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RBG-46432
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Ladies and Gentlemen:

Enclosed is the River Bend Station (RBS) Annual Radioactive Effluent Release Report for the period January 1, 2004, through December 31, 2004. This report is submitted in accordance with the RBS Technical Specifications, Section 5.6.3.

Should you have any questions regarding the enclosed information, please contact Mr. Michael J. Boyle at (225) 381-4406.

Sincerely,

A handwritten signature in black ink, appearing to read "David N. Lorfing".

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enclosure

IE48

Radioactive Effluent Release Report for 2004
April 27, 2005
RBG-46432
RBF1-05-0074
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2004 ANNUAL EFFLUENT RELEASE REPORT

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ATTACHMENT 1 – Radwaste Process Control Program (PCP)

I. INTRODUCTION

This is the annual Radioactive Effluent Release Report for the period of January 1, 2004, through December 31, 2004. This report is submitted in accordance with Technical Specification 5.6.3 of Appendix A to River Bend Station (RBS) License Number NPF-47.

II. SUPPLEMENTAL INFORMATION

A. Regulatory Limits

1. 10CFR50, Appendix I Limits

a. Fission and Activation Gases

In accordance with Technical Requirement (TR) 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:

$$\begin{aligned}
 D_{\text{Gamma-Air}} &= \text{gamma air dose from radioactive noble gases in} \\
 &\quad \text{millirad (mrad)} \\
 &= 3.17\text{E-}8 \sum_{i=1}^n M_i \overline{(X/Q)} Q_i \quad \begin{array}{l} \leq 5 \text{ mrad/qtr} \\ \leq 10 \text{ mrad/yr} \end{array}
 \end{aligned}$$

$$\begin{aligned}
 D_{\text{Beta-Air}} &= \text{beta air dose from radioactive noble gases in millirad} \\
 &\quad \text{(mrad)} \\
 &= 3.17\text{E-}8 \sum_{i=1}^n N_i \overline{(X/Q)} Q_i \quad \begin{array}{l} \leq 10 \text{ mrad/qtr} \\ \leq 20 \text{ mrad/yr} \end{array}
 \end{aligned}$$

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

In accordance with Technical Requirement 3.11.2.3, the dose to a MEMBER OF THE PUBLIC from radioiodines (I-131 and I-133), tritium (H-3) 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.)

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

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

$$D_{\tau} = \sum_{z=1}^n D_{I\&SDP\tau} \leq 7.5 \text{ mrem/qtr}$$

$$\leq 15 \text{ mrem/yr}$$

(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:

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

and

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

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

and

$$D_{TOTAL} \quad \text{Total Body} \quad \leq 1.5 \text{ mrem/qtr}$$

$$\leq 3 \text{ mrem/yr}$$

$$D_{TOTAL} \quad \text{Any Organ} \quad \leq 5 \text{ mrem/qtr}$$

$$\leq 10 \text{ mrem/yr}$$

(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:

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

$$\leq 75 \text{ mrem to the thyroid}$$

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:

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

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

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

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

(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 radioiodines, 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:

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

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

(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 concentration.

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 using high purity germanium detectors coupled to computerized pulse height analyzers. The sampling and analysis frequencies are described in Table 1.

TABLE 1
Effluent and Waste Disposal Annual Report 2004 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 | 1.00E-04 |
| | | | H-3 | 1.00E-06 |
| B. Fuel Building Ventilation Exhaust Duct | M Grab Sample | M | Principal Gamma Emitters | 1.00E-04 |
| | | | H-3 | 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 | 1.00E-12 |
| | | | I-133 | 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

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 used 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, Iodine-131 and Iodine-133 are continuously sampled from the three release points using 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 using high purity germanium detectors coupled to computerized pulse height analyzers. Given the nuclide specific activity concentrations, process flow rate, and duration of the sample; 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. Strontium-89 and Strontium-90 (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 using an ice bath condensation collection method. The collected sample is then analyzed using 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 using a high resolution germanium detector coupled to a computerized pulse height analyzer. Tritium

concentration is determined using a liquid scintillation counter. Strontium-89 and Strontium-90 are quantitatively analyzed by Scintillation techniques (Chrenkov counting). Iron-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.

TABLE 2
Effluent and Waste Disposal Annual Report 2004 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: <u>except for Ce-144</u> | 5.00E-07 |
| | | | I-131 | 5.00E-06 |
| | P One Batch/M | M | Dissolved and Entrained Gases (Gamma Emitters) | 1.00E-05 |
| | P Each Batch | M Composite | H-3 | 1.00E-05 |
| | P Each Batch | Q Composite | Gross Alpha | 1.00E-07 |
| | | | Sr-89, Sr-90 | 5.00E-08 |
| | P Each Batch | Q Composite | Fe-55 | 1.00E-06 |

P = Prior to each radioactive release

M = At least once per 31 days

Q = At least once per 92 days

D. Batch Releases**Liquid Effluents**

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

| REPORT FOR 2004 | Units | QTR 1 | QTR 2 | QTR 3 | QTR 4 | YEAR |
|----------------------|---------|----------|----------|----------|----------|----------|
| Number of releases | | 0 | 13 | 55 | 65 | 133 |
| Total release time | minutes | 0.00E+00 | 4.39E+03 | 1.95E+04 | 2.25E+04 | 4.64E+04 |
| Maximum release time | minutes | 0.00E+00 | 3.56E+02 | 4.46E+02 | 4.90E+02 | 4.90E+02 |
| Average release time | minutes | 0.00E+00 | 3.38E+02 | 3.54E+02 | 3.47E+02 | 3.49E+02 |
| Minimum release time | minutes | 0.00E+00 | 3.11E+02 | 1.00E+00 | 0.00E+00 | 0.00E+00 |

| | | <u>QTR 1</u> | <u>QTR 2</u> | <u>QTR 3</u> | <u>QTR 4</u> |
|---|----------------------|--------------|--------------|--------------|--------------|
| Average Miss. River stream flow during periods of release of effluent into a flowing stream | ft ³ /sec | 650,022 | 657,429 | 431,859 | 587,870 |

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

Gaseous Effluents

There were no batch releases of gaseous effluents from River Bend Station during 2004.

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

| REPORT FOR 2004 | 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, 2004, through December 31, 2004.

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:

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

where:

E_T = total error

$E_1, E_2 \dots E_n$ = 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)

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 | = | 8.81E-02 | mrem |
| Skin | = | 5.39E-02 | mrem |
| Thyroid | = | 1.30E-01 | mrem |
| Other Organ | = | 8.85E-02 | 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 used 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 was the National Guard, which was stationed on site during 2004. 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 meteorological recovery for 2004 was 96.2%.

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 January 1, 2004, through December 31, 2004, 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 January 1, 2004, through December 31, 2004, 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 January 1, 2004, through December 31, 2004 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 January 1, 2004, through December 31, 2004.

XII. LAND USE CENSUS

The Land Use Census, as required by Technical Requirement 3.12.2, did not identify any location(s) that would yield a calculated dose or dose commitment greater than the values calculated. In addition, the milk animal census identified no milk production for human consumption within 8 km (5 miles) of River Bend Station.

XIII. OFFSITE DOSE CALCULATION MANUAL (ODCM)

No changes were made to the ODCM in 2004.

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

Engineering has performed a review of the Integrated Document Electronic Access System (IDEAS) database to evaluate design changes completed or partially completed during 2004 involving the subject systems. These design changes were then reviewed to determine if there

have been any major changes to the subject systems. The review was based on a major change being defined as a modification that affected the method of processing or the effluent from the system. Also, to be a "major change" the change must have affected the USAR.

The Engineering Requests completed during this time period primarily consisted of administrative changes and parts interchangeability evaluations. Two evaluations were performed, one providing evaluation of Offgas System operation without the Offgas Preheater in service, and the second evaluating a leak seal repair for a head gasket on Offgas Preheater N64-EB001B. Neither evaluation had an impact on method of processing, system effluent, or on the USAR. A nuclear change was performed to replace the level instrumentation on the Waste Sludge Tank, WSS-TK14. Although the USAR was affected by this change, there was no impact on the processing method or system effluent. As a result, these modifications do not constitute major changes.

Nuclear change ER-RBS-2002-0528 was implemented to allow the use of leased liquid radwaste processing equipment. The leased processing equipment was placed in service in October 2004. Because the leased equipment can be used as an alternative to, or in combination with our existing liquid radwaste equipment, and the ability to use our existing liquid radwaste equipment as originally installed has been maintained, it could reasonably be concluded that this modification does not constitute a major change per the criteria above. However, given the scope of the modification and the preferential usage of the leased equipment, engineering is categorizing this modification as a major change with the following information provided for inclusion in the Annual Radioactive Effluent Release Report to address the reporting requirements of TR 5.10.1.

A. 10CFR50.59 Evaluation Summary

The objective of the radioactive liquid waste (radwaste) system is to collect, monitor, and process for reuse or disposal all potentially radioactive liquid wastes in a controlled manner so that the operation or availability is not limited. The radwaste system has the capacity and capability of processing the anticipated quantities and activities of liquid wastes resulting from normal operation. The installation of the ultra filtration unit and interconnecting piping will reinforce the capabilities of the radwaste system. The ultra filtration unit and interconnecting piping is designed to the same codes and standards as the existing liquid radwaste system. Enhancement of liquid radwaste processing capability does not affect the quantity or characteristics of the fluid being processed by the radwaste system. This change does not affect the frequency of postulated accidents or malfunctions, the consequences of postulated accidents or malfunctions, introduce a new or different accident or malfunction, or affect design basis limits for fission product barriers. A review of analyzed radioactive releases was performed and it is concluded that this modification is bounded by existing radioactive release evaluations.

B. Reason for Change

The existing liquid radwaste system has limited capability to remove organic material and provide filtration. As a result, the ion exchange resins become fouled, effectively reducing their capacity. Additionally, the walnut shell filters require polyelectrolyte injection to enable efficient removal of particles from the process stream. The location of the polyelectrolyte injection relative to the filters provides inadequate time for proper mixing and coagulation, which results in carryover of the poly and the solids to the demineralizers. In addition, variations in the inlet stream composition make determination of the optimum quantity of

polyelectrolyte for each batch impractical. The walnut shells also provide an environment that promotes bacterial growth. Sloughing off of the organic matter also results in downstream resin fouling. Radwaste Operations and Chemistry have expended major efforts to improve liquid waste processing performance in terms of both run time and quality of water produced. However, the lack of filtration and effective organic removal limit result in higher generation of solid waste for radwaste processing than that typical in the industry.

C. Detailed Equipment Description and Interfaces with other Plant Systems

River Bend Station has implemented modifications to enable the use of leased liquid radwaste processing equipment. The leased liquid radwaste processing equipment can be used as an alternative to, or in combination with our existing permanently installed liquid radwaste processing equipment.

The leased liquid radwaste processing equipment selected uses reverse osmosis as the ultra filtration method. The equipment consists of two redundant pretreatment trains containing an inlet strainer, ozone injection system, backwashable granular activated carbon (GAC) filters, and backwashable, 1 micron rated particulate filters. The inlet strainers are intended to remove large particles and/or debris. The ozone injection system will provide for oxidation of organic material and to change the oxidation state of particulate iron present in the process stream, improving the ease of removal via filtration. The GAC filters provide removal of any residual organics that were not oxidized by the ozone injection, removes any residual ozone present in the process stream, and removes particulates on the order of 6 micron and larger. The backwashable 1 micron filters remove smaller particulates from the process stream. Each pretreatment train has the capacity to simultaneously process water from the LWS system at a rate of 75 gpm.

Downstream of the pretreatment portion of the system is a single train, reverse osmosis (RO) skid and final polishing demineralizer. The RO skid is a two-pass unit that removes the remaining insoluble material and the bulk of the soluble impurities from the process stream. The final polishing demineralizer removes any remaining ionic species not removed by the reverse osmosis process. The RO skid and demineralizer can process liquid waste at a rate of 75 gpm. Typically during normal load periods, both floor drain and waste collector (equipment drain) streams will be processed via vendor pretreatment and the RO skid. This processing will be performed on a batch basis. During high load periods, such as outages, or to maximize available storage capacity, floor and waste collector water can be simultaneously processed by the pretreatment portion of the system. The lower quality floor drain water will typically be sent to the RO for final processing, with the waste collector water being sent to the existing LWS demineralizers for final processing. An isolation valve was added to the Recovery Sample Tank Inlet Header to facilitate simultaneous operation of the RO skid and the existing LWS demineralizers.

An additional demineralizer vessel is being leased to provide the ability to use the residual ion exchange capacity in discharged condensate demineralizer resin. This discharged resin will be transferred to this additional demineralizer vessel, and be used to process the waste water from the RO skid. The waste water from the RO skid is referred to as "brine," and this additional demineralizer is referred to as the "brine demin." Use of residual condensate demin resin capacity provides significant reduction in solid waste generation from radwaste processing.

The treated water from either the RO or from the LWS Demineralizers is directed to the

Recovery Sample Tanks. Each tank is recirculated, sampled and directed to either the Condensate Storage Tank, collector tanks for reprocessing, or discharged.

Media backwashes and exhausted carbon and ion exchange resins are directed to the radwaste backwash tank, LWS-TK7.

The added interfaces with plant systems to enable use of the leased liquid radwaste processing equipment are as follows:

Liquid Radwaste

- Waste stream supply via connections to the Waste Collector Tank and Floor Drain Collector Tank pump discharge piping.
- Pretreatment return to the Liquid Radwaste Demineralizer inlet crosstie piping.
- RO polishing demineralizer discharge to the Recovery Sample Tank Inlet Header.
- Backwash transfer piping from vendor inlet strainers, granular activated carbon filters, and recirculation tank (interim point for filter backwash stream) to the radwaste backwash tank, and from the brine demin to the radwaste backwash tank.
- Brine demineralizer supply piping from the vendor recirculation tank skid.

Radwaste Building Floor and Equipment Drains

- Brine demineralizer process effluent and vendor skid drains.

Condensate Makeup, Storage and Transfer

- A connection to the condensate system was made to provide demineralized water for filling, flushing, and backwashing vendor equipment.

Condensate Demineralizer

- Piping from the Condensate Demineralizer resin transfer line to the brine demineralizer.

Service Air

- Service air was supplied to the vendor skid area for operation of air operated valves, facilitating strainer and filter backwashes, and skid area general use.

Radwaste Building Ventilation

- The discharge of the vendor ozone skid reaction tanks is connected to the radwaste tank vent header, and is directed to the Radwaste Building Ventilation Filter Trains.

480 VAC Power

- Electrical power from 480-Volt switchgear NJS-SWG1R is provided to the vendor power distribution panel.

D. Differences in Predicted Releases or Quantity of Solid Wastes

Because the the original liquid radwaste treatment system has been maintained, there was no change in the predicted releases of radioactive materials in liquid or gaseous effluents or the quantity of solid wastes different from those previously predicted in licensing basis documents.

E. Unrestricted Area Exposure

Because the original liquid radwaste treatment system has been maintained, there was no change in the expected maximum exposure to a member of the public in the unrestricted area different from those previously predicted in licensing basis documents.

F. Comparison of Predicted Releases to Actual Releases

Because the the original liquid radwaste treatment system has been maintained, there was no change in the predicted releases of radioactive materials in liquid or gaseous effluents or the quantity of solid wastes different from those previously predicted in licensing basis documents. It is possible that when the RO is used, there could be a reduction of solid waste and some types of liquid effluent released.

G. Plant Personnel Exposure

There is no overall plant personnel exposure change anticipated as a result of using the leased reverse osmosis equipment.

H. Documentation of Review per TR 5.8.2

The Engineering Request was reviewed and approved per the requirements of TR 5.8.2 as documented by Onsite Safety Review Committee (OSRC) approval on the 10CFR50.59 evaluation included with ER-RB-2002-0528-000. The evaluation, #2003-025, was approved in OSRC meeting #2003-037 and dated December 11, 2003.

XV. PROCESS CONTROL PROGRAM (PCP)

The following changes to the PCP (Nuclear Management Manual/ENS/RW-105, Process Control Program) were implemented at RBS on October 1, 2004. These changes are either an enhancement or editorial in nature and did not reduce the overall conformance of the solidified waste product to existing criteria for solid wastes. A copy of the PCP is attached in Attachment 1. Below is a summary of the changes to the PCP:

- Change to Section 1.0, Purpose – adding information for the PCP program
- Changed reference section to identify only non-site references for this document
- Added definition for Batch in Section 3.0
- Changes/updates made in Section 4.0 (Responsibilities) & 8.0 (Commitment Cross-Reference)
- Moved text about vendor taking title of waste from Section 5.2.2 to 5.2.1
- Updated Section 5.4 to match each site's approval authority list for the PCP and changes
- Added Section 5.5 to include vendor related requirements

- Updated procedure to match requirements of Nuclear Management Manual/EN/AD-101, Procedure Process.

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

| REPORT FOR 2004 | Units | QTR 1 | QTR 2 | QTR 3 | QTR 4 |
|--|---------|----------|----------|----------|----------|
| Fission and Activation Gases | | | | | |
| 1. Total Release | Ci | 1.72E+00 | 3.67E-01 | 4.96E+00 | 3.70E+01 |
| 2. Avg. Release Rate | uCi/sec | 2.19E-01 | 4.67E-02 | 6.24E-01 | 4.66E+00 |
| 3. % Applicable Limit | % (1) | 3.04E-02 | 6.50E-03 | 2.31E-02 | 5.59E-01 |
| Iodine-131 | | | | | |
| 1. Total Release | Ci | 1.69E-04 | 1.62E-04 | 1.72E-04 | 7.00E-04 |
| 2. Avg. Release Rate | uCi/sec | 2.15E-05 | 2.06E-05 | 2.17E-05 | 8.80E-05 |
| 3. % Applicable Limit | % (2) | 7.19E-02 | 7.11E-02 | 7.33E-02 | 2.99E-01 |
| Particulates Half Life >= 8 days | | | | | |
| 1. Total Release | Ci | 9.15E-04 | 6.14E-05 | 4.69E-05 | 2.52E-05 |
| 2. Avg. Release Rate | uCi/sec | 1.16E-04 | 7.81E-06 | 5.90E-06 | 3.17E-06 |
| 3. % Applicable Limit | % (2) | 5.63E-02 | 1.42E-02 | 1.55E-02 | 1.16E-02 |
| Tritium | | | | | |
| 1. Total Release | Ci | 9.95E+00 | 1.98E+01 | 1.03E+01 | 6.55E+00 |
| 2. Avg. Release Rate | uCi/sec | 1.27E+00 | 2.52E+00 | 1.30E+00 | 8.24E-01 |
| 3. % Applicable Limit | % (2) | 1.65E-01 | 2.31E-01 | 1.61E-01 | 1.74E-01 |

1. Either the gamma air dose limit of 5 mrad/qtr or beta air dose limit of 10 mrad/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 2004 | Units | QTR 1 | QTR 2 | QTR 3 | QTR 4 | YEAR |
|----------------------------------|-------|----------|----------|----------|----------|----------|
| Fission and Activation Gases | | | | | | |
| XE-133 | Ci | 1.38E+00 | 2.95E-01 | 6.55E-02 | 0.00E+00 | 1.74E+00 |
| XE-133M | Ci | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135 | Ci | 3.37E-01 | 7.22E-02 | 1.60E-02 | 0.00E+00 | 4.25E-01 |
| XE-135M | Ci | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Totals for Period... | Ci | 1.71E+00 | 3.67E-01 | 8.15E-02 | 0.00E+00 | 2.16E+00 |
| Iodines | | | | | | |
| I-131 | Ci | 0.00E+00 | 2.44E-06 | 0.00E+00 | 1.28E-06 | 3.72E-06 |
| I-133 | Ci | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Totals for Period... | Ci | 0.00E+00 | 2.44E-06 | 0.00E+00 | 1.28E-06 | 3.72E-06 |
| 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 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| CO-60 | Ci | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.69E-07 | 5.69E-07 |
| CR-51 | Ci | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| CS-137 | Ci | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| FE-59 | 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 |
| 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 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.69E-07 | 5.69E-07 |
| Tritium | | | | | | |
| H-3 | Ci | 1.83E+00 | 2.06E+00 | 1.73E+00 | 2.26E+00 | 7.87E+00 |
| Totals for Period... | Ci | 1.83E+00 | 2.06E+00 | 1.73E+00 | 2.26E+00 | 7.87E+00 |

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

| REPORT FOR 2004 | 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 2004 | 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 | 7.57E-01 | 7.57E-01 |
| KR-85 | Ci | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| KR-85M | Ci | 0.00E+00 | 0.00E+00 | 2.92E-01 | 4.06E+00 | 4.36E+00 |
| KR-87 | Ci | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.65E+00 | 8.65E+00 |
| KR-88 | Ci | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.21E+01 | 1.21E+01 |
| XE-131M | Ci | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-133 | Ci | 0.00E+00 | 0.00E+00 | 1.66E-01 | 5.11E+00 | 5.27E+00 |
| XE-133M | Ci | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-135 | Ci | 8.20E-03 | 0.00E+00 | 3.44E+00 | 3.88E+00 | 7.33E+00 |
| XE-135M | Ci | 0.00E+00 | 0.00E+00 | 9.78E-01 | 2.47E+00 | 3.45E+00 |
| XE-137 | Ci | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| XE-138 | Ci | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Totals for Period... | Ci | 8.20E-03 | 0.00E+00 | 4.88E+00 | 3.70E+01 | 4.19E+01 |
| Iodines | | | | | | |
| I-131 | Ci | 1.69E-04 | 1.59E-04 | 1.72E-04 | 6.98E-04 | 1.20E-03 |
| I-132 | Ci | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| I-133 | Ci | 1.51E-03 | 1.22E-03 | 1.35E-03 | 9.88E-04 | 5.08E-03 |
| I-135 | Ci | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Totals for Period... | Ci | 1.68E-03 | 1.38E-03 | 1.52E-03 | 1.69E-03 | 6.28E-03 |
| Particulates Half Life >= 8 days | | | | | | |
| BA-140 | Ci | 8.88E-05 | 1.50E-05 | 0.00E+00 | 0.00E+00 | 1.04E-04 |
| CE-139 | Ci | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| CO-58 | Ci | 9.51E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.51E-05 |
| CO-60 | Ci | 2.16E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.16E-04 |
| CR-51 | Ci | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| CS-134 | Ci | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| CS-137 | Ci | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| FE-59 | Ci | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| MN-54 | Ci | 7.87E-05 | 0.00E+00 | 0.00E+00 | 1.15E-05 | 9.02E-05 |
| SR-89 | Ci | 3.91E-05 | 4.64E-05 | 4.69E-05 | 1.32E-05 | 1.46E-04 |
| ZN-65 | Ci | 3.97E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.97E-04 |
| Totals for Period... | Ci | 9.15E-04 | 6.14E-05 | 4.69E-05 | 2.46E-05 | 1.05E-03 |
| Tritium | | | | | | |
| H-3 | Ci | 8.13E+00 | 1.78E+01 | 8.60E+00 | 4.29E+00 | 3.88E+01 |
| Totals for Period... | Ci | 8.13E+00 | 1.78E+01 | 8.60E+00 | 4.29E+00 | 3.88E+01 |

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

| REPORT FOR 2004 | 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 2004 | Units | QTR 1 | QTR 2 | QTR 3 | QTR 4 |
|-------------------------------|--------|----------|----------|----------|----------|
| Fission and Activation Gases | | | | | |
| 1. Total Release | Ci | 0.00E+00 | 3.70E-02 | 3.16E-02 | 2.71E-02 |
| 2. Avg. Diluted Conc. | uCi/ml | 0.00E+00 | 2.49E-08 | 2.14E-08 | 2.77E-08 |
| 3. % Applicable Limit | % (1) | 0.00E+00 | 5.42E-02 | 8.45E-02 | 2.09E-01 |
| Tritium | | | | | |
| 1. Total Release | Ci | 0.00E+00 | 1.70E+01 | 5.18E+01 | 3.78E+01 |
| 2. Avg. Diluted Conc. | uCi/ml | 0.00E+00 | 1.15E-05 | 3.51E-05 | 3.85E-05 |
| 3. % Applicable Limit | % (1) | 0.00E+00 | 1.15E-04 | 1.56E-03 | 1.99E-03 |
| Dissolved and Entrained Gases | | | | | |
| 1. Total Release | Ci | 0.00E+00 | 6.57E-04 | 5.30E-03 | 1.43E-02 |
| 2. Avg. Diluted Conc. | uCi/ml | 0.00E+00 | 4.42E-10 | 3.59E-09 | 1.46E-08 |
| 3. % Applicable Limit | % (2) | 0.00E+00 | 2.22E-04 | 1.80E-03 | 7.32E-03 |
| Gross Alpha Radioactivity | | | | | |
| 1. Total Release | Ci | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | | | | | |
| Volume of liquid waste | liters | 0.00E+00 | 7.53E+05 | 2.97E+06 | 3.43E+06 |
| Volume of dil. water | liters | 1.45E+09 | 1.48E+09 | 1.47E+09 | 9.77E+08 |

- (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 2004 | 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 2004 | Units | QTR 1 | QTR 2 | QTR 3 | QTR 4 | YEAR |
|--------------------------------------|-------|----------|----------|----------|----------|----------|
| Fission and Activation Gases | | | | | | |
| AG-110M | Ci | 0.00E+00 | 1.94E-04 | 4.67E-04 | 3.02E-05 | 6.91E-04 |
| CO-58 | Ci | 0.00E+00 | 1.88E-04 | 0.00E+00 | 3.88E-05 | 2.27E-04 |
| CO-60 | Ci | 0.00E+00 | 8.13E-03 | 3.69E-03 | 4.80E-03 | 1.66E-02 |
| CR-51 | Ci | 0.00E+00 | 5.26E-04 | 8.40E-05 | 5.72E-04 | 1.18E-03 |
| FE-55 | Ci | 0.00E+00 | 1.57E-02 | 2.34E-02 | 1.62E-02 | 5.53E-02 |
| FE-59 | Ci | 0.00E+00 | 4.33E-04 | 7.46E-06 | 4.39E-04 | 8.79E-04 |
| I-131 | Ci | 0.00E+00 | 0.00E+00 | 6.22E-05 | 0.00E+00 | 6.22E-05 |
| LA-140 | Ci | 0.00E+00 | 1.02E-04 | 7.60E-05 | 0.00E+00 | 1.78E-04 |
| MN-54 | Ci | 0.00E+00 | 9.80E-03 | 3.38E-03 | 4.86E-03 | 1.80E-02 |
| NB-95 | Ci | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.14E-05 | 3.14E-05 |
| NB-97 | Ci | 0.00E+00 | 2.91E-04 | 5.59E-05 | 8.47E-06 | 3.55E-04 |
| SB-124 | Ci | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.27E-05 | 1.27E-05 |
| SN-113 | Ci | 0.00E+00 | 3.44E-05 | 5.31E-06 | 0.00E+00 | 3.97E-05 |
| SR-92 | Ci | 0.00E+00 | 9.72E-05 | 7.70E-05 | 6.66E-06 | 1.81E-04 |
| ZN-65 | Ci | 0.00E+00 | 1.43E-03 | 3.66E-04 | 8.94E-05 | 1.88E-03 |
| ZR-97 | Ci | 0.00E+00 | 0.00E+00 | 6.10E-06 | 0.00E+00 | 6.10E-06 |
| Totals for Period... | Ci | 0.00E+00 | 3.70E-02 | 3.16E-02 | 2.71E-02 | 9.57E-02 |
| Tritium | | | | | | |
| H-3 | Ci | 0.00E+00 | 1.70E+01 | 5.18E+01 | 3.78E+01 | 1.07E+02 |
| Totals for Period... | Ci | 0.00E+00 | 1.70E+01 | 5.18E+01 | 3.78E+01 | 1.07E+02 |
| Dissolved and Entrained Gases | | | | | | |
| XE-131M | Ci | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.83E-05 | 5.83E-05 |
| XE-133 | Ci | 0.00E+00 | 2.34E-04 | 3.31E-03 | 9.03E-03 | 1.26E-02 |
| XE-133M | Ci | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.33E-04 | 1.33E-04 |
| XE-135 | Ci | 0.00E+00 | 4.22E-04 | 1.99E-03 | 5.05E-03 | 7.46E-03 |
| Totals for Period... | Ci | 0.00E+00 | 6.57E-04 | 5.30E-03 | 1.43E-02 | 2.02E-02 |
| Gross Alpha Radioactivity | | | | | | |
| ** No Nuclide Activities ** | | | | | | |

TABLE 5
Effluent and Waste Disposal Annual Report 2004 Year
Solid Waste and Irradiated Fuel Shipments
Reporting Period from January 1, 2004 to December 31, 2004

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

| <u>1. Type of Waste</u> | <u>Units</u> | <u>12 Month Period</u> | <u>Waste Class</u> | <u>Estimated Error %</u> |
|--|--------------|------------------------|--------------------|--------------------------|
| Spent Resins, Filter | m3 | 3.90E+01 | A | See Below |
| Sludges, Evaporator | Ci | 1.04E+02 | A | |
| Bottoms, Etc. | m3 | 1.94E+00 | B | |
| | Ci | 5.15E+01 | B | |
| | m3 | 1.50E+00 | C | |
| | Ci | 5.77E+01 | C | |
| <hr/> | | | | |
| Dry Compressible Wastes, | m3 | 4.47E+01 | A | See Below |
| Contaminated Equipment | Ci | 1.65E+01 | A | |
| Etc. | | | | |
| <hr/> | | | | |
| Irradiated Components, Control Rods, Etc. | m3 | 0.00E+00 | N/A | N/A |
| | Ci | 0.00E+00 | | |
| <hr/> | | | | |
| Other | m3 | 0.00E+00 | N/A | See Below |
| | Ci | 0.00E+00 | | |
| <hr/> | | | | |

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.

Effluent and Waste Disposal Annual Report 2004 Year
Solid Waste and Irradiated Fuel Shipments
Reporting Period from January 1, 2004 to December 31, 2004
Table 5 (continued)

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%) Isotope % Abundance | | Dry Compressible Wastes, Contaminated Equipment, Etc. (Min 1%) Isotope % Abundance | | Other (Min 1%) Isotope % Abundance | |
|---|--------|---|--------|---|-----|
| Mn-54 | 12.933 | Mn-54 | 7.983 | N/A | N/A |
| Fe-55 | 25.489 | Fe-55 | 83.756 | | |
| Co-60 | 42.369 | Co-60 | 6.933 | | |
| Ni-63 | 1.129 | | | | |
| Zn-65 | 6.830 | | | | |
| Cs-134 | 1.495 | | | | |
| Cs-137 | 3.715 | | | | |
| Ce-144 | 3.959 | | | | |
| | | | | | |

Determined by Measurement & Correlation.

Packaged in Strong, Tight Liners.

No Solidification Agent or Absorbent Used.

No Irradiated Components, Control Rods, Etc. were shipped in 2004.

Effluent and Waste Disposal Annual Report 2004 Year
Solid Waste and Irradiated Fuel Shipments
Reporting Period from January 1, 2004 to December 31, 2004
Table 5 (continued)

3. Solid Waste Disposition

| <u>Number of Shipments</u> | <u>Mode of Transportation</u> | <u>Destination</u> |
|----------------------------|-------------------------------|--------------------|
| 3 | Truck | Barnwell, SC |
| 80 | Truck | Clive, UT |

B. No Irradiated Components, Control Rods, Etc. were shipped in 2004.

Irradiated Fuel Shipments Disposition

| <u>Number of Shipments</u> | <u>Mode of Transportation</u> | <u>Destination</u> |
|----------------------------|-------------------------------|--------------------|
| 0 | N/A | N/A |

TABLE 6
Effluent and Waste Disposal Annual Report 2004 Year
Maximum Individual Doses Due to
Noble Gas Releases

| | Critical Sector | Critical Distance | Gamma Dose* (mrad) | Beta Dose * (mrad) |
|--------------|-----------------|-------------------|-----------------------|-----------------------|
| 1st Quarter | WNW | 994m | 1.51E-03 | 3.04E-03 |
| 2nd Quarter | WNW | 994m | 3.24E-04 | 6.50E-04 |
| 3rd Quarter | WNW | 994m | 1.15E-03 | 1.19E-03 |
| 4th Quarter | WNW | 994m | 2.80E-02 | 1.59E-02 |
| Annual Total | WNW | 994m | 3.10E-02 | 2.08E-02 |

* All age groups equally exposed

TABLE 7
Effluent and Waste Disposal Annual Report 2004 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 | 2.20E-02 |
| 2nd Quarter | WNW | 994m | Child | Thyroid | 2.37E-02 |
| 3rd Quarter | WNW | 994m | Child | Thyroid | 1.87E-02 |
| 4th Quarter | WNW | 994m | Child | Thyroid | 3.63E-02 |
| Annual Total | WNW | 994m | Child | Thyroid | 1.01E-01 |

TABLE 8
Effluent and Waste Disposal Annual Report 2004 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 | 0.00E+00 | Adult | GI Tract | 0.00E+00 |
| 2nd Quarter | Adult | 2.11E-04 | Adult | GI Tract | 2.71E-03 |
| 3rd Quarter | Adult | 3.57E-04 | Adult | GI Tract | 4.25E-03 |
| 4th Quarter | Adult | 7.39E-04 | Adult | GI Tract | 1.05E-02 |
| Annual Total | Adult | 1.12E-03 | Adult | GI Tract | 1.46E-02 |

TABLE 9
Effluent and Waste Disposal Annual Report 2004 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)⁽²⁾ |
|--------------------------------------|-----------------|--|---------------|---|
| People Entering Site Without Consent | Alligator Bayou | 2500 | SW | 4.00E+01 |
| National Guard | Activity Center | 994 | WNW | 4.80E+02 ⁽³⁾ |

(1) The approximate distances from main plant vent exhaust to location.

(2) Liquid pathways dose is not considered due to the nature of activities that individuals are engaged in.

(3) 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 2004 Year
DOSES TO MEMBERS OF THE PUBLIC ON SITE
FROM GASEOUS RELEASES 2004

| <u>Dose calc based on Durations</u> | <u>Critical Organ Dose Annual (mrem)</u> | <u>Total Body Dose Annual (mrem)</u> | <u>Skin Dose Annual (mrem)</u> | <u>Annual Duration Factor</u> |
|---|--|--|--|---------------------------------------|
| Alligator Bayou | 4.84E-05 | 1.86E-05 | 3.15E-05 | 4.57E-03 |
| National Guard | 6.58E-03 | 1.63E-03 | 2.76E-03 | 5.48E-02 |

Table 11
Effluent and Waste Disposal Annual Report 2004 Year
Meteorological Data - Joint Frequency Tables

RIVER BEND STATION
 JOINT FREQUENCY TABLE
 ALL STABILITY CLASSES

FROM 1/ 1/04 0:00 TO 3/31/04 23:00

PRIMARY SENSORS - 30 FOOT

WIND SPEED (METERS/SECOND)

| WIND DIR | .22- | .51- | .76- | 1.1- | 1.6- | 2.1- | 3.1- | 5.1- | 7.1- | 10.1- | 13.1- | >18 | TOT. |
|----------|------|------|------|------|------|------|------|------|------|-------|-------|-----|------|
| | .50 | .75 | 1.0 | 1.5 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | 13.0 | 18.0 | | |
| N | 8 | 7 | 8 | 27 | 38 | 59 | 64 | 0 | 0 | 0 | 0 | 0 | 211 |
| NNE | 6 | 9 | 7 | 32 | 35 | 52 | 9 | 1 | 0 | 0 | 0 | 0 | 151 |
| NE | 8 | 8 | 3 | 14 | 46 | 73 | 7 | 0 | 0 | 0 | 0 | 0 | 159 |
| ENE | 8 | 26 | 11 | 18 | 21 | 33 | 19 | 0 | 0 | 0 | 0 | 0 | 136 |
| E | 7 | 23 | 12 | 20 | 18 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 91 |
| ESE | 2 | 7 | 9 | 22 | 34 | 57 | 3 | 0 | 0 | 1 | 1 | 0 | 136 |
| SE | 0 | 3 | 13 | 61 | 92 | 101 | 12 | 0 | 0 | 0 | 0 | 0 | 282 |
| SSE | 0 | 1 | 4 | 20 | 15 | 55 | 39 | 13 | 0 | 0 | 0 | 0 | 147 |
| S | 0 | 0 | 8 | 10 | 23 | 45 | 47 | 8 | 0 | 0 | 0 | 0 | 141 |
| SSW | 1 | 1 | 3 | 13 | 9 | 30 | 21 | 1 | 0 | 0 | 0 | 0 | 79 |
| SW | 0 | 2 | 6 | 10 | 12 | 13 | 3 | 0 | 0 | 0 | 0 | 0 | 46 |
| WSW | 4 | 7 | 5 | 4 | 10 | 25 | 3 | 0 | 0 | 0 | 0 | 0 | 58 |
| W | 4 | 11 | 8 | 8 | 15 | 18 | 5 | 0 | 0 | 0 | 0 | 0 | 69 |
| WNW | 9 | 16 | 15 | 11 | 5 | 16 | 21 | 0 | 0 | 0 | 0 | 0 | 93 |
| NW | 2 | 22 | 18 | 20 | 13 | 25 | 44 | 0 | 0 | 0 | 0 | 0 | 144 |
| NNW | 4 | 18 | 6 | 18 | 14 | 39 | 61 | 0 | 0 | 0 | 0 | 0 | 160 |
| TOTAL | 63 | 161 | 136 | 308 | 400 | 652 | 358 | 23 | 0 | 1 | 1 | 0 | 2103 |

NUMBER OF CALMS: 0
 NUMBER OF INVALID HOURS: 81
 NUMBER OF VALID HOURS: 2103
 TOTAL HOURS FOR THE PERIOD: 2184

RIVER BEND STATION
 JOINT FREQUENCY TABLE
 STABILITY CLASS A

FROM 1/ 1/04 0:00 TO 3/31/04 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 | 1 | 2 | 13 | 0 | 0 | 0 | 0 | 0 | 16 |
| NNE | 0 | 0 | 0 | 0 | 1 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 9 |
| NE | 0 | 0 | 0 | 0 | 3 | 11 | 1 | 0 | 0 | 0 | 0 | 0 | 15 |
| ENE | 0 | 0 | 0 | 0 | 5 | 9 | 1 | 0 | 0 | 0 | 0 | 0 | 15 |
| E | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| ESE | 0 | 0 | 0 | 1 | 2 | 16 | 1 | 0 | 0 | 0 | 0 | 0 | 20 |
| SE | 0 | 0 | 0 | 0 | 2 | 23 | 5 | 0 | 0 | 0 | 0 | 0 | 30 |
| SSE | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 4 |
| S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SSW | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| SW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WSW | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 |
| W | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WNW | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| NW | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 5 |
| NNW | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 5 |
| TOTAL | 0 | 0 | 0 | 1 | 15 | 70 | 40 | 0 | 0 | 0 | 0 | 0 | 126 |

NUMBER OF CALMS: 0
 NUMBER OF INVALID HOURS: 0
 NUMBER OF VALID HOURS: 126
 TOTAL HOURS FOR THE PERIOD: 126

RIVER BEND STATION
 JOINT FREQUENCY TABLE
 STABILITY CLASS B

FROM 1/ 1/04 0:00 TO 3/31/04 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 | 2 | 12 | 0 | 0 | 0 | 0 | 0 | 14 |
| NNE | 0 | 0 | 0 | 0 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| NE | 0 | 0 | 0 | 0 | 3 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| ENE | 0 | 0 | 0 | 1 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| E | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ESE | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| SE | 0 | 0 | 1 | 0 | 3 | 7 | 2 | 0 | 0 | 0 | 0 | 0 | 13 |
| SSE | 0 | 0 | 0 | 1 | 1 | 4 | 5 | 3 | 0 | 0 | 0 | 0 | 14 |
| S | 0 | 0 | 0 | 0 | 0 | 2 | 10 | 1 | 0 | 0 | 0 | 0 | 13 |
| SSW | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 2 |
| SW | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 2 |
| WSW | 0 | 0 | 0 | 0 | 0 | 6 | 1 | 0 | 0 | 0 | 0 | 0 | 7 |
| W | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| WNW | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 2 |
| NW | 0 | 0 | 0 | 0 | 0 | 2 | 9 | 0 | 0 | 0 | 0 | 0 | 11 |
| NNW | 0 | 0 | 0 | 0 | 0 | 3 | 8 | 0 | 0 | 0 | 0 | 0 | 11 |
| TOTAL | 0 | 0 | 1 | 2 | 12 | 42 | 50 | 4 | 0 | 0 | 0 | 0 | 111 |

NUMBER OF CALMS: 0
 NUMBER OF INVALID HOURS: 0
 NUMBER OF VALID HOURS: 111
 TOTAL HOURS FOR THE PERIOD: 111

RIVER BEND STATION
 JOINT FREQUENCY TABLE
 STABILITY CLASS C

FROM 1/ 1/04 0:00 TO 3/31/04 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 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 4 |
| NNE | 0 | 0 | 0 | 0 | 0 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 5 |
| NE | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| ENE | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| E | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| ESE | 0 | 0 | 0 | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| SE | 0 | 0 | 0 | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| SSE | 0 | 0 | 0 | 0 | 1 | 6 | 2 | 1 | 0 | 0 | 0 | 0 | 10 |
| S | 0 | 0 | 0 | 0 | 2 | 2 | 5 | 1 | 0 | 0 | 0 | 0 | 10 |
| SSW | 0 | 0 | 0 | 1 | 0 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 5 |
| 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 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| WNW | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 3 |
| NW | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 3 |
| NNW | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 6 |
| TOTAL | 0 | 0 | 0 | 5 | 11 | 27 | 23 | 2 | 0 | 0 | 0 | 0 | 68 |

NUMBER OF CALMS: 0
 NUMBER OF INVALID HOURS: 0
 NUMBER OF VALID HOURS: 68
 TOTAL HOURS FOR THE PERIOD: 68

RIVER BEND STATION
 JOINT FREQUENCY TABLE
 STABILITY CLASS D

FROM 1/ 1/04 0:00 TO 3/31/04 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 | 6 | 19 | 38 | 37 | 0 | 0 | 0 | 0 | 0 | 101 |
| NNE | 0 | 0 | 1 | 5 | 23 | 32 | 3 | 1 | 0 | 0 | 0 | 0 | 65 |
| NE | 0 | 0 | 0 | 4 | 15 | 20 | 4 | 0 | 0 | 0 | 0 | 0 | 43 |
| ENE | 0 | 0 | 0 | 6 | 3 | 5 | 12 | 0 | 0 | 0 | 0 | 0 | 26 |
| E | 0 | 1 | 1 | 9 | 4 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 20 |
| ESE | 0 | 0 | 2 | 10 | 8 | 12 | 0 | 0 | 0 | 1 | 1 | 0 | 34 |
| SE | 0 | 0 | 2 | 8 | 38 | 49 | 3 | 0 | 0 | 0 | 0 | 0 | 100 |
| SSE | 0 | 0 | 0 | 5 | 2 | 28 | 19 | 9 | 0 | 0 | 0 | 0 | 63 |
| S | 0 | 0 | 0 | 1 | 7 | 28 | 29 | 3 | 0 | 0 | 0 | 0 | 68 |
| SSW | 0 | 0 | 0 | 1 | 4 | 21 | 16 | 0 | 0 | 0 | 0 | 0 | 42 |
| SW | 0 | 0 | 0 | 2 | 9 | 12 | 2 | 0 | 0 | 0 | 0 | 0 | 25 |
| WSW | 0 | 0 | 0 | 1 | 6 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 23 |
| W | 0 | 1 | 1 | 2 | 10 | 12 | 5 | 0 | 0 | 0 | 0 | 0 | 31 |
| WNW | 0 | 0 | 0 | 5 | 4 | 14 | 16 | 0 | 0 | 0 | 0 | 0 | 39 |
| NW | 0 | 1 | 1 | 0 | 6 | 19 | 26 | 0 | 0 | 0 | 0 | 0 | 53 |
| NNW | 0 | 0 | 0 | 3 | 4 | 29 | 41 | 0 | 0 | 0 | 0 | 0 | 77 |
| TOTAL | 0 | 3 | 9 | 68 | 162 | 340 | 213 | 13 | 0 | 1 | 1 | 0 | 810 |

NUMBER OF CALMS: 0
 NUMBER OF INVALID HOURS: 0
 NUMBER OF VALID HOURS: 810
 TOTAL HOURS FOR THE PERIOD: 810

RIVER BEND STATION
 JOINT FREQUENCY TABLE
 STABILITY CLASS E

FROM 1/ 1/04 0:00 TO 3/31/04 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 | 1 | 1 | 14 | 17 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 48 |
| NNE | 0 | 0 | 3 | 23 | 10 | 8 | 1 | 0 | 0 | 0 | 0 | 0 | 45 |
| NE | 0 | 0 | 1 | 9 | 20 | 34 | 2 | 0 | 0 | 0 | 0 | 0 | 66 |
| ENE | 0 | 1 | 2 | 7 | 8 | 13 | 6 | 0 | 0 | 0 | 0 | 0 | 37 |
| E | 0 | 1 | 4 | 7 | 13 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 28 |
| ESE | 0 | 3 | 5 | 7 | 17 | 29 | 2 | 0 | 0 | 0 | 0 | 0 | 63 |
| SE | 0 | 1 | 7 | 48 | 44 | 21 | 2 | 0 | 0 | 0 | 0 | 0 | 123 |
| SSE | 0 | 0 | 3 | 9 | 10 | 13 | 11 | 0 | 0 | 0 | 0 | 0 | 46 |
| S | 0 | 0 | 3 | 8 | 13 | 13 | 3 | 3 | 0 | 0 | 0 | 0 | 43 |
| SSW | 0 | 1 | 2 | 10 | 5 | 6 | 1 | 1 | 0 | 0 | 0 | 0 | 26 |
| SW | 0 | 0 | 4 | 7 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 |
| WSW | 0 | 1 | 2 | 2 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| W | 0 | 2 | 2 | 5 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| WNW | 0 | 2 | 3 | 6 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 13 |
| NW | 0 | 3 | 0 | 12 | 6 | 4 | 2 | 0 | 0 | 0 | 0 | 0 | 27 |
| NNW | 0 | 3 | 1 | 9 | 10 | 7 | 1 | 0 | 0 | 0 | 0 | 0 | 31 |
| TOTAL | 0 | 19 | 43 | 183 | 184 | 167 | 32 | 4 | 0 | 0 | 0 | 0 | 632 |

NUMBER OF CALMS: 0
 NUMBER OF INVALID HOURS: 0
 NUMBER OF VALID HOURS: 632
 TOTAL HOURS FOR THE PERIOD: 632

RIVER BEND STATION
 JOINT FREQUENCY TABLE
 STABILITY CLASS F

FROM 1/ 1/04 0:00 TO 3/31/04 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 | 5 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 |
| NNE | 2 | 0 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| NE | 0 | 2 | 1 | 1 | 5 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 11 |
| ENE | 0 | 1 | 3 | 3 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 12 |
| E | 1 | 10 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 |
| ESE | 0 | 4 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| SE | 0 | 0 | 1 | 5 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| SSE | 0 | 0 | 1 | 4 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| S | 0 | 0 | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| SSW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SW | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| WSW | 1 | 5 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| W | 1 | 6 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 |
| WNW | 3 | 4 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| NW | 1 | 4 | 7 | 6 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 19 |
| NNW | 0 | 1 | 3 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| TOTAL | 9 | 37 | 42 | 42 | 14 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 150 |

NUMBER OF CALMS: 0
 NUMBER OF INVALID HOURS: 0
 NUMBER OF VALID HOURS: 150
 TOTAL HOURS FOR THE PERIOD: 150

RIVER BEND STATION
 JOINT FREQUENCY TABLE
 STABILITY CLASS G

FROM 1/ 1/04 0:00 TO 3/31/04 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 | 8 | 6 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 |
| NNE | 4 | 9 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 |
| NE | 8 | 6 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 |
| ENE | 8 | 24 | 6 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 39 |
| E | 6 | 11 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21 |
| ESE | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| SE | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| SSE | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| S | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| SSW | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| SW | 0 | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| WSW | 3 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| W | 3 | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| WNW | 6 | 10 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22 |
| NW | 1 | 14 | 10 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 26 |
| NNW | 4 | 14 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21 |
| TOTAL | 54 | 102 | 41 | 7 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 206 |

NUMBER OF CALMS: 0
 NUMBER OF INVALID HOURS: 0
 NUMBER OF VALID HOURS: 206
 TOTAL HOURS FOR THE PERIOD: 206

RIVER BEND STATION
 JOINT FREQUENCY TABLE
 ALL STABILITY CLASSES

FROM 1/ 1/04 0:00 TO 3/31/04 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 | 10 | 45 | 103 | 20 | 0 | 0 | 0 | 0 | 182 |
| NNE | 0 | 0 | 0 | 5 | 12 | 49 | 102 | 10 | 1 | 0 | 0 | 0 | 179 |
| NE | 0 | 1 | 0 | 3 | 5 | 33 | 115 | 25 | 2 | 0 | 0 | 0 | 184 |
| ENE | 0 | 0 | 1 | 0 | 6 | 21 | 47 | 37 | 6 | 0 | 0 | 0 | 118 |
| E | 0 | 0 | 2 | 6 | 6 | 22 | 23 | 15 | 4 | 0 | 1 | 0 | 79 |
| ESE | 0 | 0 | 0 | 4 | 6 | 16 | 190 | 73 | 2 | 0 | 1 | 0 | 292 |
| SE | 0 | 0 | 0 | 3 | 3 | 19 | 86 | 21 | 1 | 0 | 0 | 0 | 133 |
| SSE | 0 | 0 | 0 | 6 | 10 | 22 | 76 | 15 | 13 | 0 | 0 | 0 | 142 |
| S | 0 | 0 | 1 | 1 | 6 | 31 | 81 | 19 | 8 | 0 | 0 | 0 | 147 |
| SSW | 1 | 0 | 1 | 8 | 5 | 31 | 40 | 15 | 0 | 0 | 0 | 0 | 101 |
| SW | 0 | 1 | 0 | 3 | 5 | 31 | 18 | 2 | 0 | 0 | 0 | 0 | 60 |
| WSW | 0 | 0 | 0 | 4 | 7 | 39 | 28 | 0 | 0 | 0 | 0 | 0 | 78 |
| W | 0 | 1 | 0 | 6 | 7 | 29 | 43 | 3 | 0 | 0 | 0 | 0 | 89 |
| WNW | 0 | 0 | 1 | 3 | 8 | 15 | 28 | 14 | 2 | 0 | 0 | 0 | 71 |
| NW | 0 | 0 | 1 | 1 | 7 | 32 | 56 | 23 | 3 | 0 | 0 | 0 | 123 |
| NNW | 0 | 0 | 0 | 1 | 2 | 19 | 85 | 18 | 0 | 0 | 0 | 0 | 125 |
| TOTAL | 1 | 3 | 7 | 58 | 105 | 454 | 1121 | 310 | 42 | 0 | 2 | 0 | 2103 |

NUMBER OF CALMS: 0
 NUMBER OF INVALID HOURS: 81
 NUMBER OF VALID HOURS: 2103
 TOTAL HOURS FOR THE PERIOD: 2184

RIVER BEND STATION
 JOINT FREQUENCY TABLE
 STABILITY CLASS A

FROM 1/ 1/04 0:00 TO 3/31/04 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 | 0 | 6 | 4 | 0 | 0 | 0 | 0 | 10 |
| NNE | 0 | 0 | 0 | 0 | 1 | 0 | 5 | 4 | 0 | 0 | 0 | 0 | 10 |
| NE | 0 | 0 | 0 | 0 | 0 | 2 | 16 | 4 | 0 | 0 | 0 | 0 | 22 |
| ENE | 0 | 0 | 0 | 0 | 0 | 5 | 3 | 3 | 0 | 0 | 0 | 0 | 11 |
| E | 0 | 0 | 0 | 0 | 0 | 1 | 5 | 2 | 1 | 0 | 0 | 0 | 9 |
| ESE | 0 | 0 | 0 | 0 | 0 | 1 | 27 | 6 | 0 | 0 | 0 | 0 | 34 |
| SE | 0 | 0 | 0 | 0 | 0 | 1 | 8 | 2 | 0 | 0 | 0 | 0 | 11 |
| SSE | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 3 |
| S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SSW | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| SW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WSW | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 |
| W | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| WNW | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 4 |
| NW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 5 |
| NNW | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 3 |
| TOTAL | 0 | 0 | 0 | 0 | 1 | 11 | 81 | 32 | 1 | 0 | 0 | 0 | 126 |

NUMBER OF CALMS: 0
 NUMBER OF INVALID HOURS: 0
 NUMBER OF VALID HOURS: 126
 TOTAL HOURS FOR THE PERIOD: 126

RIVER BEND STATION
 JOINT FREQUENCY TABLE
 STABILITY CLASS B

FROM 1/ 1/04 0:00 TO 3/31/04 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 | 3 | 6 | 3 | 0 | 0 | 0 | 0 | 12 |
| NNE | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | 5 |
| NE | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 8 |
| ENE | 0 | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 0 | 0 | 0 | 0 | 6 |
| E | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| ESE | 0 | 0 | 0 | 0 | 0 | 2 | 7 | 0 | 0 | 0 | 0 | 0 | 9 |
| SE | 0 | 0 | 0 | 1 | 0 | 1 | 7 | 3 | 0 | 0 | 0 | 0 | 12 |
| SSE | 0 | 0 | 0 | 1 | 0 | 0 | 3 | 1 | 2 | 0 | 0 | 0 | 7 |
| S | 0 | 0 | 0 | 0 | 0 | 3 | 5 | 4 | 1 | 0 | 0 | 0 | 13 |
| SSW | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| SW | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 3 |
| WSW | 0 | 0 | 0 | 0 | 0 | 2 | 4 | 0 | 0 | 0 | 0 | 0 | 6 |
| W | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 3 |
| WNW | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 4 |
| NW | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 5 | 0 | 0 | 0 | 0 | 10 |
| NNW | 0 | 0 | 0 | 0 | 0 | 2 | 4 | 4 | 0 | 0 | 0 | 0 | 10 |
| TOTAL | 0 | 0 | 0 | 2 | 1 | 25 | 57 | 23 | 3 | 0 | 0 | 0 | 111 |

NUMBER OF CALMS: 0
 NUMBER OF INVALID HOURS: 0
 NUMBER OF VALID HOURS: 111
 TOTAL HOURS FOR THE PERIOD: 111

RIVER BEND STATION
 JOINT FREQUENCY TABLE
 STABILITY CLASS C

FROM 1/ 1/04 0:00 TO 3/31/04 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 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 4 |
| NNE | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 4 |
| NE | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 3 |
| ENE | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| E | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 3 |
| ESE | 0 | 0 | 0 | 0 | 1 | 3 | 4 | 0 | 0 | 0 | 0 | 0 | 8 |
| SE | 0 | 0 | 0 | 0 | 0 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 5 |
| SSE | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 2 | 1 | 0 | 0 | 0 | 7 |
| S | 0 | 0 | 0 | 0 | 2 | 1 | 2 | 4 | 0 | 0 | 0 | 0 | 9 |
| SSW | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 5 |
| SW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WSW | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 6 |
| W | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 4 |
| WNW | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| NW | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 3 |
| NNW | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 2 | 0 | 0 | 0 | 0 | 5 |
| TOTAL | 0 | 0 | 0 | 2 | 5 | 12 | 33 | 15 | 1 | 0 | 0 | 0 | 68 |

NUMBER OF CALMS: 0
 NUMBER OF INVALID HOURS: 0
 NUMBER OF VALID HOURS: 68
 TOTAL HOURS FOR THE PERIOD: 68

RIVER BEND STATION
 JOINT FREQUENCY TABLE
 STABILITY CLASS D

FROM 1/ 1/04 0:00 TO 3/31/04 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 | 5 | 18 | 45 | 11 | 0 | 0 | 0 | 0 | 79 |
| NNE | 0 | 0 | 0 | 1 | 6 | 13 | 52 | 2 | 1 | 0 | 0 | 0 | 75 |
| NE | 0 | 0 | 0 | 2 | 1 | 9 | 31 | 8 | 1 | 0 | 0 | 0 | 52 |
| ENE | 0 | 0 | 0 | 0 | 3 | 6 | 9 | 9 | 5 | 0 | 0 | 0 | 32 |
| E | 0 | 0 | 0 | 4 | 3 | 4 | 3 | 3 | 0 | 0 | 1 | 0 | 18 |
| ESE | 0 | 0 | 0 | 2 | 1 | 1 | 47 | 23 | 0 | 0 | 1 | 0 | 75 |
| SE | 0 | 0 | 0 | 1 | 1 | 7 | 43 | 9 | 0 | 0 | 0 | 0 | 61 |
| SSE | 0 | 0 | 0 | 2 | 2 | 5 | 36 | 9 | 9 | 0 | 0 | 0 | 63 |
| S | 0 | 0 | 0 | 0 | 0 | 7 | 40 | 8 | 3 | 0 | 0 | 0 | 58 |
| SSW | 0 | 0 | 1 | 0 | 0 | 13 | 19 | 13 | 0 | 0 | 0 | 0 | 46 |
| SW | 0 | 0 | 0 | 1 | 0 | 12 | 9 | 2 | 0 | 0 | 0 | 0 | 24 |
| WSW | 0 | 0 | 0 | 0 | 1 | 13 | 12 | 0 | 0 | 0 | 0 | 0 | 26 |
| W | 0 | 0 | 0 | 1 | 1 | 12 | 23 | 3 | 0 | 0 | 0 | 0 | 40 |
| WNW | 0 | 0 | 1 | 2 | 1 | 3 | 20 | 10 | 2 | 0 | 0 | 0 | 39 |
| NW | 0 | 0 | 0 | 1 | 1 | 7 | 35 | 11 | 2 | 0 | 0 | 0 | 57 |
| NNW | 0 | 0 | 0 | 0 | 0 | 3 | 50 | 12 | 0 | 0 | 0 | 0 | 65 |
| TOTAL | 0 | 0 | 2 | 17 | 26 | 133 | 474 | 133 | 23 | 0 | 2 | 0 | 810 |

NUMBER OF CALMS: 0
 NUMBER OF INVALID HOURS: 0
 NUMBER OF VALID HOURS: 810
 TOTAL HOURS FOR THE PERIOD: 810

RIVER BEND STATION
 JOINT FREQUENCY TABLE
 STABILITY CLASS E

FROM 1/ 1/04 0:00 TO 3/31/04 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 | 13 | 37 | 0 | 0 | 0 | 0 | 0 | 52 |
| NNE | 0 | 0 | 0 | 0 | 0 | 16 | 34 | 1 | 0 | 0 | 0 | 0 | 51 |
| NE | 0 | 0 | 0 | 1 | 2 | 10 | 45 | 11 | 1 | 0 | 0 | 0 | 70 |
| ENE | 0 | 0 | 0 | 0 | 2 | 3 | 20 | 22 | 1 | 0 | 0 | 0 | 48 |
| E | 0 | 0 | 0 | 0 | 1 | 6 | 11 | 9 | 3 | 0 | 0 | 0 | 30 |
| ESE | 0 | 0 | 0 | 0 | 1 | 5 | 91 | 41 | 2 | 0 | 0 | 0 | 140 |
| SE | 0 | 0 | 0 | 0 | 0 | 1 | 23 | 7 | 1 | 0 | 0 | 0 | 32 |
| SSE | 0 | 0 | 0 | 1 | 0 | 4 | 28 | 3 | 1 | 0 | 0 | 0 | 37 |
| S | 0 | 0 | 1 | 0 | 0 | 10 | 28 | 3 | 4 | 0 | 0 | 0 | 46 |
| SSW | 0 | 0 | 0 | 3 | 2 | 7 | 16 | 0 | 0 | 0 | 0 | 0 | 28 |
| SW | 0 | 0 | 0 | 1 | 3 | 9 | 6 | 0 | 0 | 0 | 0 | 0 | 19 |
| WSW | 0 | 0 | 0 | 1 | 2 | 3 | 4 | 0 | 0 | 0 | 0 | 0 | 10 |
| W | 0 | 0 | 0 | 3 | 3 | 7 | 6 | 0 | 0 | 0 | 0 | 0 | 19 |
| WNW | 0 | 0 | 0 | 1 | 2 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 9 |
| NW | 0 | 0 | 0 | 0 | 0 | 9 | 9 | 1 | 1 | 0 | 0 | 0 | 20 |
| NNW | 0 | 0 | 0 | 0 | 0 | 6 | 15 | 0 | 0 | 0 | 0 | 0 | 21 |
| TOTAL | 0 | 0 | 1 | 11 | 20 | 111 | 375 | 100 | 14 | 0 | 0 | 0 | 632 |

NUMBER OF CALMS: 0
 NUMBER OF INVALID HOURS: 0
 NUMBER OF VALID HOURS: 632
 TOTAL HOURS FOR THE PERIOD: 632

RIVER BEND STATION
JOINT FREQUENCY TABLE
STABILITY CLASS F

FROM 1/ 1/04 0:00 TO 3/31/04 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 | 5 | 6 | 0 | 0 | 0 | 0 | 0 | 14 |
| NNE | 0 | 0 | 0 | 1 | 1 | 4 | 5 | 0 | 0 | 0 | 0 | 0 | 11 |
| NE | 0 | 0 | 0 | 0 | 1 | 5 | 10 | 2 | 0 | 0 | 0 | 0 | 18 |
| ENE | 0 | 0 | 0 | 0 | 0 | 1 | 9 | 2 | 0 | 0 | 0 | 0 | 12 |
| E | 0 | 0 | 0 | 0 | 1 | 5 | 4 | 0 | 0 | 0 | 0 | 0 | 10 |
| ESE | 0 | 0 | 0 | 0 | 0 | 1 | 12 | 3 | 0 | 0 | 0 | 0 | 16 |
| SE | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| SSE | 0 | 0 | 0 | 0 | 4 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 8 |
| S | 0 | 0 | 0 | 1 | 0 | 5 | 2 | 0 | 0 | 0 | 0 | 0 | 8 |
| SSW | 0 | 0 | 0 | 0 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| SW | 0 | 0 | 0 | 0 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| WSW | 0 | 0 | 0 | 0 | 1 | 5 | 2 | 0 | 0 | 0 | 0 | 0 | 8 |
| W | 0 | 0 | 0 | 0 | 1 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 6 |
| WNW | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| NW | 0 | 0 | 0 | 0 | 0 | 6 | 4 | 0 | 0 | 0 | 0 | 0 | 10 |
| NNW | 0 | 0 | 0 | 0 | 1 | 3 | 6 | 0 | 0 | 0 | 0 | 0 | 10 |
| TOTAL | 0 | 0 | 0 | 5 | 13 | 61 | 64 | 7 | 0 | 0 | 0 | 0 | 150 |

NUMBER OF CALMS: 0
NUMBER OF INVALID HOURS: 0
NUMBER OF VALID HOURS: 150
TOTAL HOURS FOR THE PERIOD: 150

RIVER BEND STATION
 JOINT FREQUENCY TABLE
 STABILITY CLASS G

FROM 1/ 1/04 0:00 TO 3/31/04 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 | 2 | 6 | 1 | 0 | 0 | 0 | 0 | 0 | 11 |
| NNE | 0 | 0 | 0 | 3 | 4 | 14 | 2 | 0 | 0 | 0 | 0 | 0 | 23 |
| NE | 0 | 1 | 0 | 0 | 1 | 3 | 6 | 0 | 0 | 0 | 0 | 0 | 11 |
| ENE | 0 | 0 | 1 | 0 | 1 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 8 |
| E | 0 | 0 | 2 | 1 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| ESE | 0 | 0 | 0 | 2 | 3 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 10 |
| SE | 0 | 0 | 0 | 0 | 2 | 7 | 1 | 0 | 0 | 0 | 0 | 0 | 10 |
| SSE | 0 | 0 | 0 | 2 | 3 | 9 | 3 | 0 | 0 | 0 | 0 | 0 | 17 |
| S | 0 | 0 | 0 | 0 | 4 | 5 | 4 | 0 | 0 | 0 | 0 | 0 | 13 |
| SSW | 1 | 0 | 0 | 4 | 2 | 7 | 1 | 0 | 0 | 0 | 0 | 0 | 15 |
| SW | 0 | 1 | 0 | 1 | 1 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 9 |
| WSW | 0 | 0 | 0 | 3 | 3 | 13 | 1 | 0 | 0 | 0 | 0 | 0 | 20 |
| W | 0 | 1 | 0 | 2 | 2 | 5 | 6 | 0 | 0 | 0 | 0 | 0 | 16 |
| WNW | 0 | 0 | 0 | 0 | 5 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| NW | 0 | 0 | 1 | 0 | 5 | 10 | 2 | 0 | 0 | 0 | 0 | 0 | 18 |
| NNW | 0 | 0 | 0 | 1 | 1 | 5 | 4 | 0 | 0 | 0 | 0 | 0 | 11 |
| TOTAL | 1 | 3 | 4 | 21 | 39 | 101 | 37 | 0 | 0 | 0 | 0 | 0 | 206 |

NUMBER OF CALMS: 0
 NUMBER OF INVALID HOURS: 0
 NUMBER OF VALID HOURS: 206
 TOTAL HOURS FOR THE PERIOD: 206

RIVER BEND STATION
 JOINT FREQUENCY TABLE
 ALL STABILITY CLASSES

FROM 4/ 1/04 0:00 TO 6/30/04 23:00

PRIMARY SENSORS - 30 FOOT

WIND SPEED (METERS/SECOND)

| WIND DIR | .22- | .51- | .76- | 1.1- | 1.6- | 2.1- | 3.1- | 5.1- | 7.1- | 10.1- | 13.1- | >18 | TOT. |
|----------|------|------|------|------|------|------|------|------|------|-------|-------|-----|------|
| | .50 | .75 | 1.0 | 1.5 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | 13.0 | 18.0 | | |
| N | 29 | 7 | 5 | 21 | 19 | 23 | 14 | 1 | 0 | 0 | 0 | 0 | 119 |
| NNE | 23 | 9 | 14 | 27 | 10 | 13 | 2 | 0 | 0 | 0 | 0 | 0 | 98 |
| NE | 25 | 6 | 6 | 13 | 18 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 78 |
| ENE | 16 | 14 | 14 | 18 | 16 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 83 |
| E | 6 | 17 | 14 | 13 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 58 |
| ESE | 10 | 35 | 29 | 29 | 17 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 123 |
| SE | 7 | 21 | 57 | 103 | 74 | 42 | 5 | 0 | 0 | 0 | 0 | 0 | 309 |
| SSE | 5 | 13 | 18 | 73 | 59 | 107 | 53 | 2 | 0 | 0 | 0 | 0 | 330 |
| S | 1 | 5 | 7 | 50 | 52 | 115 | 108 | 2 | 0 | 0 | 0 | 0 | 340 |
| SSW | 1 | 9 | 10 | 23 | 24 | 47 | 21 | 0 | 0 | 0 | 0 | 0 | 135 |
| SW | 4 | 5 | 5 | 12 | 16 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 59 |
| WSW | 2 | 5 | 5 | 17 | 15 | 10 | 1 | 0 | 0 | 0 | 0 | 0 | 55 |
| W | 7 | 7 | 6 | 13 | 6 | 8 | 1 | 0 | 0 | 0 | 0 | 0 | 48 |
| WNW | 9 | 11 | 5 | 14 | 16 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 65 |
| NW | 6 | 17 | 10 | 13 | 16 | 23 | 14 | 0 | 0 | 0 | 0 | 0 | 99 |
| NNW | 13 | 20 | 6 | 23 | 23 | 29 | 26 | 0 | 0 | 0 | 0 | 0 | 140 |
| TOTAL | 164 | 201 | 211 | 462 | 389 | 462 | 245 | 5 | 0 | 0 | 0 | 0 | 2139 |

NUMBER OF CALMS: 8
 NUMBER OF INVALID HOURS: 37
 NUMBER OF VALID HOURS: 2147
 TOTAL HOURS FOR THE PERIOD: 2184

RIVER BEND STATION
 JOINT FREQUENCY TABLE
 STABILITY CLASS A

FROM 4/ 1/04 0:00 TO 6/30/04 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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NNE | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| NE | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| ENE | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| E | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ESE | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| SE | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 2 |
| SSE | 0 | 0 | 0 | 0 | 1 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 5 |
| S | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| SSW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WSW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| W | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WNW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NNW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL | 0 | 0 | 0 | 0 | 3 | 6 | 5 | 0 | 0 | 0 | 0 | 0 | 14 |

NUMBER OF CALMS: 0
 NUMBER OF INVALID HOURS: 0
 NUMBER OF VALID HOURS: 14
 TOTAL HOURS FOR THE PERIOD: 14

RIVER BEND STATION
 JOINT FREQUENCY TABLE
 STABILITY CLASS B

FROM 4/ 1/04 0:00 TO 6/30/04 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 | 1 | 5 | 0 | 0 | 0 | 0 | 0 | 6 |
| NNE | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| NE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ENE | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| E | 0 | 0 | 0 | 0 | 3 | 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 | 0 | 1 | 6 | 3 | 0 | 0 | 0 | 0 | 0 | 10 |
| SSE | 0 | 0 | 0 | 0 | 0 | 2 | 5 | 1 | 0 | 0 | 0 | 0 | 8 |
| S | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 2 | 0 | 0 | 0 | 0 | 9 |
| SSW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WSW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| W | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WNW | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| NW | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 4 |
| NNW | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 4 |
| TOTAL | 0 | 0 | 0 | 0 | 5 | 12 | 28 | 3 | 0 | 0 | 0 | 0 | 48 |

NUMBER OF CALMS: 0
 NUMBER OF INVALID HOURS: 0
 NUMBER OF VALID HOURS: 48
 TOTAL HOURS FOR THE PERIOD: 48

RIVER BEND STATION
 JOINT FREQUENCY TABLE
 STABILITY CLASS C

FROM 4/ 1/04 0:00 TO 6/30/04 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 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 3 |
| NNE | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| NE | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| ENE | 0 | 0 | 0 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| E | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ESE | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| SE | 0 | 0 | 0 | 0 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| SSE | 0 | 0 | 0 | 0 | 0 | 4 | 10 | 0 | 0 | 0 | 0 | 0 | 14 |
| S | 0 | 0 | 0 | 0 | 0 | 2 | 17 | 0 | 0 | 0 | 0 | 0 | 19 |
| SSW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WSW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| W | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WNW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NNW | 0 | 0 | 0 | 0 | 1 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 6 |
| TOTAL | 0 | 0 | 0 | 2 | 8 | 14 | 33 | 0 | 0 | 0 | 0 | 0 | 57 |

NUMBER OF CALMS: 0
 NUMBER OF INVALID HOURS: 0
 NUMBER OF VALID HOURS: 57
 TOTAL HOURS FOR THE PERIOD: 57

RIVER BEND STATION
 JOINT FREQUENCY TABLE
 STABILITY CLASS D

FROM 4/ 1/04 0:00 TO 6/30/04 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 | 10 | 13 | 21 | 7 | 1 | 0 | 0 | 0 | 0 | 54 |
| NNE | 0 | 0 | 3 | 11 | 9 | 8 | 2 | 0 | 0 | 0 | 0 | 0 | 33 |
| NE | 0 | 1 | 0 | 6 | 6 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 16 |
| ENE | 0 | 0 | 4 | 9 | 8 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 22 |
| E | 0 | 0 | 4 | 4 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| ESE | 0 | 1 | 2 | 13 | 10 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 27 |
| SE | 0 | 0 | 3 | 28 | 41 | 26 | 1 | 0 | 0 | 0 | 0 | 0 | 99 |
| SSE | 0 | 0 | 1 | 17 | 25 | 74 | 33 | 1 | 0 | 0 | 0 | 0 | 151 |
| S | 0 | 0 | 0 | 7 | 15 | 82 | 77 | 0 | 0 | 0 | 0 | 0 | 181 |
| SSW | 0 | 2 | 0 | 5 | 15 | 40 | 19 | 0 | 0 | 0 | 0 | 0 | 81 |
| SW | 2 | 0 | 0 | 4 | 12 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 33 |
| WSW | 0 | 0 | 0 | 7 | 9 | 9 | 1 | 0 | 0 | 0 | 0 | 0 | 26 |
| W | 0 | 0 | 1 | 7 | 5 | 7 | 1 | 0 | 0 | 0 | 0 | 0 | 21 |
| WNW | 0 | 0 | 1 | 11 | 13 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 33 |
| NW | 0 | 0 | 1 | 6 | 15 | 22 | 10 | 0 | 0 | 0 | 0 | 0 | 54 |
| NNW | 0 | 0 | 2 | 6 | 20 | 28 | 17 | 0 | 0 | 0 | 0 | 0 | 73 |
| TOTAL | 2 | 4 | 24 | 151 | 218 | 345 | 168 | 2 | 0 | 0 | 0 | 0 | 914 |

NUMBER OF CALMS: 0
 NUMBER OF INVALID HOURS: 0
 NUMBER OF VALID HOURS: 914
 TOTAL HOURS FOR THE PERIOD: 914

RIVER BEND STATION
 JOINT FREQUENCY TABLE
 STABILITY CLASS E
 FROM 4/ 1/04 0:00 TO 6/30/04 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 | 4 | 0 | 3 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| NNE | 3 | 3 | 7 | 8 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 24 |
| NE | 1 | 2 | 2 | 0 | 11 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 21 |
| ENE | 2 | 7 | 6 | 6 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 25 |
| E | 0 | 5 | 7 | 7 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22 |
| ESE | 4 | 18 | 18 | 15 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 59 |
| SE | 1 | 13 | 48 | 70 | 30 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 167 |
| SSE | 1 | 8 | 11 | 49 | 27 | 26 | 2 | 0 | 0 | 0 | 0 | 0 | 124 |
| S | 1 | 3 | 2 | 35 | 37 | 31 | 6 | 0 | 0 | 0 | 0 | 0 | 115 |
| SSW | 1 | 4 | 5 | 15 | 9 | 7 | 2 | 0 | 0 | 0 | 0 | 0 | 43 |
| SW | 0 | 4 | 3 | 7 | 4 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 20 |
| WSW | 0 | 3 | 3 | 10 | 6 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 23 |
| W | 0 | 0 | 2 | 5 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| WNW | 0 | 1 | 1 | 3 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| NW | 1 | 2 | 5 | 7 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 17 |
| NNW | 0 | 2 | 1 | 9 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 15 |
| TOTAL | 15 | 79 | 121 | 249 | 147 | 84 | 11 | 0 | 0 | 0 | 0 | 0 | 706 |

NUMBER OF CALMS: 0
 NUMBER OF INVALID HOURS: 0
 NUMBER OF VALID HOURS: 706
 TOTAL HOURS FOR THE PERIOD: 706

RIVER BEND STATION
 JOINT FREQUENCY TABLE
 STABILITY CLASS F

FROM 4/ 1/04 0:00 TO 6/30/04 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 | 7 | 1 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 |
| NNE | 3 | 3 | 4 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 |
| NE | 3 | 1 | 3 | 6 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 |
| ENE | 3 | 2 | 1 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| E | 5 | 10 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18 |
| ESE | 4 | 12 | 7 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 24 |
| SE | 2 | 7 | 3 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18 |
| SSE | 4 | 2 | 6 | 5 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 23 |
| S | 0 | 2 | 4 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 |
| SSW | 0 | 0 | 4 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| SW | 2 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| WSW | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| W | 6 | 4 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| WNW | 7 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| NW | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| NNW | 6 | 6 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 |
| TOTAL | 54 | 54 | 41 | 46 | 8 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 204 |

NUMBER OF CALMS: 2
 NUMBER OF INVALID HOURS: 0
 NUMBER OF VALID HOURS: 206
 TOTAL HOURS FOR THE PERIOD: 206

RIVER BEND STATION
JOINT FREQUENCY TABLE
STABILITY CLASS G

FROM 4/ 1/04 0:00 TO 6/30/04 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 | 2 | 2 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 31 |
| NNE | 17 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21 |
| NE | 21 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 24 |
| ENE | 11 | 5 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 19 |
| E | 1 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| ESE | 2 | 4 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| SE | 4 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| SSE | 0 | 3 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| S | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| SSW | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| SW | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| WSW | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| W | 1 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| WNW | 2 | 9 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| NW | 4 | 13 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21 |
| NNW | 7 | 12 | 3 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 27 |
| TOTAL | 93 | 64 | 25 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 196 |

NUMBER OF CALMS: 6
NUMBER OF INVALID HOURS: 0
NUMBER OF VALID HOURS: 202
TOTAL HOURS FOR THE PERIOD: 202

RIVER BEND STATION
JOINT FREQUENCY TABLE
ALL STABILITY CLASSES

FROM 4/ 1/04 0:00 TO 6/30/04 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 | 9 | 3 | 31 | 40 | 5 | 1 | 0 | 0 | 0 | 90 |
| NNE | 0 | 1 | 1 | 9 | 4 | 21 | 32 | 1 | 0 | 0 | 0 | 0 | 69 |
| NE | 0 | 1 | 3 | 7 | 5 | 19 | 28 | 5 | 0 | 0 | 0 | 0 | 68 |
| ENE | 0 | 0 | 4 | 7 | 14 | 26 | 48 | 12 | 0 | 0 | 0 | 0 | 111 |
| E | 0 | 0 | 3 | 7 | 19 | 31 | 20 | 1 | 0 | 0 | 0 | 0 | 81 |
| ESE | 0 | 2 | 0 | 4 | 15 | 80 | 180 | 9 | 0 | 0 | 0 | 0 | 290 |
| SE | 0 | 2 | 0 | 12 | 18 | 61 | 142 | 10 | 1 | 0 | 0 | 0 | 246 |
| SSE | 0 | 0 | 0 | 13 | 17 | 92 | 117 | 29 | 2 | 0 | 0 | 0 | 270 |
| S | 0 | 0 | 0 | 5 | 22 | 101 | 179 | 47 | 0 | 0 | 0 | 0 | 354 |
| SSW | 0 | 2 | 2 | 5 | 12 | 58 | 98 | 4 | 0 | 0 | 0 | 0 | 181 |
| SW | 0 | 0 | 0 | 7 | 10 | 26 | 15 | 1 | 0 | 0 | 0 | 0 | 59 |
| WSW | 0 | 0 | 0 | 3 | 10 | 32 | 6 | 2 | 0 | 0 | 0 | 0 | 53 |
| W | 0 | 0 | 0 | 1 | 14 | 26 | 3 | 1 | 0 | 0 | 0 | 0 | 45 |
| WNW | 0 | 1 | 0 | 5 | 10 | 19 | 16 | 5 | 0 | 0 | 0 | 0 | 56 |
| NW | 0 | 1 | 0 | 4 | 6 | 22 | 41 | 8 | 0 | 0 | 0 | 0 | 82 |
| NNW | 0 | 0 | 0 | 10 | 9 | 23 | 40 | 10 | 0 | 0 | 0 | 0 | 92 |
| TOTAL | 0 | 10 | 14 | 108 | 188 | 668 | 1005 | 150 | 4 | 0 | 0 | 0 | 2147 |

NUMBER OF CALMS: 0
NUMBER OF INVALID HOURS: 37
NUMBER OF VALID HOURS: 2147
TOTAL HOURS FOR THE PERIOD: 2184

RIVER BEND STATION
 JOINT FREQUENCY TABLE
 STABILITY CLASS A

FROM 4/ 1/04 0:00 TO 6/30/04 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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NNE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NE | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 |
| ENE | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 |
| E | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ESE | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 4 |
| SE | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 2 |
| SSE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 3 |
| S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| SSW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WSW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| W | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WNW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NNW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL | 0 | 0 | 0 | 0 | 0 | 1 | 7 | 6 | 0 | 0 | 0 | 0 | 14 |

NUMBER OF CALMS: 0
 NUMBER OF INVALID HOURS: 0
 NUMBER OF VALID HOURS: 14
 TOTAL HOURS FOR THE PERIOD: 14

RIVER BEND STATION
JOINT FREQUENCY TABLE
STABILITY CLASS B

FROM 4/ 1/04 0:00 TO 6/30/04 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 | 0 | 2 | 3 | 0 | 0 | 0 | 0 | 5 |
| NNE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NE | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| ENE | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 3 |
| E | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 |
| ESE | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 4 |
| SE | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 4 | 0 | 0 | 0 | 0 | 10 |
| SSE | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 1 | 0 | 0 | 0 | 4 |
| S | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 7 | 0 | 0 | 0 | 0 | 9 |
| SSW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WSW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| W | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WNW | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 3 |
| NW | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 2 |
| NNW | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 0 | 0 | 0 | 0 | 5 |
| TOTAL | 0 | 0 | 0 | 0 | 0 | 1 | 22 | 24 | 1 | 0 | 0 | 0 | 48 |

NUMBER OF CALMS: 0
NUMBER OF INVALID HOURS: 0
NUMBER OF VALID HOURS: 48
TOTAL HOURS FOR THE PERIOD: 48

RIVER BEND STATION
 JOINT FREQUENCY TABLE
 STABILITY CLASS C

FROM 4/ 1/04 0:00 TO 6/30/04 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 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 |
| NNE | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 3 |
| NE | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 2 |
| ENE | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 4 |
| E | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| ESE | 0 | 0 | 0 | 0 | 0 | 2 | 4 | 1 | 0 | 0 | 0 | 0 | 7 |
| SE | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 1 | 0 | 0 | 0 | 0 | 5 |
| SSE | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 4 | 0 | 0 | 0 | 0 | 11 |
| S | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 4 | 0 | 0 | 0 | 0 | 17 |
| SSW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WSW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| W | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WNW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NNW | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 5 |
| TOTAL | 0 | 0 | 0 | 0 | 2 | 4 | 39 | 12 | 0 | 0 | 0 | 0 | 57 |

NUMBER OF CALMS: 0
 NUMBER OF INVALID HOURS: 0
 NUMBER OF VALID HOURS: 57
 TOTAL HOURS FOR THE PERIOD: 57

RIVER BEND STATION
 JOINT FREQUENCY TABLE
 STABILITY CLASS D

FROM 4/ 1/04 0:00 TO 6/30/04 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 | 1 | 17 | 20 | 2 | 1 | 0 | 0 | 0 | 47 |
| NNE | 0 | 0 | 0 | 6 | 2 | 13 | 16 | 1 | 0 | 0 | 0 | 0 | 38 |
| NE | 0 | 0 | 0 | 2 | 3 | 8 | 5 | 3 | 0 | 0 | 0 | 0 | 21 |
| ENE | 0 | 0 | 1 | 1 | 2 | 10 | 17 | 2 | 0 | 0 | 0 | 0 | 33 |
| E | 0 | 0 | 1 | 3 | 5 | 9 | 5 | 0 | 0 | 0 | 0 | 0 | 23 |
| ESE | 0 | 0 | 0 | 0 | 2 | 23 | 40 | 3 | 0 | 0 | 0 | 0 | 68 |
| SE | 0 | 0 | 0 | 1 | 6 | 24 | 54 | 5 | 1 | 0 | 0 | 0 | 91 |
| SSE | 0 | 0 | 0 | 2 | 5 | 31 | 62 | 18 | 1 | 0 | 0 | 0 | 119 |
| S | 0 | 0 | 0 | 1 | 8 | 29 | 90 | 32 | 0 | 0 | 0 | 0 | 160 |
| SSW | 0 | 1 | 1 | 3 | 4 | 21 | 55 | 3 | 0 | 0 | 0 | 0 | 88 |
| SW | 0 | 0 | 0 | 0 | 3 | 12 | 9 | 0 | 0 | 0 | 0 | 0 | 24 |
| WSW | 0 | 0 | 0 | 0 | 5 | 20 | 5 | 2 | 0 | 0 | 0 | 0 | 32 |
| W | 0 | 0 | 0 | 0 | 6 | 15 | 2 | 1 | 0 | 0 | 0 | 0 | 24 |
| WNW | 0 | 0 | 0 | 3 | 3 | 12 | 8 | 3 | 0 | 0 | 0 | 0 | 29 |
| NW | 0 | 1 | 0 | 1 | 5 | 17 | 31 | 7 | 0 | 0 | 0 | 0 | 62 |
| NNW | 0 | 0 | 0 | 1 | 4 | 14 | 32 | 4 | 0 | 0 | 0 | 0 | 55 |
| TOTAL | 0 | 2 | 3 | 30 | 64 | 275 | 451 | 86 | 3 | 0 | 0 | 0 | 914 |

NUMBER OF CALMS: 0
 NUMBER OF INVALID HOURS: 0
 NUMBER OF VALID HOURS: 914
 TOTAL HOURS FOR THE PERIOD: 914

RIVER BEND STATION
 JOINT FREQUENCY TABLE
 STABILITY CLASS E

FROM 4/ 1/04 0:00 TO 6/30/04 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 | 0 | 6 | 3 | 0 | 0 | 0 | 0 | 0 | 12 |
| NNE | 0 | 1 | 1 | 1 | 2 | 2 | 4 | 0 | 0 | 0 | 0 | 0 | 11 |
| NE | 0 | 0 | 2 | 3 | 1 | 2 | 9 | 2 | 0 | 0 | 0 | 0 | 19 |
| ENE | 0 | 0 | 1 | 1 | 8 | 4 | 11 | 8 | 0 | 0 | 0 | 0 | 33 |
| E | 0 | 0 | 0 | 3 | 8 | 11 | 8 | 1 | 0 | 0 | 0 | 0 | 31 |
| ESE | 0 | 0 | 0 | 3 | 7 | 39 | 108 | 2 | 0 | 0 | 0 | 0 | 159 |
| SE | 0 | 2 | 0 | 6 | 9 | 25 | 55 | 0 | 0 | 0 | 0 | 0 | 97 |
| SSE | 0 | 0 | 0 | 5 | 5 | 42 | 39 | 2 | 0 | 0 | 0 | 0 | 93 |
| S | 0 | 0 | 0 | 1 | 6 | 32 | 66 | 3 | 0 | 0 | 0 | 0 | 108 |
| SSW | 0 | 0 | 1 | 1 | 5 | 18 | 35 | 1 | 0 | 0 | 0 | 0 | 61 |
| SW | 0 | 0 | 0 | 5 | 6 | 6 | 6 | 1 | 0 | 0 | 0 | 0 | 24 |
| WSW | 0 | 0 | 0 | 3 | 4 | 7 | 1 | 0 | 0 | 0 | 0 | 0 | 15 |
| W | 0 | 0 | 0 | 1 | 6 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 11 |
| WNW | 0 | 0 | 0 | 0 | 4 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 8 |
| NW | 0 | 0 | 0 | 3 | 0 | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 8 |
| NNW | 0 | 0 | 0 | 5 | 3 | 4 | 3 | 1 | 0 | 0 | 0 | 0 | 16 |
| TOTAL | 0 | 3 | 5 | 44 | 74 | 205 | 354 | 21 | 0 | 0 | 0 | 0 | 706 |

NUMBER OF CALMS: 0
 NUMBER OF INVALID HOURS: 0
 NUMBER OF VALID HOURS: 706
 TOTAL HOURS FOR THE PERIOD: 706

RIVER BEND STATION
 JOINT FREQUENCY TABLE
 STABILITY CLASS F

FROM 4/ 1/04 0:00 TO 6/30/04 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 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 4 |
| NNE | 0 | 0 | 0 | 1 | 0 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 6 |
| NE | 0 | 1 | 1 | 0 | 0 | 3 | 6 | 0 | 0 | 0 | 0 | 0 | 11 |
| ENE | 0 | 0 | 1 | 2 | 2 | 4 | 12 | 0 | 0 | 0 | 0 | 0 | 21 |
| E | 0 | 0 | 0 | 1 | 4 | 4 | 2 | 0 | 0 | 0 | 0 | 0 | 11 |
| ESE | 0 | 1 | 0 | 0 | 5 | 6 | 19 | 0 | 0 | 0 | 0 | 0 | 31 |
| SE | 0 | 0 | 0 | 3 | 2 | 8 | 21 | 0 | 0 | 0 | 0 | 0 | 34 |
| SSE | 0 | 0 | 0 | 2 | 2 | 10 | 3 | 0 | 0 | 0 | 0 | 0 | 17 |
| S | 0 | 0 | 0 | 3 | 3 | 22 | 6 | 0 | 0 | 0 | 0 | 0 | 34 |
| SSW | 0 | 0 | 0 | 1 | 3 | 7 | 4 | 0 | 0 | 0 | 0 | 0 | 15 |
| SW | 0 | 0 | 0 | 1 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| WSW | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| W | 0 | 0 | 0 | 0 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| WNW | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| NW | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| NNW | 0 | 0 | 0 | 1 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| TOTAL | 0 | 3 | 2 | 15 | 25 | 80 | 81 | 0 | 0 | 0 | 0 | 0 | 206 |

NUMBER OF CALMS: 0
 NUMBER OF INVALID HOURS: 0
 NUMBER OF VALID HOURS: 206
 TOTAL HOURS FOR THE PERIOD: 206

RIVER BEND STATION
JOINT FREQUENCY TABLE
STABILITY CLASS G

FROM 4/ 1/04 0:00 TO 6/30/04 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 | 0 | 2 | 8 | 9 | 0 | 0 | 0 | 0 | 0 | 20 |
| NNE | 0 | 0 | 0 | 1 | 0 | 5 | 5 | 0 | 0 | 0 | 0 | 0 | 11 |
| NE | 0 | 0 | 0 | 2 | 1 | 5 | 4 | 0 | 0 | 0 | 0 | 0 | 12 |
| ENE | 0 | 0 | 1 | 3 | 1 | 7 | 2 | 1 | 0 | 0 | 0 | 0 | 15 |
| E | 0 | 0 | 2 | 0 | 2 | 7 | 2 | 0 | 0 | 0 | 0 | 0 | 13 |
| ESE | 0 | 1 | 0 | 1 | 1 | 9 | 5 | 0 | 0 | 0 | 0 | 0 | 17 |
| SE | 0 | 0 | 0 | 2 | 1 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 7 |
| SSE | 0 | 0 | 0 | 4 | 5 | 9 | 5 | 0 | 0 | 0 | 0 | 0 | 23 |
| S | 0 | 0 | 0 | 0 | 5 | 18 | 2 | 0 | 0 | 0 | 0 | 0 | 25 |
| SSW | 0 | 1 | 0 | 0 | 0 | 12 | 4 | 0 | 0 | 0 | 0 | 0 | 17 |
| SW | 0 | 0 | 0 | 1 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| WSW | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| W | 0 | 0 | 0 | 0 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| WNW | 0 | 0 | 0 | 2 | 2 | 4 | 5 | 0 | 0 | 0 | 0 | 0 | 13 |
| NW | 0 | 0 | 0 | 0 | 1 | 2 | 6 | 0 | 0 | 0 | 0 | 0 | 9 |
| NNW | 0 | 0 | 0 | 3 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 7 |
| TOTAL | 0 | 2 | 4 | 19 | 23 | 102 | 51 | 1 | 0 | 0 | 0 | 0 | 202 |

NUMBER OF CALMS: 0
NUMBER OF INVALID HOURS: 0
NUMBER OF VALID HOURS: 202
TOTAL HOURS FOR THE PERIOD: 202

RIVER BEND STATION
 JOINT FREQUENCY TABLE
 ALL STABILITY CLASSES

FROM 7/ 1/04 0:00 TO 9/30/04 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 | 25 | 22 | 33 | 99 | 68 | 62 | 35 | 0 | 0 | 0 | 0 | 0 | 344 |
| NNE | 16 | 22 | 19 | 80 | 59 | 26 | 10 | 0 | 0 | 0 | 0 | 0 | 232 |
| NE | 11 | 13 | 22 | 40 | 41 | 22 | 1 | 0 | 0 | 0 | 0 | 0 | 150 |
| ENE | 10 | 15 | 19 | 12 | 12 | 12 | 1 | 0 | 0 | 0 | 0 | 0 | 81 |
| E | 6 | 11 | 17 | 21 | 12 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 76 |
| ESE | 8 | 21 | 11 | 22 | 15 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 87 |
| SE | 6 | 19 | 19 | 30 | 30 | 31 | 3 | 0 | 0 | 0 | 0 | 0 | 138 |
| SSE | 5 | 10 | 8 | 34 | 28 | 35 | 4 | 0 | 0 | 0 | 0 | 0 | 124 |
| S | 2 | 18 | 11 | 21 | 23 | 43 | 3 | 0 | 0 | 0 | 0 | 0 | 121 |
| SSW | 3 | 10 | 10 | 19 | 12 | 14 | 3 | 0 | 0 | 0 | 0 | 0 | 71 |
| SW | 1 | 5 | 10 | 20 | 19 | 8 | 1 | 0 | 0 | 0 | 0 | 0 | 64 |
| WSW | 3 | 8 | 10 | 20 | 28 | 21 | 2 | 0 | 0 | 0 | 0 | 0 | 92 |
| W | 2 | 17 | 10 | 19 | 17 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 81 |
| WNW | 13 | 28 | 7 | 17 | 15 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 88 |
| NW | 11 | 58 | 19 | 19 | 20 | 20 | 8 | 0 | 0 | 0 | 0 | 0 | 155 |
| NNW | 17 | 14 | 26 | 38 | 43 | 63 | 40 | 0 | 0 | 0 | 0 | 0 | 241 |
| TOTAL | 139 | 291 | 251 | 511 | 442 | 400 | 111 | 0 | 0 | 0 | 0 | 0 | 2145 |

NUMBER OF CALMS: 4
 NUMBER OF INVALID HOURS: 59
 NUMBER OF VALID HOURS: 2149
 TOTAL HOURS FOR THE PERIOD: 2208

RIVER BEND STATION
JOINT FREQUENCY TABLE
STABILITY CLASS A

FROM 7/ 1/04 0:00 TO 9/30/04 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 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 6 |
| NNE | 0 | 0 | 0 | 0 | 0 | 5 | 2 | 0 | 0 | 0 | 0 | 0 | 7 |
| NE | 0 | 0 | 0 | 1 | 1 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 8 |
| ENE | 0 | 0 | 0 | 0 | 3 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 11 |
| E | 0 | 0 | 0 | 0 | 4 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| ESE | 0 | 0 | 0 | 0 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| SE | 0 | 0 | 0 | 0 | 1 | 13 | 1 | 0 | 0 | 0 | 0 | 0 | 15 |
| SSE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SSW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WSW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| W | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WNW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NW | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 4 |
| NNW | 0 | 0 | 0 | 0 | 0 | 1 | 7 | 0 | 0 | 0 | 0 | 0 | 8 |
| TOTAL | 0 | 0 | 0 | 1 | 10 | 43 | 20 | 0 | 0 | 0 | 0 | 0 | 74 |

NUMBER OF CALMS: 0
NUMBER OF INVALID HOURS: 0
NUMBER OF VALID HOURS: 74
TOTAL HOURS FOR THE PERIOD: 74

RIVER BEND STATION
 JOINT FREQUENCY TABLE
 STABILITY CLASS B

FROM 7/ 1/04 0:00 TO 9/30/04 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 | 4 | 11 | 0 | 0 | 0 | 0 | 0 | 15 |
| NNE | 0 | 0 | 0 | 0 | 2 | 4 | 5 | 0 | 0 | 0 | 0 | 0 | 11 |
| NE | 0 | 0 | 0 | 0 | 5 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| ENE | 0 | 0 | 0 | 0 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| E | 0 | 0 | 0 | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| ESE | 0 | 0 | 0 | 1 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| SE | 0 | 0 | 0 | 0 | 0 | 7 | 1 | 0 | 0 | 0 | 0 | 0 | 8 |
| SSE | 0 | 0 | 0 | 0 | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 4 |
| S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SSW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SW | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 2 |
| WSW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| W | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WNW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NW | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 3 |
| NNW | 0 | 0 | 0 | 0 | 0 | 2 | 13 | 0 | 0 | 0 | 0 | 0 | 15 |
| TOTAL | 0 | 0 | 0 | 3 | 16 | 30 | 34 | 0 | 0 | 0 | 0 | 0 | 83 |

NUMBER OF CALMS: 0
 NUMBER OF INVALID HOURS: 0
 NUMBER OF VALID HOURS: 83
 TOTAL HOURS FOR THE PERIOD: 83

RIVER BEND STATION
JOINT FREQUENCY TABLE
STABILITY CLASS C

FROM 7/ 1/04 0:00 TO 9/30/04 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 | 4 | 0 | 0 | 0 | 0 | 0 | 9 |
| NNE | 0 | 0 | 0 | 0 | 2 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 8 |
| NE | 0 | 0 | 0 | 0 | 8 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| ENE | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| E | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| ESE | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| SE | 0 | 0 | 0 | 0 | 3 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 8 |
| SSE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| S | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| SSW | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 2 |
| SW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WSW | 0 | 0 | 0 | 0 | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 4 |
| W | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| WNW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NW | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| NNW | 0 | 0 | 0 | 0 | 0 | 9 | 5 | 0 | 0 | 0 | 0 | 0 | 14 |
| TOTAL | 0 | 0 | 0 | 0 | 17 | 39 | 13 | 0 | 0 | 0 | 0 | 0 | 69 |

NUMBER OF CALMS: 0
NUMBER OF INVALID HOURS: 0
NUMBER OF VALID HOURS: 69
TOTAL HOURS FOR THE PERIOD: 69

RIVER BEND STATION
 JOINT FREQUENCY TABLE
 STABILITY CLASS D

FROM 7/ 1/04 0:00 TO 9/30/04 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 | 10 | 26 | 47 | 14 | 0 | 0 | 0 | 0 | 0 | 101 |
| NNE | 0 | 0 | 2 | 18 | 32 | 10 | 2 | 0 | 0 | 0 | 0 | 0 | 64 |
| NE | 0 | 1 | 3 | 11 | 13 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 33 |
| ENE | 0 | 1 | 1 | 5 | 3 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 12 |
| E | 0 | 1 | 4 | 6 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| ESE | 0 | 0 | 2 | 9 | 7 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 21 |
| SE | 0 | 0 | 2 | 11 | 15 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 32 |
| SSE | 0 | 0 | 0 | 4 | 19 | 27 | 3 | 0 | 0 | 0 | 0 | 0 | 53 |
| S | 0 | 0 | 3 | 5 | 14 | 36 | 2 | 0 | 0 | 0 | 0 | 0 | 60 |
| SSW | 0 | 1 | 2 | 6 | 6 | 12 | 2 | 0 | 0 | 0 | 0 | 0 | 29 |
| SW | 0 | 0 | 0 | 6 | 15 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 28 |
| WSW | 0 | 0 | 0 | 7 | 26 | 16 | 1 | 0 | 0 | 0 | 0 | 0 | 50 |
| W | 0 | 0 | 0 | 8 | 15 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 38 |
| WNW | 0 | 0 | 2 | 8 | 15 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 33 |
| NW | 0 | 0 | 0 | 8 | 16 | 14 | 3 | 0 | 0 | 0 | 0 | 0 | 41 |
| NNW | 0 | 0 | 0 | 10 | 20 | 40 | 15 | 0 | 0 | 0 | 0 | 0 | 85 |
| TOTAL | 0 | 6 | 23 | 132 | 244 | 245 | 43 | 0 | 0 | 0 | 0 | 0 | 693 |

NUMBER OF CALMS: 0
 NUMBER OF INVALID HOURS: 1
 NUMBER OF VALID HOURS: 693
 TOTAL HOURS FOR THE PERIOD: 694

RIVER BEND STATION
JOINT FREQUENCY TABLE
STABILITY CLASS E

FROM 7/ 1/04 0:00 TO 9/30/04 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 | 7 | 13 | 35 | 37 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 98 |
| NNE | 2 | 6 | 8 | 43 | 22 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 82 |
| NE | 2 | 5 | 14 | 22 | 13 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 63 |
| ENE | 2 | 11 | 15 | 7 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 38 |
| E | 2 | 3 | 13 | 13 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 34 |
| ESE | 3 | 12 | 8 | 12 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 37 |
| SE | 1 | 8 | 15 | 18 | 11 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 56 |
| SSE | 1 | 6 | 5 | 25 | 9 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 51 |
| S | 1 | 9 | 5 | 15 | 9 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 44 |
| SSW | 1 | 4 | 8 | 10 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 29 |
| SW | 0 | 2 | 7 | 11 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 24 |
| WSW | 0 | 4 | 4 | 12 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 24 |
| W | 0 | 3 | 7 | 9 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 |
| WNW | 1 | 5 | 2 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 |
| NW | 0 | 3 | 7 | 6 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18 |
| NNW | 1 | 4 | 9 | 13 | 20 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 58 |
| TOTAL | 17 | 92 | 140 | 258 | 142 | 41 | 1 | 0 | 0 | 0 | 0 | 0 | 691 |

NUMBER OF CALMS: 0
NUMBER OF INVALID HOURS: 1
NUMBER OF VALID HOURS: 691
TOTAL HOURS FOR THE PERIOD: 692

RIVER BEND STATION
JOINT FREQUENCY TABLE
STABILITY CLASS F

FROM 7/ 1/04 0:00 TO 9/30/04 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 | 9 | 9 | 10 | 37 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 69 |
| NNE | 4 | 7 | 4 | 16 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 33 |
| NE | 5 | 6 | 5 | 6 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 23 |
| ENE | 6 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| E | 3 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| ESE | 4 | 7 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 |
| SE | 5 | 11 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18 |
| SSE | 3 | 4 | 3 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 |
| S | 1 | 8 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| SSW | 2 | 3 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| SW | 1 | 2 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| WSW | 2 | 3 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 |
| W | 0 | 6 | 3 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 |
| WNW | 3 | 10 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 |
| NW | 4 | 19 | 4 | 4 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 33 |
| NNW | 2 | 2 | 5 | 9 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21 |
| TOTAL | 54 | 105 | 51 | 89 | 12 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 313 |

NUMBER OF CALMS: 3
NUMBER OF INVALID HOURS: 0
NUMBER OF VALID HOURS: 316
TOTAL HOURS FOR THE PERIOD: 316

RIVER BEND STATION
 JOINT FREQUENCY TABLE
 STABILITY CLASS G

FROM 7/ 1/04 0:00 TO 9/30/04 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 | 16 | 4 | 8 | 17 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 46 |
| NNE | 10 | 9 | 5 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 27 |
| NE | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| ENE | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| E | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| ESE | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| SE | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| SSE | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| S | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| SSW | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| SW | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| WSW | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| W | 2 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| WNW | 9 | 13 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 23 |
| NW | 7 | 36 | 8 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 52 |
| NNW | 14 | 8 | 12 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 40 |
| TOTAL | 68 | 88 | 37 | 28 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 222 |

NUMBER OF CALMS: 1
 NUMBER OF INVALID HOURS: 0
 NUMBER OF VALID HOURS: 223
 TOTAL HOURS FOR THE PERIOD: 223

RIVER BEND STATION
 JOINT FREQUENCY TABLE
 ALL STABILITY CLASSES

FROM 7/ 1/04 0:00 TO 9/30/04 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 | 2 | 3 | 8 | 17 | 58 | 125 | 7 | 0 | 0 | 0 | 0 | 220 |
| NNE | 0 | 2 | 1 | 4 | 15 | 79 | 108 | 8 | 0 | 0 | 0 | 0 | 217 |
| NE | 0 | 0 | 0 | 14 | 21 | 70 | 143 | 13 | 0 | 0 | 0 | 0 | 261 |
| ENE | 0 | 0 | 1 | 12 | 26 | 59 | 91 | 29 | 3 | 0 | 0 | 0 | 221 |
| E | 0 | 0 | 4 | 15 | 22 | 28 | 38 | 4 | 0 | 0 | 0 | 0 | 111 |
| ESE | 1 | 3 | 2 | 6 | 12 | 50 | 62 | 11 | 1 | 0 | 0 | 0 | 148 |
| SE | 0 | 0 | 2 | 3 | 13 | 44 | 32 | 1 | 0 | 0 | 0 | 0 | 95 |
| SSE | 0 | 0 | 2 | 4 | 20 | 64 | 22 | 0 | 0 | 0 | 0 | 0 | 112 |
| S | 0 | 0 | 3 | 13 | 13 | 69 | 36 | 0 | 0 | 0 | 0 | 0 | 134 |
| SSW | 0 | 1 | 1 | 5 | 16 | 42 | 14 | 1 | 0 | 0 | 0 | 0 | 80 |
| SW | 0 | 0 | 1 | 9 | 18 | 24 | 6 | 0 | 0 | 0 | 0 | 0 | 58 |
| WSW | 0 | 0 | 0 | 8 | 20 | 50 | 15 | 0 | 0 | 0 | 0 | 0 | 93 |
| W | 0 | 3 | 2 | 3 | 17 | 53 | 11 | 0 | 0 | 0 | 0 | 0 | 89 |
| WNW | 1 | 0 | 1 | 8 | 13 | 23 | 6 | 0 | 0 | 0 | 0 | 0 | 52 |
| NW | 1 | 1 | 1 | 12 | 14 | 37 | 13 | 12 | 0 | 0 | 0 | 0 | 91 |
| NNW | 0 | 0 | 1 | 8 | 18 | 41 | 92 | 7 | 0 | 0 | 0 | 0 | 167 |
| TOTAL | 3 | 12 | 25 | 132 | 275 | 791 | 814 | 93 | 4 | 0 | 0 | 0 | 2149 |

NUMBER OF CALMS: 0
 NUMBER OF INVALID HOURS: 59
 NUMBER OF VALID HOURS: 2149
 TOTAL HOURS FOR THE PERIOD: 2208

RIVER BEND STATION
 JOINT FREQUENCY TABLE
 STABILITY CLASS A

FROM 7/ 1/04 0:00 TO 9/30/04 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 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 |
| NNE | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 0 | 0 | 0 | 0 | 4 |
| NE | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 4 | 0 | 0 | 0 | 0 | 11 |
| ENE | 0 | 0 | 0 | 0 | 0 | 1 | 15 | 0 | 1 | 0 | 0 | 0 | 17 |
| E | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 2 | 0 | 0 | 0 | 0 | 13 |
| ESE | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 2 | 0 | 0 | 0 | 0 | 14 |
| SE | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WSW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| W | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WNW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NW | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 4 | 0 | 0 | 0 | 0 | 5 |
| NNW | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 1 | 0 | 0 | 0 | 0 | 7 |
| TOTAL | 0 | 0 | 0 | 0 | 0 | 1 | 56 | 16 | 1 | 0 | 0 | 0 | 74 |

NUMBER OF CALMS: 0
 NUMBER OF INVALID HOURS: 0
 NUMBER OF VALID HOURS: 74
 TOTAL HOURS FOR THE PERIOD: 74

RIVER BEND STATION
 JOINT FREQUENCY TABLE
 STABILITY CLASS B

FROM 7/ 1/04 0:00 TO 9/30/04 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 | 0 | 16 | 1 | 0 | 0 | 0 | 0 | 17 |
| NNE | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 1 | 0 | 0 | 0 | 0 | 6 |
| NE | 0 | 0 | 0 | 0 | 0 | 3 | 6 | 2 | 0 | 0 | 0 | 0 | 11 |
| ENE | 0 | 0 | 0 | 0 | 0 | 1 | 14 | 0 | 0 | 0 | 0 | 0 | 15 |
| E | 0 | 0 | 0 | 0 | 0 | 1 | 4 | 1 | 0 | 0 | 0 | 0 | 6 |
| ESE | 0 | 0 | 0 | 0 | 0 | 1 | 4 | 1 | 0 | 0 | 0 | 0 | 6 |
| SE | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 5 |
| SSE | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SSW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WSW | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 2 |
| W | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WNW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NW | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 4 |
| NNW | 0 | 0 | 0 | 0 | 0 | 1 | 8 | 1 | 0 | 0 | 0 | 0 | 10 |
| TOTAL | 0 | 0 | 0 | 0 | 0 | 8 | 66 | 9 | 0 | 0 | 0 | 0 | 83 |

NUMBER OF CALMS: 0
 NUMBER OF INVALID HOURS: 0
 NUMBER OF VALID HOURS: 83
 TOTAL HOURS FOR THE PERIOD: 83

RIVER BEND STATION
 JOINT FREQUENCY TABLE
 STABILITY CLASS C

FROM 7/ 1/04 0:00 TO 9/30/04 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 | 8 | 0 | 0 | 0 | 0 | 0 | 9 |
| NNE | 0 | 0 | 0 | 0 | 0 | 1 | 5 | 1 | 0 | 0 | 0 | 0 | 7 |
| NE | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 5 |
| ENE | 0 | 0 | 0 | 0 | 0 | 3 | 7 | 1 | 0 | 0 | 0 | 0 | 11 |
| E | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 3 |
| ESE | 0 | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 0 | 0 | 0 | 0 | 6 |
| SE | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 2 |
| SSE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| S | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 4 |
| SSW | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| SW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WSW | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 4 |
| W | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| WNW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NW | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 4 |
| NNW | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 12 |
| TOTAL | 0 | 0 | 0 | 0 | 0 | 13 | 53 | 3 | 0 | 0 | 0 | 0 | 69 |

NUMBER OF CALMS: 0
 NUMBER OF INVALID HOURS: 0
 NUMBER OF VALID HOURS: 69
 TOTAL HOURS FOR THE PERIOD: 69

RIVER BEND STATION
 JOINT FREQUENCY TABLE
 STABILITY CLASS D

FROM 7/ 1/04 0:00 TO 9/30/04 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 | 1 | 4 | 8 | 26 | 32 | 6 | 0 | 0 | 0 | 0 | 78 |
| NNE | 0 | 0 | 0 | 1 | 5 | 33 | 15 | 2 | 0 | 0 | 0 | 0 | 56 |
| NE | 0 | 0 | 0 | 3 | 5 | 23 | 26 | 2 | 0 | 0 | 0 | 0 | 59 |
| ENE | 0 | 0 | 0 | 1 | 3 | 17 | 13 | 6 | 1 | 0 | 0 | 0 | 41 |
| E | 0 | 0 | 1 | 2 | 1 | 3 | 12 | 1 | 0 | 0 | 0 | 0 | 20 |
| ESE | 0 | 0 | 1 | 0 | 1 | 8 | 14 | 3 | 1 | 0 | 0 | 0 | 28 |
| SE | 0 | 0 | 0 | 0 | 4 | 10 | 10 | 1 | 0 | 0 | 0 | 0 | 25 |
| SSE | 0 | 0 | 0 | 1 | 5 | 23 | 8 | 0 | 0 | 0 | 0 | 0 | 37 |
| S | 0 | 0 | 0 | 2 | 5 | 27 | 22 | 0 | 0 | 0 | 0 | 0 | 56 |
| SSW | 0 | 0 | 0 | 2 | 6 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | 26 |
| SW | 0 | 0 | 0 | 2 | 9 | 11 | 2 | 0 | 0 | 0 | 0 | 0 | 24 |
| WSW | 0 | 0 | 0 | 2 | 10 | 28 | 7 | 0 | 0 | 0 | 0 | 0 | 47 |
| W | 0 | 0 | 0 | 1 | 9 | 39 | 7 | 0 | 0 | 0 | 0 | 0 | 56 |
| WNW | 0 | 0 | 0 | 4 | 6 | 11 | 2 | 0 | 0 | 0 | 0 | 0 | 23 |
| NW | 0 | 0 | 0 | 5 | 9 | 22 | 5 | 6 | 0 | 0 | 0 | 0 | 47 |
| NNW | 0 | 0 | 0 | 3 | 12 | 21 | 29 | 5 | 0 | 0 | 0 | 0 | 70 |
| TOTAL | 0 | 1 | 3 | 33 | 98 | 311 | 213 | 32 | 2 | 0 | 0 | 0 | 693 |

NUMBER OF CALMS: 0
 NUMBER OF INVALID HOURS: 1
 NUMBER OF VALID HOURS: 693
 TOTAL HOURS FOR THE PERIOD: 694

RIVER BEND STATION
 JOINT FREQUENCY TABLE
 STABILITY CLASS E

FROM 7/ 1/04 0:00 TO 9/30/04 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 | 20 | 36 | 0 | 0 | 0 | 0 | 0 | 63 |
| NNE | 0 | 1 | 0 | 1 | 6 | 16 | 37 | 0 | 0 | 0 | 0 | 0 | 61 |
| NE | 0 | 0 | 0 | 4 | 11 | 23 | 52 | 3 | 0 | 0 | 0 | 0 | 93 |
| ENE | 0 | 0 | 1 | 4 | 12 | 30 | 36 | 19 | 1 | 0 | 0 | 0 | 103 |
| E | 0 | 0 | 2 | 4 | 12 | 14 | 9 | 0 | 0 | 0 | 0 | 0 | 41 |
| ESE | 0 | 1 | 0 | 1 | 7 | 22 | 24 | 4 | 0 | 0 | 0 | 0 | 59 |
| SE | 0 | 0 | 0 | 0 | 5 | 16 | 10 | 0 | 0 | 0 | 0 | 0 | 31 |
| SSE | 0 | 0 | 1 | 2 | 6 | 24 | 12 | 0 | 0 | 0 | 0 | 0 | 45 |
| S | 0 | 0 | 3 | 5 | 3 | 25 | 9 | 0 | 0 | 0 | 0 | 0 | 45 |
| SSW | 0 | 1 | 0 | 0 | 4 | 21 | 3 | 1 | 0 | 0 | 0 | 0 | 30 |
| SW | 0 | 0 | 0 | 4 | 5 | 6 | 3 | 0 | 0 | 0 | 0 | 0 | 18 |
| WSW | 0 | 0 | 0 | 2 | 8 | 15 | 3 | 0 | 0 | 0 | 0 | 0 | 28 |
| W | 0 | 2 | 2 | 2 | 2 | 4 | 3 | 0 | 0 | 0 | 0 | 0 | 15 |
| WNW | 1 | 0 | 0 | 1 | 3 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 11 |
| NW | 0 | 0 | 0 | 2 | 3 | 6 | 1 | 0 | 0 | 0 | 0 | 0 | 12 |
| NNW | 0 | 0 | 0 | 2 | 0 | 9 | 25 | 0 | 0 | 0 | 0 | 0 | 36 |
| TOTAL | 1 | 5 | 11 | 35 | 91 | 256 | 264 | 27 | 1 | 0 | 0 | 0 | 691 |

NUMBER OF CALMS: 0
 NUMBER OF INVALID HOURS: 1
 NUMBER OF VALID HOURS: 691
 TOTAL HOURS FOR THE PERIOD: 692

RIVER BEND STATION
JOINT FREQUENCY TABLE
STABILITY CLASS F

FROM 7/ 1/04 0:00 TO 9/30/04 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 | 3 | 3 | 16 | 0 | 0 | 0 | 0 | 0 | 24 |
| NNE | 0 | 0 | 0 | 1 | 1 | 17 | 25 | 1 | 0 | 0 | 0 | 0 | 45 |
| NE | 0 | 0 | 0 | 4 | 2 | 7 | 29 | 2 | 0 | 0 | 0 | 0 | 44 |
| ENE | 0 | 0 | 0 | 3 | 8 | 5 | 3 | 3 | 0 | 0 | 0 | 0 | 22 |
| E | 0 | 0 | 1 | 4 | 7 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 17 |
| ESE | 1 | 0 | 0 | 3 | 2 | 14 | 6 | 0 | 0 | 0 | 0 | 0 | 26 |
| SE | 0 | 0 | 0 | 1 | 4 | 14 | 5 | 0 | 0 | 0 | 0 | 0 | 24 |
| SSE | 0 | 0 | 0 | 1 | 7 | 13 | 1 | 0 | 0 | 0 | 0 | 0 | 22 |
| S | 0 | 0 | 0 | 4 | 3 | 10 | 1 | 0 | 0 | 0 | 0 | 0 | 18 |
| SSW | 0 | 0 | 1 | 3 | 2 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 11 |
| SW | 0 | 0 | 1 | 1 | 2 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 8 |
| WSW | 0 | 0 | 0 | 3 | 1 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| W | 0 | 1 | 0 | 0 | 4 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 14 |
| WNW | 0 | 0 | 0 | 2 | 2 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 9 |
| NW | 0 | 1 | 0 | 3 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 8 |
| NNW | 0 | 0 | 0 | 1 | 3 | 5 | 5 | 0 | 0 | 0 | 0 | 0 | 14 |
| TOTAL | 1 | 2 | 3 | 36 | 52 | 121 | 95 | 6 | 0 | 0 | 0 | 0 | 316 |

NUMBER OF CALMS: 0
NUMBER OF INVALID HOURS: 0
NUMBER OF VALID HOURS: 316
TOTAL HOURS FOR THE PERIOD: 316

RIVER BEND STATION
JOINT FREQUENCY TABLE
STABILITY CLASS G

FROM 7/ 1/04 0:00 TO 9/30/04 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 | 1 | 2 | 8 | 15 | 0 | 0 | 0 | 0 | 0 | 27 |
| NNE | 0 | 1 | 1 | 1 | 3 | 12 | 20 | 0 | 0 | 0 | 0 | 0 | 38 |
| NE | 0 | 0 | 0 | 3 | 3 | 12 | 20 | 0 | 0 | 0 | 0 | 0 | 38 |
| ENE | 0 | 0 | 0 | 4 | 3 | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 12 |
| E | 0 | 0 | 0 | 5 | 2 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 11 |
| ESE | 0 | 2 | 1 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| SE | 0 | 0 | 2 | 2 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| SSE | 0 | 0 | 1 | 0 | 2 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| S | 0 | 0 | 0 | 2 | 2 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 11 |
| SSW | 0 | 0 | 0 | 0 | 4 | 7 | 1 | 0 | 0 | 0 | 0 | 0 | 12 |
| SW | 0 | 0 | 0 | 2 | 2 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| WSW | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| W | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| WNW | 0 | 0 | 1 | 1 | 2 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 9 |
| NW | 1 | 0 | 1 | 2 | 1 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 11 |
| NNW | 0 | 0 | 1 | 2 | 3 | 5 | 7 | 0 | 0 | 0 | 0 | 0 | 18 |
| TOTAL | 1 | 4 | 8 | 28 | 34 | 81 | 67 | 0 | 0 | 0 | 0 | 0 | 223 |

NUMBER OF CALMS: 0
NUMBER OF INVALID HOURS: 0
NUMBER OF VALID HOURS: 223
TOTAL HOURS FOR THE PERIOD: 223

RIVER BEND STATION
 JOINT FREQUENCY TABLE
 ALL STABILITY CLASSES

FROM 10/ 1/04 0:00 TO 12/31/04 23:00

PRIMARY SENSORS - 30 FOOT

WIND SPEED (METERS/SECOND)

| WIND DIR | 0.22-0.5 | 0.51-0.75 | 0.76-1 | 1.1-1.5 | 1.6-2 | 2.1-3 | 3.1-5 | 5.1-7 | 7.1-10 | 10.1-13 | 13.1-18 | >18 | TOT. |
|----------|----------|-----------|--------|---------|-------|-------|-------|-------|--------|---------|---------|-----|------|
| N | 10 | 16 | 13 | 20 | 20 | 50 | 24 | 0 | 0 | 0 | 0 | 0 | 153 |
| NNE | 15 | 11 | 14 | 30 | 18 | 10 | 5 | 0 | 0 | 0 | 0 | 0 | 103 |
| NE | 22 | 24 | 16 | 17 | 13 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 104 |
| ENE | 14 | 47 | 19 | 31 | 16 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 133 |
| E | 8 | 23 | 16 | 33 | 19 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 101 |
| ESE | 2 | 12 | 19 | 53 | 43 | 29 | 2 | 0 | 0 | 0 | 0 | 0 | 160 |
| SE | 2 | 15 | 13 | 70 | 93 | 94 | 4 | 0 | 0 | 0 | 0 | 0 | 291 |
| SSE | 1 | 7 | 5 | 22 | 22 | 66 | 55 | 1 | 0 | 0 | 0 | 0 | 179 |
| S | 1 | 2 | 6 | 24 | 31 | 51 | 43 | 0 | 0 | 0 | 0 | 0 | 158 |
| SSW | 2 | 4 | 11 | 27 | 20 | 18 | 20 | 0 | 0 | 0 | 0 | 0 | 102 |
| SW | 2 | 3 | 7 | 15 | 8 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 48 |
| WSW | 1 | 5 | 4 | 7 | 12 | 17 | 1 | 0 | 0 | 0 | 0 | 0 | 47 |
| W | 2 | 12 | 16 | 14 | 13 | 14 | 3 | 0 | 0 | 0 | 0 | 0 | 74 |
| WNW | 2 | 22 | 16 | 18 | 17 | 20 | 15 | 0 | 0 | 0 | 0 | 0 | 110 |
| NW | 7 | 29 | 20 | 19 | 6 | 30 | 36 | 1 | 0 | 0 | 0 | 0 | 148 |
| NNW | 5 | 18 | 12 | 15 | 17 | 47 | 24 | 3 | 0 | 0 | 0 | 0 | 141 |
| TOTAL | 96 | 250 | 207 | 415 | 368 | 479 | 232 | 5 | 0 | 0 | 0 | 0 | 2052 |

NUMBER OF CALMS: 1
 NUMBER OF INVALID HOURS: 157
 NUMBER OF VALID HOURS: 2051
 TOTAL HOURS FOR THE PERIOD: 2208

RIVER BEND STATION
 JOINT FREQUENCY TABLE
 STABILITY CLASS A

FROM 10/ 1/04 0:00 TO 12/31/04 23:00

PRIMARY SENSORS - 30 FOOT

WIND SPEED (METERS/SECOND)

| WIND DIR | 0.22-0.5 | 0.51-0.75 | 0.76-1 | 1.1-1.5 | 1.6-2 | 2.1-3 | 3.1-5 | 5.1-7 | 7.1-10 | 10.1-13 | 13.1-18 | >18 | TOT. |
|-----------------------------|----------|-----------|----------|-----------|-----------|-----------|----------|----------|----------|----------|----------|----------|-----------|
| N | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 |
| NNE | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| NE | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| ENE | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| E | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| ESE | 0 | 0 | 0 | 0 | 4 | 8 | 1 | 0 | 0 | 0 | 0 | 0 | 13 |
| SE | 0 | 0 | 0 | 0 | 2 | 20 | 1 | 0 | 0 | 0 | 0 | 0 | 23 |
| SSE | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| S | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| SSW | 0 | 0 | 2 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| SW | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| WSW | 0 | 1 | 0 | 0 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 5 |
| W | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 3 |
| WNW | 0 | 0 | 2 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| NW | 0 | 0 | 0 | 2 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 5 |
| NNW | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| TOTAL | 1 | 1 | 4 | 15 | 12 | 38 | 7 | 0 | 0 | 0 | 0 | 0 | 78 |
| NUMBER OF CALMS: | 0 | | | | | | | | | | | | |
| NUMBER OF INVALID HOURS: | 0 | | | | | | | | | | | | |
| NUMBER OF VALID HOURS: | 78 | | | | | | | | | | | | |
| TOTAL HOURS FOR THE PERIOD: | 78 | | | | | | | | | | | | |

RIVERBEND STATION
 JOINT FREQUENCY TABLE
 STABILITY CLASS B

FROM 10/ 1/04 0:00 TO 12/31/04 23:00

PRIMARY SENSORS - 30 FOOT

WIND SPEED (METERS/SECOND)

| WIND DIR | 0.22-0.5 | 0.51-0.75 | 0.76-1 | 1.1-1.5 | 1.6-2 | 2.1-3 | 3.1-5 | 5.1-7 | 7.1-10 | 10.1-13 | 13.1-18 | >18 | TOT. |
|-----------------------------|----------|-----------|--------|---------|-------|-------|-------|-------|--------|---------|---------|-----|------|
| N | 0 | 0 | 0 | 0 | 0 | 3 | 6 | 0 | 0 | 0 | 0 | 0 | 9 |
| NNE | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| NE | 0 | 0 | 0 | 0 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| ENE | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| E | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| ESE | 0 | 0 | 0 | 3 | 3 | 9 | 1 | 0 | 0 | 0 | 0 | 0 | 16 |
| SE | 0 | 1 | 1 | 0 | 4 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 15 |
| SSE | 0 | 0 | 0 | 0 | 1 | 4 | 5 | 0 | 0 | 0 | 0 | 0 | 10 |
| S | 0 | 0 | 1 | 1 | 1 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 7 |
| SSW | 0 | 0 | 0 | 1 | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 5 |
| SW | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| WSW | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| W | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WNW | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 3 |
| NW | 1 | 0 | 1 | 0 | 0 | 1 | 7 | 0 | 0 | 0 | 0 | 0 | 10 |
| NNW | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 3 |
| TOTAL | 1 | 1 | 4 | 6 | 16 | 36 | 28 | 0 | 0 | 0 | 0 | 0 | 92 |
| NUMBER OF CALMS: | 0 | | | | | | | | | | | | |
| NUMBER OF INVALID HOURS: | 0 | | | | | | | | | | | | |
| NUMBER OF VALID HOURS: | 92 | | | | | | | | | | | | |
| TOTAL HOURS FOR THE PERIOD: | 92 | | | | | | | | | | | | |

RIVER BEND STATION
 JOINT FREQUENCY TABLE
 STABILITY CLASS C

FROM 10/ 1/04 0:00 TO 12/31/04 23:00

PRIMARY SENSORS - 30 FOOT

WIND SPEED (METERS/SECOND)

| WIND DIR | 0.22-0.5 | 0.51-0.75 | 0.76-1 | 1.1-1.5 | 1.6-2 | 2.1-3 | 3.1-5 | 5.1-7 | 7.1-10 | 10.1-13 | 13.1-18 | >18 | TOT. |
|----------|----------|-----------|--------|---------|-------|-------|-------|-------|--------|---------|---------|-----|------|
| N | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 3 |
| NNE | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| NE | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| ENE | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| E | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| ESE | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| SE | 0 | 0 | 0 | 2 | 3 | 7 | 1 | 0 | 0 | 0 | 0 | 0 | 13 |
| SSE | 0 | 0 | 0 | 0 | 0 | 5 | 9 | 0 | 0 | 0 | 0 | 0 | 14 |
| S | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 9 |
| SSW | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 3 |
| SW | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| WSW | 0 | 0 | 0 | 0 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| W | 0 | 0 | 0 | 0 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| WNW | 0 | 0 | 0 | 1 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 4 |
| NW | 0 | 0 | 0 | 0 | 0 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 5 |
| NNW | 0 | 0 | 0 | 0 | 0 | 4 | 2 | 1 | 0 | 0 | 0 | 0 | 7 |
| TOTAL | 0 | 0 | 2 | 6 | 8 | 33 | 28 | 1 | 0 | 0 | 0 | 0 | 78 |

NUMBER OF CALMS: 0
 NUMBER OF INVALID HOURS: 3
 NUMBER OF VALID HOURS: 78
 TOTAL HOURS FOR THE PERIOD: 81

RIVER BEND STATION
 JOINT FREQUENCY TABLE
 STABILITY CLASS D

FROM 10/ 1/04 0:00 TO 12/31/04 23:00

PRIMARY SENSORS - 30 FOOT

WIND SPEED (METERS/SECOND)

| WIND DIR | 0.22-0.5 | 0.51-0.75 | 0.76-1 | 1.1-1.5 | 1.6-2 | 2.1-3 | 3.1-5 | 5.1-7 | 7.1-10 | 10.1-13 | 13.1-18 | >18 | TOT. |
|-----------------------------|----------|-----------|--------|---------|-------|-------|-------|-------|--------|---------|---------|-----|------|
| N | 0 | 1 | 2 | 3 | 13 | 42 | 16 | 0 | 0 | 0 | 0 | 0 | 77 |
| NNE | 0 | 1 | 2 | 14 | 9 | 6 | 5 | 0 | 0 | 0 | 0 | 0 | 37 |
| NE | 0 | 2 | 5 | 8 | 7 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 26 |
| ENE | 1 | 3 | 3 | 8 | 8 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 25 |
| E | 0 | 1 | 2 | 15 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 29 |
| ESE | 0 | 2 | 3 | 22 | 19 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 53 |
| SE | 0 | 0 | 2 | 25 | 41 | 30 | 1 | 0 | 0 | 0 | 0 | 0 | 99 |
| SSE | 0 | 0 | 2 | 3 | 10 | 37 | 37 | 1 | 0 | 0 | 0 | 0 | 90 |
| S | 0 | 0 | 0 | 3 | 11 | 38 | 31 | 0 | 0 | 0 | 0 | 0 | 83 |
| SSW | 0 | 1 | 2 | 9 | 7 | 10 | 15 | 0 | 0 | 0 | 0 | 0 | 44 |
| SW | 0 | 1 | 2 | 9 | 8 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 31 |
| WSW | 0 | 0 | 0 | 2 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 20 |
| W | 0 | 1 | 3 | 9 | 11 | 10 | 2 | 0 | 0 | 0 | 0 | 0 | 36 |
| WNW | 0 | 2 | 3 | 3 | 12 | 14 | 12 | 0 | 0 | 0 | 0 | 0 | 46 |
| NW | 0 | 0 | 1 | 3 | 5 | 20 | 22 | 1 | 0 | 0 | 0 | 0 | 52 |
| NNW | 0 | 1 | 0 | 3 | 9 | 34 | 19 | 2 | 0 | 0 | 0 | 0 | 68 |
| TOTAL | 1 | 16 | 32 | 139 | 190 | 274 | 160 | 4 | 0 | 0 | 0 | 0 | 816 |
| NUMBER OF CALMS: | | | | | 0 | | | | | | | | |
| NUMBER OF INVALID HOURS: | | | | | | | 0 | | | | | | |
| NUMBER OF VALID HOURS: | | | | | | | | | | | | | 816 |
| TOTAL HOURS FOR THE PERIOD: | | | | | | | | | | | | | 816 |

RIVER BEND STATION
 JOINT FREQUENCY TABLE
 STABILITY CLASS E

FROM 10/ 1/04 0:00 TO 12/31/04 23:00

PRIMARY SENSORS - 30 FOOT

WIND SPEED (METERS/SECOND)

| WIND DIR | 0.22-0.5 | 0.51-0.75 | 0.76-1 | 1.1-1.5 | 1.6-2 | 2.1-3 | 3.1-5 | 5.1-7 | 7.1-10 | 10.1-13 | 13.1-18 | >18 | TOT. |
|-----------------------------|----------|-----------|--------|---------|-------|-------|-------|-------|--------|---------|---------|-----|------|
| N | 0 | 4 | 3 | 13 | 6 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 29 |
| NNE | 1 | 4 | 7 | 13 | 6 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 32 |
| NE | 1 | 9 | 7 | 7 | 5 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 31 |
| ENE | 1 | 4 | 7 | 20 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 38 |
| E | 4 | 8 | 6 | 13 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 37 |
| ESE | 1 | 4 | 9 | 19 | 17 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 53 |
| SE | 0 | 3 | 5 | 34 | 42 | 26 | 1 | 0 | 0 | 0 | 0 | 0 | 111 |
| SSE | 0 | 2 | 2 | 14 | 11 | 18 | 4 | 0 | 0 | 0 | 0 | 0 | 51 |
| S | 0 | 1 | 4 | 17 | 17 | 12 | 1 | 0 | 0 | 0 | 0 | 0 | 52 |
| SSW | 1 | 2 | 4 | 10 | 11 | 7 | 1 | 0 | 0 | 0 | 0 | 0 | 36 |
| SW | 0 | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| WSW | 1 | 0 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| W | 0 | 3 | 7 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| WNW | 0 | 1 | 3 | 7 | 5 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 20 |
| NW | 0 | 2 | 8 | 8 | 1 | 7 | 1 | 0 | 0 | 0 | 0 | 0 | 27 |
| NNW | 0 | 2 | 2 | 10 | 7 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 30 |
| TOTAL | 10 | 50 | 76 | 192 | 139 | 94 | 9 | 0 | 0 | 0 | 0 | 0 | 570 |
| NUMBER OF CALMS: | 0 | | | | | | | | | | | | |
| NUMBER OF INVALID HOURS: | 0 | | | | | | | | | | | | |
| NUMBER OF VALID HOURS: | 570 | | | | | | | | | | | | |
| TOTAL HOURS FOR THE PERIOD: | 570 | | | | | | | | | | | | |

RIVER BEND STATION
 JOINT FREQUENCY TABLE
 STABILITY CLASS F

FROM 10/ 1/04 0:00 TO 12/31/04 23:00

PRIMARY SENSORS - 30 FOOT

WIND SPEED (METERS/SECOND)

| WIND DIR | 0.22-0.5 | 0.51-0.75 | 0.76-1 | 1.1-1.5 | 1.6-2 | 2.1-3 | 3.1-5 | 5.1-7 | 7.1-10 | 10.1-13 | 13.1-18 | >18 | TOT. |
|----------|----------|-----------|--------|---------|-------|-------|-------|-------|--------|---------|---------|-----|------|
| N | 2 | 2 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| NNE | 1 | 1 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| NE | 1 | 3 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| ENE | 4 | 13 | 5 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 25 |
| E | 0 | 7 | 5 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 |
| ESE | 0 | 3 | 5 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 |
| SE | 1 | 7 | 5 | 8 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 24 |
| SSE | 1 | 2 | 1 | 4 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| S | 1 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| SSW | 1 | 0 | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| SW | 1 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| WSW | 0 | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| W | 1 | 4 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| WNW | 0 | 8 | 5 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18 |
| NW | 3 | 6 | 4 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 |
| NNW | 0 | 4 | 4 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| TOTAL | 17 | 64 | 50 | 48 | 3 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 186 |

NUMBER OF CALMS: 0
 NUMBER OF INVALID HOURS: 0
 NUMBER OF VALID HOURS: 186
 TOTAL HOURS FOR THE PERIOD: 186

RIVER BEND STATION
 JOINT FREQUENCY TABLE
 STABILITY CLASS G

FROM 10/ 1/04 0:00 TO 12/31/04 23:00

PRIMARY SENSORS - 30 FOOT

WIND SPEED (METERS/SECOND)

| WIND DIR | 0.22-0.5 | 0.51-0.75 | 0.76-1 | 1.1-1.5 | 1.6-2 | 2.1-3 | 3.1-5 | 5.1-7 | 7.1-10 | 10.1-13 | 13.1-18 | >18 | TOT. |
|-----------------------------|-----------|------------|-----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|------------|
| N | 8 | 9 | 5 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 24 |
| NNE | 13 | 5 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 |
| NE | 20 | 10 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 33 |
| ENE | 8 | 27 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 40 |
| E | 4 | 7 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 |
| ESE | 1 | 3 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| SE | 1 | 4 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| SSE | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| S | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| SSW | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| SW | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| WSW | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| W | 1 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| WNW | 2 | 11 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 |
| NW | 3 | 21 | 6 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 33 |
| NNW | 5 | 11 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22 |
| TOTAL | 66 | 118 | 39 | 9 | 0 | 232 |
| NUMBER OF CALMS: | 1 | | | | | | | | | | | | |
| NUMBER OF INVALID HOURS: | 0 | | | | | | | | | | | | |
| NUMBER OF VALID HOURS: | 233 | | | | | | | | | | | | |
| TOTAL HOURS FOR THE PERIOD: | 233 | | | | | | | | | | | | |

RIVER BEND STATION
 JOINT FREQUENCY TABLE
 ALL STABILITY CLASSES

FROM 10/1/2004 0:00 TO 12/31/2004 23:00

PRIMARY SENSORS - 150 FOOT

WIND SPEED (METERS/SECOND)

| WIND DIR | 0.22-0.5 | 0.51-0.75 | 0.76-1 | 1.1-1.5 | 1.6-2 | 2.1-3 | 3.1-5 | 5.1-7 | 7.1-10 | 10.1-13 | 13.1-18 | >18 | TOT. |
|-----------------------------|----------|-----------|--------|---------|-------|-------|-------|-------|--------|---------|---------|-----|------|
| N | 0 | 1 | 2 | 3 | 4 | 34 | 79 | 6 | 0 | 0 | 0 | 0 | 129 |
| NNE | 0 | 0 | 0 | 2 | 10 | 51 | 33 | 7 | 0 | 0 | 0 | 0 | 103 |
| NE | 1 | 1 | 1 | 3 | 10 | 30 | 53 | 3 | 0 | 0 | 0 | 0 | 102 |
| ENE | 0 | 1 | 0 | 2 | 11 | 24 | 38 | 13 | 2 | 0 | 0 | 0 | 91 |
| E | 0 | 1 | 0 | 5 | 8 | 27 | 84 | 18 | 1 | 0 | 0 | 0 | 144 |
| ESE | 1 | 0 | 2 | 5 | 9 | 41 | 177 | 47 | 7 | 0 | 0 | 0 | 289 |
| SE | 0 | 0 | 2 | 5 | 6 | 41 | 101 | 18 | 0 | 0 | 0 | 0 | 173 |
| SSE | 0 | 0 | 1 | 6 | 15 | 47 | 85 | 23 | 1 | 0 | 0 | 0 | 178 |
| S | 0 | 0 | 2 | 4 | 9 | 55 | 95 | 11 | 0 | 0 | 0 | 0 | 176 |
| SSW | 0 | 2 | 0 | 3 | 9 | 30 | 42 | 13 | 0 | 0 | 0 | 0 | 99 |
| SW | 0 | 0 | 1 | 5 | 23 | 39 | 22 | 2 | 0 | 0 | 0 | 0 | 92 |
| WSW | 0 | 0 | 1 | 6 | 13 | 32 | 17 | 0 | 0 | 0 | 0 | 0 | 69 |
| W | 1 | 1 | 1 | 4 | 8 | 54 | 28 | 4 | 0 | 0 | 0 | 0 | 101 |
| WNW | 0 | 1 | 0 | 5 | 4 | 17 | 42 | 15 | 1 | 0 | 0 | 0 | 85 |
| NW | 0 | 0 | 1 | 2 | 2 | 26 | 64 | 24 | 4 | 0 | 0 | 0 | 123 |
| NNW | 0 | 1 | 0 | 0 | 2 | 25 | 55 | 12 | 3 | 0 | 0 | 0 | 98 |
| TOTAL | 3 | 9 | 14 | 60 | 143 | 573 | 1015 | 216 | 19 | 0 | 0 | 0 | 2052 |
| NUMBER OF CALMS: | 1 | | | | | | | | | | | | |
| NUMBER OF INVALID HOURS: | 157 | | | | | | | | | | | | |
| NUMBER OF VALID HOURS: | 2051 | | | | | | | | | | | | |
| TOTAL HOURS FOR THE PERIOD: | 2210 | | | | | | | | | | | | |

RIVER BEND STATION
 JOINT FREQUENCY TABLE
 STABILITY CLASS A

FROM 10/1/2004 0:00 TO 12/31/2004 23:00

PRIMARY SENSORS - 150 FOOT

WIND SPEED (METERS/SECOND)

 WIND 0.22- 0.51- 0.76- 1.1- 1.6- 2.1- 3.1- 5.1- 7.1- 10.1- 13.1- >18 TOT.
 DIR 0.5 0.75 1 1.5 2 3 5 7 10 13 18

| | | | | | | | | | | | | | |
|-----|---|---|---|---|---|---|---|----|---|---|---|---|----|
| N | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| NNE | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| NE | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 |
| ENE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 3 |
| E | 0 | 0 | 0 | 0 | 0 | 1 | 6 | 4 | 0 | 0 | 0 | 0 | 11 |
| ESE | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 11 | 2 | 0 | 0 | 0 | 22 |
| SE | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 1 | 0 | 0 | 0 | 0 | 5 |
| SSE | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 |
| S | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| SSW | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| SW | 0 | 0 | 0 | 1 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| WSW | 0 | 0 | 0 | 2 | 0 | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 7 |
| W | 0 | 0 | 0 | 0 | 0 | 5 | 2 | 0 | 0 | 0 | 0 | 0 | 7 |
| WNW | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| NW | 0 | 0 | 0 | 0 | 1 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 5 |
| NNW | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |

 TOTAL 0 0 0 4 5 17 30 19 3 0 0 0 0 78

NUMBER OF CALMS: 0
 NUMBER OF INVALID HOURS: 0
 NUMBER OF VALID HOURS: 78
 TOTAL HOURS FOR THE PERIOD: 78

RIVER BEND STATION
 JOINT FREQUENCY TABLE
 STABILITY CLASS B

FROM 10/1/2004 0:00 TO 12/31/2004 23:00

PRIMARY SENSORS - 150 FOOT

WIND SPEED (METERS/SECOND)

| WIND DIR | 0.22-0.5 | 0.51-0.75 | 0.76-1 | 1.1-1.5 | 1.6-2 | 2.1-3 | 3.1-5 | 5.1-7 | 7.1-10 | 10.1-13 | 13.1-18 | >18 | TOT. |
|----------|----------|-----------|--------|---------|-------|-------|-------|-------|--------|---------|---------|-----|------|
| N | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 1 | 0 | 0 | 0 | 0 | 7 |
| NNE | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 4 |
| NE | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 3 |
| ENE | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 1 | 0 | 0 | 0 | 5 |
| E | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 1 | 1 | 0 | 0 | 0 | 7 |
| ESE | 0 | 0 | 1 | 1 | 0 | 1 | 10 | 6 | 2 | 0 | 0 | 0 | 21 |
| SE | 0 | 0 | 0 | 0 | 1 | 1 | 4 | 1 | 0 | 0 | 0 | 0 | 7 |
| SSE | 0 | 0 | 0 | 1 | 0 | 1 | 4 | 3 | 0 | 0 | 0 | 0 | 9 |
| S | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 4 |
| SSW | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 5 |
| SW | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 |
| WSW | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 3 |
| W | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| WNW | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 3 |
| NW | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 5 | 1 | 0 | 0 | 0 | 7 |
| NNW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 2 |
| TOTAL | 0 | 0 | 1 | 3 | 4 | 11 | 41 | 27 | 5 | 0 | 0 | 0 | 92 |

NUMBER OF CALMS: 0
 NUMBER OF INVALID HOURS: 0
 NUMBER OF VALID HOURS: 92
 TOTAL HOURS FOR THE PERIOD: 92

RIVER BEND STATION
 JOINT FREQUENCY TABLE
 STABILITY CLASS C

FROM 10/1/2004 0:00 TO 12/31/2004 23:00

PRIMARY SENSORS - 150 FOOT

WIND SPEED (METERS/SECOND)

| WIND DIR | 0.22-0.5 | 0.51-0.75 | 0.76-1 | 1.1-1.5 | 1.6-2 | 2.1-3 | 3.1-5 | 5.1-7 | 7.1-10 | 10.1-13 | 13.1-18 | >18 | TOT. |
|----------|----------|-----------|--------|---------|-------|-------|-------|-------|--------|---------|---------|-----|------|
| N | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 3 |
| NNE | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| NE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| ENE | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| E | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 2 | 0 | 0 | 0 | 0 | 5 |
| ESE | 0 | 0 | 0 | 1 | 0 | 1 | 5 | 1 | 2 | 0 | 0 | 0 | 10 |
| SE | 0 | 0 | 0 | 0 | 0 | 2 | 4 | 1 | 0 | 0 | 0 | 0 | 7 |
| SSE | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 2 | 0 | 0 | 0 | 0 | 10 |
| S | 0 | 0 | 0 | 0 | 0 | 1 | 5 | 2 | 0 | 0 | 0 | 0 | 8 |
| SSW | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 0 | 0 | 0 | 0 | 4 |
| SW | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 2 |
| WSW | 0 | 0 | 0 | 0 | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 4 |
| W | 0 | 0 | 0 | 0 | 0 | 3 | 4 | 0 | 0 | 0 | 0 | 0 | 7 |
| WNW | 0 | 0 | 0 | 0 | 0 | 1 | 4 | 1 | 0 | 0 | 0 | 0 | 6 |
| NW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 3 |
| NNW | 0 | 0 | 0 | 0 | 0 | 1 | 4 | 0 | 1 | 0 | 0 | 0 | 6 |

TOTAL 0 0 0 1 1 13 43 17 3 0 0 0 0 78

NUMBER OF CALMS: 0
 NUMBER OF INVALID HOURS: 3
 NUMBER OF VALID HOURS: 78
 TOTAL HOURS FOR THE PERIOD: 81

RIVER BEND STATION
 JOINT FREQUENCY TABLE
 STABILITY CLASS D

FROM 10/1/2004 0:00 TO 12/31/2004 23:00

PRIMARY SENSORS - 150 FOOT

WIND SPEED (METERS/SECOND)

| WIND DIR | 0.22-0.5 | 0.51-0.75 | 0.76-1 | 1.1-1.5 | 1.6-2 | 2.1-3 | 3.1-5 | 5.1-7 | 7.1-10 | 10.1-13 | 13.1-18 | >18 | TOT. |
|-----------------------------|----------|-----------|--------|---------|-------|-------|-------|-------|--------|---------|---------|-----|------|
| N | 0 | 0 | 2 | 0 | 2 | 16 | 44 | 4 | 0 | 0 | 0 | 0 | 68 |
| NNE | 0 | 0 | 0 | 1 | 2 | 22 | 13 | 6 | 0 | 0 | 0 | 0 | 44 |
| NE | 0 | 0 | 1 | 0 | 5 | 8 | 13 | 2 | 0 | 0 | 0 | 0 | 29 |
| ENE | 0 | 0 | 0 | 1 | 0 | 7 | 13 | 4 | 0 | 0 | 0 | 0 | 25 |
| E | 0 | 0 | 0 | 4 | 3 | 9 | 31 | 2 | 0 | 0 | 0 | 0 | 49 |
| ESE | 0 | 0 | 1 | 0 | 7 | 16 | 62 | 9 | 1 | 0 | 0 | 0 | 96 |
| SE | 0 | 0 | 1 | 1 | 2 | 7 | 35 | 3 | 0 | 0 | 0 | 0 | 49 |
| SSE | 0 | 0 | 0 | 1 | 3 | 13 | 44 | 14 | 1 | 0 | 0 | 0 | 76 |
| S | 0 | 0 | 0 | 1 | 2 | 23 | 53 | 8 | 0 | 0 | 0 | 0 | 87 |
| SSW | 0 | 0 | 0 | 0 | 3 | 6 | 18 | 7 | 0 | 0 | 0 | 0 | 34 |
| SW | 0 | 0 | 0 | 1 | 13 | 11 | 12 | 1 | 0 | 0 | 0 | 0 | 38 |
| WSW | 0 | 0 | 1 | 2 | 7 | 13 | 10 | 0 | 0 | 0 | 0 | 0 | 33 |
| W | 0 | 0 | 0 | 1 | 5 | 29 | 11 | 4 | 0 | 0 | 0 | 0 | 50 |
| WNW | 0 | 1 | 0 | 1 | 0 | 5 | 15 | 12 | 1 | 0 | 0 | 0 | 35 |
| NW | 0 | 0 | 1 | 0 | 1 | 6 | 27 | 14 | 3 | 0 | 0 | 0 | 52 |
| NNW | 0 | 0 | 0 | 0 | 0 | 13 | 26 | 10 | 2 | 0 | 0 | 0 | 51 |
| TOTAL | 0 | 1 | 7 | 14 | 55 | 204 | 427 | 100 | 8 | 0 | 0 | 0 | 816 |
| NUMBER OF CALMS: | 0 | | | | | | | | | | | | |
| NUMBER OF INVALID HOURS: | 0 | | | | | | | | | | | | |
| NUMBER OF VALID HOURS: | 816 | | | | | | | | | | | | |
| TOTAL HOURS FOR THE PERIOD: | 816 | | | | | | | | | | | | |

RIVER BEND STATION
 JOINT FREQUENCY TABLE
 STABILITY CLASS E

FROM 10/1/2004 0:00 TO 12/31/2004 23:00

PRIMARY SENSORS - 150 FOOT

WIND SPEED (METERS/SECOND)

| WIND DIR | 0.22-0.51 | 0.51-0.76 | 0.76-1.1 | 1.1-1.6 | 1.6-2.1 | 2.1-3.1 | 3.1-5.1 | 5.1-7.1 | 7.1-10.1 | 10.1-13.1 | 13.1-18 | >18 | TOT. |
|----------|-----------|-----------|----------|---------|---------|---------|---------|---------|----------|-----------|---------|-----|------|
| N | 0 | 0 | 0 | 0 | 0 | 9 | 17 | 0 | 0 | 0 | 0 | 0 | 26 |
| NNE | 0 | 0 | 0 | 1 | 3 | 12 | 8 | 0 | 0 | 0 | 0 | 0 | 24 |
| NE | 1 | 0 | 0 | 2 | 2 | 14 | 13 | 0 | 0 | 0 | 0 | 0 | 32 |
| ENE | 0 | 0 | 0 | 0 | 5 | 7 | 15 | 4 | 0 | 0 | 0 | 0 | 31 |
| E | 0 | 1 | 0 | 0 | 3 | 5 | 37 | 8 | 0 | 0 | 0 | 0 | 54 |
| ESE | 1 | 0 | 0 | 1 | 0 | 12 | 61 | 15 | 0 | 0 | 0 | 0 | 90 |
| SE | 0 | 0 | 1 | 2 | 1 | 11 | 31 | 11 | 0 | 0 | 0 | 0 | 57 |
| SSE | 0 | 0 | 1 | 4 | 4 | 16 | 25 | 4 | 0 | 0 | 0 | 0 | 54 |
| S | 0 | 0 | 0 | 0 | 5 | 22 | 30 | 0 | 0 | 0 | 0 | 0 | 57 |
| SSW | 0 | 1 | 0 | 1 | 2 | 10 | 21 | 1 | 0 | 0 | 0 | 0 | 36 |
| SW | 0 | 0 | 0 | 0 | 4 | 12 | 7 | 0 | 0 | 0 | 0 | 0 | 23 |
| WSW | 0 | 0 | 0 | 1 | 2 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 8 |
| W | 1 | 0 | 1 | 2 | 0 | 7 | 5 | 0 | 0 | 0 | 0 | 0 | 16 |
| WNW | 0 | 0 | 0 | 2 | 1 | 4 | 11 | 1 | 0 | 0 | 0 | 0 | 19 |
| NW | 0 | 0 | 0 | 1 | 0 | 7 | 14 | 2 | 0 | 0 | 0 | 0 | 24 |
| NNW | 0 | 0 | 0 | 0 | 0 | 4 | 15 | 0 | 0 | 0 | 0 | 0 | 19 |
| TOTAL | 3 | 2 | 3 | 17 | 32 | 155 | 312 | 46 | 0 | 0 | 0 | 0 | 570 |

NUMBER OF CALMS: 0
 NUMBER OF INVALID HOURS: 0
 NUMBER OF VALID HOURS: 570
 TOTAL HOURS FOR THE PERIOD: 570

RIVER BEND STATION
 JOINT FREQUENCY TABLE
 STABILITY CLASS F

FROM 10/1/2004 0:00 TO 12/31/2004 23:00

PRIMARY SENSORS - 150 FOOT

WIND SPEED (METERS/SECOND)

| WIND DIR | 0.22-0.5 | 0.51-0.75 | 0.76-1 | 1.1-1.5 | 1.6-2 | 2.1-3 | 3.1-5 | 5.1-7 | 7.1-10 | 10.1-13 | 13.1-18 | >18 | TOT. |
|-----------------------------|----------|-----------|--------|---------|-------|-------|-------|-------|--------|---------|---------|-----|------|
| N | 0 | 0 | 0 | 2 | 1 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 8 |
| NNE | 0 | 0 | 0 | 0 | 2 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 7 |
| NE | 0 | 0 | 0 | 0 | 1 | 2 | 6 | 0 | 0 | 0 | 0 | 0 | 9 |
| ENE | 0 | 0 | 0 | 0 | 2 | 6 | 7 | 0 | 0 | 0 | 0 | 0 | 15 |
| E | 0 | 0 | 0 | 0 | 1 | 5 | 2 | 1 | 0 | 0 | 0 | 0 | 9 |
| ESE | 0 | 0 | 0 | 1 | 0 | 8 | 19 | 3 | 0 | 0 | 0 | 0 | 31 |
| SE | 0 | 0 | 0 | 1 | 1 | 10 | 15 | 1 | 0 | 0 | 0 | 0 | 28 |
| SSE | 0 | 0 | 0 | 0 | 5 | 5 | 3 | 0 | 0 | 0 | 0 | 0 | 13 |
| S | 0 | 0 | 0 | 2 | 0 | 2 | 4 | 0 | 0 | 0 | 0 | 0 | 8 |
| SSW | 0 | 0 | 0 | 0 | 2 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| SW | 0 | 0 | 0 | 2 | 0 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 7 |
| WSW | 0 | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| W | 0 | 0 | 0 | 0 | 1 | 5 | 5 | 0 | 0 | 0 | 0 | 0 | 11 |
| WNW | 0 | 0 | 0 | 1 | 0 | 3 | 6 | 0 | 0 | 0 | 0 | 0 | 10 |
| NW | 0 | 0 | 0 | 0 | 0 | 5 | 6 | 0 | 0 | 0 | 0 | 0 | 11 |
| NNW | 0 | 0 | 0 | 0 | 0 | 3 | 4 | 0 | 0 | 0 | 0 | 0 | 7 |
| TOTAL | 0 | 0 | 0 | 9 | 19 | 72 | 81 | 5 | 0 | 0 | 0 | 0 | 186 |
| NUMBER OF CALMS: | 0 | | | | | | | | | | | | |
| NUMBER OF INVALID HOURS: | 0 | | | | | | | | | | | | |
| NUMBER OF VALID HOURS: | 186 | | | | | | | | | | | | |
| TOTAL HOURS FOR THE PERIOD: | 186 | | | | | | | | | | | | |

RIVER BEND STATION
 JOINT FREQUENCY TABLE
 STABILITY CLASS G

FROM 10/1/2004 0:00 TO 12/31/2004 23:00

PRIMARY SENSORS - 150 FOOT

WIND SPEED (METERS/SECOND)

| WIND DIR | 0.22-0.5 | 0.51-0.75 | 0.76-1 | 1.1-1.5 | 1.6-2 | 2.1-3 | 3.1-5 | 5.1-7 | 7.1-10 | 10.1-13 | 13.1-18 | >18 | TOT. |
|----------|----------|-----------|--------|---------|-------|-------|-------|-------|--------|---------|---------|-----|------|
| N | 0 | 1 | 0 | 1 | 1 | 6 | 7 | 0 | 0 | 0 | 0 | 0 | 16 |
| NNE | 0 | 0 | 0 | 0 | 3 | 11 | 8 | 0 | 0 | 0 | 0 | 0 | 22 |
| NE | 0 | 1 | 0 | 1 | 2 | 5 | 17 | 0 | 0 | 0 | 0 | 0 | 26 |
| ENE | 0 | 1 | 0 | 1 | 4 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 11 |
| E | 0 | 0 | 0 | 1 | 1 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| ESE | 0 | 0 | 0 | 1 | 2 | 3 | 11 | 2 | 0 | 0 | 0 | 0 | 19 |
| SE | 0 | 0 | 0 | 1 | 1 | 10 | 8 | 0 | 0 | 0 | 0 | 0 | 20 |
| SSE | 0 | 0 | 0 | 0 | 2 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 14 |
| S | 0 | 0 | 2 | 1 | 2 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 11 |
| SSW | 0 | 1 | 0 | 2 | 1 | 5 | 2 | 0 | 0 | 0 | 0 | 0 | 11 |
| SW | 0 | 0 | 1 | 1 | 2 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 14 |
| WSW | 0 | 0 | 0 | 1 | 1 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| W | 0 | 1 | 0 | 0 | 1 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 7 |
| WNW | 0 | 0 | 0 | 0 | 2 | 4 | 5 | 0 | 0 | 0 | 0 | 0 | 11 |
| NW | 0 | 0 | 0 | 1 | 0 | 7 | 13 | 0 | 0 | 0 | 0 | 0 | 21 |
| NNW | 0 | 1 | 0 | 0 | 2 | 3 | 6 | 0 | 0 | 0 | 0 | 0 | 12 |
| TOTAL | 0 | 6 | 3 | 12 | 27 | 101 | 81 | 2 | 0 | 0 | 0 | 0 | 232 |

NUMBER OF CALMS: 1
 NUMBER OF INVALID HOURS: 0
 NUMBER OF VALID HOURS: 233
 TOTAL HOURS FOR THE PERIOD: 233

Table 12

**Effluent and Waste Disposal Annual Report 2004 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/m³(2) All D/Q = 10^{-9} m⁻²

(3) Maximum offsite location (property boundary) with highest CHI/Q (unoccupied).

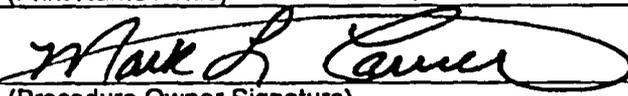
(4) Maximum hypothetical occupied offsite location with highest CHI/Q and D/Q.

(5) No milk animal within 5 miles radius, hypothetical location in worst sector.

(6) Other on-site receptors.

ATTACHMENT 1
Process Control Program (PCP)

Title: Process Control Program

| | | |
|------------------|--|---------|
| Procedure Owner: | Mark L. Carver / Sr Nuclear Support Coordinator | |
| | (Print Name / Title) | |
| Approved: |  | 9/30/04 |
| | (Procedure Owner Signature) | (Date) |

| | | | | | | | | |
|----------------|-----------|-------------------------------------|----------|--------------------------|------|--|------|--|
| Effective Date | EN Common | <input type="checkbox"/> | | Effective Date Exception | ANO | | PNPS | |
| | ENN | <input type="checkbox"/> | | | ECH | | RBS | |
| | ENS | <input checked="" type="checkbox"/> | 10/01/04 | | GGNS | | VY | |
| | | | | | IPEC | | W3 | |
| | | | | | JAF | | WPO | |

Basis Statement

Change to Section 1.0, Purpose – adding information for the PCP program
 Changed reference section to identify only non-site references for this document
 Added definition for Batch in Section 3.0
 Changes made in Section 4.0 & 8.0
 Moved text about vendor taking title of waste from Section 5.2.2 to 5.2.1
 Updated Section 5.4 to match each site's approval authority list for the PCP and changes
 Added Section 5.5 to include vendor related requirements
 Updated procedure to match requirements of AD-101

Procedures Affected By This Revision

None

Process Applicability Exclusion (ENN-LI-100) / Programmatic Exclusion (ENS-LI-101)

All Sites: Specific Sites: ANO GGNS IPEC JAF PNPS RBS VY W3

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| | | | | |
|---|--|-------------------|-------------|----------|
|  | NUCLEAR MANAGEMENT MANUAL | QUALITY RELATED | ENS-RW-105 | REV. # 2 |
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1.0 PURPOSE

The Process Control Program (PCP) shall contain formulas, sampling, analyses, test and determinations to be made to ensure that the processing and packing of solid radioactive wastes based on demonstrated processing of actual or simulated wet solid wastes will be accomplished in such a way as to assure compliance with 10 CFR Parts 20, 61 and 71, State Regulations, burial ground requirements, and other requirements governing the disposal of solid radioactive waste. The scope of the PCP 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 - South

- [1] EN-QV-104, "Entergy Quality Assurance Program Manual Control"
- [2] Title 49, Code of Federal Regulations
- [3] Title 10, Code of Federal Regulations
- [4] Low-Level Waste Licensing Branch Technical Position on Radioactive Waste Classification, 11 May 1983
- [5] Disposal Site Criteria and License
- [6] Waste Processor Acceptance Criteria
- [7] LI-101, "10CFR50.59 Review Program"

3.0 DEFINITIONS

- [1] De-watering - The removal of water or liquid from a waste form, usually by gravity or pumping.
- [2] Batch – An isolated quantity of waste to be processed having essentially consistent physical and chemical characteristics.
- [3] Compaction - The process of volume reducing solid waste by applying external pressure.
- [4] Incineration – The process of burning a combustible material to reduce its volume and yield an ash residue.
- [5] Solid Dry Waste - Radioactive waste which exist primarily in a non-liquid form and includes such items as dry materials, metals, resins, filter media and sludges.

| | | | | |
|---|--|--------------------------|--------------------|-----------------|
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- [6] 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 liquids.
- [7] Solidification – Conversion of liquid or liquid like materials, including wet solids, into a solid free standing form.
- [8] 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.
- [9] Volume Reduction – any process that reduces the volume of waste. This includes but is not limited to, compaction and incineration.

4.0 RESPONSIBILITIES

- 4.1 The Vice President Operations Support (VPOS) is responsible for the implementation of 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) Focus Group is responsible for evaluating and recommending changes and revisions to this procedure.

5.0 DETAILS

An isotopic analysis shall be performed on every batch for each waste stream so that the waste can be classified in accordance with 10CFR61. The isotopic and curie content of each shipping container shall be determined in accordance with 49CFR packaging requirements. The total activity in the container may be determined by either isotopic analysis or by dose-rate-to-curie conversion.

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 a licensed off-site waste processing facility. The licensed off-site waste processing facility will take title to the waste and certify that it has been properly incinerated, solidified or vitrified prior to disposal.

| | | | | |
|---|--|-------------------|-------------|----------|
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- 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.

5.2 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 a licensed off-site waste processing facility. The licensed off-site waste processing facility will take title to the waste and certify that it has been properly incinerated, solidified or vitrified prior to disposal.
- 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 off-site is reported annually to the Nuclear Regulatory Commission in the Annual Radioactive Effluent Release Report as specified by the Offsite Dose Calculation Manual (ODCM).
- 5.4.2 All changes to the PCP shall be documented. All records of reviews performed shall be retained as required by the Quality Assurance Program. The documentation of the changes shall:
 - 5.4.2.1 Contain sufficient information to support the change with appropriate analyses or evaluations justifying the change.

| | | | | |
|---|--|-------------------|-------------|----------|
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5.4.2.2 Include a determination that the change will maintain the overall conformance of the solidified waste product to existing requirements of Federal, State or other applicable regulations.

5.4.3 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 with the following exception at Grand Gulf Nuclear Station. Grand Gulf Specific Requirement – PCP changes are not submitted to the NRC.

5.4.4 The changes to RW-105 shall become effective upon review and acceptance by the site's General Plant Manager except as listed below:

5.4.4.1 For Grand Gulf Nuclear Station, the changes to RW-105 shall be accomplished as specified in Grand Gulf Nuclear Station Technical Requirements Manual (TRM) Section 7.6.3.8. The changes shall become effective upon review and acceptance by the On-site Safety Review Committee (OSRC) and the approval of the GGNS Plant General Manager.

5.4.4.2 For River Bend Nuclear Station, the procedure approval along with changes to RW-105 shall be accomplished per the River Bend Nuclear Station Technical Requirements, Section 5.5.14.1. The changes shall become effective upon review and acceptance by approval from the River Bend Nuclear Station Plant Manager or Radiation Protection Manager.

5.4.4.3 For Waterford 3, the procedure approval along with changes to RW-105 shall be accomplished per Waterford 3 Technical Specifications 6.13.2. The changes shall become effective upon review and acceptance by the Waterford 3 General Plant Manager.

5.4.5 Each site will maintain applicable state and federal regulations (web based access is acceptable), vendor waste acceptance criteria and disposal site waste acceptance criteria.

5.5 Vendor Requirements

5.5.1 Vendors performing radwaste services under 10CFR61 and 10CFR71 requirements will be on the Entergy Qualified Supplier's List (QSL).

5.5.2 Vendors performing radwaste services on-site are to comply with the following:

5.5.2.1 Dewatering and solidification services shall have a NRC approved Topical Report or other form of certification documenting NRC approval of the processes and associated equipment/containers.

| | | | | |
|---|--|--------------------------|--------------------|-----------------|
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5.5.2.2 All vendor procedures utilized for performing on-site radwaste services will be reviewed per the requirements of LI-101, technically by the applicable site's Radiation Protection organization and only be accepted per the approvals specified in Section 5.4.4.

5.5.2.3 All changes to vendor procedures for ongoing on-site radwaste services will be reviewed technically by the site's Radiation Protection organization and screened per the requirements of LI-101, "10CFR50.59 Review Program". Significant procedural changes will require the approvals specified in Section 5.4.4. During screening, the level of significance for procedural changes on equipment and process parameters may warrant the full 10CFR50.59 documentation and approval process.

PRECAUTIONS AND LIMITATIONS

None

6.0 INTERFACES

None

7.0 RECORDS

7.1 Documentation of pertinent data required to classify waste and verify solidification will be maintained on each batch of processed waste as required by approved procedures.

7.2 Documentation will also be maintained to ensure that containers, shipping casks, and methods of packaging wastes meet applicable Federal regulations and disposal site criteria. The records of reviews performed and documents associated with these reviews will be maintained as QA records.

8.0 OBLIGATION AND REGULATORY COMMITMENT CROSS-REFERENCES

| Document | Document Section | NMM Procedure Section | Site Applicability |
|---------------------------------|---------------------|-----------------------|--------------------|
| ANO ODCM | L3.2.1.B | 5.4.3 | ANO |
| ANO1 Technical Specifications | 5.6.3 | 5.4.1 | ANO |
| ANO2 Technical Specifications | 6.9.3 | 5.4.1 | ANO |
| RBS Technical Requirements | 5.5.14 | * | RBS |
| RBS Technical Requirements | 5.5.14.1 | 5.4.3.2 | RBS |
| RBS Technical Requirements | 5.5.14.2 | 5.4.3.2 | RBS |
| RBS Technical Requirements | 5.8.2 | 5.4.3.2 | RBS |
| WF3 Technical Specifications | 1.22 | * | WF3 |
| WF3 Technical Specifications | 6.9.18 | 5.4.1 | WF3 |
| WF3 Technical Specifications | 6.13.2.b | 5.4.3.3 | WF3 |
| GGNS UFSAR, Chapter 16B.1 / TRM | 7.6.3.8 paragraph 1 | 1.0 | GGNS |
| GGNS ODCM | 5.6.3.c | 5.4.1 | GGNS |
| GGNS UFSAR, Chapter 16B.1 / TRM | 7.6.3.8 paragraph 2 | 5.4.2 5.4.4 | GGNS |

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

9.0 ATTACHMENTS

9.1 None