ENERCON SERVICES, INC.	CALCULATION COVER SHEET	CALC. NO. TXUT-001-FSAR-2.3-CALC-022
		REV. 0
		PAGE NO. 1 of 122

Title:	CPNPP Short-Term Atmospheric Dispersion Calculation	Client: Luminant
		Project: MITS003

Item	Cover Sheet Items	Yes	No
1	Does this calculation contain any assumptions that require confirmation? If **YES**, identify the assumptions 4.4	☒	☐
2	Does this calculation serve as an "Alternate Calculation"? If **YES**, identify the design verified calculation. **Design Verified Calculation No.**	☐	☒
3	Does this calculation supersede an existing calculation? If **YES**, identify the superseded calculation. **Superseded Calculation No.**	☐	☒

Scope of Revision:

Initial Issue

Revision Impact on Results:

N/A

Preliminary Calculation	☐	**Final Calculation**	☒
Safety-Related	☒	**Non-Safety Related**	☐

Print Name and Sign

Originator: Jared Monroe	**Date:** 12/31/07
Design Verifier: Richard Rogers	**Date:** 12/31/07
Approver: Joanne G. Morris	**Date:** 12/31/07

ENERCON SERVICES, INC.	CALCULATION REVISION STATUS SHEET	CALC. NO. TXUT-001-FSAR-2.3-CALC-022 REV. 0 PAGE NO. 2 of 122

CALCULATION REVISION STATUS

REVISION	DATE	DESCRIPTION
0	12/31/2007	Initial Issue

PAGE REVISION STATUS

PAGE NO.	REVISION	PAGE NO.	REVISION
1 – 3A	0		
4 – 122	0		

APPENDIX REVISION STATUS

APPENDIX NO.	PAGE NO.	REVISION NO.	APPENDIX NO.	PAGE NO.	REVISION NO.
Attachment 1	18-20	0			
Attachment 2	21	0			
Attachment 3	22-55	0			
Attachment 4	56-60	0			
Attachment 5	61-120	0			
Attachment 6	121-122	0			

ENERCON SERVICES, INC.	CALCULATION DESIGN VERIFICATION PLAN AND SUMMARY SHEET	CALC. NO. TXUT-001-FSAR-2.3-CALC-022 REV. 0 PAGE NO. 3 of 122

Calculation Design Verification Plan:

Design inputs shall be verified by comparing the documented input with the source references and checking the validity of the references for the intended use. All assumptions shall be evaluated and verified to determine if they are based on sound engineering principles and practices. Verify the methodology, computer code input parameters, results, and conclusions.

Print Name and Sign	
Originator: Jared Monroe	**Date:** 12/31/07
Approver: Joanne G. Morris	**Date:** 12/31/07

Calculation Design Verification Summary:

Design inputs, assumptions, methodology, results, and conclusions are evaluated/verified and were found to be acceptable. All comments have been incorporated.

Note that Assumption 4.4 requires verification.

Based on the above summary, the calculation is determined to be acceptable.

Print Name and Sign	
Design Verifier: Richard Rogers	**Date:** 12/31/07
Others:	**Date:**

ENERCON SERVICES, INC.	CALCULATION DESIGN VERIFICATION CHECKLIST	CALC. NO. TXUT-001-FSAR-2.3-CALC-022
		REV. 0
		PAGE NO. 3A of 122

Item	Cover Sheet Items	Yes	No	N/A
1	Design Inputs - Were the design inputs correctly selected, referenced latest revision, consistent with the design basis and incorporated in the calculation?	☒	☐	☐
2	Assumptions – Were the assumptions reasonable and adequately described, justified and/or verified, and documented?	☐	☒	☐
3	Quality Assurance – Were the appropriate QA classification and requirements assigned to the calculation?	☒	☐	☐
4	Codes, Standard and Regulatory Requirements – Were the applicable codes, standards and regulatory requirements, including issue and addenda, properly identified and their requirements satisfied?	☒	☐	☐
5	Construction and Operating Experience – Has applicable construction and operating experience been considered?	☐	☐	☒
6	Interfaces – Have the design interface requirements been satisfied, including interactions with other calculations?	☒	☐	☐
7	Methods – Was the calculation methodology appropriate and properly applied to satisfy the calculation objective?	☒	☐	☐
8	Design Outputs – Was the conclusion of the calculation clearly stated, did it correspond directly with the objectives and are the results reasonable compared to the inputs?	☒	☐	☐
9	Radiation Exposure – Has the calculation properly considered radiation exposure to the public and plant personnel?	☐	☐	☒
10	Acceptance Criteria – Are the acceptance criteria incorporated in the calculation sufficient to allow verification that the design requirements have been satisfactorily accomplished?	☐	☐	☒

COMMENTS:

Item 2 is checked "No" since Assumption 4.4 requires verification.

Print Name and Sign	
Design Verifier: Richard Rogers Richard Rogers	**Date:** 12/31/07
Others:	**Date:**

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1.0 Purpose and Background

The purpose of this calculation is to provide the relative ground-level air concentrations (χ/Q values) for postulated accidental releases of radioactive material from the proposed Luminant Power nuclear plants, Comanche Peak Nuclear Power Plant Units 3 & 4. Such assessments are required by 10 CFR Part 100, "Reactor Site Criteria" [Reference 3.4] and 10 CFR Part 52, "Licenses, Certifications, and Approvals for Nuclear Power Plants" [Reference 3.5]. The results of this calculation will be used to support the Combined Operating License Application (COLA) to be submitted by Luminant Power. This calculation was performed using the PAVAN computer program [References 3.1 and 3.2], which is also used by the U.S. Nuclear Regulatory Commission for this type of evaluation. The computer program, PAVAN, implements the guidance provided in Regulatory Guide 1.145, "Atmospheric Dispersion Models for Potential Accident Consequence Assessments at Nuclear Power Plants" [Reference 3.3]. Refer to Reference 3.2 for the Computer Program Documentation Package for the PAVAN program.

The consequence of a design basis accident in terms of personnel exposure is a function of the atmospheric dispersion conditions at the site of the potential release. Atmospheric dispersion consists of two components: (1) atmospheric transport due to organized or mean airflow within the atmosphere and (2) atmospheric diffusion due to disorganized or random air motions. Atmospheric dispersion conditions are represented by relative air concentration (χ/Q) values [Reference 3.3].

The Comanche Peak onsite meteorological measurement program utilizes wind speed sensors, wind direction sensors and temperature sensors from the meteorological tower located at the plant site near the Squaw Creek Reservoir. The hourly meteorological data for the years beginning January 1, 2001 and ending December 31, 2006 (herein referred to as 2001 – 2006 Met Data) was recorded at the 10 m and 60 m levels as provided by Texas Utilities and Luminant Power [References 3.6 and 3.7].

The meteorological data provided by Texas Utilities and Luminant Power was formatted for use as input to the PAVAN code in terms of joint frequency distributions, in hours, of wind direction and wind speed by atmospheric stability class.

2.0 Summary of Results and Conclusions

There are no specific acceptance criteria or regulatory requirements associated with the atmospheric dispersion factors determined in this calculation; however, relative concentration (χ/Q) values have been determined for the proposed plant type, as documented in Table 2.0-1 of the US-APWR DCD [Reference 3.9]. These estimates are bounding for a typical US-APWR sited in most areas of the conterminous United States and can be used to calculate radiological consequences of design basis accidents. Therefore, the χ/Q values determined here should be less than those given in Table 2.0-1 of the US-APWR DCD [Reference 3.9]. The site specific short term atmospheric dispersion values determined here for Comanche Peak are given in Table 2-3. The 0.5% maximum sector and 5% overall site limit short term atmospheric dispersion values determined for Comanche Peak are bounded by the values from Table 2.0-1 of the US-APWR DCD [Reference 3.9].

PAVAN was executed using the input data described herein. The results of the computer run are included in Attachment 5 for the identified years of meteorological data. Regulatory Position 4 of Regulatory Guide 1.145 [Reference 3.3] requires that the Exclusion Area Boundary (EAB) and Low Population Zone (LPZ) χ/Q values be calculated based on both a directionally independent methodology (overall site limit) and a directionally dependent methodology (maximum sector) and that the most conservative (highest) values be chosen. One PAVAN run was made to determine the limiting χ/Q values. The PAVAN run used the distances to the EAB from the release boundary. See Section 6.5 for discussion of EAB and LPZ downwind distances. The results of this run (see Attachment 5) indicated that the ENE sector produced the highest EAB χ/Q.

A summary of the results based on the 2001 – 2006 Met Data, as presented in the PAVAN output, is given in Tables 2-1 and 2-2. Limiting values are shown in bold font. In accordance with the guidance of Regulatory Guide 1.145, the limiting values are to be used for assessment of accidental releases. The limiting χ/Q values for Comanche Peak Units 3 & 4 are given in Table 2-3. The 50% probability χ/Q values based on the 2001 – 2006 meteorological data, calculated in Attachment 6, are given in Table 2-4. Median (50%) values may be used in making realistic estimates of the environmental effects of potential radiological accidents.

The development of the site for the proposed CPNPP Units 3 & 4 is preliminary. Therefore, to account for any future changes to the proposed site and any changes in future meteorological data, ten percent is added to the maximum accident and 50% χ/Q values in Tables 2-3 and 2-4, respectively. The maximum values, with the ten percent added, to be used in the accident analysis at CPNPP Units 3 & 4 are given in Table 2-5. The maximum 50% χ/Q values with the ten percent added are given in Table 2-6.

Table 2-1
Summary - Exclusion Area Boundary χ/Q Values (s/m^3)

	Exclusion Area Boundary χ/Q (s/m^3)		
	Direction Dependent χ/Q		Direction Independent χ/Q
Time Period	**0.5% Max Sector χ/Q[1]**	**Sector/Distance**	**5% Overall Site Limit**
0-2 Hrs	**3.36E-04**	ENE / 600 m	2.59E-04

[1] 0.5% χ/Q values represent the maximum for all sector-dependent values. Refer to page 92 for the PAVAN output EAB results summary. Refer to page 119 for the PAVAN output LPZ results summary.

Table 2-2
Summary - Low Population Zone χ/Q Values (s/m^3)

	Low Population Zone χ/Q (s/m^3)		
	Direction Dependent χ/Q		Direction Independent χ/Q
Time Period	0.5% Max χ/Q[1]	Sector	5% Site Limit[2]
0-8 Hrs	**2.08E-05**	NNE	1.85E-05
8-24 Hrs	**1.35E-05**	NNE	1.28E-05
1-4 Days	5.33E-06	NNE	**5.76E-06**
4-30 Days	1.67E-06	NNW	**1.83E-06**

Table 2-3
Comanche Peak Accident χ/Q Values (s/m^3)

	0 – 2 Hrs	0 – 8 Hrs	8 – 24 Hrs	24 – 96 Hrs	96 – 720 Hrs
EAB (ENE, 600 m)[1]	3.36E-04				
LPZ (NNE, 3219 m)[1]		2.08E-05	1.35E-05		
LPZ (5% Site Limit, 3219 m)				5.76E-06	1.83E-06

Table 2-4
Comanche Peak 50% Probability-Level χ/Q Values (s/m^3)

	0 – 2 Hrs	0 – 8 Hrs	8 – 24 Hrs	24 – 96 Hrs	96 – 720 Hrs
EAB[3]	5.23E-05				
LPZ[3]		3.02E-06	2.50E-06	1.66E-06	9.22E-07

Table 2-5
Comanche Peak Maximum Accident χ/Q Values (s/m^3)

	0 – 2 Hrs	0 – 8 Hrs	8 – 24 Hrs	24 – 96 Hrs	96 – 720 Hrs
EAB (ENE, 600 m)	3.70E-04				
LPZ (NNE, 3219 m)		2.29E-05	1.49E-05		
LPZ (5% Site Limit, 3219 m)				6.34E-06	2.01E-06

[2] Refer to page 119 for the PAVAN output LPZ results summary. As identified in the PAVAN manual, the direction independent χ/Q envelope values (i.e. the 5% "SITE LIMIT" values) are considered approximations and require confirmation (see Section 6.7, Evaluation of Results).
[3] LPZ and EAB values are based on the "FIVE PERCENT OVERALL SITE LIMIT", 50% probability χ/Q, χ/Q results for 0-2 hr and annual average. Refer to Attachment 6, pages 120 and 121.

Table 2-6
Comanche Peak Maximum 50% Probability-Level χ/Q Values (s/m^3)

	0 – 2 Hrs	0 – 8 Hrs	8 – 24 Hrs	24 – 96 Hrs	96 – 720 Hrs
EAB	5.75E-05				
LPZ		3.32E-06	2.75E-06	1.83E-06	1.01E-06

3.0 References

3.1 NUREG/CR-2858, PNL-4413, "PAVAN: An Atmospheric Dispersion Program for Evaluating Design Basis Accidental Releases of Radioactive Materials from Nuclear Power Stations", November 1982

3.2 ENERCON Computer Program Certification: "PAVAN: An Atmospheric Dispersion Program for Evaluating Design Basis Accidental Releases of Radioactive Materials from Nuclear Power Stations", 4/3/07

3.3 Regulatory Guide 1.145, "Atmospheric Dispersion Models for Potential Accident Consequence Assessments at Nuclear Power Plants", Revision 1, November 1982 (Revised February 1983 to correct page 1.145-7)

3.4 10 CFR Part 100, "Reactor Site Criteria"

3.5 10 CFR Part 52, "Licenses, Certifications, and Approvals for Nuclear Power Plants"

3.6 Dennis Buschbaum (TXU) to Mike Laggart (ENERCON), CPSES-200602398, "Transmittal of Existing CPSES Meteorological Data for Use in COLA at Comanche Peak Units 3 and 4", (Jan. 2001 – Nov 2006, see Attachment 1)

3.7 Matt Weeks (Luminant Power) to Mike Laggart (ENERCON), CPSES-200701296, "Transmittal MET data (November Thru December 2006) as requested by ENERCON RFI-0067", Aug. 2, 2007(data is included in electronic files in Attachment 1)

3.8 Regulatory Guide 1.23, "Meteorological Monitoring Programs for Nuclear Power Plants", Revision 1, March 2007

3.9 Mitsubishi Heavy Industries, Ltd., "Design Control Document for the United States Advanced Pressurized Water Reactor", Revision 0 Draft

3.10 Comanche Peak Nuclear Power Plant Report TXUT-001-PR-001, "Suitabillity of Existing Meteorological Program for COL Application", Revision 0

3.11 Comanche Peak Steam Electric Station Units 1 & 2 FSAR

3.12 Regulatory Guide 4.7, "General Site Suitability Criteria for Nuclear Power Stations", Revision 2, April 1998

3.13 Comanche Peak Nuclear Power Plant Units 3 & 4, FSAR Figure 2.1-209, "Low Population Zone", Revision A

3.14 Regulatory Guide 1.206, "Combined License Applications for Nuclear Power Plants (LWR Edition)", June 2007

3.15 Regulatory Guide 1.111, "Methods for Estimating Atmospheric Transport and Dispersion of Gaseous Effluents in Routine Releases from Light-Water-Cooled Reactors", Revision 1, July 1977 (For Comment)

3.16 NUREG-0917, "Nuclear Regulatory Commission Staff Computer Programs for Use with Meteorological Data", July 1982

3.17 Luminant/Comanche Peak Units 3 & 4, MNES US APWR, GAS-15-11-100-002, "Site Plan", Revision P2

4.0 Assumptions

4.1 Building wake effects are credited in this calculation. The effects of building wake mixing and ambient plume meander on atmospheric dispersion are expressed in Regulatory Guide 1.145 and the PAVAN code in terms of conditional use of Equations 1, 2, and 3 (See Section 5, Methodology). Regulatory Guide 1.145 states that the conditional use of Equations 1, 2, and 3 is considered appropriate because (1) horizontal plume meander tends to dominate dispersion during light wind and stable or neutral conditions and (2) building wake mixing becomes more effective in dispersing effluents than meander effects as the wind speed increases and the atmosphere becomes less stable.

4.2 Vertical and lateral plume spread associated with unrestricted flow over relatively flat uniform terrain (Pasquill-Gifford diffusion parameters) will be assumed. Per Regulatory Guide 1.145 [Reference 3.3] and the user's guide for PAVAN [Reference 3.1], these values are generally applicable to sites in most continental, non-arid areas. Per review of Figure 2.3-4 of the CPSES Units 1 & 2 FSAR [Reference 3.11], there are no significant changes in topography within 5 miles of the Comanche Peak site.

4.3 The topography in the region of a proposed site may cause long-term spatial and temporal variations in the air flow in the site vicinity resulting in an underestimate of the annual average χ/Q value [Reference 3.15]. This calculation assumes that the six years of meteorological data provided by TXU and Luminant Power [References 3.6 and 3.7] is representative of the overall site conditions and long-term trends for the Comanche Peak site. Per review of Figure 2.3-4 of the CPSES Units 1 & 2 FSAR [Reference 3.11], there are no significant changes in topography within 5 miles of the Comanche Peak site. Furthermore, as documented in the Comanche Peak Report on the Suitability of Existing Meteorological Program for COL Application [Reference 3.10], the location of the Comanche Peak meteorological tower is sufficiently removed from any plant structures or significant topographic features to insure that the system provides adequate data to represent onsite meteorological conditions and to describe the local and regional atmospheric transport and diffusion characteristics. The wind and stability characteristics of the Comanche Peak site and the relationship of these parameters to the corresponding parameters at the Mineral Wells Airport are discussed in Section 4 of the Report [Reference 3.10] and are found to be "very similar". Thus, no long term trends were observed which would bias χ/Q estimates.

4.4 This calculation is prepared in support of the Comanche Peak Units 3 & 4 COLA for an US-APWR nuclear power plant in accordance with Regulatory Guide 1.206, "Combined License Applications for Nuclear Power Plants (LWR Edition)" [Reference 3.14]. Because the COLA is under development at this time, certain documents referenced in the calculation are preliminary. ***Approved revisions must be obtained and reviewed for impact on the results of this calculation in order to close this open assumption. This assumption applies to References 3.9, 3.13, and 3.17.***

4.5 The approximate release locations for the US-APWR are identified in Figure 15A-1 of the US-APWR DCD [Reference 3.9]. This figure and the Site Plan for Comanche Peak Units 3 & 4 [Reference 3.17] are used to show that a circle with a radius of approximately 150 ft (46 m) centered on the reactor building encompasses all release locations for each unit. Because these drawings are preliminary and Figure 15A-1 may not be exactly to scale, a circle with a radius of 670 ft (204 m) is conservatively assumed for the release boundary. This circle encompasses the entire power block including the turbine building as well as all other buildings with potential release locations. See Section 6.5.

5.0 Methodology

The computer program, PAVAN, is used for this analysis. Verification of the PAVAN computer code was performed in accordance with the ENERCON computer code certification procedure [Reference 3.2]. Atmospheric dispersion (χ/Q) values are determined as functions of direction for various time periods at the exclusion area boundary (EAB) and the outer boundary of the low population zone (LPZ). The χ/Q calculations are based on the theory that material released to the atmosphere will be normally distributed (Gaussian) about the plume centerline. A straight-line trajectory is assumed between the point of release and all distances for which χ/Q values are calculated [References 3.1 and 3.3].

Using joint frequency distributions of wind direction and wind speed by atmospheric stability category, PAVAN provides the χ/Q values as functions of direction for various time periods at the EAB and LPZ. The meteorological data needed for this calculation includes wind speed, wind direction, and atmospheric stability. Other plant specific data used in the PAVAN input includes: building height, building area, meteorological tower height at which wind speed was measured, and distances to the EAB and LPZ [Reference 3.1].

Regulatory Guide 1.145 [Reference 3.3] divides release configurations into two modes, ground release and stack release. A ground release includes all release points that are effectively lower than two and one-half times the height of the adjacent solid structures. Since the Comanche Peak Units 3 & 4 plant vents are less than two and one-half times the containment building height (see Section 6.6, Type of Release), the release mode applied in this analysis is classified as a ground release.

Within the ground level release class, two sets of meteorological conditions are treated differently in order to consider the effects of building wake mixing and ambient plume meander. During neutral (D) or stable (E, F, or G) atmospheric stability conditions when the wind speed at the 10-meter level is less than 6 meters per second (m/s), horizontal plume meander is considered. Relative concentration (χ/Q) values are determined through the selective use of the following set of equations for ground-level relative concentrations at the plume centerline. [Reference 3.1]

$$\chi/Q = \frac{1}{U_{10}\left(\pi \upsilon_y \upsilon_z + A/2\right)} \qquad \text{Equation 1}$$

$$\chi/Q = \frac{1}{U_{10}\left(3\pi \upsilon_y \upsilon_z\right)} \qquad \text{Equation 2}$$

$$\chi/Q = \frac{1}{U_{10}\pi \Sigma_y \upsilon_z} \qquad \text{Equation 3}$$

Where:

χ/Q is relative concentration, in sec/m^3,
U_{10} is average wind speed at 10 meters above plant grade, in m/s
ν_y is lateral plume spread, in meters, a function of atmospheric stability and distance
ν_z is vertical plume spread, in meters, a function of atmospheric stability and distance
Σ_y is lateral plume spread with meander and building wake effects, in meters, a function of atmospheric stability, wind speed, and distance
A is the smallest vertical-plane cross-sectional area of the reactor building, in square-meters

PAVAN calculates χ/Q values using Equations 1, 2, and 3. The values from Equations 1 and 2 are compared and the higher value is selected. This value is then compared with the value from Equation 3, and the lower value of these two is selected as the appropriate χ/Q value.

During unstable (A, B, or C) atmospheric stability and/or 10-meter level wind speeds of 6 m/s or more, plume meander (Equation 3) is not considered. The higher value calculated from Equation 1 or 2 is used as the appropriate χ/Q value.

From these results, PAVAN constructs a cumulative probability distribution of χ/Q values for each of the 16 directional sectors. This distribution is the probability of the given χ/Q values being exceeded in that sector during the total time. The sector χ/Q values and the maximum sector χ/Q value is determined by effectively "plotting" the χ/Q versus probability of being exceeded and selecting the χ/Q value that is exceeded 0.5% of the total time. This same method is used to determine the 5% and 50% overall site χ/Q values. Attachment 6 documents the check of the 5% overall site limit values and the determination of the 50% overall site limit values.

The PAVAN manual states that the χ/Q value for the EAB or LPZ boundary evaluations will be the maximum sector χ/Q or the 5% overall site χ/Q, whichever is greater. This instruction is consistent with Regulatory Guide 1.145 [Reference 3.3].

6.0 Calculations

Conservative and realistic estimates of atmospheric dispersion factors at the exclusion area boundary (EAB) and at the outer boundary of the low population zone (LPZ) are determined using the computer code PAVAN and the site specific input documented below. The PAVAN output file is provided in Attachment 5.

6.1 Meteorological Data

The meteorological data used in this analysis was obtained from the raw hourly meteorological data for the years beginning January 1, 2001 and ending December 31, 2006 as provided by Comanche Peak. Note that 2004 was a leap year. Therefore, the meteorological data provided represents 52,584 total possible hours of data, i.e. 365 x 24 x 5 + 366 x 24 x 1.

Using an Excel spreadsheet, the raw met data provided by Comanche Peak was screened and then manually reviewed using criteria recommended in NUREG-0917 [Reference 3.16]. The screening criteria used to identify suspect data is as follows:

- A, B, or C stability during the night
- F or G stability class during the day
- Unstable (A, B, or C) conditions during precipitation
- Stable (F or G) conditions during precipitation
- Wind direction at 60 meters not changing
- Wind direction at 10 meters not changing
- Upper and lower wind speed the same
- Missing data for Wind Direction at 10 meters, Wind speed at 10 meters, Wind Direction at 60 meters, Wind speed at 60 meters, Temperature at 60 meters, Temperature at 10 meters
- Precipitation for more than 8 consecutive hours
- Precipitation greater than 25 mm (1 inch) in 1 hour
- Wind speed greater than 25 m/s
- Same stability class for 12 or more consecutive hours (Unstable or Stable, no D or E)
- Same temperature for 8 or more hours
- Delta-T less than -3.4°C/100 meters (autoconvective lapse rate)
- Greater than 3 stability class jump for two consecutive hours
- Stability Class consistency

Suspect data was flagged for further investigation. Subsequently, a manual review was conducted to accept or reject data flagged by the screening process. In some cases where temperature data was found to be bad, it was replaced using data from a redundant device on the primary tower. Per Regulatory Guide 1.23 [Reference 3.8], "the use of redundant sensors and/or recorders is an acceptable approach to achieve the 90-percent data recovery goal." This evaluation process validates the meteorological data so that it can be used for modeling and analysis.

The evaluation of the Comanche Peak meteorological data is documented in Attachment 3. Two-thousand four hundred and forty (2,440) hours of bad or missing data were identified and rejected based on the screening and review process. Regulatory Guide 1.23 [Reference 3.8] recommends that a data recovery goal of 90% be achieved for each year of meteorological data. The data recoveries for each year used in this calculation are 92.0%, 96.2%, 98.5%, 97.1%, 88.5%, and 99.8%, for 2001 – 2006, respectively. Typically, only five years of data are required, but because the data recovery for 2005 is below 90%, a sixth year of data was included. The data recovery for the six-year composite data is 95.4%.

PAVAN requires meteorological data that is input in the form of joint frequency distributions of wind direction and wind speed by atmospheric stability class. The stability classes were determined based on the classification system given in Table 1 of Regulatory Guide 1.23 [Reference 3.8], as follows:

Regulatory Guide 1.23 (Table 1) Classification of Atmospheric Stability

Stability Classification	Pasquill Categories	Temperature change with height (°C/100m)
Extremely unstable	A	$\Delta T \leq -1.9$
Moderately unstable	B	$-1.9 < \Delta T \leq -1.7$
Slightly unstable	C	$-1.7 < \Delta T \leq -1.5$
Neutral	D	$-1.5 < \Delta T \leq -0.5$
Slightly stable	E	$-0.5 < \Delta T \leq 1.5$
Moderately stable	F	$1.5 < \Delta T \leq 4.0$
Extremely stable	G	$\Delta T > 4.0$

Since the hourly meteorological data provided by Texas Utilities and Luminant Power gives the temperature differences in °F/50 meter [References 3.6 and 3.7], multiplication by 1.111 (i.e., (5/9) x (100/50)) was required prior to use for the stability class determination. This operation puts the temperature differences on the appropriate scale for comparison with the Regulatory Guide stability classes.

After the stability class determination, the total hours in each stability class, wind speed and direction were obtained from a sort of the hourly meteorological data. Since the wind speed data given in these files contain the upper and lower wind speeds in miles per hour, a conversion to meters per second was required, as follows:

$$\text{Wind speed} = \text{Wind speed (mph)} * 0.44704 \frac{\text{m/sec}}{\text{mph}}$$

Joint frequency distribution tables were developed from the validated hourly meteorological data based on the methodology that if any data required as input to the PAVAN program (i.e., lower level wind direction, lower level wind speed, and temperature differential) was missing from the hourly data record, all data for that hour was discarded. Also, the data in the joint frequency distribution tables was rounded to the nearest integer for input into the PAVAN code. The resulting joint frequency distribution tables for each stability class are given in Attachment 4 for the 2001 – 2006 data. The hours in each stability class based on the data for 2001 – 2006, for an equivalent year with 8,760 hours, are given in Table 6.1-1.

Table 6.1-1
Total Hours in Each Stability Class[4]

Year	Class A	Class B	Class C	Class D	Class E	Class F	Class G
2001 – 2006	657	576	660	4088	2023	490	261
Percent in Class	7.5	6.6	7.5	46.7	23.1	5.6	3.0

The meteorological data used for the PAVAN code input was entered by atmospheric stability (A through G), by wind direction (16 sectors), and by wind speed category. PAVAN produces the best results if wind speeds are classified into a large number of categories at the lower wind speeds. The wind speed categories used in the PAVAN analyses are as given in the joint frequency distribution tables (see Attachment 4). The upper bounds for each wind speed category are ≤0.45 m/s, ≤0.5 m/s, ≤0.75 m/s, ≤1.0 m/s, ≤1.25 m/s, ≤1.5 m/s, ≤2.0 m/s, ≤3.0 m/s, ≤4.0 m/s, ≤5.0 m/s, ≤6.0 m/s, ≤8.0 m/s, and ≤16.0 m/s. For the years of data under consideration, there were no hourly recordings of wind speeds greater than 16.0

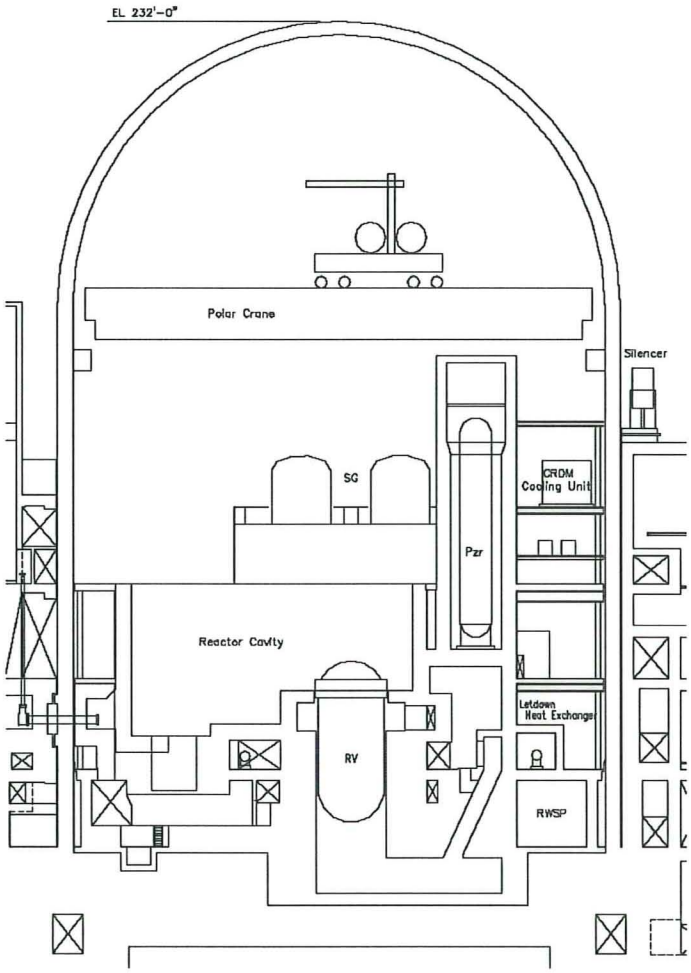
[4] Stability class based on vertical temperature gradient between the 60m and 10m monitoring levels of the Comanche Peak meteorological tower for meteorological data from January 1, 2001 through December 31, 2006. Note that the sum of the hours in each class may not equal exactly 8,760 because of rounding.

m/s. Calms were classified as hourly average wind speeds below the vane or anemometer starting speed, whichever is higher [Reference 3.3]. According to the meteorological tower instrumentation data given in Table 2.3-34 of the CPSES Units 1 & 2 FSAR [Reference 3.11], the starting wind speeds for the anemometer and vane are 0.45 m/s. Therefore, a starting wind speed of 0.45 m/s (1.0 mph) is used to determine the hours of calm wind speeds. The hours of calm wind speeds for each stability class are given in Attachment 4.

6.2 Building Area

Building area is defined in Regulatory Guide 1.145 [Reference 3.3] as the smallest vertical-plane cross-sectional area of the reactor building in square-meters. A smaller cross-sectional area results in less building wake and higher atmospheric dispersion coefficients. Therefore, for conservatism, the containment area is used in the determination of building-wake effects. The figure below, taken from Figure 2.2-13 of the Tier 1 material of the US-APWR DCD [Reference 3.9], shows a cross-section of the US-APWR containment.

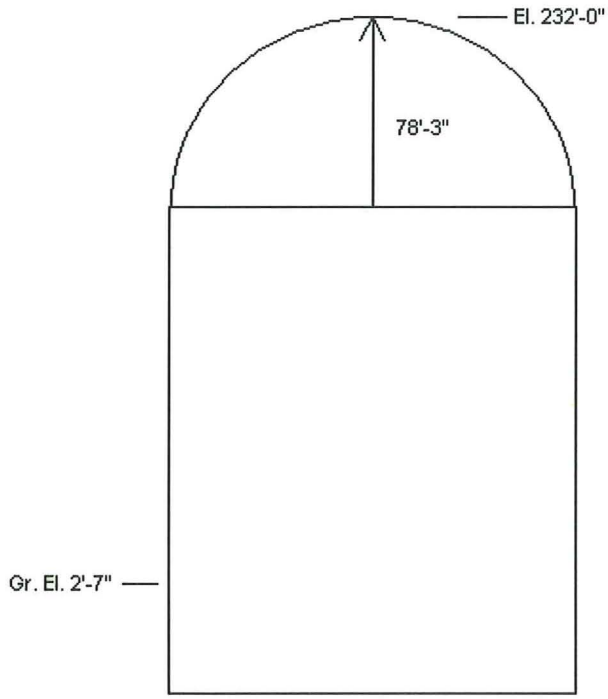
US-APWR Reactor Building:



The area of the reactor building to be used in the determination of building-wake effects will be conservatively estimated as the above grade, cross-sectional area of containment as described below. The following information was obtained from Figure 2.2-13 and Table 2.2-2 of the Tier 1 material of the US-APWR DCD [Reference 3.9].

Design Plant Grade – El. 2'-7"
Distance from Design Plant Grade to Top Surface of Reactor Building Roof – 229'-5"
Elevation of Hemispherical Wall of PCCV – 153'-9" to 232'-0"

These elevations and dimensions are used to create the diagram of the reactor building cross-section below.



Cross-Section of Above Grade Cylindrical Section:
Width = 2 x (78'-3") = 156'-6" = 156.5 ft
Height = 232'-0" – 78'-3" – 2'-7" = 151'-2" = 151.2 ft
Area = 156.5 x 151.2 = 23663 ft^2 = 2198 m^2

Cross-Section of Dome Roof:
Area = $\pi/2$ x $(78'\text{-}3")^2$
= 9,618 ft^2 = 894 m^2

Total Area = 3092 m^2

Tolerances in the reactor building dimensions are neglected. As discussed above, a smaller cross-sectional area results in a higher atmospheric dispersion coefficient. Therefore, for additional conservatism, a building cross-sectional area of 2,500 m^2 is used.

6.3 Building Height (H_1)

Building Height (H_1) is the height above plant grade of the containment structure used in the building-wake term for the annual-average calculations. The roof of the reactor building is 229'-5" (69.9 m) above grade, as shown above.

6.4 Meteorological Tower Height (H_2)

The tower height (H_2) is the height above ground level at which the lower wind speed was measured. Per the CPSES Units 1 & 2 FSAR [Reference 3.11], the lower wind speed measurement height is 10.0 meters.

6.5 Downwind Distances

For each of the 16 direction sectors, the distance for exclusion area boundary or outer LPZ boundary χ/Q calculation should be the minimum distance from the stack or, in the case of releases through vents or building penetrations, the nearest point on the building to the exclusion area boundary or outer LPZ boundary within a 45-degree sector centered on the compass direction of interest. [Reference 3.3]

Exclusion Area Boundary (EAB)

According to Regulatory Guide 4.7, "General Site Suitability Criteria for Nuclear Power Stations" [Reference 3.12], a reactor licensee is required to designate an exclusion area and to have authority to determine all activities within that area, including removal of personnel and property. In addition, the exclusion area is required to be of such a size that an individual assumed to be located at any point on its boundary would not receive a radiation dose in excess of 25 rem total effective dose equivalent (TEDE) over any 2-hour period following a postulated fission product release into the containment. The Exclusion Area Boundary (EAB) for Comanche Peak is shown in the Site Plan drawing [Reference 3.17].

The EAB extends at least one-half mile from the center of containment for Units 3 & 4. A circle with a radius of approximately 670 ft, centered on containment, encompasses the entire power block and therefore all release points for one unit (see Assumption 4.5). Therefore, the distance from the release point to the EAB is conservatively estimated as the distance between the release boundary and a circle with a one-half mile radius centered on the containment of each unit. This distance is 1,970 ft (600 m).

Low Population Zone (LPZ)

According to Regulatory Guide 4.7, "General Site Suitability Criteria for Nuclear Power Stations" [Reference 3.12], an applicant is also required by 10 CFR Part 100 to designate an area immediately beyond the exclusion area as a low population zone (LPZ). The size of the LPZ must be such that the distance to the boundary of the nearest densely populated center containing more than approximately 25,000 residents (population center distance) must be at least one and one-third times the distance from the reactor to the outer boundary of the LPZ. The boundary of the population center should be determined upon consideration of population distribution, not political boundaries. In addition, the LPZ must be of such a size that an individual located on its outer radius for the course of the postulated accident (assumed to be 30 days) would not receive a radiation dose in excess of 25 rem TEDE.

The Low Population Zone (LPZ) for Comanche Peak is shown in FSAR Figure 2.1-209 [Reference 3.13]. It is given as a circle with a 2 mile (3,219 m) radius, centered on the Comanche Peak center point.

6.6 Type of Release

A ground release is defined as all release points that are effectively lower than two and one-half times the height of adjacent solid structures [Reference 3.3]. The Comanche Peak Units 3 & 4 reactor building roofs are approximately 69.9 m. (229'-5") above grade [Reference 3.9]. The highest release location identified for the US-APWR is the plant vent [Reference 3.9], which is located on the containment roof as shown in Figure 2.2-14 of the Tier 1 material of the US-APWR DCD [Reference 3.9]. Therefore, it is also approximately 69.9 m above grade. Since the highest release location is not two and one-half times the height of adjacent solid structures, a ground release analysis is considered.

6.7 Evaluation of Results

As identified in the PAVAN manual, the direction independent χ/Q envelope values (i.e. the 5% "Site Limit" values) are considered approximations and require confirmation. As a check of the calculated "Site Limit" χ/Q values, a logarithmic interpolation of the 2001 – 2006 results using the 5% 0-2-hour and annual average χ/Q values was performed. This interpolation showed that the values given in the summary table of the PAVAN output are reasonable and bound the "hand checked" values for all time periods. The "handcheck" of the PAVAN results is given in Attachment 6.

Attachment 1
Comanche Peak Site 2001 – 2006 Meteorological Data Files

TXU Power

'XU Power
:omanche Peak
:team Electric Station
'.O. Box 1002
ilen Rose, TX 76043
'el: 254 897 5851
ax: 254 897 6573
buschb1@txu.com

Dennis Buschbaum
Licensing Basis Manager

CPSES-200602398
November 30, 2006

Mr. Mike Laggart
Project Manager
Enercon
400 Valley Road
Suite 301
Mt. Arlington, NJ 07856

SUBJECT: Transmittal of Existing CPSES Meteorological Data for Use in COLA at Comanche Peak Units 3 and 4

Dear Mike,

Transmitted with this letter is a disk containing Comanche Peak's meteorological records from January 1, 2000 through November 8, 2006. The disk contains seven files as described below.

Should you have any questions or need further information, please contact me at 254-897-5851.

Thank You,

Denny Buschbaum – A08

File Description:	Size	Date
2000 METSYS DATA.DMP	2,277 KB	11/20/2006 11:32 AM
2001 METSYS DATA.DMP	2,270 KB	11/20/2006 11:33 AM
2002 METSYS DATA.DMP	2,270 KB	11/20/2006 11:33 AM
2003 METSYS DATA.DMP	2,270 KB	11/20/2006 11:33 AM
2004 METSYS DATA.DMP	2,277 KB	11/20/2006 11:33 AM
2005 METSYS DATA.DMP	2,270 KB	11/20/2006 11:33 AM
2006 METSYS DATA_THRU 11082006.DMP	1,947 KB	11/20/2006 11:33 AM

Attachment 1 (Continued)
Comanche Peak Site 2001 – 2006 Meteorological Data File

Luminant

Matt Weeks
Principal Engineer, NuBuild
Matt.weeks@luminant.com

Luminant Power
PO BOX 1002
6322 FM 56 N
Glen Rose, TX 76043

T 254.897.5183
C 817.975.2051
F 254.897.6890

CPSES-200701296

August 2, 2007

Mike Laggart
Project Manager, CP 3 & 4
ENERCON
400 Valley Rd. Suite 301
Mt. Arlington, NJ 07856

SUBJECT: Transmittal MET data (November Thru December 2006) as requested by ENERCON RFI-0067

Mike,
Attached to this letter is a hard copy of the MET data transmitted electronically on August 2, 2007. The specific data transmitted is Comanche Peak's meteorological records from November 1, 2006 through December 31, 2006. The data transmitted represents the balance of the CPSES MET data required for COLA development ENERCON as requested by in RFI-0067. The file information associated with the previously transmitted electronic data is as described below.

If you should have any questions or need further information, please contact me at 254-897-5183.

File Description: Size Date
Nov-1 thru Dec 31 2006_EDM903A.DMP 379 KB 08/02/2007 11:49 AM

Sincerely,

Matt Weeks
Principal Engineer, NuBuild

CC: Craig Hill
Tim Gilder
Denny Buschbaum
Marvin Morris

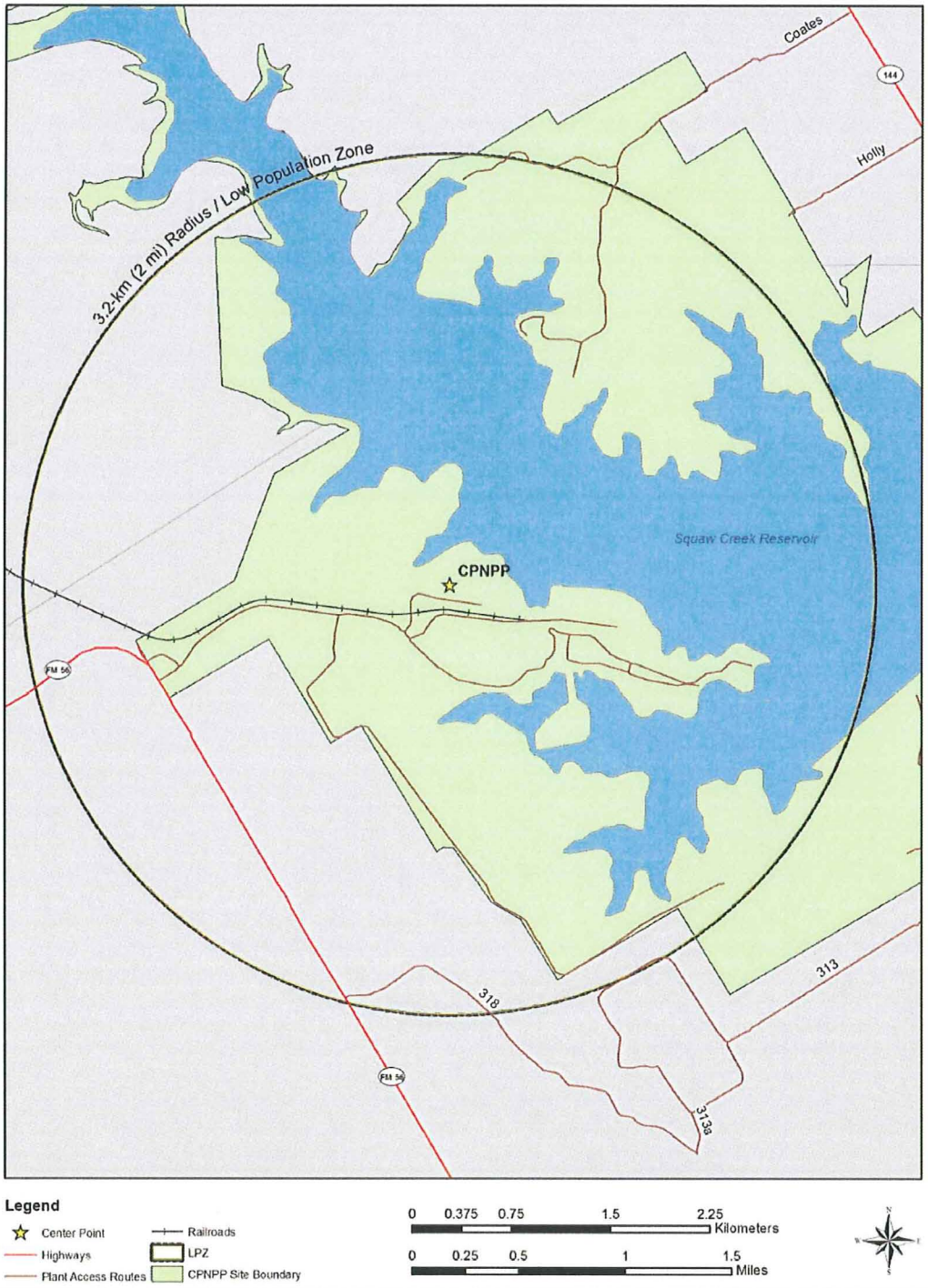
Attachments: Attachment 1 Listing of Data transmitted electronically (Total of 123 pages)

Attachment 1 (Continued)
Comanche Peak Site 2001 – 2006 Meteorological Data File

CD: Comanche Peak Met Data:

2001 METSYS DATA.DMP
2002 METSYS DATA.DMP
2003 METSYS DATA.DMP
2004 METSYS DATA.DMP
2005 METSYS DATA.DMP
2006 METSYS DATA_THRU 11082006.DMP
Nov-1 thru Dec 31 2006_EDM903A.DMP

Attachment 2
FSAR Figure 2.1-209 – Low Population Zone



Low Population Zone FIGURE 2.1-209	Rev A	COMANCHE PEAK NUCLEAR POWER PLANT UNITS 3 AND 4

Attachment 3
Evaluation of Meteorological Data

Using an Excel spreadsheet, the raw met data provided by Comanche Peak was screened and then manually reviewed using NUREG-0917 [Reference 3.16]. The screening criteria used to identify suspect data is as follows:

- A, B, or C stability during the night where nighttime hours are < 8 and > 18
- F or G stability class during the day where daytime hours are > 8 and < 18
- Unstable (A, B, or C) conditions during precipitation
- Stable (F or G) conditions during precipitation
- Wind direction at 60 meters not changing
- Wind direction at 10 meters not changing
- Upper and lower wind speed the same
- Missing data for Wind Direction at 10 meters, Wind speed at 10 meters, Wind Direction at 60 meters, Wind speed at 60 meters, Temperature at 60 meters, Temperature at 10 meters
- Precipitation for more than 8 consecutive hours
- Precipitation greater than 25 mm (1 inch) in 1 hour
- Wind speed greater than 25 m/s
- Same stability class for 12 or more consecutive hours (Unstable or Stable, no D or E)
- Same temperature for 8 or more hours
- Delta-T less than -3.4 C/100 meters (autoconvective lapse rate)
- Greater than 3 stability class jump for two consecutive hours
- Stability Class consistency

Suspect data was flagged for further investigation. Subsequently, a manual review was conducted to accept or reject data flagged by the screening process. In some cases where the temperature is bad, the temperature was replaced using a redundant device on the primary tower in accordance with Regulatory Guide 1.23 [Reference 3.8]. This evaluation process validates the meteorological data so that it can be used for modeling and analysis.

The evaluation of the Comanche Peak meteorological data is documented in Attachment 3. Two-thousand four hundred and forty (2,440) hours of bad or missing data were identified and rejected based on the screening and review process. Regulatory Guide 1.23 [Reference 3.8] recommends that a data recovery goal of 90% be achieved for each year of meteorological data. The data recoveries for each year used in this calculation are 92.0%, 96.2%, 98.5%, 97.1%, 88.5%, and 99.8%, for 2001 – 2006, respectively. Typically, only five years of data are required, but because the data recovery for 2005 is below 90%, a sixth year of data was included. The data recovery for the six-year composite data is 95.4%.

Year	Month	Day	Hour	Upper WD	Upper WS	Lower WD	Lower WS	Upper TMP	Lower TMP
2001	1	1	2	353.4	8.5	359.1	8.5	27.01	27.8
2001	1	3	11	223.4	6.8	225.4	6	38.54	42.1
2001	1	3	12	225.3	6	226.5	5.2	43.05	46.7
2001	1	3	13	236.5	6.3	236.8	5.4	47.72	51.2
2001	1	3	17	232.7	7.4	225.1	4.9	55.63	55.5
2001	1	3	18	236.6	10.9	224.9	5.5	56.8	51.5
2001	1	4	11	227.9	3.9	228.5	2.6	50.7	55.3
2001	1	4	12	243.2	6.5	243.2	5.4	55.77	59.6
2001	1	4	13	236.6	5.9	235.9	4.8	58.86	62.6
2001	1	4	14	230.3	5.9	233	5.2	61.32	64.9
2001	1	4	15	226.2	4.2	227.1	3.4	62.9	66.4
2001	1	4	17	198	9.2	197	5.2	65.82	64.7
2001	1	4	18	188.1	11.2	186.9	3.5	67.1	59.6
2001	1	5	5	251	16.4	253.4	4.4	52.69	45.9
2001	1	5	6	271.3	13.7	296.7	5.1	50.34	45.5
2001	1	6	9	181.8	4.3	140.8	1	46.87	45.5
2001	1	9	6	240.7	12.2	250.3	2.3	46.68	38.8
2001	1	9	7	242.8	11.4	244.8	3.1	45.75	39.1
2001	1	9	9	244.4	1.8	210.9	0.6	41.57	45.1
2001	1	9	11	138.6	2.8	106.8	3.4	49.91	53.7
2001	1	9	12	162.5	8.2	165.2	6.8	55.12	58.3
2001	1	10	20	99.3	4.9	102.7	4.9	38.8	39.5
2001	1	14	3	263.5	19.7	247.5	9	51.6	47.1
2001	1	15	11	91.2	5.4	95.5	4.9	46.28	49.8
2001	1	20	11	151.8	8.5	155.9	7.5	31.99	35.2
2001	1	22	11	216	5.2	226.9	4.5	43.03	46.8
2001	1	22	12	170.2	6.5	171.9	5.6	46.24	50
2001	1	22	13	161.8	5.1	161.4	4.7	47.05	51.6
2001	1	22	14	144.5	5.5	144	5	49.08	53
2001	1	22	15	142.2	6.6	142.1	6	51.19	54.3
2001	1	23	13	154.1	10.7	159.4	9.4	52.31	55.5
2001	1	23	20	126.6	10.4	130	7.2	49.52	49.7
2001	1	25	9	113.9	4.4	117.6	3.9	38.78	41.9
2001	1	25	12	138.1	9.6	139.6	8.2	49.16	52.3
2001	1	26	9	219	4.8	209.2	3.6	52.73	55.9
2001	1	26	10	257.4	7.5	254	6	57.96	61.4
2001	1	29	12	253.8	22.9	254.5	18.6	53.27	55.4
2001	1	30	5	236.7	21.3	233.1	13.6	48.08	47.1
2001	2	1	10	126.4	4.8	122.6	4.3	42.2	45.7
2001	2	1	11	142.1	6.2	145.7	5.6	45.38	48.5
2001	2	1	12	116	4.5	113.7	4.3	45.63	49.5
2001	2	1	13	77.9	1.5	75.1	1.4	46.4	50.7
2001	2	1	14	59.2	1.9	63	1.8	47.89	51.6
2001	2	1	15	9.3	1.1	89.2	0.6	48.35	52.6
2001	2	2	4	7.9	6.6	1.9	6.6	38.41	38.8
2001	2	2	11	103.6	3.8	105.7	3.3	37.78	41.8
2001	2	2	12	105.7	3.3	105.7	2.6	39.11	44.1
2001	2	2	13	91.3	3	79.3	2.9	41.97	46.2
2001	2	2	14	87.8	1.6	82.1	1.4	44.27	48.4
2001	2	2	15	232.9	1.6	237.5	0.9	46.11	50.4
2001	2	2	16	222.1	3.1	238.6	2.1	47.68	52.2
2001	2	2	18	136.4	7.2	136.8	5.9	51.54	50.9
2001	2	2	19	154.1	14	162.9	9.2	47.71	47.4
2001	2	3	3	189	19.1	191.2	12.5	42.81	41.8
2001	2	5	8	193.9	8.8	227.2	3.7	46.54	41.8
2001	2	6	12	247.4	11.7	247.1	10	65.14	68.7
2001	2	6	13	258.6	8.1	259.6	6.6	66.45	70.5
2001	2	8	4	149.5	16.3	152.1	12.6	66.96	67.6

2001	2	10	12	70.6	1.8	100.2	1.4	29.09	33.4
2001	2	10	13	43.2	5.4	53.2	4.7	33.06	36.3
2001	2	12	4	117.2	5.8	120.3	5.8	42.69	43.3
2001	2	14	8	160.3	13.8	162.9	10.7	64.04	65.5
2001	2	18	13	153.1	10.3	157.7	8.8	48.22	51.4
2001	2	19	8	14.7	0.6	151.4	8.9	45.33	49.4
2001	2	19	9	33.9	4.2	168.9	12	47.2	52.2
2001	2	19	10	55.1	4.5	191.7	15.1	51.5	56.5
2001	2	19	11	0	0.6	196.6	16.6	54.1	59.1
2001	2	19	12	0	0.6	182	15.5	56.51	61.5
2001	2	19	13	0	0.6	190.8	15.4	59.51	64.5
2001	2	19	14	0	0.6	193.4	15.1	62.01	67
2001	2	19	15	194.2	15.5	191	15.1	63	67.6
2001	2	20	11	226.4	11.6	234	10.3	65.95	69.2
2001	2	20	12	222.6	8.7	225.6	7.2	68.12	72.4
2001	2	20	13	208.4	7.1	191.4	1.7	70.12	74.7
2001	2	20	14	194.7	8.5	191.7	10.2	72.98	76.7
2001	2	20	15	186.2	6.4	189.4	5.7	73.86	77.4
2001	2	21	8	316.7	11	314.3	9.6	50.67	53.3
2001	2	22	14	10	3.1	26.1	2.2	45.94	49.4
2001	2	25	11	67.4	7.6	73.1	6.6	56.07	59.6
2001	2	26	12	81.3	6	86.8	5.3	58.98	62.3
2001	2	26	14	81	7.9	85.6	6.9	62.68	65.9
2001	2	27	1	104.5	4.5	106.3	4.3	57.05	57.2
2001	2	27	7	111.9	3.9	116.6	3.9	55.1	55.7
2001	2	27	22	346.6	22.5	352.3	19.8	42.05	43.2
2001	2	27	23	345.9	21.8	352.3	19.4	40.76	41.8
2001	3	1	14	351.2	2.9	7.5	2.3	42.47	45.7
2001	3	1	15	164.9	1.5	152.5	1.4	44.04	48.7
2001	3	1	16	180.8	4	181.5	3.2	46.18	50
2001	3	2	7	115.7	6.9	123.2	6.9	44.92	45.2
2001	3	5	12	49.7	2.7	53.4	2.7	52.44	56.8
2001	3	5	13	5.5	2.3	12.3	1.6	54.59	59.4
2001	3	5	15	26.6	3.5	40.2	3.2	59.54	63
2001	3	5	18	109.3	4.8	119.7	4.8	63.66	63
2001	3	5	19	123.1	9.3	131.6	6.7	61.46	60.7
2001	3	6	11	109.9	6	108.8	5.8	53.51	57
2001	3	7	6	167	3.1	160.8	3.1	51.11	48.2
2001	3	7	9	164.4	3.2	147.7	3.3	52.74	56.6
2001	3	7	10	164.2	7.3	161.9	6.1	57.76	61.5
2001	3	7	11	175.2	10.9	183.6	9.4	61.44	64.5
2001	3	7	12	174	10.4	178.9	9.1	62.36	66.1
2001	3	7	13	164.4	9.7	168.6	8.6	63.76	67.3
2001	3	7	14	155.7	9.4	161.4	8	64.73	68.3
2001	3	9	14	49	4.8	57.4	3.8	54.93	58.2
2001	3	9	15	68.1	4.5	67.1	3.6	55.72	59.4
2001	3	9	16	100.8	3.9	109.7	3.5	56.46	60.2
2001	3	9	19	111.1	4.7	115.1	4.8	60.19	58.7
2001	3	10	6	151.8	8.4	142.5	5.9	46.39	44.8
2001	3	11	4	137.5	14.3	142.4	11.8	56.11	57.1
2001	3	13	11	64.7	5.1	81.1	4.9	59.18	62.5
2001	3	13	12	109.1	7.6	109.7	7.2	61.72	66
2001	3	15	21	322.9	24.8	326.2	20.5	45.23	47.5
2001	3	15	22	324.8	20.9	327.5	17	44.72	46.4
2001	3	15	23	329.7	19.5	332.3	16.4	44.27	45.8
2001	3	16	8	349.6	20.2	355.5	18.3	38.29	39.9
2001	3	17	8	79.2	16	84.6	13.5	43.86	45.4
2001	3	20	12	332.5	5.7	333.2	4.4	52.5	55.6

2001	3	21	11	182.9	8.8	186.3	7.6	64.31	67.4
2001	3	21	12	174.8	9.2	179.5	7.5	66.35	70.3
2001	3	21	13	173.9	8.5	178.7	7.5	68.04	72.1
2001	3	21	14	168.6	9.5	171.2	8.2	69.74	73.5
2001	3	22	8	189.9	16.8	193.1	14.3	59.73	61.2
2001	3	23	8	135.9	4.1	133.2	4.3	55.88	57.4
2001	3	23	9	136.8	4.9	138.9	4.2	57.56	60.7
2001	3	23	10	64.1	3	52.8	3.2	59.32	62.9
2001	3	23	11	98.8	5.5	102.7	5.2	63.05	67
2001	3	23	12	119.7	8.4	123.5	7.8	66.38	70.5
2001	3	23	13	153.7	10.9	159.9	9.3	70	73.4
2001	3	23	14	165.8	11.4	171.3	9.9	72.3	75.7
2001	3	23	15	161.2	11.1	164.1	9.8	73.51	76.9
2001	3	26	7	19.2	11.9	22.5	11	41.32	42.2
2001	3	30	13	161.9	5.5	167.6	4.7	52.99	57.9
2001	3	30	14	163	6.6	165.7	5.8	55.16	59.4
2001	3	30	15	170.9	7	174.4	6.4	56.5	59.7
2001	3	31	2	169.1	7.2	154.4	5.8	51.57	51.2
2001	3	31	8	260.1	5.4	261.6	4.4	51.5	53.6
2001	4	1	4	0	0	0	0	0	0
2001	4	3	18	167.5	17.7	174.5	14.9	75.21	76.7
2001	4	4	11	201.6	2.8	191.6	1.6	66.86	70.6
2001	4	4	12	166.6	2.8	134.1	1.7	71.6	75
2001	4	4	13	131.8	5.1	132.7	4.1	73.94	77.4
2001	4	4	14	144.6	7.2	148.1	5.9	75.12	79.7
2001	4	4	15	149.3	10.7	155.4	9	78.19	81.9
2001	4	8	1	161	16.3	166.3	12.5	70.36	71
2001	4	8	18	160.2	25.4	167	20.9	81.37	82.8
2001	4	11	13	243.4	15.8	246	13	66.28	69.9
2001	4	11	14	245.2	17	246.8	14	69.03	72.5
2001	4	11	15	241.7	17.2	244.3	13.9	70.79	74.3
2001	4	11	16	242.8	17	244.3	14.2	72.25	75.5
2001	4	11	17	242.7	16.1	245.2	12.7	72.68	75.8
2001	4	11	18	235.2	13.2	235.8	10.6	72.33	75.1
2001	4	11	20	213.9	12	213.3	5.4	73.57	68.7
2001	4	12	14	83.5	5.4	89.4	5.2	61.3	65.9
2001	4	13	8	166.5	1.4	234.2	1.1	58.59	60.4
2001	4	13	9	119.1	1.6	108.9	1.2	58.06	62.6
2001	4	13	10	96.9	3.3	91.8	3.4	60.75	65
2001	4	13	12	93	3.7	90.6	3.1	68.47	72
2001	4	13	13	124.9	6.3	129.2	5.8	69.95	74.8
2001	4	13	14	118.9	6.2	119.5	5.8	70.64	75.6
2001	4	13	15	111.1	7	111	6.6	71.67	75.7
2001	4	13	16	111.3	6.6	115.4	6.3	71.94	75.2
2001	4	13	18	114	8.2	117.6	7.5	71.59	73.2
2001	4	15	8	213.9	7	216.5	5.2	69.76	71.7
2001	4	15	9	286.5	5.1	291.3	4.4	70.56	73.8
2001	4	16	8	57.8	12.1	61.1	10.2	59.38	60.8
2001	4	16	10	93.7	10.8	97.9	9.8	62.7	66.8
2001	4	16	11	92.8	8.6	100.2	8	64.67	68.8
2001	4	16	12	105.4	6.8	112.4	6.4	66.59	71.1
2001	4	16	13	91.3	6.3	97.7	5.8	68.44	73.3
2001	4	16	14	76.1	6.6	75.8	6.1	70.19	74.6
2001	4	16	15	68.5	8.3	71.5	7.4	71.91	75.6
2001	4	16	17	68.7	10	73.3	8.3	73.64	76.7
2001	4	16	18	66.5	12.3	73.8	10	74.21	76.1
2001	4	17	5	13.2	20.3	17.5	17.9	53.26	54.2
2001	4	18	8	26.5	2.5	21.8	1.9	49.23	50.8

2001	4	18	10	138.8	6	143.8	5.1	51.1	54.6
2001	4	18	11	156.5	6.9	162.7	5.8	53.44	56.7
2001	4	18	12	164.4	10.9	168.2	9.1	56.39	60.3
2001	4	18	13	169.9	13.4	174.3	11.2	58.48	61.9
2001	4	18	14	178.1	13.1	182.2	10.8	59.77	63.4
2001	4	18	15	169.3	13.7	172.3	12	61.2	65
2001	4	18	16	165.9	13.8	169	11.9	62.39	65.6
2001	4	18	18	180.6	15.9	185.1	13.5	64.9	66.7
2001	4	20	2	180.5	21.9	184.2	18.2	69.06	70
2001	4	20	18	163.8	23.3	169.2	19	77.04	78.5
2001	4	22	18	162.4	27.3	168.8	22.4	78.41	79.8
2001	4	24	8	341.1	4.4	317	3.6	53.11	54.9
2001	4	24	18	30.1	11.2	34.6	10	69.54	70.9
2001	4	25	10	0	0.6	33.8	1.1	62.11	66
2001	4	25	11	71.8	2.4	68.4	2.2	64.95	68.9
2001	4	25	13	46.2	3.7	53.3	4.4	68.24	71.9
2001	4	25	14	69.1	3.9	65.6	4.3	69.52	73.8
2001	4	25	15	67.2	3.9	62	3.6	71.57	75.3
2001	4	25	16	82.6	5.2	81.3	5	71.71	76.5
2001	4	25	17	132.2	6.5	137.1	5.6	72.82	77.4
2001	4	25	18	123.4	6.9	124.9	6.2	73.58	76.8
2001	4	26	8	216.8	6.4	228.3	2.8	60.17	61.7
2001	4	26	9	199.3	6.3	208.5	5.5	64.76	67.9
2001	4	26	10	173.6	7.7	175.8	6.8	68.95	72.4
2001	4	26	12	172.7	11.7	177.8	10.1	72.73	76.3
2001	4	26	13	178.3	11.3	184.6	9.4	73.24	77.5
2001	4	26	14	180.5	11.8	187.5	10	74.22	78.4
2001	4	26	15	166.9	11.5	171.8	9.8	74.9	78.8
2001	4	26	16	176.7	11	179.2	8.9	75.27	79.2
2001	4	26	17	176.2	11.4	181.1	9.6	75.94	79.2
2001	4	26	18	171.5	12.4	177.2	10.3	76.25	78.6
2001	4	27	8	236.3	4.8	232.5	3.2	58.42	61.6
2001	4	27	9	215.4	6.1	222.5	5.3	63.9	67.3
2001	4	27	10	208.6	7.7	213.3	6.4	68.35	71.9
2001	4	27	11	173.2	8.5	176.9	6.5	70.55	74.2
2001	4	27	12	156.4	12.1	163.6	10.3	71.98	75.1
2001	4	27	13	158.4	14.3	164.7	12.4	71.83	75.8
2001	4	27	14	154	12.2	160.8	10.5	72.57	77
2001	4	27	15	149.3	14.3	152.9	11.8	73.57	77.5
2001	4	27	16	151.5	14.7	155.9	12.5	73.89	77.5
2001	4	27	18	157	14.4	163.3	11.7	74.07	76.2
2001	4	28	8	261.2	5.6	277.9	3.1	60.32	62.4
2001	4	28	9	239.7	4.6	237.4	4.3	62.63	66.9
2001	4	28	10	196.8	4.3	197.3	3.8	66.47	70.9
2001	4	28	11	124	5.6	123.1	4.9	69.04	73.7
2001	4	28	12	122.8	10.7	123.6	9	71.33	75.1
2001	4	28	13	138	12.1	142.7	10.3	71.77	75.9
2001	4	28	14	125.2	11	130.4	9.7	72.41	77
2001	4	28	15	130	12.8	134.1	11.3	73.41	77
2001	4	28	16	142.4	12.6	147.7	10.6	73.68	77.6
2001	4	28	18	141.7	11.9	148	9.7	74.77	76.6
2001	4	29	8	190.2	4.2	185.3	3.2	59.46	62.8
2001	4	29	9	175.3	6.8	176.1	5.8	64.37	68
2001	4	29	10	156.3	11.2	164.9	9.3	69.46	72.8
2001	4	29	13	134.3	14.4	138.6	12	72.39	76.1
2001	4	29	14	125.9	15.5	128.9	13.3	73.53	77.1
2001	4	29	15	128.5	15.1	132.3	13.2	74.66	77.8
2001	4	29	16	140.2	15.2	145.4	13	75.12	78.3

2001	4	29	18	130.6	15.4	134.6	13	76.19	78
2001	4	30	8	141.7	11.2	139	8.2	61.74	63.7
2001	4	30	10	156.3	16.2	162.7	13.8	69.13	72.5
2001	4	30	11	148.3	15.7	153.8	13	70.34	73.6
2001	4	30	12	147.5	13.4	152.1	11.5	71.98	75.8
2001	4	30	13	152.4	14.7	157.5	12.5	73.4	77.5
2001	4	30	14	152.9	14.5	157.6	12.3	74.54	78.4
2001	4	30	15	157.7	16.3	163.3	13.9	75.91	79.3
2001	4	30	16	153.4	16.2	158.4	13.8	76.35	79.6
2001	4	30	18	169.5	16.6	175.6	14.4	76.12	77.9
2001	5	1	8	174.5	10.9	173.1	9.6	66.34	68.2
2001	5	1	18	172.1	18.5	177.2	15.1	79.51	81
2001	5	2	8	163.7	20.1	169.3	16.6	69.8	71.5
2001	5	2	18	156.7	26.1	162.9	21.3	82.15	84
2001	5	3	7	147.4	16.1	152.7	12.2	69.17	69.8
2001	5	5	11	145.5	5.9	143	5.3	63.99	67.4
2001	5	5	13	197.1	6.7	200.5	5.4	68.46	72.5
2001	5	5	18	142.5	13.7	145	11.5	68.32	70.1
2001	5	6	14	204.8	15.1	205.5	12.4	81.75	85.3
2001	5	6	17	219.4	4.4	218	3.3	82.1	85.9
2001	5	6	18	188.2	11.1	194.8	8.9	82.49	85
2001	5	6	19	162.6	16.6	166.7	13.8	78.32	80.1
2001	5	7	8	1.7	4	356.7	2.7	65.1	66.8
2001	5	7	11	112	9.3	116	9	70.81	74.3
2001	5	7	12	120.8	8.7	128.4	8.1	73.5	76.8
2001	5	7	13	140.7	7.4	146.6	6.3	75.5	80.2
2001	5	7	14	57.7	3.7	55.7	3.9	77.36	81.4
2001	5	7	15	40.7	5.5	42.5	5	77.9	81.7
2001	5	8	11	59.2	5.4	70.1	4.6	71.3	74.6
2001	5	8	12	50.4	5.8	54.7	5.5	73.99	77.1
2001	5	8	13	37.4	5.2	45.5	4.8	74.8	78.3
2001	5	8	18	47.7	11.5	50.5	10.1	78.95	80.4
2001	5	9	8	166.5	4.4	168.8	3.8	66.66	69
2001	5	9	9	140.7	5.4	139.5	4.6	68.97	72.4
2001	5	9	10	156.7	5.1	157.7	4.3	71.58	75.8
2001	5	9	11	179.6	4.9	183.3	4.1	74.43	78.6
2001	5	9	12	166.9	4.5	173.7	4.1	75.58	80.4
2001	5	9	13	141.7	5.8	147.3	5.2	76.65	81.5
2001	5	9	14	148.5	9.1	154.9	7.8	78.05	82.3
2001	5	9	15	138	10.7	142.6	9.5	79.32	83.1
2001	5	9	18	137.9	14	142.5	11.6	80.73	83.1
2001	5	10	8	192.2	9.9	195.6	8.3	68.06	69.9
2001	5	10	13	172.2	16.9	175.5	14.8	76.61	79.9
2001	5	10	14	177.2	16.9	182.1	14.2	78.24	81.5
2001	5	10	18	166	16.6	171.3	13.8	80.03	81.6
2001	5	11	8	169.9	10.5	170.5	9	67.91	70
2001	5	11	12	187.3	9.5	191.3	8.1	75.08	78.7
2001	5	11	13	174.8	10.2	179.7	8.8	75.86	80.2
2001	5	11	14	186.4	10.7	188.7	8.8	77.8	81.4
2001	5	11	15	173.4	9.9	177.4	8.1	78.46	82.1
2001	5	11	16	162.9	9.6	166.4	8.2	79.59	82.8
2001	5	11	18	153.5	13.3	160.2	10.8	80.81	83
2001	5	11	19	144.7	9.8	147.9	8	80.53	81.9
2001	5	12	7	339.5	2.5	359.6	2.5	66.5	66.4
2001	5	12	8	29.8	9.6	35.1	9.5	64.87	66.3
2001	5	12	10	66.6	5.9	71	5	67.16	70.3
2001	5	12	11	70.9	5	75.4	4.5	68.83	73.2
2001	5	12	12	59.4	4.7	68.3	3.7	71.72	76.3

2001	5	12	13	60.2	5.2	59.6	4.4	74.26	78.6
2001	5	12	14	38	4.9	41.1	4.4	75.83	79.6
2001	5	12	18	48.2	9.9	51.1	8.5	79.75	81.4
2001	5	13	6	106.1	2.5	136.3	2.5	69.9	68.8
2001	5	13	8	120.5	2.7	126.6	3.1	68.45	71.5
2001	5	13	9	110.2	3.3	101.2	2.9	68.84	73.4
2001	5	13	10	77	4.2	68.7	4.4	72.13	75.6
2001	5	13	12	159.2	4.7	164.4	3.7	75.79	79.3
2001	5	13	13	144.7	10.3	151.2	9.3	76.29	80.2
2001	5	13	14	144.6	10.5	151.5	9.2	77.81	82.6
2001	5	13	15	166	11.2	172.4	9.5	78.95	82.7
2001	5	13	16	152.7	11.4	161.7	9.6	79	83.3
2001	5	13	18	150.5	13.1	157.2	10.5	79	81.2
2001	5	14	8	211.4	8.7	211.9	6.9	69.53	71.7
2001	5	14	14	179.7	17.4	183.8	14.8	80.34	83.4
2001	5	14	15	176.9	17.6	181.3	15.4	81.11	84.2
2001	5	14	18	160.7	18.8	165.2	15.6	81.55	84
2001	5	14	19	163.4	16.9	168.2	14.1	81.25	82.8
2001	5	15	8	189.8	17.2	191.6	14.3	69.08	71.2
2001	5	15	13	182.3	18.8	186	15.9	80.01	83.1
2001	5	15	14	174.6	21	179.2	17.9	81.79	84.9
2001	5	15	18	177.9	21.4	183.2	17.7	84.15	85.9
2001	5	16	8	175.5	17.3	179.7	15	70.18	72
2001	5	16	18	161.1	22.1	166.3	18	86.44	88.8
2001	5	16	19	156.3	21.3	162	17	85.67	87.1
2001	5	17	4	166.6	17	170.8	13.9	72.55	74
2001	5	17	5	165.5	15.9	169.4	13.1	72.7	74.1
2001	5	17	7	163.3	14.6	165.3	12.2	71.94	73.7
2001	5	17	8	163.6	17.4	167.4	14.8	72.47	74.7
2001	5	17	13	168.3	15.5	173.6	13	82.33	86.1
2001	5	17	14	162.6	17.2	167.7	14.4	84.2	88.1
2001	5	17	18	174.6	23.4	179.4	19.5	87.28	89
2001	5	18	3	178.9	15.6	182.9	13.1	72.5	73.9
2001	5	18	5	340	9.3	345.9	7.9	72.25	73.7
2001	5	18	7	134	12.5	140.3	10.5	70.33	72.1
2001	5	18	8	146.6	13.5	152.8	11.4	71.74	74.2
2001	5	18	9	154.9	15.1	160.8	12.5	73.93	77.1
2001	5	18	10	161.8	13.8	168.1	12.1	75.91	79.1
2001	5	18	13	179.8	16.4	181.9	14	80.79	84.2
2001	5	18	14	195.1	14	197.1	11.9	81.83	85.9
2001	5	18	18	140.1	9.6	145.7	8.3	83.69	86.4
2001	5	19	8	168.7	2.2	145.9	1.9	71.34	75
2001	5	19	9	117.2	4.5	116.7	4.4	72.56	77.3
2001	5	19	10	110.3	4.6	111.7	4.4	74.44	78.9
2001	5	19	11	124.6	7.3	129.7	6.7	76.98	81.1
2001	5	19	12	126.7	11.6	129.8	10.3	79.02	82.3
2001	5	19	13	148.5	11.9	152.5	10.3	79.51	82.7
2001	5	19	15	182.2	13.3	186.7	11.3	79.59	82.7
2001	5	19	18	165.4	11.7	170.9	10	80.75	82.4
2001	5	19	19	155	11.1	159.1	9	79.87	81.3
2001	5	20	8	163.5	13.7	167.4	11.3	73.54	75.1
2001	5	20	14	210	14.9	213.6	12.2	85.99	89.5
2001	5	20	15	211.5	18.1	215.7	15.1	89.99	93.4
2001	5	20	16	220.2	17.1	225.1	14.2	91.05	94.9
2001	5	20	18	197	17.6	201.9	14.3	93.22	95.1
2001	5	20	21	180.7	22.9	185.5	18.2	82.41	83
2001	5	21	7	339.5	29.7	343.2	25	70.87	72.3
2001	5	21	8	344.5	33.4	350.4	28.5	63.06	65.2

2001	5	21	12	348	31.1	354.2	26.7	59.28	62.6
2001	5	21	13	358.1	28.1	5.3	25.1	59.77	63
2001	5	21	14	349.7	25.5	356.7	22.5	60.21	63.5
2001	5	21	15	347.4	23.2	353.6	20.5	61.46	64.7
2001	5	21	16	351.5	23.6	359.1	21.1	62.15	65.3
2001	5	21	18	354.7	20.1	1.9	18	64.98	67.6
2001	5	21	19	349	20.6	357.3	18.3	65.27	67.6
2001	5	21	20	353.9	13.3	3.5	11.6	64.46	66.5
2001	5	21	21	354.1	11.4	1.4	9.5	64.08	65.7
2001	5	21	22	349.2	11.6	349.5	8.5	63.18	64.7
2001	5	21	23	351.2	13.8	352.6	10.4	61.63	63.3
2001	5	22	14	34.8	7.6	41.8	7.1	74.64	77.7
2001	5	22	15	40.6	2.7	45	2.1	74.48	79
2001	5	22	17	245.5	3.9	257.3	2.9	76.81	81.6
2001	5	22	18	245.7	4.4	242.7	3.3	77.53	81.7
2001	5	22	19	204.7	4.4	205.3	3.6	78.72	81.3
2001	5	22	21	160	7.6	154.8	5.6	76.33	74.7
2001	5	23	13	227.3	17	231.3	14.2	83.48	87.4
2001	5	23	14	229	16.3	228.9	13.4	84.61	88.8
2001	5	23	15	233.6	15.3	238.5	12.6	85.1	89.6
2001	5	23	16	228	14.1	230.3	11.6	86.35	90.7
2001	5	23	17	211.4	14.4	214.6	12	87.66	90.9
2001	5	23	18	202.9	14.9	206.5	11.9	88.29	90.6
2001	5	24	5	227.5	1	241.5	1	76.6	75.3
2001	5	24	18	43.8	9.3	47.8	8	78.58	80.6
2001	5	25	8	58.6	15	62.4	12.6	62.4	64
2001	5	25	9	76.7	8.6	79.9	7.6	63.08	66.3
2001	5	25	13	46.5	5	49.4	3.9	69.25	73.4
2001	5	25	15	62.5	6.1	89.8	5.5	71.7	76.7
2001	5	25	16	74.5	10.9	73.3	9.4	73.35	77.3
2001	5	25	17	91.2	7.3	90.8	6.5	74.1	78
2001	5	25	18	107.4	7.1	109.1	6.7	75.1	78.1
2001	5	25	19	116.3	7.3	120.3	6.6	75.95	77.7
2001	5	25	21	96	7.7	99.2	5.7	75.54	74.5
2001	5	26	12	126.3	5.6	128.2	5.1	63.6	67.6
2001	5	26	13	86.2	3.8	78.1	3.7	66.33	70.7
2001	5	26	14	76.4	3.3	72	3.1	70.3	75.2
2001	5	26	15	353.2	2.5	0	1.8	74.28	79.1
2001	5	26	16	192.7	5.5	189.6	4.4	77.1	82.1
2001	5	26	17	205.3	7.2	211.4	6	78.5	83.5
2001	5	26	18	192.6	7	191.2	6.1	79.49	83.7
2001	5	26	19	157	11.2	163.6	9.4	80.89	82.9
2001	5	27	10	175	7.8	180	6.6	76.38	79.5
2001	5	27	11	59.3	4.9	61.5	4.8	78.95	82.3
2001	5	27	12	61.7	7.1	83.7	6.8	80.06	83.7
2001	5	27	13	116.6	8	122.6	7.4	80.87	85.4
2001	5	27	14	123.5	9.9	128.1	9.1	82.05	86.5
2001	5	27	15	134	13.4	138.9	11.3	83.27	87.5
2001	5	27	16	135.8	15.1	145.2	12.7	84.62	88.1
2001	5	27	18	147.6	18	155.7	14.6	86.07	88.6
2001	5	27	19	146.3	16.1	153.3	12.6	85.55	87.3
2001	5	28	8	162	17.9	168.8	14	69.33	70.7
2001	5	28	14	170.8	17.4	176.9	14.6	83.74	87.1
2001	5	28	15	169.1	13.2	176.7	11.1	83.89	87.4
2001	5	28	18	124.8	12.9	131.7	11.3	84.07	85.7
2001	5	29	8	161.6	17.3	169.1	14.1	73.48	74.9
2001	5	29	15	143.5	13.6	150.4	11.5	83.65	87.3
2001	5	29	18	148.3	23.5	157.1	18.5	86.29	87.8

2001	5	30	13	199	15.7	202.6	13.2	82.4	85.9
2001	5	30	14	200	16	206.8	13.3	83.68	87.4
2001	5	30	15	212.8	13.8	221.6	11.4	84.06	88.5
2001	5	30	16	206.5	11.5	213.9	9.4	85.33	89.8
2001	5	30	17	177.5	10.8	184	9.3	86.74	90.6
2001	5	30	18	169.8	10.2	175	8.7	87.46	90.3
2001	5	31	7	318.1	0.6	200.6	0.7	71.39	72.8
2001	5	31	8	16.9	3.7	18.7	3.3	73.16	75.3
2001	5	31	18	345.3	9.7	354.5	8.7	83.17	84.9
2001	6	1	7	129.9	8.7	143.5	7.1	64.85	66.4
2001	6	1	8	80.7	8.9	84.7	7.6	65.72	68.3
2001	6	1	9	101.7	5.3	102.5	5	67.61	71.6
2001	6	1	10	61.6	5.3	66.2	4.8	70.82	74.4
2001	6	1	11	51.8	6	54.4	5.6	73.82	76.9
2001	6	1	12	72.9	5.9	74.6	5.6	75.19	78.9
2001	6	1	14	43.1	5.2	44.9	5.3	77.39	80.9
2001	6	1	15	24.6	3.3	32.9	3.2	79.08	82.3
2001	6	1	16	117.1	5.4	119.2	5.2	79.22	83.5
2001	6	2	8	163.7	9.5	165.9	8.5	70.8	72.9
2001	6	2	10	193	11.5	196.1	9.4	80.43	83.6
2001	6	2	13	186.5	12.1	193	10.3	85.53	89.3
2001	6	2	14	184.5	11	188.4	9.1	86.75	91.4
2001	6	2	15	189.3	11.4	196.8	9.7	88.45	92.9
2001	6	2	16	165.3	14.2	173.6	12.1	89.51	93.3
2001	6	2	17	158.7	14.7	165.9	12.4	90.52	93.7
2001	6	2	18	169.2	16.4	176	13.8	91.11	93.3
2001	6	2	19	167.9	15.4	175.1	12.5	90.81	92.3
2001	6	3	8	185.1	23.3	191.8	19.5	76.19	77.7
2001	6	3	18	162.1	28.7	170.1	23.4	90.45	92.3
2001	6	4	8	176.7	24.2	183.1	20.5	76.74	78.4
2001	6	4	18	161.9	26.3	170.1	21.7	90.12	92
2001	6	4	19	157.6	24.2	166.6	19.9	89.27	90.7
2001	6	5	2	161.9	17.9	168.7	14.9	76.83	77.6
2001	6	5	4	153.7	14.6	160.1	11.4	74.28	74.9
2001	6	5	8	154.6	18.7	163.1	15.2	74.35	75.9
2001	6	5	14	135.7	19.9	142.3	16.4	82.99	86.3
2001	6	5	18	123.7	22.5	131	18.8	82.37	83.9
2001	6	8	8	21.9	18.6	27.3	16.7	73.84	75.2
2001	6	8	18	36.4	21.3	42.2	18.9	81.47	82.9
2001	6	9	8	20.2	9.2	25.4	8.8	73.51	74.9
2001	6	9	18	72.5	14.3	79.4	11.9	85.82	88.4
2001	6	9	19	70.4	13.4	77.3	10.9	86.34	88.1
2001	6	10	8	113.1	3.5	116.3	3.6	71.28	74.6
2001	6	10	9	80.8	4.5	81.6	4	73.35	77.5
2001	6	10	10	66.8	4.1	64.6	3.2	76.05	80.1
2001	6	10	11	80.8	6.5	82.2	5.8	80.03	83.7
2001	6	10	12	74.3	8.4	76.4	7.3	82.46	85.8
2001	6	10	13	76.4	8.6	79.7	7.3	83.77	87.6
2001	6	10	14	82.1	7.8	88.7	6.9	84.45	89.1
2001	6	10	15	82.4	6.7	82.6	5.6	85.45	90.1
2001	6	10	16	96.2	6.6	104.7	5.6	86.15	90.6
2001	6	10	17	117.8	6.3	124.1	5.4	86.23	91
2001	6	10	18	116.7	7.6	124.1	7.2	86.74	90.5
2001	6	10	19	130.1	9.5	137.6	8.1	87.35	89.4
2001	6	11	8	184.3	7.6	194.3	6.3	75.14	78
2001	6	11	9	174.8	10.7	182.1	9.2	78.23	81.4
2001	6	11	10	158.1	9.4	162.8	8.3	79.64	83.5
2001	6	11	11	145.2	8.6	153.5	7.5	82.12	85.9

2001	6	11	12	145.3	9.1	151.9	7.8	84.21	87.6
2001	6	11	13	150	8.6	161.2	7.8	85.06	89.3
2001	6	11	14	156.1	8.3	167.9	7	86.3	91.3
2001	6	11	15	146.6	10.6	154.3	8.9	87.91	92.7
2001	6	11	16	146.8	11.7	153.4	10.4	89.31	93.1
2001	6	11	18	125.3	15.3	131.7	13.1	89.83	92.1
2001	6	11	19	123.1	14.1	129.9	11.9	89.16	90.8
2001	6	12	8	183.6	16.2	190.1	13.5	78.76	80.6
2001	6	12	12	165.9	10.9	171.3	13.4	86.5	90.5
2001	6	12	13	180.9	16.9	175.5	13.4	87.75	92.4
2001	6	12	18	142.6	22.9	148.8	18	92.02	93.5
2001	6	15	10	17.1	2.9	13.8	2.9	73.73	74.9
2001	6	15	18	114.4	9.1	121	7.9	88.36	89.8
2001	6	16	18	127.4	11.5	134.1	9.9	89.12	90.6
2001	6	17	18	126.2	15.5	132.8	13.2	87.81	89.2
2001	6	18	18	129.3	15.8	135.9	13.3	87.83	89.3
2001	6	19	18	120.3	12.9	125.7	11.4	86.42	88
2001	6	20	18	138.8	14.5	146.4	12.2	88.55	90
2001	6	21	8	185.1	7.8	187.3	6.7	75.13	76.5
2001	6	23	18	131.1	10.2	138.7	8.9	83.85	85.2
2001	6	23	20	139.5	11.8	146.1	7.9	82.54	82.6
2001	6	24	18	131.9	14.7	138.7	12.4	87.8	89.3
2001	6	25	8	145.7	7.8	145.9	6.9	72.49	73.5
2001	6	26	16	209.8	19.1	225	14.2	82.49	79.7
2001	6	26	17	126	2.9	35.5	0.6	85.22	83.8
2001	6	29	18	148.3	19	155.8	15.5	92.42	93.9
2001	6	30	5	193.8	18	193.6	12.9	77.2	77.8
2001	6	30	8	138.4	2.2	126.3	2.2	77.26	78
2001	7	1	15	99.6	0.6	91.1	0.6	80.7	82.1
2001	7	1	18	121.4	11.7	127.6	10.7	82.95	84.6
2001	7	2	18	135.4	11.4	143.5	9.4	86.66	88.1
2001	7	6	18	129.8	17.9	136.4	14.8	94.13	95.6
2001	7	8	18	150.4	14.9	156.3	12.2	93.62	95
2001	7	9	18	129.1	13.5	134.4	11.6	96.19	97.7
2001	7	10	18	135.6	12.1	142.2	9.9	97.44	99
2001	7	11	18	129.1	15.1	135.5	13	95.51	97.1
2001	7	13	14	55.3	4.8	54.9	4.8	98.25	99.9
2001	7	15	8	152.9	12.1	159.9	10.3	79.6	81
2001	7	15	18	121.4	17.8	127.6	14.7	97.57	99.2
2001	7	16	18	153.5	20	162.4	16.4	95.94	97.4
2001	7	17	18	136.6	18.2	142.2	15	94.72	96.4
2001	7	18	18	123.8	17.9	130.2	15.4	95.23	96.9
2001	7	19	18	122.8	14.8	129.4	13.1	93.62	95.3
2001	7	20	8	187.4	9.9	188.9	8.7	79.91	81.3
2001	7	20	18	135.1	15.9	141.2	13.2	95.85	97.4
2001	7	20	19	133.9	17.3	141.2	13.9	95.13	96.3
2001	7	21	18	124.9	9.9	129.2	8.9	98.63	100.3
2001	7	22	18	130.2	10.5	138.3	9.2	99.12	100.7
2001	7	23	18	135.3	12.3	141.2	10.3	97.54	99.1
2001	7	24	18	116.7	10.3	122.1	9.3	95.72	97.5
2001	7	25	18	123.1	14	129.5	11.9	94.85	96.5
2001	7	26	18	123.6	13.2	129.6	11.5	94.95	96.6
2001	7	27	18	132.8	16.3	139.4	13.4	94.96	96.7
2001	7	28	8	188.4	16.1	193.1	13.7	81.06	82.5
2001	7	28	18	121.6	11.2	127.2	10.2	94.52	96.2
2001	7	30	18	150.3	19.4	156.8	15.7	95.8	97.4
2001	7	31	8	187.3	18.1	192.4	15.1	79.17	80.8
2001	7	31	18	156.2	17	165	14	95.99	97.5

2001	8	1	18	131.8	12.1	137.9	10.1	96.83	98.4
2001	8	2	18	101.5	13.2	107.8	11.4	93.73	95.2
2001	8	3	18	92.8	8.3	99.1	7.1	93.18	94.6
2001	8	8	18	157.8	16.5	165.7	13.8	96.26	97.7
2001	8	9	8	189.1	10.8	195.8	8.7	80.87	82.3
2001	8	10	8	207.1	11.7	211.9	9.7	81.31	82.7
2001	8	12	18	91.5	5.4	96	4.3	98.27	99.7
2001	8	13	11	6.6	2.9	50.4	9	85.7	89.8
2001	8	13	12	0.8	1.7	40.5	9.3	86.61	91.6
2001	8	13	13	4.2	0.6	49.3	10	88.15	93.1
2001	8	13	15	59.3	6	57.2	10.2	90.76	94.4
2001	8	14	8	90.8	13.2	130.3	5.9	76.42	80.4
2001	8	14	9	0	0.6	138.3	8.4	77.78	82.1
2001	8	14	13	75.4	6	116.7	7.2	89.55	92.8
2001	8	14	18	102.1	5.3	109.6	4.7	94.4	95.8
2001	8	15	8	149.3	6.7	168	8.5	78.71	80.4
2001	8	15	9	177.7	8.7	185.7	10.3	81.01	86
2001	8	15	10	87.1	2.6	214.7	11.4	84.2	89.2
2001	8	15	11	28.3	9.8	195.1	11.6	87.2	92.2
2001	8	15	12	60.6	2.1	192.5	10.7	89.92	94.9
2001	8	17	18	12.8	3.6	20.5	3.6	84.78	85.7
2001	8	20	9	24.5	7.2	219	9.5	79.73	84.4
2001	8	20	10	9.8	11.3	235.9	9	82.18	87.1
2001	8	21	13	177.9	17.2	178.6	14.9	91.89	93.6
2001	8	22	8	171.2	18.9	163.9	9	76.6	79.2
2001	8	22	9	184.1	29.3	183.3	8.9	76.92	81.9
2001	8	23	11	196.6	12.4	194.1	10	86.8	88.2
2001	8	23	18	132.9	18.3	135.7	14.8	94.85	96.2
2001	8	27	10	145.5	4.8	149.3	4.1	75.9	77.1
2001	9	3	14	56.6	4.9	59.4	4.9	89.7	91.1
2001	9	4	9	124.4	1.9	137.2	1.9	71.37	72
2001	9	12	11	0	0.8	2.6	0.8	77.08	78.1
2001	9	14	18	114.9	5.1	119	5.1	87.94	88.9
2001	9	15	16	293.5	0.6	256.5	0.6	82.47	83.3
2001	9	23	17	336.8	20.5	329.3	14.7	78.58	76.6
2001	9	24	20	32.6	12.7	30.8	10.9	66.11	66.9
2001	9	27	18	126	11	126.2	9.3	76.01	78
2001	9	29	17	74.3	8.9	78.3	7.4	77.69	79.3
2001	9	29	18	64.7	12.7	66.9	10.4	76.72	78.3
2001	9	29	19	57.2	12.3	56.7	10.8	75.28	77
2001	9	29	20	64.1	13	64	10.7	73.69	75.6
2001	9	29	21	72.5	11.8	73.9	8.7	71.4	73.2
2001	9	29	22	60.6	10.5	89.1	7	68.43	70.6
2001	9	29	23	89.8	9	96.9	6.2	66.08	67.7
2001	9	30	0	96	7	97.8	5.5	64.57	66.7
2001	9	30	1	107.3	6.8	114.2	5.7	64.17	65.7
2001	9	30	18	57.7	13.6	60.2	11.9	74.06	75.5
2001	10	4	23	176.9	20.6	177	16.3	72.95	74.8
2001	10	5	0	180.6	19.4	180.2	15.8	72.21	74.2
2001	10	5	1	185	16.6	186.2	13.1	71.49	73.5
2001	10	5	2	191.6	18	191.3	13.7	71.16	73.2
2001	10	5	3	186.2	15.6	184.2	12.7	70.6	72.6
2001	10	5	4	220.2	11.8	219.8	8.5	69.96	72.1
2001	10	5	5	186.7	9.6	175.8	7.6	69.67	71.8
2001	10	5	6	162.9	12.9	159.4	9.9	69.64	71.8
2001	10	5	7	149.7	9.1	137	6.7	68.51	70.6
2001	10	5	8	135	8.4	126.5	6.9	67.52	69.8
2001	10	5	18	348.1	25.7	357.4	23.3	56.04	58.2

2001	10	5	19	5.2	20.6	10.1	19.2	55.59	57.6
2001	10	7	5	156	6.1	142.9	6.1	51.73	52
2001	10	8	18	133.7	16.5	135.7	13.4	71.88	72.8
2001	10	9	3	156.9	17	158.2	14	69.7	70.7
2001	10	14	9	321.7	5.1	323.5	5.1	60.02	60.9
2001	10	27	12	116.5	4.6	122.2	4.6	64.63	66.3
2001	10	31	8	183	13.5	183.2	11.4	59.82	61.2
2001	11	5	10	100.4	3	95.9	3	65.61	66.9
2001	11	9	15	30.8	3.4	50	3.4	58.74	59.8
2001	11	9	17	97.5	2.1	117.4	2.1	60.02	60.5
2001	11	10	14	103.3	4.6	97.7	4.6	65.64	66.7
2001	11	11	9	128.4	3.5	113.8	3.6	63.32	61.9
2001	11	11	12	76.2	4.6	69.3	3.5	73.64	78.6
2001	11	11	13	155.1	7.3	145.7	5.9	27.3	32.3
2001	11	11	14	156.2	6.8	142.9	4.7	26	31
2001	11	11	15	180.5	4.3	186.1	2.8	42.4	47.4
2001	11	11	16	196.4	8.5	201.4	5.9	44	49
2001	11	11	17	179.2	8.9	181.7	6.1	36	41
2001	11	11	18	145.4	8	134.1	5.9	35.6	40.6
2001	11	11	19	70.8	7.7	66.4	6.4	18.5	23.5
2001	11	11	20	118.2	9.1	114.7	6.7	29.7	34.7
2001	11	11	21	148.9	10.1	153	6.7	27.9	32.9
2001	11	11	22	149.4	10.1	149	7.7	25.7	30.7
2001	11	11	23	147.8	9.2	142.4	6.9	27.9	32.9
2001	11	12	0	135.7	10.8	133.4	8.2	26	31
2001	11	12	1	146.3	10.2	142.3	7.6	28.4	33.4
2001	11	12	2	147.1	8.6	142.4	6.2	27.5	32.5
2001	11	12	3	134.1	7.6	126.9	5.7	30.4	35.4
2001	11	12	4	121.4	9.2	117	7.1	27.4	32.4
2001	11	12	5	128.9	11.7	129.3	8.4	26.1	31.1
2001	11	12	6	135.8	12.3	135.5	8.8	25.1	30.1
2001	11	12	7	145.5	13.2	144.6	9.6	27	32
2001	11	12	8	148.2	15.1	149.2	10.7	31.5	36.5
2001	11	12	9	160.7	11.8	163.7	9.2	36	41
2001	11	12	10	155.6	10.3	154.5	8.3	34.7	39.7
2001	11	12	11	150.5	10	148.9	8.2	28	33
2001	11	12	12	146.3	12.7	144.2	10.4	25.5	30.5
2001	11	12	13	170.7	11.5	170.2	9.7	34	39
2001	11	12	14	171.1	12.7	171	10.9	35.1	40.1
2001	11	12	15	161	13.1	161.8	11	35.8	40.8
2001	11	12	16	152	12	152.6	10	31.1	36.1
2001	11	12	17	136.1	14.2	135.2	11.4	27.1	32.1
2001	11	12	18	127.9	12.4	127	10	26.9	31.9
2001	11	12	19	131.5	13	127.7	10.2	19.7	24.7
2001	11	12	20	132	11.3	131	8	23.5	28.5
2001	11	12	21	132.5	12.2	131.3	8.3	33.2	38.2
2001	11	12	22	131.6	14.5	130	10.7	30.7	35.7
2001	11	12	23	141	12.7	136.8	9.3	30.4	35.4
2001	11	13	0	140.1	11.7	137.5	8.6	29	34
2001	11	13	1	155.2	11.6	151.2	8.3	31.8	36.8
2001	11	13	2	157.2	10.8	153.7	8.1	31.6	36.6
2001	11	13	3	160.3	9.8	151.3	7.5	31.8	36.8
2001	11	13	4	164.5	11.5	159.6	9.4	34.7	39.7
2001	11	13	5	159.5	11.4	153.6	9.1	33	38
2001	11	13	6	152.8	11	145.4	8.5	31.5	36.5
2001	11	13	7	150.5	8.7	135.2	4.8	15.4	20.4
2001	11	13	8	143.4	9.6	135.9	7.2	55.1	60.1
2001	11	13	9	153.5	12	153.6	4.8	10.8	15.8

2001	11	13	10	161.7	14.9	163.4	13.1	61.6	66.6
2001	11	13	11	161.5	15.9	163.5	13.9	62.5	67.5
2001	11	13	12	142.6	12.7	146.4	7.6	30.87	34
2001	11	13	13	136.6	12.2	132.9	6.8	27.58	29.7
2001	11	13	20	140.1	17.3	139.7	11	63.14	65.5
2001	11	13	21	142.5	16.2	137.3	10.1	62.89	65.3
2001	11	13	22	138.3	16.5	132.6	11	62.12	64.7
2001	11	13	23	147	17.1	142.6	11.6	61.85	64.6
2001	11	14	0	150.7	16.1	146	11.1	61.08	64.1
2001	11	14	1	153.3	15.1	148.4	10.9	60.62	63.7
2001	11	14	2	150.4	17	146.8	11.9	60.39	63.2
2001	11	14	3	154.1	16.7	152.4	12.7	61.5	63.8
2001	11	14	4	151.5	15.4	149.1	11.8	60.57	64
2001	11	14	5	157.1	14	155.5	11	60.92	64.1
2001	11	14	6	152.8	14.9	151.6	11.4	61.6	63.7
2001	11	14	7	148.1	12.7	144.4	9.7	60.52	63
2001	11	14	8	131.2	13.3	129.9	10.9	61.63	63.2
2001	11	14	18	109.5	9	104.5	6.8	64.98	67.4
2001	11	14	19	108.2	10	102.6	8.1	63.84	66.4
2001	11	14	20	110.6	10.3	106.1	8.5	64.55	66.4
2001	11	14	21	115.9	11.8	114	9.6	63.62	66
2001	11	14	22	124.3	15	124	11.7	63.36	65.6
2001	11	14	23	114.3	10.9	111.2	9.2	62.02	64.8
2001	11	15	0	116.1	9.6	113.1	7.3	61.08	63.5
2001	11	15	1	106.3	9.1	98.3	7.5	59.75	62.1
2001	11	15	2	112	8.2	103.8	6.4	59.06	61.6
2001	11	15	3	109.2	8.2	103.5	6.7	58.73	61.7
2001	11	15	4	100.8	9.1	95.7	8	58.39	61.7
2001	11	15	5	101.4	8.6	96.5	7.2	58.12	61.4
2001	11	15	6	93.7	10.3	89.3	8.7	57.96	61.3
2001	11	15	7	103	9	98.1	3.2	57.54	61.8
2001	11	15	8	70.1	5.5	49.9	0.9	57.3	62.1
2001	11	15	9	2.4	0.8	2.5	0.6	57.42	62.4
2001	11	15	14	61.9	9.5	61.2	8.2	60.2	62.7
2001	11	16	16	128.3	10.2	129.7	9.1	61.76	65.1
2001	11	16	17	105.4	6.4	100.3	6.1	62.02	65.3
2001	11	16	18	105.6	7.2	100.2	6.1	61.65	64.7
2001	11	16	19	112.4	7.1	107.6	5.7	61.07	64
2001	11	16	20	121.8	7.6	122.5	6.5	60.56	63.9
2001	11	16	21	110.8	7	106.5	5.8	60.43	63.8
2001	11	16	22	101.6	6.4	97	5.5	60.1	63.4
2001	11	16	23	117.3	6.5	111.3	4.8	60.07	63.2
2001	11	17	0	121.3	8.1	117.2	6.4	59.08	62.5
2001	11	17	1	136.5	10.9	137.6	8.8	57.7	59.4
2001	11	19	7	337.1	30.8	337.3	27	52.94	54.4
2001	11	30	17	222.6	13.3	217.7	7.5	65.82	64.2
2001	12	6	6	260.1	3.7	246.7	3.7	64.22	62.7
2001	12	9	18	120.4	5.7	128	5.7	48.07	48.3
2001	12	11	10	0	0	0	0	0	0
2001	12	11	12	0	0	0	0	0	0
2001	12	11	13	0	0	0	0	0	0
2001	12	11	14	0	0	0	0	0	0
2001	12	12	7	0	0	0	0	0	0
2001	12	12	8	0	0	0	0	0	0
2001	12	15	8	142.4	0.6	138.9	11.9	49.3	49.5
2001	12	17	9	69.1	7.7	66	1.2	42.17	46.2
2001	12	20	10	175.2	13.1	178.5	11.6	48.7	50.3
2001	12	27	21	140	3.7	116	3.7	52.2	52.4

2001	12	29	2	322	7.2	321.8	7.2	47.11	43.9
2001	12	31	12	23.2	11.4	23.5	10.3	31.88	33.3
2002	3	21	13	2.10	22.6	6.70	19.4	~~33.50~~	~~33.5~~
2002	4	10	17	147.30	13.7	144.70	11.4	~~43.12~~	~~45.5~~
2002	5	9	9	311.70	8.7	298.70	8.2	73.41	~~57.9~~
2002	5	13	8	356.60	18.8	348.60	16.8	48.31	~~0~~
2002	5	13	13	5.00	18.2	358.60	16.2	48.45	~~50.4~~
2002	8	12	12	120.50	5.3	159.10	10.1	83.89	~~77.5~~
2002	9	11	8	344.60	7.6	326.10	5	73.83	~~56.5~~
2002	9	11	9	350.70	8.2	340.70	7.6	75.85	~~46~~
2002	9	11	10	2.40	7	354.10	6.7	74.46	~~44~~
2002	9	11	11	1.10	4.1	352.40	3.8	77.47	~~23.1~~
2002	9	11	12	22.90	3.5	19.30	2.7	80.97	~~-12.9~~
2002	9	11	13	36.30	7	68.90	2.9	86.26	~~15.9~~
2002	9	12	12	25.40	1.8	24.30	2.4	82.49	~~41.6~~
2002	9	12	13	2.20	5.9	1.90	0.6	85.13	~~18~~
2002	9	12	14	52.20	2.5	43.90	2	86.99	~~56.2~~
2002	9	16	9	13.80	6.4	5.10	5.9	70.96	~~62.1~~
2002	9	16	10	22.80	4.8	16.00	4.1	73.39	~~65.1~~
2002	9	16	12	35.80	2.5	58.40	1.5	76.42	~~13.6~~
2002	9	23	9	55.90	11.3	44.60	8.8	~~52.28~~	~~54.1~~
2002	9	23	10	2.20	0.6	36.10	4.1	~~55.70~~	~~60.7~~
2002	9	26	8	2.10	3	3.00	5.7	67.19	~~5.6~~
2002	9	26	9	96.50	7.3	1.90	19.7	74.89	~~-19.7~~
2002	9	26	10	30.70	9.2	1.90	21.7	74.93	~~-19.7~~
2002	9	26	11	10.60	0.6	1.90	7.2	79.45	~~-19.7~~
2002	9	26	12	25.10	0.6	1.90	0.6	83.69	~~-19.7~~
2002	9	26	13	10.70	11.7	354.50	0.6	81.93	~~19.6~~
2003	2	17	13	2.40	7	172.20	6.1	57.29	~~14.6~~
2003	2	17	14	12.30	4.6	169.20	2.7	59.90	~~7.5~~
2003	2	24	9	15.10	17.8	6.40	17.1	23.00	24.3
2003	2	24	10	15.30	19	5.10	18	23.51	24.9
2003	3	5	8	8.40	13.1	359.40	11.1	29.98	~~17.9~~
2003	3	5	9	353.20	9.8	345.30	7.4	31.07	~~41.6~~
2003	3	6	14	79.10	5.7	61.30	5.9	58.17	~~43.3~~
2003	3	6	15	95.60	4.3	119.20	3.6	58.62	~~47.4~~
2003	3	10	8	358.10	9.9	353.00	4.8	38.21	~~30.4~~
2003	3	10	9	2.40	14.8	19.40	2.3	37.54	~~26.8~~
2003	3	12	8	169.30	7.9	175.40	11.6	64.91	~~47.3~~
2003	3	12	9	182.60	10.5	173.80	15.2	66.97	~~64.4~~
2003	3	12	13	186.30	9.3	179.80	12.6	73.70	~~56.9~~
2003	3	13	8	43.60	2.1	35.00	1.5	62.18	~~6.6~~
2003	4	10	8	192.30	4.7	176.70	1.8	50.04	48.9
2003	4	10	10	152.50	4.9	137.50	4.1	56.53	~~50.5~~
2003	4	10	14	216.70	2.6	209.90	1.9	70.19	~~30.4~~
2003	4	11	11	150.60	3.4	140.50	3.7	63.72	~~36.8~~
2003	8	27	10	158.70	4.4	147.80	4	78.23	79.3
2003	8	27	11	118.00	3.6	111.00	3.5	81.09	82.2
2003	8	27	12	183.90	4.2	178.50	3.3	85.25	86.4
2003	9	4	9	13.30	7.7	9.20	6.9	73.28	74.3
2003	9	11	7	184.80	12	184.50	9.1	76.36	~~61.3~~
2003	9	11	8	14.50	3.3	11.60	2.5	74.96	~~8.3~~
2004	4	25	6	37.60	0.7	97.80	0.9	999.00	60.9
2004	4	25	7	148.30	3.9	148.20	3.9	999.00	60.6
2004	4	25	8	151.90	6.6	154.90	5.5	999.00	60.7
2004	4	25	9	136.80	3.6	128.50	3.1	999.00	61.8
2004	4	25	10	21.00	3	22.90	3	999.00	63.3
2004	4	25	11	72.70	2.6	75.20	2.6	999.00	66.9

2004	4	25	12	62.90	3	76.80	2.9	999.00	69.2
2004	4	25	13	121.10	6.5	118.10	6.2	999.00	71.4
2004	4	25	14	115.30	8.1	111.50	7.5	999.00	73.6
2004	4	25	15	97.60	8.1	92.20	7.5	999.00	75.1
2004	4	25	16	117.90	10.6	115.80	9.9	999.00	75.7
2004	4	25	17	111.00	9.9	108.30	9.1	999.00	75.8
2004	4	25	18	128.40	12.8	126.20	10.7	999.00	74.8
2004	4	25	19	135.70	12.6	135.30	9.4	999.00	72.8
2004	4	25	20	129.10	8.4	126.70	4.8	999.00	70.7
2004	4	25	21	114.30	8.4	110.50	5.4	999.00	68.6
2004	4	25	22	138.50	8.4	145.80	3.4	999.00	67
2004	4	25	23	344.50	6.7	330.90	6	999.00	66.2
2004	4	26	0	18.30	9.5	6.30	6.1	999.00	65.8
2004	4	26	1	10.80	13.4	4.90	10.7	999.00	63.5
2004	4	26	2	2.20	21.1	357.20	16.6	999.00	62.7
2004	4	26	3	347.70	13.9	343.70	11	999.00	63.1
2004	4	26	4	62.30	1.7	217.60	3.6	999.00	61.9
2004	4	26	5	267.70	3.4	231.30	2.7	999.00	61.5
2004	4	26	6	13.80	9.1	356.30	8.3	999.00	62.3
2004	4	26	7	356.70	11.1	349.20	9.4	999.00	62.2
2004	2	24	8	53.50	12.7	50.00	9.7	50.04	~~49~~
2004	2	24	9	45.00	17.2	40.90	14.9	50.84	49.7
2004	2	24	10	49.10	19.2	45.10	15.5	51.15	46.4
2004	2	24	12	36.80	18.3	33.10	15.2	50.86	~~35.2~~
2004	4	26	8	359.70	11.3	356.40	10.1	61.26	~~55.6~~
2004	9	7	7	4.70	20	353.10	15.2	66.39	66.9
2004	9	7	8	12.80	19.2	6.10	16	67.51	68.5
2004	9	9	8	353.10	5.6	310.80	3.5	63.94	63.3
2004	9	9	9	355.90	3.6	354.90	3.3	67.01	68.2
2004	9	9	12	42.60	3.7	30.30	3	76.11	77.6
2004	9	9	13	60.50	3.7	65.70	2.9	77.83	79.4
2004	9	9	14	41.60	3.8	46.90	3.3	79.42	80.9
2004	11	30	13	317.50	19.9	318.90	3.7	45.10	~~37.2~~
2004	11	30	14	307.70	12.1	304.00	10.4	45.71	~~31.4~~
2005	2	23	9	48.10	2.5	52.80	2	57.05	60.5
2005	3	8	20	0.00	0.6	0.00	0.6	0.00	0
2005	3	8	21	0.00	0.6	0.00	0.6	0.00	0
2005	3	8	22	0.00	0.6	0.00	0.6	0.00	0
2005	3	8	23	0.00	0.6	0.00	0.6	0.00	0
2005	3	9	0	0.00	0.6	0.00	0.6	0.00	0
2005	3	9	1	0.00	0.6	0.00	0.6	0.00	0
2005	3	9	2	0.00	0.6	0.00	0.6	0.00	0
2005	3	9	3	0.00	0.6	0.00	0.6	0.00	0
2005	3	9	4	0.00	0.6	0.00	0.6	0.00	0
2005	3	9	5	0.00	0.6	0.00	0.6	0.00	0
2005	3	9	6	0.00	0.6	0.00	0.6	0.00	0
2005	3	9	7	0.00	0.6	0.00	0.6	0.00	0
2005	3	9	8	0.00	0.6	0.00	0.6	0.00	0
2005	3	9	9	0.00	0.6	0.00	0.6	0.00	0
2005	3	9	10	0.00	0.6	0.00	0.6	0.00	0
2005	3	9	11	0.00	0.6	0.00	0.6	0.00	0
2005	3	9	12	0.00	0.6	0.00	0.6	0.00	0
2005	3	9	13	0.00	0.6	0.00	0.6	0.00	0
2005	3	9	14	0.00	0.6	0.00	0.6	0.00	0
2005	3	9	15	0.00	0.6	0.00	0.6	0.00	0
2005	3	9	16	0.00	0.6	0.00	0.6	0.00	0

2005	3	9	17	0.00	0.6	0.00	0.6	0.00	0
2005	3	9	18	0.00	0.6	0.00	0.6	0.00	0
2005	3	9	19	0.00	0.6	0.00	0.6	0.00	0
2005	3	9	20	0.00	0.6	0.00	0.6	0.00	0
2005	3	9	21	0.00	0.6	0.00	0.6	0.00	0
2005	3	9	22	0.00	0.6	0.00	0.6	0.00	0
2005	3	9	23	0.00	0.6	0.00	0.6	0.00	0
2005	3	10	0	0.00	0.6	0.00	0.6	0.00	0
2005	3	10	1	0.00	0.6	0.00	0.6	0.00	0
2005	3	10	2	0.00	0.6	0.00	0.6	0.00	0
2005	3	10	3	0.00	0.6	0.00	0.6	0.00	0
2005	3	10	4	0.00	0.6	0.00	0.6	0.00	0
2005	3	10	5	0.00	0.6	0.00	0.6	0.00	0
2005	3	10	6	0.00	0.6	0.00	0.6	0.00	0
2005	3	10	7	0.00	0.6	0.00	0.6	0.00	0
2005	3	10	8	0.00	0.6	0.00	0.6	0.00	0
2005	3	10	9	0.00	0.6	0.00	0.6	0.00	0
2005	3	10	10	0.00	0.6	0.00	0.6	0.00	0
2005	3	10	11	0.00	0.6	0.00	0.6	0.00	0
2005	3	10	12	0.00	0.6	0.00	0.6	0.00	0
2005	3	10	13	0.00	0.6	0.00	0.6	0.00	0
2005	3	10	14	0.00	0.6	0.00	0.6	0.00	0
2005	3	10	15	0.00	0.6	0.00	0.6	0.00	0
2005	3	10	16	0.00	0.6	0.00	0.6	0.00	0
2005	3	10	17	0.00	0.6	0.00	0.6	0.00	0
2005	3	10	18	0.00	0.6	0.00	0.6	0.00	0
2005	3	10	19	0.00	0.6	0.00	0.6	0.00	0
2005	3	10	20	0.00	0.6	0.00	0.6	0.00	0
2005	3	10	21	0.00	0.6	0.00	0.6	0.00	0
2005	3	10	22	0.00	0.6	0.00	0.6	0.00	0
2005	3	10	23	0.00	0.6	0.00	0.6	0.00	0
2005	3	11	0	0.00	0.6	0.00	0.6	0.00	0
2005	3	11	1	0.00	0.6	0.00	0.6	0.00	0
2005	3	11	2	0.00	0.6	0.00	0.6	0.00	0
2005	3	11	3	0.00	0.6	0.00	0.6	0.00	0
2005	3	11	4	0.00	0.6	0.00	0.6	0.00	0
2005	3	11	5	0.00	0.6	0.00	0.6	0.00	0
2005	3	11	6	0.00	0.6	0.00	0.6	0.00	0
2005	3	11	7	0.00	0.6	0.00	0.6	0.00	0
2005	3	11	8	0.00	0.6	0.00	0.6	0.00	0
2005	3	11	9	0.00	0.6	0.00	0.6	0.00	0
2005	3	11	10	0.00	0.6	0.00	0.6	0.00	0
2005	3	11	11	0.00	0.6	0.00	0.6	0.00	0
2005	3	11	12	0.00	0.6	0.00	0.6	0.00	0
2005	3	11	13	0.00	0.6	0.00	0.6	0.00	0
2005	3	11	14	0.00	0.6	0.00	0.6	0.00	0
2005	3	11	15	0.00	0.6	0.00	0.6	0.00	0
2005	3	11	16	2.10	0.6	0.20	0.6	-5.00	0
2005	3	11	17	2.10	0.6	0.20	0.6	-5.00	0
2005	3	11	18	307.80	3.3	307.40	2.5	-2.47	0
2005	3	11	19	0.00	0.6	0.00	0.6	0.00	0
2005	3	11	20	0.00	0.6	0.00	0.6	0.00	0
2005	3	11	21	0.00	0.6	0.00	0.6	0.00	0
2005	3	11	22	0.00	0.6	0.00	0.6	0.00	0

2005	3	11	23	0.00	0.6	0.00	0.6	0.00	0
2005	3	12	0	0.00	0.6	0.00	0.6	0.00	0
2005	3	12	1	0.00	0.6	0.00	0.6	0.00	0
2005	3	12	2	0.00	0.6	0.00	0.6	0.00	0
2005	3	12	3	0.00	0.6	0.00	0.6	0.00	0
2005	3	12	4	0.00	0.6	0.00	0.6	0.00	0
2005	3	12	5	0.00	0.6	0.00	0.6	0.00	0
2005	3	12	6	2.10	0.6	0.20	0.6	0.00	0
2005	3	12	10	54.60	4.1	232.20	10.4	-5.00	0
2005	3	12	11	230.10	17.6	231.90	17	-5.00	0
2005	3	12	12	236.90	15.1	235.80	16	-5.00	0
2005	3	12	14	50.10	19.4	37.90	8.3	21.40	21.4
2005	3	12	15	50.20	19.9	31.90	19.3	33.23	38
2005	3	12	16	47.10	19.5	60.30	12.8	98.20	103.2
2005	3	12	17	42.90	13.2	31.30	12.7	49.51	50.2
2005	3	12	18	213.60	19.2	212.20	12.3	64.70	69.7
2005	3	12	19	202.30	16.4	199.00	9	64.70	69.7
2005	3	12	20	189.90	15.8	180.00	10.2	64.70	69.7
2005	3	12	21	190.50	15.4	187.30	9.4	64.70	69.7
2005	3	12	22	202.20	18.8	200.40	11.9	64.70	69.7
2005	3	12	23	208.60	19.7	206.40	12.4	64.70	69.7
2005	3	13	0	211.10	20.7	211.40	13.5	64.70	69.7
2005	3	13	1	205.90	21.3	204.70	14.4	64.70	69.7
2005	3	13	2	211.00	21	210.60	14.5	64.70	69.7
2005	3	13	3	210.00	25.1	207.20	17.2	64.70	69.7
2005	3	13	4	218.80	25.3	216.70	17.4	64.70	69.7
2005	3	13	5	229.00	25.6	227.80	17.6	64.70	69.7
2005	3	13	6	74.00	5.6	264.00	4.3	63.08	66.5
2005	3	13	18	359.60	0.6	1.30	0.6	-0.01	0
2005	3	13	19	359.60	0.6	1.20	0.6	-0.01	0
2005	3	13	20	359.60	0.6	1.30	0.6	-0.01	0
2005	3	13	21	359.60	0.6	1.30	0.6	-0.01	0
2005	3	13	22	359.60	0.6	1.20	0.6	-0.01	0
2005	3	13	23	359.60	0.6	1.20	0.6	-0.01	0
2005	3	14	0	359.60	0.6	1.20	0.6	-0.01	0
2005	3	14	1	359.60	0.6	1.20	0.6	-0.01	0
2005	3	14	2	359.60	0.6	1.20	0.6	-0.01	0
2005	3	14	3	359.60	0.6	1.20	0.6	-0.01	0
2005	3	14	4	359.60	0.6	1.20	0.6	-0.01	0
2005	3	14	5	359.60	0.6	1.20	0.6	-0.01	0
2005	3	14	15	7.30	0.6	44.10	0.6	-3.07	0
2005	3	14	16	7.90	0.6	35.60	0.6	-5.00	0
2005	3	15	8	112.80	3.2	67.70	4.1	-2.95	0
2005	4	3	7	0.00	0	0.00	0	0.00	0
2005	8	1	14	0.00	0	0.00	0	0.00	0
2005	8	1	15	0.00	0	0.00	0	0.00	0
2005	8	1	16	0.00	0	0.00	0	0.00	0
2005	8	1	17	0.00	0	0.00	0	0.00	0
2005	8	1	18	0.00	0	0.00	0	0.00	0
2005	8	1	19	0.00	0	0.00	0	0.00	0
2005	8	1	20	0.00	0	0.00	0	0.00	0
2005	8	1	21	0.00	0	0.00	0	0.00	0
2005	8	1	22	0.00	0	0.00	0	0.00	0
2005	8	1	23	0.00	0	0.00	0	0.00	0

2005	8	2	0	0.00	0	0.00	0	0.00	0
2005	8	2	1	0.00	0	0.00	0	0.00	0
2005	8	2	2	0.00	0	0.00	0	0.00	0
2005	8	2	3	0.00	0	0.00	0	0.00	0
2005	8	2	4	0.00	0	0.00	0	0.00	0
2005	8	2	5	0.00	0	0.00	0	0.00	0
2005	8	2	6	0.00	0	0.00	0	0.00	0
2005	8	2	7	0.00	0	0.00	0	0.00	0
2005	8	2	8	0.00	0	0.00	0	0.00	0
2005	8	2	9	0.00	0	0.00	0	0.00	0
2005	8	2	10	0.00	0	0.00	0	0.00	0
2005	8	2	11	0.00	0	0.00	0	0.00	0
2005	8	2	12	0.00	0	0.00	0	0.00	0
2005	8	2	13	0.00	0	0.00	0	0.00	0
2005	8	2	14	0.00	0	0.00	0	0.00	0
2005	8	2	15	0.00	0	0.00	0	0.00	0
2005	8	2	16	0.00	0	0.00	0	0.00	0
2005	8	2	17	0.00	0	0.00	0	0.00	0
2005	8	2	18	0.00	0	0.00	0	0.00	0
2005	8	2	19	0.00	0	0.00	0	0.00	0
2005	8	2	20	0.00	0	0.00	0	0.00	0
2005	8	2	21	0.00	0	0.00	0	0.00	0
2005	8	2	22	0.00	0	0.00	0	0.00	0
2005	8	2	23	0.00	0	0.00	0	0.00	0
2005	8	3	0	0.00	0	0.00	0	0.00	0
2005	8	3	1	0.00	0	0.00	0	0.00	0
2005	8	3	2	0.00	0	0.00	0	0.00	0
2005	8	3	3	0.00	0	0.00	0	0.00	0
2005	8	3	4	0.00	0	0.00	0	0.00	0
2005	8	3	5	0.00	0	0.00	0	0.00	0
2005	8	3	6	0.00	0	0.00	0	0.00	0
2005	8	3	7	0.00	0	0.00	0	0.00	0
2005	8	3	8	0.00	0	0.00	0	0.00	0
2005	8	3	9	0.00	0	0.00	0	0.00	0
2005	8	3	10	0.00	0	0.00	0	0.00	0
2005	8	3	11	0.00	0	0.00	0	0.00	0
2005	8	3	12	0.00	0	0.00	0	0.00	0
2005	8	3	13	0.00	0	0.00	0	0.00	0
2005	8	3	14	0.00	0	0.00	0	0.00	0
2005	8	3	15	0.00	0	0.00	0	0.00	0
2005	8	3	16	0.00	0	0.00	0	0.00	0
2005	8	3	17	0.00	0	0.00	0	0.00	0
2005	8	3	18	0.00	0	0.00	0	0.00	0
2005	8	3	19	0.00	0	0.00	0	0.00	0
2005	8	3	20	0.00	0	0.00	0	0.00	0
2005	8	3	21	0.00	0	0.00	0	0.00	0
2005	8	3	22	0.00	0	0.00	0	0.00	0
2005	8	3	23	0.00	0	0.00	0	0.00	0
2005	8	4	0	0.00	0	0.00	0	0.00	0
2005	8	4	1	0.00	0	0.00	0	0.00	0
2005	8	4	2	0.00	0	0.00	0	0.00	0
2005	8	4	3	0.00	0	0.00	0	0.00	0
2005	8	4	4	0.00	0	0.00	0	0.00	0
2005	8	4	5	0.00	0	0.00	0	0.00	0

2005	8	4	6	0.00	0	0.00	0	0.00	0
2005	8	4	7	0.00	0	0.00	0	0.00	0
2005	8	4	8	0.00	0	0.00	0	0.00	0
2005	8	4	9	0.00	0	0.00	0	0.00	0
2005	8	4	10	0.00	0	0.00	0	0.00	0
2005	8	4	11	0.00	0	0.00	0	0.00	0
2005	8	4	12	0.00	0	0.00	0	0.00	0
2005	8	4	13	0.00	0	0.00	0	0.00	0
2005	8	4	14	0.00	0	0.00	0	0.00	0
2005	8	4	15	0.00	0	0.00	0	0.00	0
2005	8	4	16	0.00	0	0.00	0	0.00	0
2005	8	4	17	0.00	0	0.00	0	0.00	0
2005	8	4	18	0.00	0	0.00	0	0.00	0
2005	8	4	19	0.00	0	0.00	0	0.00	0
2005	8	4	20	0.00	0	0.00	0	0.00	0
2005	8	4	21	0.00	0	0.00	0	0.00	0
2005	8	4	22	0.00	0	0.00	0	0.00	0
2005	8	4	23	0.00	0	0.00	0	0.00	0
2005	8	5	0	0.00	0	0.00	0	0.00	0
2005	8	5	1	0.00	0	0.00	0	0.00	0
2005	8	5	2	0.00	0	0.00	0	0.00	0
2005	8	5	3	0.00	0	0.00	0	0.00	0
2005	8	5	4	0.00	0	0.00	0	0.00	0
2005	8	5	5	0.00	0	0.00	0	0.00	0
2005	8	5	6	0.00	0	0.00	0	0.00	0
2005	8	5	7	0.00	0	0.00	0	0.00	0
2005	8	5	8	0.00	0	0.00	0	0.00	0
2005	8	5	9	0.00	0	0.00	0	0.00	0
2005	8	5	10	0.00	0	0.00	0	0.00	0
2005	8	5	11	0.00	0	0.00	0	0.00	0
2005	8	5	12	0.00	0	0.00	0	0.00	0
2005	8	5	13	0.00	0	0.00	0	0.00	0
2005	8	5	14	0.00	0	0.00	0	0.00	0
2005	8	5	15	0.00	0	0.00	0	0.00	0
2005	8	5	16	0.00	0	0.00	0	0.00	0
2005	8	5	17	0.00	0	0.00	0	0.00	0
2005	8	5	18	0.00	0	0.00	0	0.00	0
2005	8	5	19	0.00	0	0.00	0	0.00	0
2005	8	5	20	0.00	0	0.00	0	0.00	0
2005	8	5	21	0.00	0	0.00	0	0.00	0
2005	8	5	22	0.00	0	0.00	0	0.00	0
2005	8	5	23	0.00	0	0.00	0	0.00	0
2005	8	6	0	0.00	0	0.00	0	0.00	0
2005	8	6	1	0.00	0	0.00	0	0.00	0
2005	8	6	2	0.00	0	0.00	0	0.00	0
2005	8	6	3	0.00	0	0.00	0	0.00	0
2005	8	6	4	0.00	0	0.00	0	0.00	0
2005	8	6	5	0.00	0	0.00	0	0.00	0
2005	8	6	6	0.00	0	0.00	0	0.00	0
2005	8	6	7	0.00	0	0.00	0	0.00	0
2005	8	6	8	0.00	0	0.00	0	0.00	0
2005	8	6	9	0.00	0	0.00	0	0.00	0
2005	8	6	10	0.00	0	0.00	0	0.00	0
2005	8	6	11	0.00	0	0.00	0	0.00	0

2005	8	6	12	0.00	0	0.00	0	0.00	0
2005	8	6	13	0.00	0	0.00	0	0.00	0
2005	8	6	14	0.00	0	0.00	0	0.00	0
2005	8	6	15	0.00	0	0.00	0	0.00	0
2005	8	6	16	0.00	0	0.00	0	0.00	0
2005	8	6	17	0.00	0	0.00	0	0.00	0
2005	8	6	18	0.00	0	0.00	0	0.00	0
2005	8	6	19	0.00	0	0.00	0	0.00	0
2005	8	6	20	0.00	0	0.00	0	0.00	0
2005	8	6	21	0.00	0	0.00	0	0.00	0
2005	8	6	22	0.00	0	0.00	0	0.00	0
2005	8	6	23	0.00	0	0.00	0	0.00	0
2005	8	7	0	0.00	0	0.00	0	0.00	0
2005	8	7	1	0.00	0	0.00	0	0.00	0
2005	8	7	2	0.00	0	0.00	0	0.00	0
2005	8	7	3	0.00	0	0.00	0	0.00	0
2005	8	7	4	0.00	0	0.00	0	0.00	0
2005	8	7	5	0.00	0	0.00	0	0.00	0
2005	8	7	6	0.00	0	0.00	0	0.00	0
2005	8	7	7	0.00	0	0.00	0	0.00	0
2005	8	7	8	0.00	0	0.00	0	0.00	0
2005	8	7	9	0.00	0	0.00	0	0.00	0
2005	8	7	10	0.00	0	0.00	0	0.00	0
2005	8	7	11	0.00	0	0.00	0	0.00	0
2005	8	7	12	0.00	0	0.00	0	0.00	0
2005	8	7	13	0.00	0	0.00	0	0.00	0
2005	8	7	14	0.00	0	0.00	0	0.00	0
2005	8	7	15	0.00	0	0.00	0	0.00	0
2005	8	7	16	0.00	0	0.00	0	0.00	0
2005	8	7	17	0.00	0	0.00	0	0.00	0
2005	8	7	18	0.00	0	0.00	0	0.00	0
2005	8	7	19	0.00	0	0.00	0	0.00	0
2005	8	7	20	0.00	0	0.00	0	0.00	0
2005	8	7	21	0.00	0	0.00	0	0.00	0
2005	8	7	22	0.00	0	0.00	0	0.00	0
2005	8	7	23	0.00	0	0.00	0	0.00	0
2005	8	8	0	0.00	0	0.00	0	0.00	0
2005	8	8	1	0.00	0	0.00	0	0.00	0
2005	8	8	2	0.00	0	0.00	0	0.00	0
2005	8	8	3	0.00	0	0.00	0	0.00	0
2005	8	8	4	0.00	0	0.00	0	0.00	0
2005	8	8	5	0.00	0	0.00	0	0.00	0
2005	8	8	6	0.00	0	0.00	0	0.00	0
2005	8	8	7	0.00	0	0.00	0	0.00	0
2005	8	8	8	0.00	0	0.00	0	0.00	0
2005	8	8	9	0.00	0	0.00	0	0.00	0
2005	8	8	10	0.00	0	0.00	0	0.00	0
2005	8	8	11	0.00	0	0.00	0	0.00	0
2005	8	8	12	0.00	0	0.00	0	0.00	0
2005	8	8	13	0.00	0	0.00	0	0.00	0
2005	8	8	14	0.00	0	0.00	0	0.00	0
2005	8	8	15	0.00	0	0.00	0	0.00	0
2005	8	8	16	0.00	0	0.00	0	0.00	0
2005	8	8	17	0.00	0	0.00	0	0.00	0

2005	8	8	18	0.00	0	0.00	0	0.00	0
2005	8	8	19	0.00	0	0.00	0	0.00	0
2005	8	8	20	0.00	0	0.00	0	0.00	0
2005	8	8	21	0.00	0	0.00	0	0.00	0
2005	8	8	22	0.00	0	0.00	0	0.00	0
2005	8	8	23	0.00	0	0.00	0	0.00	0
2005	8	9	0	0.00	0	0.00	0	0.00	0
2005	8	9	1	0.00	0	0.00	0	0.00	0
2005	8	9	2	0.00	0	0.00	0	0.00	0
2005	8	9	3	0.00	0	0.00	0	0.00	0
2005	8	9	4	0.00	0	0.00	0	0.00	0
2005	8	9	5	0.00	0	0.00	0	0.00	0
2005	8	9	6	0.00	0	0.00	0	0.00	0
2005	8	9	7	0.00	0	0.00	0	0.00	0
2005	8	9	8	0.00	0	0.00	0	0.00	0
2005	8	9	9	0.00	0	0.00	0	0.00	0
2005	8	9	10	0.00	0	0.00	0	0.00	0
2005	8	9	11	0.00	0	0.00	0	0.00	0
2005	8	9	12	0.00	0	0.00	0	0.00	0
2005	8	9	13	0.00	0	0.00	0	0.00	0
2005	8	9	14	0.00	0	0.00	0	0.00	0
2005	8	9	15	0.00	0	0.00	0	0.00	0
2005	8	9	16	0.00	0	0.00	0	0.00	0
2005	8	9	17	0.00	0	0.00	0	0.00	0
2005	8	9	18	0.00	0	0.00	0	0.00	0
2005	8	9	19	0.00	0	0.00	0	0.00	0
2005	8	9	20	0.00	0	0.00	0	0.00	0
2005	8	9	21	0.00	0	0.00	0	0.00	0
2005	8	9	22	0.00	0	0.00	0	0.00	0
2005	8	9	23	0.00	0	0.00	0	0.00	0
2005	8	10	0	0.00	0	0.00	0	0.00	0
2005	8	10	1	0.00	0	0.00	0	0.00	0
2005	8	10	2	0.00	0	0.00	0	0.00	0
2005	8	10	3	0.00	0	0.00	0	0.00	0
2005	8	10	4	0.00	0	0.00	0	0.00	0
2005	8	10	5	0.00	0	0.00	0	0.00	0
2005	8	10	6	0.00	0	0.00	0	0.00	0
2005	8	10	7	0.00	0	0.00	0	0.00	0
2005	8	10	8	0.00	0	0.00	0	0.00	0
2005	8	10	9	0.00	0	0.00	0	0.00	0
2005	8	10	10	0.00	0	0.00	0	0.00	0
2005	8	10	11	0.00	0	0.00	0	0.00	0
2005	8	10	12	0.00	0	0.00	0	0.00	0
2005	8	10	13	0.00	0	0.00	0	0.00	0
2005	8	10	14	0.00	0	0.00	0	0.00	0
2005	8	10	15	0.00	0	0.00	0	0.00	0
2005	8	10	16	0.00	0	0.00	0	0.00	0
2005	8	10	17	0.00	0	0.00	0	0.00	0
2005	8	10	18	0.00	0	0.00	0	0.00	0
2005	8	10	19	0.00	0	0.00	0	0.00	0
2005	8	10	20	0.00	0	0.00	0	0.00	0
2005	8	10	21	0.00	0	0.00	0	0.00	0
2005	8	10	22	0.00	0	0.00	0	0.00	0
2005	8	10	23	0.00	0	0.00	0	0.00	0

2005	8	11	0	0.00	0	0.00	0	0.00	0
2005	8	11	1	0.00	0	0.00	0	0.00	0
2005	8	11	2	0.00	0	0.00	0	0.00	0
2005	8	11	3	0.00	0	0.00	0	0.00	0
2005	8	11	4	0.00	0	0.00	0	0.00	0
2005	8	11	5	0.00	0	0.00	0	0.00	0
2005	8	11	6	0.00	0	0.00	0	0.00	0
2005	8	11	7	0.00	0	0.00	0	0.00	0
2005	8	11	8	0.00	0	0.00	0	0.00	0
2005	8	11	9	0.00	0	0.00	0	0.00	0
2005	8	11	10	0.00	0	0.00	0	0.00	0
2005	8	11	11	0.00	0	0.00	0	0.00	0
2005	8	11	12	0.00	0	0.00	0	0.00	0
2005	8	11	13	0.00	0	0.00	0	0.00	0
2005	8	11	14	0.00	0	0.00	0	0.00	0
2005	8	11	15	0.00	0	0.00	0	0.00	0
2005	8	11	16	0.00	0	0.00	0	0.00	0
2005	8	11	17	0.00	0	0.00	0	0.00	0
2005	8	11	18	0.00	0	0.00	0	0.00	0
2005	8	11	19	0.00	0	0.00	0	0.00	0
2005	8	11	20	0.00	0	0.00	0	0.00	0
2005	8	11	21	0.00	0	0.00	0	0.00	0
2005	8	11	22	0.00	0	0.00	0	0.00	0
2005	8	11	23	0.00	0	0.00	0	0.00	0
2005	8	12	0	0.00	0	0.00	0	0.00	0
2005	8	12	1	0.00	0	0.00	0	0.00	0
2005	8	12	2	0.00	0	0.00	0	0.00	0
2005	8	12	3	0.00	0	0.00	0	0.00	0
2005	8	12	4	0.00	0	0.00	0	0.00	0
2005	8	12	5	0.00	0	0.00	0	0.00	0
2005	8	12	6	0.00	0	0.00	0	0.00	0
2005	8	12	7	0.00	0	0.00	0	0.00	0
2005	8	12	8	0.00	0	0.00	0	0.00	0
2005	8	12	9	0.00	0	0.00	0	0.00	0
2005	8	12	10	0.00	0	0.00	0	0.00	0
2005	8	12	11	0.00	0	0.00	0	0.00	0
2005	8	12	12	0.00	0	0.00	0	0.00	0
2005	8	12	13	0.00	0	0.00	0	0.00	0
2005	8	12	14	0.00	0	0.00	0	0.00	0
2005	8	12	15	0.00	0	0.00	0	0.00	0
2005	8	12	16	0.00	0	0.00	0	0.00	0
2005	8	12	17	0.00	0	0.00	0	0.00	0
2005	8	12	18	0.00	0	0.00	0	0.00	0
2005	8	12	19	0.00	0	0.00	0	0.00	0
2005	8	12	20	0.00	0	0.00	0	0.00	0
2005	8	12	21	0.00	0	0.00	0	0.00	0
2005	8	12	22	0.00	0	0.00	0	0.00	0
2005	8	12	23	0.00	0	0.00	0	0.00	0
2005	8	13	0	0.00	0	0.00	0	0.00	0
2005	8	13	1	0.00	0	0.00	0	0.00	0
2005	8	13	2	0.00	0	0.00	0	0.00	0
2005	8	13	3	0.00	0	0.00	0	0.00	0
2005	8	13	4	0.00	0	0.00	0	0.00	0
2005	8	13	5	0.00	0	0.00	0	0.00	0

2005	8	13	6	0.00	0	0.00	0	0.00	0
2005	8	13	7	0.00	0	0.00	0	0.00	0
2005	8	13	8	0.00	0	0.00	0	0.00	0
2005	8	13	9	0.00	0	0.00	0	0.00	0
2005	8	13	10	0.00	0	0.00	0	0.00	0
2005	8	13	11	0.00	0	0.00	0	0.00	0
2005	8	13	12	0.00	0	0.00	0	0.00	0
2005	8	13	13	0.00	0	0.00	0	0.00	0
2005	8	13	14	0.00	0	0.00	0	0.00	0
2005	8	13	15	0.00	0	0.00	0	0.00	0
2005	8	13	16	0.00	0	0.00	0	0.00	0
2005	8	13	17	0.00	0	0.00	0	0.00	0
2005	8	13	18	0.00	0	0.00	0	0.00	0
2005	8	13	19	0.00	0	0.00	0	0.00	0
2005	8	13	20	0.00	0	0.00	0	0.00	0
2005	8	13	21	0.00	0	0.00	0	0.00	0
2005	8	13	22	0.00	0	0.00	0	0.00	0
2005	8	13	23	0.00	0	0.00	0	0.00	0
2005	8	14	0	0.00	0	0.00	0	0.00	0
2005	8	14	1	0.00	0	0.00	0	0.00	0
2005	8	14	2	0.00	0	0.00	0	0.00	0
2005	8	14	3	0.00	0	0.00	0	0.00	0
2005	8	14	4	0.00	0	0.00	0	0.00	0
2005	8	14	5	0.00	0	0.00	0	0.00	0
2005	8	14	6	0.00	0	0.00	0	0.00	0
2005	8	14	7	0.00	0	0.00	0	0.00	0
2005	8	14	8	0.00	0	0.00	0	0.00	0
2005	8	14	9	0.00	0	0.00	0	0.00	0
2005	8	14	10	0.00	0	0.00	0	0.00	0
2005	8	14	11	0.00	0	0.00	0	0.00	0
2005	8	14	12	0.00	0	0.00	0	0.00	0
2005	8	14	13	0.00	0	0.00	0	0.00	0
2005	8	14	14	0.00	0	0.00	0	0.00	0
2005	8	14	15	0.00	0	0.00	0	0.00	0
2005	8	14	16	0.00	0	0.00	0	0.00	0
2005	8	14	17	0.00	0	0.00	0	0.00	0
2005	8	14	18	0.00	0	0.00	0	0.00	0
2005	8	14	19	0.00	0	0.00	0	0.00	0
2005	8	14	20	0.00	0	0.00	0	0.00	0
2005	8	14	21	0.00	0	0.00	0	0.00	0
2005	8	14	22	0.00	0	0.00	0	0.00	0
2005	8	14	23	0.00	0	0.00	0	0.00	0
2005	8	15	0	0.00	0	0.00	0	0.00	0
2005	8	15	1	0.00	0	0.00	0	0.00	0
2005	8	15	2	0.00	0	0.00	0	0.00	0
2005	8	15	3	0.00	0	0.00	0	0.00	0
2005	8	15	4	0.00	0	0.00	0	0.00	0
2005	8	15	5	0.00	0	0.00	0	0.00	0
2005	8	15	6	0.00	0	0.00	0	0.00	0
2005	8	15	7	0.00	0	0.00	0	0.00	0
2005	8	15	8	0.00	0	0.00	0	0.00	0
2005	8	15	9	0.00	0	0.00	0	0.00	0
2005	8	15	10	0.00	0	0.00	0	0.00	0
2005	8	15	11	0.00	0	0.00	0	0.00	0

2005	8	15	12	0.00	0	0.00	0	0.00	0
2005	8	15	13	0.00	0	0.00	0	0.00	0
2005	8	15	14	0.00	0	0.00	0	0.00	0
2005	8	15	15	0.00	0	0.00	0	0.00	0
2005	8	15	16	0.00	0	0.00	0	0.00	0
2005	8	15	17	0.00	0	0.00	0	0.00	0
2005	8	15	18	0.00	0	0.00	0	0.00	0
2005	8	15	19	0.00	0	0.00	0	0.00	0
2005	8	15	20	0.00	0	0.00	0	0.00	0
2005	8	15	21	0.00	0	0.00	0	0.00	0
2005	8	15	22	0.00	0	0.00	0	0.00	0
2005	8	15	23	0.00	0	0.00	0	0.00	0
2005	8	16	0	0.00	0	0.00	0	0.00	0
2005	8	16	1	0.00	0	0.00	0	0.00	0
2005	8	16	2	0.00	0	0.00	0	0.00	0
2005	8	16	3	0.00	0	0.00	0	0.00	0
2005	8	16	4	0.00	0	0.00	0	0.00	0
2005	8	16	5	0.00	0	0.00	0	0.00	0
2005	8	16	6	0.00	0	0.00	0	0.00	0
2005	8	16	7	0.00	0	0.00	0	0.00	0
2005	8	16	8	0.00	0	0.00	0	0.00	0
2005	8	16	9	0.00	0	0.00	0	0.00	0
2005	8	16	10	0.00	0	0.00	0	0.00	0
2005	8	16	11	0.00	0	0.00	0	0.00	0
2005	8	16	12	0.00	0	0.00	0	0.00	0
2005	8	16	13	0.00	0	0.00	0	0.00	0
2005	8	16	14	0.00	0	0.00	0	0.00	0
2005	8	16	15	0.00	0	0.00	0	0.00	0
2005	8	16	16	0.00	0	0.00	0	0.00	0
2005	8	16	17	0.00	0	0.00	0	0.00	0
2005	8	16	18	0.00	0	0.00	0	0.00	0
2005	8	16	19	0.00	0	0.00	0	0.00	0
2005	8	16	20	0.00	0	0.00	0	0.00	0
2005	8	16	21	0.00	0	0.00	0	0.00	0
2005	8	16	22	0.00	0	0.00	0	0.00	0
2005	8	16	23	0.00	0	0.00	0	0.00	0
2005	8	17	0	0.00	0	0.00	0	0.00	0
2005	8	17	1	0.00	0	0.00	0	0.00	0
2005	8	17	2	0.00	0	0.00	0	0.00	0
2005	8	17	3	0.00	0	0.00	0	0.00	0
2005	8	17	4	0.00	0	0.00	0	0.00	0
2005	8	17	5	0.00	0	0.00	0	0.00	0
2005	8	17	6	0.00	0	0.00	0	0.00	0
2005	8	17	7	0.00	0	0.00	0	0.00	0
2005	8	17	8	0.00	0	0.00	0	0.00	0
2005	8	17	9	0.00	0	0.00	0	0.00	0
2005	8	17	10	0.00	0	0.00	0	0.00	0
2005	8	17	11	0.00	0	0.00	0	0.00	0
2005	8	17	12	0.00	0	0.00	0	0.00	0
2005	8	17	13	0.00	0	0.00	0	0.00	0
2005	8	17	14	0.00	0	0.00	0	0.00	0
2005	8	17	15	0.00	0	0.00	0	0.00	0
2005	8	17	16	0.00	0	0.00	0	0.00	0
2005	8	17	17	0.00	0	0.00	0	0.00	0

2005	6	17	18	0.00	0	0.00	0	0.00	0
2005	6	17	19	0.00	0	0.00	0	0.00	0
2005	6	17	20	0.00	0	0.00	0	0.00	0
2005	6	17	21	0.00	0	0.00	0	0.00	0
2005	6	17	22	0.00	0	0.00	0	0.00	0
2005	6	17	23	0.00	0	0.00	0	0.00	0
2005	6	18	0	0.00	0	0.00	0	0.00	0
2005	6	18	1	0.00	0	0.00	0	0.00	0
2005	6	18	2	0.00	0	0.00	0	0.00	0
2005	6	18	3	0.00	0	0.00	0	0.00	0
2005	6	18	4	0.00	0	0.00	0	0.00	0
2005	6	18	5	0.00	0	0.00	0	0.00	0
2005	6	18	6	0.00	0	0.00	0	0.00	0
2005	6	18	7	0.00	0	0.00	0	0.00	0
2005	6	18	8	0.00	0	0.00	0	0.00	0
2005	6	18	9	0.00	0	0.00	0	0.00	0
2005	6	18	10	0.00	0	0.00	0	0.00	0
2005	6	18	11	0.00	0	0.00	0	0.00	0
2005	6	18	12	0.00	0	0.00	0	0.00	0
2005	6	18	13	0.00	0	0.00	0	0.00	0
2005	6	18	14	0.00	0	0.00	0	0.00	0
2005	6	18	15	0.00	0	0.00	0	0.00	0
2005	6	18	16	0.00	0	0.00	0	0.00	0
2005	6	18	17	0.00	0	0.00	0	0.00	0
2005	6	18	18	0.00	0	0.00	0	0.00	0
2005	6	18	19	0.00	0	0.00	0	0.00	0
2005	6	18	20	0.00	0	0.00	0	0.00	0
2005	6	18	21	0.00	0	0.00	0	0.00	0
2005	6	18	22	0.00	0	0.00	0	0.00	0
2005	6	18	23	0.00	0	0.00	0	0.00	0
2005	6	19	0	0.00	0	0.00	0	0.00	0
2005	6	19	1	0.00	0	0.00	0	0.00	0
2005	6	19	2	0.00	0	0.00	0	0.00	0
2005	6	19	3	0.00	0	0.00	0	0.00	0
2005	6	19	4	0.00	0	0.00	0	0.00	0
2005	6	19	5	0.00	0	0.00	0	0.00	0
2005	6	19	6	0.00	0	0.00	0	0.00	0
2005	6	19	7	0.00	0	0.00	0	0.00	0
2005	6	19	8	0.00	0	0.00	0	0.00	0
2005	6	19	9	0.00	0	0.00	0	0.00	0
2005	6	19	10	0.00	0	0.00	0	0.00	0
2005	6	19	11	0.00	0	0.00	0	0.00	0
2005	6	19	12	0.00	0	0.00	0	0.00	0
2005	6	19	13	0.00	0	0.00	0	0.00	0
2005	6	19	14	0.00	0	0.00	0	0.00	0
2005	6	19	15	0.00	0	0.00	0	0.00	0
2005	6	19	16	0.00	0	0.00	0	0.00	0
2005	6	19	17	0.00	0	0.00	0	0.00	0
2005	6	19	18	0.00	0	0.00	0	0.00	0
2005	6	19	19	0.00	0	0.00	0	0.00	0
2005	6	19	20	0.00	0	0.00	0	0.00	0
2005	6	19	21	0.00	0	0.00	0	0.00	0
2005	6	19	22	0.00	0	0.00	0	0.00	0
2005	6	19	23	0.00	0	0.00	0	0.00	0

2005	6	20	0	0.00	0	0.00	0	0.00	0
2005	6	20	1	0.00	0	0.00	0	0.00	0
2005	6	20	2	0.00	0	0.00	0	0.00	0
2005	6	20	3	0.00	0	0.00	0	0.00	0
2005	6	20	4	0.00	0	0.00	0	0.00	0
2005	6	20	5	0.00	0	0.00	0	0.00	0
2005	6	20	6	0.00	0	0.00	0	0.00	0
2005	6	20	7	0.00	0	0.00	0	0.00	0
2005	6	20	8	0.00	0	0.00	0	0.00	0
2005	6	20	9	0.00	0	0.00	0	0.00	0
2005	6	20	10	0.00	0	0.00	0	0.00	0
2005	6	20	11	0.00	0	0.00	0	0.00	0
2005	6	20	12	0.00	0	0.00	0	0.00	0
2005	6	20	13	0.00	0	0.00	0	0.00	0
2005	6	20	14	0.00	0	0.00	0	0.00	0
2005	6	20	15	0.00	0	0.00	0	0.00	0
2005	6	20	16	0.00	0	0.00	0	0.00	0
2005	6	20	17	0.00	0	0.00	0	0.00	0
2005	6	20	18	0.00	0	0.00	0	0.00	0
2005	6	20	19	0.00	0	0.00	0	0.00	0
2005	6	20	20	0.00	0	0.00	0	0.00	0
2005	6	20	21	0.00	0	0.00	0	0.00	0
2005	6	20	22	0.00	0	0.00	0	0.00	0
2005	6	20	23	0.00	0	0.00	0	0.00	0
2005	6	21	0	0.00	0	0.00	0	0.00	0
2005	6	21	1	0.00	0	0.00	0	0.00	0
2005	6	21	2	0.00	0	0.00	0	0.00	0
2005	6	21	3	0.00	0	0.00	0	0.00	0
2005	6	21	4	0.00	0	0.00	0	0.00	0
2005	6	21	5	0.00	0	0.00	0	0.00	0
2005	6	21	6	0.00	0	0.00	0	0.00	0
2005	6	21	7	0.00	0	0.00	0	0.00	0
2005	6	21	8	0.00	0	0.00	0	0.00	0
2005	6	21	9	0.00	0	0.00	0	0.00	0
2005	6	21	10	0.00	0	0.00	0	0.00	0
2005	6	21	11	0.00	0	0.00	0	0.00	0
2005	6	21	12	0.00	0	0.00	0	0.00	0
2005	6	21	13	0.00	0	0.00	0	0.00	0
2005	6	21	14	0.00	0	0.00	0	0.00	0
2005	6	21	15	0.00	0	0.00	0	0.00	0
2005	6	21	16	0.00	0	0.00	0	0.00	0
2005	6	21	17	0.00	0	0.00	0	0.00	0
2005	6	21	18	0.00	0	0.00	0	0.00	0
2005	6	21	19	0.00	0	0.00	0	0.00	0
2005	6	21	20	0.00	0	0.00	0	0.00	0
2005	6	21	21	0.00	0	0.00	0	0.00	0
2005	6	21	22	0.00	0	0.00	0	0.00	0
2005	6	21	23	0.00	0	0.00	0	0.00	0
2005	6	22	0	0.00	0	0.00	0	0.00	0
2005	6	22	1	0.00	0	0.00	0	0.00	0
2005	6	22	2	0.00	0	0.00	0	0.00	0
2005	6	22	3	0.00	0	0.00	0	0.00	0
2005	6	22	4	0.00	0	0.00	0	0.00	0
2005	6	22	5	0.00	0	0.00	0	0.00	0

2005	6	22	6	0.00	0	0.00	0	0.00	0
2005	6	22	7	0.00	0	0.00	0	0.00	0
2005	6	22	8	0.00	0	0.00	0	0.00	0
2005	6	22	9	0.00	0	0.00	0	0.00	0
2005	6	22	10	0.00	0	0.00	0	0.00	0
2005	6	22	11	0.00	0	0.00	0	0.00	0
2005	6	22	12	0.00	0	0.00	0	0.00	0
2005	6	22	13	0.00	0	0.00	0	0.00	0
2005	6	22	14	0.00	0	0.00	0	0.00	0
2005	6	22	15	0.00	0	0.00	0	0.00	0
2005	6	22	16	0.00	0	0.00	0	0.00	0
2005	6	22	17	0.00	0	0.00	0	0.00	0
2005	6	22	18	0.00	0	0.00	0	0.00	0
2005	6	22	19	0.00	0	0.00	0	0.00	0
2005	6	22	20	0.00	0	0.00	0	0.00	0
2005	6	22	21	0.00	0	0.00	0	0.00	0
2005	6	22	22	0.00	0	0.00	0	0.00	0
2005	6	22	23	0.00	0	0.00	0	0.00	0
2005	6	23	0	0.00	0	0.00	0	0.00	0
2005	6	23	1	0.00	0	0.00	0	0.00	0
2005	6	23	2	0.00	0	0.00	0	0.00	0
2005	6	23	3	0.00	0	0.00	0	0.00	0
2005	6	23	4	0.00	0	0.00	0	0.00	0
2005	6	23	5	0.00	0	0.00	0	0.00	0
2005	6	23	6	0.00	0	0.00	0	0.00	0
2005	6	23	7	0.00	0	0.00	0	0.00	0
2005	6	23	8	0.00	0	0.00	0	0.00	0
2005	6	23	9	0.00	0	0.00	0	0.00	0
2005	6	23	10	0.00	0	0.00	0	0.00	0
2005	6	23	11	0.00	0	0.00	0	0.00	0
2005	6	23	12	0.00	0	0.00	0	0.00	0
2005	6	23	13	0.00	0	0.00	0	0.00	0
2005	6	23	14	0.00	0	0.00	0	0.00	0
2005	6	23	15	0.00	0	0.00	0	0.00	0
2005	6	23	16	0.00	0	0.00	0	0.00	0
2005	6	23	17	0.00	0	0.00	0	0.00	0
2005	6	23	18	0.00	0	0.00	0	0.00	0
2005	6	23	19	0.00	0	0.00	0	0.00	0
2005	6	23	20	0.00	0	0.00	0	0.00	0
2005	6	23	21	0.00	0	0.00	0	0.00	0
2005	6	23	22	0.00	0	0.00	0	0.00	0
2005	6	23	23	0.00	0	0.00	0	0.00	0
2005	6	24	0	0.00	0	0.00	0	0.00	0
2005	6	24	1	0.00	0	0.00	0	0.00	0
2005	6	24	2	0.00	0	0.00	0	0.00	0
2005	6	24	3	0.00	0	0.00	0	0.00	0
2005	6	24	4	0.00	0	0.00	0	0.00	0
2005	6	24	5	0.00	0	0.00	0	0.00	0
2005	6	24	6	0.00	0	0.00	0	0.00	0
2005	6	24	7	0.00	0	0.00	0	0.00	0
2005	6	24	8	0.00	0	0.00	0	0.00	0
2005	6	24	9	0.00	0	0.00	0	0.00	0
2005	6	24	10	0.00	0	0.00	0	0.00	0
2005	6	24	11	0.00	0	0.00	0	0.00	0

2005	8	24	12	0.00	0	0.00	0	0.00	0
2005	8	24	13	0.00	0	0.00	0	0.00	0
2005	8	24	14	0.00	0	0.00	0	0.00	0
2005	8	24	15	0.00	0	0.00	0	0.00	0
2005	8	24	16	0.00	0	0.00	0	0.00	0
2005	8	24	17	0.00	0	0.00	0	0.00	0
2005	8	24	18	0.00	0	0.00	0	0.00	0
2005	8	24	19	0.00	0	0.00	0	0.00	0
2005	8	24	20	0.00	0	0.00	0	0.00	0
2005	8	24	21	0.00	0	0.00	0	0.00	0
2005	8	24	22	0.00	0	0.00	0	0.00	0
2005	8	24	23	0.00	0	0.00	0	0.00	0
2005	8	25	0	0.00	0	0.00	0	0.00	0
2005	8	25	1	0.00	0	0.00	0	0.00	0
2005	8	25	2	0.00	0	0.00	0	0.00	0
2005	8	25	3	0.00	0	0.00	0	0.00	0
2005	8	25	4	0.00	0	0.00	0	0.00	0
2005	8	25	5	0.00	0	0.00	0	0.00	0
2005	8	25	6	0.00	0	0.00	0	0.00	0
2005	8	25	7	0.00	0	0.00	0	0.00	0
2005	8	25	8	0.00	0	0.00	0	0.00	0
2005	8	25	9	0.00	0	0.00	0	0.00	0
2005	8	25	10	0.00	0	0.00	0	0.00	0
2005	8	25	11	0.00	0	0.00	0	0.00	0
2005	8	25	12	0.00	0	0.00	0	0.00	0
2005	8	25	13	0.00	0	0.00	0	0.00	0
2005	8	25	14	0.00	0	0.00	0	0.00	0
2005	8	25	15	0.00	0	0.00	0	0.00	0
2005	8	25	16	0.00	0	0.00	0	0.00	0
2005	8	25	17	0.00	0	0.00	0	0.00	0
2005	8	25	18	0.00	0	0.00	0	0.00	0
2005	8	25	19	0.00	0	0.00	0	0.00	0
2005	8	25	20	0.00	0	0.00	0	0.00	0
2005	8	25	21	0.00	0	0.00	0	0.00	0
2005	8	25	22	0.00	0	0.00	0	0.00	0
2005	8	25	23	0.00	0	0.00	0	0.00	0
2005	8	26	0	0.00	0	0.00	0	0.00	0
2005	8	26	1	0.00	0	0.00	0	0.00	0
2005	8	26	2	0.00	0	0.00	0	0.00	0
2005	8	26	3	0.00	0	0.00	0	0.00	0
2005	8	26	4	0.00	0	0.00	0	0.00	0
2005	8	26	5	0.00	0	0.00	0	0.00	0
2005	8	26	6	0.00	0	0.00	0	0.00	0
2005	8	26	7	0.00	0	0.00	0	0.00	0
2005	8	26	8	0.00	0	0.00	0	0.00	0
2005	8	26	9	0.00	0	0.00	0	0.00	0
2005	8	26	10	0.00	0	0.00	0	0.00	0
2005	8	26	11	0.00	0	0.00	0	0.00	0
2005	8	26	12	0.00	0	0.00	0	0.00	0
2005	8	26	13	0.00	0	0.00	0	0.00	0
2005	8	26	14	0.00	0	0.00	0	0.00	0
2005	8	26	15	0.00	0	0.00	0	0.00	0
2005	8	26	16	0.00	0	0.00	0	0.00	0
2005	8	26	17	0.00	0	0.00	0	0.00	0

2005	8	26	18	0.00	0	0.00	0	0.00	0
2005	8	26	19	0.00	0	0.00	0	0.00	0
2005	8	26	20	0.00	0	0.00	0	0.00	0
2005	8	26	21	0.00	0	0.00	0	0.00	0
2005	8	26	22	0.00	0	0.00	0	0.00	0
2005	8	26	23	0.00	0	0.00	0	0.00	0
2005	8	27	0	0.00	0	0.00	0	0.00	0
2005	8	27	1	0.00	0	0.00	0	0.00	0
2005	8	27	2	0.00	0	0.00	0	0.00	0
2005	8	27	3	0.00	0	0.00	0	0.00	0
2005	8	27	4	0.00	0	0.00	0	0.00	0
2005	8	27	5	0.00	0	0.00	0	0.00	0
2005	8	27	6	0.00	0	0.00	0	0.00	0
2005	8	27	7	0.00	0	0.00	0	0.00	0
2005	8	27	8	0.00	0	0.00	0	0.00	0
2005	8	27	9	0.00	0	0.00	0	0.00	0
2005	8	27	10	0.00	0	0.00	0	0.00	0
2005	8	27	11	0.00	0	0.00	0	0.00	0
2005	8	27	12	0.00	0	0.00	0	0.00	0
2005	8	27	13	0.00	0	0.00	0	0.00	0
2005	8	27	14	0.00	0	0.00	0	0.00	0
2005	8	27	15	0.00	0	0.00	0	0.00	0
2005	8	27	16	0.00	0	0.00	0	0.00	0
2005	8	27	17	0.00	0	0.00	0	0.00	0
2005	8	27	18	0.00	0	0.00	0	0.00	0
2005	8	27	19	0.00	0	0.00	0	0.00	0
2005	8	27	20	0.00	0	0.00	0	0.00	0
2005	8	27	21	0.00	0	0.00	0	0.00	0
2005	8	27	22	0.00	0	0.00	0	0.00	0
2005	8	27	23	0.00	0	0.00	0	0.00	0
2005	8	28	0	0.00	0	0.00	0	0.00	0
2005	8	28	1	0.00	0	0.00	0	0.00	0
2005	8	28	2	0.00	0	0.00	0	0.00	0
2005	8	28	3	0.00	0	0.00	0	0.00	0
2005	8	28	4	0.00	0	0.00	0	0.00	0
2005	8	28	5	0.00	0	0.00	0	0.00	0
2005	8	28	6	0.00	0	0.00	0	0.00	0
2005	8	28	7	0.00	0	0.00	0	0.00	0
2005	8	28	8	0.00	0	0.00	0	0.00	0
2005	8	28	9	0.00	0	0.00	0	0.00	0
2005	8	28	10	0.00	0	0.00	0	0.00	0
2005	8	28	11	0.00	0	0.00	0	0.00	0
2005	8	28	12	0.00	0	0.00	0	0.00	0
2005	8	28	13	0.00	0	0.00	0	0.00	0
2005	8	28	14	0.00	0	0.00	0	0.00	0
2005	8	28	15	0.00	0	0.00	0	0.00	0
2005	8	28	16	0.00	0	0.00	0	0.00	0
2005	8	28	17	0.00	0	0.00	0	0.00	0
2005	8	28	18	0.00	0	0.00	0	0.00	0
2005	8	28	19	0.00	0	0.00	0	0.00	0
2005	8	28	20	0.00	0	0.00	0	0.00	0
2005	8	28	21	0.00	0	0.00	0	0.00	0
2005	8	28	22	0.00	0	0.00	0	0.00	0
2005	8	28	23	0.00	0	0.00	0	0.00	0

2005	8	29	0	0.00	0	0.00	0	0.00	0
2005	8	29	1	0.00	0	0.00	0	0.00	0
2005	8	29	2	0.00	0	0.00	0	0.00	0
2005	8	29	3	0.00	0	0.00	0	0.00	0
2005	8	29	4	0.00	0	0.00	0	0.00	0
2005	8	29	5	0.00	0	0.00	0	0.00	0
2005	8	29	6	0.00	0	0.00	0	0.00	0
2005	8	29	7	0.00	0	0.00	0	0.00	0
2005	8	29	8	0.00	0	0.00	0	0.00	0
2005	8	29	9	0.00	0	0.00	0	0.00	0
2005	8	29	10	0.00	0	0.00	0	0.00	0
2005	8	29	11	0.00	0	0.00	0	0.00	0
2005	8	29	12	0.00	0	0.00	0	0.00	0
2005	8	29	13	0.00	0	0.00	0	0.00	0
2005	8	29	14	0.00	0	0.00	0	0.00	0
2005	8	29	15	0.00	0	0.00	0	0.00	0
2005	8	29	16	0.00	0	0.00	0	0.00	0
2005	8	29	17	0.00	0	0.00	0	0.00	0
2005	8	29	18	0.00	0	0.00	0	0.00	0
2005	8	29	19	0.00	0	0.00	0	0.00	0
2005	8	29	20	0.00	0	0.00	0	0.00	0
2005	8	29	21	0.00	0	0.00	0	0.00	0
2005	8	29	22	0.00	0	0.00	0	0.00	0
2005	8	29	23	0.00	0	0.00	0	0.00	0
2005	8	30	0	0.00	0	0.00	0	0.00	0
2005	8	30	1	0.00	0	0.00	0	0.00	0
2005	8	30	2	0.00	0	0.00	0	0.00	0
2005	8	30	3	0.00	0	0.00	0	0.00	0
2005	8	30	4	0.00	0	0.00	0	0.00	0
2005	8	30	5	0.00	0	0.00	0	0.00	0
2005	8	30	6	0.00	0	0.00	0	0.00	0
2005	8	30	7	0.00	0	0.00	0	0.00	0
2005	8	30	8	0.00	0	0.00	0	0.00	0
2005	8	30	9	0.00	0	0.00	0	0.00	0
2005	8	30	10	0.00	0	0.00	0	0.00	0
2005	8	30	11	0.00	0	0.00	0	0.00	0
2005	8	30	12	0.00	0	0.00	0	0.00	0
2005	8	30	13	0.00	0	0.00	0	0.00	0
2005	8	30	14	0.00	0	0.00	0	0.00	0
2005	8	30	15	0.00	0	0.00	0	0.00	0
2005	8	30	16	0.00	0	0.00	0	0.00	0
2005	8	30	17	0.00	0	0.00	0	0.00	0
2005	8	30	18	0.00	0	0.00	0	0.00	0
2005	8	30	19	0.00	0	0.00	0	0.00	0
2005	8	30	20	0.00	0	0.00	0	0.00	0
2005	8	30	21	0.00	0	0.00	0	0.00	0
2005	8	30	22	0.00	0	0.00	0	0.00	0
2005	8	30	23	0.00	0	0.00	0	0.00	0
2005	8	31	0	0.00	0	0.00	0	0.00	0
2005	8	31	1	0.00	0	0.00	0	0.00	0
2005	8	31	2	0.00	0	0.00	0	0.00	0
2005	8	31	3	0.00	0	0.00	0	0.00	0
2005	8	31	4	0.00	0	0.00	0	0.00	0
2005	8	31	5	0.00	0	0.00	0	0.00	0

2005	8	31	6	0.00	0	0.00	0	0.00	0
2005	8	31	7	0.00	0	0.00	0	0.00	0
2005	8	31	8	0.00	0	0.00	0	0.00	0
2005	8	31	9	0.00	0	0.00	0	0.00	0
2005	8	31	10	0.00	0	0.00	0	0.00	0
2005	8	31	11	0.00	0	0.00	0	0.00	0
2005	8	31	12	0.00	0	0.00	0	0.00	0
2005	8	31	13	0.00	0	0.00	0	0.00	0
2005	8	31	14	0.00	0	0.00	0	0.00	0
2005	8	31	15	0.00	0	0.00	0	0.00	0
2005	8	31	16	0.00	0	0.00	0	0.00	0
2005	8	31	17	0.00	0	0.00	0	0.00	0
2005	8	31	18	0.00	0	0.00	0	0.00	0
2005	8	31	19	0.00	0	0.00	0	0.00	0
2005	8	31	20	0.00	0	0.00	0	0.00	0
2005	8	31	21	0.00	0	0.00	0	0.00	0
2005	8	31	22	0.00	0	0.00	0	0.00	0
2005	8	31	23	0.00	0	0.00	0	0.00	0
2005	9	1	0	0.00	0	0.00	0	0.00	0
2005	9	1	1	0.00	0	0.00	0	0.00	0
2005	9	1	2	0.00	0	0.00	0	0.00	0
2005	9	1	3	0.00	0	0.00	0	0.00	0
2005	9	1	4	0.00	0	0.00	0	0.00	0
2005	9	1	5	0.00	0	0.00	0	0.00	0
2005	9	1	6	0.00	0	0.00	0	0.00	0
2005	9	1	7	0.00	0	0.00	0	0.00	0
2005	9	1	8	0.00	0	0.00	0	0.00	0
2005	9	1	9	0.00	0	0.00	0	0.00	0
2005	9	1	10	0.00	0	0.00	0	0.00	0
2005	9	1	11	0.00	0	0.00	0	0.00	0
2005	9	1	12	0.00	0	0.00	0	0.00	0
2005	9	1	13	0.00	0	0.00	0	0.00	0
2005	9	1	14	0.00	0	0.00	0	0.00	0
2005	9	1	15	0.00	0	0.00	0	0.00	0
2005	9	1	16	0.00	0	0.00	0	0.00	0
2005	9	1	17	0.00	0	0.00	0	0.00	0
2005	9	1	18	0.00	0	0.00	0	0.00	0
2005	9	1	19	0.00	0	0.00	0	0.00	0
2005	9	1	20	0.00	0	0.00	0	0.00	0
2005	9	1	21	0.00	0	0.00	0	0.00	0
2005	9	1	22	0.00	0	0.00	0	0.00	0
2005	9	1	23	0.00	0	0.00	0	0.00	0
2005	9	2	0	0.00	0	0.00	0	0.00	0
2005	9	2	1	0.00	0	0.00	0	0.00	0
2005	9	2	2	0.00	0	0.00	0	0.00	0
2005	9	2	3	0.00	0	0.00	0	0.00	0
2005	9	2	4	0.00	0	0.00	0	0.00	0
2005	9	2	5	0.00	0	0.00	0	0.00	0
2005	9	2	6	0.00	0	0.00	0	0.00	0
2005	9	2	7	0.00	0	0.00	0	0.00	0
2005	9	2	8	0.00	0	0.00	0	0.00	0
2005	9	2	9	0.00	0	0.00	0	0.00	0
2005	9	2	10	0.00	0	0.00	0	0.00	0
2005	9	2	11	0.00	0	0.00	0	0.00	0

2005	9	2	12	0.00	0	0.00	0	0.00	0
2005	9	2	13	0.00	0	0.00	0	0.00	0
2005	9	2	14	0.00	0	0.00	0	0.00	0
2005	9	2	15	0.00	0	0.00	0	0.00	0
2005	9	2	16	0.00	0	0.00	0	0.00	0
2005	9	2	17	0.00	0	0.00	0	0.00	0
2005	9	2	18	0.00	0	0.00	0	0.00	0
2005	9	2	19	0.00	0	0.00	0	0.00	0
2005	9	2	20	0.00	0	0.00	0	0.00	0
2005	9	2	21	0.00	0	0.00	0	0.00	0
2005	9	2	22	0.00	0	0.00	0	0.00	0
2005	9	2	23	0.00	0	0.00	0	0.00	0
2005	9	3	0	0.00	0	0.00	0	0.00	0
2005	9	3	1	0.00	0	0.00	0	0.00	0
2005	9	3	2	0.00	0	0.00	0	0.00	0
2005	9	3	3	0.00	0	0.00	0	0.00	0
2005	9	3	4	0.00	0	0.00	0	0.00	0
2005	9	3	5	0.00	0	0.00	0	0.00	0
2005	9	3	6	0.00	0	0.00	0	0.00	0
2005	9	3	7	0.00	0	0.00	0	0.00	0
2005	9	3	8	0.00	0	0.00	0	0.00	0
2005	9	3	9	0.00	0	0.00	0	0.00	0
2005	9	3	10	0.00	0	0.00	0	0.00	0
2005	9	3	11	0.00	0	0.00	0	0.00	0
2005	9	3	12	0.00	0	0.00	0	0.00	0
2005	9	3	13	0.00	0	0.00	0	0.00	0
2005	9	3	14	0.00	0	0.00	0	0.00	0
2005	9	3	15	0.00	0	0.00	0	0.00	0
2005	9	3	16	0.00	0	0.00	0	0.00	0
2005	9	3	17	0.00	0	0.00	0	0.00	0
2005	9	3	18	0.00	0	0.00	0	0.00	0
2005	9	3	19	0.00	0	0.00	0	0.00	0
2005	9	3	20	0.00	0	0.00	0	0.00	0
2005	9	3	21	0.00	0	0.00	0	0.00	0
2005	9	3	22	0.00	0	0.00	0	0.00	0
2005	9	3	23	0.00	0	0.00	0	0.00	0
2005	9	4	0	0.00	0	0.00	0	0.00	0
2005	9	4	1	0.00	0	0.00	0	0.00	0
2005	9	4	2	0.00	0	0.00	0	0.00	0
2005	9	4	3	0.00	0	0.00	0	0.00	0
2005	9	4	4	0.00	0	0.00	0	0.00	0
2005	9	4	5	0.00	0	0.00	0	0.00	0
2005	9	4	6	0.00	0	0.00	0	0.00	0
2005	9	4	7	0.00	0	0.00	0	0.00	0
2005	9	4	8	0.00	0	0.00	0	0.00	0
2005	9	4	9	0.00	0	0.00	0	0.00	0
2005	9	4	10	0.00	0	0.00	0	0.00	0
2005	9	4	11	0.00	0	0.00	0	0.00	0
2005	9	4	12	0.00	0	0.00	0	0.00	0
2005	9	4	13	0.00	0	0.00	0	0.00	0
2005	9	4	14	0.00	0	0.00	0	0.00	0
2005	9	4	15	0.00	0	0.00	0	0.00	0
2005	9	4	16	0.00	0	0.00	0	0.00	0
2005	9	4	17	0.00	0	0.00	0	0.00	0

2005	9	4	18	0.00	0	0.00	0	0.00	0
2005	9	4	19	0.00	0	0.00	0	0.00	0
2005	9	4	20	0.00	0	0.00	0	0.00	0
2005	9	4	21	0.00	0	0.00	0	0.00	0
2005	9	4	22	0.00	0	0.00	0	0.00	0
2005	9	4	23	0.00	0	0.00	0	0.00	0
2005	9	5	0	0.00	0	0.00	0	0.00	0
2005	9	5	1	0.00	0	0.00	0	0.00	0
2005	9	5	2	0.00	0	0.00	0	0.00	0
2005	9	5	3	0.00	0	0.00	0	0.00	0
2005	9	5	4	0.00	0	0.00	0	0.00	0
2005	9	5	5	0.00	0	0.00	0	0.00	0
2005	9	5	6	0.00	0	0.00	0	0.00	0
2005	9	5	7	0.00	0	0.00	0	0.00	0
2005	9	5	8	0.00	0	0.00	0	0.00	0
2005	9	5	9	0.00	0	0.00	0	0.00	0
2005	9	5	10	0.00	0	0.00	0	0.00	0
2005	9	5	11	0.00	0	0.00	0	0.00	0
2005	9	5	12	0.00	0	0.00	0	0.00	0
2005	9	5	13	0.00	0	0.00	0	0.00	0
2005	9	5	14	0.00	0	0.00	0	0.00	0
2005	9	5	15	0.00	0	0.00	0	0.00	0
2005	9	5	16	0.00	0	0.00	0	0.00	0
2005	9	5	17	0.00	0	0.00	0	0.00	0
2005	9	5	18	0.00	0	0.00	0	0.00	0
2005	9	5	19	0.00	0	0.00	0	0.00	0
2005	9	5	20	0.00	0	0.00	0	0.00	0
2005	9	5	21	0.00	0	0.00	0	0.00	0
2005	9	5	22	0.00	0	0.00	0	0.00	0
2005	9	5	23	0.00	0	0.00	0	0.00	0
2005	9	6	0	0.00	0	0.00	0	0.00	0
2005	9	6	1	0.00	0	0.00	0	0.00	0
2005	9	6	2	0.00	0	0.00	0	0.00	0
2005	9	6	3	0.00	0	0.00	0	0.00	0
2005	9	6	4	0.00	0	0.00	0	0.00	0
2005	9	6	5	0.00	0	0.00	0	0.00	0
2005	9	6	6	0.00	0	0.00	0	0.00	0
2005	9	6	7	0.00	0	0.00	0	0.00	0
2005	9	6	8	0.00	0	0.00	0	0.00	0
2005	9	6	9	0.00	0	0.00	0	0.00	0
2005	9	6	10	0.00	0	0.00	0	0.00	0
2005	9	6	11	0.00	0	0.00	0	0.00	0
2005	9	6	12	0.00	0	0.00	0	0.00	0
2005	9	6	13	0.00	0	0.00	0	0.00	0
2005	9	6	14	0.00	0	0.00	0	0.00	0
2005	9	6	15	0.00	0	0.00	0	0.00	0
2005	9	6	16	0.00	0	0.00	0	0.00	0
2005	9	6	17	0.00	0	0.00	0	0.00	0
2005	9	6	18	0.00	0	0.00	0	0.00	0
2005	9	6	19	0.00	0	0.00	0	0.00	0
2005	9	6	20	0.00	0	0.00	0	0.00	0
2005	9	6	21	0.00	0	0.00	0	0.00	0
2005	9	6	22	0.00	0	0.00	0	0.00	0
2005	9	6	23	0.00	0	0.00	0	0.00	0

2005	9	7	0	0.00	0	0.00	0	0.00	0
2005	9	7	1	0.00	0	0.00	0	0.00	0
2005	9	7	2	0.00	0	0.00	0	0.00	0
2005	9	7	3	0.00	0	0.00	0	0.00	0
2005	9	7	4	0.00	0	0.00	0	0.00	0
2005	9	7	5	0.00	0	0.00	0	0.00	0
2005	9	7	6	0.00	0	0.00	0	0.00	0
2005	9	7	7	0.00	0	0.00	0	0.00	0
2005	9	7	8	0.00	0	0.00	0	0.00	0
2005	9	7	9	0.00	0	0.00	0	0.00	0
2005	9	7	10	0.00	0	0.00	0	0.00	0
2005	9	7	11	0.00	0	0.00	0	0.00	0
2006	3	1	8	215.70	10.7	205.10	7.6	65.73	67.3
2006	3	1	9	229.10	14.9	225.60	11.9	70.54	72.3
2006	4	3	7	0.00	0	0.00	0	0.00	0
2006	7	4	23	40.70	0.6	343.70	0.6	74.69	75.10
2006	7	18	12	24.70	0.6	10.00	0.6	0.00	0.00
2006	7	18	13	24.40	0.6	10.10	0.6	0.00	0.00
2006	7	18	14	24.00	0.6	9.90	0.6	0.00	0.00
2006	7	18	15	23.80	0.6	10.10	0.6	0.00	0.00
2006	7	18	16	23.40	0.6	9.80	0.6	0.00	0.00
2006	9	1	15	22.90	1.8	36.80	1.8	94.47	95.80
2006	9	7	9	119.80	0.6	6.00	0.6	0.00	0.00
2006	9	7	10	94.00	0.6	89.20	0.6	0.00	0.00
2006	9	11	9	27.70	0.6	40.90	0.6	0.02	0.00
2006	9	11	10	349.70	1.4	346.40	1.4	-0.23	0.00

Attachment 4
Joint Frequency Distribution Tables

CODE TO DETERMINE CPN JOINT FREQUENCY DISTRIBUTIONCODE

Run Date 12/20/2007 TIME 13:49

Input File = CPNPP.IN
Output File = CPNPP.OUT

SUMMARY RESULTS FOR 52584. HOURS OF DATA
HOURS OF DATA IN EACH STABILITY CLASS

YEAR	CLASS A	CLASS B	CLASS C	CLASS D	CLASS E	CLASS F	CLASS G
CP01	657	576	660	4088	2023	490	261

TOTAL HOURS OF MISSING DATA 2440

STABILITY CLASS A HRS

DIR	0.5	0.75	1	1.25	1.5	2.00	3	4.0	5.0	6	8	16	TOTAL	AVE SPEED
N	.175	.000	.175	.175	.175	.524	1.398	4.892	5.940	5.066	11.355	3.843	33.716	5.741
NNE	.000	.349	.175	.349	.524	.699	2.271	3.494	5.066	5.940	3.843	.699	23.409	4.626
NE	.000	.175	.524	.000	1.398	1.223	7.512	7.512	6.638	2.795	1.572	.349	29.698	3.679
ENE	.000	.000	.000	.349	1.223	1.572	5.940	8.211	2.970	1.747	1.048	.000	23.060	3.415
E	.000	.000	.000	.175	.699	2.795	6.988	6.464	2.620	.175	.349	.000	20.265	3.023
ESE	.000	.000	.524	.524	.873	1.048	14.150	20.090	8.910	4.018	1.572	.000	51.710	3.519
SE	.000	.175	.175	.000	.349	1.048	7.337	16.422	22.885	15.199	6.988	1.398	71.975	4.496
SSE	.000	.000	.349	.175	.699	1.398	8.385	15.897	25.855	26.379	26.205	8.036	113.378	5.227
S	.000	.175	.000	.175	.175	1.048	5.590	15.199	20.440	28.126	38.608	18.867	128.402	5.840
SSW	.000	.000	.349	.000	.349	.175	4.717	7.163	10.831	11.355	18.518	5.416	58.873	5.512
SW	.000	.000	.000	.000	.000	.524	3.319	6.638	4.717	1.922	2.620	1.048	20.789	4.398
WSW	.000	.000	.175	.000	.175	.349	.873	1.398	1.747	1.398	1.048	1.572	8.735	5.249
W	.000	.000	.175	.000	.000	.175	.349	.524	.349	.175	.349	.524	2.620	4.861
WNW	.000	.000	.175	.000	.000	.524	.175	.175	.524	.175	1.572	.699	4.018	5.823
NW	.000	.000	.175	.000	.000	.000	.524	1.398	.873	1.922	3.843	6.813	15.548	7.443
NNW	.000	.000	.000	.000	.175	.000	2.795	3.494	5.940	6.289	13.626	18.168	50.487	7.155
CALM	.87												.87	.38
TOTAL	1.05	.87	2.97	1.92	6.81	13.10	72.32	118.97	126.31	112.68	133.12	67.43	657.56	

HOURS OF CALM .87

STABILITY CLASS B HRS

DIR	0.5	0.75	1	1.25	1.5	2.00	3	4.0	5.0	6	8	16	TOTAL	AVE SPEED
N	.000	.175	.524	.000	.349	.699	3.145	4.367	5.241	4.892	10.307	5.765	35.463	5.741
NNE	.000	.175	.000	.349	.524	2.620	5.241	5.416	4.018	4.892	4.717	3.843	31.795	4.799
NE	.000	.000	.349	.699	1.398	4.717	8.735	6.114	3.145	2.271	1.747	1.572	30.747	3.458
ENE	.000	.175	.000	.873	1.223	4.193	9.434	4.193	1.922	1.572	1.048	.000	24.632	2.952
E	.000	.000	.349	.699	1.048	1.048	6.114	3.843	1.747	.524	.000	.000	15.373	2.823
ESE	.000	.175	.175	.524	.000	2.271	10.482	8.036	2.970	1.048	.349	.000	26.030	3.110
SE	.000	.000	.000	.000	.524	1.398	11.006	7.861	10.132	6.114	3.145	.699	40.879	4.018
SSE	.000	.000	.349	.349	.699	1.572	8.385	10.831	10.132	13.976	20.265	7.687	74.246	5.303
S	.000	.175	.349	.349	.524	1.048	6.988	9.608	17.120	22.187	41.578	21.837	121.764	6.125
SSW	.000	.000	.000	.175	.175	1.398	3.843	7.512	7.337	7.337	9.259	4.717	41.753	5.246
SW	.000	.000	.175	.699	.524	1.048	6.464	9.259	6.638	6.988	4.018	.873	36.686	4.259
WSW	.000	.000	.000	.000	.000	.873	2.271	4.717	2.446	1.223	2.970	1.572	16.072	4.742
W	.000	.000	.175	.000	.175	.349	.873	.000	1.223	.000	.349	.000	3.145	3.522
WNW	.000	.000	.000	.000	.000	.349	.000	.524	.699	.699	1.223	.699	4.193	5.925
NW	.000	.349	.000	.000	.175	.000	.524	1.747	2.620	3.145	6.114	4.892	19.566	6.401
NNW	.000	.000	.000	.175	.175	1.223	5.416	6.114	6.813	6.988	10.132	16.596	53.632	6.405
CALM	.70												.70	.35
TOTAL	.70	1.22	2.45	4.89	7.51	24.81	88.92	90.14	84.20	83.85	117.22	70.75	576.67	

HOURS OF CALM .70

STABILITY CLASS C HRS

DIR	0.5	0.75	1	1.25	1.5	2.00	3	4.0	5.0	6	8	16	TOTAL	AVE SPEED
N	.000	.175	.699	.873	1.048	1.572	5.416	6.289	7.163	7.687	12.403	10.132	53.457	5.531
NNE	.000	.175	.524	1.223	1.223	4.018	3.843	5.066	4.542	4.717	4.892	4.367	34.590	4.575
NE	.000	.175	.699	1.747	3.494	4.717	9.608	3.843	1.922	2.970	2.970	.349	32.494	3.128
ENE	.175	.175	1.223	1.223	3.319	6.289	8.036	4.018	4.367	1.747	.873	.175	31.620	2.806
E	.000	.524	.699	1.223	1.048	4.367	6.638	3.494	1.223	.349	.349	.000	19.915	2.480
ESE	.175	.349	.349	.175	.524	4.367	14.500	6.464	2.271	1.398	.524	.000	31.096	2.875
SE	.000	.524	.000	.175	.873	1.398	8.910	8.211	9.608	8.385	4.018	.349	42.451	4.114
SSE	.000	.175	.524	.349	.349	4.367	7.687	12.054	9.783	16.946	20.964	8.385	81.583	5.250
S	.000	.175	.000	.873	.873	1.048	6.114	8.910	15.548	24.283	43.849	25.506	127.179	6.226
SSW	.000	.349	.524	.524	.873	2.271	5.416	2.795	7.163	7.687	12.403	4.717	44.722	5.233
SW	.000	.000	.349	.349	.175	1.398	5.940	5.416	4.542	4.717	5.241	1.747	29.873	4.597
WSW	.000	.000	.349	.349	.175	2.096	2.970	4.542	4.542	3.145	4.367	1.922	24.458	4.647
W	.000	.349	.349	.000	.699	.524	1.398	1.223	2.446	1.747	1.048	.699	10.482	4.272
WNW	.175	.349	.000	.000	.000	.524	1.398	1.048	1.223	1.048	1.398	2.271	9.434	5.422
NW	.000	.000	.349	.524	.175	.524	1.572	3.145	3.843	3.494	6.114	9.608	29.349	6.397
NNW	.000	.175	1.048	.175	.699	2.446	8.211	6.289	4.367	5.241	11.006	16.771	56.427	6.016
CALM	1.57												1.57	.36
TOTAL	2.10	3.67	7.69	9.78	15.55	41.93	97.66	82.81	84.55	95.56	132.42	87.00	660.70	

HOURS OF CALM 1.57

STABILITY CLASS D HRS

DIR	0.5	0.75	1	1.25	1.5	2.00	3	4.0	5.0	6	8	16	TOTAL	AVE SPEED
N	.000	.873	1.223	1.223	3.494	9.783	42.626	73.897	86.126	83.854	103.071	51.885	458.055	5.293
NNE	.000	1.223	2.620	2.620	2.620	10.482	35.463	50.837	57.301	45.596	42.626	13.277	264.666	4.584
NE	.349	1.048	2.620	4.193	5.416	9.434	26.379	36.337	42.102	29.873	16.247	2.271	176.269	3.998
ENE	.175	1.398	3.319	5.066	5.241	11.181	28.301	38.608	35.289	20.090	7.337	.349	156.354	3.605
E	.000	1.572	2.446	3.669	6.988	15.373	58.873	53.807	18.693	6.464	1.922	.000	169.805	2.990
ESE	.175	1.223	3.669	2.795	9.434	24.108	78.439	53.632	23.759	10.657	2.795	.349	211.034	2.986
SE	.000	.873	2.620	2.620	5.416	14.849	73.547	110.408	103.246	76.168	35.289	3.145	428.182	4.104
SSE	.000	.699	2.620	2.446	3.145	11.879	41.753	88.397	149.715	161.944	197.757	55.728	716.083	5.394
S	.175	1.048	1.572	2.096	2.795	8.560	30.397	64.813	114.601	143.601	195.835	76.867	642.360	5.745
SSW	.000	.524	2.096	2.271	1.398	7.512	25.331	27.427	27.427	23.759	23.409	6.988	148.143	4.421
SW	.175	.873	2.096	1.572	2.620	6.988	14.325	11.879	9.783	7.861	8.910	4.717	71.800	4.004
WSW	.175	1.048	1.922	1.572	2.271	6.813	13.801	7.337	4.367	3.843	7.163	1.572	51.885	3.540
W	.000	.699	2.096	.175	1.398	1.398	7.512	4.717	4.367	2.795	3.319	1.922	30.397	3.827
WNW	.000	.524	.873	1.048	1.922	2.446	11.355	14.150	12.753	12.054	17.120	8.385	82.632	4.940
NW	.175	1.048	1.223	.524	1.223	4.193	15.548	16.771	19.391	24.458	41.753	27.078	153.384	5.711
NNW	.175	.873	1.747	1.223	2.446	7.512	19.741	26.554	37.036	50.662	93.812	76.168	317.948	6.192
CALM	9.96												9.96	.33
TOTAL	11.53	15.55	34.76	35.11	57.82	152.51	523.39	679.57	745.96	703.68	798.36	330.70	4088.95	

HOURS OF CALM 9.96

STABILITY CLASS E HRS

DIR	0.5	0.75	1	1.25	1.5	2.00	3	4.0	5.0	6	8	16	TOTAL	AVE SPEED
N	.349	1.398	1.398	2.096	1.922	5.590	12.403	15.373	13.102	7.861	2.271	.175	63.939	3.423
NNE	.000	.873	.699	1.223	1.922	5.416	12.928	20.440	13.452	4.717	.524	.175	62.367	3.359
NE	.000	.524	.524	1.398	1.398	3.494	6.813	4.367	3.319	.524	.349	.000	22.711	2.755
ENE	.175	1.048	1.048	.873	1.048	3.494	5.241	2.620	1.747	.349	.000	.000	17.644	2.361
E	.000	1.398	2.446	1.747	3.145	10.657	25.506	11.530	1.747	.349	.000	.000	58.523	2.385
ESE	.349	.699	2.795	3.494	8.735	22.361	64.987	26.554	3.843	.175	.175	.000	134.167	2.454
SE	.175	3.145	2.271	4.193	8.910	23.584	113.902	163.516	80.535	14.675	1.572	.000	416.477	3.290
SSE	.699	2.271	3.494	3.669	5.416	17.994	84.204	149.715	144.125	54.505	17.295	2.795	486.181	3.845
S	.349	2.970	4.018	3.669	5.416	9.084	34.066	57.825	55.379	32.144	15.548	2.271	222.739	3.901
SSW	.524	2.795	4.542	3.843	6.114	8.560	26.030	28.476	26.030	16.946	10.482	1.398	135.739	3.627
SW	.524	2.620	6.988	4.542	5.066	8.910	11.705	12.403	8.735	7.861	8.560	1.398	79.312	3.272
WSW	.175	1.747	2.970	2.446	4.193	6.464	9.783	5.940	5.765	4.717	3.843	.175	48.216	3.071
W	.175	1.223	1.747	2.096	3.319	4.367	7.337	3.843	3.319	1.572	.349	.000	29.349	2.519
WNW	.000	.873	3.669	3.319	2.446	4.892	13.976	13.452	11.181	4.193	2.620	.524	61.144	3.189
NW	.175	1.223	1.747	2.970	5.241	9.958	26.903	26.554	19.391	5.590	1.922	.524	102.198	3.173

NNW	.349	.349	1.572	1.747	3.494	5.241	12.229	13.277	9.434	5.940	3.145	2.271	59.048	3.561
CALM	23.76												23.76	.35
TOTAL	27.78	25.16	41.93	43.32	67.78	150.06	468.01	555.89	401.10	162.12	68.66	11.70	2023.51	

HOURS OF CALM 23.76

STABILITY CLASS F HRS

DIR	0.5	0.75	1	1.25	1.5	2.00	3	4.0	5.0	6	8	16	TOTAL	AVE SPEED
N	.000	.349	.000	.524	.349	.524	.175	.873	.699	.175	.000	.000	3.669	2.686
NNE	.000	.000	.175	.175	.000	.000	.349	1.747	.699	.349	.000	.000	3.494	3.668
NE	.000	.349	.175	.349	.000	.000	.000	.175	.000	.000	.000	.000	1.048	1.296
ENE	.000	.349	.000	.000	.000	.000	.000	.175	.000	.000	.000	.000	.524	1.565
E	.000	.000	.000	.175	.175	.524	.699	.000	.000	.000	.000	.000	1.572	1.912
ESE	.000	.699	.699	.699	.524	1.398	1.572	1.572	.175	.000	.175	.000	7.512	2.091
SE	.175	.699	2.271	1.398	2.446	4.018	22.361	20.265	4.193	.175	.175	.000	58.174	2.776
SSE	.000	.873	3.319	2.620	2.620	5.940	16.422	17.295	5.590	.349	.000	.000	55.030	2.684
S	.349	1.223	3.669	1.572	6.464	9.608	15.548	13.102	5.765	1.223	.175	.175	58.873	2.545
SSW	.175	1.922	5.066	5.590	6.638	8.211	13.801	9.958	6.114	1.922	.349	.000	59.746	2.418
SW	.000	1.747	3.843	8.385	5.940	8.036	9.608	6.464	6.638	1.572	.349	.000	52.584	2.335
WSW	.175	2.096	4.018	5.241	5.416	5.590	14.150	6.813	4.193	1.922	.349	.000	49.963	2.345
W	.175	1.747	3.494	3.843	2.446	5.241	4.018	3.145	1.223	.699	.175	.000	26.205	2.000
WNW	.175	1.572	2.970	3.319	4.367	5.066	7.687	5.765	2.795	.524	.349	.000	34.590	2.262
NW	.000	1.223	1.922	2.096	4.193	6.638	24.807	15.199	2.096	.175	.000	.000	58.349	2.552
NNW	.000	.524	1.223	.699	.349	1.922	2.620	1.747	.175	.175	.000	.000	9.434	2.090
CALM	9.96												9.96	.36
TOTAL	11.18	15.37	32.84	36.69	41.93	62.72	133.82	104.29	40.35	9.26	2.10	.17	490.72	

HOURS OF CALM 9.96

STABILITY CLASS G HRS

DIR	0.5	0.75	1	1.25	1.5	2.00	3	4.0	5.0	6	8	16	TOTAL	AVE SPEED
N	.000	.175	.000	.175	.175	.000	.000	.000	.000	.000	.000	.000	.524	1.013
NNE	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
NE	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
ENE	.175	.000	.000	.000	.000	.000	.175	.000	.000	.000	.000	.000	.349	1.699
E	.000	.175	.000	.000	.000	.000	.175	.000	.000	.000	.000	.000	.349	1.654
ESE	.000	.175	.175	.000	.699	.175	.175	.000	.175	.000	.000	.000	1.572	1.704
SE	.000	.000	.873	.524	.349	1.747	2.271	1.398	.000	.000	.175	.000	7.337	2.235
SSE	.000	.873	1.048	1.223	1.922	.699	.699	.524	.000	.000	.000	.524	7.512	2.137
S	.000	.349	1.223	1.223	2.446	5.066	4.717	1.922	.699	.000	.524	.524	18.693	2.440
SSW	.000	.873	.524	3.319	6.464	11.006	8.735	5.416	2.096	.524	.349	.000	39.307	2.231
SW	.175	.524	2.271	3.494	4.542	8.560	12.229	5.590	2.271	.175	.175	.000	40.006	2.212
WSW	.000	1.048	2.271	3.145	4.542	11.355	18.168	11.530	5.241	1.048	.175	.000	58.523	2.537

W	.000	1.048	2.096	4.018	3.669	4.892	3.843	1.398	.175	.175	.000	.524	21.837	1.903
WNW	.175	1.048	4.018	3.319	3.494	5.940	4.717	.699	.175	.349	.000	.000	23.933	1.651
NW	.000	1.048	1.223	1.572	4.018	5.765	15.897	3.843	.349	.000	.000	.000	33.716	2.175
NNW	.000	.000	.175	.873	.175	1.398	1.572	.349	.000	.000	.000	.000	4.542	1.950
CALM	3.67												3.67	.34
TOTAL	4.19	7.34	15.90	22.89	32.49	56.60	73.37	32.67	11.18	2.27	1.40	1.57	261.87	

HOURS OF CALM 3.67

PERCENT DATA RECOVERY 95.4
EQUIVALENT HRS = 8760.00

Attachment 5
PAVAN Output File: CPNPP.OUT

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1USNRC COMPUTER CODE-PAVAN, VERSION 2.0          RUN DATE:  12/20/2007     TIME:  14: 5:45
0PRINTOUT OF INPUT CARDS

    1     00000 00100 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000
    2      CPSES Units 3 & 4 COLA  Ground-Level Release
    3      10 meter           10 meter - 60 meter
    4      Met Data 2001-2006
    5      Data Period: Jan 2001-Dec 2006  Calc. No. TXUT-001-FSAR-2.3-CALC-022 Rev 0
    6         13  8738     0
    7           .500  2500.000    69.900    10.000    10.000
    8       1.000  1.000  2.000 10.000 24.000 10.000  4.000
    9        .000   .000   .000   .000   .000   .000   .000   .000   .000   .000   .000   .000   .000   .000   .000   .000
    9        .000   .000   .000   .000   .000   .000   .000   .000   .000   .000   .000   .000   .000   .000   .000   .000
    9        .000   .000  1.000   .000   .000  1.000   .000   .000   .000   .000   .000   .000   .000   .000   .000   .000
    9        .000   .000   .000   .000   .000  1.000   .000   .000   .000   .000   .000   .000   .000   .000   .000   .000
    9        .000  1.000  1.000  1.000  1.000  1.000   .000  1.000   .000   .000   .000   .000   .000   .000   .000   .000
    9       1.000  1.000  1.000  2.000  3.000  1.000  1.000  1.000  1.000   .000  1.000   .000   .000  1.000   .000   .000
    9       1.000  2.000  8.000  6.000  7.000 14.000  7.000  8.000  6.000  5.000  3.000  1.000   .000   .000  1.000  3.000
    9       5.000  3.000  8.000  8.000  6.000 20.000 16.000 16.000 15.000  7.000  7.000  1.000  1.000   .000  1.000  3.000
    9       6.000  5.000  7.000  3.000  3.000  9.000 23.000 26.000 20.000 11.000  5.000  2.000   .000  1.000  1.000  6.000
    9       5.000  6.000  3.000  2.000   .000  4.000 15.000 26.000 28.000 11.000  2.000  1.000   .000   .000  2.000  6.000
    9      11.000  4.000  2.000  1.000   .000  2.000  7.000 26.000 39.000 19.000  3.000  1.000   .000  2.000  4.000 14.000
    9       4.000  1.000   .000   .000   .000   .000  1.000  8.000 19.000  5.000  1.000  2.000  1.000  1.000  7.000 18.000
    9        .000   .000   .000   .000   .000   .000   .000   .000   .000   .000   .000   .000   .000   .000   .000   .000
    9        .000   .000   .000   .000   .000   .000   .000   .000   .000   .000   .000   .000   .000   .000   .000   .000
    9       1.000   .000   .000   .000   .000   .000   .000   .000   .000   .000   .000   .000   .000   .000   .000   .000
    9        .000   .000  1.000  1.000  1.000  1.000   .000   .000   .000   .000  1.000   .000   .000   .000   .000   .000
    9        .000  1.000  1.000  1.000  1.000   .000  1.000  1.000  1.000   .000  1.000   .000   .000   .000   .000   .000
    9       1.000  3.000  5.000  4.000  1.000  2.000  1.000  2.000  1.000  1.000  1.000   .000   .000   .000   .000  1.000
    9       3.000  5.000  9.000  9.000  6.000 10.000 11.000  8.000  7.000  4.000  6.000  2.000  1.000   .000  1.000  5.000
    9       4.000  5.000  6.000  4.000  4.000  8.000  8.000 11.000 10.000  8.000  9.000  5.000   .000  1.000  2.000  6.000
    9       5.000  4.000  3.000  2.000  2.000  3.000 10.000 10.000 17.000  7.000  7.000  2.000  1.000  1.000  3.000  7.000
    9       5.000  5.000  2.000  2.000  1.000  1.000  6.000 14.000 22.000  7.000  7.000  1.000   .000  1.000  3.000  7.000
    9      10.000  5.000  2.000  1.000   .000   .000  3.000 20.000 42.000  9.000  4.000  3.000   .000  1.000  6.000 10.000
    9       6.000  4.000  2.000   .000   .000   .000  1.000  8.000 22.000  5.000  1.000  2.000   .000  1.000  5.000 17.000
    9        .000   .000   .000   .000   .000   .000   .000   .000   .000   .000   .000   .000   .000   .000   .000   .000
    9        .000   .000   .000   .000  1.000   .000  1.000   .000   .000   .000   .000   .000   .000   .000   .000   .000
    9       1.000  1.000  1.000  1.000  1.000   .000   .000  1.000   .000  1.000   .000   .000   .000   .000   .000  1.000
    9       1.000  1.000  2.000  1.000  1.000   .000   .000   .000  1.000  1.000   .000   .000   .000   .000  1.000   .000
    9       1.000  1.000  3.000  3.000  1.000  1.000  1.000   .000  1.000  1.000   .000   .000  1.000   .000   .000  1.000
    9       2.000  4.000  5.000  6.000  4.000  4.000  1.000  4.000  1.000  2.000  1.000  2.000  1.000  1.000  1.000  2.000
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9	5.000	4.000	10.000	8.000	7.000	14.000	9.000	8.000	6.000	5.000	6.000	3.000	1.000	1.000	2.000	8.000
9	6.000	5.000	4.000	4.000	3.000	6.000	8.000	12.000	9.000	3.000	5.000	5.000	1.000	1.000	3.000	6.000
9	7.000	5.000	2.000	4.000	1.000	2.000	10.000	10.000	16.000	7.000	5.000	5.000	2.000	1.000	4.000	4.000
9	8.000	5.000	3.000	2.000	.000	1.000	8.000	17.000	24.000	8.000	5.000	3.000	2.000	1.000	3.000	5.000
9	12.000	5.000	3.000	1.000	.000	1.000	4.000	21.000	44.000	12.000	5.000	4.000	1.000	1.000	6.000	11.000
9	10.000	4.000	.000	.000	.000	.000	.000	8.000	26.000	5.000	2.000	2.000	1.000	2.000	10.000	17.000
9	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
9	1.000	1.000	1.000	1.000	2.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
9	1.000	3.000	3.000	3.000	2.000	4.000	3.000	3.000	2.000	2.000	2.000	2.000	2.000	1.000	1.000	2.000
9	1.000	3.000	4.000	5.000	4.000	3.000	3.000	2.000	2.000	2.000	2.000	2.000	.000	1.000	1.000	1.000
9	3.000	3.000	5.000	5.000	7.000	9.000	5.000	3.000	3.000	1.000	3.000	2.000	1.000	2.000	1.000	2.000
9	10.000	10.000	9.000	11.000	15.000	24.000	15.000	12.000	9.000	8.000	7.000	7.000	1.000	2.000	4.000	8.000
9	43.000	35.000	26.000	28.000	59.000	78.000	74.000	42.000	30.000	25.000	14.000	14.000	8.000	11.000	16.000	20.000
9	74.000	51.000	36.000	39.000	54.000	54.000	110.000	88.000	65.000	27.000	12.000	7.000	5.000	14.000	17.000	27.000
9	86.000	57.000	42.000	35.000	19.000	24.000	103.000	150.000	115.000	27.000	10.000	4.000	4.000	13.000	19.000	37.000
9	84.000	46.000	30.000	20.000	6.000	11.000	76.000	162.000	144.000	24.000	8.000	4.000	3.000	12.000	24.000	51.000
9	103.000	43.000	16.000	7.000	2.000	3.000	35.000	198.000	196.000	23.000	9.000	7.000	3.000	17.000	42.000	94.000
9	52.000	13.000	2.000	.000	.000	.000	3.000	56.000	77.000	7.000	5.000	2.000	2.000	8.000	27.000	76.000
9	.000	.000	.000	.000	.000	.000	.000	1.000	.000	1.000	1.000	.000	.000	.000	.000	.000
9	1.000	1.000	1.000	1.000	1.000	1.000	3.000	2.000	3.000	3.000	3.000	2.000	1.000	1.000	1.000	.000
9	1.000	1.000	1.000	1.000	2.000	3.000	2.000	3.000	4.000	5.000	7.000	3.000	2.000	4.000	2.000	2.000
9	2.000	1.000	1.000	1.000	2.000	3.000	4.000	4.000	4.000	4.000	5.000	2.000	2.000	3.000	3.000	2.000
9	2.000	2.000	1.000	1.000	3.000	9.000	9.000	5.000	5.000	6.000	5.000	4.000	3.000	2.000	5.000	3.000
9	6.000	5.000	3.000	3.000	11.000	22.000	24.000	18.000	9.000	9.000	9.000	6.000	4.000	5.000	10.000	5.000
9	12.000	13.000	7.000	5.000	26.000	65.000	114.000	84.000	34.000	26.000	12.000	10.000	7.000	14.000	27.000	12.000
9	15.000	20.000	4.000	3.000	12.000	27.000	164.000	150.000	58.000	28.000	12.000	6.000	4.000	13.000	27.000	13.000
9	13.000	13.000	3.000	2.000	2.000	4.000	81.000	144.000	55.000	26.000	9.000	6.000	3.000	11.000	19.000	9.000
9	8.000	5.000	1.000	.000	.000	.000	15.000	55.000	32.000	17.000	8.000	5.000	2.000	4.000	6.000	6.000
9	2.000	1.000	.000	.000	.000	.000	2.000	17.000	16.000	10.000	9.000	4.000	.000	3.000	2.000	3.000
9	.000	.000	.000	.000	.000	.000	.000	3.000	2.000	1.000	1.000	.000	.000	1.000	1.000	2.000
9	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
9	.000	.000	.000	.000	.000	1.000	1.000	1.000	1.000	2.000	2.000	2.000	2.000	2.000	1.000	1.000
9	.000	.000	.000	.000	.000	1.000	2.000	3.000	4.000	5.000	4.000	4.000	3.000	3.000	2.000	1.000
9	1.000	.000	.000	.000	.000	1.000	1.000	3.000	2.000	6.000	8.000	5.000	4.000	3.000	2.000	1.000
9	.000	.000	.000	.000	.000	1.000	2.000	3.000	6.000	7.000	6.000	5.000	2.000	4.000	4.000	.000
9	1.000	.000	.000	.000	1.000	1.000	4.000	6.000	10.000	8.000	8.000	6.000	5.000	5.000	7.000	2.000
9	.000	.000	.000	.000	1.000	2.000	22.000	16.000	16.000	14.000	10.000	14.000	4.000	8.000	25.000	3.000
9	1.000	2.000	.000	.000	.000	2.000	20.000	17.000	13.000	10.000	6.000	7.000	3.000	6.000	15.000	2.000
9	1.000	1.000	.000	.000	.000	.000	4.000	6.000	6.000	6.000	7.000	4.000	1.000	3.000	2.000	.000
9	.000	.000	.000	.000	.000	.000	.000	.000	1.000	2.000	2.000	2.000	1.000	1.000	.000	.000
9	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
9	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
9	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
9	.000	.000	.000	.000	.000	.000	.000	1.000	.000	1.000	1.000	1.000	1.000	1.000	1.000	.000
9	.000	.000	.000	.000	.000	.000	1.000	1.000	1.000	1.000	2.000	2.000	2.000	4.000	1.000	.000
9	.000	.000	.000	.000	.000	.000	1.000	1.000	1.000	3.000	3.000	3.000	4.000	3.000	2.000	1.000

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   9        .000   .000   .000   .000   .000  1.000   .000  2.000  2.000  6.000  5.000  5.000  4.000  3.000  4.000   .000
   9        .000   .000   .000   .000   .000   .000  2.000  1.000  5.000 11.000  9.000 11.000  5.000  6.000  6.000  1.000
   9        .000   .000   .000   .000   .000   .000  2.000  1.000  5.000  9.000 12.000 18.000  4.000  5.000 16.000  2.000
   9        .000   .000   .000   .000   .000   .000  1.000  1.000  2.000  5.000  6.000 12.000  1.000  1.000  4.000   .000
   9        .000   .000   .000   .000   .000   .000   .000   .000  1.000  2.000  2.000  5.000   .000   .000   .000   .000
   9        .000   .000   .000   .000   .000   .000   .000   .000   .000  1.000   .000  1.000   .000   .000   .000   .000
   9        .000   .000   .000   .000   .000   .000   .000   .000  1.000   .000   .000   .000   .000   .000   .000   .000
   9        .000   .000   .000   .000   .000   .000   .000  1.000  1.000   .000   .000   .000  1.000   .000   .000   .000
  10         -1.   .450   .500   .750  1.000  1.250  1.500  2.000  3.000  4.000  5.000  6.000  8.000 16.000   .000
  11        600.   600.   600.   600.   600.   600.   600.   600.   600.   600.   600.   600.   600.   600.   600.   600.
  11       3219.  3219.  3219.  3219.  3219.  3219.  3219.  3219.  3219.  3219.  3219.  3219.  3219.  3219.  3219.  3219.
1USNRC COMPUTER CODE-PAVAN, VERSION 2.0          RUN DATE:  12/20/2007     TIME:  14: 5:45
/PLANT NAME:  CPSES Units 3 & 4 C                METEOROLOGICAL INSTRUMENTATION
 DATA PERIOD: OLA  Ground-Level Re               WIND SENSORS HEIGHT:  10 meter
 TYPE OF RELEASE: lease                          DELTA-T HEIGHTS: 10 meter - 60 meter
 SOURCE OF DATA:  Met Data 2001-2006
 COMMENTS:  Data Period: Jan 2001-Dec 2006  Calc. No. TXUT-001-FSAR-2.3-CALC-022 Rev 0
 PROGRAM: PAVAN, 10/76, 8/79 REVISION, IMPLEMENTATION OF REGULATORY GUIDE 1.145
0JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION          ATMOSPHERIC STABILITY CLASS A
 WIND SPEED (M/S)
 TOWER RELEASE      N    NNE     NE    ENE      E    ESE     SE    SSE      S    SSW     SW    WSW      W    WNW     NW    NNW  TOTAL
   .45   .45     .000   .001   .003   .001   .001   .004   .000   .001   .000   .000   .000   .000   .000   .000   .000   .000   .011
   .50   .50     .000   .000   .000   .000   .000   .000   .000   .000   .000   .000   .000   .000   .000   .000   .000   .000   .000
   .75   .75     .000   .000   .000   .000   .000   .000   .000   .000   .000   .000   .000   .000   .000   .000   .000   .000   .000
  1.00  1.00     .000   .000   .011   .000   .000   .011   .000   .000   .000   .000   .000   .000   .000   .000   .000   .000   .023
  1.25  1.25     .000   .000   .000   .000   .000   .011   .000   .000   .000   .000   .000   .000   .000   .000   .000   .000   .011
  1.50  1.50     .000   .011   .011   .011   .011   .011   .000   .011   .000   .000   .000   .000   .000   .000   .000   .000   .069
  2.00  2.00     .011   .011   .011   .023   .034   .011   .011   .011   .011   .000   .011   .000   .000   .011   .000   .000   .160
  3.00  3.00     .011   .023   .092   .069   .080   .160   .080   .092   .069   .057   .034   .011   .000   .000   .011   .034   .824
  4.00  4.00     .057   .034   .092   .092   .069   .229   .183   .183   .172   .080   .080   .011   .011   .000   .011   .034  1.339
  5.00  5.00     .069   .057   .080   .034   .034   .103   .263   .298   .229   .126   .057   .023   .000   .011   .011   .069  1.465
  6.00  6.00     .057   .069   .034   .023   .000   .046   .172   .298   .320   .126   .023   .011   .000   .000   .023   .069  1.270
  8.00  8.00     .126   .046   .023   .011   .000   .023   .080   .298   .446   .217   .034   .011   .000   .023   .046   .160  1.545
 16.00 16.00     .046   .011   .000   .000   .000   .000   .011   .092   .217   .057   .011   .023   .011   .011   .080   .206   .778
 TOTAL           .38    .26    .36    .26    .23    .61    .80   1.28   1.46    .66    .25    .09    .02    .06    .18    .57   7.50

0JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION          ATMOSPHERIC STABILITY CLASS B
 WIND SPEED (M/S)
 TOWER RELEASE      N    NNE     NE    ENE      E    ESE     SE    SSE      S    SSW     SW    WSW      W    WNW     NW    NNW  TOTAL
   .45   .45     .001   .001   .002   .002   .002   .001   .001   .001   .001   .000   .002   .000   .000   .000   .000   .000   .011
   .50   .50     .000   .000   .000   .000   .000   .000   .000   .000   .000   .000   .000   .000   .000   .000   .000   .000   .000
   .75   .75     .000   .000   .000   .000   .000   .000   .000   .000   .000   .000   .000   .000   .000   .000   .000   .000   .000
  1.00  1.00     .011   .000   .000   .000   .000   .000   .000   .000   .000   .000   .000   .000   .000   .000   .000   .000   .011
  1.25  1.25     .000   .000   .011   .011   .011   .011   .000   .000   .000   .000   .011   .000   .000   .000   .000   .000   .057
  1.50  1.50     .000   .011   .011   .011   .011   .000   .011   .011   .011   .000   .011   .000   .000   .000   .000   .000   .092
  2.00  2.00     .011   .034   .057   .046   .011   .023   .011   .023   .011   .011   .011   .011   .000   .000   .000   .011   .275
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3.00	3.00	.034	.057	.103	.103	.069	.114	.126	.092	.080	.046	.069	.023	.011	.000	.011	.057	.996
4.00	4.00	.046	.057	.069	.046	.046	.092	.092	.126	.114	.092	.103	.057	.000	.011	.023	.069	1.041
5.00	5.00	.057	.046	.034	.023	.023	.034	.114	.114	.195	.080	.080	.023	.011	.011	.034	.080	.961
6.00	6.00	.057	.057	.023	.023	.011	.011	.069	.160	.252	.080	.080	.011	.000	.011	.034	.080	.961
8.00	8.00	.114	.057	.023	.011	.000	.000	.034	.229	.481	.103	.046	.034	.000	.011	.069	.114	1.328
16.00	16.00	.069	.046	.023	.000	.000	.000	.011	.092	.252	.057	.011	.023	.000	.011	.057	.195	.847
TOTAL		.40	.37	.36	.28	.18	.29	.47	.85	1.40	.47	.43	.18	.02	.06	.23	.61	6.58

0JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION ATMOSPHERIC STABILITY CLASS C

WIND SPEED (M/S)

TOWER	RELEASE	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
.45	.45	.002	.002	.004	.003	.003	.001	.001	.001	.001	.002	.000	.000	.001	.000	.001	.001	.023
.50	.50	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
.75	.75	.000	.000	.000	.000	.011	.000	.011	.000	.000	.000	.000	.000	.000	.000	.000	.000	.023
1.00	1.00	.011	.011	.011	.011	.011	.000	.000	.011	.000	.011	.000	.000	.000	.000	.000	.011	.092
1.25	1.25	.011	.011	.023	.011	.011	.000	.000	.000	.011	.011	.000	.000	.000	.000	.011	.000	.103
1.50	1.50	.011	.011	.034	.034	.011	.011	.011	.000	.011	.011	.000	.000	.011	.000	.000	.011	.172
2.00	2.00	.023	.046	.057	.069	.046	.046	.011	.046	.011	.023	.011	.023	.011	.011	.011	.023	.469
3.00	3.00	.057	.046	.114	.092	.080	.160	.103	.092	.069	.057	.069	.034	.011	.011	.023	.092	1.110
4.00	4.00	.069	.057	.046	.046	.034	.069	.092	.137	.103	.034	.057	.057	.011	.011	.034	.069	.927
5.00	5.00	.080	.057	.023	.046	.011	.023	.114	.114	.183	.080	.057	.057	.023	.011	.046	.046	.973
6.00	6.00	.092	.057	.034	.023	.000	.011	.092	.195	.275	.092	.057	.034	.023	.011	.034	.057	1.087
8.00	8.00	.137	.057	.034	.011	.000	.011	.046	.240	.504	.137	.057	.046	.011	.011	.069	.126	1.499
16.00	16.00	.114	.046	.000	.000	.000	.000	.000	.092	.298	.057	.023	.023	.011	.023	.114	.195	.996
TOTAL		.61	.40	.38	.35	.22	.33	.48	.93	1.47	.52	.33	.27	.12	.09	.34	.63	7.47

0JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION ATMOSPHERIC STABILITY CLASS D

WIND SPEED (M/S)

TOWER	RELEASE	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
.45	.45	.005	.008	.010	.011	.012	.014	.010	.007	.006	.005	.006	.006	.003	.004	.003	.005	.114
.50	.50	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
.75	.75	.011	.011	.011	.011	.023	.011	.011	.011	.011	.011	.011	.011	.011	.011	.011	.011	.195
1.00	1.00	.011	.034	.034	.034	.023	.046	.034	.034	.023	.023	.023	.023	.023	.011	.011	.023	.412
1.25	1.25	.011	.034	.046	.057	.046	.034	.034	.023	.023	.023	.023	.023	.000	.011	.011	.011	.412
1.50	1.50	.034	.034	.057	.057	.080	.103	.057	.034	.034	.011	.034	.023	.011	.023	.011	.023	.629
2.00	2.00	.114	.114	.103	.126	.172	.275	.172	.137	.103	.092	.080	.080	.011	.023	.046	.092	1.740
3.00	3.00	.492	.401	.298	.320	.675	.893	.847	.481	.343	.286	.160	.160	.092	.126	.183	.229	5.985
4.00	4.00	.847	.584	.412	.446	.618	.618	1.259	1.007	.744	.309	.137	.080	.057	.160	.195	.309	7.782
5.00	5.00	.984	.652	.481	.401	.217	.275	1.179	1.717	1.316	.309	.114	.046	.046	.149	.217	.423	8.526
6.00	6.00	.961	.526	.343	.229	.069	.126	.870	1.854	1.648	.275	.092	.046	.034	.137	.275	.584	8.068
8.00	8.00	1.179	.492	.183	.080	.023	.034	.401	2.266	2.243	.263	.103	.080	.034	.195	.481	1.076	9.133
16.00	16.00	.595	.149	.023	.000	.000	.000	.034	.641	.881	.080	.057	.023	.023	.092	.309	.870	3.777
TOTAL		5.25	3.04	2.00	1.77	1.96	2.43	4.91	8.21	7.38	1.69	.84	.60	.35	.94	1.75	3.66	46.77

0JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION ATMOSPHERIC STABILITY CLASS E

WIND SPEED (M/S)

TOWER	RELEASE	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
.45	.45	.009	.008	.006	.006	.012	.025	.028	.023	.025	.029	.032	.017	.012	.015	.017	.011	.275
.50	.50	.000	.000	.000	.000	.000	.000	.000	.011	.000	.011	.011	.000	.000	.000	.000	.000	.034
.75	.75	.011	.011	.011	.011	.011	.011	.034	.023	.034	.034	.034	.023	.011	.011	.011	.000	.286
1.00	1.00	.011	.011	.011	.011	.023	.034	.023	.034	.046	.057	.080	.034	.023	.046	.023	.023	.492
1.25	1.25	.023	.011	.011	.011	.023	.034	.046	.046	.046	.046	.057	.023	.023	.034	.034	.023	.492
1.50	1.50	.023	.023	.011	.011	.034	.103	.103	.057	.057	.069	.057	.046	.034	.023	.057	.034	.744
2.00	2.00	.069	.057	.034	.034	.126	.252	.275	.206	.103	.103	.103	.069	.046	.057	.114	.057	1.705
3.00	3.00	.137	.149	.080	.057	.298	.744	1.305	.961	.389	.298	.137	.114	.080	.160	.309	.137	5.356
4.00	4.00	.172	.229	.046	.034	.137	.309	1.877	1.717	.664	.320	.137	.069	.046	.149	.309	.149	6.363
5.00	5.00	.149	.149	.034	.023	.023	.046	.927	1.648	.629	.298	.103	.069	.034	.126	.217	.103	4.578
6.00	6.00	.092	.057	.011	.000	.000	.000	.172	.629	.366	.195	.092	.057	.023	.046	.069	.069	1.877
8.00	8.00	.023	.011	.000	.000	.000	.000	.023	.195	.183	.114	.103	.046	.000	.034	.023	.034	.790
16.00	16.00	.000	.000	.000	.000	.000	.000	.000	.034	.023	.011	.011	.000	.000	.011	.011	.023	.126
TOTAL		.72	.72	.26	.20	.69	1.56	4.81	5.58	2.57	1.59	.96	.57	.33	.71	1.20	.66	23.12

0JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION ATMOSPHERIC STABILITY CLASS F

WIND SPEED (M/S)

TOWER	RELEASE	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
.45	.45	.001	.000	.000	.000	.000	.004	.005	.009	.012	.018	.018	.015	.010	.011	.008	.003	.114
.50	.50	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
.75	.75	.000	.000	.000	.000	.000	.011	.011	.011	.011	.023	.023	.023	.023	.023	.011	.011	.183
1.00	1.00	.000	.000	.000	.000	.000	.011	.023	.034	.046	.057	.046	.046	.034	.034	.023	.011	.366
1.25	1.25	.011	.000	.000	.000	.000	.011	.011	.034	.023	.069	.092	.057	.046	.034	.023	.011	.423
1.50	1.50	.000	.000	.000	.000	.000	.011	.023	.034	.069	.080	.069	.057	.023	.046	.046	.000	.458
2.00	2.00	.011	.000	.000	.000	.011	.011	.046	.069	.114	.092	.092	.069	.057	.057	.080	.023	.732
3.00	3.00	.000	.000	.000	.000	.011	.023	.252	.183	.183	.160	.114	.160	.046	.092	.286	.034	1.545
4.00	4.00	.011	.023	.000	.000	.000	.023	.229	.195	.149	.114	.069	.080	.034	.069	.172	.023	1.190
5.00	5.00	.011	.011	.000	.000	.000	.000	.046	.069	.069	.069	.080	.046	.011	.034	.023	.000	.469
6.00	6.00	.000	.000	.000	.000	.000	.000	.000	.000	.011	.023	.023	.023	.011	.011	.000	.000	.103
8.00	8.00	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
16.00	16.00	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
TOTAL		.05	.03	.00	.00	.02	.11	.65	.64	.69	.70	.62	.58	.30	.41	.67	.12	5.58

0JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION ATMOSPHERIC STABILITY CLASS G

WIND SPEED (M/S)

TOWER	RELEASE	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
.45	.45	.000	.000	.000	.000	.000	.001	.001	.003	.002	.007	.007	.007	.007	.007	.005	.001	.046
.50	.50	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
.75	.75	.000	.000	.000	.000	.000	.000	.000	.011	.000	.011	.011	.011	.011	.011	.011	.000	.080
1.00	1.00	.000	.000	.000	.000	.000	.000	.011	.011	.011	.011	.023	.023	.023	.046	.011	.000	.172
1.25	1.25	.000	.000	.000	.000	.000	.000	.011	.011	.011	.034	.034	.034	.046	.034	.023	.011	.252
1.50	1.50	.000	.000	.000	.000	.000	.011	.000	.023	.023	.069	.057	.057	.046	.034	.046	.000	.366
2.00	2.00	.000	.000	.000	.000	.000	.000	.023	.011	.057	.126	.103	.126	.057	.069	.069	.011	.652
3.00	3.00	.000	.000	.000	.000	.000	.000	.023	.011	.057	.103	.137	.206	.046	.057	.183	.023	.847
4.00	4.00	.000	.000	.000	.000	.000	.000	.011	.011	.023	.057	.069	.137	.011	.011	.046	.000	.378

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  5.00  5.00      .000   .000   .000   .000   .000   .000   .000   .000   .011   .023   .023   .057   .000   .000   .000   .000   .114
  6.00  6.00      .000   .000   .000   .000   .000   .000   .000   .000   .000   .011   .000   .011   .000   .000   .000   .000   .023
  8.00  8.00      .000   .000   .000   .000   .000   .000   .000   .000   .011   .000   .000   .000   .000   .000   .000   .000   .011
 16.00 16.00      .000   .000   .000   .000   .000   .000   .000   .011   .011   .000   .000   .000   .011   .000   .000   .000   .034
 TOTAL            .00    .00    .00    .00    .00    .01    .08    .11    .22    .45    .46    .67    .26    .27    .39    .05   2.98

0WIND MEASURED AT  10.0 METERS.
 WIND SPEED CORRECTED TO THE RELEASE HEIGHT OF  10.0 METERS.
0OVERALL WIND DIRECTION FREQUENCY
 WIND DIRECTION:          N   NNE    NE   ENE     E   ESE    SE   SSE     S   SSW    SW   WSW     W   WNW    NW   NNW
 FREQUENCY:             7.4   4.8   3.4   2.9   3.3   5.3  12.2  17.6  15.2   6.1   3.9   3.0   1.4   2.5   4.8   6.3
0OVERALL WIND SPEED FREQUENCY AS MEASURED ON THE TOWER:
 MAX.WIND SPEED (M/S):      .450   .500   .750  1.000  1.250  1.500  2.000  3.000  4.000  5.000  6.000  8.000 16.000
 WIND SPEED FREQUENCY:      .60    .03    .77   1.57   1.75   2.53   5.73  16.66  19.02  17.09  13.39  14.31   6.56
0BUILDING AND RELEASE CHARACTERISTICS:
 RELEASE HEIGHT:                  10.00 METERS
 MIXING VOLUME COEFFICIENT:         .50
 BUILDING CROSS-SECTIONAL AREA: 2500.00 SQUARE METERS
0BOUNDARY DISTANCES (METERS) FROM THE SOURCE FOR EACH DOWNWIND SECTOR:
 DOWNWIND SECTOR      S    SSW     SW    WSW      W    WNW     NW    NNW      N    NNE     NE    ENE      E    ESE     SE    SSE
 BOUNDARY 1        600.   600.   600.   600.   600.   600.   600.   600.   600.   600.   600.   600.   600.   600.   600.   600.
 BOUNDARY 2       3219.  3219.  3219.  3219.  3219.  3219.  3219.  3219.  3219.  3219.  3219.  3219.  3219.  3219.  3219.  3219.
1USNRC COMPUTER CODE-PAVAN, VERSION 2.0          RUN DATE:  12/20/2007     TIME:  14: 5:45
/PLANT NAME:  CPSES Units 3 & 4 C                METEOROLOGICAL INSTRUMENTATION
 DATA PERIOD: OLA  Ground-Level Re               WIND SENSORS HEIGHT:  10 meter
 TYPE OF RELEASE: lease                          DELTA-T HEIGHTS: 10 meter - 60 meter
 SOURCE OF DATA:  Met Data 2001-2006
 COMMENTS:  Data Period: Jan 2001-Dec 2006  Calc. No. TXUT-001-FSAR-2.3-CALC-022 Rev 0
 PROGRAM: PAVAN, 10/76, 8/79 REVISION, IMPLEMENTATION OF REGULATORY GUIDE 1.145
0WINDSPEEDS ADJUSTED TO  10.0 METERS.
0PERCENT OF THE TIME A GIVEN WINDSPEED IS LOWER:
0WINDSPEED    CUMULATIVE FREQUENCY
 (METER/SEC)         (PERCENT)
       .45              .60
       .50              .63
       .75             1.40
      1.00             2.96
      1.25             4.72
      1.50             7.24
      2.00            12.98
      3.00            29.64
      4.00            48.66
      5.00            65.75
      6.00            79.14
      8.00            93.44
     16.00           100.00
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0
0LOG-NORMAL INTERPOLATION PERCENTILES
0WINDSPEED    CUMULATIVE FREQUENCY
 (METER/SEC)         (PERCENT)
       .63             1.00
      1.01             3.00
      1.28             5.00
      1.75            10.00
      2.13            15.00
      2.43            20.00
      2.73            25.00
      3.02            30.00
      3.27            35.00
      3.53            40.00
      3.79            45.00
      4.07            50.00
      4.34            55.00
      4.63            60.00
      4.95            65.00
      5.28            70.00
      5.64            75.00
      6.08            80.00
      6.70            85.00
      7.28            90.00
1USNRC COMPUTER CODE-PAVAN, VERSION 2.0          RUN DATE:  12/20/2007     TIME:  14: 5:45
/PLANT NAME:  CPSES Units 3 & 4 C                METEOROLOGICAL INSTRUMENTATION
 DATA PERIOD: OLA  Ground-Level Re               WIND SENSORS HEIGHT:  10 meter
 TYPE OF RELEASE: lease                          DELTA-T HEIGHTS: 10 meter - 60 meter
 SOURCE OF DATA:  Met Data 2001-2006
 COMMENTS:  Data Period: Jan 2001-Dec 2006  Calc. No. TXUT-001-FSAR-2.3-CALC-022 Rev 0
 PROGRAM: PAVAN, 10/76, 8/79 REVISION, IMPLEMENTATION OF REGULATORY GUIDE 1.145
0SITE EXCLUSION BOUNDARY CALCULATIONS:
0   S SECTOR     BOUNDARY DISTANCE =  600.0 METERS
0LATERAL PLUME MEANDER/BUILDING WAKE CREDIT ALLOWED
 AS A FUNCTION OF DOWNWIND DISTANCE.
 MEANDER CREDIT IS FOR WINDSPEEDS LESS THAN 6 MPS.
 BUILDING WAKE CREDIT ALLOWED:   C=   .5     A=  2500.     D=   69.9
0BELOW ARE PRINTED THE ORDERED VALUES OF CHI/Q AND THE FREQUENCY WITH WHICH THAT VALUE IS REACHED OR EXCEEDED.
 THE TOP NUMBER IS THE CHI/Q.  THE MIDDLE NUMBER IS THE FREQUENCY NORMALIZED TO THIS SECTOR.
 THE THIRD NUMBER IS THE FREQUENCY WITH RESPECT TO ALL TIME.
0   8.046E-04   4.706E-04   3.507E-04   2.897E-04   2.824E-04   2.369E-04   2.118E-04   2.104E-04   1.810E-04   1.694E-04
         .012        .137        .201        .356        .511        .538        .693        .847       1.002       1.311
       .00092      .01012      .01489      .02633      .03778      .03980      .05124      .06269      .07413      .09702
0   1.578E-04   1.412E-04   1.288E-04   1.263E-04   1.185E-04   1.066E-04   1.059E-04   1.059E-04   1.052E-04   1.031E-04
        1.466       1.775       1.930       2.085       2.096       2.250       3.178       5.034       5.498       5.653
       .10846      .13135      .14280      .15424      .15506      .16650      .23517      .37250      .40683      .41828
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0   8.852E-05   8.530E-05   7.892E-05   7.108E-05   7.082E-05   6.795E-05   5.902E-05   5.659E-05   5.331E-05   5.331E-05
        7.973       8.128       9.674       9.829      11.840      18.490      19.728      31.173      31.328      31.637
       .58994      .60139      .71583      .72727      .87605     1.36815     1.45971     2.30658     2.31803     2.34091
0   4.527E-05   4.426E-05   3.772E-05   3.554E-05   2.829E-05   2.666E-05   2.666E-05   2.133E-05   1.777E-05   1.777E-05
       44.938      45.248      58.240      59.013      74.944      75.099      76.027      77.109      77.573      78.811
      3.32512     3.34801     4.30933     4.36655     5.54531     5.55675     5.62542     5.70553     5.73986     5.83142
0   1.415E-05   1.333E-05   1.333E-05   1.066E-05   8.886E-06   7.678E-06   6.664E-06   6.664E-06   5.119E-06   3.839E-06
       86.853      87.472      89.328      90.101      90.875      91.029      92.576      94.123      94.277      95.051
      6.42652     6.47229     6.60963     6.66685     6.72407     6.73551     6.84996     6.96440     6.97584     7.03307
0   3.332E-06   3.071E-06   2.559E-06   1.919E-06   9.597E-07
       95.979      96.907      97.680      99.381     100.000
      7.10173     7.17040     7.22762     7.35350     7.39928
0          X/Q PERCENTILES
 (BASED ON THE UPPER ENVELOPE OF THE
 ORDERED X/Q-FREQUENCY VALUES, AND AS
 PLOTTED ON A LOG-NORMAL GRAPH.)
0 PERCENT OF TIME CHI/Q IS EQUALED OR EXCEEDED
        CHI/Q      WITH RESPECT TO     WHEN THE WIND BLOWS
 SEC/CUBIC METER  THE TOTAL TIME      INTO THIS SECTOR ONLY

                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 3)=    .038
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 4)=    .097
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 5)=    .406
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 7)=   3.322
     1.969E-04              .074             1.000
     1.297E-04              .222             3.000
     1.088E-04              .370             5.000
     8.625E-05              .740            10.000
     7.476E-05             1.110            15.000
     6.723E-05             1.480            20.000
     6.174E-05             1.850            25.000
     5.746E-05             2.220            30.000
     5.280E-05             2.590            35.000
     4.867E-05             2.960            40.000
0    9.840E-05             0.5               6.76
0ANNUAL AVERAGE =   1.80E-06
1USNRC COMPUTER CODE-PAVAN, VERSION 2.0          RUN DATE:  12/20/2007     TIME:  14: 5:45
/PLANT NAME:  CPSES Units 3 & 4 C                METEOROLOGICAL INSTRUMENTATION
 DATA PERIOD: OLA  Ground-Level Re               WIND SENSORS HEIGHT:  10 meter
 TYPE OF RELEASE: lease                          DELTA-T HEIGHTS: 10 meter - 60 meter
 SOURCE OF DATA:  Met Data 2001-2006
 COMMENTS:  Data Period: Jan 2001-Dec 2006  Calc. No. TXUT-001-FSAR-2.3-CALC-022 Rev 0
 PROGRAM: PAVAN, 10/76, 8/79 REVISION, IMPLEMENTATION OF REGULATORY GUIDE 1.145
0SITE EXCLUSION BOUNDARY CALCULATIONS:
0 SSW SECTOR     BOUNDARY DISTANCE =  600.0 METERS
0LATERAL PLUME MEANDER/BUILDING WAKE CREDIT ALLOWED
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 AS A FUNCTION OF DOWNWIND DISTANCE.
 MEANDER CREDIT IS FOR WINDSPEEDS LESS THAN 6 MPS.
 BUILDING WAKE CREDIT ALLOWED:   C=   .5     A=  2500.     D=   69.9
0BELOW ARE PRINTED THE ORDERED VALUES OF CHI/Q AND THE FREQUENCY WITH WHICH THAT VALUE IS REACHED OR EXCEEDED.
 THE TOP NUMBER IS THE CHI/Q.  THE MIDDLE NUMBER IS THE FREQUENCY NORMALIZED TO THIS SECTOR.
 THE THIRD NUMBER IS THE FREQUENCY WITH RESPECT TO ALL TIME.
0   4.706E-04   3.507E-04   2.824E-04   2.369E-04   2.118E-04   2.104E-04   1.694E-04   1.578E-04   1.412E-04   1.288E-04
         .159        .324        .561        .603        .840       1.077       1.314       2.025       2.500       2.974
       .00767      .01562      .02706      .02908      .04053      .05197      .06342      .09775      .12064      .14353
0   1.263E-04   1.185E-04   1.066E-04   1.059E-04   1.059E-04   1.052E-04   1.031E-04   8.852E-05   8.530E-05   7.892E-05
        3.685       3.702       3.939       5.125       8.207       8.919       9.156      13.898      14.135      16.507
       .17786      .17868      .19012      .24734      .39612      .43045      .44189      .67078      .68222      .79667
0   7.108E-05   7.082E-05   6.795E-05   5.902E-05   5.659E-05   5.331E-05   4.527E-05   4.426E-05   3.772E-05   3.554E-05
       16.744      19.826      28.126      29.311      41.405      42.353      55.869      56.106      67.014      67.251
       .80811      .95689     1.35744     1.41466     1.99831     2.04409     2.69641     2.70786     3.23430     3.24574
0   3.554E-05   3.412E-05   2.829E-05   2.666E-05   2.666E-05   2.133E-05   1.777E-05   1.777E-05   1.415E-05   1.333E-05
       68.199      68.226      78.422      79.133      80.319      81.504      82.690      83.876      86.958      88.144
      3.29152     3.29279     3.78489     3.81922     3.87645     3.93367     3.99089     4.04811     4.19688     4.25411
0   1.333E-05   1.066E-05   1.024E-05   8.886E-06   7.678E-06   6.664E-06   6.664E-06   5.119E-06   3.839E-06   3.332E-06
       89.329      90.278      90.515      91.701      91.938      93.123      94.072      94.546      95.258      96.206
      4.31133     4.35710     4.36855     4.42577     4.43721     4.49443     4.54021     4.56310     4.59743     4.64321
0   3.071E-06   2.559E-06   1.919E-06   9.597E-07
       97.392      98.814      99.763     100.000
      4.70043     4.76910     4.81487     4.82632
0          X/Q PERCENTILES
 (BASED ON THE UPPER ENVELOPE OF THE
 ORDERED X/Q-FREQUENCY VALUES, AND AS
 PLOTTED ON A LOG-NORMAL GRAPH.)
0 PERCENT OF TIME CHI/Q IS EQUALED OR EXCEEDED
        CHI/Q      WITH RESPECT TO     WHEN THE WIND BLOWS
 SEC/CUBIC METER  THE TOTAL TIME      INTO THIS SECTOR ONLY

                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 2)=    .027
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 3)=    .178
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 5)=   1.356
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 6)=   1.996
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 7)=   2.694
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 8)=   3.231
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 9)=   3.782
     2.232E-04                .048              1.000
     1.387E-04                .145              3.000
     1.188E-04                .241              5.000
     1.010E-04                .483             10.000
     8.697E-05                .724             15.000
     7.787E-05                .965             20.000
     7.128E-05               1.207             25.000
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     6.595E-05              1.448              30.000
     6.135E-05              1.689              35.000
     5.754E-05              1.931              40.000
     5.324E-05              2.172              45.000
     4.923E-05              2.413              50.000
     4.581E-05              2.654              55.000
     4.217E-05              2.896              60.000
     3.891E-05              3.137              65.000
     3.486E-05              3.378              70.000
     3.073E-05              3.620              75.000
0    9.971E-05              0.5                10.36
0ANNUAL AVERAGE =   1.40E-06
1USNRC COMPUTER CODE-PAVAN, VERSION 2.0          RUN DATE:  12/20/2007     TIME:  14: 5:45
/PLANT NAME:  CPSES Units 3 & 4 C                METEOROLOGICAL INSTRUMENTATION
 DATA PERIOD: OLA  Ground-Level Re               WIND SENSORS HEIGHT:  10 meter
 TYPE OF RELEASE: lease                          DELTA-T HEIGHTS: 10 meter - 60 meter
 SOURCE OF DATA:  Met Data 2001-2006
 COMMENTS:  Data Period: Jan 2001-Dec 2006  Calc. No. TXUT-001-FSAR-2.3-CALC-022 Rev 0
 PROGRAM: PAVAN, 10/76, 8/79 REVISION, IMPLEMENTATION OF REGULATORY GUIDE 1.145
0SITE EXCLUSION BOUNDARY CALCULATIONS:
0  SW SECTOR     BOUNDARY DISTANCE =  600.0 METERS
0LATERAL PLUME MEANDER/BUILDING WAKE CREDIT ALLOWED
 AS A FUNCTION OF DOWNWIND DISTANCE.
 MEANDER CREDIT IS FOR WINDSPEEDS LESS THAN 6 MPS.
 BUILDING WAKE CREDIT ALLOWED:   C=   .5     A=  2500.     D=   69.9
0BELOW ARE PRINTED THE ORDERED VALUES OF CHI/Q AND THE FREQUENCY WITH WHICH THAT VALUE IS REACHED OR EXCEEDED.
 THE TOP NUMBER IS THE CHI/Q.  THE MIDDLE NUMBER IS THE FREQUENCY NORMALIZED TO THIS SECTOR.
 THE THIRD NUMBER IS THE FREQUENCY WITH RESPECT TO ALL TIME.
0   4.706E-04   3.507E-04   2.824E-04   2.369E-04   2.118E-04   2.104E-04   1.694E-04   1.578E-04   1.412E-04   1.263E-04
         .183        .491        .832        .952       1.294       1.635       1.976       2.999       3.340       4.705
       .00614      .01647      .02791      .03195      .04340      .05484      .06629      .10062      .11206      .15784
0   1.185E-04   1.066E-04   1.059E-04   1.059E-04   1.052E-04   8.852E-05   8.530E-05   7.892E-05   7.108E-05   7.082E-05
        4.753       5.095       6.118       8.506      10.211      11.576      12.258      15.328      16.351      17.375
       .15947      .17092      .20525      .28536      .34258      .38836      .41125      .51425      .54858      .58291
0   6.795E-05   5.902E-05   5.659E-05   5.331E-05   4.527E-05   4.265E-05   3.772E-05   3.554E-05   3.554E-05   3.412E-05
       26.244      26.585      38.865      40.570      54.897      55.238      65.472      65.813      69.224      69.300
       .88046      .89191     1.30390     1.36112     1.84178     1.85323     2.19655     2.20800     2.32244     2.32498
0   2.829E-05   2.666E-05   2.666E-05   2.133E-05   1.777E-05   1.777E-05   1.536E-05   1.415E-05   1.333E-05   1.333E-05
       74.758      76.463      77.828      78.510      81.580      82.603      82.944      83.627      85.673      86.697
      2.50809     2.56531     2.61109     2.63398     2.73698     2.77131     2.78276     2.80564     2.87431     2.90864
0   1.066E-05   1.024E-05   8.886E-06   7.678E-06   6.664E-06   5.119E-06   3.839E-06   3.332E-06   3.071E-06   2.559E-06
       87.720      88.061      88.743      89.084      89.767      92.496      95.224      95.907      98.294      99.318
      2.94298     2.95442     2.97731     2.98875     3.01164     3.10320     3.19475     3.21764     3.29775     3.33208
0   1.919E-06
      100.000
      3.35497
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0          X/Q PERCENTILES
 (BASED ON THE UPPER ENVELOPE OF THE
 ORDERED X/Q-FREQUENCY VALUES, AND AS
 PLOTTED ON A LOG-NORMAL GRAPH.)
0 PERCENT OF TIME CHI/Q IS EQUALED OR EXCEEDED
        CHI/Q      WITH RESPECT TO     WHEN THE WIND BLOWS
 SEC/CUBIC METER  THE TOTAL TIME      INTO THIS SECTOR ONLY

                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 2)=    .016
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 3)=    .028
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 4)=    .055
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 5)=    .342
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 6)=   1.302
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 7)=   1.840
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 8)=   2.194
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 9)=   2.320
     2.610E-04              .034             1.000
     1.693E-04              .101             3.000
     1.397E-04              .168             5.000
     1.061E-04              .335            10.000
     8.887E-05              .503            15.000
     7.796E-05              .671            20.000
     7.021E-05              .839            25.000
     6.432E-05             1.006            30.000
     5.963E-05             1.174            35.000
     5.557E-05             1.342            40.000
     5.154E-05             1.510            45.000
     4.814E-05             1.677            50.000
     4.518E-05             1.845            55.000
     4.132E-05             2.013            60.000
     3.801E-05             2.181            65.000
0    8.913E-05             0.5              14.90
0ANNUAL AVERAGE =   1.08E-06
1USNRC COMPUTER CODE-PAVAN, VERSION 2.0          RUN DATE:  12/20/2007     TIME:  14: 5:45
/PLANT NAME:  CPSES Units 3 & 4 C                METEOROLOGICAL INSTRUMENTATION
 DATA PERIOD: OLA  Ground-Level Re               WIND SENSORS HEIGHT:  10 meter
 TYPE OF RELEASE: lease                          DELTA-T HEIGHTS: 10 meter - 60 meter
 SOURCE OF DATA:  Met Data 2001-2006
 COMMENTS:  Data Period: Jan 2001-Dec 2006  Calc. No. TXUT-001-FSAR-2.3-CALC-022 Rev 0
 PROGRAM: PAVAN, 10/76, 8/79 REVISION, IMPLEMENTATION OF REGULATORY GUIDE 1.145
0SITE EXCLUSION BOUNDARY CALCULATIONS:
0 WSW SECTOR     BOUNDARY DISTANCE =  600.0 METERS
0LATERAL PLUME MEANDER/BUILDING WAKE CREDIT ALLOWED
 AS A FUNCTION OF DOWNWIND DISTANCE.
 MEANDER CREDIT IS FOR WINDSPEEDS LESS THAN 6 MPS.
 BUILDING WAKE CREDIT ALLOWED:   C=   .5     A=  2500.     D=   69.9
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0BELOW ARE PRINTED THE ORDERED VALUES OF CHI/Q AND THE FREQUENCY WITH WHICH THAT VALUE IS REACHED OR EXCEEDED.
 THE TOP NUMBER IS THE CHI/Q.  THE MIDDLE NUMBER IS THE FREQUENCY NORMALIZED TO THIS SECTOR.
 THE THIRD NUMBER IS THE FREQUENCY WITH RESPECT TO ALL TIME.
0   4.706E-04   3.507E-04   2.824E-04   2.369E-04   2.118E-04   2.104E-04   1.694E-04   1.578E-04   1.412E-04   1.263E-04
         .214        .603       1.003       1.121       1.521       1.921       2.321       3.520       3.920       5.920
       .00614      .01726      .02871      .03207      .04352      .05496      .06641      .10074      .11218      .16941
0   1.185E-04   1.066E-04   1.059E-04   1.059E-04   1.052E-04   8.852E-05   8.530E-05   7.892E-05   7.108E-05   7.082E-05
        5.977       6.377       7.576       9.576      11.576      12.775      13.175      17.574      18.774      19.574
       .17104      .18248      .21682      .27404      .33126      .36559      .37704      .50292      .53726      .56015
0   6.795E-05   5.659E-05   5.331E-05   4.527E-05   4.265E-05   3.772E-05   3.554E-05   3.554E-05   3.412E-05   2.829E-05
       30.771      46.368      48.767      62.764      63.164      71.162      71.562      74.761      74.806      77.605
       .88058     1.32691     1.39558     1.79613     1.80757     2.03646     2.04790     2.13945     2.14073     2.22084
0   2.666E-05   2.666E-05   2.133E-05   1.777E-05   1.777E-05   1.333E-05   1.333E-05   1.066E-05   1.024E-05   8.886E-06
       79.205      80.804      82.404      86.003      86.803      88.403      88.803      89.602      90.002      90.802
      2.26661     2.31239     2.35817     2.46117     2.48405     2.52983     2.54128     2.56416     2.57561     2.59850
0   7.678E-06   6.664E-06   5.119E-06   3.839E-06   3.071E-06   2.559E-06   1.919E-06
       91.602      92.002      94.401      97.601      98.800      99.600     100.000
      2.62139     2.63283     2.70149     2.79305     2.82738     2.85027     2.86171
0          X/Q PERCENTILES
 (BASED ON THE UPPER ENVELOPE OF THE
 ORDERED X/Q-FREQUENCY VALUES, AND AS
 PLOTTED ON A LOG-NORMAL GRAPH.)
0 PERCENT OF TIME CHI/Q IS EQUALED OR EXCEEDED
        CHI/Q      WITH RESPECT TO     WHEN THE WIND BLOWS
 SEC/CUBIC METER  THE TOTAL TIME      INTO THIS SECTOR ONLY

                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 2)=    .017
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 3)=    .169
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 5)=   1.325
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 6)=   1.794
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 7)=   2.137
     2.838E-04                .029              1.000
     1.744E-04                .086              3.000
     1.371E-04                .143              5.000
     1.096E-04                .286             10.000
     9.440E-05                .429             15.000
     8.338E-05                .572             20.000
     7.552E-05                .715             25.000
     6.951E-05                .859             30.000
     6.472E-05               1.002             35.000
     6.076E-05               1.145             40.000
     5.742E-05               1.288             45.000
     5.358E-05               1.431             50.000
     4.996E-05               1.574             55.000
     4.683E-05               1.717             60.000
     4.315E-05               1.860             65.000
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     3.896E-05              2.003              70.000
0    8.843E-05              0.5                17.47
0ANNUAL AVERAGE =   1.02E-06
1USNRC COMPUTER CODE-PAVAN, VERSION 2.0          RUN DATE:  12/20/2007     TIME:  14: 5:45
/PLANT NAME:  CPSES Units 3 & 4 C                METEOROLOGICAL INSTRUMENTATION
 DATA PERIOD: OLA  Ground-Level Re               WIND SENSORS HEIGHT:  10 meter
 TYPE OF RELEASE: lease                          DELTA-T HEIGHTS: 10 meter - 60 meter
 SOURCE OF DATA:  Met Data 2001-2006
 COMMENTS:  Data Period: Jan 2001-Dec 2006  Calc. No. TXUT-001-FSAR-2.3-CALC-022 Rev 0
 PROGRAM: PAVAN, 10/76, 8/79 REVISION, IMPLEMENTATION OF REGULATORY GUIDE 1.145
0SITE EXCLUSION BOUNDARY CALCULATIONS:
0   W SECTOR     BOUNDARY DISTANCE =  600.0 METERS
0LATERAL PLUME MEANDER/BUILDING WAKE CREDIT ALLOWED
 AS A FUNCTION OF DOWNWIND DISTANCE.
 MEANDER CREDIT IS FOR WINDSPEEDS LESS THAN 6 MPS.
 BUILDING WAKE CREDIT ALLOWED:   C=   .5     A=  2500.     D=   69.9
0BELOW ARE PRINTED THE ORDERED VALUES OF CHI/Q AND THE FREQUENCY WITH WHICH THAT VALUE IS REACHED OR EXCEEDED.
 THE TOP NUMBER IS THE CHI/Q.  THE MIDDLE NUMBER IS THE FREQUENCY NORMALIZED TO THIS SECTOR.
 THE THIRD NUMBER IS THE FREQUENCY WITH RESPECT TO ALL TIME.
0   4.706E-04   3.507E-04   2.824E-04   2.369E-04   2.118E-04   2.104E-04   1.810E-04   1.718E-04   1.694E-04   1.578E-04
         .372        .733       1.079       1.161       1.854       2.547       2.893       3.240       3.933       4.626
       .01228      .02420      .03564      .03833      .06122      .08411      .09555      .10700      .12989      .15278
0   1.422E-04   1.412E-04   1.263E-04   1.185E-04   1.066E-04   1.059E-04   1.059E-04   1.052E-04   8.852E-05   8.530E-05
        4.972       6.012       7.398       7.447       7.794      11.605      20.614      23.039      27.197      27.544
       .16422      .19855      .24433      .24597      .25741      .38330      .68085      .76096      .89829      .90973
0   7.892E-05   7.108E-05   7.082E-05   6.795E-05   5.659E-05   5.331E-05   4.527E-05   4.265E-05   3.772E-05   3.554E-05
       32.741      33.088      33.781      54.224      72.935      74.321      80.904      81.251      83.330      83.676
      1.08140     1.09284     1.11573     1.79094     2.40893     2.45471     2.67215     2.68359     2.75226     2.76370
0   3.554E-05   3.412E-05   2.829E-05   2.666E-05   2.666E-05   2.133E-05   1.777E-05   1.333E-05   1.066E-05   1.024E-05
       86.102      86.140      86.833      87.180      88.219      88.566      90.645      92.031      92.724      93.070
      2.84381     2.84509     2.86797     2.87942     2.91375     2.92520     2.99386     3.03964     3.06253     3.07397
0   8.886E-06   7.678E-06   5.119E-06   3.839E-06   3.071E-06
       93.417      94.456      96.882      98.961     100.000
      3.08542     3.11975     3.19986     3.26852     3.30286
0          X/Q PERCENTILES
 (BASED ON THE UPPER ENVELOPE OF THE
 ORDERED X/Q-FREQUENCY VALUES, AND AS
 PLOTTED ON A LOG-NORMAL GRAPH.)
0 PERCENT OF TIME CHI/Q IS EQUALED OR EXCEEDED
        CHI/Q      WITH RESPECT TO     WHEN THE WIND BLOWS
 SEC/CUBIC METER  THE TOTAL TIME      INTO THIS SECTOR ONLY

                                                HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 2)=    .084
                                                HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 3)=    .198
                                                HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 5)=   1.789
                                                HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 6)=   2.406
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     3.153E-04              .033              1.000
     1.954E-04              .099              3.000
     1.542E-04              .165              5.000
     1.269E-04              .330             10.000
     1.161E-04              .495             15.000
     1.088E-04              .661             20.000
     1.011E-04              .826             25.000
     9.242E-05              .991             30.000
     8.551E-05             1.156             35.000
     7.984E-05             1.321             40.000
     7.507E-05             1.486             45.000
     7.098E-05             1.651             50.000
     6.737E-05             1.817             55.000
     6.389E-05             1.982             60.000
     6.082E-05             2.147             65.000
     5.807E-05             2.312             70.000
0    1.159E-04             0.5               15.14
0ANNUAL AVERAGE =   1.47E-06
1USNRC COMPUTER CODE-PAVAN, VERSION 2.0          RUN DATE:  12/20/2007     TIME:  14: 5:45
/PLANT NAME:  CPSES Units 3 & 4 C                METEOROLOGICAL INSTRUMENTATION
 DATA PERIOD: OLA  Ground-Level Re               WIND SENSORS HEIGHT:  10 meter
 TYPE OF RELEASE: lease                          DELTA-T HEIGHTS: 10 meter - 60 meter
 SOURCE OF DATA:  Met Data 2001-2006
 COMMENTS:  Data Period: Jan 2001-Dec 2006  Calc. No. TXUT-001-FSAR-2.3-CALC-022 Rev 0
 PROGRAM: PAVAN, 10/76, 8/79 REVISION, IMPLEMENTATION OF REGULATORY GUIDE 1.145
0SITE EXCLUSION BOUNDARY CALCULATIONS:
0 WNW SECTOR     BOUNDARY DISTANCE =  600.0 METERS
0LATERAL PLUME MEANDER/BUILDING WAKE CREDIT ALLOWED
 AS A FUNCTION OF DOWNWIND DISTANCE.
 MEANDER CREDIT IS FOR WINDSPEEDS LESS THAN 6 MPS.
 BUILDING WAKE CREDIT ALLOWED:   C=   .5     A=  2500.     D=   69.9
0BELOW ARE PRINTED THE ORDERED VALUES OF CHI/Q AND THE FREQUENCY WITH WHICH THAT VALUE IS REACHED OR EXCEEDED.
 THE TOP NUMBER IS THE CHI/Q.  THE MIDDLE NUMBER IS THE FREQUENCY NORMALIZED TO THIS SECTOR.
 THE THIRD NUMBER IS THE FREQUENCY WITH RESPECT TO ALL TIME.
0   1.223E-03   8.046E-04   4.828E-04   4.706E-04   3.669E-04   3.621E-04   3.507E-04   2.897E-04   2.824E-04   2.414E-04
         .011        .080        .294        .755        .969       1.184       1.437       1.651       1.866       2.080
       .00060      .00426      .01571      .04026      .05170      .06315      .07666      .08810      .09955      .11099
0   2.369E-04   2.118E-04   2.104E-04   1.810E-04   1.718E-04   1.694E-04   1.578E-04   1.412E-04   1.288E-04   1.263E-04
        2.093       2.737       2.951       3.166       3.595       4.238       5.096       7.027       7.456       8.100
       .11166      .14600      .15744      .16889      .19177      .22611      .27188      .37488      .39777      .43210
0   1.185E-04   1.059E-04   1.059E-04   1.052E-04   8.852E-05   7.892E-05   7.108E-05   7.082E-05   6.795E-05   5.659E-05
        8.115      12.834      26.778      28.709      34.501      39.649      39.864      40.722      57.454      69.038
       .43292      .68470     1.42857     1.53157     1.84057     2.11523     2.12667     2.17245     3.06510     3.68309
0   5.331E-05   4.527E-05   4.265E-05   3.772E-05   3.554E-05   3.412E-05   2.829E-05   2.666E-05   2.666E-05   2.133E-05
       69.896      75.044      75.259      77.619      80.622      80.693      81.337      81.766      83.053      83.482
      3.72887     4.00353     4.01498     4.14086     4.30108     4.30490     4.33923     4.36212     4.43079     4.45367
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0   1.777E-05   1.777E-05   1.536E-05   1.333E-05   1.333E-05   1.228E-05   1.066E-05   1.024E-05   8.886E-06   7.678E-06
       85.627      85.842      86.056      87.773      87.987      88.202      88.845      89.060      89.274      89.489
      4.56812     4.57956     4.59101     4.68256     4.69400     4.70545     4.73978     4.75122     4.76267     4.77411
0   5.119E-06   3.839E-06   3.071E-06   2.559E-06   1.919E-06
       92.492      96.782      98.713      99.571     100.000
      4.93433     5.16322     5.26622     5.31199     5.33488
0          X/Q PERCENTILES
 (BASED ON THE UPPER ENVELOPE OF THE
 ORDERED X/Q-FREQUENCY VALUES, AND AS
 PLOTTED ON A LOG-NORMAL GRAPH.)
0 PERCENT OF TIME CHI/Q IS EQUALED OR EXCEEDED
        CHI/Q      WITH RESPECT TO     WHEN THE WIND BLOWS
 SEC/CUBIC METER  THE TOTAL TIME      INTO THIS SECTOR ONLY

                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 3)=    .077
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 4)=    .226
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 6)=   3.062
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 7)=   3.680
     4.146E-04              .053             1.000
     2.154E-04              .160             3.000
     1.632E-04              .267             5.000
     1.386E-04              .533            10.000
     1.252E-04              .800            15.000
     1.161E-04             1.067            20.000
     1.093E-04             1.334            25.000
     1.025E-04             1.600            30.000
     9.331E-05             1.867            35.000
     8.587E-05             2.134            40.000
     7.970E-05             2.401            45.000
     7.446E-05             2.667            50.000
     6.995E-05             2.934            55.000
     6.511E-05             3.201            60.000
     6.013E-05             3.468            65.000
0    1.408E-04             0.5               9.37
0ANNUAL AVERAGE =   2.46E-06
1USNRC COMPUTER CODE-PAVAN, VERSION 2.0          RUN DATE:  12/20/2007     TIME:  14: 5:45
/PLANT NAME:  CPSES Units 3 & 4 C                METEOROLOGICAL INSTRUMENTATION
 DATA PERIOD: OLA  Ground-Level Re               WIND SENSORS HEIGHT:  10 meter
 TYPE OF RELEASE: lease                          DELTA-T HEIGHTS: 10 meter - 60 meter
 SOURCE OF DATA:  Met Data 2001-2006
 COMMENTS:  Data Period: Jan 2001-Dec 2006  Calc. No. TXUT-001-FSAR-2.3-CALC-022 Rev 0
 PROGRAM: PAVAN, 10/76, 8/79 REVISION, IMPLEMENTATION OF REGULATORY GUIDE 1.145
0SITE EXCLUSION BOUNDARY CALCULATIONS:
0  NW SECTOR     BOUNDARY DISTANCE =  600.0 METERS
0LATERAL PLUME MEANDER/BUILDING WAKE CREDIT ALLOWED
 AS A FUNCTION OF DOWNWIND DISTANCE.
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 MEANDER CREDIT IS FOR WINDSPEEDS LESS THAN 6 MPS.
 BUILDING WAKE CREDIT ALLOWED:   C=   .5     A=  2500.     D=   69.9
0BELOW ARE PRINTED THE ORDERED VALUES OF CHI/Q AND THE FREQUENCY WITH WHICH THAT VALUE IS REACHED OR EXCEEDED.
 THE TOP NUMBER IS THE CHI/Q.  THE MIDDLE NUMBER IS THE FREQUENCY NORMALIZED TO THIS SECTOR.
 THE THIRD NUMBER IS THE FREQUENCY WITH RESPECT TO ALL TIME.
0   1.223E-03   8.046E-04   5.503E-04   4.828E-04   4.706E-04   4.402E-04   3.621E-04   3.554E-04   3.507E-04   2.897E-04
         .010        .055        .149        .243        .469        .563        .750        .938       1.016       1.110
       .00120      .00670      .01814      .02959      .05721      .06865      .09154      .11443      .12396      .13541
0   2.824E-04   2.752E-04   2.751E-04   2.414E-04   2.369E-04   2.118E-04   2.104E-04   1.810E-04   1.718E-04   1.694E-04
        1.391       1.579       1.673       1.860       1.871       2.059       2.153       2.528       4.592       4.967
       .16974      .19263      .20407      .22696      .22831      .25120      .26264      .30842      .56019      .60597
0   1.578E-04   1.422E-04   1.412E-04   1.288E-04   1.263E-04   1.185E-04   1.059E-04   1.059E-04   1.052E-04   1.031E-04
        5.248       5.342       6.187       8.063       8.344       8.351      10.602      21.296      21.765      22.140
       .64030      .65175      .75475      .98363     1.01796     1.01878     1.29344     2.59809     2.65531     2.70109
0   8.852E-05   7.892E-05   7.108E-05   7.082E-05   6.795E-05   5.902E-05   5.659E-05   5.331E-05   4.527E-05   4.426E-05
       37.525      38.932      39.026      46.624      53.566      54.973      65.291      65.385      75.047      75.235
      4.57795     4.74961     4.76106     5.68804     6.53492     6.70658     7.96545     7.97689     9.15565     9.17854
0   3.772E-05   3.554E-05   3.554E-05   2.829E-05   2.666E-05   2.666E-05   2.133E-05   1.777E-05   1.777E-05   1.415E-05
       82.364      82.458      83.302      86.586      86.679      87.430      88.368      89.400      90.150      90.432
     10.04831    10.05975    10.16275    10.56330    10.57474    10.66630    10.78074    10.90663    10.99818    11.03251
0   1.333E-05   1.333E-05   1.066E-05   8.886E-06   7.678E-06   6.664E-06   5.119E-06   3.839E-06   3.332E-06   3.071E-06
       91.182      91.557      92.495      93.058      93.152      93.434      94.090      95.591      95.685      97.842
     11.12407    11.16985    11.28429    11.35295    11.36440    11.39873    11.47884    11.66195    11.67339    11.93661
0   2.559E-06   1.919E-06   9.597E-07
       99.250      99.906     100.000
     12.10827    12.18838    12.19983
0          X/Q PERCENTILES
 (BASED ON THE UPPER ENVELOPE OF THE
 ORDERED X/Q-FREQUENCY VALUES, AND AS
 PLOTTED ON A LOG-NORMAL GRAPH.)
0 PERCENT OF TIME CHI/Q IS EQUALED OR EXCEEDED
        CHI/Q      WITH RESPECT TO     WHEN THE WIND BLOWS
 SEC/CUBIC METER  THE TOTAL TIME      INTO THIS SECTOR ONLY

                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 3)=    .069
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 4)=    .124
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 5)=    .204
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 6)=    .605
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 9)=   6.531
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE(10)=   7.962
     3.529E-04              .122             1.000
     2.135E-04              .366             3.000
     1.691E-04              .610             5.000
     1.368E-04             1.220            10.000
     1.198E-04             1.830            15.000
     1.084E-04             2.440            20.000
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     1.009E-04              3.050              25.000
     9.523E-05              3.660              30.000
     9.059E-05              4.270              35.000
     8.454E-05              4.880              40.000
     7.754E-05              5.490              45.000
     7.163E-05              6.100              50.000
     6.634E-05              6.710              55.000
     6.125E-05              7.320              60.000
     5.683E-05              7.930              65.000
0    1.853E-04              0.5                 4.10
0ANNUAL AVERAGE =   4.75E-06
1USNRC COMPUTER CODE-PAVAN, VERSION 2.0          RUN DATE:  12/20/2007     TIME:  14: 5:45
/PLANT NAME:  CPSES Units 3 & 4 C                METEOROLOGICAL INSTRUMENTATION
 DATA PERIOD: OLA  Ground-Level Re               WIND SENSORS HEIGHT:  10 meter
 TYPE OF RELEASE: lease                          DELTA-T HEIGHTS: 10 meter - 60 meter
 SOURCE OF DATA:  Met Data 2001-2006
 COMMENTS:  Data Period: Jan 2001-Dec 2006  Calc. No. TXUT-001-FSAR-2.3-CALC-022 Rev 0
 PROGRAM: PAVAN, 10/76, 8/79 REVISION, IMPLEMENTATION OF REGULATORY GUIDE 1.145
0SITE EXCLUSION BOUNDARY CALCULATIONS:
0 NNW SECTOR     BOUNDARY DISTANCE =  600.0 METERS
0LATERAL PLUME MEANDER/BUILDING WAKE CREDIT ALLOWED
 AS A FUNCTION OF DOWNWIND DISTANCE.
 MEANDER CREDIT IS FOR WINDSPEEDS LESS THAN 6 MPS.
 BUILDING WAKE CREDIT ALLOWED:   C=   .5     A=  2500.     D=   69.9
0BELOW ARE PRINTED THE ORDERED VALUES OF CHI/Q AND THE FREQUENCY WITH WHICH THAT VALUE IS REACHED OR EXCEEDED.
 THE TOP NUMBER IS THE CHI/Q.  THE MIDDLE NUMBER IS THE FREQUENCY NORMALIZED TO THIS SECTOR.
 THE THIRD NUMBER IS THE FREQUENCY WITH RESPECT TO ALL TIME.
0   1.223E-03   8.046E-04   7.337E-04   5.503E-04   4.828E-04   4.706E-04   4.402E-04   4.235E-04   3.669E-04   3.621E-04
         .017        .069        .134        .199        .264        .395        .460        .525        .655        .850
       .00301      .01217      .02361      .03506      .04650      .06952      .08096      .09240      .11529      .14963
0   3.554E-04   3.507E-04   2.897E-04   2.824E-04   2.752E-04   2.751E-04   2.414E-04   2.369E-04   2.118E-04   2.104E-04
         .915        .956       1.151       1.281       1.346       1.411       1.606       1.610       1.805       1.870
       .16107      .16822      .20256      .22544      .23689      .24833      .28267      .28334      .31767      .32912
0   1.810E-04   1.718E-04   1.694E-04   1.578E-04   1.412E-04   1.288E-04   1.263E-04   1.185E-04   1.066E-04   1.059E-04
        2.260       3.300       3.560       3.756       4.081       5.186       5.316       5.321       5.386       6.556
       .39778      .58089      .62667      .66100      .71822      .91277      .93566      .93648      .94792     1.15392
0   1.059E-04   1.052E-04   1.031E-04   8.852E-05   7.892E-05   7.082E-05   6.878E-05   6.795E-05   5.902E-05   5.659E-05
       12.018      12.213      12.603      22.356      23.137      32.500      32.565      35.296      38.872      44.594
      2.11524     2.14957     2.21824     3.93488     4.07221     5.72018     5.73163     6.21229     6.84172     7.84882
0   5.331E-05   4.527E-05   4.426E-05   3.772E-05   3.554E-05   3.554E-05   3.412E-05   2.829E-05   2.666E-05   2.666E-05
       44.854      54.607      55.713      66.246      66.311      66.832      66.839      79.713      79.843      80.623
      7.89459     9.61123     9.80579    11.65976    11.67120    11.76276    11.76403    14.02999    14.05288    14.19021
0   2.213E-05   2.133E-05   1.777E-05   1.777E-05   1.415E-05   1.333E-05   1.333E-05   1.066E-05   1.024E-05   8.886E-06
       80.818      81.469      81.989      83.094      86.736      87.451      88.816      89.466      89.531      90.442
     14.22455    14.33899    14.43054    14.62510    15.26598    15.39186    15.63219    15.74664    15.75808    15.91830
0   7.678E-06   6.664E-06   6.664E-06   5.119E-06   3.839E-06   3.332E-06   3.071E-06   2.559E-06   1.919E-06   9.597E-07
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       90.507      91.807      92.327      92.848      93.888      94.408      96.099      97.789      99.480     100.000
     15.92975    16.15863    16.25019    16.34174    16.52485    16.61640    16.91395    17.21151    17.50906    17.60061
0          X/Q PERCENTILES
 (BASED ON THE UPPER ENVELOPE OF THE
 ORDERED X/Q-FREQUENCY VALUES, AND AS
 PLOTTED ON A LOG-NORMAL GRAPH.)
0 PERCENT OF TIME CHI/Q IS EQUALED OR EXCEEDED
        CHI/Q      WITH RESPECT TO     WHEN THE WIND BLOWS
 SEC/CUBIC METER  THE TOTAL TIME      INTO THIS SECTOR ONLY

                                                        HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 3)=    .168
                                                        HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 4)=    .248
                                                        HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 5)=    .626
                                                        HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 6)=   2.147
                                                        HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 8)=   6.208
                                                        HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 9)=   7.845
     3.411E-04              .176             1.000
     1.860E-04              .528             3.000
     1.497E-04              .880             5.000
     1.143E-04             1.760            10.000
     9.941E-05             2.640            15.000
     9.151E-05             3.520            20.000
     8.316E-05             4.400            25.000
     7.487E-05             5.280            30.000
     6.830E-05             6.160            35.000
     6.169E-05             7.040            40.000
0    1.915E-04             0.5               2.84
0ANNUAL AVERAGE =   5.37E-06
1USNRC COMPUTER CODE-PAVAN, VERSION 2.0          RUN DATE:  12/20/2007     TIME:  14: 5:45
/PLANT NAME:  CPSES Units 3 & 4 C                METEOROLOGICAL INSTRUMENTATION
 DATA PERIOD: OLA  Ground-Level Re               WIND SENSORS HEIGHT:  10 meter
 TYPE OF RELEASE: lease                          DELTA-T HEIGHTS: 10 meter - 60 meter
 SOURCE OF DATA:  Met Data 2001-2006
 COMMENTS:  Data Period: Jan 2001-Dec 2006  Calc. No. TXUT-001-FSAR-2.3-CALC-022 Rev 0
 PROGRAM: PAVAN, 10/76, 8/79 REVISION, IMPLEMENTATION OF REGULATORY GUIDE 1.145
0SITE EXCLUSION BOUNDARY CALCULATIONS:
0   N SECTOR     BOUNDARY DISTANCE =  600.0 METERS
0LATERAL PLUME MEANDER/BUILDING WAKE CREDIT ALLOWED
 AS A FUNCTION OF DOWNWIND DISTANCE.
 MEANDER CREDIT IS FOR WINDSPEEDS LESS THAN 6 MPS.
 BUILDING WAKE CREDIT ALLOWED:   C=   .5     A=  2500.     D=   69.9
0BELOW ARE PRINTED THE ORDERED VALUES OF CHI/Q AND THE FREQUENCY WITH WHICH THAT VALUE IS REACHED OR EXCEEDED.
 THE TOP NUMBER IS THE CHI/Q.  THE MIDDLE NUMBER IS THE FREQUENCY NORMALIZED TO THIS SECTOR.
 THE THIRD NUMBER IS THE FREQUENCY WITH RESPECT TO ALL TIME.
0   1.223E-03   8.046E-04   5.503E-04   4.828E-04   4.706E-04   4.402E-04   3.669E-04   3.621E-04   3.554E-04   3.507E-04
         .016        .094        .170        .245        .407        .482        .633        .935       1.312       1.354
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       .00241      .01431      .02576      .03720      .06175      .07319      .09608      .14186      .19908      .20544
0   2.897E-04   2.824E-04   2.752E-04   2.751E-04   2.414E-04   2.369E-04   2.201E-04   2.118E-04   2.104E-04   1.810E-04
       1.504       1.731       2.108       2.259       2.711       2.720       2.795       3.097       3.172       3.926
       .22833      .26266      .31988      .34277      .41144      .41278      .42423      .47000      .48145      .59589
0   1.718E-04   1.694E-04   1.578E-04   1.412E-04   1.376E-04   1.288E-04   1.263E-04   1.185E-04   1.059E-04   1.059E-04
       5.133       5.434       5.585       5.962       6.038       7.018       7.169       7.174       7.853      10.417
       .77900      .82478      .84767      .90489      .91633     1.06511     1.08799     1.08881     1.19181     1.58092
0   1.052E-04   1.031E-04   8.852E-05   8.589E-05   8.530E-05   7.892E-05   7.108E-05   7.082E-05   6.878E-05   6.795E-05
      10.643      11.095      15.469      15.544      15.620      16.298      16.374      20.521      20.597      22.859
     1.61525     1.68391     2.34768     2.35913     2.37057     2.47357     2.48501     3.11445     3.12589     3.46922
0   5.902E-05   5.659E-05   5.331E-05   4.527E-05   4.426E-05   3.772E-05   3.554E-05   3.554E-05   2.829E-05   2.666E-05
      25.272      30.173      30.249      38.920      40.127      50.986      51.061      51.513      66.293      66.369
     3.83544     4.57931     4.59076     5.90685     6.08996     7.73793     7.74938     7.81804    10.06112    10.07256
0   2.666E-05   2.213E-05   2.133E-05   1.777E-05   1.777E-05   1.415E-05   1.333E-05   1.333E-05   1.066E-05   8.886E-06
      67.047      67.198      68.405      68.932      70.742      76.548      77.303      80.620      81.902      83.561
    10.17556    10.19845    10.38156    10.46167    10.73633    11.61754    11.73198    12.23553    12.43008    12.68185
0   7.678E-06   6.664E-06   6.664E-06   5.119E-06   3.839E-06   3.332E-06   3.071E-06   2.559E-06   1.919E-06   9.597E-07
      83.637      86.804      88.764      89.217      90.348      92.007      93.515      95.626      98.567     100.000
    12.69330    13.17396    13.47151    13.54017    13.71184    13.96361    14.19250    14.51294    14.95926    15.17670
0          X/Q PERCENTILES
 (BASED ON THE UPPER ENVELOPE OF THE
 ORDERED X/Q-FREQUENCY VALUES, AND AS
 PLOTTED ON A LOG-NORMAL GRAPH.)
0 PERCENT OF TIME CHI/Q IS EQUALED OR EXCEEDED
        CHI/Q      WITH RESPECT TO     WHEN THE WIND BLOWS
 SEC/CUBIC METER  THE TOTAL TIME      INTO THIS SECTOR ONLY

                                                                HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 3)=    .199
                                                                HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 4)=    .205
                                                                HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 5)=    .342
                                                                HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 6)=    .824
                                                                HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 7)=   1.613
                                                                HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 8)=   2.345
                                                                HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 9)=   4.576
                                                                HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE(10)=   7.734
     3.897E-04              .152             1.000
     2.364E-04              .455             3.000
     1.778E-04              .759             5.000
     1.102E-04             1.518            10.000
     8.983E-05             2.277            15.000
     7.499E-05             3.035            20.000
     6.454E-05             3.794            25.000
     5.682E-05             4.553            30.000
     5.069E-05             5.312            35.000
     4.577E-05             6.071            40.000
     4.173E-05             6.830            45.000
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     3.833E-05              7.588              50.000
0    2.246E-04              0.5                 3.29
0ANNUAL AVERAGE =   4.27E-06
1USNRC COMPUTER CODE-PAVAN, VERSION 2.0          RUN DATE:  12/20/2007     TIME:  14: 5:45
/PLANT NAME:  CPSES Units 3 & 4 C                METEOROLOGICAL INSTRUMENTATION
 DATA PERIOD: OLA  Ground-Level Re               WIND SENSORS HEIGHT:  10 meter
 TYPE OF RELEASE: lease                          DELTA-T HEIGHTS: 10 meter - 60 meter
 SOURCE OF DATA:  Met Data 2001-2006
 COMMENTS:  Data Period: Jan 2001-Dec 2006  Calc. No. TXUT-001-FSAR-2.3-CALC-022 Rev 0
 PROGRAM: PAVAN, 10/76, 8/79 REVISION, IMPLEMENTATION OF REGULATORY GUIDE 1.145
0SITE EXCLUSION BOUNDARY CALCULATIONS:
0 NNE SECTOR     BOUNDARY DISTANCE =  600.0 METERS
0LATERAL PLUME MEANDER/BUILDING WAKE CREDIT ALLOWED
 AS A FUNCTION OF DOWNWIND DISTANCE.
 MEANDER CREDIT IS FOR WINDSPEEDS LESS THAN 6 MPS.
 BUILDING WAKE CREDIT ALLOWED:   C=   .5     A=  2500.     D=   69.9
0BELOW ARE PRINTED THE ORDERED VALUES OF CHI/Q AND THE FREQUENCY WITH WHICH THAT VALUE IS REACHED OR EXCEEDED.
 THE TOP NUMBER IS THE CHI/Q.  THE MIDDLE NUMBER IS THE FREQUENCY NORMALIZED TO THIS SECTOR.
 THE THIRD NUMBER IS THE FREQUENCY WITH RESPECT TO ALL TIME.
0   1.223E-03   8.046E-04   7.337E-04   5.503E-04   4.828E-04   4.706E-04   4.402E-04   4.235E-04   3.669E-04   3.621E-04
        .109        .410        .598        .787       1.163       1.642       2.207       2.395       3.525       4.466
      .00663      .02494      .03638      .04782      .07071      .09987      .13420      .14564      .21431      .27153
0   3.554E-04   3.507E-04   2.897E-04   2.824E-04   2.752E-04   2.751E-04   2.414E-04   2.369E-04   2.201E-04   2.118E-04
       6.159       6.238       7.367       7.932      10.002      10.943      12.261      12.294      12.670      13.611
      .37453      .37930      .44796      .48230      .60818      .66541      .74551      .74753      .77042      .82764
0   2.104E-04   1.834E-04   1.810E-04   1.718E-04   1.694E-04   1.578E-04   1.412E-04   1.288E-04   1.263E-04   1.066E-04
      13.800      13.988      15.493      18.128      18.881      19.258      20.387      22.269      22.645      22.834
      .83909      .85053      .94209     1.10231     1.14808     1.17097     1.23964     1.35408     1.37697     1.38841
0   1.059E-04   1.059E-04   1.052E-04   1.031E-04   8.852E-05   8.589E-05   8.530E-05   7.892E-05   7.108E-05   7.082E-05
      24.528      29.421      29.609      30.738      36.008      36.385      36.573      38.079      38.267      43.160
     1.49141     1.78896     1.80041     1.86907     2.18951     2.21240     2.22384     2.31540     2.32684     2.62439
0   6.795E-05   5.902E-05   5.659E-05   5.331E-05   4.527E-05   4.426E-05   3.772E-05   3.554E-05   2.829E-05   2.666E-05
      47.866      51.065      56.147      56.523      61.605      63.487      68.004      68.945      73.274      73.462
     2.91050     3.10505     3.41405     3.43694     3.74593     3.86037     4.13504     4.19226     4.45548     4.46692
0   2.666E-05   2.213E-05   2.133E-05   1.777E-05   1.777E-05   1.415E-05   1.333E-05   1.333E-05   1.066E-05   8.886E-06
      74.027      74.215      75.533      76.285      77.791      79.109      80.614      82.873      84.190      85.508
     4.50125     4.51270     4.59281     4.63858     4.73014     4.81025     4.90180     5.03913     5.11924     5.19935
0   6.664E-06   6.664E-06   5.119E-06   3.839E-06   3.332E-06   3.071E-06   2.559E-06   1.919E-06   9.597E-07
      87.202      88.143      89.084      90.401      91.342      93.413      95.483      99.059     100.000
     5.30235     5.35957     5.41679     5.49690     5.55413     5.68001     5.80590     6.02334     6.08056
0          X/Q PERCENTILES
 (BASED ON THE UPPER ENVELOPE OF THE
 ORDERED X/Q-FREQUENCY VALUES, AND AS
 PLOTTED ON A LOG-NORMAL GRAPH.)
0 PERCENT OF TIME CHI/Q IS EQUALED OR EXCEEDED
        CHI/Q      WITH RESPECT TO     WHEN THE WIND BLOWS
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 SEC/CUBIC METER  THE TOTAL TIME      INTO THIS SECTOR ONLY

                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 2)=    .036
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 3)=    .374
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 4)=    .665
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 5)=   1.147
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 6)=   1.867
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 7)=   2.908
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 8)=   3.411
     6.328E-04              .061             1.000
     4.516E-04              .182             3.000
     3.816E-04              .304             5.000
     2.867E-04              .608            10.000
     2.087E-04              .912            15.000
     1.600E-04             1.216            20.000
     1.278E-04             1.520            25.000
     1.057E-04             1.824            30.000
     9.149E-05             2.128            35.000
     8.074E-05             2.432            40.000
     7.214E-05             2.736            45.000
     6.467E-05             3.040            50.000
     5.796E-05             3.344            55.000
0    3.131E-04             0.5               8.22
0ANNUAL AVERAGE =   3.55E-06
1USNRC COMPUTER CODE-PAVAN, VERSION 2.0          RUN DATE:  12/20/2007     TIME:  14: 5:45
/PLANT NAME:  CPSES Units 3 & 4 C                METEOROLOGICAL INSTRUMENTATION
 DATA PERIOD: OLA  Ground-Level Re               WIND SENSORS HEIGHT:  10 meter
 TYPE OF RELEASE: lease                          DELTA-T HEIGHTS: 10 meter - 60 meter
 SOURCE OF DATA:  Met Data 2001-2006
 COMMENTS:  Data Period: Jan 2001-Dec 2006  Calc. No. TXUT-001-FSAR-2.3-CALC-022 Rev 0
 PROGRAM: PAVAN, 10/76, 8/79 REVISION, IMPLEMENTATION OF REGULATORY GUIDE 1.145
0SITE EXCLUSION BOUNDARY CALCULATIONS:
0  NE SECTOR     BOUNDARY DISTANCE =  600.0 METERS
0LATERAL PLUME MEANDER/BUILDING WAKE CREDIT ALLOWED
 AS A FUNCTION OF DOWNWIND DISTANCE.
 MEANDER CREDIT IS FOR WINDSPEEDS LESS THAN 6 MPS.
 BUILDING WAKE CREDIT ALLOWED:   C=   .5     A=  2500.     D=   69.9
0BELOW ARE PRINTED THE ORDERED VALUES OF CHI/Q AND THE FREQUENCY WITH WHICH THAT VALUE IS REACHED OR EXCEEDED.
 THE TOP NUMBER IS THE CHI/Q.  THE MIDDLE NUMBER IS THE FREQUENCY NORMALIZED TO THIS SECTOR.
 THE THIRD NUMBER IS THE FREQUENCY WITH RESPECT TO ALL TIME.
0   1.223E-03   8.046E-04   7.337E-04   5.503E-04   4.828E-04   4.706E-04   4.402E-04   4.235E-04   3.669E-04   3.621E-04
         .170        .640        .933       1.520       2.107       2.934       3.814       4.108       5.575       6.749
       .00663      .02494      .03638      .05927      .08216      .11438      .14871      .16016      .21738      .26316
0   3.554E-04   3.507E-04   2.897E-04   2.824E-04   2.752E-04   2.751E-04   2.414E-04   2.201E-04   2.118E-04   2.104E-04
      10.272      10.435      12.783      13.663      16.305      18.066      19.827      20.414      22.469      22.762
      .40049      .40685      .49840      .53273      .63573      .70440      .77306      .79595      .87606      .88750
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0   1.810E-04   1.718E-04   1.694E-04   1.578E-04   1.412E-04   1.288E-04   1.263E-04   1.185E-04   1.059E-04   1.059E-04
       25.111      28.046      29.513      30.100      31.568      33.329      33.916      33.958      36.600      40.122
       .97906     1.09350     1.15072     1.17361     1.23083     1.29950     1.32239     1.32402     1.42702     1.56435
0   1.052E-04   1.031E-04   8.852E-05   8.589E-05   7.892E-05   7.082E-05   6.795E-05   5.902E-05   5.659E-05   5.331E-05
       41.003      43.057      46.579      47.167      49.221      51.863      55.972      58.320      61.842      62.136
      1.59868     1.67879     1.81613     1.83901     1.91912     2.02212     2.18234     2.27390     2.41123     2.42267
0   4.527E-05   4.426E-05   4.265E-05   3.772E-05   3.554E-05   3.554E-05   2.829E-05   2.666E-05   2.666E-05   2.213E-05
       65.071      67.713      68.006      70.355      70.648      72.409      75.051      75.344      76.812      77.105
      2.53711     2.64011     2.65156     2.74311     2.75455     2.82322     2.92622     2.93766     2.99488     3.00633
0   2.133E-05   1.777E-05   1.777E-05   1.415E-05   1.333E-05   1.333E-05   1.066E-05   8.886E-06   7.678E-06   6.664E-06
       78.573      80.334      81.802      83.269      85.911      87.379      89.433      91.488      91.781      92.956
      3.06355     3.13222     3.18944     3.24666     3.34966     3.40688     3.48699     3.56710     3.57854     3.62432
0   6.664E-06   5.119E-06   3.839E-06   3.332E-06   3.071E-06   2.559E-06   1.919E-06   9.597E-07
       93.543      94.423      96.478      96.771      98.239      98.826      99.706     100.000
      3.64721     3.68154     3.76165     3.77309     3.83032     3.85320     3.88754     3.89898
0          X/Q PERCENTILES
 (BASED ON THE UPPER ENVELOPE OF THE
 ORDERED X/Q-FREQUENCY VALUES, AND AS
 PLOTTED ON A LOG-NORMAL GRAPH.)
0 PERCENT OF TIME CHI/Q IS EQUALED OR EXCEEDED
        CHI/Q      WITH RESPECT TO     WHEN THE WIND BLOWS
 SEC/CUBIC METER  THE TOTAL TIME      INTO THIS SECTOR ONLY

                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 2)=    .036
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 4)=    .704
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 5)=   1.149
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 6)=   1.677
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 7)=   2.180
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 8)=   2.409
     7.199E-04              .039             1.000
     5.251E-04              .117             3.000
     4.490E-04              .195             5.000
     3.586E-04              .390            10.000
     2.999E-04              .585            15.000
     2.494E-04              .780            20.000
     2.003E-04              .975            25.000
     1.659E-04             1.170            30.000
     1.358E-04             1.365            35.000
     1.138E-04             1.560            40.000
     9.620E-05             1.755            45.000
     8.145E-05             1.949            50.000
     6.990E-05             2.144            55.000
     5.983E-05             2.339            60.000
0    3.220E-04             0.5              12.82
0ANNUAL AVERAGE =   3.11E-06
1USNRC COMPUTER CODE-PAVAN, VERSION 2.0          RUN DATE:  12/20/2007     TIME:  14: 5:45
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/PLANT NAME:  CPSES Units 3 & 4 C                METEOROLOGICAL INSTRUMENTATION
 DATA PERIOD: OLA  Ground-Level Re               WIND SENSORS HEIGHT:  10 meter
 TYPE OF RELEASE: lease                          DELTA-T HEIGHTS: 10 meter - 60 meter
 SOURCE OF DATA:  Met Data 2001-2006
 COMMENTS:  Data Period: Jan 2001-Dec 2006  Calc. No. TXUT-001-FSAR-2.3-CALC-022 Rev 0
 PROGRAM: PAVAN, 10/76, 8/79 REVISION, IMPLEMENTATION OF REGULATORY GUIDE 1.145
0SITE EXCLUSION BOUNDARY CALCULATIONS:
0 ENE SECTOR     BOUNDARY DISTANCE =  600.0 METERS
0LATERAL PLUME MEANDER/BUILDING WAKE CREDIT ALLOWED
 AS A FUNCTION OF DOWNWIND DISTANCE.
 MEANDER CREDIT IS FOR WINDSPEEDS LESS THAN 6 MPS.
 BUILDING WAKE CREDIT ALLOWED:   C=   .5     A=  2500.     D=   69.9
0BELOW ARE PRINTED THE ORDERED VALUES OF CHI/Q AND THE FREQUENCY WITH WHICH THAT VALUE IS REACHED OR EXCEEDED.
 THE TOP NUMBER IS THE CHI/Q.  THE MIDDLE NUMBER IS THE FREQUENCY NORMALIZED TO THIS SECTOR.
 THE THIRD NUMBER IS THE FREQUENCY WITH RESPECT TO ALL TIME.
0   1.223E-03   8.046E-04   7.337E-04   5.503E-04   4.828E-04   4.706E-04   4.402E-04   3.669E-04   3.621E-04   3.554E-04
         .224        .718       1.105       1.877       2.650       3.220       4.379       6.311       7.856      14.811
       .00663      .02127      .03272      .05561      .07850      .09537      .12971      .18693      .23271      .43870
0   3.507E-04   2.897E-04   2.824E-04   2.752E-04   2.751E-04   2.414E-04   2.201E-04   2.118E-04   2.104E-04   1.834E-04
       14.999      16.931      17.703      21.953      26.590      28.522      30.454      31.613      31.999      32.385
       .44427      .50149      .52438      .65026      .78759      .84481      .90204      .93637      .94781      .95926
0   1.810E-04   1.718E-04   1.694E-04   1.578E-04   1.412E-04   1.288E-04   1.263E-04   1.059E-04   1.059E-04   1.052E-04
       34.704      40.113      40.886      41.658      43.204      45.908      46.681      48.999      52.863      53.636
      1.02792     1.18814     1.21103     1.23392     1.27970     1.35981     1.38270     1.45136     1.56580     1.58869
0   1.031E-04   8.852E-05   8.589E-05   7.892E-05   7.082E-05   6.795E-05   5.902E-05   5.659E-05   5.331E-05   4.527E-05
       55.181      57.499      58.272      60.977      63.295      68.704      70.636      73.341      74.113      75.659
      1.63447     1.70313     1.72602     1.80613     1.87480     2.03502     2.09224     2.17235     2.19524     2.24102
0   4.426E-05   3.772E-05   3.554E-05   2.829E-05   2.666E-05   2.666E-05   2.133E-05   1.777E-05   1.777E-05   1.415E-05
       77.204      78.750      79.909      82.613      83.000      84.932      86.863      87.636      88.795      89.568
      2.28679     2.33257     2.36690     2.44701     2.45846     2.51568     2.57290     2.59579     2.63012     2.65301
0   1.333E-05   1.333E-05   1.066E-05   8.886E-06   6.664E-06   6.664E-06   5.119E-06   3.839E-06   3.332E-06   3.071E-06
       91.500      93.045      93.818      94.204      95.364      96.136      96.523      96.909      97.682      98.455
      2.71023     2.75601     2.77890     2.79034     2.82467     2.84756     2.85901     2.87045     2.89334     2.91623
0   2.559E-06   1.919E-06   9.597E-07
       98.841      99.227     100.000
      2.92767     2.93912     2.96200
0          X/Q PERCENTILES
 (BASED ON THE UPPER ENVELOPE OF THE
 ORDERED X/Q-FREQUENCY VALUES, AND AS
 PLOTTED ON A LOG-NORMAL GRAPH.)
0 PERCENT OF TIME CHI/Q IS EQUALED OR EXCEEDED
        CHI/Q      WITH RESPECT TO     WHEN THE WIND BLOWS
 SEC/CUBIC METER  THE TOTAL TIME      INTO THIS SECTOR ONLY

                                                HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 2)=    .438
                                                HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 3)=    .787
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                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 4)=   1.210
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 5)=   1.633
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 6)=   2.033
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 7)=   2.170
     8.215E-04              .030             1.000
     5.972E-04              .089             3.000
     5.099E-04              .148             5.000
     4.067E-04              .296            10.000
     3.535E-04              .444            15.000
     3.123E-04              .592            20.000
     2.829E-04              .741            25.000
     2.408E-04              .889            30.000
     2.025E-04             1.037            35.000
     1.738E-04             1.185            40.000
     1.448E-04             1.333            45.000
     1.216E-04             1.481            50.000
     1.036E-04             1.629            55.000
     8.804E-05             1.777            60.000
     7.560E-05             1.925            65.000
     6.450E-05             2.073            70.000
0    3.361E-04             0.5              16.88
0ANNUAL AVERAGE =   2.75E-06
1USNRC COMPUTER CODE-PAVAN, VERSION 2.0          RUN DATE:  12/20/2007     TIME:  14: 5:45
/PLANT NAME:  CPSES Units 3 & 4 C                METEOROLOGICAL INSTRUMENTATION
 DATA PERIOD: OLA  Ground-Level Re               WIND SENSORS HEIGHT:  10 meter
 TYPE OF RELEASE: lease                          DELTA-T HEIGHTS: 10 meter - 60 meter
 SOURCE OF DATA:  Met Data 2001-2006
 COMMENTS:  Data Period: Jan 2001-Dec 2006  Calc. No. TXUT-001-FSAR-2.3-CALC-022 Rev 0
 PROGRAM: PAVAN, 10/76, 8/79 REVISION, IMPLEMENTATION OF REGULATORY GUIDE 1.145
0SITE EXCLUSION BOUNDARY CALCULATIONS:
0   E SECTOR     BOUNDARY DISTANCE =  600.0 METERS
0LATERAL PLUME MEANDER/BUILDING WAKE CREDIT ALLOWED
 AS A FUNCTION OF DOWNWIND DISTANCE.
 MEANDER CREDIT IS FOR WINDSPEEDS LESS THAN 6 MPS.
 BUILDING WAKE CREDIT ALLOWED:   C=   .5     A=  2500.     D=   69.9
0BELOW ARE PRINTED THE ORDERED VALUES OF CHI/Q AND THE FREQUENCY WITH WHICH THAT VALUE IS REACHED OR EXCEEDED.
 THE TOP NUMBER IS THE CHI/Q.  THE MIDDLE NUMBER IS THE FREQUENCY NORMALIZED TO THIS SECTOR.
 THE THIRD NUMBER IS THE FREQUENCY WITH RESPECT TO ALL TIME.
0   1.223E-03   8.046E-04   7.337E-04   5.503E-04   4.828E-04   4.706E-04   4.402E-04   3.669E-04   3.621E-04   3.554E-04
         .475       1.197       2.018       3.659       5.300       6.180       9.462      12.745      15.206      18.488
       .00663      .01670      .02814      .05103      .07392      .08619      .13197      .17775      .21208      .25786
0   3.507E-04   2.897E-04   2.824E-04   2.752E-04   2.751E-04   2.414E-04   2.369E-04   2.118E-04   2.104E-04   1.810E-04
      18.716      21.999      22.819      26.922      27.743      29.384      29.432      31.073      31.894      35.996
      .26104      .30681      .31826      .37548      .38692      .40981      .41048      .43337      .44482      .50204
0   1.718E-04   1.694E-04   1.578E-04   1.412E-04   1.288E-04   1.059E-04   1.059E-04   1.052E-04   1.031E-04   8.852E-05
      39.279      40.920      42.561      45.023      47.484      50.766      56.510      57.331      58.152      61.434
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       .54782      .57070      .59359      .62793      .66226      .70804      .78815      .79959      .81103      .85681
0   8.589E-05   7.892E-05   7.108E-05   7.082E-05   6.878E-05   6.795E-05   5.902E-05   5.659E-05   5.331E-05   4.527E-05
       62.254      63.075      63.895      66.357      67.178      73.742      75.383      79.486      80.307      83.589
       .86826      .87970      .89114      .92548      .93692     1.02848     1.05136     1.10859     1.12003     1.16581
0   3.772E-05   3.554E-05   2.829E-05   2.666E-05   2.133E-05   1.777E-05   1.777E-05   1.415E-05   1.333E-05   1.066E-05
       86.051      86.871      89.333      90.153      91.794      92.615      94.256      95.897      96.718      97.538
      1.20014     1.21158     1.24592     1.25736     1.28025     1.29169     1.31458     1.33747     1.34891     1.36036
0   6.664E-06   3.839E-06   9.597E-07
       98.359      99.179     100.000
      1.37180     1.38325     1.39469
0          X/Q PERCENTILES
 (BASED ON THE UPPER ENVELOPE OF THE
 ORDERED X/Q-FREQUENCY VALUES, AND AS
 PLOTTED ON A LOG-NORMAL GRAPH.)
0 PERCENT OF TIME CHI/Q IS EQUALED OR EXCEEDED
        CHI/Q      WITH RESPECT TO     WHEN THE WIND BLOWS
 SEC/CUBIC METER  THE TOTAL TIME      INTO THIS SECTOR ONLY

                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 2)=    .258
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 3)=    .386
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 4)=    .570
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 5)=    .799
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 6)=    .810
     9.752E-04              .014             1.000
     6.843E-04              .042             3.000
     5.748E-04              .070             5.000
     4.485E-04              .139            10.000
     3.852E-04              .209            15.000
     3.385E-04              .279            20.000
     2.941E-04              .349            25.000
     2.499E-04              .418            30.000
     2.064E-04              .488            35.000
     1.744E-04              .558            40.000
     1.484E-04              .628            45.000
     1.279E-04              .697            50.000
     1.117E-04              .767            55.000
0    2.003E-04             0.5              35.85
0ANNUAL AVERAGE =   1.64E-06
1USNRC COMPUTER CODE-PAVAN, VERSION 2.0          RUN DATE:  12/20/2007     TIME:  14: 5:45
/PLANT NAME:  CPSES Units 3 & 4 C                METEOROLOGICAL INSTRUMENTATION
 DATA PERIOD: OLA  Ground-Level Re               WIND SENSORS HEIGHT:  10 meter
 TYPE OF RELEASE: lease                          DELTA-T HEIGHTS: 10 meter - 60 meter
 SOURCE OF DATA:  Met Data 2001-2006
 COMMENTS:  Data Period: Jan 2001-Dec 2006  Calc. No. TXUT-001-FSAR-2.3-CALC-022 Rev 0
 PROGRAM: PAVAN, 10/76, 8/79 REVISION, IMPLEMENTATION OF REGULATORY GUIDE 1.145
0SITE EXCLUSION BOUNDARY CALCULATIONS:
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0 ESE SECTOR     BOUNDARY DISTANCE =  600.0 METERS
0LATERAL PLUME MEANDER/BUILDING WAKE CREDIT ALLOWED
 AS A FUNCTION OF DOWNWIND DISTANCE.
 MEANDER CREDIT IS FOR WINDSPEEDS LESS THAN 6 MPS.
 BUILDING WAKE CREDIT ALLOWED:   C=   .5     A=  2500.     D=   69.9
0BELOW ARE PRINTED THE ORDERED VALUES OF CHI/Q AND THE FREQUENCY WITH WHICH THAT VALUE IS REACHED OR EXCEEDED.
 THE TOP NUMBER IS THE CHI/Q.  THE MIDDLE NUMBER IS THE FREQUENCY NORMALIZED TO THIS SECTOR.
 THE THIRD NUMBER IS THE FREQUENCY WITH RESPECT TO ALL TIME.
0   1.223E-03   8.046E-04   7.337E-04   5.503E-04   4.828E-04   4.706E-04   4.402E-04   3.669E-04   3.621E-04   3.554E-04
         .261        .693       1.143       2.942       3.842       4.446       5.796       7.146       8.496      10.746
       .00663      .01761      .02906      .07483      .09772      .11307      .14740      .18173      .21606      .27329
0   3.507E-04   2.897E-04   2.824E-04   2.752E-04   2.751E-04   2.414E-04   2.118E-04   2.104E-04   1.810E-04   1.718E-04
      10.902      12.252      12.702      15.402      15.852      17.652      19.452      19.902      22.152      25.752
      .27726      .31159      .32304      .39170      .40315      .44892      .49470      .50615      .56337      .65492
0   1.694E-04   1.578E-04   1.412E-04   1.288E-04   1.263E-04   1.059E-04   1.059E-04   1.052E-04   1.031E-04   8.852E-05
      27.102      27.552      28.452      31.151      31.601      33.851      40.151      41.051      42.401      48.251
      .68925      .70070      .72359      .79225      .80370      .86092     1.02114     1.04403     1.07836     1.22713
0   8.589E-05   7.892E-05   7.082E-05   6.795E-05   5.902E-05   5.659E-05   5.331E-05   4.527E-05   4.426E-05   3.772E-05
      48.701      49.601      54.551      59.501      61.301      67.601      68.051      73.901      75.251      80.650
     1.23858     1.26147     1.38735     1.51324     1.55902     1.71924     1.73068     1.87946     1.91379     2.05112
0   3.554E-05   2.829E-05   2.666E-05   2.213E-05   2.133E-05   1.777E-05   1.415E-05   1.333E-05   1.333E-05   1.066E-05
      81.100      88.750      89.200      89.650      90.100      90.550      94.150      94.600      95.050      95.500
     2.06257     2.25712     2.26856     2.28001     2.29145     2.30290     2.39445     2.40589     2.41734     2.42878
0   8.886E-06   7.678E-06   6.664E-06   6.664E-06   3.332E-06   3.071E-06   1.919E-06   9.597E-07
      95.950      96.400      96.850      97.750      98.200      98.650      99.550     100.000
     2.44023     2.45167     2.46311     2.48600     2.49745     2.50889     2.53178     2.54322
0          X/Q PERCENTILES
 (BASED ON THE UPPER ENVELOPE OF THE
 ORDERED X/Q-FREQUENCY VALUES, AND AS
 PLOTTED ON A LOG-NORMAL GRAPH.)
0 PERCENT OF TIME CHI/Q IS EQUALED OR EXCEEDED
        CHI/Q      WITH RESPECT TO     WHEN THE WIND BLOWS
 SEC/CUBIC METER  THE TOTAL TIME      INTO THIS SECTOR ONLY

                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 2)=    .273
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 3)=    .403
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 4)=    .688
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 5)=   1.077
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 6)=   1.226
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 7)=   1.512
     8.122E-04              .025             1.000
     5.650E-04              .076             3.000
     4.721E-04              .127             5.000
     3.653E-04              .254            10.000
     2.855E-04              .381            15.000
     2.238E-04              .509            20.000
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     1.826E-04              .636            25.000
     1.517E-04              .763            30.000
     1.280E-04              .890            35.000
     1.101E-04             1.017            40.000
     9.613E-05             1.144            45.000
     8.468E-05             1.272            50.000
     7.511E-05             1.399            55.000
0    2.272E-04             0.5              19.66
0ANNUAL AVERAGE =   2.09E-06
1USNRC COMPUTER CODE-PAVAN, VERSION 2.0          RUN DATE:  12/20/2007     TIME:  14: 5:45
/PLANT NAME:  CPSES Units 3 & 4 C                METEOROLOGICAL INSTRUMENTATION
 DATA PERIOD: OLA  Ground-Level Re               WIND SENSORS HEIGHT:  10 meter
 TYPE OF RELEASE: lease                          DELTA-T HEIGHTS: 10 meter - 60 meter
 SOURCE OF DATA:  Met Data 2001-2006
 COMMENTS:  Data Period: Jan 2001-Dec 2006  Calc. No. TXUT-001-FSAR-2.3-CALC-022 Rev 0
 PROGRAM: PAVAN, 10/76, 8/79 REVISION, IMPLEMENTATION OF REGULATORY GUIDE 1.145
0SITE EXCLUSION BOUNDARY CALCULATIONS:
0  SE SECTOR     BOUNDARY DISTANCE =  600.0 METERS
0LATERAL PLUME MEANDER/BUILDING WAKE CREDIT ALLOWED
 AS A FUNCTION OF DOWNWIND DISTANCE.
 MEANDER CREDIT IS FOR WINDSPEEDS LESS THAN 6 MPS.
 BUILDING WAKE CREDIT ALLOWED:   C=   .5     A=  2500.     D=   69.9
0BELOW ARE PRINTED THE ORDERED VALUES OF CHI/Q AND THE FREQUENCY WITH WHICH THAT VALUE IS REACHED OR EXCEEDED.
 THE TOP NUMBER IS THE CHI/Q.  THE MIDDLE NUMBER IS THE FREQUENCY NORMALIZED TO THIS SECTOR.
 THE THIRD NUMBER IS THE FREQUENCY WITH RESPECT TO ALL TIME.
0   1.223E-03   8.046E-04   7.337E-04   5.503E-04   4.828E-04   4.706E-04   4.402E-04   3.669E-04   3.621E-04   3.554E-04
         .101        .274        .514        .753        .993       1.347       1.827       2.786       3.266       7.103
       .00482      .01306      .02450      .03595      .04739      .06427      .08716      .13294      .15582      .33893
0   3.507E-04   2.897E-04   2.824E-04   2.752E-04   2.751E-04   2.414E-04   2.369E-04   2.118E-04   2.104E-04   1.810E-04
        7.170       7.649       7.889       9.328      10.287      11.247      11.261      11.741      11.980      13.659
       .34211      .36500      .37644      .44511      .49089      .53666      .53734      .56023      .57167      .65178
0   1.718E-04   1.694E-04   1.578E-04   1.412E-04   1.288E-04   1.263E-04   1.059E-04   1.059E-04   1.052E-04   1.031E-04
       19.655      20.375      20.614      21.814      25.411      25.651      28.049      34.525      34.765      35.244
       .93789      .97222      .98366     1.04088     1.21255     1.22399     1.33844     1.64743     1.65888     1.68176
0   8.852E-05   8.530E-05   7.892E-05   7.082E-05   6.795E-05   5.902E-05   5.659E-05   5.331E-05   4.527E-05   4.426E-05
       41.720      41.960      42.919      47.476      51.313      52.752      56.830      57.069      61.626      62.106
      1.99076     2.00220     2.04798     2.26542     2.44853     2.51720     2.71175     2.72319     2.94063     2.96352
0   3.772E-05   3.554E-05   2.829E-05   2.666E-05   2.213E-05   2.133E-05   1.777E-05   1.777E-05   1.415E-05   1.333E-05
       67.862      68.342      78.415      79.134      79.374      80.333      80.573      81.293      87.768      88.248
      3.23818     3.26107     3.74173     3.77606     3.78751     3.83329     3.84473     3.87906     4.18806     4.21095
0   1.333E-05   1.066E-05   8.886E-06   6.664E-06   6.664E-06   5.119E-06   3.839E-06   3.332E-06   3.071E-06   2.559E-06
       89.687      90.407      91.126      92.565      94.963      95.203      95.443      96.642      96.882      97.362
      4.27961     4.31395     4.34828     4.41694     4.53139     4.54283     4.55428     4.61150     4.62294     4.64583
0   1.919E-06   9.597E-07
       98.321     100.000
      4.69161     4.77172
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0          X/Q PERCENTILES
 (BASED ON THE UPPER ENVELOPE OF THE
 ORDERED X/Q-FREQUENCY VALUES, AND AS
 PLOTTED ON A LOG-NORMAL GRAPH.)
0 PERCENT OF TIME CHI/Q IS EQUALED OR EXCEEDED
        CHI/Q      WITH RESPECT TO     WHEN THE WIND BLOWS
 SEC/CUBIC METER  THE TOTAL TIME      INTO THIS SECTOR ONLY

                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 2)=    .339
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 3)=    .490
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 4)=    .971
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 5)=   1.657
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 6)=   1.989
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 7)=   2.446
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 8)=   2.709
     6.593E-04              .048             1.000
     4.724E-04              .143             3.000
     4.002E-04              .239             5.000
     2.807E-04              .477            10.000
     2.115E-04              .716            15.000
     1.717E-04              .954            20.000
     1.417E-04             1.193            25.000
     1.204E-04             1.432            30.000
     1.046E-04             1.670            35.000
     9.216E-05             1.909            40.000
     8.044E-05             2.147            45.000
     7.027E-05             2.386            50.000
     6.003E-05             2.624            55.000
0    2.717E-04             0.5              10.48
0ANNUAL AVERAGE =   2.66E-06
1USNRC COMPUTER CODE-PAVAN, VERSION 2.0          RUN DATE:  12/20/2007     TIME:  14: 5:45
/PLANT NAME:  CPSES Units 3 & 4 C                METEOROLOGICAL INSTRUMENTATION
 DATA PERIOD: OLA  Ground-Level Re               WIND SENSORS HEIGHT:  10 meter
 TYPE OF RELEASE: lease                          DELTA-T HEIGHTS: 10 meter - 60 meter
 SOURCE OF DATA:  Met Data 2001-2006
 COMMENTS:  Data Period: Jan 2001-Dec 2006  Calc. No. TXUT-001-FSAR-2.3-CALC-022 Rev 0
 PROGRAM: PAVAN, 10/76, 8/79 REVISION, IMPLEMENTATION OF REGULATORY GUIDE 1.145
0SITE EXCLUSION BOUNDARY CALCULATIONS:
0 SSE SECTOR     BOUNDARY DISTANCE =  600.0 METERS
0LATERAL PLUME MEANDER/BUILDING WAKE CREDIT ALLOWED
 AS A FUNCTION OF DOWNWIND DISTANCE.
 MEANDER CREDIT IS FOR WINDSPEEDS LESS THAN 6 MPS.
 BUILDING WAKE CREDIT ALLOWED:   C=   .5     A=  2500.     D=   69.9
0BELOW ARE PRINTED THE ORDERED VALUES OF CHI/Q AND THE FREQUENCY WITH WHICH THAT VALUE IS REACHED OR EXCEEDED.
 THE TOP NUMBER IS THE CHI/Q.  THE MIDDLE NUMBER IS THE FREQUENCY NORMALIZED TO THIS SECTOR.
 THE THIRD NUMBER IS THE FREQUENCY WITH RESPECT TO ALL TIME.
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0   1.223E-03   8.046E-04   4.828E-04   4.706E-04   4.402E-04   3.621E-04   3.554E-04   3.507E-04   2.897E-04   2.752E-04
        .010        .053        .235        .406        .588        .770       1.133       1.209       1.391       1.573
      .00060      .00335      .01479      .02553      .03698      .04842      .07131      .07608      .08752      .09897
0   2.369E-04   2.118E-04   2.104E-04   1.810E-04   1.718E-04   1.694E-04   1.578E-04   1.412E-04   1.288E-04   1.263E-04
       1.594       1.958       2.140       2.504       3.050       3.413       3.777       4.323       4.687       4.869
      .10031      .12320      .13465      .15754      .19187      .21476      .23765      .27198      .29487      .30631
0   1.066E-04   1.059E-04   1.059E-04   1.052E-04   8.852E-05   7.892E-05   7.108E-05   7.082E-05   6.795E-05   5.902E-05
       5.050       5.960       8.143       8.506      10.871      12.326      12.508      14.145      17.783      18.875
      .31776      .37498      .51231      .53520      .68397      .77553      .78697      .88997     1.11885     1.18752
0   5.659E-05   5.331E-05   4.527E-05   4.426E-05   3.772E-05   3.554E-05   2.829E-05   2.666E-05   2.666E-05   2.213E-05
      23.786      24.149      30.880      31.425      40.702      42.157      59.255      59.437      60.529      60.892
     1.49652     1.51940     1.94284     1.97717     2.56083     2.65239     3.72815     3.73959     3.80826     3.83115
0   2.133E-05   1.777E-05   1.777E-05   1.415E-05   1.333E-05   1.333E-05   1.066E-05   8.886E-06   6.664E-06   6.664E-06
      61.620      62.529      63.439      77.263      78.354      80.355      81.629      82.902      84.721      87.813
     3.87692     3.93414     3.99137     4.86113     4.92980     5.05568     5.13579     5.21590     5.33034     5.52490
0   5.119E-06   3.839E-06   3.332E-06   3.071E-06   2.559E-06   1.919E-06   9.597E-07
      88.359      88.904      91.997      93.088      94.179      96.726     100.000
     5.55923     5.59356     5.78812     5.85678     5.92545     6.08567     6.29166
0          X/Q PERCENTILES
 (BASED ON THE UPPER ENVELOPE OF THE
 ORDERED X/Q-FREQUENCY VALUES, AND AS
 PLOTTED ON A LOG-NORMAL GRAPH.)
0 PERCENT OF TIME CHI/Q IS EQUALED OR EXCEEDED
        CHI/Q      WITH RESPECT TO     WHEN THE WIND BLOWS
 SEC/CUBIC METER  THE TOTAL TIME      INTO THIS SECTOR ONLY

                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 2)=    .037
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 3)=    .076
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 4)=    .237
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 5)=    .535
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 6)=   1.495
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 7)=   3.725
    3.728E-04              .063             1.000
    1.867E-04              .189             3.000
    1.377E-04              .315             5.000
    9.592E-05              .629            10.000
    7.547E-05              .944            15.000
    6.319E-05             1.258            20.000
    5.462E-05             1.573            25.000
    4.788E-05             1.887            30.000
    4.272E-05             2.202            35.000
    3.861E-05             2.517            40.000
    3.525E-05             2.831            45.000
    3.245E-05             3.146            50.000
    3.006E-05             3.460            55.000
0   1.090E-04             0.5               7.95
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0ANNUAL AVERAGE =   1.57E-06
1USNRC COMPUTER CODE-PAVAN, VERSION 2.0          RUN DATE:  12/20/2007     TIME:  14: 5:45
/PLANT NAME:  CPSES Units 3 & 4 C                METEOROLOGICAL INSTRUMENTATION
 DATA PERIOD: OLA  Ground-Level Re               WIND SENSORS HEIGHT:  10 meter
 TYPE OF RELEASE: lease                          DELTA-T HEIGHTS: 10 meter - 60 meter
 SOURCE OF DATA:  Met Data 2001-2006
 COMMENTS:  Data Period: Jan 2001-Dec 2006  Calc. No. TXUT-001-FSAR-2.3-CALC-022 Rev 0
 PROGRAM: PAVAN, 10/76, 8/79 REVISION, IMPLEMENTATION OF REGULATORY GUIDE 1.145
0SITE EXCLUSION BOUNDARY CALCULATIONS:
 DIRECTION-INDEPENDENT (S.R.P 2.3.4) MODEL.
 MINIMUM BOUNDARY DISTANCE =  600.0 METERS.
 BUILDING WAKE CREDIT ALLOWED:   C=   .5     A=  2500.     D=   69.9
0BELOW ARE PRINTED THE ORDERED VALUES OF CHI/Q AND THE FREQUENCY WITH WHICH THAT VALUE IS REACHED OR EXCEEDED.
 THE TOP NUMBER IS THE CHI/Q.  THE MIDDLE NUMBER IS THE FREQUENCY NORMALIZED TO THIS SECTOR.
 THE THIRD NUMBER IS THE FREQUENCY WITH RESPECT TO ALL TIME.
0   2.446E-03   1.467E-03   1.145E-03   1.100E-03   8.804E-04   7.869E-04   7.337E-04   7.082E-04   6.871E-04   5.502E-04
         .046        .126        .240        .412        .664        .938       1.305       1.339       1.522       2.174
       .04578      .12589      .24033      .41199      .66377      .93843     1.30465     1.33898     1.52209     2.17441
0   5.153E-04   5.030E-04   4.721E-04   4.123E-04   3.668E-04   3.541E-04   3.436E-04   3.018E-04   2.833E-04   2.751E-04
        2.541       2.655       2.941       3.365       4.212       4.704       5.161       5.356       5.848       6.226
      2.54063     2.65507     2.94118     3.36461     4.21149     4.70359     5.16137     5.35592     5.84802     6.22568
0   2.577E-04   2.369E-04   2.361E-04   2.263E-04   2.201E-04   1.834E-04   1.811E-04   1.770E-04   1.718E-04   1.509E-04
        6.958       6.981       7.725       8.137       8.251       8.274       8.686      10.391      11.936      12.566
      6.95812     6.98100     7.72488     8.13688     8.25132     8.27421     8.68620    10.39139    11.93637    12.56581
0   1.422E-04   1.376E-04   1.288E-04   1.185E-04   1.180E-04   1.132E-04   1.066E-04   1.031E-04   8.852E-05   8.589E-05
       12.589      12.600      13.790      13.802      19.158      20.897      20.989      21.458      27.821      27.924
     12.58869    12.60014    13.79034    13.80179    19.15770    20.89723    20.98878    21.45800    27.82101    27.92401
0   8.530E-05   7.545E-05   7.108E-05   7.082E-05   6.878E-05   5.902E-05   5.659E-05   5.331E-05   5.331E-05   4.527E-05
       28.027      34.012      34.184      38.762      38.796      40.673      48.455      48.467      48.936      57.462
     28.02701    34.01236    34.18403    38.76173    38.79607    40.67292    48.45502    48.46647    48.93568    57.46167
0   4.426E-05   4.265E-05   3.772E-05   3.554E-05   3.554E-05   3.412E-05   2.829E-05   2.666E-05   2.666E-05   2.213E-05
       58.252      58.309      66.377      66.469      67.579      67.590      76.723      76.997      77.924      78.050
     58.25132    58.30854    66.37675    66.46830    67.57840    67.58984    76.72237    76.99703    77.92402    78.04990
0   2.133E-05   1.777E-05   1.777E-05   1.536E-05   1.415E-05   1.333E-05   1.333E-05   1.228E-05   1.066E-05   1.024E-05
       79.023      80.019      81.106      81.129      84.905      85.947      87.446      87.457      88.419      88.487
     79.02266    80.01831    81.10551    81.12840    84.90501    85.94644    87.44564    87.45708    88.41840    88.48707
0   8.886E-06   7.678E-06   6.664E-06   6.664E-06   5.119E-06   3.839E-06   3.332E-06   3.071E-06   2.559E-06   1.919E-06
       89.449      89.609      90.936      91.932      92.756      94.095      94.942      96.407      97.677      99.222
     89.44839    89.60860    90.93613    91.93178    92.75577    94.09475    94.94162    96.40649    97.67680    99.22178
0   9.597E-07
      100.000
     99.99999
0          X/Q PERCENTILES
 (BASED ON THE UPPER ENVELOPE OF THE
 ORDERED X/Q-FREQUENCY VALUES, AND AS
 PLOTTED ON A LOG-NORMAL GRAPH.)
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0 PERCENT OF TIME CHI/Q IS EQUALED OR EXCEEDED
        CHI/Q      WITH RESPECT TO     WHEN THE WIND BLOWS
 SEC/CUBIC METER  THE TOTAL TIME      INTO THIS SECTOR ONLY

                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 2)=   1.520
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 3)=   5.158
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 4)=   8.133
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 5)=  11.934
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 6)=  20.903
     8.216E-04              1.000              1.000
     4.759E-04              3.000              3.000
     3.505E-04              5.000              5.000
     1.958E-04             10.000             10.000
     1.463E-04             15.000             15.000
     1.173E-04             20.000             20.000
     1.003E-04             25.000             25.000
     8.767E-05             30.000             30.000
     7.742E-05             35.000             35.000
     6.882E-05             40.000             40.000
     6.143E-05             45.000             45.000
     5.494E-05             50.000             50.000
     4.914E-05             55.000             55.000
     4.387E-05             60.000             60.000
     3.900E-05             65.000             65.000
0    3.505E-04              5.0                5.00
1USNRC COMPUTER CODE-PAVAN, VERSION 2.0          RUN DATE:  12/20/2007     TIME:  14: 5:45
/PLANT NAME:  CPSES Units 3 & 4 C                METEOROLOGICAL INSTRUMENTATION
 DATA PERIOD: OLA  Ground-Level Re               WIND SENSORS HEIGHT:  10 meter
 TYPE OF RELEASE: lease                          DELTA-T HEIGHTS: 10 meter - 60 meter
 SOURCE OF DATA:  Met Data 2001-2006
 COMMENTS:  Data Period: Jan 2001-Dec 2006  Calc. No. TXUT-001-FSAR-2.3-CALC-022 Rev 0
 PROGRAM: PAVAN, 10/76, 8/79 REVISION, IMPLEMENTATION OF REGULATORY GUIDE 1.145
0SITE EXCLUSION BOUNDARY CALCULATIONS:
0FIVE PERCENT OVERALL SITE LIMIT
 BUILDING WAKE CREDIT ALLOWED:   C=   .5     A=  2500.     D=   69.9
0BELOW ARE PRINTED THE ORDERED VALUES OF CHI/Q AND THE FREQUENCY WITH WHICH THAT VALUE IS REACHED OR EXCEEDED.
 THE TOP NUMBER IS THE CHI/Q.  THE MIDDLE NUMBER IS THE FREQUENCY NORMALIZED TO THIS SECTOR.
 THE THIRD NUMBER IS THE FREQUENCY WITH RESPECT TO ALL TIME.
0   1.223E-03   8.046E-04   7.337E-04   5.503E-04   4.828E-04   4.706E-04   4.402E-04   4.235E-04   3.669E-04   3.621E-04
         .046        .160        .240        .412        .595        .870       1.122       1.156       1.522       1.888
       .04578      .16022      .24033      .41199      .59510      .86976     1.12154     1.15587     1.52209     1.88830
0   3.554E-04   3.507E-04   2.897E-04   2.824E-04   2.752E-04   2.751E-04   2.414E-04   2.369E-04   2.201E-04   2.118E-04
        2.735       2.850       3.273       3.559       4.212       4.589       5.047       5.070       5.184       5.676
      2.73518     2.84962     3.27306     3.55917     4.21149     4.58915     5.04692     5.06981     5.18425     5.67636
0   2.104E-04   1.834E-04   1.810E-04   1.718E-04   1.694E-04   1.578E-04   1.422E-04   1.412E-04   1.376E-04   1.288E-04
        5.871       5.894       6.626       8.171       8.663       9.075       9.098       9.842       9.854      11.044
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      5.87091     5.89379     6.62623     8.17120     8.66330     9.07530     9.09819     9.84206     9.85351    11.04371
0   1.263E-04   1.185E-04   1.066E-04   1.059E-04   1.059E-04   1.052E-04   1.031E-04   8.852E-05   8.589E-05   8.530E-05
       11.456      11.467      11.559      13.264      18.620      19.249      19.719      26.082      26.185      26.288
     11.45570    11.46715    11.55870    13.26390    18.61981    19.24924    19.71846    26.08146    26.18446    26.28746
0   7.892E-05   7.108E-05   7.082E-05   6.878E-05   6.795E-05   5.902E-05   5.659E-05   5.331E-05   5.331E-05   4.527E-05
       28.027      28.199      32.776      32.811      38.796      40.673      48.455      48.467      48.936      57.462
     28.02699    28.19865    32.77635    32.81068    38.79604    40.67289    48.45499    48.46643    48.93564    57.46162
0   4.426E-05   4.265E-05   3.772E-05   3.554E-05   3.554E-05   3.412E-05   2.829E-05   2.666E-05   2.666E-05   2.213E-05
       58.251      58.309      66.377      66.468      67.579      67.590      76.723      76.997      77.924      78.050
     58.25127    58.30849    66.37669    66.46824    67.57832    67.58978    76.72230    76.99696    77.92393    78.04980
0   2.133E-05   1.777E-05   1.777E-05   1.536E-05   1.415E-05   1.333E-05   1.333E-05   1.228E-05   1.066E-05   1.024E-05
       79.023      80.018      81.106      81.129      84.905      85.947      87.446      87.457      88.419      88.487
     79.02256    80.01820    81.10538    81.12827    84.90488    85.94630    87.44547    87.45692    88.41823    88.48689
0   8.886E-06   7.678E-06   6.664E-06   6.664E-06   5.119E-06   3.839E-06   3.332E-06   3.071E-06   2.559E-06   1.919E-06
       89.448      89.609      90.936      91.932      92.756      94.095      94.942      96.407      97.677      99.222
     89.44820    89.60841    90.93594    91.93158    92.75556    94.09452    94.94139    96.40625    97.67656    99.22152
0   9.597E-07
      100.000
     99.99973
0          X/Q PERCENTILES
 (BASED ON THE UPPER ENVELOPE OF THE
 ORDERED X/Q-FREQUENCY VALUES, AND AS
 PLOTTED ON A LOG-NORMAL GRAPH.)
0 PERCENT OF TIME CHI/Q IS EQUALED OR EXCEEDED
        CHI/Q      WITH RESPECT TO     WHEN THE WIND BLOWS
 SEC/CUBIC METER  THE TOTAL TIME      INTO THIS SECTOR ONLY

                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 5)=   4.586
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 6)=   8.660
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 7)=  11.453
     4.625E-04              1.000              1.000
     3.420E-04              3.000              3.000
     2.587E-04              5.000              5.000
     1.461E-04             10.000             10.000
     1.153E-04             15.000             15.000
     1.031E-04             20.000             20.000
     9.097E-05             25.000             25.000
     8.130E-05             30.000             30.000
     7.327E-05             35.000             35.000
     6.638E-05             40.000             40.000
     6.037E-05             45.000             45.000
0    2.587E-04              5.0                5.00
1USNRC COMPUTER CODE-PAVAN, VERSION 2.0          RUN DATE:  12/20/2007     TIME:  14: 5:45
/PLANT NAME:  CPSES Units 3 & 4 C                METEOROLOGICAL INSTRUMENTATION
 DATA PERIOD: OLA  Ground-Level Re               WIND SENSORS HEIGHT:  10 meter
 TYPE OF RELEASE: lease                          DELTA-T HEIGHTS: 10 meter - 60 meter
```

SOURCE OF DATA: Met Data 2001-2006
COMMENTS: Data Period: Jan 2001-Dec 2006 Calc. No. TXUT-001-FSAR-2.3-CALC-022 Rev 0
PROGRAM: PAVAN, 10/76, 8/79 REVISION, IMPLEMENTATION OF REGULATORY GUIDE 1.145
0 RELATIVE CONCENTRATION (X/Q) VALUES (SEC/CUBIC METER)
VERSUS
AVERAGING TIME

DOWNWIND SECTOR	DISTANCE (METERS)	0-2 HOURS	0-8 HOURS	8-24 HOURS	1-4 DAYS	4-30 DAYS	ANNUAL AVERAGE	HOURS PER YEAR MAX 0-2 HR X/Q IS EXCEEDED IN SECTOR	DOWNWIND SECTOR
S	600.	9.84E-05	5.08E-05	3.65E-05	1.78E-05	6.34E-06	1.80E-06	2.1	S
SSW	600.	9.97E-05	4.93E-05	3.46E-05	1.61E-05	5.38E-06	1.40E-06	272.0	SSW
SW	600.	8.91E-05	4.30E-05	2.98E-05	1.35E-05	4.34E-06	1.08E-06	1.6	SW
WSW	600.	8.84E-05	4.23E-05	2.92E-05	1.31E-05	4.16E-06	1.02E-06	1.7	WSW
W	600.	1.16E-04	5.63E-05	3.92E-05	1.79E-05	5.82E-06	1.47E-06	2.5	W
WNW	600.	1.41E-04	7.21E-05	5.16E-05	2.50E-05	8.80E-06	2.46E-06	7.2	WNW
NW	600.	1.85E-04	1.01E-04	7.47E-05	3.87E-05	1.51E-05	4.75E-06	11.9	NW
NNW	600.	1.92E-04	1.06E-04	7.90E-05	4.16E-05	1.66E-05	5.37E-06	15.8	NNW
N	600.	2.25E-04	1.17E-04	8.41E-05	4.13E-05	1.49E-05	4.27E-06	19.7	N
NNE	600.	3.13E-04	1.49E-04	1.03E-04	4.62E-05	1.46E-05	3.55E-06	37.3	NNE
NE	600.	3.22E-04	1.49E-04	1.02E-04	4.43E-05	1.34E-05	3.11E-06	39.7	NE
ENE	600.	3.36E-04	1.52E-04	1.02E-04	4.31E-05	1.25E-05	2.75E-06	43.7	ENE
E	600.	2.00E-04	9.05E-05	6.09E-05	2.57E-05	7.46E-06	1.64E-06	24.7	E
ESE	600.	2.27E-04	1.05E-04	7.11E-05	3.07E-05	9.17E-06	2.09E-06	26.1	ESE
SE	600.	2.72E-04	1.26E-04	8.63E-05	3.76E-05	1.14E-05	2.66E-06	32.2	SE
SSE	600.	1.09E-04	5.40E-05	3.81E-05	1.78E-05	5.96E-06	1.57E-06	7.1	SSE
MAX X/Q		3.36E-04				TOTAL HOURS AROUND SITE:		545.2	
SRP 2.3.4	600.	3.51E-04	1.76E-04	1.24E-04	5.88E-05	2.00E-05	5.37E-06		
SITE LIMIT		2.59E-04	1.36E-04	9.90E-05	4.94E-05	1.82E-05	5.37E-06		

0THE FIVE-PERCENT-FOR-THE-ENTIRE-SITE X/Q IS LIMITING.
0**NOTE**: VALUES ON THIS PAGE ARE APPROXIMATIONS ONLY.
CHECK THE REASONABLENESS OF THE ENVELOPES
COMPUTED FOR THE 0-2 HOUR VALUES. FOR ANY
FAULTY ENVELOPES, ADJUST THE ABOVE VALUES.
1USNRC COMPUTER CODE-PAVAN, VERSION 2.0 RUN DATE: 12/20/2007 TIME: 14: 5:45
/PLANT NAME: CPSES Units 3 & 4 C METEOROLOGICAL INSTRUMENTATION
DATA PERIOD: OLA Ground-Level Re WIND SENSORS HEIGHT: 10 meter
TYPE OF RELEASE: lease DELTA-T HEIGHTS: 10 meter - 60 meter
SOURCE OF DATA: Met Data 2001-2006
COMMENTS: Data Period: Jan 2001-Dec 2006 Calc. No. TXUT-001-FSAR-2.3-CALC-022 Rev 0
PROGRAM: PAVAN, 10/76, 8/79 REVISION, IMPLEMENTATION OF REGULATORY GUIDE 1.145
0LOW POPULATION ZONE CALCULATIONS:
0 S SECTOR BOUNDARY DISTANCE = 3219.0 METERS
0LATERAL PLUME MEANDER/BUILDING WAKE CREDIT ALLOWED
AS A FUNCTION OF DOWNWIND DISTANCE.
MEANDER CREDIT IS FOR WINDSPEEDS LESS THAN 6 MPS.
BUILDING WAKE CREDIT ALLOWED: C= .5 A= 2500. D= 69.9

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0BELOW ARE PRINTED THE ORDERED VALUES OF CHI/Q AND THE FREQUENCY WITH WHICH THAT VALUE IS REACHED OR EXCEEDED.
 THE TOP NUMBER IS THE CHI/Q.  THE MIDDLE NUMBER IS THE FREQUENCY NORMALIZED TO THIS SECTOR.
 THE THIRD NUMBER IS THE FREQUENCY WITH RESPECT TO ALL TIME.
0   1.254E-04   6.502E-05   4.514E-05   3.901E-05   3.722E-05   2.926E-05   2.822E-05   2.341E-05   2.233E-05   2.197E-05
         .012        .137        .291        .446        .511        .665        .820       1.129       1.284       1.439
       .00092      .01012      .02157      .03301      .03778      .04922      .06067      .08356      .09500      .10644
0   1.951E-05   1.850E-05   1.675E-05   1.463E-05   1.340E-05   1.289E-05   1.191E-05   1.117E-05   1.005E-05   8.683E-06
        1.748       1.903       2.057       2.985       3.140       3.167       5.023       5.487       7.807       9.818
       .12933      .14078      .15222      .22089      .23233      .23435      .37168      .40602      .57768      .72645
0   8.374E-06   7.236E-06   6.203E-06   5.799E-06   5.427E-06   4.966E-06   4.639E-06   4.438E-06   4.158E-06   3.866E-06
       11.365      12.602      19.253      19.407      19.717      31.162      31.317      31.328      44.629      44.784
       .84090      .93245     1.42456     1.43600     1.45889     2.30576     2.31721     2.31803     3.30223     3.31368
0   3.491E-06   2.899E-06   2.619E-06   1.997E-06   1.933E-06   1.450E-06   1.309E-06   1.160E-06   9.985E-07   9.664E-07
       57.776      58.085      74.016      74.171      74.944      75.872      83.915      84.997      85.152      86.389
      4.27499     4.29788     5.47664     5.48809     5.54531     5.61397     6.20908     6.28919     6.30063     6.39218
0   7.248E-07   6.657E-07   4.993E-07   3.994E-07   3.624E-07   3.328E-07   2.954E-07   2.496E-07   1.969E-07   1.477E-07
       88.245      88.709      89.328      90.101      91.648      92.421      92.576      94.123      94.277      95.051
      6.52952     6.56385     6.60963     6.66685     6.78129     6.83851     6.84996     6.96440     6.97584     7.03307
0   1.248E-07   1.182E-07   9.847E-08   7.385E-08   3.693E-08
       95.979      96.907      97.680      99.381     100.000
      7.10173     7.17040     7.22762     7.35350     7.39928
0          X/Q PERCENTILES
 (BASED ON THE UPPER ENVELOPE OF THE
 ORDERED X/Q-FREQUENCY VALUES, AND AS
 PLOTTED ON A LOG-NORMAL GRAPH.)
0 PERCENT OF TIME CHI/Q IS EQUALED OR EXCEEDED
        CHI/Q      WITH RESPECT TO     WHEN THE WIND BLOWS
 SEC/CUBIC METER  THE TOTAL TIME      INTO THIS SECTOR ONLY

                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 2)=    .010
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 3)=    .038
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 4)=    .106
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 5)=    .577
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 6)=   2.303
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 7)=   3.299
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 8)=   4.272
     2.656E-05              .074             1.000
     1.588E-05              .222             3.000
     1.251E-05              .370             5.000
     8.938E-06              .740            10.000
     7.322E-06             1.110            15.000
     6.315E-06             1.480            20.000
     5.607E-06             1.850            25.000
     5.073E-06             2.220            30.000
     4.695E-06             2.590            35.000
     4.395E-06             2.960            40.000
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     4.136E-06              3.330              45.000
     3.854E-06              3.700              50.000
     3.612E-06              4.070              55.000
0    1.080E-05              0.5                 6.76
0ANNUAL AVERAGE =   1.51E-07
1USNRC COMPUTER CODE-PAVAN, VERSION 2.0          RUN DATE:  12/20/2007     TIME:  14: 5:45
/PLANT NAME:  CPSES Units 3 & 4 C                METEOROLOGICAL INSTRUMENTATION
 DATA PERIOD: OLA  Ground-Level Re               WIND SENSORS HEIGHT:  10 meter
 TYPE OF RELEASE: lease                          DELTA-T HEIGHTS: 10 meter - 60 meter
 SOURCE OF DATA:  Met Data 2001-2006
 COMMENTS:  Data Period: Jan 2001-Dec 2006  Calc. No. TXUT-001-FSAR-2.3-CALC-022 Rev 0
 PROGRAM: PAVAN, 10/76, 8/79 REVISION, IMPLEMENTATION OF REGULATORY GUIDE 1.145
0LOW POPULATION ZONE CALCULATIONS:
0 SSW SECTOR     BOUNDARY DISTANCE = 3219.0 METERS
0LATERAL PLUME MEANDER/BUILDING WAKE CREDIT ALLOWED
 AS A FUNCTION OF DOWNWIND DISTANCE.
 MEANDER CREDIT IS FOR WINDSPEEDS LESS THAN 6 MPS.
 BUILDING WAKE CREDIT ALLOWED:   C=   .5     A=  2500.     D=   69.9
0BELOW ARE PRINTED THE ORDERED VALUES OF CHI/Q AND THE FREQUENCY WITH WHICH THAT VALUE IS REACHED OR EXCEEDED.
 THE TOP NUMBER IS THE CHI/Q.  THE MIDDLE NUMBER IS THE FREQUENCY NORMALIZED TO THIS SECTOR.
 THE THIRD NUMBER IS THE FREQUENCY WITH RESPECT TO ALL TIME.
0   6.502E-05   3.901E-05   3.722E-05   2.926E-05   2.341E-05   2.233E-05   2.197E-05   1.951E-05   1.850E-05   1.675E-05
         .159        .396        .561        .798       1.035       1.272       1.746       2.221       2.458       3.169
       .00767      .01912      .02706      .03851      .04995      .06140      .08429      .10717      .11862      .15295
0   1.463E-05   1.340E-05   1.289E-05   1.191E-05   1.117E-05   1.005E-05   8.683E-06   8.374E-06   7.236E-06   6.203E-06
        4.355       5.066       5.108       8.191       8.902      13.644      16.727      19.098      20.284      28.583
       .21017      .24450      .24652      .39530      .42963      .65852      .80729      .92174      .97896     1.37951
0   5.799E-06   5.427E-06   4.966E-06   4.639E-06   4.438E-06   4.158E-06   3.866E-06   3.491E-06   2.899E-06   2.619E-06
       28.820      29.057      41.150      41.388      41.405      54.920      55.158      66.065      67.014      77.210
      1.39095     1.40240     1.98605     1.99750     1.99831     2.65064     2.66208     3.18852     3.23430     3.72640
0   1.933E-06   1.450E-06   1.331E-06   1.313E-06   1.309E-06   1.160E-06   9.985E-07   9.664E-07   7.248E-07   6.657E-07
       78.158      79.344      79.581      79.607      82.690      83.876      84.587      85.773      86.958      88.144
      3.77218     3.82940     3.84084     3.84211     3.99089     4.04811     4.08244     4.13966     4.19688     4.25411
0   4.993E-07   3.994E-07   3.939E-07   3.624E-07   3.328E-07   2.954E-07   2.496E-07   1.969E-07   1.477E-07   1.248E-07
       89.329      90.278      90.515      91.464      92.649      92.886      94.072      94.546      95.258      96.206
      4.31133     4.35710     4.36855     4.41433     4.47155     4.48299     4.54021     4.56310     4.59743     4.64321
0   1.182E-07   9.847E-08   7.385E-08   3.693E-08
       97.392      98.814      99.763     100.000
      4.70043     4.76910     4.81487     4.82632
0          X/Q PERCENTILES
 (BASED ON THE UPPER ENVELOPE OF THE
 ORDERED X/Q-FREQUENCY VALUES, AND AS
 PLOTTED ON A LOG-NORMAL GRAPH.)
0 PERCENT OF TIME CHI/Q IS EQUALED OR EXCEEDED
        CHI/Q      WITH RESPECT TO     WHEN THE WIND BLOWS
 SEC/CUBIC METER  THE TOTAL TIME      INTO THIS SECTOR ONLY
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                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 2)=    .153
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 3)=    .658
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 4)=    .921
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 5)=   2.648
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 6)=   3.186
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 7)=   3.723
     2.926E-05              .048             1.000
     1.722E-05              .145             3.000
     1.439E-05              .241             5.000
     1.128E-05              .483            10.000
     9.552E-06              .724            15.000
     8.139E-06              .965            20.000
     7.074E-06             1.207            25.000
     6.288E-06             1.448            30.000
     5.679E-06             1.689            35.000
     5.189E-06             1.931            40.000
     4.785E-06             2.172            45.000
     4.445E-06             2.413            50.000
     4.153E-06             2.654            55.000
     3.827E-06             2.896            60.000
     3.546E-06             3.137            65.000
     3.141E-06             3.378            70.000
     2.764E-06             3.620            75.000
0    1.113E-05             0.5              10.36
0ANNUAL AVERAGE =   1.17E-07
1USNRC COMPUTER CODE-PAVAN, VERSION 2.0          RUN DATE:  12/20/2007     TIME:  14: 5:45
/PLANT NAME:  CPSES Units 3 & 4 C                METEOROLOGICAL INSTRUMENTATION
 DATA PERIOD: OLA  Ground-Level Re               WIND SENSORS HEIGHT:  10 meter
 TYPE OF RELEASE: lease                          DELTA-T HEIGHTS: 10 meter - 60 meter
 SOURCE OF DATA:  Met Data 2001-2006
 COMMENTS:  Data Period: Jan 2001-Dec 2006  Calc. No. TXUT-001-FSAR-2.3-CALC-022 Rev 0
 PROGRAM: PAVAN, 10/76, 8/79 REVISION, IMPLEMENTATION OF REGULATORY GUIDE 1.145
0LOW POPULATION ZONE CALCULATIONS:
0  SW SECTOR     BOUNDARY DISTANCE = 3219.0 METERS
0LATERAL PLUME MEANDER/BUILDING WAKE CREDIT ALLOWED
 AS A FUNCTION OF DOWNWIND DISTANCE.
 MEANDER CREDIT IS FOR WINDSPEEDS LESS THAN 6 MPS.
 BUILDING WAKE CREDIT ALLOWED:   C=   .5     A=  2500.     D=   69.9
0BELOW ARE PRINTED THE ORDERED VALUES OF CHI/Q AND THE FREQUENCY WITH WHICH THAT VALUE IS REACHED OR EXCEEDED.
 THE TOP NUMBER IS THE CHI/Q.  THE MIDDLE NUMBER IS THE FREQUENCY NORMALIZED TO THIS SECTOR.
 THE THIRD NUMBER IS THE FREQUENCY WITH RESPECT TO ALL TIME.
0   6.502E-05   3.901E-05   3.722E-05   2.926E-05   2.341E-05   2.233E-05   1.951E-05   1.675E-05   1.463E-05   1.340E-05
         .183        .524        .832       1.173       1.514       1.855       2.196       3.220       4.243       5.608
       .00614      .01758      .02791      .03936      .05080      .06225      .07369      .10802      .14236      .18813
0   1.289E-05   1.191E-05   1.117E-05   1.005E-05   8.683E-06   8.374E-06   7.236E-06   6.203E-06   5.799E-06   4.966E-06
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        5.728       8.116       9.821      11.186      12.209      15.279      15.620      24.489      24.830      37.110
       .19217      .27228      .32950      .37528      .40961      .51261      .52406      .82161      .83305     1.24505
0   4.639E-06   4.438E-06   4.158E-06   3.866E-06   3.491E-06   2.899E-06   2.619E-06   1.933E-06   1.598E-06   1.450E-06
       37.793      37.841      52.168      53.192      63.425      65.131      70.588      74.000      74.341      75.705
      1.26793     1.26957     1.75023     1.78456     2.12789     2.18511     2.36822     2.48266     2.49411     2.53988
0   1.331E-06   1.313E-06   1.309E-06   1.160E-06   9.985E-07   9.664E-07   7.248E-07   6.657E-07   5.908E-07   4.993E-07
       76.046      76.122      76.804      77.486      79.192      80.215      81.239      84.309      84.650      86.697
      2.55133     2.55387     2.57676     2.59965     2.65687     2.69120     2.72553     2.82853     2.83998     2.90864
0   3.994E-07   3.939E-07   3.328E-07   2.954E-07   2.496E-07   1.969E-07   1.477E-07   1.248E-07   1.182E-07   9.847E-08
       87.720      88.061      88.743      89.084      89.767      92.496      95.224      95.907      98.294      99.318
      2.94298     2.95442     2.97731     2.98875     3.01164     3.10320     3.19475     3.21764     3.29775     3.33208
0   7.385E-08
      100.000
      3.35497
0          X/Q PERCENTILES
 (BASED ON THE UPPER ENVELOPE OF THE
 ORDERED X/Q-FREQUENCY VALUES, AND AS
 PLOTTED ON A LOG-NORMAL GRAPH.)
0 PERCENT OF TIME CHI/Q IS EQUALED OR EXCEEDED
        CHI/Q      WITH RESPECT TO     WHEN THE WIND BLOWS
 SEC/CUBIC METER  THE TOTAL TIME      INTO THIS SECTOR ONLY

                                                                HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 2)=    .028
                                                                HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 3)=    .272
                                                                HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 4)=    .329
                                                                HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 5)=   1.244
                                                                HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 6)=   1.748
                                                                HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 7)=   2.126
                                                                HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 8)=   2.366
                                                                HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 9)=   2.480
     3.420E-05                .034              1.000
     2.012E-05                .101              3.000
     1.546E-05                .168              5.000
     1.105E-05                .335             10.000
     8.740E-06                .503             15.000
     7.352E-06                .671             20.000
     6.403E-06                .839             25.000
     5.704E-06               1.006             30.000
     5.161E-06               1.174             35.000
     4.779E-06               1.342             40.000
     4.496E-06               1.510             45.000
     4.253E-06               1.677             50.000
     3.968E-06               1.845             55.000
     3.671E-06               2.013             60.000
     3.270E-06               2.181             65.000
     2.679E-06               2.348             70.000
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0    8.773E-06              0.5              14.90
0ANNUAL AVERAGE =   8.56E-08
1USNRC COMPUTER CODE-PAVAN, VERSION 2.0          RUN DATE:  12/20/2007     TIME:  14: 5:45
/PLANT NAME:  CPSES Units 3 & 4 C                METEOROLOGICAL INSTRUMENTATION
 DATA PERIOD: OLA  Ground-Level Re               WIND SENSORS HEIGHT:  10 meter
 TYPE OF RELEASE: lease                          DELTA-T HEIGHTS: 10 meter - 60 meter
 SOURCE OF DATA:  Met Data 2001-2006
 COMMENTS:  Data Period: Jan 2001-Dec 2006  Calc. No. TXUT-001-FSAR-2.3-CALC-022 Rev 0
 PROGRAM: PAVAN, 10/76, 8/79 REVISION, IMPLEMENTATION OF REGULATORY GUIDE 1.145
0LOW POPULATION ZONE CALCULATIONS:
0 WSW SECTOR     BOUNDARY DISTANCE = 3219.0 METERS
0LATERAL PLUME MEANDER/BUILDING WAKE CREDIT ALLOWED
 AS A FUNCTION OF DOWNWIND DISTANCE.
 MEANDER CREDIT IS FOR WINDSPEEDS LESS THAN 6 MPS.
 BUILDING WAKE CREDIT ALLOWED:   C=   .5     A=  2500.     D=   69.9
0BELOW ARE PRINTED THE ORDERED VALUES OF CHI/Q AND THE FREQUENCY WITH WHICH THAT VALUE IS REACHED OR EXCEEDED.
 THE TOP NUMBER IS THE CHI/Q.  THE MIDDLE NUMBER IS THE FREQUENCY NORMALIZED TO THIS SECTOR.
 THE THIRD NUMBER IS THE FREQUENCY WITH RESPECT TO ALL TIME.
0   6.502E-05   3.901E-05   3.722E-05   2.926E-05   2.341E-05   2.233E-05   1.951E-05   1.675E-05   1.463E-05   1.340E-05
         .214        .614       1.003       1.403       1.803       2.203       2.603       3.803       5.002       7.002
       .00614      .01758      .02871      .04015      .05160      .06304      .07449      .10882      .14315      .20037
0   1.289E-05   1.191E-05   1.117E-05   1.005E-05   8.683E-06   8.374E-06   6.203E-06   5.799E-06   4.966E-06   4.639E-06
        7.119       9.119      11.119      12.318      13.118      17.517      28.715      29.114      44.711      45.111
       .20374      .26096      .31818      .35251      .37540      .50129      .82173      .83317     1.27950     1.29094
0   4.438E-06   4.158E-06   3.866E-06   3.491E-06   2.899E-06   2.619E-06   1.933E-06   1.598E-06   1.450E-06   1.331E-06
       45.168      59.165      60.365      68.363      70.762      73.562      76.761      77.161      78.760      79.160
      1.29258     1.69313     1.72746     1.95635     2.02501     2.10512     2.19668     2.20812     2.25390     2.26534
0   1.313E-06   1.160E-06   9.985E-07   9.664E-07   7.248E-07   6.657E-07   4.993E-07   3.994E-07   3.939E-07   3.328E-07
       79.205      80.804      82.404      83.204      83.604      87.203      88.803      89.602      90.002      90.802
      2.26661     2.31239     2.35817     2.38106     2.39250     2.49550     2.54128     2.56416     2.57561     2.59850
0   2.954E-07   2.496E-07   1.969E-07   1.477E-07   1.182E-07   9.847E-08   7.385E-08
       91.602      92.002      94.401      97.601      98.800      99.600     100.000
      2.62139     2.63283     2.70150     2.79305     2.82738     2.85027     2.86172
0          X/Q PERCENTILES
 (BASED ON THE UPPER ENVELOPE OF THE
 ORDERED X/Q-FREQUENCY VALUES, AND AS
 PLOTTED ON A LOG-NORMAL GRAPH.)
0 PERCENT OF TIME CHI/Q IS EQUALED OR EXCEEDED
        CHI/Q      WITH RESPECT TO     WHEN THE WIND BLOWS
 SEC/CUBIC METER  THE TOTAL TIME      INTO THIS SECTOR ONLY

                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 2)=    .029
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 3)=    .261
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 4)=    .318
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 5)=   1.691
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 6)=   1.954
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                                                        HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 7)=   2.103
     3.726E-05              .029              1.000
     2.169E-05              .086              3.000
     1.659E-05              .143              5.000
     1.156E-05              .286             10.000
     9.484E-06              .429             15.000
     8.067E-06              .572             20.000
     7.090E-06              .715             25.000
     6.363E-06              .859             30.000
     5.797E-06             1.002             35.000
     5.339E-06             1.145             40.000
     4.959E-06             1.288             45.000
     4.638E-06             1.431             50.000
     4.361E-06             1.574             55.000
     4.089E-06             1.717             60.000
     3.713E-06             1.860             65.000
     3.183E-06             2.003             70.000
0    8.710E-06             0.5               17.47
0ANNUAL AVERAGE =   8.16E-08
1USNRC COMPUTER CODE-PAVAN, VERSION 2.0          RUN DATE:  12/20/2007     TIME:  14: 5:45
/PLANT NAME:  CPSES Units 3 & 4 C                METEOROLOGICAL INSTRUMENTATION
 DATA PERIOD: OLA  Ground-Level Re               WIND SENSORS HEIGHT:  10 meter
 TYPE OF RELEASE: lease                          DELTA-T HEIGHTS: 10 meter - 60 meter
 SOURCE OF DATA:  Met Data 2001-2006
 COMMENTS:  Data Period: Jan 2001-Dec 2006  Calc. No. TXUT-001-FSAR-2.3-CALC-022 Rev 0
 PROGRAM: PAVAN, 10/76, 8/79 REVISION, IMPLEMENTATION OF REGULATORY GUIDE 1.145
0LOW POPULATION ZONE CALCULATIONS:
0   W SECTOR     BOUNDARY DISTANCE = 3219.0 METERS
0LATERAL PLUME MEANDER/BUILDING WAKE CREDIT ALLOWED
 AS A FUNCTION OF DOWNWIND DISTANCE.
 MEANDER CREDIT IS FOR WINDSPEEDS LESS THAN 6 MPS.
 BUILDING WAKE CREDIT ALLOWED:   C=   .5     A=  2500.     D=   69.9
0BELOW ARE PRINTED THE ORDERED VALUES OF CHI/Q AND THE FREQUENCY WITH WHICH THAT VALUE IS REACHED OR EXCEEDED.
 THE TOP NUMBER IS THE CHI/Q.  THE MIDDLE NUMBER IS THE FREQUENCY NORMALIZED TO THIS SECTOR.
 THE THIRD NUMBER IS THE FREQUENCY WITH RESPECT TO ALL TIME.
0   6.502E-05   3.901E-05   3.722E-05   2.926E-05   2.822E-05   2.494E-05   2.341E-05   2.233E-05   1.951E-05   1.675E-05
         .372        .718       1.079       1.772       2.119       2.465       3.158       3.851       4.891       5.584
       .01228      .02372      .03564      .05853      .06997      .08142      .10431      .12719      .16153      .18442
0   1.463E-05   1.340E-05   1.289E-05   1.191E-05   1.117E-05   1.005E-05   8.683E-06   8.374E-06   7.731E-06   6.203E-06
        9.395      10.781      10.863      19.871      22.297      26.455      27.148      32.345      32.692      53.135
       .31030      .35608      .35877      .65632      .73643      .87376      .89665     1.06832     1.07976     1.75497
0   5.799E-06   4.966E-06   4.639E-06   4.438E-06   4.158E-06   3.866E-06   3.491E-06   2.899E-06   2.619E-06   1.933E-06
       53.482      72.192      72.539      72.588      79.172      79.518      81.597      82.983      83.676      86.102
      1.76642     2.38441     2.39585     2.39749     2.61493     2.62637     2.69504     2.74082     2.76370     2.84381
0   1.598E-06   1.450E-06   1.331E-06   1.313E-06   1.160E-06   9.985E-07   6.657E-07   4.993E-07   3.994E-07   3.939E-07
       86.448      87.488      87.834      87.873      88.219      88.566      90.645      92.031      92.724      93.070
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      2.85526     2.88959     2.90104     2.90231     2.91375     2.92520     2.99386     3.03964     3.06253     3.07397
0   3.328E-07   2.954E-07   1.969E-07   1.477E-07   1.182E-07
       93.417      94.456      96.882      98.961     100.000
      3.08542     3.11975     3.19986     3.26852     3.30286
0          X/Q PERCENTILES
 (BASED ON THE UPPER ENVELOPE OF THE
 ORDERED X/Q-FREQUENCY VALUES, AND AS
 PLOTTED ON A LOG-NORMAL GRAPH.)
0 PERCENT OF TIME CHI/Q IS EQUALED OR EXCEEDED
        CHI/Q      WITH RESPECT TO     WHEN THE WIND BLOWS
 SEC/CUBIC METER  THE TOTAL TIME      INTO THIS SECTOR ONLY

                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 2)=    .127
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 3)=    .656
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 4)=    .736
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 5)=    .873
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 6)=   2.382
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 7)=   2.612
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 8)=   2.692
     4.227E-05              .033             1.000
     2.526E-05              .099             3.000
     2.034E-05              .165             5.000
     1.569E-05              .330            10.000
     1.337E-05              .495            15.000
     1.187E-05              .661            20.000
     1.041E-05              .826            25.000
     9.246E-06              .991            30.000
     8.335E-06             1.156            35.000
     7.606E-06             1.321            40.000
     7.006E-06             1.486            45.000
     6.502E-06             1.651            50.000
     6.072E-06             1.817            55.000
     5.699E-06             1.982            60.000
     5.372E-06             2.147            65.000
     5.083E-06             2.312            70.000
     4.616E-06             2.477            75.000
     3.915E-06             2.642            80.000
0    1.332E-05             0.5              15.14
0ANNUAL AVERAGE =   1.24E-07
1USNRC COMPUTER CODE-PAVAN, VERSION 2.0          RUN DATE:  12/20/2007     TIME:  14: 5:45
/PLANT NAME:  CPSES Units 3 & 4 C                METEOROLOGICAL INSTRUMENTATION
 DATA PERIOD: OLA  Ground-Level Re               WIND SENSORS HEIGHT:  10 meter
 TYPE OF RELEASE: lease                          DELTA-T HEIGHTS: 10 meter - 60 meter
 SOURCE OF DATA:  Met Data 2001-2006
 COMMENTS:  Data Period: Jan 2001-Dec 2006  Calc. No. TXUT-001-FSAR-2.3-CALC-022 Rev 0
 PROGRAM: PAVAN, 10/76, 8/79 REVISION, IMPLEMENTATION OF REGULATORY GUIDE 1.145
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0LOW POPULATION ZONE CALCULATIONS:
0 WNW SECTOR     BOUNDARY DISTANCE = 3219.0 METERS
0LATERAL PLUME MEANDER/BUILDING WAKE CREDIT ALLOWED
 AS A FUNCTION OF DOWNWIND DISTANCE.
 MEANDER CREDIT IS FOR WINDSPEEDS LESS THAN 6 MPS.
 BUILDING WAKE CREDIT ALLOWED:   C=   .5     A=  2500.     D=   69.9
0BELOW ARE PRINTED THE ORDERED VALUES OF CHI/Q AND THE FREQUENCY WITH WHICH THAT VALUE IS REACHED OR EXCEEDED.
 THE TOP NUMBER IS THE CHI/Q.  THE MIDDLE NUMBER IS THE FREQUENCY NORMALIZED TO THIS SECTOR.
 THE THIRD NUMBER IS THE FREQUENCY WITH RESPECT TO ALL TIME.
0   2.186E-04   1.254E-04   7.524E-05   6.558E-05   6.502E-05   5.643E-05   4.514E-05   3.901E-05   3.762E-05   3.722E-05
        .011        .080        .294        .509        .969       1.184       1.398       1.613       1.827       2.080
      .00060      .00426      .01571      .02715      .05170      .06315      .07459      .08604      .09748      .11099
0   2.926E-05   2.822E-05   2.494E-05   2.341E-05   2.233E-05   2.197E-05   1.951E-05   1.675E-05   1.463E-05   1.340E-05
       2.724       2.939       3.368       4.011       4.226       4.655       6.585       7.443      12.163      12.806
      .14532      .15677      .17966      .21399      .22543      .24832      .35132      .39710      .64887      .68320
0   1.289E-05   1.191E-05   1.117E-05   1.005E-05   8.683E-06   8.374E-06   6.203E-06   4.966E-06   4.438E-06   4.158E-06
      12.819      26.763      28.693      34.485      35.343      40.492      57.224      68.808      68.823      73.972
      .68388     1.42776     1.53075     1.83975     1.88553     2.16019     3.05284     3.67083     3.67165     3.94631
0   3.866E-06   3.491E-06   2.899E-06   2.619E-06   1.933E-06   1.598E-06   1.450E-06   1.313E-06   1.160E-06   9.985E-07
      74.186      76.546      77.404      78.048      81.051      81.265      82.553      82.624      83.053      83.482
     3.95776     4.08364     4.12942     4.16375     4.32397     4.33542     4.40408     4.40790     4.43079     4.45367
0   9.664E-07   7.248E-07   6.657E-07   5.908E-07   4.993E-07   4.727E-07   3.994E-07   3.939E-07   3.328E-07   2.954E-07
      83.697      83.911      86.056      86.271      87.987      88.202      88.845      89.060      89.274      89.489
     4.46512     4.47656     4.59101     4.60245     4.69400     4.70545     4.73978     4.75122     4.76267     4.77411
0   1.969E-07   1.477E-07   1.182E-07   9.847E-08   7.385E-08
      92.492      96.782      98.713      99.571     100.000
     4.93433     5.16322     5.26622     5.31199     5.33488
0          X/Q PERCENTILES
 (BASED ON THE UPPER ENVELOPE OF THE
 ORDERED X/Q-FREQUENCY VALUES, AND AS
 PLOTTED ON A LOG-NORMAL GRAPH.)
0 PERCENT OF TIME CHI/Q IS EQUALED OR EXCEEDED
       CHI/Q      WITH RESPECT TO     WHEN THE WIND BLOWS
 SEC/CUBIC METER  THE TOTAL TIME      INTO THIS SECTOR ONLY

                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 2)=    .052
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 3)=    .214
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 4)=   1.426
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 5)=   1.838
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 6)=   3.050
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 7)=   3.668
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 8)=   3.943
     6.365E-05                .053              1.000
     2.914E-05                .160              3.000
     2.179E-05                .267              5.000
     1.722E-05                .533             10.000
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     1.487E-05              .800             15.000
     1.335E-05             1.067             20.000
     1.224E-05             1.334             25.000
     1.104E-05             1.600             30.000
     9.912E-06             1.867             35.000
     8.758E-06             2.134             40.000
     7.836E-06             2.401             45.000
     7.081E-06             2.667             50.000
     6.451E-06             2.934             55.000
     5.863E-06             3.201             60.000
     5.323E-06             3.468             65.000
     4.762E-06             3.734             70.000
0    1.761E-05             0.5                9.37
0ANNUAL AVERAGE =   2.07E-07
1USNRC COMPUTER CODE-PAVAN, VERSION 2.0          RUN DATE:  12/20/2007     TIME:  14: 5:45
/PLANT NAME:  CPSES Units 3 & 4 C                METEOROLOGICAL INSTRUMENTATION
 DATA PERIOD: OLA  Ground-Level Re               WIND SENSORS HEIGHT:  10 meter
 TYPE OF RELEASE: lease                          DELTA-T HEIGHTS: 10 meter - 60 meter
 SOURCE OF DATA:  Met Data 2001-2006
 COMMENTS:  Data Period: Jan 2001-Dec 2006  Calc. No. TXUT-001-FSAR-2.3-CALC-022 Rev 0
 PROGRAM: PAVAN, 10/76, 8/79 REVISION, IMPLEMENTATION OF REGULATORY GUIDE 1.145
0LOW POPULATION ZONE CALCULATIONS:
0  NW SECTOR     BOUNDARY DISTANCE = 3219.0 METERS
0LATERAL PLUME MEANDER/BUILDING WAKE CREDIT ALLOWED
 AS A FUNCTION OF DOWNWIND DISTANCE.
 MEANDER CREDIT IS FOR WINDSPEEDS LESS THAN 6 MPS.
 BUILDING WAKE CREDIT ALLOWED:   C=   .5     A=  2500.     D=   69.9
0BELOW ARE PRINTED THE ORDERED VALUES OF CHI/Q AND THE FREQUENCY WITH WHICH THAT VALUE IS REACHED OR EXCEEDED.
 THE TOP NUMBER IS THE CHI/Q.  THE MIDDLE NUMBER IS THE FREQUENCY NORMALIZED TO THIS SECTOR.
 THE THIRD NUMBER IS THE FREQUENCY WITH RESPECT TO ALL TIME.
0   2.186E-04   1.254E-04   9.837E-05   7.869E-05   7.524E-05   6.502E-05   5.643E-05   4.975E-05   4.918E-05   4.590E-05
         .010        .055        .149        .243        .336        .563        .750        .938       1.126       1.219
       .00120      .00670      .01814      .02959      .04103      .06865      .09154      .11443      .13732      .14876
0   4.514E-05   3.901E-05   3.762E-05   3.722E-05   2.926E-05   2.822E-05   2.494E-05   2.341E-05   2.233E-05   2.197E-05
        1.313       1.595       1.782       1.860       2.048       2.423       4.487       4.862       4.956       6.832
       .16020      .19454      .21743      .22696      .24985      .29563      .54740      .59318      .60462      .83351
0   1.951E-05   1.850E-05   1.675E-05   1.463E-05   1.340E-05   1.289E-05   1.191E-05   1.117E-05   1.005E-05   8.683E-06
        7.676       8.052       8.333      10.584      10.866      10.877      21.571      22.040      37.424      45.023
       .93651      .98228     1.01662     1.29128     1.32561     1.32696     2.63161     2.68883     4.56569     5.49267
0   8.374E-06   7.731E-06   7.236E-06   6.203E-06   5.427E-06   4.966E-06   4.438E-06   4.158E-06   3.866E-06   3.491E-06
       46.430      46.523      47.931      54.872      55.060      65.379      65.385      75.047      75.141      82.271
      5.66434     5.67578     5.84744     6.69432     6.71721     7.97608     7.97690     9.15566     9.16710    10.03686
0   2.899E-06   2.619E-06   1.933E-06   1.450E-06   1.331E-06   1.309E-06   1.160E-06   9.985E-07   9.664E-07   7.248E-07
       82.364      85.648      86.492      87.242      87.336      87.618      88.556      88.649      89.400      89.775
     10.04831    10.44886    10.55186    10.64341    10.65485    10.68919    10.80363    10.81507    10.90663    10.95240
0   6.657E-07   4.993E-07   3.994E-07   3.328E-07   2.954E-07   2.496E-07   1.969E-07   1.477E-07   1.248E-07   1.182E-07
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       90.807      91.557      92.495      93.058      93.152      93.434      94.090      95.591      95.685      97.842
     11.07829    11.16985    11.28429    11.35295    11.36440    11.39873    11.47884    11.66195    11.67339    11.93661
0   9.847E-08   7.385E-08   3.693E-08
       99.250      99.906     100.000
     12.10827    12.18838    12.19983
0          X/Q PERCENTILES
 (BASED ON THE UPPER ENVELOPE OF THE
 ORDERED X/Q-FREQUENCY VALUES, AND AS
 PLOTTED ON A LOG-NORMAL GRAPH.)
0 PERCENT OF TIME CHI/Q IS EQUALED OR EXCEEDED
        CHI/Q      WITH RESPECT TO     WHEN THE WIND BLOWS
 SEC/CUBIC METER  THE TOTAL TIME      INTO THIS SECTOR ONLY

                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 2)=    .069
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 3)=    .137
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 4)=    .547
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 6)=   4.562
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 7)=   5.489
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 8)=   5.661
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 9)=   9.152
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE(10)=  10.034
     5.164E-05              .122             1.000
     3.069E-05              .366             3.000
     2.415E-05              .610             5.000
     1.875E-05             1.220            10.000
     1.569E-05             1.830            15.000
     1.373E-05             2.440            20.000
     1.234E-05             3.050            25.000
     1.126E-05             3.660            30.000
     1.041E-05             4.270            35.000
     9.539E-06             4.880            40.000
     8.686E-06             5.490            45.000
     7.554E-06             6.100            50.000
     6.600E-06             6.710            55.000
     5.819E-06             7.320            60.000
     5.171E-06             7.930            65.000
     4.626E-06             8.540            70.000
     4.162E-06             9.150            75.000
     3.684E-06             9.760            80.000
0    2.615E-05             0.5               4.10
0ANNUAL AVERAGE =   4.02E-07
1USNRC COMPUTER CODE-PAVAN, VERSION 2.0          RUN DATE:  12/20/2007     TIME:  14: 5:45
/PLANT NAME:  CPSES Units 3 & 4 C                METEOROLOGICAL INSTRUMENTATION
 DATA PERIOD: OLA  Ground-Level Re               WIND SENSORS HEIGHT:  10 meter
 TYPE OF RELEASE: lease                          DELTA-T HEIGHTS: 10 meter - 60 meter
 SOURCE OF DATA:  Met Data 2001-2006
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 COMMENTS:  Data Period: Jan 2001-Dec 2006  Calc. No. TXUT-001-FSAR-2.3-CALC-022 Rev 0
 PROGRAM: PAVAN, 10/76, 8/79 REVISION, IMPLEMENTATION OF REGULATORY GUIDE 1.145
0LOW POPULATION ZONE CALCULATIONS:
0 NNW SECTOR     BOUNDARY DISTANCE = 3219.0 METERS
0LATERAL PLUME MEANDER/BUILDING WAKE CREDIT ALLOWED
 AS A FUNCTION OF DOWNWIND DISTANCE.
 MEANDER CREDIT IS FOR WINDSPEEDS LESS THAN 6 MPS.
 BUILDING WAKE CREDIT ALLOWED:   C=   .5     A=  2500.     D=   69.9
0BELOW ARE PRINTED THE ORDERED VALUES OF CHI/Q AND THE FREQUENCY WITH WHICH THAT VALUE IS REACHED OR EXCEEDED.
 THE TOP NUMBER IS THE CHI/Q.  THE MIDDLE NUMBER IS THE FREQUENCY NORMALIZED TO THIS SECTOR.
 THE THIRD NUMBER IS THE FREQUENCY WITH RESPECT TO ALL TIME.
0   2.186E-04   1.312E-04   1.254E-04   9.837E-05   7.869E-05   7.524E-05   6.558E-05   6.502E-05   5.852E-05   5.643E-05
         .017        .082        .134        .199        .264        .329        .459        .590        .655        .850
       .00301      .01446      .02361      .03506      .04650      .05794      .08083      .10385      .11529      .14963
0   4.975E-05   4.918E-05   4.590E-05   4.514E-05   3.901E-05   3.762E-05   3.722E-05   2.926E-05   2.822E-05   2.494E-05
         .915        .980       1.045       1.240       1.370       1.565       1.606       1.801       2.191       3.232
       .16107      .17251      .18396      .21829      .24118      .27551      .28267      .31700      .38566      .56877
0   2.341E-05   2.233E-05   2.197E-05   1.951E-05   1.850E-05   1.675E-05   1.463E-05   1.340E-05   1.289E-05   1.191E-05
        3.492       3.557       4.662       4.987       5.377       5.572       6.743       6.873       6.877      12.338
       .61455      .62599      .82055      .87777      .94643      .98077     1.18676     1.20965     1.21032     2.17164
0   1.147E-05   1.117E-05   1.005E-05   8.683E-06   8.374E-06   7.236E-06   6.203E-06   5.799E-06   5.427E-06   4.966E-06
       12.403      12.599      22.352      31.715      32.495      36.071      38.802      38.867      39.973      45.695
      2.18309     2.21742     3.93406     5.58203     5.71937     6.34880     6.82946     6.84090     7.03546     8.04255
0   4.438E-06   4.158E-06   3.491E-06   2.899E-06   2.713E-06   2.619E-06   1.933E-06   1.450E-06   1.331E-06   1.313E-06
       45.699      55.453      65.986      66.246      66.441      79.316      79.836      80.616      80.681      80.688
      8.04337     9.76001    11.61398    11.65976    11.69409    13.96005    14.05161    14.18894    14.20038    14.20166
0   1.309E-06   1.160E-06   9.985E-07   9.664E-07   7.248E-07   6.657E-07   4.993E-07   3.994E-07   3.939E-07   3.624E-07
       84.330      84.980      85.110      86.215      87.581      88.101      88.816      89.466      89.531      90.052
     14.84254    14.95698    14.97987    15.17442    15.41475    15.50630    15.63219    15.74663    15.75808    15.84963
0   3.328E-07   2.954E-07   2.496E-07   1.969E-07   1.477E-07   1.248E-07   1.182E-07   9.847E-08   7.385E-08   3.693E-08
       90.962      91.027      92.327      92.848      93.888      94.408      96.099      97.789      99.480     100.000
     16.00985    16.02130    16.25018    16.34174    16.52485    16.61640    16.91395    17.21150    17.50906    17.60061
0          X/Q PERCENTILES
 (BASED ON THE UPPER ENVELOPE OF THE
 ORDERED X/Q-FREQUENCY VALUES, AND AS
 PLOTTED ON A LOG-NORMAL GRAPH.)
0 PERCENT OF TIME CHI/Q IS EQUALED OR EXCEEDED
        CHI/Q      WITH RESPECT TO     WHEN THE WIND BLOWS
 SEC/CUBIC METER  THE TOTAL TIME      INTO THIS SECTOR ONLY

                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 2)=    .024
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 3)=    .149
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 4)=    .218
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 5)=    .820
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 6)=   2.169
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 9)=  11.612
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                                                                HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE(10)=  13.959
     5.132E-05              .176              1.000
     2.825E-05              .528              3.000
     2.108E-05              .880              5.000
     1.369E-05             1.760             10.000
     1.129E-05             2.640             15.000
     1.039E-05             3.520             20.000
     9.599E-06             4.400             25.000
     8.893E-06             5.280             30.000
     7.751E-06             6.160             35.000
     6.619E-06             7.040             40.000
     5.736E-06             7.920             45.000
     5.028E-06             8.800             50.000
     4.449E-06             9.680             55.000
     3.969E-06            10.560             60.000
     3.564E-06            11.440             65.000
     3.189E-06            12.320             70.000
     2.863E-06            13.200             75.000
0    2.911E-05             0.5               2.84
0ANNUAL AVERAGE =   4.49E-07
1USNRC COMPUTER CODE-PAVAN, VERSION 2.0          RUN DATE:  12/20/2007     TIME:  14: 5:45
/PLANT NAME:  CPSES Units 3 & 4 C                METEOROLOGICAL INSTRUMENTATION
 DATA PERIOD: OLA  Ground-Level Re               WIND SENSORS HEIGHT:  10 meter
 TYPE OF RELEASE: lease                          DELTA-T HEIGHTS: 10 meter - 60 meter
 SOURCE OF DATA:  Met Data 2001-2006
 COMMENTS:  Data Period: Jan 2001-Dec 2006  Calc. No. TXUT-001-FSAR-2.3-CALC-022 Rev 0
 PROGRAM: PAVAN, 10/76, 8/79 REVISION, IMPLEMENTATION OF REGULATORY GUIDE 1.145
0LOW POPULATION ZONE CALCULATIONS:
0   N SECTOR     BOUNDARY DISTANCE = 3219.0 METERS
0LATERAL PLUME MEANDER/BUILDING WAKE CREDIT ALLOWED
 AS A FUNCTION OF DOWNWIND DISTANCE.
 MEANDER CREDIT IS FOR WINDSPEEDS LESS THAN 6 MPS.
 BUILDING WAKE CREDIT ALLOWED:   C=   .5     A=  2500.     D=   69.9
0BELOW ARE PRINTED THE ORDERED VALUES OF CHI/Q AND THE FREQUENCY WITH WHICH THAT VALUE IS REACHED OR EXCEEDED.
 THE TOP NUMBER IS THE CHI/Q.  THE MIDDLE NUMBER IS THE FREQUENCY NORMALIZED TO THIS SECTOR.
 THE THIRD NUMBER IS THE FREQUENCY WITH RESPECT TO ALL TIME.
0   2.186E-04   1.254E-04   9.837E-05   7.869E-05   7.524E-05   6.558E-05   6.502E-05   5.643E-05   4.975E-05   4.918E-05
         .016        .094        .170        .245        .321        .471        .633        .935       1.312       1.689
       .00241      .01431      .02576      .03720      .04864      .07153      .09608      .14186      .19908      .25630
0   4.590E-05   4.514E-05   3.901E-05   3.762E-05   3.722E-05   3.672E-05   2.926E-05   2.822E-05   2.494E-05   2.341E-05
        1.840       1.990       2.217       2.669       2.711       2.786       3.088       3.842       5.049       5.350
       .27919      .30208      .33641      .40508      .41144      .42288      .46866      .58310      .76621      .81199
0   2.295E-05   2.233E-05   2.197E-05   1.951E-05   1.850E-05   1.675E-05   1.541E-05   1.463E-05   1.340E-05   1.289E-05
        5.426       5.501       6.481       6.858       7.311       7.462       7.537       8.216       8.366       8.375
       .82343      .83487      .98365     1.04087     1.10954     1.13243     1.14387     1.24687     1.26976     1.27110
0   1.191E-05   1.147E-05   1.117E-05   1.005E-05   8.683E-06   8.374E-06   7.236E-06   6.203E-06   5.427E-06   4.966E-06
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       10.939      11.015      11.241      15.614      19.762      20.440      22.853      25.116      26.322      31.224
      1.66021     1.67165     1.70599     2.36975     2.99919     3.10219     3.46840     3.81173     3.99484     4.73872
0   4.639E-06   4.438E-06   4.158E-06   3.866E-06   3.491E-06   2.899E-06   2.713E-06   2.619E-06   1.933E-06   1.450E-06
       31.299      31.304      39.976      40.052      50.910      50.986      51.136      65.916      66.369      67.047
      4.75016     4.75098     6.06707     6.07851     7.72649     7.73793     7.76082    10.00390    10.07256    10.17556
0   1.331E-06   1.309E-06   1.160E-06   9.985E-07   9.664E-07   7.248E-07   6.657E-07   4.993E-07   3.994E-07   3.624E-07
       67.123      72.929      74.135      74.211      76.021      79.339      79.866      80.620      81.902      83.863
     10.18700    11.06821    11.25132    11.26276    11.53743    12.04097    12.12108    12.23553    12.43008    12.72763
0   3.328E-07   2.954E-07   2.496E-07   1.969E-07   1.477E-07   1.248E-07   1.182E-07   9.847E-08   7.385E-08   3.693E-08
       85.522      85.597      88.764      89.217      90.348      92.007      93.515      95.626      98.567     100.000
     12.97940    12.99085    13.47151    13.54017    13.71184    13.96361    14.19250    14.51294    14.95926    15.17670
0          X/Q PERCENTILES
 (BASED ON THE UPPER ENVELOPE OF THE
 ORDERED X/Q-FREQUENCY VALUES, AND AS
 PLOTTED ON A LOG-NORMAL GRAPH.)
0 PERCENT OF TIME CHI/Q IS EQUALED OR EXCEEDED
        CHI/Q      WITH RESPECT TO     WHEN THE WIND BLOWS
 SEC/CUBIC METER  THE TOTAL TIME      INTO THIS SECTOR ONLY

                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 2)=    .256
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 3)=    .302
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 4)=    .422
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 5)=    .982
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 6)=   1.658
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 7)=   2.367
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 8)=   2.996
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 9)=   6.063
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE(10)=   7.723
     5.976E-05                .152              1.000
     3.517E-05                .455              3.000
     2.587E-05                .759              5.000
     1.327E-05               1.518             10.000
     1.025E-05               2.277             15.000
     8.581E-06               3.035             20.000
     6.865E-06               3.794             25.000
     5.682E-06               4.553             30.000
     4.816E-06               5.312             35.000
     4.156E-06               6.071             40.000
     3.822E-06               6.830             45.000
     3.538E-06               7.588             50.000
0    3.329E-05               0.5                3.29
0ANNUAL AVERAGE =   3.42E-07
1USNRC COMPUTER CODE-PAVAN, VERSION 2.0          RUN DATE:  12/20/2007     TIME:  14: 5:45
/PLANT NAME:  CPSES Units 3 & 4 C                METEOROLOGICAL INSTRUMENTATION
 DATA PERIOD: OLA  Ground-Level Re               WIND SENSORS HEIGHT:  10 meter
 TYPE OF RELEASE: lease                          DELTA-T HEIGHTS: 10 meter - 60 meter
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 SOURCE OF DATA:  Met Data 2001-2006
 COMMENTS:  Data Period: Jan 2001-Dec 2006  Calc. No. TXUT-001-FSAR-2.3-CALC-022 Rev 0
 PROGRAM: PAVAN, 10/76, 8/79 REVISION, IMPLEMENTATION OF REGULATORY GUIDE 1.145
0LOW POPULATION ZONE CALCULATIONS:
0 NNE SECTOR     BOUNDARY DISTANCE = 3219.0 METERS
0LATERAL PLUME MEANDER/BUILDING WAKE CREDIT ALLOWED
 AS A FUNCTION OF DOWNWIND DISTANCE.
 MEANDER CREDIT IS FOR WINDSPEEDS LESS THAN 6 MPS.
 BUILDING WAKE CREDIT ALLOWED:   C=   .5     A=  2500.     D=   69.9
0BELOW ARE PRINTED THE ORDERED VALUES OF CHI/Q AND THE FREQUENCY WITH WHICH THAT VALUE IS REACHED OR EXCEEDED.
 THE TOP NUMBER IS THE CHI/Q.  THE MIDDLE NUMBER IS THE FREQUENCY NORMALIZED TO THIS SECTOR.
 THE THIRD NUMBER IS THE FREQUENCY WITH RESPECT TO ALL TIME.
0   2.186E-04   1.312E-04   1.254E-04   9.837E-05   7.869E-05   7.524E-05   6.558E-05   6.502E-05   5.852E-05   5.643E-05
         .109        .297        .598        .787       1.351       1.728       2.857       3.336       3.525       4.466
       .00663      .01807      .03638      .04782      .08216      .10505      .17371      .20287      .21431      .27153
0   4.975E-05   4.918E-05   4.590E-05   4.514E-05   3.901E-05   3.762E-05   3.722E-05   3.672E-05   3.060E-05   2.926E-05
        6.159       8.230       9.171      10.300      10.865      12.182      12.261      12.637      12.825      13.766
       .37453      .50042      .55764      .62630      .66064      .74075      .74551      .76840      .77985      .83707
0   2.822E-05   2.494E-05   2.341E-05   2.233E-05   2.197E-05   1.951E-05   1.850E-05   1.675E-05   1.541E-05   1.463E-05
       15.272      17.907      18.660      18.848      20.730      21.859      22.989      23.365      23.741      25.435
       .92862     1.08884     1.13462     1.14606     1.26051     1.32917     1.39784     1.42073     1.44362     1.54661
0   1.340E-05   1.289E-05   1.191E-05   1.117E-05   1.005E-05   8.683E-06   8.374E-06   7.236E-06   6.203E-06   5.799E-06
       25.812      25.845      30.738      30.927      36.197      41.090      42.596      45.795      50.501      50.689
      1.56950     1.57152     1.86907     1.88052     2.20096     2.49851     2.59006     2.78461     3.07072     3.08216
0   5.427E-06   4.966E-06   4.639E-06   4.158E-06   3.866E-06   3.491E-06   2.899E-06   2.713E-06   2.619E-06   1.933E-06
       52.571      57.653      57.841      62.922      63.111      67.628      68.004      68.192      72.521      73.462
      3.19661     3.50560     3.51705     3.82604     3.83749     4.11215     4.13504     4.14648     4.40970     4.46692
0   1.450E-06   1.309E-06   1.160E-06   9.985E-07   9.664E-07   7.248E-07   6.657E-07   4.993E-07   3.994E-07   3.624E-07
       74.027      75.344      76.662      76.850      78.356      80.614      81.367      82.873      84.190      85.131
      4.50125     4.58136     4.66147     4.67292     4.76447     4.90180     4.94758     5.03913     5.11924     5.17647
0   3.328E-07   2.496E-07   1.969E-07   1.477E-07   1.248E-07   1.182E-07   9.847E-08   7.385E-08   3.693E-08
       86.449      88.143      89.084      90.401      91.342      93.413      95.483      99.059     100.000
      5.25658     5.35957     5.41679     5.49690     5.55413     5.68001     5.80590     6.02334     6.08056
0          X/Q PERCENTILES
 (BASED ON THE UPPER ENVELOPE OF THE
 ORDERED X/Q-FREQUENCY VALUES, AND AS
 PLOTTED ON A LOG-NORMAL GRAPH.)
0 PERCENT OF TIME CHI/Q IS EQUALED OR EXCEEDED
        CHI/Q      WITH RESPECT TO     WHEN THE WIND BLOWS
 SEC/CUBIC METER  THE TOTAL TIME      INTO THIS SECTOR ONLY

                                                HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 2)=    .036
                                                HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 3)=    .500
                                                HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 4)=    .626
                                                HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 5)=    .767
                                                HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 6)=   1.259
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                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 7)=   1.867
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 8)=   2.199
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 9)=   2.587
     1.060E-04              .061             1.000
     7.237E-05              .182             3.000
     5.981E-05              .304             5.000
     4.566E-05              .608            10.000
     3.085E-05              .912            15.000
     2.283E-05             1.216            20.000
     1.649E-05             1.520            25.000
     1.238E-05             1.824            30.000
     1.041E-05             2.128            35.000
     8.990E-06             2.432            40.000
0    4.920E-05             0.5               8.22
0ANNUAL AVERAGE =   2.71E-07
1USNRC COMPUTER CODE-PAVAN, VERSION 2.0          RUN DATE:  12/20/2007     TIME:  14: 5:45
/PLANT NAME:  CPSES Units 3 & 4 C                METEOROLOGICAL INSTRUMENTATION
 DATA PERIOD: OLA  Ground-Level Re               WIND SENSORS HEIGHT:  10 meter
 TYPE OF RELEASE: lease                          DELTA-T HEIGHTS: 10 meter - 60 meter
 SOURCE OF DATA:  Met Data 2001-2006
 COMMENTS:  Data Period: Jan 2001-Dec 2006  Calc. No. TXUT-001-FSAR-2.3-CALC-022 Rev 0
 PROGRAM: PAVAN, 10/76, 8/79 REVISION, IMPLEMENTATION OF REGULATORY GUIDE 1.145
0LOW POPULATION ZONE CALCULATIONS:
0  NE SECTOR     BOUNDARY DISTANCE = 3219.0 METERS
0LATERAL PLUME MEANDER/BUILDING WAKE CREDIT ALLOWED
 AS A FUNCTION OF DOWNWIND DISTANCE.
 MEANDER CREDIT IS FOR WINDSPEEDS LESS THAN 6 MPS.
 BUILDING WAKE CREDIT ALLOWED:   C=   .5     A=  2500.     D=   69.9
0BELOW ARE PRINTED THE ORDERED VALUES OF CHI/Q AND THE FREQUENCY WITH WHICH THAT VALUE IS REACHED OR EXCEEDED.
 THE TOP NUMBER IS THE CHI/Q.  THE MIDDLE NUMBER IS THE FREQUENCY NORMALIZED TO THIS SECTOR.
 THE THIRD NUMBER IS THE FREQUENCY WITH RESPECT TO ALL TIME.
0   2.186E-04   1.312E-04   1.254E-04   9.837E-05   7.869E-05   7.524E-05   6.558E-05   6.502E-05   5.852E-05   5.643E-05
         .170        .463        .933       1.520       2.401       2.988       4.455       5.282       5.575       6.749
       .00663      .01807      .03638      .05927      .09360      .11649      .17371      .20593      .21738      .26316
0   4.975E-05   4.918E-05   4.590E-05   4.514E-05   3.901E-05   3.762E-05   3.722E-05   3.672E-05   2.926E-05   2.822E-05
      10.272      12.913      14.674      17.023      17.903      19.664      19.827      20.414      22.469      24.817
       .40049      .50349      .57215      .66371      .69804      .76670      .77306      .79595      .87606      .96761
0   2.494E-05   2.341E-05   2.233E-05   2.197E-05   1.951E-05   1.850E-05   1.675E-05   1.541E-05   1.463E-05   1.340E-05
      27.752      29.220      29.513      31.275      32.742      34.797      35.384      35.971      38.613      39.200
      1.08206     1.13928     1.15072     1.21939     1.27661     1.35672     1.37961     1.40250     1.50549     1.52838
0   1.191E-05   1.117E-05   1.005E-05   8.683E-06   8.374E-06   7.236E-06   6.203E-06   5.427E-06   4.966E-06   4.438E-06
      42.722      43.602      47.125      49.766      51.821      54.169      58.278      60.920      64.442      64.484
      1.66571     1.70005     1.83738     1.94038     2.02049     2.11204     2.27226     2.37526     2.51259     2.51423
0   4.158E-06   3.491E-06   2.899E-06   2.713E-06   2.619E-06   1.933E-06   1.598E-06   1.450E-06   1.331E-06   1.309E-06
      67.419      69.768      70.061      70.355      72.996      74.757      75.051      76.518      76.812      78.280
      2.62867     2.72022     2.73167     2.74311     2.84611     2.91477     2.92622     2.98344     2.99488     3.05211
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0   1.160E-06   9.985E-07   9.664E-07   7.248E-07   6.657E-07   4.993E-07   3.994E-07   3.624E-07   3.328E-07   2.954E-07
       79.747      80.041      81.508      82.976      84.737      87.379      89.433      90.020      92.075      92.368
      3.10933     3.12077     3.17799     3.23521     3.30388     3.40688     3.48699     3.50988     3.58999     3.60143
0   2.496E-07   1.969E-07   1.477E-07   1.248E-07   1.182E-07   9.847E-08   7.385E-08   3.693E-08
       93.543      94.423      96.478      96.771      98.239      98.826      99.706     100.000
      3.64721     3.68154     3.76165     3.77309     3.83032     3.85320     3.88754     3.89898
0          X/Q PERCENTILES
 (BASED ON THE UPPER ENVELOPE OF THE
 ORDERED X/Q-FREQUENCY VALUES, AND AS
 PLOTTED ON A LOG-NORMAL GRAPH.)
0 PERCENT OF TIME CHI/Q IS EQUALED OR EXCEEDED
        CHI/Q      WITH RESPECT TO     WHEN THE WIND BLOWS
 SEC/CUBIC METER  THE TOTAL TIME      INTO THIS SECTOR ONLY

                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 2)=    .036
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 3)=    .503
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 5)=    .795
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 6)=   1.218
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 7)=   1.355
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 8)=   2.018
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 9)=   2.510
     1.227E-04              .039             1.000
     8.491E-05              .117             3.000
     7.074E-05              .195             5.000
     5.443E-05              .390            10.000
     4.697E-05              .585            15.000
     3.759E-05              .780            20.000
     2.887E-05              .975            25.000
     2.313E-05             1.170            30.000
     1.829E-05             1.365            35.000
     1.409E-05             1.560            40.000
     1.115E-05             1.755            45.000
     9.009E-06             1.949            50.000
     7.273E-06             2.144            55.000
     5.905E-06             2.339            60.000
0    4.932E-05             0.5              12.82
0ANNUAL AVERAGE =   2.33E-07
1USNRC COMPUTER CODE-PAVAN, VERSION 2.0          RUN DATE:  12/20/2007     TIME:  14: 5:45
/PLANT NAME:  CPSES Units 3 & 4 C                METEOROLOGICAL INSTRUMENTATION
 DATA PERIOD: OLA  Ground-Level Re               WIND SENSORS HEIGHT:  10 meter
 TYPE OF RELEASE: lease                          DELTA-T HEIGHTS: 10 meter - 60 meter
 SOURCE OF DATA:  Met Data 2001-2006
 COMMENTS:  Data Period: Jan 2001-Dec 2006  Calc. No. TXUT-001-FSAR-2.3-CALC-022 Rev 0
 PROGRAM: PAVAN, 10/76, 8/79 REVISION, IMPLEMENTATION OF REGULATORY GUIDE 1.145
0LOW POPULATION ZONE CALCULATIONS:
0 ENE SECTOR     BOUNDARY DISTANCE = 3219.0 METERS
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0LATERAL PLUME MEANDER/BUILDING WAKE CREDIT ALLOWED
 AS A FUNCTION OF DOWNWIND DISTANCE.
 MEANDER CREDIT IS FOR WINDSPEEDS LESS THAN 6 MPS.
 BUILDING WAKE CREDIT ALLOWED:   C=   .5     A=  2500.     D=   69.9
0BELOW ARE PRINTED THE ORDERED VALUES OF CHI/Q AND THE FREQUENCY WITH WHICH THAT VALUE IS REACHED OR EXCEEDED.
 THE TOP NUMBER IS THE CHI/Q.  THE MIDDLE NUMBER IS THE FREQUENCY NORMALIZED TO THIS SECTOR.
 THE THIRD NUMBER IS THE FREQUENCY WITH RESPECT TO ALL TIME.
0   2.186E-04   1.312E-04   1.254E-04   9.837E-05   7.869E-05   7.524E-05   6.558E-05   6.502E-05   5.643E-05   4.975E-05
         .224        .610       1.105       1.877       3.036       3.809       5.741       6.311       7.856      14.811
       .00663      .01807      .03272      .05561      .08994      .11283      .17005      .18693      .23271      .43870
0   4.918E-05   4.590E-05   4.514E-05   3.901E-05   3.762E-05   3.722E-05   3.672E-05   3.060E-05   2.926E-05   2.822E-05
      19.061      23.697      25.629      26.402      28.334      28.522      30.454      30.840      31.999      34.317
      .56459      .70192      .75914      .78203      .83925      .84481      .90204      .91348      .94781     1.01648
0   2.494E-05   2.341E-05   2.233E-05   2.197E-05   1.951E-05   1.850E-05   1.675E-05   1.541E-05   1.463E-05   1.340E-05
      39.726      40.499      40.886      43.590      45.136      46.681      47.454      48.227      50.545      51.318
     1.17670     1.19959     1.21103     1.29114     1.33692     1.38270     1.40558     1.42847     1.49714     1.52003
0   1.191E-05   1.117E-05   1.005E-05   8.683E-06   8.374E-06   7.236E-06   6.203E-06   5.427E-06   4.966E-06   4.158E-06
      55.181      55.954      58.272      60.590      63.295      65.227      70.636      72.181      74.886      76.431
     1.63447     1.65736     1.72602     1.79469     1.87480     1.93202     2.09224     2.13802     2.21813     2.26390
0   3.491E-06   2.899E-06   2.619E-06   1.933E-06   1.450E-06   1.309E-06   1.160E-06   9.985E-07   9.664E-07   7.248E-07
      77.977      78.750      81.454      82.613      84.545      85.318      87.250      87.636      88.795      90.341
     2.30968     2.33257     2.41268     2.44701     2.50423     2.52712     2.58434     2.59579     2.63012     2.67590
0   6.657E-07   4.993E-07   3.994E-07   3.624E-07   3.328E-07   2.496E-07   1.969E-07   1.477E-07   1.248E-07   1.182E-07
      91.114      93.045      93.818      94.591      94.977      96.136      96.523      96.909      97.682      98.455
     2.69879     2.75601     2.77890     2.80178     2.81323     2.84756     2.85901     2.87045     2.89334     2.91623
0   9.847E-08   7.385E-08   3.693E-08
      98.841      99.227     100.000
     2.92767     2.93911     2.96200
0          X/Q PERCENTILES
 (BASED ON THE UPPER ENVELOPE OF THE
 ORDERED X/Q-FREQUENCY VALUES, AND AS
 PLOTTED ON A LOG-NORMAL GRAPH.)
0 PERCENT OF TIME CHI/Q IS EQUALED OR EXCEEDED
        CHI/Q       WITH RESPECT TO     WHEN THE WIND BLOWS
 SEC/CUBIC METER  THE TOTAL TIME      INTO THIS SECTOR ONLY

                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 2)=    .438
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 5)=    .901
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 6)=   1.290
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 7)=   1.381
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 8)=   1.873
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 9)=   2.090
     1.357E-04                .030             1.000
     9.263E-05                .089             3.000
     7.667E-05                .148             5.000
     5.848E-05                .296            10.000
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     4.972E-05              .444            15.000
     4.851E-05              .592            20.000
     4.548E-05              .741            25.000
     3.739E-05              .889            30.000
     3.017E-05             1.037            35.000
     2.490E-05             1.185            40.000
     2.029E-05             1.333            45.000
     1.552E-05             1.481            50.000
     1.212E-05             1.629            55.000
     9.649E-06             1.777            60.000
     7.791E-06             1.925            65.000
     6.360E-06             2.073            70.000
0    4.946E-05             0.5              16.88
0ANNUAL AVERAGE =   1.99E-07
1USNRC COMPUTER CODE-PAVAN, VERSION 2.0          RUN DATE:  12/20/2007     TIME:  14: 5:45
/PLANT NAME:  CPSES Units 3 & 4 C                METEOROLOGICAL INSTRUMENTATION
 DATA PERIOD: OLA  Ground-Level Re               WIND SENSORS HEIGHT:  10 meter
 TYPE OF RELEASE: lease                          DELTA-T HEIGHTS: 10 meter - 60 meter
 SOURCE OF DATA:  Met Data 2001-2006
 COMMENTS:  Data Period: Jan 2001-Dec 2006  Calc. No. TXUT-001-FSAR-2.3-CALC-022 Rev 0
 PROGRAM: PAVAN, 10/76, 8/79 REVISION, IMPLEMENTATION OF REGULATORY GUIDE 1.145
0LOW POPULATION ZONE CALCULATIONS:
0   E SECTOR     BOUNDARY DISTANCE = 3219.0 METERS
0LATERAL PLUME MEANDER/BUILDING WAKE CREDIT ALLOWED
 AS A FUNCTION OF DOWNWIND DISTANCE.
 MEANDER CREDIT IS FOR WINDSPEEDS LESS THAN 6 MPS.
 BUILDING WAKE CREDIT ALLOWED:   C=   .5     A=  2500.     D=   69.9
0BELOW ARE PRINTED THE ORDERED VALUES OF CHI/Q AND THE FREQUENCY WITH WHICH THAT VALUE IS REACHED OR EXCEEDED.
 THE TOP NUMBER IS THE CHI/Q.  THE MIDDLE NUMBER IS THE FREQUENCY NORMALIZED TO THIS SECTOR.
 THE THIRD NUMBER IS THE FREQUENCY WITH RESPECT TO ALL TIME.
0   2.186E-04   1.312E-04   1.254E-04   9.837E-05   7.869E-05   7.524E-05   6.558E-05   6.502E-05   5.643E-05   4.975E-05
         .475       1.296       2.018       3.659       6.941       8.582      11.864      12.745      15.206      18.488
       .00663      .01807      .02814      .05103      .09681      .11969      .16547      .17775      .21208      .25786
0   4.918E-05   4.590E-05   4.514E-05   3.901E-05   3.762E-05   3.722E-05   2.926E-05   2.822E-05   2.494E-05   2.341E-05
      22.591      23.412      26.694      27.515      29.156      29.384      31.025      35.128      38.410      40.051
       .31508      .32652      .37230      .38374      .40663      .40981      .43270      .48992      .53570      .55859
0   2.233E-05   2.197E-05   1.951E-05   1.850E-05   1.675E-05   1.541E-05   1.463E-05   1.289E-05   1.191E-05   1.147E-05
      40.872      43.333      45.795      46.615      48.257      49.077      52.359      52.408      58.152      58.972
       .57003      .60436      .63870      .65014      .67303      .68447      .73025      .73092      .81103      .82248
0   1.117E-05   1.005E-05   8.683E-06   8.374E-06   7.236E-06   6.203E-06   4.966E-06   4.158E-06   3.866E-06   3.491E-06
      59.793      63.075      65.537      66.357      67.998      74.563      78.666      81.948      82.768      85.230
       .83392      .87970      .91403      .92548      .94837     1.03992     1.09714     1.14292     1.15436     1.18870
0   2.899E-06   2.619E-06   1.933E-06   1.450E-06   1.309E-06   1.160E-06   9.664E-07   7.248E-07   6.657E-07   3.994E-07
      86.051      88.512      89.333      90.153      91.794      93.436      95.077      95.897      96.718      97.538
     1.20014     1.23447     1.24592     1.25736     1.28025     1.30314     1.32603     1.33747     1.34891     1.36036
0   3.624E-07   1.477E-07   3.693E-08
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       98.359      99.179     100.000
      1.37180     1.38325     1.39469
0          X/Q PERCENTILES
 (BASED ON THE UPPER ENVELOPE OF THE
 ORDERED X/Q-FREQUENCY VALUES, AND AS
 PLOTTED ON A LOG-NORMAL GRAPH.)
0 PERCENT OF TIME CHI/Q IS EQUALED OR EXCEEDED
        CHI/Q      WITH RESPECT TO     WHEN THE WIND BLOWS
 SEC/CUBIC METER  THE TOTAL TIME      INTO THIS SECTOR ONLY

                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 2)=    .178
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 3)=    .315
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 4)=    .372
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 5)=    .604
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 6)=    .810
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 7)=    .879
     1.701E-04              .014             1.000
     1.148E-04              .042             3.000
     9.463E-05              .070             5.000
     7.187E-05              .139            10.000
     6.015E-05              .209            15.000
     5.226E-05              .279            20.000
     4.670E-05              .349            25.000
     3.808E-05              .418            30.000
     3.032E-05              .488            35.000
     2.481E-05              .558            40.000
     2.033E-05              .628            45.000
     1.636E-05              .697            50.000
     1.340E-05              .767            55.000
     1.116E-05              .837            60.000
0    2.925E-05             0.5              35.85
0ANNUAL AVERAGE =   1.20E-07
1USNRC COMPUTER CODE-PAVAN, VERSION 2.0          RUN DATE:  12/20/2007     TIME:  14: 5:45
/PLANT NAME:  CPSES Units 3 & 4 C                METEOROLOGICAL INSTRUMENTATION
 DATA PERIOD: OLA  Ground-Level Re               WIND SENSORS HEIGHT:  10 meter
 TYPE OF RELEASE: lease                          DELTA-T HEIGHTS: 10 meter - 60 meter
 SOURCE OF DATA:  Met Data 2001-2006
 COMMENTS:  Data Period: Jan 2001-Dec 2006  Calc. No. TXUT-001-FSAR-2.3-CALC-022 Rev 0
 PROGRAM: PAVAN, 10/76, 8/79 REVISION, IMPLEMENTATION OF REGULATORY GUIDE 1.145
0LOW POPULATION ZONE CALCULATIONS:
0 ESE SECTOR     BOUNDARY DISTANCE = 3219.0 METERS
0LATERAL PLUME MEANDER/BUILDING WAKE CREDIT ALLOWED
 AS A FUNCTION OF DOWNWIND DISTANCE.
 MEANDER CREDIT IS FOR WINDSPEEDS LESS THAN 6 MPS.
 BUILDING WAKE CREDIT ALLOWED:   C=   .5     A=  2500.     D=   69.9
0BELOW ARE PRINTED THE ORDERED VALUES OF CHI/Q AND THE FREQUENCY WITH WHICH THAT VALUE IS REACHED OR EXCEEDED.
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 THE TOP NUMBER IS THE CHI/Q.  THE MIDDLE NUMBER IS THE FREQUENCY NORMALIZED TO THIS SECTOR.
 THE THIRD NUMBER IS THE FREQUENCY WITH RESPECT TO ALL TIME.
0   2.186E-04   1.312E-04   1.254E-04   9.837E-05   7.869E-05   7.524E-05   6.558E-05   6.502E-05   5.643E-05   4.975E-05
         .261        .711       1.143       2.942       4.292       5.192       6.542       7.146       8.496      10.746
       .00663      .01807      .02906      .07483      .10917      .13205      .16639      .18173      .21606      .27329
0   4.918E-05   4.590E-05   4.514E-05   3.901E-05   3.762E-05   3.722E-05   2.926E-05   2.822E-05   2.494E-05   2.341E-05
      13.446      13.896      15.246      15.696      17.496      17.652      19.452      21.702      25.302      26.652
      .34195      .35340      .38773      .39917      .44495      .44892      .49470      .55192      .64348      .67781
0   2.233E-05   2.197E-05   1.951E-05   1.850E-05   1.675E-05   1.541E-05   1.463E-05   1.340E-05   1.191E-05   1.117E-05
      27.102      29.801      30.701      32.051      32.501      32.951      35.201      35.651      41.951      42.851
      .68925      .75792      .78081      .81514      .82658      .83803      .89525      .90669     1.06691     1.08980
0   1.005E-05   8.683E-06   8.374E-06   7.236E-06   6.203E-06   5.427E-06   4.966E-06   4.158E-06   3.491E-06   2.899E-06
      48.701      53.651      54.551      56.351      61.301      62.651      68.951      74.801      80.200      80.650
     1.23858     1.36446     1.38735     1.43313     1.55902     1.59335     1.75357     1.90235     2.03968     2.05112
0   2.713E-06   2.619E-06   1.933E-06   1.450E-06   1.309E-06   1.160E-06   9.664E-07   7.248E-07   4.993E-07   3.994E-07
      81.100      88.750      89.200      89.650      93.250      93.700      94.150      94.600      95.050      95.500
     2.06257     2.25712     2.26856     2.28001     2.37156     2.38300     2.39445     2.40589     2.41734     2.42878
0   3.624E-07   3.328E-07   2.954E-07   2.496E-07   1.248E-07   1.182E-07   7.385E-08   3.693E-08
      96.400      96.850      97.300      97.750      98.200      98.650      99.550     100.000
     2.45167     2.46311     2.47456     2.48600     2.49745     2.50889     2.53178     2.54322
0          X/Q PERCENTILES
 (BASED ON THE UPPER ENVELOPE OF THE
 ORDERED X/Q-FREQUENCY VALUES, AND AS
 PLOTTED ON A LOG-NORMAL GRAPH.)
0 PERCENT OF TIME CHI/Q IS EQUALED OR EXCEEDED
        CHI/Q      WITH RESPECT TO     WHEN THE WIND BLOWS
 SEC/CUBIC METER  THE TOTAL TIME      INTO THIS SECTOR ONLY

                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 2)=    .075
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 3)=    .342
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 4)=    .387
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 5)=    .757
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 6)=   1.237
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 7)=   1.363
    1.426E-04              .025             1.000
    9.756E-05              .076             3.000
    7.804E-05              .127             5.000
    5.673E-05              .254            10.000
    4.565E-05              .381            15.000
    3.394E-05              .509            20.000
    2.668E-05              .636            25.000
    2.175E-05              .763            30.000
    1.710E-05              .890            35.000
    1.383E-05             1.017            40.000
    1.143E-05             1.144            45.000
    9.658E-06             1.272            50.000
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0    3.457E-05              0.5              19.66
0ANNUAL AVERAGE =   1.58E-07
1USNRC COMPUTER CODE-PAVAN, VERSION 2.0          RUN DATE:  12/20/2007     TIME:  14: 5:45
/PLANT NAME:  CPSES Units 3 & 4 C                METEOROLOGICAL INSTRUMENTATION
 DATA PERIOD: OLA  Ground-Level Re               WIND SENSORS HEIGHT:  10 meter
 TYPE OF RELEASE: lease                          DELTA-T HEIGHTS: 10 meter - 60 meter
 SOURCE OF DATA:  Met Data 2001-2006
 COMMENTS:  Data Period: Jan 2001-Dec 2006  Calc. No. TXUT-001-FSAR-2.3-CALC-022 Rev 0
 PROGRAM: PAVAN, 10/76, 8/79 REVISION, IMPLEMENTATION OF REGULATORY GUIDE 1.145
0LOW POPULATION ZONE CALCULATIONS:
0  SE SECTOR     BOUNDARY DISTANCE = 3219.0 METERS
0LATERAL PLUME MEANDER/BUILDING WAKE CREDIT ALLOWED
 AS A FUNCTION OF DOWNWIND DISTANCE.
 MEANDER CREDIT IS FOR WINDSPEEDS LESS THAN 6 MPS.
 BUILDING WAKE CREDIT ALLOWED:   C=   .5     A=  2500.     D=   69.9
0BELOW ARE PRINTED THE ORDERED VALUES OF CHI/Q AND THE FREQUENCY WITH WHICH THAT VALUE IS REACHED OR EXCEEDED.
 THE TOP NUMBER IS THE CHI/Q.  THE MIDDLE NUMBER IS THE FREQUENCY NORMALIZED TO THIS SECTOR.
 THE THIRD NUMBER IS THE FREQUENCY WITH RESPECT TO ALL TIME.
0   2.186E-04   1.312E-04   1.254E-04   9.837E-05   7.869E-05   7.524E-05   6.558E-05   6.502E-05   5.643E-05   4.975E-05
         .101        .341        .514        .753       1.233       1.473       2.432       2.786       3.266       7.103
       .00482      .01626      .02450      .03595      .05884      .07028      .11606      .13294      .15582      .33893
0   4.918E-05   4.590E-05   4.514E-05   3.901E-05   3.762E-05   3.722E-05   2.926E-05   2.822E-05   2.494E-05   2.341E-05
        8.542       9.501       9.981      10.221      11.180      11.247      11.726      13.405      19.401      20.121
       .40760      .45338      .47626      .48771      .53348      .53666      .55955      .63966      .92577      .96010
0   2.233E-05   2.197E-05   1.951E-05   1.850E-05   1.675E-05   1.463E-05   1.340E-05   1.289E-05   1.191E-05   1.117E-05
       20.361      23.958      25.157      25.637      25.877      28.275      28.515      28.529      35.005      35.244
       .97155     1.14321     1.20043     1.22332     1.23476     1.34921     1.36065     1.36132     1.67032     1.68176
0   1.005E-05   8.683E-06   8.374E-06   7.236E-06   6.203E-06   5.427E-06   4.966E-06   4.639E-06   4.158E-06   3.491E-06
       41.720      46.277      47.236      48.675      52.513      52.992      57.069      57.309      61.866      67.622
      1.99076     2.20820     2.25398     2.32264     2.50575     2.52864     2.72319     2.73464     2.95208     3.22674
0   2.899E-06   2.713E-06   2.619E-06   1.933E-06   1.450E-06   1.309E-06   1.160E-06   9.664E-07   7.248E-07   6.657E-07
       67.862      68.102      78.175      78.655      79.374      85.850      86.809      87.529      88.968      89.207
      3.23818     3.24963     3.73029     3.75318     3.78751     4.09650     4.14228     4.17661     4.24528     4.25672
0   4.993E-07   3.994E-07   3.624E-07   3.328E-07   2.496E-07   1.969E-07   1.477E-07   1.248E-07   1.182E-07   9.847E-08
       89.687      90.407      92.805      93.524      94.963      95.203      95.443      96.642      96.882      97.362
      4.27961     4.31395     4.42839     4.46272     4.53139     4.54283     4.55428     4.61150     4.62294     4.64583
0   7.385E-08   3.693E-08
       98.321     100.000
      4.69161     4.77172
0          X/Q PERCENTILES
 (BASED ON THE UPPER ENVELOPE OF THE
 ORDERED X/Q-FREQUENCY VALUES, AND AS
 PLOTTED ON A LOG-NORMAL GRAPH.)
0 PERCENT OF TIME CHI/Q IS EQUALED OR EXCEEDED
        CHI/Q      WITH RESPECT TO     WHEN THE WIND BLOWS
 SEC/CUBIC METER  THE TOTAL TIME      INTO THIS SECTOR ONLY
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                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 2)=    .339
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 4)=    .476
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 5)=   1.142
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 6)=   1.989
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 7)=   2.206
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 8)=   2.252
     1.043E-04              .048             1.000
     6.996E-05              .143             3.000
     5.735E-05              .239             5.000
     4.508E-05              .477            10.000
     3.259E-05              .716            15.000
     2.565E-05              .954            20.000
     2.073E-05             1.193            25.000
     1.612E-05             1.432            30.000
     1.296E-05             1.670            35.000
     1.069E-05             1.909            40.000
     9.034E-06             2.147            45.000
0    4.346E-05             0.5              10.48
0ANNUAL AVERAGE =   2.04E-07
1USNRC COMPUTER CODE-PAVAN, VERSION 2.0          RUN DATE:  12/20/2007     TIME:  14: 5:45
/PLANT NAME:  CPSES Units 3 & 4 C                METEOROLOGICAL INSTRUMENTATION
 DATA PERIOD: OLA  Ground-Level Re               WIND SENSORS HEIGHT:  10 meter
 TYPE OF RELEASE: lease                          DELTA-T HEIGHTS: 10 meter - 60 meter
 SOURCE OF DATA:  Met Data 2001-2006
 COMMENTS:  Data Period: Jan 2001-Dec 2006  Calc. No. TXUT-001-FSAR-2.3-CALC-022 Rev 0
 PROGRAM: PAVAN, 10/76, 8/79 REVISION, IMPLEMENTATION OF REGULATORY GUIDE 1.145
0LOW POPULATION ZONE CALCULATIONS:
0 SSE SECTOR     BOUNDARY DISTANCE = 3219.0 METERS
0LATERAL PLUME MEANDER/BUILDING WAKE CREDIT ALLOWED
 AS A FUNCTION OF DOWNWIND DISTANCE.
 MEANDER CREDIT IS FOR WINDSPEEDS LESS THAN 6 MPS.
 BUILDING WAKE CREDIT ALLOWED:   C=   .5     A=  2500.     D=   69.9
0BELOW ARE PRINTED THE ORDERED VALUES OF CHI/Q AND THE FREQUENCY WITH WHICH THAT VALUE IS REACHED OR EXCEEDED.
 THE TOP NUMBER IS THE CHI/Q.  THE MIDDLE NUMBER IS THE FREQUENCY NORMALIZED TO THIS SECTOR.
 THE THIRD NUMBER IS THE FREQUENCY WITH RESPECT TO ALL TIME.
0   2.186E-04   1.254E-04   7.869E-05   7.524E-05   6.502E-05   5.643E-05   4.975E-05   4.918E-05   4.514E-05   3.722E-05
        .010        .053        .235        .417        .588        .770       1.133       1.315       1.497       1.573
      .00060      .00335      .01479      .02624      .03698      .04842      .07131      .08276      .09420      .09897
0   2.926E-05   2.822E-05   2.494E-05   2.341E-05   2.233E-05   2.197E-05   1.951E-05   1.675E-05   1.463E-05   1.340E-05
       1.937       2.301       2.846       3.210       3.392       3.756       4.301       4.665       5.575       5.757
      .12186      .14475      .17908      .20197      .21341      .23630      .27063      .29352      .35074      .36219
0   1.289E-05   1.191E-05   1.117E-05   1.005E-05   8.683E-06   8.374E-06   7.236E-06   6.203E-06   5.799E-06   5.427E-06
       5.778       7.961       8.325      10.689      12.326      13.781      14.873      18.511      18.693      19.238
      .36353      .50086      .52375      .67253      .77553      .86708      .93575     1.16463     1.17608     1.21041
0   4.966E-06   4.158E-06   3.866E-06   3.491E-06   2.899E-06   2.713E-06   2.619E-06   1.933E-06   1.450E-06   1.309E-06
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       24.149      30.880      31.062      40.338      40.702      41.066      58.164      59.619      60.711      74.535
      1.51940     1.94284     1.95429     2.53794     2.56083     2.58372     3.65948     3.75104     3.81970     4.68947
0   1.160E-06   9.985E-07   9.664E-07   7.248E-07   6.657E-07   4.993E-07   3.994E-07   3.624E-07   3.328E-07   2.496E-07
       75.262      75.444      76.354      78.354      79.264      80.355      81.629      84.721      85.994      87.813
      4.73524     4.74669     4.80391     4.92980     4.98702     5.05568     5.13579     5.33034     5.41045     5.52490
0   1.969E-07   1.477E-07   1.248E-07   1.182E-07   9.847E-08   7.385E-08   3.693E-08
       88.359      88.904      91.997      93.088      94.179      96.726     100.000
      5.55923     5.59356     5.78811     5.85678     5.92545     6.08567     6.29166
0          X/Q PERCENTILES
 (BASED ON THE UPPER ENVELOPE OF THE
 ORDERED X/Q-FREQUENCY VALUES, AND AS
 PLOTTED ON A LOG-NORMAL GRAPH.)
0 PERCENT OF TIME CHI/Q IS EQUALED OR EXCEEDED
        CHI/Q      WITH RESPECT TO     WHEN THE WIND BLOWS
 SEC/CUBIC METER  THE TOTAL TIME      INTO THIS SECTOR ONLY

                                                        HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 2)=    .026
                                                        HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 3)=    .083
                                                        HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 4)=    .094
                                                        HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 5)=    .236
                                                        HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 6)=    .672
                                                        HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 7)=    .866
                                                        HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 8)=   2.535
                                                        HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 9)=   3.656
     5.462E-05                .063              1.000
     2.634E-05                .189              3.000
     1.789E-05                .315              5.000
     1.059E-05                .629             10.000
     7.851E-06                .944             15.000
     6.274E-06               1.258             20.000
     5.241E-06               1.573             25.000
     4.505E-06               1.887             30.000
     3.951E-06               2.202             35.000
     3.517E-06               2.517             40.000
     3.210E-06               2.831             45.000
     2.956E-06               3.146             50.000
     2.740E-06               3.460             55.000
0    1.265E-05               0.5                7.95
0ANNUAL AVERAGE =   1.26E-07
1USNRC COMPUTER CODE-PAVAN, VERSION 2.0          RUN DATE:  12/20/2007     TIME:  14: 5:45
/PLANT NAME:  CPSES Units 3 & 4 C                METEOROLOGICAL INSTRUMENTATION
 DATA PERIOD: OLA  Ground-Level Re               WIND SENSORS HEIGHT:  10 meter
 TYPE OF RELEASE: lease                          DELTA-T HEIGHTS: 10 meter - 60 meter
 SOURCE OF DATA:  Met Data 2001-2006
 COMMENTS:  Data Period: Jan 2001-Dec 2006  Calc. No. TXUT-001-FSAR-2.3-CALC-022 Rev 0
 PROGRAM: PAVAN, 10/76, 8/79 REVISION, IMPLEMENTATION OF REGULATORY GUIDE 1.145
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0LOW POPULATION ZONE CALCULATIONS:
 DIRECTION-INDEPENDENT (S.R.P 2.3.4) MODEL.
 MINIMUM BOUNDARY DISTANCE = 3219.0 METERS.
 BUILDING WAKE CREDIT ALLOWED:   C=   .5     A=  2500.     D=   69.9
0BELOW ARE PRINTED THE ORDERED VALUES OF CHI/Q AND THE FREQUENCY WITH WHICH THAT VALUE IS REACHED OR EXCEEDED.
 THE TOP NUMBER IS THE CHI/Q.  THE MIDDLE NUMBER IS THE FREQUENCY NORMALIZED TO THIS SECTOR.
 THE THIRD NUMBER IS THE FREQUENCY WITH RESPECT TO ALL TIME.
0   4.080E-04   2.448E-04   2.055E-04   1.836E-04   1.469E-04   1.233E-04   1.224E-04   9.647E-05   9.249E-05   9.179E-05
         .046        .126        .240        .412        .664        .847       1.213       1.488       1.854       2.506
       .04578      .12589      .24033      .41199      .66377      .84688     1.21309     1.48775     1.85397     2.50629
0   8.683E-05   7.399E-05   6.166E-05   6.119E-05   5.788E-05   4.655E-05   4.624E-05   4.590E-05   4.341E-05   3.672E-05
        2.541       2.964       3.422       4.269       4.555       4.669       5.402       5.779       6.271       6.386
      2.54063     2.96407     3.42184     4.26871     4.55482     4.66926     5.40169     5.77936     6.27146     6.38590
0   3.473E-05   3.083E-05   3.060E-05   2.894E-05   2.793E-05   2.312E-05   2.295E-05   2.171E-05   2.095E-05   1.850E-05
        6.878       8.423       8.446       9.190       9.384      10.575      10.586      12.291      12.703      13.172
      6.87800     8.42298     8.44587     9.18975     9.38430    10.57450    10.58595    12.29114    12.70314    13.17235
0   1.676E-05   1.541E-05   1.447E-05   1.397E-05   1.289E-05   1.147E-05   1.085E-05   1.047E-05   8.683E-06   7.731E-06
       13.584      13.687      19.043      19.673      19.696      19.730      26.093      27.833      32.410      32.433
     13.58434    13.68734    19.04326    19.67269    19.69558    19.72991    26.09293    27.83245    32.41016    32.43305
0   7.236E-06   6.983E-06   5.799E-06   5.427E-06   5.237E-06   4.639E-06   4.438E-06   4.190E-06   3.866E-06   3.491E-06
       34.310      40.295      40.387      41.177      48.959      49.062      49.073      57.599      57.771      65.839
     34.30991    40.29526    40.38681    41.17647    48.95857    49.06157    49.07301    57.59900    57.77066    65.83887
0   2.899E-06   2.713E-06   2.619E-06   1.997E-06   1.933E-06   1.598E-06   1.450E-06   1.331E-06   1.313E-06   1.309E-06
       66.308      66.434      75.567      75.578      76.688      76.745      77.672      77.764      77.775      81.552
     66.30808    66.43396    75.56649    75.57793    76.68803    76.74525    77.67223    77.76379    77.77523    81.55183
0   1.160E-06   9.985E-07   9.664E-07   7.248E-07   6.657E-07   5.908E-07   4.993E-07   4.727E-07   3.994E-07   3.939E-07
       82.525      82.800      83.887      85.386      86.382      86.404      87.446      87.457      88.419      88.487
     82.52460    82.79926    83.88647    85.38567    86.38132    86.40421    87.44563    87.45708    88.41840    88.48706
0   3.624E-07   3.328E-07   2.954E-07   2.496E-07   1.969E-07   1.477E-07   1.248E-07   1.182E-07   9.847E-08   7.385E-08
       89.483      90.444      90.605      91.932      92.756      94.095      94.942      96.407      97.677      99.222
     89.48271    90.44402    90.60424    91.93177    92.75576    94.09474    94.94161    96.40649    97.67680    99.22177
0   3.693E-08
      100.000
     99.99998
0          X/Q PERCENTILES
 (BASED ON THE UPPER ENVELOPE OF THE
 ORDERED X/Q-FREQUENCY VALUES, AND AS
 PLOTTED ON A LOG-NORMAL GRAPH.)
0 PERCENT OF TIME CHI/Q IS EQUALED OR EXCEEDED
        CHI/Q      WITH RESPECT TO     WHEN THE WIND BLOWS
 SEC/CUBIC METER  THE TOTAL TIME      INTO THIS SECTOR ONLY

                                                HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 2)=   2.504
                                                HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 3)=   4.265
                                                HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 4)=   4.551
                                                HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 5)=   6.268
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                                                        HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 6)=  12.289
     1.375E-04              1.000              1.000
     8.038E-05              3.000              3.000
     5.333E-05              5.000              5.000
     2.720E-05             10.000             10.000
     1.840E-05             15.000             15.000
     1.419E-05             20.000             20.000
     1.136E-05             25.000             25.000
     9.716E-06             30.000             30.000
     8.239E-06             35.000             35.000
     7.046E-06             40.000             40.000
     6.159E-06             45.000             45.000
     5.402E-06             50.000             50.000
     4.738E-06             55.000             55.000
     4.146E-06             60.000             60.000
     3.611E-06             65.000             65.000
     3.122E-06             70.000             70.000
     2.668E-06             75.000             75.000
0    5.333E-05              5.0                5.00
1USNRC COMPUTER CODE-PAVAN, VERSION 2.0          RUN DATE:  12/20/2007     TIME:  14: 5:45
/PLANT NAME:  CPSES Units 3 & 4 C                METEOROLOGICAL INSTRUMENTATION
 DATA PERIOD: OLA  Ground-Level Re               WIND SENSORS HEIGHT:  10 meter
 TYPE OF RELEASE: lease                          DELTA-T HEIGHTS: 10 meter - 60 meter
 SOURCE OF DATA:  Met Data 2001-2006
 COMMENTS:  Data Period: Jan 2001-Dec 2006  Calc. No. TXUT-001-FSAR-2.3-CALC-022 Rev 0
 PROGRAM: PAVAN, 10/76, 8/79 REVISION, IMPLEMENTATION OF REGULATORY GUIDE 1.145
0LOW POPULATION ZONE CALCULATIONS:
0FIVE PERCENT OVERALL SITE LIMIT
 BUILDING WAKE CREDIT ALLOWED:   C=   .5     A=  2500.     D=   69.9
0BELOW ARE PRINTED THE ORDERED VALUES OF CHI/Q AND THE FREQUENCY WITH WHICH THAT VALUE IS REACHED OR EXCEEDED.
 THE TOP NUMBER IS THE CHI/Q.  THE MIDDLE NUMBER IS THE FREQUENCY NORMALIZED TO THIS SECTOR.
 THE THIRD NUMBER IS THE FREQUENCY WITH RESPECT TO ALL TIME.
0   2.186E-04   1.312E-04   1.254E-04   9.837E-05   7.869E-05   7.524E-05   6.558E-05   6.502E-05   5.852E-05   5.643E-05
         .046        .126        .240        .412        .664        .847       1.213       1.488       1.522       1.888
       .04578      .12589      .24033      .41199      .66377      .84688     1.21309     1.48776     1.52209     1.88830
0   4.975E-05   4.918E-05   4.590E-05   4.514E-05   3.901E-05   3.762E-05   3.722E-05   3.672E-05   3.060E-05   2.926E-05
         2.735       3.388       3.765       4.189       4.475       4.932       5.047       5.161       5.184       5.676
      2.73518     3.38750     3.76516     4.18860     4.47471     4.93248     5.04692     5.16136     5.18425     5.67635
0   2.822E-05   2.494E-05   2.341E-05   2.295E-05   2.233E-05   2.197E-05   1.951E-05   1.850E-05   1.675E-05   1.541E-05
         6.409       7.954       8.446       8.457       8.652       9.842      10.586      11.055      11.467      11.570
      6.40879     7.95376     8.44587     8.45731     8.65186     9.84206    10.58594    11.05516    11.46715    11.57015
0   1.463E-05   1.340E-05   1.289E-05   1.191E-05   1.147E-05   1.117E-05   1.005E-05   8.683E-06   8.374E-06   7.731E-06
        13.275      13.687      13.710      19.066      19.101      19.730      26.093      30.671      32.410      32.433
     13.27534    13.68734    13.71023    19.06614    19.10047    19.72990    26.09291    30.67062    32.41014    32.43303
0   7.236E-06   6.203E-06   5.799E-06   5.427E-06   4.966E-06   4.639E-06   4.438E-06   4.158E-06   3.866E-06   3.491E-06
        34.310      40.295      40.387      41.177      48.959      49.062      49.073      57.599      57.771      65.839
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     34.30988    40.29523    40.38679    41.17644    48.95854    49.06153    49.07298    57.59896    57.77062    65.83883
0   2.899E-06   2.713E-06   2.619E-06   1.997E-06   1.933E-06   1.598E-06   1.450E-06   1.331E-06   1.313E-06   1.309E-06
       66.308      66.434      75.567      75.578      76.688      76.745      77.672      77.764      77.775      81.552
     66.30804    66.43391    75.56644    75.57788    76.68796    76.74518    77.67215    77.76370    77.77515    81.55176
0   1.160E-06   9.985E-07   9.664E-07   7.248E-07   6.657E-07   5.908E-07   4.993E-07   4.727E-07   3.994E-07   3.939E-07
       82.525      82.799      83.887      85.386      86.381      86.404      87.446      87.457      88.419      88.487
     82.52451    82.79916    83.88636    85.38554    86.38118    86.40407    87.44547    87.45692    88.41823    88.48689
0   3.624E-07   3.328E-07   2.954E-07   2.496E-07   1.969E-07   1.477E-07   1.248E-07   1.182E-07   9.847E-08   7.385E-08
       89.483      90.444      90.604      91.932      92.756      94.095      94.942      96.407      97.677      99.222
     89.48254    90.44385    90.60406    91.93158    92.75556    94.09452    94.94139    96.40625    97.67656    99.22152
0   3.693E-08
      100.000
     99.99973
0          X/Q PERCENTILES
 (BASED ON THE UPPER ENVELOPE OF THE
 ORDERED X/Q-FREQUENCY VALUES, AND AS
 PLOTTED ON A LOG-NORMAL GRAPH.)
0 PERCENT OF TIME CHI/Q IS EQUALED OR EXCEEDED
        CHI/Q      WITH RESPECT TO     WHEN THE WIND BLOWS
 SEC/CUBIC METER  THE TOTAL TIME      INTO THIS SECTOR ONLY

                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 2)=   1.486
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 5)=   7.950
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 6)=   9.839
                                                    HANDCHECK GRAPH:  SLOPE LT -1.0 FOR LOW PERCENTAGES.  XSAVE( 7)=  19.070
     7.650E-05              1.000              1.000
     5.138E-05              3.000              3.000
     3.863E-05              5.000              5.000
     2.168E-05             10.000             10.000
     1.510E-05             15.000             15.000
     1.162E-05             20.000             20.000
     1.030E-05             25.000             25.000
     8.958E-06             30.000             30.000
     7.756E-06             35.000             35.000
     6.724E-06             40.000             40.000
     5.857E-06             45.000             45.000
     5.114E-06             50.000             50.000
     4.466E-06             55.000             55.000
     3.956E-06             60.000             60.000
     3.556E-06             65.000             65.000
0    3.863E-05              5.0                5.00
1USNRC COMPUTER CODE-PAVAN, VERSION 2.0          RUN DATE:  12/20/2007     TIME:  14: 5:45
/PLANT NAME:  CPSES Units 3 & 4 C                METEOROLOGICAL INSTRUMENTATION
 DATA PERIOD: OLA  Ground-Level Re               WIND SENSORS HEIGHT:  10 meter
 TYPE OF RELEASE: lease                          DELTA-T HEIGHTS: 10 meter - 60 meter
 SOURCE OF DATA:  Met Data 2001-2006
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COMMENTS: Data Period: Jan 2001-Dec 2006 Calc. No. TXUT-001-FSAR-2.3-CALC-022 Rev 0
PROGRAM: PAVAN, 10/76, 8/79 REVISION, IMPLEMENTATION OF REGULATORY GUIDE 1.145
0 RELATIVE CONCENTRATION (X/Q) VALUES (SEC/CUBIC METER)
VERSUS
AVERAGING TIME

DOWNWIND SECTOR	DISTANCE (METERS)	0-2 HOURS	0-8 HOURS	8-24 HOURS	1-4 DAYS	4-30 DAYS	ANNUAL AVERAGE	HOURS PER YEAR MAX 0-2 HR X/Q IS EXCEEDED IN SECTOR	DOWNWIND SECTOR
S	3219.	1.08E-05	5.33E-06	3.75E-06	1.74E-06	5.80E-07	1.51E-07	1.7	S
SSW	3219.	1.11E-05	5.24E-06	3.60E-06	1.59E-06	4.93E-07	1.17E-07	292.0	SSW
SW	3219.	8.77E-06	4.08E-06	2.78E-06	1.21E-06	3.68E-07	8.56E-08	1.2	SW
WSW	3219.	8.71E-06	4.02E-06	2.74E-06	1.18E-06	3.56E-07	8.16E-08	1.2	WSW
W	3219.	1.33E-05	6.15E-06	4.18E-06	1.80E-06	5.41E-07	1.24E-07	2.0	W
WNW	3219.	1.76E-05	8.45E-06	5.85E-06	2.64E-06	8.41E-07	2.07E-07	6.7	WNW
NW	3219.	2.62E-05	1.31E-05	9.29E-06	4.39E-06	1.50E-06	4.02E-07	11.9	NW
NNW	3219.	2.91E-05	1.46E-05	1.03E-05	4.90E-06	1.67E-06	4.49E-07	16.4	NNW
N	3219.	3.33E-05	1.56E-05	1.07E-05	4.71E-06	1.45E-06	3.42E-07	22.1	N
NNE	3219.	4.92E-05	2.08E-05	1.35E-05	5.33E-06	1.40E-06	2.71E-07	43.2	NNE
NE	3219.	4.93E-05	2.04E-05	1.31E-05	5.01E-06	1.26E-06	2.33E-07	43.5	NE
ENE	3219.	4.95E-05	1.99E-05	1.26E-05	4.68E-06	1.13E-06	1.99E-07	43.7	ENE
E	3219.	2.93E-05	1.18E-05	7.49E-06	2.80E-06	6.80E-07	1.20E-07	27.3	E
ESE	3219.	3.46E-05	1.42E-05	9.09E-06	3.46E-06	8.64E-07	1.58E-07	29.6	ESE
SE	3219.	4.35E-05	1.79E-05	1.15E-05	4.39E-06	1.10E-06	2.04E-07	32.6	SE
SSE	3219.	1.27E-05	5.91E-06	4.04E-06	1.77E-06	5.39E-07	1.26E-07	7.1	SSE
MAX X/Q		4.95E-05				TOTAL HOURS AROUND SITE:		582.2	
SRP 2.3.4	3219.	5.33E-05	2.42E-05	1.63E-05	6.93E-06	2.02E-06	4.49E-07		
SITE LIMIT		3.86E-05	1.85E-05	1.28E-05	5.76E-06	1.83E-06	4.49E-07		

0THE FIVE-PERCENT-FOR-THE-ENTIRE-SITE X/Q IS LIMITING.
0**NOTE**: VALUES ON THIS PAGE ARE APPROXIMATIONS ONLY.
CHECK THE REASONABLENESS OF THE ENVELOPES
COMPUTED FOR THE 0-2 HOUR VALUES. FOR ANY
FAULTY ENVELOPES, ADJUST THE ABOVE VALUES.

Attachment 6
Check of PAVAN Results

CPNPP COLA Met Data

Data from PAVAN run CPNPP.OUT file (12/20/07, 14:05:45)

Check of 5% Overall Site Limit

EAB Site Values ("SITE LIMIT")

5% X/Q	Annual X/Q	Slope	Intercept	XQT(8)	XQT(16)	XQT(72)	XQT(624)
2.4486E-04	5.37E-06	-0.4555684	-7.9990549	-8.9463828	-9.2621588	-9.9473689	-10.9312

X/Q(8)	X/Q(16)	X/Q(72)	X/Q(624)
1.30E-04	9.50E-05	4.79E-05	1.79E-05

Comparison with data from PAVAN Run:

	0-2 Hours	0-8 Hours	8-24 Hours	1-4 Days	4-30 Days	Annual Average
EAB Site Limit	2.59E-04	1.36E-04	9.90E-05	4.94E-05	1.82E-05	5.37E-06
% difference with Log interp		4.45%	4.27%	3.23%	1.72%	

Determination of 50 % EAB Site Values (50% 0-2 hr X/Q based on methodology above)

0-2 hr 50% X/Q	Annual X/Q	Slope	Intercept	XQT(8)	XQT(16)	XQT(72)	XQT(624)
5.231E-05	5.3700E-06	-0.2714787	-9.6702124	-10.234736	-10.422911	-10.831236	-11.4175

X/Q(8)	X/Q(16)	X/Q(72)	X/Q(624)
3.59E-05	2.97E-05	1.98E-05	1.10E-05

Where:

Slope = the slope of the tangent of the curve.
For example: Slope = (ln(5% X/Q value)-ln(Annual X/Q value))/(ln(2)-ln(8760))

Assuming a straight line between two points and using the slope-intercept equation,
y = Slope * x + Intercept, the y intercept is determined.
For example: Intercept = ln(5% X/Q value)-(Slope * ln(2))

Then, again using the slope-intercept equation, values of y are determined.
For example: XQT(8) = Slope * ln(8) + Intercept
The X/Q value for a particular time interval is obtained by taking the inverse of the natural log.
For example: X/Q(8 hours) = $e^{XQT(8)}$

Note that the 5% X/Q value and the 50% X/Q value are interpolated from the ordered values of X/Q and the frequency with which those values are reached or exceeded given in the PAVAN output.
The annual X/Q is obtained from the summary of results given in the PAVAN output.

CPNPP COLA Met Data

Data from PAVAN run CPNPP.OUT file (12/20/07, 14:05:45)

Check of 5% Overall Site Limit

LPZ Site Values ("SITE LIMIT")

5% X/Q	Annual X/Q	Slope	Intercept	XQT(8)	XQT(16)	XQT(72)	XQT(624)
3.7383E-05	4.49E-07	-0.527378	-9.8287311	-10.925383	-11.290933	-12.084151	-13.223

X/Q(8)	X/Q(16)	X/Q(72)	X/Q(624)
1.80E-05	1.25E-05	5.65E-06	1.81E-06

Comparison with data from PAVAN Run:

	0-2 Hours	0-8 Hours	8-24 Hours	1-4 Days	4-30 Days	Annual Average
LPZ Site Limit	3.8600E-05	1.8500E-05	1.2800E-05	5.7600E-06	1.8300E-06	4.4900E-07
% difference with Log interp		2.80%	2.52%	1.98%	1.19%	

Determination of 50 % LPZ Site Values (50% 0-2 hr X/Q based on methodology above)

0-2 hr 50% X/Q	Annual X/Q	Slope	Intercept	XQT(8)	XQT(16)	XQT(72)	XQT(624)
4.408E-06	4.49E-07	-0.2724038	-12.143374	-12.709822	-12.898638	-13.308354	-13.8966

X/Q(8)	X/Q(16)	X/Q(72)	X/Q(624)
3.02E-06	2.50E-06	1.66E-06	9.22E-07

Where:

Slope = the slope of the tangent of the curve.
For example: Slope = (ln(5% X/Q value)-ln(Annual X/Q value))/(ln(2)-ln(8760))

Assuming a straight line between two points and using the slope-intercept equation,
y = Slope * x + Intercept, the y intercept is determined.
For example: Intercept = ln(5% X/Q value)-(Slope * ln(2))

Then, again using the slope-intercept equation, values of y are determined.
For example: XQT(8) = Slope * ln(8) + Intercept
The X/Q value for a particular time interval is obtained by taking the inverse of the natural log.
For example: X/Q(8 hours) = $e^{XQT(8)}$

Note that the 5% X/Q value and the 50% X/Q value are interpolated from the ordered values of X/Q and the frequency with which those values are reached or exceeded given in the PAVAN output.
The annual X/Q is obtained from the summary of results given in the PAVAN output.

The 5% Site Limit X/Q values for the EAB and the LPZ "checked" here are bounded by the values reported in the PAVAN output reported on pages 92 and 119, respectively. The 50% Site Limit X/Q values determined here are reported in Table 2-4 on page 7.