERIOD: 230

RIVER BEND STATION
JOINT FREQUENCY TABLE
STABILITY CLASS G

FROM 10/ 1/03 0:00 TO 12/31/03 23:00

PRIMARY SENSORS - 150 FOOT

WIND SPEED (METERS/SECOND)

WIND DIR	.22- .50	.51- .75	.76- 1.0	1.1- 1.5	1.6- 2.0	2.1- 3.0	3.1- 5.0	5.1- 7.0	7.1- 10.0	10.1- 13.0	13.1- 18.0	>18	TOT.
N	0	0	0	2	4	6	5	0	0	0	0	0	17
NNE	0	0	0	2	7	6	7	0	0	0	0	0	22
NE	0	1	0	2	2	8	21	0	0	0	0	0	34
ENE	0	0	2	0	3	17	7	0	0	0	0	0	29
E	0	1	1	0	3	24	4	0	0	0	0	0	33
ESE	0	0	1	0	0	9	15	3	0	0	0	0	28
SE	0	0	0	2	3	10	14	0	0	0	0	0	29
SSE	0	0	1	3	3	23	6	0	0	0	0	0	36
S	0	0	0	3	3	16	2	0	0	0	0	0	24
SSW	0	1	0	1	3	7	4	0	0	0	0	0	16
SW	0	0	2	1	5	13	3	0	0	0	0	0	24
WSW	0	0	0	4	2	8	8	0	0	0	0	0	22
W	0	0	0	1	3	12	12	0	0	0	0	0	28
WNW	0	0	1	1	4	19	9	0	0	0	0	0	34
NW	0	0	1	1	4	14	21	0	0	0	0	0	41
NNW	0	0	0	2	5	10	11	0	0	0	0	0	28
TOTAL	0	3	9	25	54	202	149	3	0	0	0	0	445

NUMBER OF CALMS: 0
NUMBER OF INVALID HOURS: 0
NUMBER OF VALID HOURS: 445
TOTAL HOURS FOR THE PERIOD: 445

Table 12

Effluent and Waste Disposal Annual Report 2003 Year
ATMOSPHERIC DISPERSION AND DEPOSITION RATES FOR THE MAXIMUM INDIVIDUAL DOSE CALCULATIONS

Analysis	Location (meters)	Ground Level Releases	Mixed Mode Releases
Gamma air dose (3) and Beta Air Dose	994 m WNW (Containment)	CHI/Q - 421.0	CHI/Q - 33.1
Maximum Receptor	994 m WNW	CHI/Q - 421.0	CHI/Q - 33.1
Resident		D/Q - 50.3	D/Q - 18.1
Garden			
Meat animal			
Immersion			
Milk animal	7,000 m WNW	CHI/Q - 3.58 D/Q - 0.38	CHI/Q - .870 D/Q - .223
Other on-site Receptors (6)	115 m ENE	CHI/Q - 5977.0 D/Q - 529.7	CHI/Q - 407.5 D/Q - 46.9
	275 m N	CHI/Q - 1644.0 D/Q - 345.6	CHI/Q - 169.1 D/Q - 68.4
	2500 SW	CHI/Q - 34.45 D/Q - 3.35	CHI/Q - 4.65 D/Q - 1.40

Notes:
(1) All CHI/Q = 10^{-7} sec/m^3
(2) All D/Q = 10^{-9} m^{-2}
(3) Maximum offsite location (property boundary) with highest CHI/Q (unoccupied).
(4) Maximum hypothetical occupied offsite location with highest CHI/Q and D/Q.
(5) No milk animal within 5 miles radius, hypothetical location in worst sector.
(6) Other on-site receptors.

ATTACHMENT 1

Process Control Program (PCP)

Entergy	NUCLEAR MANAGEMENT MANUAL	QUALITY RELATED INFORMATION USE	RW-105 Revision 1 Page 1 of 6

Title: **Process Control Program**

Reviews	Required
Cross Discipline Review	No
Code Reviews:	
10CFR50.59 Review	Yes
10CFR50.54 Review	No
Environmental Qualification.....	No
On-Site Safety Review Committee Reviews*	No

Procedure Owner: John L. Etheridge / Sr Project Manager
(Print Name / Title)

Approved: John L Etheridge 12/30/02
(Procedure Owners Signature) (Date)

Effective Dates:

1/2/03	N/A	1/2/03	1/2/03	N/A
ANO	**GGNS**	**RBS**	**W3**	**Echelon**

New Procedure/Revision/Cancellation Basis:

RW-105, "Process Control Program" is modified to

- Change the classification to Quality vs. Non-Quality
- Addition of vendor requirement for placement on QSL when performing services under 10CFR61 & 10CFR71 requirements
- Updated Section 8.0

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1.0 PURPOSE

The Process Control Program establishes the necessary guidance to ensure that solid radioactive waste management activities result in solid waste products meeting the criteria contained in the Code of Federal Regulations, State Regulations and Radioactive Waste Burial Site License Criteria for solid radioactive waste shipping and disposal. The scope of the Process Control Program is to assure that radioactive waste will be handled, shipped, and disposed of in a safe manner in accordance with approved site or vendor procedures, whichever is applicable.

2.0 REFERENCES

2.1 Entergy Nuclear - Southwest

- Entergy Quality Assurance Program Manual
- Title 49, Code of Federal Regulations
- Title 10, Code of Federal Regulations
- Branch Technical Position on Final Waste Classification and Waste Form
- Disposal Site Criteria and License
- Waste Processor Acceptance Criteria

2.2 River Bend Specific References

- RBS Technical Requirements Manual Section 5.8
- RWS-0336, Set-up and Operation of the RDS-1000 Dewatering Unit
- RWS-0310, Operation of the Nuclear Packaging Model WC-1800 Waste Compactor

2.3 Arkansas Nuclear One Specific References

- 1601.5XX series procedures

2.4 Waterford Specific References

- FSAR Chapter 11.4, Solid Waste Management System
- FSAR Chapter 13.4, Review and Audit
- FSAR Chapter 13.2, Training
- FSAR Chapter 13.5, Plant Procedures

3.0 **DEFINITIONS**

3.1 De-watering - The removal of water or liquid from a waste form, usually by gravity or pumping.

3.2 Compaction - The process of volume reducing solid waste by applying external pressure.

3.3 Incineration – The process of burning a combustible material to reduce its volume and yield an ash residue.

3.4 Solid Dry Waste - Radioactive waste which exist primarily in a non-liquid phase and includes such items as dry materials, metals, resins, filter media and sludges.

3.5 Solid Liquid Waste - Radioactive waste that exist primarily in a liquid form and is contained in other than installed plant systems, to include such items as oil, EHC fluid, and other concentrated liquids.

3.6 Solidification – Conversion of liquid or liquid like materials, including wet solids, into a solid free standing form.

3.7 Stability – Structural stability per 10CFR61.2. This can be provided by the waste form, or by placing the waste in a disposal container or structure that provides stability after disposal.

3.8 Volume Reduction – any process that reduces the volume of waste. This includes but is not limited to, compaction and incineration.

4.0 **RESPONSIBILITY**

4.1 The Vice President Operations Support (VPOS) is responsible for the implementation of this procedure and must approve any changes or revisions to this procedure.

4.2 Each site Senior Nuclear Executive (SNE) is responsible for ensuring that necessary site staff implements this procedure.

4.3 The Low Level RadWaste (LLRW) Peer Group is responsible for evaluating and recommending changes and revisions to this procedure.

5.0 **DETAILS**

5.1 Solid Dry Waste Management

> NOTE
> If the provisions of the Process Control Program are not satisfied, suspend shipment of the defectively processed or defectively packaged solid waste from the site. Shipment may be accomplished when the waste is processed/packaged in accordance with the Process Control Program.

5.1.1 Solid waste may be packaged and processed either on-site or at an offsite waste processing facility.

5.1.2 Solid waste will meet applicable regulatory requirements, vendor waste acceptance criteria and disposal site acceptance criteria.

5.1.3 Solid waste processing may include, but is not limited to compaction, incineration, bulk processing, dewatering, or any other acceptance technologies available.

5.1.4 River Bend Specific Requirement - Radioactive waste processed at RBS will either be, dewatered in accordance with RWS-0336, Set-up and Operation of the RDS-1000 Dewatering Unit, or compacted in accordance with RWS-0310, Operation of the Nuclear Packing Model WC-1800 Waste Compactor.

5.2 Liquid Waste Management

NOTE
The solidification of liquid wastes will be verified with surveillance activities of an approved Process Control Program.

5.2.1 Solid Liquid waste may be packaged and processed either on-site or at an offsite waste processing facility.

5.2.2 Solid Liquid waste will meet applicable regulatory requirements, vendor waste acceptance criteria and disposal site acceptance criteria.

5.2.3 Solid Liquid waste processing may include, but is not limited to incineration, solidification, or any other acceptance technologies available.

5.3 Quality Assurance

5.3.1 Reviews of solid waste activities performed under the guidance of the Process Control Program are completed through audits and selected monitoring activities.

5.3.2 Certain elements of the Entergy Quality Assurance Program Manual are applied to the Process Control Program.

5.4 Administrative Controls

5.4.1 Information on solid radioactive waste shipped offsite is reported annually to the Nuclear Regulatory Commission.

5.4.2 All changes in the Process Control Program and supporting documentation are included in each site's next annual Radiological Effluent Release Report to the Nuclear Regulatory Commission as required.

5.4.3 All changes that do not affect procedure content are reviewed through the site's Safety Review Committees and up to the site's Vice Presidents.

5.4.4 Each site will maintain applicable state and federal regulations, vendor waste acceptance criteria and disposal site waste acceptance criteria.

5.4.5 Vendors performing radwaste services under 10CFR61 and 10CFR71 requirements will be on the Entergy QSL.

6.0 **INTERFACES**

6.1 None

7.0 **RECORDS**

7.1 None

8.0 **REQUIREMENTS AND COMMITMENT CROSS REFERENCE**

Document	Document Section	Procedure Section	Site Applicability
RBS Technical Requirements	5.5.14	*	RBS
RBS Technical Requirements	5.5.14.1	5.4	RBS
RBS Technical Requirements	5.5.14.2	5.4.3	RBS
RBS Technical Requirements	5.8.2	5.4.3	RBS
WF3 Technical Specifications	1.22	*	WF3
WF3 Technical Specifications	6.9.18	5.4.1	WF3
WF3 Technical Specifications	6.13.2.b	5.4.3	WF3

* Covered by directive as a whole or by various paragraphs of the directive.

9.0 **ATTACHMENTS**

9.1 None

ATTACHMENT 2

Offsite Dose Calculation Manual (ODCM)