

2.3 METEOROLOGY

2.3.1 REGIONAL CLIMATOLOGY

2.3.1.1 General Climate

The climate of east central Pennsylvania is on the border of Koeppens' "snow forest" and temperate rainy climate (Ref. 2.3-1). There is considerable snow during the winter and relatively hot humid summers with precipitation distributed evenly throughout the year.

This region is repeatedly affected by interactions between warm, moist maritime tropical air masses and cool, dry continental polar air masses. The polar air masses are the dominant influence in the winter while tropical air masses predominate in the summer. Maritime polar air masses are also common in a highly modified form from the Pacific or directly from the North Atlantic. The North Atlantic air masses which are cool and humid are usually associated with approaching warm fronts and "back door" cold fronts.

The weather systems which affect east central Pennsylvania are generally of non-tropical origin. The storm tracks of less than 7% of all North Atlantic tropical cyclones enter Pennsylvania (Ref. 2.3-2). Systems which produce precipitation are divided into 3 groups. Cold fronts, trailing from cyclones passing to the north, occurring throughout the year, are the primary source of summer precipitation in the region. A second type of disturbance that produces precipitation in this area is the coastal low, originating in the Gulf of Mexico or in the Cape Hatteras region, which moves NNE along the coast. The greatest snowfalls in east central Pennsylvania are associated with this type of system. Major extra-tropical cyclones originating in the Gulf of Mexico, Texas Panhandle, or the lee of the Rockies which move northeast or east frequently give the region light or moderate snowfalls and rain. Tropical cyclones occasionally affect the region but very rarely retain hurricane force so far inland. Record rainfalls are often associated with decaying tropical cyclones.

Tornadoes seldom occur in Pennsylvania and those which cause severe damage or loss of life are rare.

The monthly average winds are westerly (Ref. 2.3-3). The wind in the region is constrained by the general direction (ENE-WSW) of the ridge and valley topography. Wind speeds in the region are light to moderate with monthly averages less than 10 mph.

Average temperatures range between 72°F in the summer and 25°F in the winter with extremes of 101°F and -21°F. Relative humidity is usually greater than 50%, often greater than 85% (Ref. 2.3-3a).

The Wilkes-Barre Scranton Airport at Avoca, Pennsylvania approximately 45 km northeast of the site, is the nearest National Weather Service Station. Based upon "STAR" summaries for the years 1971-1975 neutral stability conditions predominate at Avoca with Class C, D, and E occurring approximately 9, 59, and 13 percent of the time, respectively (Ref. 2.3-4).

The diffusion climatology of the region is generally good due to the prevalence of moderate wind speeds at most times. Occasional stagnant situations occur during the late summer and autumn when anticyclones stall over the northeastern U.S. It should also be noted that the plant's location

in the Susquehanna Valley can cause different stability conditions than those found concurrently at the top of the surrounding mountains or plateaus.

2.3.1.2 Regional Meteorological Conditions for Design and Operating Bases

2.3.1.2.1 Hurricanes

Hurricane winds seldom affect the area because of the rough terrain and the distance of the region from the ocean. Recently, Hurricane Agnes (June 1972) resulted in the worst natural disaster to hit the region because of the excessive precipitation it produced. Record flooding was recorded along the Susquehanna River. At Wilkes-Barre, 25 miles upstream from the site, the river crested on June 24 at a height of 40.91 feet, almost 8 feet above the previous record. Rainfall at Avoca, Pennsylvania for the period of Hurricane Agnes (June 21-22) was 3.10 inches. On August 18-19, 1955 the rainfall associated with Hurricane Diane was 4.58 inches (Ref. 2.3-3).

A tabulation of North Atlantic tropical cyclones with centers passing within 75 and 150 nautical miles of the Susquehanna site is presented in Table 2.3-1. The significance of these two distances is that points that lie within 75 to 150 nautical miles from the center of a hurricane may receive some heavy rainfall whereas points that lie between 0 and 75 nautical miles from the center of a hurricane are very likely to receive heavy rainfall. The frequency and recurrence interval of hurricane centers passing within 75 and 150 nautical miles is, respectively, 0.08 per year with an interval of 12 years, and 0.20 per year with an interval of 5 years (Ref. 2.3-2).

2.3.1.2.2 Tornadoes

The incidence of tornadoes in the site area is very low. Between the years 1950 and 1973 only 38 tornadoes were reported within 50 miles of the site. Tornado activity is at a maximum during the summer months with most tornadoes occurring in the late afternoon or evening. Figure 2.3-1 is a histogram for the years 1953-1962 showing tornado frequency by month, hour, and intensity within a 3° by 3° square which is centered on the site. The intensity categories are based on the Fujita tornado intensity classification (Ref. 2.3-5). From Figure 2.3-1 it can be seen that maximum tornado occurrence is in the summer. Diurnally, tornado frequency reaches a maximum during late afternoon, shortly after the period of greatest instability. For the period from 1950-1997, there were 5 tornadoes officially reported in Columbia County and 13 tornadoes officially reported in Luzerne County (Ref. 2.3-5a).

2.3.1.2.3 Thunderstorms

Thunderstorms in the area are usually of brief duration and concentrated in the warm months. They are responsible for most of the summertime rainfall which normally averages around 3.7 inches per month at Avoca, Pennsylvania. Based on a 19 year average at Avoca the mean number of "days with thunder heard" is 30 (Ref. 2.3-3). A monthly breakdown of the mean number of thunderstorm days that is representative of the site is shown in Table 2.3-2.

2.3.1.2.4 Lightning

There is neither documentation nor direct measurement of the occurrence of lightning other than the observation of associated thunder. Local climatological data tabulated by the National Weather Service (Ref. 2.3-3) does not provide information regarding the incidence, severity, or frequency of lightning occurrences. A thunderstorm can usually be heard unless the lightning causing the thunder is more than 15 miles away; therefore, thunder incidence can presumably be used to confirm the presence of some lightning.

The number of lightning strikes per square mile per year has been established by Uman (Ref. 2.3-6). The combined results of several studies summarized by Uman indicate that the number of flashes to the ground per square mile per year is between .05 and .80 times the number of thunderstorm days per year. The mean number of days with thunderstorms probably overestimates the actual occurrence of cloud-to-ground lightning since some thunderstorms probably contain only cloud-to-cloud lightning. Therefore, if the annual thunderstorm frequency at Avoca is used (30 days), the number of ground lightning strikes is between 2 and 24.

2.3.1.2.5 Hail

Hail in the site region sometimes falls from severe thunderstorms. Because hail falls in narrow swaths, only a small fraction of occurrences is recorded at regular reporting stations. The average annual number of days with hail at a point in the area is 23 (Ref. 2.3-7). The occurrence of large hail (greater than 3/4 inch diameter) averages 1 or 2 occurrences annually. According to Pautz (Ref. 2.3-7) the number of hailstorms with hail 3/4 inch and greater by 1-degree longitude-latitude squares was about 5 in the vicinity of the site for the period 1955-1967. For Avoca, Pennsylvania from 1973-75 there was one hailstorm each June, and one each in July of 1973 and 1974. In 1975 there was also one hailstorm in August and one in October. There were no occurrences of hail recorded in 1976 at Avoca (Ref. 2.3-3).

2.3.1.2.6 Extreme Winds

Strong winds occur in Pennsylvania as a result of the remnants or outer fringes of tropical systems, occasional hurricanes, thunderstorms, and tornadoes. The following is the fastest mile of wind and its associated direction, by month, at Avoca, Pennsylvania (1955-1976) (Ref. 2.3-3).

FASTEST MILE OF WIND

| <u>Month</u> | <u>mph</u> | <u>Direction</u> | <u>Month</u> | <u>mph</u> | <u>Direction</u> |
|--------------|------------|------------------|--------------|------------|------------------|
| January | 43 | SE | July | 42 | NW |
| February | 60 | W | August | 50 | NE |
| March | 49 | S | September | 38 | SW |
| April | 47 | NW | October | 38 | E |
| May | 40 | NW | November | 45 | S |
| June | 43 | W | December | 47 | SW |

The 50-year and 100-year mean fastest mile wind speeds for the site area are 75 miles per hour and 80 miles per hour, respectively (Ref. 2.3-8). According to Pautz, there were 8 windstorms 50 knots and greater for the 1 degree latitude-longitude square that includes the Susquehanna site for the period 1955-1967 (Ref. 2.3-7).

The gust factor was calculated as 1.3 from the following equation (Ref. 2.3-9).

$$G_F = \frac{G_f}{K_z(.00256V^2)}$$

Where

G_F is the gust factor to be applied to the fastest mile wind speed at 10 m above the ground.

K_z is the velocity pressure coefficient at 10 m (.52).

V is the speed of the 100 year return period fastest mile wind (80 mph).

G_f is the velocity pressure (11.5).

2.3.1.2.7 Freezing Rain

Freezing rain can occur in the late fall, winter, and early spring. During the 50 years from 1919-1969 there were 4 occurrences of ice accumulation of 1 inch. The probability of an ice storm accumulating at least 1 inch in any year in the Northeast region of the U.S. is .24 (Ref. 2.3-10). At Avoca, Pennsylvania from 1973-1976 there were 57 days with freezing rain, 21 in January and 18 in February. There were nine occurrences each in March and December during that period. The duration of these phenomenon never exceeded 12 hours and was usually less than 3 hours (Ref. 2.3-11).

2.3.1.2.8 Duststorms

Because the soil in Pennsylvania is usually moist all year the likelihood of a duststorm is small (Ref. 2.3-12). There were no recorded duststorms for the period 1972-1976 at Avoca, Pennsylvania (Ref. 2.3-11).

2.3.1.2.9 High Air Pollution Potential

The meteorological conditions that are generally conducive to high air pollution potential are light winds, stable boundary layers, and near surface based inversions. Holzworth (Ref. 2.3-13) studied the episodic occurrence of several limited dispersion conditions at each of 62 upper air stations in the United States. He considered episode durations of at least 2 days and at least 5 days. Twelve different limited dispersion conditions were used to define each episode. Each condition was defined by a different combination of mixing height and wind speed. Intermediate limiting conditions of mixing heights less than or equal to 1500 m and wind speeds 4.0 m sec⁻¹ or less with no significant precipitation during episodes lasting at least 2 days are of interest because such criteria have been used as criteria by the National Pollution Potential Forecasting Program (Ref. 2.3-13). The approximate number of episode-days at the site area is 25 in 5 years. This is much less than in the western half of the country and less than most of the East. Table 2.3-3 presents a

summary of the data at stations presented by Holzworth which are closest to the site. Days with high air pollution correlate to days with minimum low level atmospheric mixing and dispersion.

2.3.1.2.10 Snowpacks

Severe snowstorms are not frequent in the area. Snowfall averages between 40 and 50 inches a year in the site region. At Avoca, Pennsylvania the extreme 24-hour snowfall was 20.5 inches in November, 1971 but the greatest snowfall of record was 21.1 inches over a 29 hour period in January, 1964. The extreme seasonal snowfall was 76.8 inches in 1969-1970 (Ref. 2.3-3).

The 100 year mean recurrence interval snow load on the ground is 122.02 kgm⁻² (25 lbs ft⁻²) (Ref. 2.3-9). The 100 year mean recurrence snow depth for Avoca, Pennsylvania is 28.6 inches (Ref. 2.3-15).

Assuming the maximum probable winter precipitation falls on top of the 100 year mean recurrence interval snowload yields a conservative estimate of the maximum probable combined snowload.

Assuming that the 100 year mean recurrence interval snowload occurs during January, which has the lowest average monthly temperature and the greatest snowfall of record, the weight of the 48 hour probable maximum winter precipitation for January must be added to it. The weight of the 48 hour probable maximum winter precipitation for January is 287.0 kg m⁻² (59 lbs ft⁻²) (Ref. 2.3-14). Thus, the weight of the probable maximum combined snowload at ground level is 409.02 kg m⁻² (84 lbs ft⁻²).

2.3.1.2.11 Design Basis Tornado

The development of a Design Basis Tornado (DBT) follows the premise that the probability of occurrence of a tornado exceeding the DBT should be on the order of 10⁻⁷ per year (Ref. 2.3-16). The 10⁻⁷ per year design tornado was determined for a 3° latitude by 3° longitude area encompassing the site. The tornado path lengths and widths in the area of interest were used in the probable calculation.

The first step in the procedure is the computation of the geometric probability which is given by the following equation:

$$P_s = \bar{n} (a / A) \quad (\text{Eq. 2.3-1})$$

where P_s is the mean annual probability of a tornado striking a point, \bar{n} is the mean number of tornadoes occurring within the area A per year, and "a" is the mean path area determined from the log-normal distribution.

The design basis wind speed is one which satisfies the condition $P_s P_i < 10^{-7} \text{ yr}^{-1}$ where P_i is the acceptable intensity probability and is determined from the plot of cumulative F-scale intensity frequencies on log-probability paper. The F-scale is an estimate of tornadic wind speed range based upon damage inspection and has been compiled for the years of 1971 and 1972 (Ref. 2.3-17).

The average rate of pressure drop within the radius of maximum winds is determined by:
(Ref. 2.3-19)

$$\frac{dp}{dt} = \frac{\Delta p T}{2r_m} \quad (\text{Eq. 2.3-2})$$

Where:

$$\begin{aligned} \Delta p &= \text{pressure change} \\ t &= \text{time} \\ T &= \text{translational speed} \\ r_m &= \text{radius rotational wind speed} = 150' \end{aligned}$$

The total pressure drop, p , is determined by the application of the cyclostrophic wind equation:

$$\int_0^r \frac{\partial p}{\partial r} dr = \int_0^r 2\rho A \frac{V^2 m}{r_m} dr \quad (\text{Eq. 2.3-3})$$

where V_m is maximum rotational wind speed and is the density of air ($1 \times 10^{-3} \text{ gm/cm}^3$).

The region from which tornado path length and width statistics were selected was between 75° to 78° longitude and 40° to 43° latitude; approximately centered on the site location. Of the 63 tornadic events thirty four values of path length and width were found for the period 1950-1973 based upon the National Severe Storms Forecast Center's tornado tape.

The geometric probability is calculated by substituting the following parameters into Equation 2.3-1:

Where,

$$\begin{aligned} a &= 0.388 \text{ mi}^2 \\ A &= 32,265 \text{ mi}^2 \\ \bar{n} &= 63/24\text{yr} = 2.625 \text{ yr}^{-1} \\ P_s &= 3.157 \times 10^{-5} \text{ yr}^{-1} \end{aligned}$$

$$\text{and } P_i = 3.168 \times 10^{-3} \text{ yr}^{-1}$$

This results in a design wind speed of 260 mph for a probability of 10^{-7} yr^{-1} (Ref. 2.3-19). The value of "a" is conservative in comparison with a value of .26 mi^2 for the combined states of Pennsylvania and West Virginia and .37 mi^2 for New York state for the period 1953-1972 (Ref. 2.3-18). Although the value of "a" was based on only 34 of the 63 tornadoes it was conservatively assumed that all 63 tornadoes had a mean path area of 0.388 mi^2 . In this region, the highest tornadic intensity was F 2 or 157 mph. Thus, the 260 mph design wind speed is conservative with respect to the local historical record.

The rate of pressure drop and the total pressure drop are determined directly from Equations 2.3-2 and 2.3-3, respectively. The maximum translational wind speed was interpolated from the Region

II and Region III values (Ref. 2.3-16). The design basis parameters calculated for the Susquehanna Steam Electric Station are (Ref. 2.3-19):

| <u>Total Maximum Wind Speed</u> | <u>Rotational Wind Speed</u> | <u>Maximum Translational Speed</u> |
|--|--------------------------------------|--|
| 260 | 205 | 55 |
| <u>Minimum Translational Speed</u> | <u>Total Pressure Drop</u> | <u>Rate of Pressure Drop</u> |
| 5 mph | 1.9 psi | 0.9 psi/sec |

The actual design basis parameters that were used for the Susquehanna design are presented in Section 3.3.

2.3.1.2.12 Ultimate Heat Sink

An analysis of the ultimate heat sink is presented in Section 9.2 of the FSAR.

This analysis is based on 11 years of meteorological data collected on site as well as 34 years of meteorological data collected at Avoca Airport near Scranton, Pennsylvania.

A computer-aided search was done for both data bases to determine two periods of time for use as the Ultimate Heat Sink design meteorology. One was chosen such that the ability to cool sprayed water is minimized (minimum heat transfer case). The other was chosen such that the potential for water loss is maximized (maximum water loss case). The selection of this meteorology is discussed further in Subsections 9.2.7.3.5 and 9.2.7.3.7.

2.3.2 LOCAL METEOROLOGY

2.3.2.1 Normal and Extreme Values of Meteorological Parameters

2.3.2.1.1 Wind

The following data sources were used as the basis of this section: long-term data from Wilkes-Barre Scranton Airport at Avoca, Pennsylvania (Ref. 2.3-3), four years of data (1973-1976) collected at the 31.5 and 300 feet levels and five years of data (1999-2003) collected at the 10 m and 60 m levels of the Susquehanna meteorological tower located at the site.

The Avoca station is located about 30 miles northeast of the Susquehanna site. It is reasonably representative of the site due to their close proximity to one another and similar topography.

Table 2.3-6 is a summary of long-term wind data for Avoca (Ref. 2.3-3). It shows the annual average speed is 8.4 miles per hour and the prevailing direction is southwest. The monthly

average wind speeds are greatest in the spring (9.6 mph in April) and lowest in the late summer (7.2 mph in August). The prevailing wind direction is SW or WSW for every month except March when it is NW. Table 2.3-7 is a similar summary for the on-site data.

Lower level (31.5 feet) data from the Susquehanna site for the 4 year period show an average wind speed of 4.45 mph (1.99 m/sec). The prevalent direction over the 4 years was the WSW closely followed by W. The ENE direction presents a secondary maximum in frequency of occurrence.

Tables 2.3-8 through 2.3-16 provide wind persistence data for the Susquehanna site on an annual basis, at the lower level, for each stability class, all classes combined, and all stable classes.

The joint frequencies of wind speed, direction, and stability at both the lower and upper levels were updated in 2005 to use the 5 year period (1999 – 2003) are found in Tables 2.3-75 through 2.3-91.

The overall southwest to northeast orientation of topographic ridge lines in the SSES vicinity has a profound influence on the low level winds. At Avoca, PA, the mean annual wind direction is from the southwest. At the SSES site, the predominant wind directions measured at the 10-meter level are from the east-northeast and from the southwest. The Susquehanna River Valley orientation effectively funnels a localized, low level wind flow up or down the valley. The river valley environment is also favorable for stable meteorological conditions in the lowermost portion of the atmosphere characterized by little to no wind and the presence of fog. This is most prevalent during the overnight hours. The river valley influence on atmospheric stability at the SSES site makes stability conditions unique and often quite different when compared to stability conditions at Aroca.

2.3.2.1.2 Temperature and Atmospheric Water Vapor

Table 2.3-17 presents the long-term monthly average and extreme temperatures for Avoca, Pennsylvania. July is the warmest month with a long-term average maximum temperature of 82.2°F, an average minimum temperature of 61.8°F, and a mean of 72.0°F. The coolest month is January, having an average temperature range of 32.3°F to 17.7°F and a mean temperature of 25.0°F. The average annual diurnal variation is 18.1°F (Ref. 2.3-3a).

East Central Pennsylvania experiences the temperature extremes associated with mid-latitude traveling low pressure disturbances. The temperature extremes at Avoca, Pennsylvania are 101°F in July of 1966 and -21°F in January, 1994. Average Avoca, Pennsylvania dewpoint and relative humidity data are contained in Table 2.3-18 (Ref. 2.3-3a).

At the Susquehanna site during the period 1973-1976 dry bulb temperatures ranged from a high of 34.3°C (94°F) to a low of -20.9°C (-6°F). The average temperature was 9.3°C (49°F). July had the highest average temperature 20.3°C (69°F) while January had the lowest with -2.1°C (28°F). The average wet bulb temperature was 6.9°C (44°F) with the months of July and August averaging 17.7°C (64°F). The average relative humidity was 70% with the month of August averaging 82%. A summary of the site data is presented in Tables 2.3-19 through 2.3-32.

For the period of 1981-1996, the maximum SSES average hourly temperature of 37.8°C (100°F) occurred on July 16, 1996. The minimum average hourly temperature at SSES for this period was -30.8°C (-23.1°F) on January 21, 1994.

2.3.2.1.3 Precipitation

The region surrounding the Susquehanna site has a moderately moist climate averaging just over 36 inches of rainfall per year spread quite evenly over all months of the year. There is a slight maximum during the summer when there is a greater effect of tropical air masses and thunderstorms. The average monthly and maximum 24-hour precipitation for Avoca, Pennsylvania are given in Table 2.3-33. The greatest 24-hour rainfall amount reported at Avoca, Pennsylvania was 6.52 inches in September 1985, associated with the remnants of Hurricane Gloria. The greatest 24-hour snowfall, 20.5 inches occurred with the Thanksgiving Day storm of November 24-25, 1971, but the greatest snowfall of record was 21.1 inches over a 29 hour period on January 12-13, 1964 (Ref. 2.3-3).

Table 2.3-34 presents the expected rainfall by duration and recurrence intervals for the area around the Susquehanna site as compiled by the National Weather Service (Ref. 2.3-20). The probable maximum precipitation for various rainfall duration in East Central Pennsylvania by area size is presented in Table 2.3-35. Assuming 10 square miles is most representative of the power plant site, the probable maximum rainfall ranges from 25 1/2 inches in 6 hours to 36 1/2 inches in 72 hours (Ref. 2.3-21). The rainfall rate distribution curves are presented for Scranton, Pennsylvania in Figure 2.3-2. The 100 year return period rainfall rate is 2.5 inches for a 1 hour period.

Table 2.3-36 presents the summary of on-site precipitation data for the 4 year period. The site averaged a total of 47.83 inches annually with the greatest occurring in September (7.54 inches) and the minimum in December (2.21 inches). Data on the rainfall frequency, and duration of precipitation for the Susquehanna site are presented in Tables 2.3-37 through 2.3-49 by month and for the 4 year period. Precipitation wind roses are presented by month and for the total period in Tables 2.3-50 through 2.3-62.

2.3.2.1.4 Fog and Smog

At Avoca, Pennsylvania between the years of 1973-1976 there was an average of 86 days of haze and smoke reported. Most of the days were in the summer months. Over the same period, the three hourly observations of fog averaged 250 for a year. Fog was usually observed with rain or snow and most often in the early fall months. The average number of days with heavy fog for the period was 21. Table 2.3-63 presents the heavy fog occurrences at Avoca, Pennsylvania for recent years. Based on National Weather Service data from Avoca, Pennsylvania from a 22 year period, heavy fog (visibility 1/4 mile or less) occurs 24 times per year. No on-site data on fog, or haze, is available.

2.3.2.1.5 Stability

Atmospheric stability at the Wilkes-Barre Scranton airport based on STAR data for the period 1971-1975. The STAR data for the period 1971-1975 were selected because they represented the most recent five year period which was available at the time and the fact that a five year period of record is generally regarded as being representative of long-term meteorological conditions. The 1971-1975 period also shows the prevailing direction to be from the SW at an average speed of 8.5 mph. STAR data for the five year period 1960-1964 also show that the prevailing wind direction is from the SW at an average speed of 6.7 mph. For a 22 year period of record the prevailing wind

direction was SW at an average speed of 8.4 mph. The relative stability distribution of these two five year periods are:

| <u>Pasquill Stability Class</u> | <u>1960-64</u> | <u>1971-75</u> |
|-------------------------------------|----------------|----------------|
| A | 0.41 | 0.32 |
| B | 5.27 | 4.84 |
| C | 10.04 | 8.92 |
| D | 54.27 | 58.64 |
| E | 12.36 | 13.09 |
| F | 13.05 | 11.16 |
| G | 4.60 | 3.01 |

The seasonal occurrence of E and F stabilities are given below for the 1971-75 period:

SEASONAL OCCURRENCE (%) OF E AND F STABILITIES

| | <u>Winter</u> | <u>Spring</u> | <u>Summer</u> | <u>Autumn</u> |
|---|---------------|---------------|---------------|---------------|
| E | 12.3 | 12.0 | 14.9 | 12.9 |
| F | 8.5 | 8.9 | 14.0 | 13.0 |

Tables 2.3-64 to 2.3-71 are annual stability summaries by wind speed and direction from Avoca, Pennsylvania data for the years 1971 through 1975 (Ref. 2.3-4). The analytical technique for classifying stability is based upon three hourly observations and is dependent primarily upon net solar radiation and wind speed. For the entire period neutral and slightly stable most often occur. The on-site stability summaries by wind speed and direction are presented in Tables 2.3-75 through 2.3-91.

Studies by Holzworth (Ref. 2.3-33) indicate that for Northeastern Pennsylvania unstable conditions (A, B, C) occur 16-25 percent of the time while neutral (D) conditions prevail 46-55 percent of the time and stable conditions (E, F, G) occur 26-35 percent of the time. For the 4 year period 1973-1976 the on-site data showed the following stability frequencies: Pasquill class A-16 percent, B-7.6 percent, C-4.2 percent, D-30.8 percent, E-26.2 percent, F-10.5 percent, G-4.5 percent. This indicates that the site is prone toward stable conditions (41.2%) rather than neutral conditions (30.8%).

Representative mixing heights on a seasonal and diurnal basis obtained by averaging data from Albany, and New York, New York; Pittsburgh, Pennsylvania; and Washington, D.C. (Ref. 2.3-13) are presented in Table 2.3-72.

Low level atmospheric stability is influenced by insolation. The relatively high latitude of the SSES site (approximately 41° North) has a profound impact on the length of daylight. At the winter solstice (around December 21), the time elapsed between sunrise and sunset is 9 hours, 11 minutes. At the summer solstice (around June 21), the time elapsed between sunrise and sunset is 15 hours, 10 minutes, or a difference of 6 hours (Ref. 2.3-13a).

2.3.2.2 Potential Influence of the Plant and its Facilities on Local Meteorology

The expected characteristics and effects of water vapor plumes entering the atmosphere arising from the operation of two natural draft cooling towers have been evaluated.

The characteristics and effects associated with cooling tower operation were determined in terms of:

- a) Monthly and annual frequency distributions of plume length with respect to distance and direction out to 20,000 ft.
- b) Monthly and annual frequency distributions of ground level plumes (fogging) with respect to distance and direction.
- c) Monthly and annual frequency distributions of ground level plumes accompanied by subfreezing temperatures (icing) by distance and direction.
- d) Monthly and annual frequency distribution of increases in relative humidity and temperature with respect to distance and direction.

Simulations were obtained from a computerized diffusion model that simulates vapor plume length and the occurrence of ground level fogging or icing. The Gaussian plume theory distribution is assumed with buoyancy approximated by a dry plume rise equation. The computer program utilizes cooling tower performance data and on-site meteorological observations for 1976 (ambient temperature, dew point, wet bulb temperature, wind velocity, and atmospheric stability) to determine the downwind dispersion of water vapor at plume centerline and ground level.

The year 1976 was selected because it was the most conservative year with respect to atmospheric dispersion conditions of the four years of on-site data. It is also conservative with respect to long-term atmospheric conditions.

The model used was developed by Dames & Moore and has been used in previous submittals to NRC. The model was presented by Bowman, W. Alan and Biggs, W. Gale in their paper entitled "Meteorological Aspects of Large Cooling Towers" presented at a APCA Conference in Miami, Florida in June, 1972. The height at which each meteorological measurement input to the model was taken is given below:

| | |
|-------------------------|--------------------|
| Wind Speed..... | 300 ft. |
| Wind Direction..... | 300 ft. |
| Temperature..... | 31.5 ft. |
| Relative Humidity | 31.5 ft. |
| Stability | 300 ft. - 31.5 ft. |

Generally, the longer plume lengths occur more frequently in the winter months in the early morning hours when the relative humidities are high. The visible plumes were computed to extend laterally beyond 20,000 feet (4 miles) approximately 30 percent of the time in the sectors of maximum occurrence (NE and ENE) and 70 percent for all sectors. Visible plumes occurred least frequently in the WNW through NNW sectors with computed plume lengths beyond 4 miles occurring with a frequency of 2.1 percent to 2.5 percent annually. There were no computed occurrences of ground fogging. Relative humidity increases of 2.5 percent above ambient did not occur.

No occurrences of icing were computed. Likewise, no computed increases in surface temperature of 0.5°C or greater were projected in the study sample.

In conclusion, the frequent (70%) long visible plumes are the primary meteorological effects to be experienced from the operation of the Susquehanna cooling towers. There is no fogging or icing expected. The inducement of other weather modification effects such as rainfall augmentation is unlikely due to the small percentage increase in atmospheric moisture introduced into the already moisture laden environment.

Further details of this analysis are provided in Subsection 5.1.4 of the Environmental Report.

The topography surrounding the site consists of ridges and valleys. Figure 2.1-11 shows the topography within a 5 mile radius of the site. The cross-sections of elevation centered on the plant along the 16 cardinal directions to a distance of 50 miles are shown in Figures 2.3-4-1, 2.3-4-2, 2.3-4-3, 2.3-4-4, 2.3-4-5, 2.3-4-6, 2.3-4-7, and 2.3-4-8.

2.3.2.3 Local Meteorological Conditions for Design and Operating Bases

All local meteorological and air quality conditions used for design and operating basis considerations and their bases, except for those conditions referred to in Subsections 2.3.4 and 2.3.5, are provided in Subsections 2.3.1.2.1 through 2.3.1.2.11. Current site meteorological information is documented on a regular basis in the SSES Annual Effluent and Waste Disposal report.

2.3.3 ON-SITE METEOROLOGICAL MEASUREMENTS PROGRAM

The on-site meteorological program is designed to provide a complete climatology of the site area, but most importantly to provide dispersion climatology for use in safety planning of radioactive effluent releases and as a means of determining the appropriately conservative meteorological parameters to be used in estimating the potential consequences of hypothetical accidents. Analysis of collected meteorological data permits an assessment of the diffusion parameters characteristic of the site.

2.3.3.1 Location and Description of the Tower Site

The site is about 8 km (5 mi.) ENE of Berwick, Pennsylvania. The primary meteorological tower, commonly referred to as the Primary Meteorological Tower, a 200 foot steel framed tower, is located about 340 m to the southeast of the cooling towers. The area is generally level, increasing slightly in elevation to the north and west. South and east of the tower the topography slopes down towards the Susquehanna River. Vegetation in the immediate vicinity is low weeds with some deciduous trees in a gully to the south. The deciduous trees are approximately 40 feet in height and are approximately 100 feet from the tower. In 1994, an ash facility was placed approximately 185 feet north of the Primary Meteorological Tower. The maximum height of this structure is approximately 30 feet.

In November 1972 three meteorological instrumentation platforms were constructed. The primary tower was erected on the Susquehanna nuclear power station site at the same altitude as the station (approximately 650' msl) between the station and the Susquehanna River. The purpose of the primary tower is to estimate the stability and movement of the air layer into which the effluent from the facility could be released as required by NRC Regulatory Guide 1.23 (Ref. 2.3-22). In addition to the primary tower, 75 foot and 10 foot instrumented poles were erected at site vicinity.

The 75 foot tower was at 1115' msl on a hill to the NW of the station and the 10 foot tower was below the station towards the river at 500' msl. The purpose of the 75 foot pole was to provide sensing of wind, temperature, and humidity parameters at an elevation comparable to the elevations of the cooling tower plumes. The 75 foot tower was removed on January 14, 1974 due to construction requirements. The data from the primary meteorological tower provides sufficient information for the cooling tower analysis. The 10 foot tower in the valley below the station, was removed on November 14, 1975, after three years of data had been collected. Figure 2.3-5 presents a schematic of the sites and the instrumentation.

In compliance with the requirements of NUREG-0654 a backup meteorological tower was erected in 1982. This tower is commonly referred to as the Backup Tower. The tower is a 30-foot instrumented utility pole located northeast of the station and across from the Training Center. The purpose of the backup tower is to provide sensing of wind parameters at the 10-meter level. Additionally, in 1985 two supplemental towers were installed in the river valley near the station to provide additional data to more accurately model the effects of surrounding terrain on atmospheric dispersion and transport. One tower is located UPRIVER approximately 1.2 miles NNE of the station off Route 11 towards Shickshinny; the second tower is located DOWNRIVER approximately 3.6 miles SW of the station off Route 93 just east of Nescopeck. Meteorological validation of the UPRIVER supplemental tower data was terminated on October 1, 1994 and the UPRIVER supplemental tower equipment was abandoned in place at that time .

Both The DOWNRIVER tower measures wind speed, wind direction and sigma theta at the 10 meter level. The DOWNRIVER tower also measures temperature at a height of approximately 6.6 feet.

The meteorological data collected from the DOWNRIVER tower continues to be validated and is used only to support assessment and restoration efforts in the event there is an accidental release of radioactive material from SSES.

2.3.3.2 Types of Measurements Made

The parameters which are monitored for conformance to NRC Regulatory Guide 1.23 (Ref. 2.3-22) commitments are wind speed, wind direction, temperature, delta temperature, dewpoint temperature and precipitation. Delta temperature accuracy criteria is monitored for conformance to AEC Safety Guide 123 (Ref. 2.3-22a). The parameter, heights, and number of sensors installed at the Susquehanna site are listed in Table 2.3-73.

2.3.3.3 Description of Instruments

The wind sensor consists of a 3 cup anemometer and coupled drive shaft that responds to wind and rotates a multi-section light beam chopper. Rotation of the chopper alternately masks and exposes a phototransistor to a miniature light source. The phototransistor responds to the light passing through the chopper wheel and generates an electrical output which has a frequency proportional to wind velocity. This signal is then sent to a translator for further conversion. The accuracy required for the wind speed measurement is ± 0.5 mph for speeds less than 5 mph and $\pm 10\%$ for speeds above 5 mph. This requirement is met by the instrumentation used on the primary tower.

The wind direction sensor is comprised of a counterbalanced lightweight vane coupled to a precision potentiometer assembly by the drive shaft, causing the potentiometer wiper to directly follow movements of the wind vane. The position of the vane is sensed by the potentiometer and is sent to a translator as a DC voltage. The accuracy requirement for the wind direction measurement is $\pm 5^\circ$ of azimuth with a starting threshold of less than 1 mph. This requirement is met by the instrumentation used on the primary tower.

On the primary tower the temperature measuring system consists of multiple thermistor composite sensors. Two sensors are mounted in motor aspirated radiation shields at each of the 10 meter and 60 meter levels. The thermistor sensors are connected in a resistive network and powered by a D.C. voltage to produce a voltage that varies approximately linearly with temperature as a translator output. Each translator produces two channels of output; one channel of one translator provides the ambient temperature output for 10 meters and a second, comparator channel provides differential temperature output derived from one 10 meter sensor input and one 60 meter sensor input. The two separate sets of 10 meter and 60 meter sensors provide one 10 meter ambient temperature measurement and two difference temperature measurements between the 10 meter and 60 meter levels.

Accuracy required for the ambient temperature measurement is $\pm 0.5^\circ\text{C}$. This requirement is met by the instrumentation used at the primary tower.

Accuracy required for the temperature difference measurement is $\pm 0.1^\circ\text{C}/50\text{m}$. This requirement is met by the instrumentation used on the primary tower.

The dewpoint temperature is measured on the primary tower with bifilar wire electrodes wound on a cloth sleeve which covers a hollow tube or bobbin. The bifilar electrodes are not interconnected, but depend on conductivity of the atmospherically moistened lithium chloride treated bobbin for current flow. As the moisture content in the air increases, the lithium chloride absorbs water vapor and becomes conductive. Current then begins to flow between the electrodes energized by low AC voltage, and heats the bobbin. Some of the moisture is thereby evaporated until an equilibrium temperature is reached on the bobbin. The equilibrium temperature is related to the dewpoint temperature of the air. A thermistor sensor is mounted inside the bobbin to measure the cavity temperature which is converted in analog outputs, representing dewpoint temperature by a electronic temperature translator. The accuracy required for the dewpoint temperature measurement is $\pm 1.5^\circ\text{C}$. This requirement is met by the instrumentation used on the primary tower.

On the 10 meter level of the primary tower a motor aspirated temperature and dewpoint shield houses two thermistor sensors, and the dewpoint sensor. At the 60 meter level two motor aspirated temperature shields each houses a thermistor sensor.

Precipitation is measured in a Tipping Bucket Rain Gauge at the primary tower site. This is a remote reading gauge which produces a signal proportional to total rainfall. Precipitation is collected in a collection opening and is funneled to the two buckets of the tipping mechanism. As one bucket fills with water, the weight causes it to lower, tip, and empty while the bucket on the opposite side is simultaneously raised to receive additional water. Each tipping phase causes a momentary switch closure. This closure actuates a digital counter directly proportional to accumulated rainfall. The required accuracy for the rainfall measurement is $\pm 10\%$ of the total accumulated catch for amounts in excess of 0.2 in. This requirement is met by the instrumentation used on the primary tower.

Vertical diffusion coefficients are computed from the vertical temperature differences. Wind sigma standard deviation of wind direction is measured at the 10 and 60 meter levels and used to compute horizontal diffusion coefficients. Sigma theta calculations based on wind direction measurements are used as a backup to temperature readings to monitor atmospheric stability.

The outputs of all sensors are handled by a modular translator system designed to convert the sensor outputs into a standardized voltage/current output. Each input channel is allotted one circuit designed for a particular sensor, such as wind speed, wind direction, or temperature, etc. The necessary signal processing and scaling is contained in each circuit to provide an electrical output of uniform range. There are two outputs from each circuit. One low voltage output is directed to a data logger accessible via telephone modem and a second low voltage output to a telemetry transmitting system which directs a specific frequency/parameter signal to telemetry receiving device in the control room which converts this signal to a 4 to 20 ma output which then inputs to an appropriate recorder in the main control room.

Each translator circuit has internal zero and full scale calibration facilities. Each calibrator switch has a "normal" position which allows normal recording of data. When depressed the calibrator switch provides a signal to the individual translator circuit producing a zero or full scale signal to the recorders. The indicated output in meteorological units for each position of the calibrator is given below.

| <u>Parameter</u> | <u>Zero</u> | <u>Full Scale</u> | <u>Type of Calibration</u> |
|------------------|-------------|-------------------|----------------------------|
| Wind Speed | 0 mph | 100 mph | Calibrated Voltage |
| Wind Direction | 0° | 540° | Calibrated Voltage |
| Temperature | -20°F | +100°F | Precision Resistance |
| Dewpoint | -40°F | +100°F | Precision Resistance |
| Delta temp | -5°F | +5°F | Calibrated Voltage |
| Precipitation | 0 in | 1 in. | Calibrated Voltage |

2.3.3.4 Data Recording Systems

The primary data recording system used for the Susquehanna site's primary tower is a digital data acquisition system. The system is an integrated data conversion and recording station which scans up to 16 analog signal outputs, converts each 0 to 1 V DC input to a digital code which is stored and retrieved via modem interface.

The secondary recording system is the Control Room recorders.

It is estimated that approximately 10% of the data used at the Susquehanna site was obtained from strip chart records.

Spot checks were made to compare the strip chart and digital data. Although no formal records of these comparisons were prepared, it is estimated that the average differences between strip chart and digital data were as follows:

| | |
|----------------|------------|
| Temperature | 1°F |
| Wind Speed | 1 mph |
| Wind Direction | 5 degrees |
| Dewpoint | 1°F |
| Temperature | 0.5°F |
| Precipitation | .05 inches |

All telemetry transmitters, translators, and the data logger are housed in a weatherproof cinderblock building. This building has thermostatically controlled heating and air conditioning.

2.3.3.5 Calibration and Maintenance of the System

All calibration and maintenance is performed at least semi-annually in accordance with the frequencies and procedures prescribed in the manufacturer's operating and maintenance manual.

2.3.3.6 Data Analysis

The analog recording system provides a back-up in case of digital system failure, so that a high data recovery rate can be maintained. Table 2.3-74 gives the recovery rates for each year.

An hourly average for each parameter is computed. Data validity, range of hourly averages, and the number of valid observations contributing to the averages are tabulated to assist in the determination of data reliability. Comparisons between the analog and digital data are performed when the review of the digital data reveals questionable or invalid data.

Temperature and dewpoint hourly averages are computed using the following scalar equation:

where:

$$\overline{B}_j = \frac{1}{n} \sum_{i=1}^n r_j B_{ji}$$

\overline{B}_j = the average hourly value for the variable (in physical units)

n = the total number of minute observations during the hour (normally 60), but if n is less than 15 for that hour, data are considered to be missing;

B_{ji} = the i^{th} minute observation on the j^{th} variable (millivolts);

r = the conversion factor to change the j^{th} variable from millivolts into physical units.

After wind speed (WS) and wind direction (WD) are converted from millivolts they are related in the following manner:

If WS is invalid (999) then WD is marked invalid (999) and vice versa

If WS > threshold (non-calm) and WD = 0 (implying calm) then WD is set to 360° (North)

If WS < threshold (calm) and WD > 0 (implying non-calm) then WD is set to 0° (calm)

Hourly averages are computed as scalars for wind speed. Wind direction averages are determined by vector analysis for all non-calm wind distribution of the lowest non-calm wind speed class by stability class.

If the associated average WS is less than .36 mps then average WD is set to 0° (calm) and average WS is set to 0 mps (calm).

NRC Regulatory Guide 1.23 (Ref. 2.3-22) suggests that data be averaged over a period of at least 15 minutes once each hour. Hours containing less than 15 minutes of valid data are invalidated. The hourly averaged data are reviewed for validity, completeness, and reliability. Periods containing problems are then replaced by analog data.

Data analysis for diffusion characteristics for the site requires three basic atmospheric variables. These three variables, together with the primary and secondary (back-up) measurements for each, are as follow:

| | |
|---------------------------------------|--|
| Horizontal wind speed | primary-10 m wind speed; secondary-60 m wind speed |
| Horizontal wind direction | primary-10 m wind direction; secondary-60 m wind direction |
| Temperature difference (ΔT) | primary-delta T's from 10 m to 60 m; secondary- ΔT from 10 m to 60 m |

If the 10 m wind speed is unavailable the 60 m wind speed is reduced to the equivalent 10 m value as follows:

$$V_{10} = V_j \left(\frac{10}{H_j} \right)^S$$

where:

| | | |
|----------|---|---|
| H_j | = | sensor height, meters |
| V_{10} | = | the equivalent 10 m wind speed |
| V_j | = | the 60 m wind speed |
| S | = | 0.25 for Pasquill classes A, B, C, and D 0.50 for Pasquill classes E, F, and G |

The percentage of data recovery for the 10 m wind sensor indicates the extent of this substitution for the data period.

Temperature difference values are used to determine Pasquill stability classes. Atmospheric dispersion coefficients are assigned according to stability class and downwind travel distance.

The hourly values of the meteorological parameters are then processed to obtain the following:

- a. joint frequency distributions of wind speed and stability for lower and upper levels (Tables 2.3-75 through 2.3-91)
- b. wind direction persistence summaries by stability class
- c. maximum, minimum and diurnal variation of temperature, and humidity
- d. annual average values of relative concentration with direction and distance
- e. frequency distribution of concentrations for the 0-2 hour, 0-8 hour, 8-24 hour, 1-4 day and 4-30 day time periods.

2.3.4 SHORT-TERM (ACCIDENT) DIFFUSION ESTIMATES

Atmospheric diffusion conditions (expressed as values of χ/Q) developed for use in evaluating accidents hypothesized in Chapter 15 are discussed in this section for various periods after an accident. This includes χ/Q estimates based on the methods described in Regulatory Guide 1.145. (Reference 2.3-34) All estimates use vertical temperature difference to determine stability classification. Tables 2.3-75 through 2.3-82 and 2.3-84 through 2.3-91 give the joint frequency distribution of temperature difference categories used to summarize 5 years of SSES data into Pasquill groups for use in computing σ_y and σ_z in the diffusion equations. Results are based on evaluation of a recent 5-year period of onsite meteorological data (1999-2003). A description of the site meteorological program is given in Section 2.3.3.

Methods used to estimate diffusion conditions for evaluating short-term accident releases are discussed in Section 2.3.4.1, and methods for assessing the consequences of longer term accident releases (up to 30 days) are discussed in Section 2.3.4.2.

2.3.4.1 Short-Term (0-2 hours) Releases

The methodology for determining the atmospheric dispersion that exists for short-term releases involves direction-dependent and direction-independent calculations as described in Regulatory Guide 1.145. Both methods include the effects of plume meander as discussed below.

2.3.4.1 1 Direction-Independent Calculations

The direction-independent approach involves computing χ/Q values for each hour of the period of SSES records used and then counting all of the hours that had χ/Q values equal to or greater than a selected value regardless of direction. The number of hours so obtained was then divided by the number of hours in the total period of record to obtain the probability that the selected χ/Q value would be equaled or exceeded. The resulting probabilities are independent of wind direction. A plot of cumulative centerline χ/Q values as a function of probability of occurrence was constructed using the SSES hourly data for all 5 years combined as shown in Figure 2.3-6. Equations 2.3-4, 2.3-5 and 2.3-6 in Section 2.3.4.4 were used to compute values of χ/Q . The distance to the site boundary (exclusion area boundary referred to as the EAB) was assumed to be a circle with a radius of 0.34 miles (549 meters).

2.3.4.1 2 Direction-Dependent Calculations

The direction-dependent calculations outlined in Regulatory Guide 1.145 require the χ/Q values to be calculated using the equations given in Section 2.3.4.4; however, the results are treated separately for each direction. A 5-year composite direction-dependent probability distribution was plotted by combining the frequency of occurrence of selected χ/Q values for each direction at the EAB as shown in Figure 2.3-7.

2.3.4.1 3 Determining Appropriate Short-Term Dispersion

In accordance with Regulatory Guide 1.145, the two cumulative probability distributions shown in Figures 2.3-6 and 2.3-7 are used to determine the appropriate χ/Q value at the EAB distance. The peak 5% value read from Figure 2.3-6 is $6.5\text{E-}4 \text{ s/m}^3$. For the direction-dependent case, the 0.5% χ/Q is determined from Figure 2.3-7 to be $8.3\text{E-}4 \text{ s/m}^3$. The highest of the two ($\chi/Q = 8.3\text{E-}4 \text{ s/m}^3$) is to be used in accident dose calculations and is shown in Table 2.3-92 for the 1-hour case at the EAB. Tables 2.3-93 through 2.3-98 show the direction dependent results for each of the separate years plus the total for all five years at the EAB. For "realistic" dose calculations the 50% direction independent value is also shown in Table 2.3-92.

Similar calculations for short-term dispersion were made at the LPZ distance of 3 miles (4827 meters). Tables 2.3-99 through 2.3-104 give the direction-dependent χ/Q probability distributions for 1 hour for each of the 5 years and the weighted 5 year average at the LPZ.

2.3.4.2 Long-Term Releases

For releases that occur over a longer period, it is appropriate to incorporate wind direction changes in the model used to estimate concentration at any given point. Using the same 5-year period of data from SSES, the probability that any particular average diffusion condition (or poorer one) would exist during a selected interval of time (greater than 1 hour) was determined.

The procedure for determining longer term- χ/Q values is also taken from Regulatory Guide 1.145. The calculation is made using the 5-year data set. The highest 0.5% direction-dependent short-term (1 hour) χ/Q value was used because it is greater than the 5% direction-independent at the LPZ. These χ/Q values are plotted on Figures 2.3-8 and 2.3-9 as a function of averaging time. Only the 1-hour values are used in the Reg. Guide 1.145 interpolation method. The long-term 0.5% χ/Q values for defined averaging times are determined by a log-

log interpolation between the maximum direction dependent annual average and the maximum 0.5% direction dependent 1 hour value used at the 2 hour averaging time. The long term 50% values are determined by interpolating (log-log) between the 50% direction independent 1 hour value at the 2 hour averaging time and the direction independent annual average (see Figure 2.3-10). The interpolated values are summarized in Table 2.3-105. For the 50% probable case the direction independent values were used because they are higher than the direction dependent values.

2.3.4.3 Analytical Methods for Dispersion Computations

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, horizontal plume meander is taken into account. χ/Q values are determined through selective use of the following set of equations for ground level relative concentrations at the plume centerline:

$$\chi/Q = \frac{1}{\overline{U}_{10}(\pi\sigma_y\sigma_z + A/2)} \quad 2.3-4$$

$$\chi/Q = \frac{1}{\overline{U}_{10}(3\pi\sigma_y\sigma_z)} \quad 2.3-5$$

$$\chi/Q = \frac{1}{\overline{U}_{10}\pi\Sigma_y\sigma_z} \quad 2.3-6$$

Where

χ/Q is relative concentration, in sec/m³

π is 3.14159

\overline{U}_{10} is wind speed at 10 meters above plant grade, in m/sec

σ_y is lateral plume spread, in m, a function of atmospheric stability and distance

σ_z is vertical plume spread, in m, a function of atmospheric stability and distance

Σ_y is lateral spread with meander and building wake effects, in m, a function of atmospheric stability, wind speed \overline{U}_{10} , and distance [for distances of 800 meters or less, $\Sigma_y = M\sigma_y$, where M is a function of the atmospheric stability and wind speed; for distances greater than 800 meters, $\Sigma_y = (M - 1)\sigma_{y800m} + \sigma_y$].

A is the smallest vertical-plane cross-sectional area of the reactor building in m².

χ/Q values are calculated using Equations 2.3-4, 2.3-5 and 2.3-6. The values from Equations 2.3-4 and 2.3-5 are compared and the higher values selected. This value is compared with the value from Equations 2.3-6 and the lower value of these two is selected as the appropriate χ/Q value.

The χ/Q value used in accident consequence analysis is selected from the maximum sector χ/Q values which is exceeded 0.5% of the time.

2.3.5 LONG-TERM (ROUTINE) DIFFUSION ESTIMATES

The long-term diffusion characteristics for the Susquehanna SSES were estimated in accordance with the criteria set forth in NRC Regulatory Guide 1.111 (1977). The analysis was performed using the onsite meteorological data recorded at the primary tower for January 1999 through December 2003.

2.3.5.1 Atmospheric Diffusion Models

2.3.5.1.1 Straight Line Airflow Model

A ground level release model based on meteorological data and plant parameters was used to calculate the annual average atmospheric relative concentration (χ/Q) values. Depletion factors are computed directly from depletion curves as the relative deposition rates. For long-term, ground level relative concentrations, the plume is assumed to diffuse evenly over a 22.5-degree sector.

The hourly relative concentration values are calculated in the sector defined by the wind direction using the following equation:

$$\chi/Q = \frac{2.032}{\sigma_z \bar{u} x} \quad (5)$$

Where

χ/Q = ground level relative concentration (sec/m³)

σ_z = vertical standard deviation of the plume (m)

\bar{u} = average wind speed (m/sec)

x = distance from the source (m)

However, with consideration of the turbulent wake effect, Equation 5 is revised as follows:

$$\chi/Q = \frac{2.032}{ux \sqrt{\sigma_z^2 + cV^2/\pi}} \quad (6)$$

Where

c = building shape factor

V = vertical height of the highest adjacent building

The wake factor (cV_z/π) is limited, close to the source, to a factor of $2\sigma_z^2$.

If $\sqrt{3} > \sigma_z > \sqrt{\sigma_z^2 + c \frac{\pi}{V_z}}$, the equation is

$$\chi/Q = \frac{2.032}{\sqrt{3}\sigma_z u_x} \quad (7)$$

(i.e., χ/Q is calculated to be the larger of Equations 6 and 7). The total relative concentration at each sector and distance is then divided by the total number of hours in the database.

2.3.5.1.2 Terrain/Recirculation Correction Factors

The straight-line trajectory, Gaussian diffusion model assumes that a constant mean wind transports and diffuses plume effluents in the direction of airflow at the release point within the entire region of interest. In other words, the wind speed and atmospheric stability at the release point are assumed to determine the atmospheric dispersion characteristics in the direction of the mean wind at all distances. In areas of more complex terrain recirculation of the plume over longer time periods may occur. To account for this effect the results of a comparison of the PAM (Puff Advection Model) with the straight line model was made from which adjustment factors for the site region were determined. These correction factors were applied to the results of the straight line model by multiplying the χ/Q values by the correction factors found in Table 2.3-106.

2.3.5.1.3 Deposition and Depleted χ/Q 's

As radioactive effluent in a plume travels downwind, it is subject to several removal mechanisms, including radioactive decay, dry deposition, and wet deposition (during precipitation). Corrections for radioactive decay of 2.26 days for undepleted χ/Q and 8 days of depleted χ/Q are shown in the dispersion estimates reported in this subsection.

Dry deposition, which results in depletion of halogen and particulate isotopes from the plume, is calculated using Figures 2 through 5 in Regulatory Guide 1.111. Depletion factors in these curves are a function of release height and distance. All releases at the SSES are at ground level. Therefore, elevated curves were not used. Each χ/Q is multiplied by the depletion correction factor to estimate the depleted χ/Q value.

To determine relative deposition rate as a function of distance and stability, the curves given in Regulatory Guide 1.111 are used in a computerized table look-up routine. Values from the curves are divided by the sector cross-width (arc) at the point of calculation to give units m^{-2} .

2.3.5.1.4 Results of Long-Term Diffusion Estimates

Tables 2.3-107 through 2.3-118 present the annual and five year average χ/Q , decayed and depleted χ/Q and deposition values at the site boundary and exclusion area boundary for each of

the 16 cardinal directions. Tables 2.3-119 through 2.3-136 show similar information for the nearest residence, vegetable garden, meat and dairy animal location and selected special receptor locations around the plant. Tables 2.3-137 through 2.3-140 present the five year average χ/Q , decayed and depleted χ/Q and deposition values for the sixteen directions out to a distance of 80.5 kilometers (50 miles) from the plant.

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| 2.3-32 | Not Used |
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| 2.3-34 | U. S. Nuclear Regulatory Commission, Regulatory Guide 1.145. Atmospheric Dispersion Models for Potential Accident Consequence Assessments at Nuclear Power Plants, Reissued February, 1983. |

SSES - FSAR

TABLE 2.3-1

HURRICANES WITHIN 75 AND 150 NAUTICAL MILES
OF THE SUSQUEHANNA SITE
PERIOD OF RECORD 1871 to 1969

| | TRACKS WITHIN 75 NM* | TRACKS WITHIN 150 NM* | TOTAL NORTH ATLANTIC STORMS |
|---------------------|----------------------------|-----------------------------|--------------------------------------|
| TIME PERIOD | | | |
| Prior to 1900 | 8 | 18 | |
| After 1900 | 0 | 2 | |
| 1871 TO 1969 | 8 | 20 | 489 |
| Occurrence by Month | | | |
| June | 0 | 1 | |
| July | 0 | 0 | |
| August | 2 | 3 | |
| September | 4 | 10 | |
| October | 2 | 6 | |
| Totals | 8 | 20 | |

*NM represents nautical miles.

SSES - FSAR

TABLE 2.3-2

THUNDERSTORM DAYS FOR AVOCA, PENNSYLVANIA

WILKES-BARRE SCRANTON AIRPORT

PERIOD OF RECORD 1956 TO 1974

VALUES ARE EXPRESSED IN DAYS (Ref. 2.3-3)

| MONTH | THUNDERSTORM DAYS (to the nearest whole day) |
|----------------|---|
| January | * |
| February | * |
| March | 1 |
| April | 2 |
| May | 4 |
| June | 6 |
| July | 8 |
| August | 5 |
| September | 3 |
| October | 1 |
| November | * |
| December | * |
| Annual Average | 30 |

*Less than one-half

SSES - FSAR

TABLE 2.3-3

TOTAL NUMBER OF DAYS IN 5 YEARS

MIXING HEIGHTS < 1500m

WIND SPEEDS < 4.0 sec⁻¹ and

NO SIGNIFICANT PRECIPITATION

FOR EPISODES LASTING AT LEAST 2 DAYS

| Station | Episodes | Episode-days | Season of Greatest # of Episode Days |
|----------------|----------|--------------|--|
| Pittsburgh, PA | 16 | 39 | Autumn |
| New York, N.Y. | 4 | 9 | Autumn |
| Albany, N.Y. | 7 | 23 | Autumn |

SSSES - FSAR

TABLE 2.3-5

MEAN MONTHLY VALUES: SUSQUEHANNA SITE (1973-1976)

| Month | Wind Speed (m/sec) | Dry Bulb (C) | Wet Bulb (C) |
|-----------|-----------------------|-----------------|-----------------|
| January | 2.3 | -2.1 | -3.6 |
| February | 2.0 | -1.4 | -3.4 |
| March | 2.7 | 3.6 | 1.1 |
| April | 2.8 | 8.8 | 5.2 |
| May | 2.0 | 13.8 | 10.6 |
| June | 1.7 | 18.8 | 16.1 |
| July | 1.5 | 20.3 | 17.7 |
| August | 1.4 | 20.0 | 17.7 |
| September | 1.6 | 15.0 | 12.9 |
| October | 1.9 | 9.9 | 7.6 |
| November | 2.1 | 4.9 | 2.6 |
| December | 2.1 | -0.9 | -2.6 |
| Annual | 2.0 | 9.3 | 6.9 |

SSSES - FSAR

TABLE 2.3-6

LONG-TERM AVERAGE WIND SPEED AND PREVAILING
DIRECTION AT WILKES-BARRE SCRANTON AIRPORT

Period of Record: 1956-1974

| Month | Average Speed (mph) | Prevailing Direction |
|-----------|------------------------|-------------------------|
| January | 8.9 | SW |
| February | 9.3 | SW |
| March | 9.3 | NW |
| April | 9.6 | SW |
| May | 8.8 | WSW |
| June | 7.9 | SW |
| July | 7.4 | WSW |
| August | 7.2 | SW |
| September | 7.4 | SW |
| October | 7.9 | WSW |
| November | 8.7 | WSW |
| December | 8.9 | SW |
| Annual | 8.4 | SW |

TABLE 2.3-7
AVERAGE WIND SPEED AND PREVAILING
DIRECTION AT THE SUSQUEHANNA SITE

Period of Record (1973-1976)

| Month | Average Speed (mph) | Prevailing Direction |
|-----------|------------------------|-------------------------|
| January | 5.1 | WSW |
| February | 4.5 | SSW |
| March | 6.0 | W |
| April | 6.3 | W |
| May | 4.5 | W and E |
| June | 3.8 | WSW |
| July | 3.4 | WSW |
| August | 3.1 | ENE |
| September | 3.6 | ENE |
| October | 4.3 | E |
| November | 4.7 | W |
| December | 4.7 | W |
| Annual | 4.5 | WSW |

TABLE 2.3-8
WIND DIRECTION PERSISTENCE - PASQUILL A (1973 - 1976)

| SECTOR | CONSECUTIVE HOURS | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | >24 |
|--------|-------------------|----|----|----|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|
| NNE | 33 | 12 | 12 | 12 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| NNE | 34 | 12 | 12 | 12 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| ENE | 17 | 12 | 12 | 12 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| ESE | 11 | 12 | 12 | 12 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| ESS | 12 | 12 | 12 | 12 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| SSS | 46 | 12 | 12 | 12 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| SSW | 49 | 12 | 12 | 12 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| WSW | 103 | 12 | 12 | 12 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| WNW | 103 | 12 | 12 | 12 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| NNW | 17 | 12 | 12 | 12 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| NNN | 16 | 12 | 12 | 12 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
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SSSES - PSAR

TOTAL NO. OF OBSERVATIONS = 35064

TABLE 2.3-9

WIND DIRECTION PERSISTENCE - PASQUILL B (1973 - 1976)

| SECTOR | CONSECUTIVE HOURS | | | | | | | | | | | | | | | | | | | | | | | |
|--------|---|------|------|------|----|------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|
| | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | >24 |
| NNE | 12 | 6 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NE | 14 | 6 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ENE | 7 | 4 | 4 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| E | 12 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ESE | 8 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SE | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SSE | 7 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| S | 21 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SSW | 20 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SW | 31 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WSW | 33 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| W | 36 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WNW | 11 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NW | 15 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NNW | 14 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| N | 8 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SECTOR | AVERAGE WIND SPEED (M/SEC) CONSECUTIVE HOURS | | | | | | | | | | | | | | | | | | | | | | | |
| | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | >24 |
| NNE | 2.51 | 2.81 | 1.30 | 3.58 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| NE | 2.72 | 2.20 | 2.14 | 3.54 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| ENE | 1.65 | 2.34 | 3.29 | 0. | 0. | 3.28 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| E | 2.69 | 1.16 | 0. | 2.06 | 0. | 0.58 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| ESE | 2.05 | 2.50 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| SE | 1.68 | 2.17 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| SSE | 2.06 | 1.16 | 1.48 | 1.74 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| S | 2.47 | 2.41 | 1.97 | 3.59 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| SSW | 2.82 | 2.00 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| SW | 3.27 | 3.06 | 4.70 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| WSW | 3.47 | 3.64 | 1.75 | 3.78 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| W | 3.53 | 3.09 | 3.62 | 3.76 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| WNW | 3.70 | 4.70 | 4.43 | 1.79 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| NW | 3.23 | 3.14 | 3.23 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| NNW | 2.29 | 2.55 | 3.35 | 2.40 | 0. | 3.61 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| N | 2.89 | 2.55 | 3.35 | 2.40 | 0. | 3.61 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |

SEAS - PASAR

TOTAL NO. OF OBSERVATIONS = 35064

WIND DIRECTION PERSISTENCE - PASQUILL C (1973 - 1976)

[illegible]

| AVERAGE WIND SPEED (M/SEC) | | | | | | | | | | | | | | | | | | | | | | | | | SSES - FSAR |
|----------------------------|------|------|------|----|------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-------------|
| SECTOR | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | |
| NNE | 2.05 | 2.49 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | |
| NNE | 2.38 | 2.00 | 3.81 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | |
| ENE | 2.38 | 2.44 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | |
| ESE | 2.05 | 2.77 | 3.0 | 0. | 4.93 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | |
| SSE | 2.34 | 1.03 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | |
| SSE | 2.39 | 1.03 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | |
| SSE | 2.39 | 1.03 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | |
| SSE | 2.39 | 1.03 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | |
| SSE | 2.39 | 1.03 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | |
| SSE | 2.39 | 1.03 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | |
| SSE | 2.39 | 1.03 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | |
| SSE | 2.39 | 1.03 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | |
| SSE | 2.39 | 1.03 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | |
| SSE | 2.39 | 1.03 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | |
| SSE | 2.39 | 1.03 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | |
| SSE | 2.39 | 1.03 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | |
| SSE | 2.39 | 1.03 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | |
| SSE | 2.39 | 1.03 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | |
| SSE | 2.39 | 1.03 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | |
| SSE | 2.39 | 1.03 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | |
| SSE | 2.39 | 1.03 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | |
| SSE | 2.39 | 1.03 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | |
| SSE | 2.39 | 1.03 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | |
| SSE | 2.39 | 1.03 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | |
| SSE | 2.39 | 1.03 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | |
| SSE | 2.39 | 1.03 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | |
| SSE | 2.39 | 1.03 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | |
| SSE | 2.39 | 1.03 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | |
| SSE | 2.39 | 1.03 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | |
| SSE | 2.39 | 1.03 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | |
| SSE | 2.39 | 1.03 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | |
| SSE | 2.39 | 1.03 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | |
| SSE | 2.39 | 1.03 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | |
| SSE | 2.39 | 1.03 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | |
| SSE | 2.39 | 1.03 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | |
| SSE | 2.39 | 1.03 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | |
| SSE | 2.39 | 1.03 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | |
| SSE | 2.39 | 1.03 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | |
| SSE | 2.39 | 1.03 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | |
| SSE | 2.39 | 1.03 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | |
| SSE | 2.39 | 1.03 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | |
| SSE | 2.39 | 1.03 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | |
| SSE | 2.39 | 1.03 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | |
| SSE | 2.39 | 1.03 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | |
| SSE | 2.39 | 1.03 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | |
| SSE | 2.39 | 1.03 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | |
| SSE | 2.39 | 1.03 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | |
| SSE | 2.39 | 1.03 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | |
| SSE | 2.39 | 1.03 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | |
| SSE | 2.39 | 1.03 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | |
| SSE | 2.39 | 1.03 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | |
| SSE | 2.39 | 1.03 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | |
| SSE | 2.39 | 1.03 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | |
| SSE | 2.39 | 1.03 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | |
| SSE | 2.39 | 1.03 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | |
| SSE | 2.39 | 1.03 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | |
| SSE | 2.39 | 1.03 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | |
| SSE | 2.39 | 1.03 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | |
| SSE | 2.39 | 1.03 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | |
| SSE | 2.39 | 1.03 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | |
| SSE | 2.39 | 1.03 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | |
| SSE | 2.39 | 1.03 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | |
| SSE | 2.39 | 1.03 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | |
| SSE | 2.39 | 1.03 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | |
| SSE | 2.39 | 1.03 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | |
| SSE | 2.39 | 1.03 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | |
| SSE | 2.39 | 1.03 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | |
| SSE | 2.39 | 1.03 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | |
| SSE | 2.39 | 1.03 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | |
| SSE | 2.39 | 1.03 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | |
| SSE | 2.39 | 1.03 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | |
| SSE | 2.39 | 1.03 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | |
| SSE | 2.39 | 1.03 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | |
| SSE | 2.39 | 1.03 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | |
| SSE | 2.39 | 1.03 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | |
| SSE | 2.39 | 1.03 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | |
| SSE | | | | | | | | | | | | | | | | | | | | | | | | | |

TOTAL NO. OF OBSERVATIONS = 35064

TABLE 2.3-11

SSES - FSAR

TOTAL NO. OF OBSERVATIONS = 35064

TABLE 2.3-12

WIND DIRECTION PERSISTENCE - PASQUILL E (1973 - 1976)

| SECTOR | CONSECUTIVE HOURS | | | | | | | | | | | | | | | | | | | | | | | |
|--------|-------------------|----|----|----|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|
| | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | >24 |
| NNE | 47 | 20 | 4 | 2 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| N | 98 | 21 | 4 | 4 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ENE | 103 | 31 | 21 | 7 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| E | 89 | 33 | 8 | 11 | 4 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ESE | 38 | 5 | 5 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SSE | 23 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| S | 19 | 3 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SSW | 34 | 13 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SW | 44 | 8 | 3 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WSW | 61 | 28 | 10 | 4 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| W | 64 | 33 | 12 | 10 | 3 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WNW | 61 | 22 | 11 | 2 | 1 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NNW | 32 | 10 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| N | 25 | 4 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 37 | 19 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

AVERAGE WIND SPEED (M/SEC)
CONSECUTIVE HOURS

| SECTOR | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | >24 |
|--------|------|------|------|------|------|------|------|------|------|----|----|----|------|----|------|----|----|----|----|----|----|----|----|-----|
| NNE | 1.55 | 1.56 | 2.39 | 1.59 | 2.13 | 1.95 | 0. | 1.70 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| N | 1.47 | 1.34 | 1.62 | 2.26 | 1.57 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 1.89 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| ENE | 1.34 | 1.03 | 1.46 | 1.12 | 0. | 0. | .81 | 0. | 1.02 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| E | 1.11 | 1.12 | 1.30 | 1.00 | 1.12 | 3.47 | 0. | 1.04 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| ESE | 1.13 | .83 | 1.52 | 1.45 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| SSE | 1.77 | .91 | .89 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| S | 1.72 | 2.05 | 2.47 | 1.86 | 2.38 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| SSW | 1.58 | 1.63 | 2.37 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| SW | 1.47 | 1.46 | 1.52 | 1.11 | 2.21 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| WSW | 1.43 | 1.35 | 1.70 | 1.31 | 0. | 2.09 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| W | 2.59 | 2.29 | 2.47 | 2.37 | 2.71 | 2.64 | 3.65 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| WNW | 2.22 | 2.06 | 2.76 | 0. | 0. | 0. | 0. | 0. | 5.62 | 0. | 0. | 0. | 0. | 0. | 5.11 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| NNW | 2.37 | 1.80 | 2.74 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| N | 1.59 | 2.66 | 2.34 | 3.03 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| | 1.72 | 1.49 | 1.62 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |

SSES - PSAR

TOTAL NO. OF OBSERVATIONS = 35064

TABLE 2.3-13

WIND DIRECTION PERSISTENCE - PASQUILL F (1973 - 1976)

| CONSECUTIVE HOURS | | | | | | | | | | | | | | | | | | | | | | | | |
|---|------|------|------|------|------|------|------|-----|------|----|----|------|----|----|----|----|----|----|----|----|----|----|----|-----|
| SECTOR | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | >24 |
| NNE | 14 | 6 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NNE | 36 | 3 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ENE | 89 | 28 | 13 | 11 | 7 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ESE | 85 | 31 | 14 | 4 | 5 | 5 | 3 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ESE | 20 | 4 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SSE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SSE | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SSW | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SSW | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WSW | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WSW | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WNW | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WNW | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NNW | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NNW | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| N | 12 | 5 | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AVERAGE WIND SPEED (M/SEC) CONSECUTIVE HOURS | | | | | | | | | | | | | | | | | | | | | | | | |
| SECTOR | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | >24 |
| NNE | .88 | .97 | 1.01 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| NNE | .91 | .72 | 1.54 | .98 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| ENE | .97 | 1.13 | 1.20 | 1.40 | 1.05 | 1.97 | 1.56 | 0. | 0. | 0. | 0. | 1.34 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| ESE | 1.06 | 1.25 | 1.00 | 1.24 | 1.17 | 1.25 | 0. | .92 | 1.02 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| ESE | .92 | 1.18 | 1.13 | .93 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| SSE | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| SSE | .71 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| S | .86 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| SSW | 1.38 | .70 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| SSW | 1.12 | .53 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| WSW | 1.98 | .64 | .93 | 0. | 0. | 2.01 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| WSW | .87 | .64 | .76 | .84 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| WNW | .74 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| WNW | .85 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| NNW | .95 | .89 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| N | 1.14 | 1.53 | .89 | 1.14 | 1.36 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |

SSES - PSAR

TOTAL NO. OF OBSERVATIONS = 35064

TABLE 2.3-14
WIND DIRECTION PERSISTENCE - PASQUILL G (1973 - 1976)

| SECTOR | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | >24 |
|--------|----|----|----|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|
| NNE | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ENE | 20 | 18 | 13 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ESE | 30 | 24 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SSE | 39 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SSW | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WSW | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WNW | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NNW | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NN | 6 | 3 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

AVERAGE WIND SPEED (M/SEC)
CONSECUTIVE HOURS

| SECTOR | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | >24 |
|--------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| NNE | .98 | 1.07 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| ENE | 1.04 | 1.05 | 1.15 | 1.22 | 1.47 | 1.33 | 1.67 | 1.76 | 1.55 | 1.23 | 1.01 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| ESE | 1.02 | 1.02 | 1.22 | 1.22 | 1.23 | 1.23 | 1.56 | 1.23 | 1.23 | 1.23 | 1.23 | 1.23 | 1.23 | 1.23 | 1.23 | 1.23 | 1.23 | 1.23 | 1.23 | 1.23 | 1.23 | 1.23 | 1.23 | 1.23 |
| SSE | .69 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| S | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| SSW | .69 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| WSW | .76 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| WNW | 1.08 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| NNW | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| NN | 0.92 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| | 1.47 | .95 | 0. | 1.48 | 1.40 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |

NNEN - FNAN

TOTAL NO. OF OBSERVATIONS = 35064

TABLE 2.3-15

WIND DIRECTION PERSISTENCE - PASQUILL ALL (1973 - 1976)

| SECTOR | CONSECUTIVE HOURS | | | | | | | | | | | | | | | | | | | | | | | |
|--------|-------------------|-----|----|----|----|----|----|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|
| | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | >24 |
| NNE | 211 | 81 | 26 | 15 | 4 | 3 | 3 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| N | 315 | 107 | 80 | 22 | 11 | 7 | 4 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ENE | 328 | 128 | 79 | 34 | 15 | 6 | 4 | 4 | 3 | 0 | 1 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| E | 271 | 99 | 63 | 35 | 21 | 17 | 9 | 4 | 4 | 2 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ESE | 140 | 44 | 15 | 9 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SSE | 90 | 17 | 7 | 4 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| S | 184 | 38 | 13 | 11 | 7 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SSW | 158 | 66 | 29 | 14 | 14 | 9 | 3 | 5 | 1 | 4 | 2 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| SW | 305 | 114 | 54 | 20 | 14 | 12 | 7 | 1 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WSW | 373 | 166 | 93 | 56 | 23 | 13 | 10 | 6 | 7 | 1 | 1 | 1 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| W | 309 | 129 | 93 | 63 | 24 | 25 | 20 | 9 | 5 | 4 | 4 | 2 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| WNW | 163 | 85 | 34 | 14 | 11 | 7 | 8 | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NNW | 128 | 58 | 20 | 8 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| N | 123 | 46 | 21 | 13 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NNE | 155 | 68 | 30 | 16 | 8 | 5 | 2 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| SECTOR | AVERAGE WIND SPEED (M/SEC) CONSECUTIVE HOURS | | | | | | | | | | | | | | | | | | | | | | | |
|--------|---|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----|------|----|----|----|-----|
| | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | >24 |
| NNE | 1.77 | 1.99 | 2.29 | 2.31 | 3.79 | 3.05 | 2.06 | 1.48 | 0. | 0. | 0. | 4.45 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| N | 1.54 | 1.80 | 2.01 | 2.25 | 1.99 | 2.34 | 1.80 | 2.73 | 2.74 | 0. | 4.11 | 0. | 1.89 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| ENE | 1.49 | 1.34 | 1.54 | 1.43 | 1.18 | 2.13 | 1.50 | 1.05 | 1.48 | 1.01 | 1.61 | 0. | 1.44 | 1.08 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| E | 1.37 | 1.21 | 1.28 | 1.17 | 1.32 | 1.47 | 1.94 | 2.06 | 1.27 | 2.72 | 3.15 | 0. | 1.49 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| ESE | 1.43 | 1.56 | 1.37 | 1.57 | 2.61 | 1.26 | 0. | 0. | 2.90 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| SSE | 1.63 | 1.55 | 1.88 | 1.20 | 1.67 | 1.85 | 0. | 0. | 2.67 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| S | 1.63 | 1.68 | 1.84 | 2.00 | 2.06 | 0. | 1.46 | 2.67 | 2.68 | 3.95 | 0. | 0. | 1.95 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| SSW | 1.71 | 2.13 | 2.64 | 2.27 | 2.74 | 2.10 | 2.61 | 2.91 | 2.24 | 3.32 | 4.69 | 3.99 | 0. | 5.26 | 4.06 | 0. | 0. | 0. | 0. | 4.89 | 0. | 0. | 0. | 0. |
| SW | 1.93 | 2.11 | 2.51 | 2.45 | 3.18 | 4.02 | 1.91 | 4.54 | 5.16 | 4.05 | 4.69 | 0. | 0. | 4.94 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| WSW | 1.91 | 1.99 | 1.94 | 2.26 | 2.48 | 3.23 | 1.72 | 3.41 | 2.22 | 4.03 | 3.36 | 2.35 | 2.81 | 0. | 5.11 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| W | 2.43 | 2.47 | 2.77 | 2.88 | 3.19 | 3.21 | 3.68 | 3.76 | 3.23 | 4.94 | 4.50 | 5.23 | 0. | 0. | 0. | 0. | 3.69 | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| WNW | 2.79 | 3.06 | 3.45 | 3.65 | 3.84 | 3.51 | 4.59 | 4.97 | 3.94 | 5.18 | 4.50 | 0. | 0. | 4.20 | 0. | 0. | 4.44 | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| NNW | 2.90 | 3.51 | 3.67 | 3.97 | 4.34 | 5.51 | 4.59 | 5.10 | 3.94 | 6.0 | 0. | 0. | 0. | 5.78 | 5.45 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| N | 2.70 | 3.08 | 3.51 | 4.07 | 3.05 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| NNE | 2.41 | 3.07 | 3.22 | 3.41 | 3.93 | 0. | 2.62 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 1.86 | 4.72 | 0. | 0. | 0. | 0. | 0. | 0. |
| N | 1.97 | 2.28 | 2.82 | 2.38 | 2.60 | 2.42 | 1.73 | 1.28 | 4.24 | 0. | 4.21 | 0. | 0. | 0. | 0. | 6.24 | 0. | 0. | 0. | 0.24 | 0. | 0. | 0. | 0. |

SSES - TSAR

TOTAL NO. OF OBSERVATIONS = 35064

TABLE 2.3-16

WIND DIRECTION PERSISTENCE - PASQUILL E, F, & G (1973 - 1976)

| | | CONSECUTIVE HOURS | | | | | | | | | | | | | | | | | | | | | | |
|--------|------|---|------|------|------|------|------|------|------|----|----|----|------|----|----|----|----|----|----|----|----|----|----|-----|
| SECTOR | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | >24 |
| NNE | 77 | 29 | 7 | 4 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NE | 183 | 46 | 17 | 7 | 4 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ENE | 235 | 94 | 54 | 21 | 15 | 6 | 10 | 2 | 6 | 2 | 1 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| E | 177 | 78 | 46 | 30 | 17 | 14 | 7 | 6 | 4 | 2 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ESE | 74 | 16 | 5 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SE | 35 | 5 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SSE | 26 | 13 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SSW | 44 | 12 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SW | 48 | 13 | 9 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WSW | 80 | 31 | 11 | 5 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| W | 81 | 34 | 17 | 10 | 3 | 4 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WNW | 86 | 29 | 12 | 5 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NW | 49 | 12 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NNW | 38 | 4 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| N | 41 | 6 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| N | 63 | 30 | 8 | 1 | 2 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | AVERAGE WIND SPEED (M/SEC) CONSECUTIVE HOURS | | | | | | | | | | | | | | | | | | | | | | |
| SECTOR | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | >24 |
| NNE | 1.26 | 1.45 | 2.03 | 1.60 | 0. | 2.02 | 0. | 1.70 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| NE | 1.26 | 1.17 | 1.48 | 1.59 | 1.44 | 1.06 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| ENE | 1.13 | 1.04 | 1.21 | 1.10 | 1.12 | 1.06 | 1.43 | 0. | 0. | 0. | 0. | 0. | 1.89 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| E | 1.05 | 1.06 | 1.03 | 1.06 | 1.21 | 1.33 | 1.26 | 1.07 | 1.40 | 0. | 0. | 0. | 1.49 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| ESE | 1.06 | 0.89 | 1.52 | 1.17 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| SE | 1.57 | 0.90 | 0.89 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| SSE | 1.55 | 2.02 | 1.63 | 1.86 | 2.38 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| SSW | 1.39 | 1.73 | 1.46 | 2.44 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| SW | 1.22 | 1.23 | 1.61 | 1.11 | 2.21 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| WSW | 1.46 | 1.35 | 1.63 | 1.46 | 0. | 2.09 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| W | 1.93 | 2.10 | 2.27 | 2.33 | 2.71 | 3.20 | 3.92 | 2.03 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| WNW | 2.22 | 2.38 | 3.53 | 3.54 | 3.40 | 2.50 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| NW | 1.80 | 2.06 | 2.81 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| NNW | 1.94 | 1.80 | 2.74 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| N | 1.57 | 1.45 | 2.34 | 3.03 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| N | 1.53 | 1.47 | 1.73 | 1.31 | 1.36 | 1.19 | 0. | 1.28 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |

SECS - PSAR

TOTAL NO. OF OBSERVATIONS = 35064

SSSES-FSAR

TABLE 2.3-17

LONG TERM TEMPERATURE (°F) AT
WILKES-BARRE SCRANTON AIRPORT

| 1 | 2 | 3 | 4 | 5 | 6 |
|-----------|------------|------------|------|---------|--------|
| Month | Averages | | Mean | Extreme | |
| | Daily Max. | Daily Min. | | Highest | Lowest |
| January | 32.3 | 17.7 | 25.0 | 67 | -21 |
| February | 34.7 | 19.0 | 26.9 | 71 | -16 |
| March | 45.4 | 28.1 | 36.8 | 83 | -4 |
| April | 58.1 | 38.1 | 48.1 | 92 | +14 |
| May | 69.6 | 48.3 | 58.9 | 91 | +27 |
| June | 77.8 | 56.8 | 67.3 | 97 | +34 |
| July | 82.2 | 61.8 | 72.0 | 101 | +43 |
| August | 80.1 | 60.2 | 70.1 | 95 | +38 |
| September | 72.2 | 52.6 | 62.4 | 95 | +30 |
| October | 61.1 | 41.9 | 51.5 | 83 | +19 |
| November | 48.8 | 33.8 | 41.3 | 80 | +9 |
| December | 36.8 | 23.5 | 30.2 | 67 | -9 |
| Annual | 58.3 | 40.2 | 49.2 | 101 | -21 |

Temperature averages are based on a 36-year climatological period from 1961-1996.
Temperature extremes are for the 43 year period from 1954-1995.

Sources: Pennsylvania State Climatologist (Ref. 2.3-5a)
National Oceanic and Atmospheric Administration Cooperative Institute for Research in
Environmental Sciences, Climate Diagnostic Center (Ref. 2.3-3a) (NOAA/CIRES/CDC)

SSES - FSAR
TABLE 2.3-18

MEAN MONTHLY TEMPERATURE, DEW POINT*
TEMPERATURE, AND RELATIVE HUMIDITY
WILKES-BARRE SCRANTON AIRPORT (Ref. 2.3-3)

Period of Records: 1956-1974

| Month | Temperature °F | Dew Point °F | RH (%) |
|-----------|----------------|--------------|--------|
| January | 26 | 18 | 70 |
| February | 27 | 18 | 69 |
| March | 36 | 26 | 67 |
| April | 49 | 37 | 62 |
| May | 59 | 47 | 64 |
| June | 68 | 58 | 70 |
| July | 72 | 62 | 70 |
| August | 70 | 61 | 73 |
| September | 63 | 55 | 76 |
| October | 53 | 44 | 72 |
| November | 41 | 33 | 72 |
| December | 29 | 21 | 73 |
| Annual | 49 | 40 | 70 |

*Dew point temperatures computed from temperature and relative humidity measurements.

SSES - FSAR
TABLE 2.3-19

TEMPERATURE AND MOISTURE DATA
FOR THE SUSQUEHANNA SITE

Period of Record: 1973-1976

| Month | Dry Bulb (°C) | | | Average Wet Bulb (°C) | R.H. % |
|-----------|------------------|------|-------|-----------------------------|-----------|
| | Average | Max | Min | | |
| January | -2.1 | 18.5 | -20.9 | -3.6 | 66 |
| February | -1.4 | 18.7 | -18.5 | -3.4 | 61 |
| March | 3.6 | 22.2 | -11.2 | 1.1 | 62 |
| April | 8.8 | 32.5 | -6.1 | 5.2 | 60 |
| May | 13.8 | 30.6 | -1.9 | 10.6 | 70 |
| June | 18.8 | 31.9 | 5.6 | 16.1 | 76 |
| July | 20.3 | 31.7 | 7.8 | 17.7 | 79 |
| August | 20.0 | 34.3 | 4.8 | 17.7 | 82 |
| September | 15.0 | 31.8 | -0.8 | 12.9 | 81 |
| October | 9.9 | 27.8 | -6.4 | 7.6 | 72 |
| November | 4.9 | 23.1 | -14.0 | 2.6 | 67 |
| December | -0.9 | 17.8 | -19.0 | -2.6 | 66 |
| Annual | 9.3 | 34.3 | -20.9 | 6.9 | 70 |

TABLE 2.3-20
 STATISTICS AND DIURNAL VARIATION OF METEOROLOGICAL PARAMETERS
 DATA PERIOD: JANUARY 1973-1976
 METEOROLOGICAL PARAMETERS (HEIGHTS IN METERS)

| | REL HUMID | WET BULB | DRY BULB |
|------|--------------|-------------|-------------|
| | 9.61 | 9.61 | 9.61 |
| HOUR | PCT | DEG C | DEG C |
| 1 | 67.9 | -4.2 | -2.8 |
| 2 | 68.5 | -4.4 | -3.1 |
| 3 | 68.8 | -4.5 | -3.2 |
| 4 | 68.9 | -4.7 | -3.4 |
| 5 | 68.7 | -4.8 | -3.6 |
| 6 | 68.4 | -5.1 | -3.8 |
| 7 | 68.8 | -5.3 | -4.1 |
| 8 | 69.2 | -5.4 | -4.2 |
| 9 | 69.6 | -5.1 | -4.0 |
| 10 | 68.8 | -4.3 | -3.0 |
| 11 | 66.3 | -3.5 | -2.0 |
| 12 | 63.6 | -2.8 | -1.1 |
| 13 | 61.7 | -2.3 | -.4 |
| 14 | 60.6 | -1.9 | .1 |
| 15 | 60.0 | -1.6 | .5 |
| 16 | 59.6 | -1.6 | .6 |
| 17 | 60.1 | -1.9 | .2 |
| 18 | 61.7 | -2.3 | -.4 |
| 19 | 63.6 | -2.7 | -1.0 |
| 20 | 64.8 | -3.1 | -1.5 |
| 21 | 65.5 | -3.4 | -1.9 |
| 22 | 65.7 | -3.8 | -2.2 |
| 23 | 65.9 | -4.0 | -2.6 |
| 24 | 66.6 | -4.3 | -2.9 |

TABLE 2.3-20
 STATISTICS AND DIURNAL VARIATION OF METEOROLOGICAL PARAMETERS
 DATA PERIOD: JANUARY 1973-1976
 METEOROLOGICAL PARAMETERS (HEIGHTS IN METERS)

| | REL HUMID | WET BULB | DRY BULB |
|---------------|--------------|-------------|-------------|
| ABSOLUTE MAX | 98.5 | 16.4 | 18.5 |
| AVG DAILY MAX | 78.3 | -.2 | 1.9 |
| MEAN | 65.6 | -3.6 | -2.1 |
| CLIMATIC MEAN | 65.1 | -3.7 | -2.2 |
| AVG DAILY MIN | 52.0 | -7.3 | -6.2 |
| ABSOLUTE MIN | 3.2 | -21.6 | -20.9 |
| STANDARD DEV | 17.9 | 6.0 | 6.2 |
| VALID OBS | 2975 | 2975 | 2975 |
| INVALID OBS | 1 | 1 | 1 |
| TOTAL OBS | 2976 | 2976 | 2976 |
| DATA RECOVERY | 100.0 | 100.0 | 100.0 |

TABLE 2.3-21
 STATISTICS AND DIURNAL VARIATION OF METEOROLOGICAL PARAMETERS
 DATA PERIOD: FEBRUARY 1973-1976
 METEOROLOGICAL PARAMETERS (HEIGHTS IN METERS)

| | REL HUMID | WET BULB | DRY BULB |
|------|--------------|-------------|-------------|
| | 9.61 | 9.61 | 9.61 |
| HOUR | PCT | DEG C | DEG C |
| 1 | 64.8 | -4.4 | -2.9 |
| 2 | 65.2 | -4.6 | -3.1 |
| 3 | 65.4 | -4.9 | -3.4 |
| 4 | 66.3 | -5.1 | -3.7 |
| 5 | 66.5 | -5.4 | -4.0 |
| 6 | 66.8 | -5.5 | -4.2 |
| 7 | 66.8 | -5.7 | -4.4 |
| 8 | 67.4 | -5.6 | -4.4 |
| 9 | 67.3 | -5.0 | -3.6 |
| 10 | 64.0 | -4.0 | -2.4 |
| 11 | 60.0 | -3.0 | -1.0 |
| 12 | 57.4 | -2.2 | .2 |
| 13 | 54.7 | -1.7 | 1.0 |
| 14 | 53.2 | -1.2 | 1.7 |
| 15 | 53.1 | -.9 | 2.1 |
| 16 | 52.6 | -.8 | 2.2 |
| 17 | 53.0 | -.9 | 2.0 |
| 18 | 54.4 | -1.4 | 1.4 |
| 19 | 56.7 | -2.0 | .5 |
| 20 | 59.2 | -2.5 | -.3 |
| 21 | 61.2 | -2.9 | -.9 |
| 22 | 62.8 | -3.2 | -1.4 |
| 23 | 64.1 | -3.6 | -1.9 |
| 24 | 65.1 | -3.9 | -2.4 |

TABLE 2.3-21
STATISTICS AND DIURNAL VARIATION OF METEOROLOGICAL PARAMETERS
DATA PERIOD: FEBRUARY 1973-1976
METEOROLOGICAL PARAMETERS (HEIGHTS IN METERS)

| | REL HUMID | WET BULB | DRY BULB |
|---------------|--------------|-------------|-------------|
| ABSOLUTE MAX | 100.0 | 14.2 | 18.7 |
| AVG DAILY MAX | 76.9 | .3 | 3.2 |
| MEAN | 61.2 | -3.4 | -1.4 |
| CLIMATIC MEAN | 61.5 | -3.6 | -1.5 |
| AVG DAILY MIN | 46.0 | -7.4 | -6.2 |
| ABSOLUTE MIN | 13.7 | -18.9 | -18.5 |
| STANDARD DEV | 17.0 | 5.9 | 6.5 |
| VALID OBS | 2712 | 2712 | 2712 |
| INVALID OBS | 0 | 0 | 0 |
| TOTAL OBS | 2712 | 2712 | 2712 |
| DATA RECOVERY | 100.0 | 100.0 | 100.0 |

TABLE 2.3-22
 STATISTICS AND DIURNAL VARIATION OF METEOROLOGICAL PARAMETERS
 DATA PERIOD: MARCH 1973-1976
 METEOROLOGICAL PARAMETERS (HEIGHTS IN METERS)

| | REL HUMID | WET BULB | DRY BULB |
|------|--------------|-------------|-------------|
| | 9.61 | 9.61 | 9.61 |
| HOUR | PCT | DEG C | DEG C |
| 1 | 66.1 | -.1 | 1.9 |
| 2 | 66.7 | -.3 | 1.6 |
| 3 | 67.4 | -.5 | 1.3 |
| 4 | 67.9 | -.7 | 1.1 |
| 5 | 68.3 | -.9 | .9 |
| 6 | 68.6 | -1.0 | .7 |
| 7 | 69.2 | -1.0 | .6 |
| 8 | 69.3 | -.7 | .9 |
| 9 | 66.9 | -.1 | 1.8 |
| 10 | 63.4 | .8 | 3.0 |
| 11 | 60.5 | 1.5 | 4.1 |
| 12 | 57.8 | 2.2 | 5.2 |
| 13 | 55.9 | 2.7 | 6.0 |
| 14 | 54.7 | 3.1 | 6.6 |
| 15 | 54.2 | 3.5 | 7.2 |
| 16 | 54.3 | 3.6 | 7.3 |
| 17 | 54.0 | 3.5 | 7.2 |
| 18 | 54.8 | 3.1 | 6.6 |
| 19 | 56.7 | 2.5 | 5.8 |
| 20 | 59.1 | 1.9 | 4.8 |
| 21 | 60.9 | 1.4 | 4.0 |
| 22 | 62.3 | .9 | 3.3 |
| 23 | 63.9 | .5 | 2.8 |
| 24 | 65.1 | .2 | 2.3 |

TABLE 2.3-22
 STATISTICS AND DIURNAL VARIATION OF METEOROLOGICAL PARAMETERS
 DATA PERIOD: MARCH 1973-1976
 METEOROLOGICAL PARAMETERS (HEIGHTS IN METERS)

| | REL HUMID | WET BULB | DRY BULB |
|---------------|--------------|-------------|-------------|
| ABSOLUTE MAX | 100.0 | 20.8 | 22.2 |
| AVG DAILY MAX | 77.7 | 4.6 | 8.3 |
| MEAN | 62.0 | 1.1 | 3.6 |
| CLIMATIC MEAN | 62.3 | 1.0 | 3.6 |
| AVG DAILY MIN | 47.0 | -2.6 | -1.0 |
| ABSOLUTE MIN | 18.8 | -12.2 | -11.2 |
| STANDARD DEV | 18.1 | 5.2 | 5.8 |
| VALID OBS | 2925 | 2925 | 2925 |
| INVALID OBS | 51 | 51 | 51 |
| TOTAL OBS | 2976 | 2976 | 2976 |
| DATA RECOVERY | 98.3 | 98.3 | 98.3 |

TABLE 2.3-23
 STATISTICS AND DIURNAL VARIATION OF METEOROLOGICAL PARAMETERS
 DATA PERIOD: APRIL 1973-1976
 METEOROLOGICAL PARAMETERS (HEIGHTS IN METERS)

| | REL HUMID | WET BULB | DRY BULB |
|------|--------------|-------------|-------------|
| | 9.61 | 9.61 | 9.61 |
| HOUR | PCT | DEG C | DEG C |
| 1 | 66.7 | 3.7 | 6.1 |
| 2 | 68.1 | 3.3 | 5.6 |
| 3 | 69.5 | 3.0 | 5.1 |
| 4 | 70.8 | 2.7 | 4.7 |
| 5 | 71.9 | 2.4 | 4.2 |
| 6 | 72.8 | 2.2 | 4.0 |
| 7 | 72.5 | 2.5 | 4.4 |
| 8 | 69.6 | 3.6 | 5.8 |
| 9 | 63.9 | 4.7 | 7.5 |
| 10 | 58.7 | 5.4 | 9.0 |
| 11 | 55.6 | 6.2 | 10.3 |
| 12 | 52.9 | 6.7 | 11.3 |
| 13 | 51.4 | 7.2 | 12.1 |
| 14 | 49.9 | 7.6 | 12.7 |
| 15 | 49.4 | 7.8 | 13.1 |
| 16 | 49.0 | 7.9 | 13.3 |
| 17 | 49.1 | 7.8 | 13.2 |
| 18 | 49.5 | 7.5 | 12.7 |
| 19 | 50.9 | 7.0 | 11.8 |
| 20 | 53.9 | 6.4 | 10.7 |
| 21 | 56.8 | 5.8 | 9.6 |
| 22 | 59.8 | 5.2 | 8.5 |
| 23 | 62.2 | 4.7 | 7.7 |
| 24 | 64.7 | 4.2 | 6.9 |

TABLE 2.3-23
STATISTICS AND DIURNAL VARIATION OF METEOROLOGICAL PARAMETERS
DATA PERIOD: APRIL 1973-1976
METEOROLOGICAL PARAMETERS (HEIGHTS IN METERS)

| | REL HUMID | WET BULB | DRY BULB |
|---------------|--------------|-------------|-------------|
| ABSOLUTE MAX | 97.9 | 20.0 | 32.5 |
| AVG DAILY MAX | 77.9 | 8.7 | 14.2 |
| MEAN | 60.0 | 5.2 | 8.8 |
| CLIMATIC MEAN | 60.7 | 4.9 | 8.6 |
| AVG DAILY MIN | 43.6 | 1.0 | 2.9 |
| ABSOLUTE MIN | 10.0 | -7.8 | -6.1 |
| STANDARD DEV | 18.6 | 5.8 | 7.1 |
| VALID OBS | 2878 | 2878 | 2878 |
| INVALID OBS | 2 | 2 | 2 |
| TOTAL OBS | 2880 | 2880 | 2880 |
| DATA RECOVERY | 99.9 | 99.9 | 99.9 |

TABLE 2.3-24
 STATISTICS AND DIURNAL VARIATION OF METEOROLOGICAL PARAMETERS
 DATA PERIOD: MAY 1973-1976
 METEOROLOGICAL PARAMETERS (HEIGHTS IN METERS)

| | REL HUMID | WET BULB | DRY BULB |
|------|--------------|-------------|-------------|
| | 9.61 | 9.61 | 9.61 |
| HOUR | PCT | DEG C | DEG C |
| 1 | 76.5 | 9.1 | 11.2 |
| 2 | 77.6 | 8.7 | 10.6 |
| 3 | 78.4 | 8.3 | 10.2 |
| 4 | 79.4 | 8.1 | 9.8 |
| 5 | 80.0 | 7.8 | 9.5 |
| 6 | 81.1 | 7.7 | 9.3 |
| 7 | 81.0 | 8.1 | 9.7 |
| 8 | 78.4 | 9.1 | 11.0 |
| 9 | 73.4 | 10.2 | 12.7 |
| 10 | 69.3 | 11.0 | 14.1 |
| 11 | 65.7 | 11.7 | 15.3 |
| 12 | 63.3 | 12.2 | 16.2 |
| 13 | 60.6 | 12.6 | 17.1 |
| 14 | 58.9 | 13.0 | 17.8 |
| 15 | 57.6 | 13.2 | 18.2 |
| 16 | 57.5 | 13.2 | 18.2 |
| 17 | 58.2 | 13.0 | 17.9 |
| 18 | 59.5 | 12.7 | 17.4 |
| 19 | 61.3 | 12.4 | 16.7 |
| 20 | 63.7 | 11.8 | 15.7 |
| 21 | 67.2 | 11.3 | 14.6 |
| 22 | 70.7 | 10.7 | 13.5 |
| 23 | 73.4 | 10.1 | 12.6 |
| 24 | 75.2 | 9.7 | 11.9 |

TABLE 2.3-24
STATISTICS AND DIURNAL VARIATION OF METEOROLOGICAL PARAMETERS
DATA PERIOD: MAY 1973-1976
METEOROLOGICAL PARAMETERS (HEIGHTS IN METERS)

| | | | |
|---------------|-------|------|------|
| ABSOLUTE MAX | 100.0 | 30.6 | 30.6 |
| AVG DAILY MAX | 85.8 | 14.0 | 19.2 |
| MEAN | 69.5 | 10.6 | 13.8 |
| CLIMATIC MEAN | 69.0 | 10.3 | 13.7 |
| AVG DAILY MIN | 52.1 | 6.6 | 8.1 |
| ABSOLUTE MIN | 20.7 | -3.3 | -1.9 |
| STANDARD DEV | 18.1 | 5.1 | 5.9 |
| VALID OBS | 2964 | 2964 | 2964 |
| INVALID OBS | 12 | 12 | 12 |
| TOTAL OBS | 2976 | 2976 | 2976 |
| DATA RECOVERY | 99.6 | 99.6 | 99.6 |

TABLE 2.3-25
 STATISTICAL AND DIURNAL VARIATION OF METEOROLOGICAL PARAMETERS
 DATA PERIOD: JUNE 1973-1976
 METEOROLOGICAL PARAMETERS (HEIGHTS IN METERS)

| | REL HUMID | WET BULB | DRY BULB |
|-------|--------------|-------------|-------------|
| | 9.61 | 9.61 | 9.61 |
| HOURL | PCT | DEG C | DEG C |
| 1 | 85.1 | 14.4 | 15.8 |
| 2 | 85.9 | 14.0 | 15.4 |
| 3 | 86.5 | 13.8 | 15.1 |
| 4 | 86.8 | 13.5 | 14.8 |
| 5 | 87.1 | 13.3 | 14.6 |
| 6 | 88.0 | 13.4 | 14.6 |
| 7 | 87.6 | 14.0 | 15.2 |
| 8 | 85.4 | 15.0 | 16.4 |
| 9 | 80.8 | 15.9 | 18.0 |
| 10 | 75.4 | 16.7 | 19.5 |
| 11 | 70.9 | 17.4 | 20.9 |
| 12 | 67.7 | 17.8 | 21.8 |
| 13 | 64.9 | 18.0 | 22.6 |
| 14 | 64.0 | 18.2 | 22.9 |
| 15 | 63.6 | 18.4 | 23.2 |
| 16 | 63.2 | 18.4 | 23.3 |
| 17 | 63.4 | 18.3 | 23.2 |
| 18 | 64.8 | 18.0 | 22.6 |
| 19 | 67.5 | 17.6 | 21.7 |
| 20 | 71.3 | 17.0 | 20.5 |
| 21 | 76.6 | 16.4 | 19.0 |
| 22 | 80.4 | 15.7 | 17.9 |
| 23 | 83.0 | 15.3 | 17.0 |
| 24 | 84.0 | 14.8 | 16.4 |

TABLE 2.3-25
STATISTICAL AND DIURNAL VARIATION OF METEOROLOGICAL PARAMETERS
DATA PERIOD: JUNE 1973-1976
METEOROLOGICAL PARAMETERS (HEIGHTS IN METERS)

| | REL HUMID | WET BULB | DRY BULB |
|---------------|--------------|-------------|-------------|
| ABSOLUTE MAX | 100.0 | 27.2 | 31.9 |
| AVG DAILY MAX | 90.5 | 19.0 | 24.0 |
| MEAN | 76.4 | 16.1 | 18.8 |
| CLIMATIC MEAN | 74.7 | 15.8 | 18.9 |
| AVG DAILY MIN | 58.8 | 12.6 | 13.9 |
| ABSOLUTE MIN | 17.3 | 3.9 | 5.6 |
| STANDARD DEV | 15.8 | 4.0 | 4.7 |
| VALID OBS | 2876 | 2876 | 2876 |
| INVALID OBS | 4 | 4 | 4 |
| TOTAL OBS | 2880 | 2880 | 2880 |
| DATA RECOVERY | 99.9 | 99.9 | 99.9 |

TABLE 2.3-26
 STATISTICS AND DIURNAL VARIATION OF METEOROLOGICAL PARAMETERS
 DATA PERIOD: JULY 1973-1976
 METEOROLOGICAL PARAMETERS (HEIGHTS IN METERS)

| HOUR | REL HUMID | WET BULB | DRY BULB |
|------|--------------|-------------|-------------|
| | 9.61 | 9.61 | 9.61 |
| | PCT | DEG C | DEG C |
| 1 | 88.9 | 15.9 | 17.1 |
| 2 | 89.5 | 15.6 | 16.6 |
| 3 | 89.6 | 15.3 | 16.3 |
| 4 | 89.7 | 15.0 | 16.0 |
| 5 | 90.2 | 14.7 | 15.7 |
| 6 | 90.8 | 14.7 | 15.7 |
| 7 | 90.8 | 15.3 | 16.2 |
| 8 | 88.6 | 16.3 | 17.5 |
| 9 | 84.0 | 17.4 | 19.2 |
| 10 | 77.6 | 18.4 | 21.0 |
| 11 | 72.9 | 19.0 | 22.4 |
| 12 | 69.4 | 19.5 | 23.4 |
| 13 | 66.7 | 19.8 | 24.2 |
| 14 | 64.3 | 20.0 | 24.8 |
| 15 | 63.3 | 20.1 | 25.2 |
| 16 | 63.2 | 20.2 | 25.3 |
| 17 | 64.0 | 20.1 | 25.0 |
| 18 | 66.1 | 19.9 | 24.5 |
| 19 | 69.6 | 19.7 | 23.7 |
| 20 | 74.9 | 19.0 | 22.1 |
| 21 | 81.0 | 18.1 | 20.3 |
| 22 | 84.4 | 17.5 | 19.2 |
| 23 | 86.3 | 16.9 | 18.4 |
| 24 | 87.6 | 16.4 | 17.7 |

TABLE 2.3-26
STATISTICS AND DIURNAL VARIATION OF METEOROLOGICAL PARAMETERS
DATA PERIOD: JULY 1973-1976
METEOROLOGICAL PARAMETERS (HEIGHTS IN METERS)

| | REL HUMID | WET BULB | DRY BULB |
|---------------|--------------|-------------|-------------|
| ABSOLUTE MAX | 100.0 | 25.7 | 31.7 |
| AVG DAILY MAX | 94.0 | 20.8 | 26.0 |
| MEAN | 78.9 | 17.7 | 20.3 |
| CLIMATIC MEAN | 76.9 | 17.5 | 20.5 |
| AVG DAILY MIN | 59.9 | 14.1 | 15.1 |
| ABSOLUTE MIN | 30.9 | 6.9 | 7.8 |
| STANDARD DEV | 14.9 | 3.5 | 4.5 |
| VALID OBS | 2970 | 2970 | 2975 |
| INVALID OBS | 6 | 6 | 1 |
| TOTAL OBS | 2976 | 2976 | 2976 |
| DATA RECOVERY | 99.8 | 99.8 | 100.0 |

TABLE 2.3-27
 STATISTICS AND DIURNAL VARIATION OF METEOROLOGICAL PARAMETERS
 DATA PERIOD: AUGUST 1973-1976
 METEOROLOGICAL PARAMETERS (HEIGHTS IN METERS)

| HOUR | REL HUMID | WET BULB | DRY BULB |
|------|--------------|-------------|-------------|
| | 9.61 | 9.61 | 9.61 |
| | PCT | DEG C | DEG C |
| 1 | 91.4 | 16.2 | 17.1 |
| 2 | 91.7 | 15.8 | 16.7 |
| 3 | 92.0 | 15.5 | 16.3 |
| 4 | 92.5 | 15.3 | 16.1 |
| 5 | 92.5 | 15.1 | 15.9 |
| 6 | 92.9 | 15.0 | 15.7 |
| 7 | 93.2 | 15.2 | 15.9 |
| 8 | 92.4 | 16.1 | 16.8 |
| 9 | 88.2 | 17.2 | 18.5 |
| 10 | 81.6 | 18.3 | 20.4 |
| 11 | 75.6 | 19.2 | 22.1 |
| 12 | 70.5 | 19.7 | 23.5 |
| 13 | 67.3 | 20.0 | 24.4 |
| 14 | 65.5 | 20.3 | 24.9 |
| 15 | 65.0 | 20.3 | 25.0 |
| 16 | 65.2 | 20.2 | 24.9 |
| 17 | 66.3 | 20.0 | 24.6 |
| 18 | 68.9 | 19.8 | 23.9 |
| 19 | 73.6 | 19.4 | 22.7 |
| 20 | 80.5 | 18.7 | 20.9 |
| 21 | 85.3 | 17.9 | 19.6 |
| 22 | 87.8 | 17.4 | 18.7 |
| 23 | 89.5 | 16.8 | 17.9 |
| 24 | 90.7 | 16.5 | 17.4 |

TABLE 2.3-27
STATISTICS AND DIURNAL VARIATION OF METEOROLOGICAL PARAMETERS
DATA PERIOD: AUGUST 1973-1976
METEOROLOGICAL PARAMETERS (HEIGHTS IN METERS)

| | REL HUMID | WET BULB | DRY BULB |
|---------------|--------------|-------------|-------------|
| ABSOLUTE MAX | 100.0 | 26.8 | 34.3 |
| AVG DAILY MAX | 95.0 | 20.8 | 25.8 |
| MEAN | 81.7 | 17.7 | 20.0 |
| CLIMATIC MEAN | 78.2 | 17.6 | 20.4 |
| AVG DAILY MIN | 61.4 | 14.3 | 15.1 |
| ABSOLUTE MIN | 28.1 | 3.9 | 4.8 |
| STANDARD DEV | 14.6 | 3.7 | 4.7 |
| VALID OBS | 2970 | 2970 | 2972 |
| INVALID OBS | 6 | 6 | 4 |
| TOTAL OBS | 2976 | 2976 | 2976 |
| DATA RECOVERY | 99.8 | 99.8 | 99.9 |

TABLE 2.3-28
 STATISTICS AND DIURNAL VARIATION OF METEOROLOGICAL PARAMETERS
 DATA PERIOD: SEPTEMBER 1973-1976
 METEOROLOGICAL PARAMETERS (HEIGHTS IN METERS)

| HOUR | REL HUMID | WET BULB | DRY BULB |
|------|--------------|-------------|-------------|
| | 9.61 | 9.61 | 9.61 |
| | PCT | DEG C | DEG C |
| 1 | 88.6 | 11.4 | 12.5 |
| 2 | 88.9 | 11.2 | 12.1 |
| 3 | 89.5 | 10.9 | 11.8 |
| 4 | 89.5 | 10.7 | 11.6 |
| 5 | 89.6 | 10.5 | 11.4 |
| 6 | 90.0 | 10.4 | 11.3 |
| 7 | 90.6 | 10.4 | 11.2 |
| 8 | 90.6 | 11.0 | 11.8 |
| 9 | 88.2 | 12.0 | 13.1 |
| 10 | 82.7 | 13.1 | 14.8 |
| 11 | 76.3 | 14.1 | 16.6 |
| 12 | 70.9 | 14.8 | 18.1 |
| 13 | 67.2 | 15.2 | 19.0 |
| 14 | 65.3 | 15.4 | 19.6 |
| 15 | 64.2 | 15.5 | 19.8 |
| 16 | 64.4 | 15.5 | 19.8 |
| 17 | 65.7 | 15.3 | 19.4 |
| 18 | 69.2 | 14.9 | 18.5 |
| 19 | 75.2 | 14.3 | 16.9 |
| 20 | 80.5 | 13.6 | 15.5 |
| 21 | 84.2 | 13.0 | 14.5 |
| 22 | 85.6 | 12.4 | 13.8 |
| 23 | 87.1 | 12.0 | 13.2 |
| 24 | 88.1 | 11.6 | 12.7 |

TABLE 2.3-28
STATISTICS AND DIURNAL VARIATION OF METEOROLOGICAL PARAMETERS
DATA PERIOD: SEPTEMBER 1973-1976
METEOROLOGICAL PARAMETERS (HEIGHTS IN METERS)

| | REL HUMID | WET BULB | DRY BULB |
|---------------|--------------|-------------|-------------|
| ABSOLUTE MAX | 99.0 | 25.7 | 31.8 |
| AVG DAILY MAX | 93.3 | 16.3 | 20.5 |
| MEAN | 80.5 | 12.9 | 15.0 |
| CLIMATIC MEAN | 77.3 | 12.6 | 15.2 |
| AVG DAILY MIN | 61.3 | 9.0 | 9.8 |
| ABSOLUTE MIN | 28.4 | -1.2 | -.8 |
| STANDARD DEV | 14.9 | 4.6 | 5.3 |
| VALID OBS | 2875 | 2875 | 2875 |
| INVALID OBS | 5 | 5 | 5 |
| TOTAL OBS | 2880 | 2880 | 2880 |
| DATA RECOVERY | 99.8 | 99.8 | 99.8 |

TABLE 2.3-29
 STATISTICS AND DIURNAL VARIATION OF METEOROLOGICAL PARAMETERS
 DATA PERIOD: OCTOBER 1973-1976
 METEOROLOGICAL PARAMETERS (HEIGHTS IN METERS)

| HOUR | REL HUMID | WET BULB | DRY BULB |
|------|--------------|-------------|-------------|
| | 9.61 | 9.61 | 9.61 |
| | PCT | DEG C | DEG C |
| 1 | 79.6 | 6.2 | 7.7 |
| 2 | 80.2 | 5.9 | 7.2 |
| 3 | 80.5 | 5.6 | 6.9 |
| 4 | 80.9 | 5.3 | 6.5 |
| 5 | 80.9 | 5.1 | 6.3 |
| 6 | 81.3 | 4.9 | 6.1 |
| 7 | 82.0 | 4.8 | 5.8 |
| 8 | 82.6 | 5.2 | 6.3 |
| 9 | 80.5 | 6.3 | 7.7 |
| 10 | 75.0 | 7.7 | 9.6 |
| 11 | 69.1 | 8.7 | 11.4 |
| 12 | 64.7 | 9.5 | 12.9 |
| 13 | 61.9 | 9.9 | 13.8 |
| 14 | 59.7 | 10.4 | 14.6 |
| 15 | 58.5 | 10.5 | 14.9 |
| 16 | 58.3 | 10.5 | 15.0 |
| 17 | 59.5 | 10.2 | 14.4 |
| 18 | 62.3 | 9.6 | 13.3 |
| 19 | 66.5 | 8.9 | 11.9 |
| 20 | 70.8 | 8.2 | 10.7 |
| 21 | 73.9 | 7.7 | 9.8 |
| 22 | 75.7 | 7.2 | 9.0 |
| 23 | 76.9 | 6.8 | 8.6 |
| 24 | 78.6 | 6.4 | 8.0 |

TABLE 2.3-29
STATISTICS AND DIURNAL VARIATION OF METEOROLOGICAL PARAMETERS
DATA PERIOD: OCTOBER 1973-1976
METEOROLOGICAL PARAMETERS (HEIGHTS IN METERS)

| | REL HUMID | WET BULB | DRY BULB |
|---------------|--------------|-------------|-------------|
| ABSOLUTE MAX | 100.0 | 20.7 | 27.8 |
| AVG DAILY MAX | 86.2 | 11.3 | 15.5 |
| MEAN | 72.4 | 7.6 | 9.9 |
| CLIMATIC MEAN | 70.8 | 7.5 | 10.1 |
| AVG DAILY MIN | 55.4 | 3.6 | 4.7 |
| ABSOLUTE MIN | 22.9 | -7.9 | -6.4 |
| STANDARD DEV | 17.4 | 5.6 | 6.0 |
| VALID OBS | 2706 | 2706 | 2975 |
| INVALID OBS | 270 | 270 | 1 |
| TOTAL OBS | 2976 | 2976 | 2976 |
| DATA RECOVERY | 90.9 | 90.9 | 100.0 |

TABLE 2.3-30
 STATISTICS AND DIURNAL VARIATION OF METEOROLOGICAL PARAMETERS
 DATA PERIOD: NOVEMBER 1973-1976
 METEOROLOGICAL PARAMETERS (HEIGHTS IN METERS)

| HOUR | REL HUMID | WET BULB | DRY BULB |
|------|--------------|-------------|-------------|
| | 9.61 | 9.61 | 9.61 |
| | PCT | DEG C | DEG C |
| 1 | 70.2 | 1.6 | 3.5 |
| 2 | 71.0 | 1.4 | 3.2 |
| 3 | 71.2 | 1.2 | 2.9 |
| 4 | 71.6 | 1.0 | 2.6 |
| 5 | 72.0 | .8 | 2.4 |
| 6 | 72.2 | .6 | 2.2 |
| 7 | 72.6 | .5 | 2.0 |
| 8 | 73.4 | .5 | 2.0 |
| 9 | 73.2 | 1.2 | 2.8 |
| 10 | 71.0 | 2.3 | 4.2 |
| 11 | 67.0 | 3.4 | 5.8 |
| 12 | 63.5 | 4.2 | 7.0 |
| 13 | 60.5 | 4.7 | 7.9 |
| 14 | 58.9 | 5.0 | 8.4 |
| 15 | 57.7 | 5.1 | 8.7 |
| 16 | 57.4 | 5.1 | 8.6 |
| 17 | 58.4 | 4.7 | 8.0 |
| 18 | 59.9 | 4.1 | 7.1 |
| 19 | 62.3 | 3.5 | 6.3 |
| 20 | 64.6 | 3.0 | 5.4 |
| 21 | 66.1 | 2.5 | 4.8 |
| 22 | 67.1 | 2.2 | 4.3 |
| 23 | 68.0 | 1.9 | 4.0 |
| 24 | 68.8 | 1.7 | 3.6 |

TABLE 2.3-30
STATISTICS AND DIURNAL VARIATION OF METEOROLOGICAL PARAMETERS
DATA PERIOD: NOVEMBER 1973-1976
METEOROLOGICAL PARAMETERS (HEIGHTS IN METERS)

| | REL HUMID | WET BULB | DRY BULB |
|---------------|--------------|-------------|-------------|
| ABSOLUTE MAX | 100.0 | 19.4 | 23.1 |
| AVG DAILY MAX | 79.0 | 6.1 | 9.4 |
| MEAN | 66.6 | 2.6 | 4.9 |
| CLIMATIC MEAN | 65.9 | 2.5 | 4.9 |
| AVG DAILY MIN | 52.8 | -1.1 | .5 |
| ABSOLUTE MIN | 21.1 | -15.4 | -14.0 |
| STANDARD DEV | 17.7 | 6.0 | 6.3 |
| VALID OBS | 2873 | 2873 | 2880 |
| INVALID OBS | 7 | 7 | 7 |
| TOTAL OBS | 2880 | 2880 | 2880 |
| DATA RECOVERY | 99.8 | 99.8 | 100.0 |

TABLE 2.3-31
 STATISTICS AND DIURNAL VARIATION OF METEOROLOGICAL PARAMETERS
 DATA PERIOD: DECEMBER 1973-1976
 METEOROLOGICAL PARAMETERS (HEIGHTS IN METERS)

| HOUR | REL HUMID | WET BULB | DRY BULB |
|------|--------------|-------------|-------------|
| | 9.61 | 9.61 | 9.61 |
| | PCT | DEG C | DEG C |
| 1 | 68.4 | -3.2 | -1.8 |
| 2 | 68.8 | -3.3 | -1.9 |
| 3 | 68.9 | -3.4 | -2.1 |
| 4 | 68.8 | -3.5 | -2.2 |
| 5 | 68.7 | -3.6 | -2.3 |
| 6 | 68.8 | -3.7 | -2.4 |
| 7 | 68.9 | -3.9 | -2.6 |
| 8 | 68.5 | -4.0 | -2.7 |
| 9 | 68.5 | -3.9 | -2.5 |
| 10 | 68.3 | -3.1 | -1.6 |
| 11 | 66.3 | -2.2 | -.6 |
| 12 | 63.9 | -1.6 | .3 |
| 13 | 62.5 | -1.1 | 1.0 |
| 14 | 60.7 | -.9 | 1.4 |
| 15 | 59.6 | -.6 | 1.8 |
| 16 | 59.4 | -.8 | 1.6 |
| 17 | 59.7 | -1.2 | 1.1 |
| 18 | 61.2 | -1.6 | .4 |
| 19 | 63.0 | -2.0 | -.1 |
| 20 | 64.9 | -2.3 | -.6 |
| 21 | 66.1 | -2.6 | -1.0 |
| 22 | 66.9 | -2.8 | -1.3 |
| 23 | 67.6 | -3.0 | -1.5 |
| 24 | 68.2 | -3.2 | -1.8 |

TABLE 2.3-31
 STATISTICS AND DIURNAL VARIATION OF METEOROLOGICAL PARAMETERS
 DATA PERIOD: DECEMBER 1973-1976
 METEOROLOGICAL PARAMETERS (HEIGHTS IN METERS)

| | REL HUMID | WET BULB | DRY BULB |
|---------------|--------------|-------------|-------------|
| ABSOLUTE MAX | 100.0 | 16.4 | 17.8 |
| AVG DAILY MAX | 79.2 | .8 | 2.9 |
| MEAN | 65.7 | -2.6 | -.9 |
| CLIMATIC MEAN | 66.1 | -2.7 | -1.0 |
| AVG DAILY MIN | 52.9 | -6.1 | -4.8 |
| ABSOLUTE MIN | 7.9 | -20.2 | -19.0 |
| STANDARD DEV | 18.8 | 5.4 | 5.4 |
| VALID OBS | 2849 | 2849 | 2853 |
| INVALID OBS | 127 | 127 | 123 |
| TOTAL OBS | 2976 | 2976 | 2976 |
| DATA RECOVERY | 95.7 | 95.7 | 95.9 |

TABLE 2.3-32
 STATISTICS AND DIURNAL VARIATION OF METEOROLOGICAL PARAMETERS
 DATA PERIOD: JANUARY 1973 - DECEMBER 1976
 METEOROLOGICAL PARAMETERS (HEIGHTS IN METERS)

| HOUR | REL HUMID | WET BULB | DRY BULB |
|------|--------------|-------------|-------------|
| | 9.61 | 9.61 | 9.61 |
| | PCT | DEG C | DEG C |
| 1 | 76.3 | 5.6 | 7.2 |
| 2 | 76.9 | 5.4 | 6.8 |
| 3 | 77.4 | 5.1 | 6.5 |
| 4 | 77.8 | 4.9 | 6.2 |
| 5 | 78.1 | 4.7 | 6.0 |
| 6 | 78.5 | 4.5 | 5.8 |
| 7 | 78.7 | 4.7 | 5.9 |
| 8 | 78.0 | 5.2 | 6.5 |
| 9 | 75.4 | 6.0 | 7.7 |
| 10 | 71.3 | 6.9 | 9.2 |
| 11 | 67.2 | 7.8 | 10.5 |
| 12 | 63.8 | 8.4 | 11.6 |
| 13 | 61.3 | 8.9 | 12.5 |
| 14 | 59.7 | 9.2 | 13.1 |
| 15 | 58.9 | 9.4 | 13.4 |
| 16 | 58.7 | 9.4 | 13.4 |
| 17 | 59.3 | 9.2 | 13.1 |
| 18 | 61.1 | 8.8 | 12.4 |
| 19 | 64.0 | 8.3 | 11.5 |
| 20 | 67.4 | 7.7 | 10.4 |
| 21 | 70.5 | 7.2 | 9.5 |
| 22 | 72.5 | 6.7 | 8.7 |
| 23 | 74.1 | 6.3 | 8.1 |
| 24 | 75.3 | 5.9 | 7.6 |

TABLE 2.3-32
STATISTICS AND DIURNAL VARIATION OF METEOROLOGICAL PARAMETERS
DATA PERIOD: JANUARY 1973 - DECEMBER 1976
METEOROLOGICAL PARAMETERS (HEIGHTS IN METERS)

| | REL HUMID | WET BULB | DRY BULB |
|---------------|--------------|-------------|-------------|
| ABSOLUTE MAX | 100.0 | 30.6 | 34.3 |
| AVG DAILY MAX | 84.5 | 10.3 | 14.3 |
| MEAN | 70.1 | 6.9 | 9.3 |
| CLIMATIC MEAN | 69.1 | 6.7 | 9.4 |
| AVG DAILY MIN | 53.6 | 3.1 | 4.4 |
| ABSOLUTE MIN | 3.2 | -21.6 | -20.9 |
| STANDARD DEV | 18.6 | 9.4 | 9.9 |
| VALID OBS | 34573 | 34573 | 34860 |
| INVALID OBS | 491 | 491 | 204 |
| TOTAL OBS | 35064 | 35064 | 35064 |
| DATA RECOVERY | 98.6 | 98.6 | 99.4 |

SSSES - FSAR

TABLE 2.3-33

LONG TERM MONTHLY PRECIPITATION DATA (LIQUID EQUIVALENT, IN INCHES)
FOR THE WILKES-BARRE SCRANTON AIRPORT AT AVOCA, PA.

| MONTH | MEAN | GREATEST 24-HOUR |
|-----------|-------|------------------|
| January | 2.23 | 1.89 |
| February | 2.01 | 3.11 |
| March | 2.60 | 3.02 |
| April | 3.15 | 3.80 |
| May | 3.50 | 2.58 |
| June | 3.70 | 3.61 |
| July | 3.70 | 2.45 |
| August | 3.27 | 3.18 |
| September | 3.40 | 6.52 |
| October | 2.89 | 3.27 |
| November | 3.20 | 2.91 |
| December | 2.58 | 2.86 |
| Annual | 36.23 | |

Precipitation means are based on a 36 year climatological period from 1961-1996. Greatest 24-hour rainfall amounts are for a 38 year period from 1953-1990.

Sources: National Oceanic Atmospheric Administration, Cooperative Institute for Research in Environmental Science, Climate Diagnostic Center (NO44/CIRES/CDC) Ref. 2.3-3a
National Oceanic and Atmospheric Administration, Local Climatological Data, Annual Summary with Comparative Data, Avoca, PA (Ref. 2.3-3)

SSSES - FSAR

TABLE 2.3-34

EXPECTED RAINFALL BY DURATION AND RECURRENCE
INTERVAL FOR VICINITY OF SUSQUEHANNA SITE (Ref. 2.3-20) (INCHES)

RECURRENCE INTERVAL

| DURATION | 1 YR | 2 YR | 5 YR | 10 YR | 25 YR | 50 YR | 100 YR |
|----------|------|------|------|-------|-------|-------|--------|
| 1 Hour | 1.1 | 1.4 | 1.6 | 2.0 | 2.2 | 2.5 | 2.8 |
| 2 Hour | 1.4 | 1.6 | 2.1 | 2.5 | 2.8 | 3.2 | 3.5 |
| 3 Hour | 1.4 | 1.8 | 2.3 | 2.7 | 3.1 | 3.5 | 3.8 |
| 6 Hour | 1.8 | 2.2 | 2.8 | 3.3 | 3.9 | 4.2 | 4.8 |
| 12 Hour | 2.2 | 2.7 | 3.4 | 4.0 | 4.7 | 5.0 | 5.8 |
| 24 Hour | 2.5 | 3.0 | 4.0 | 4.7 | 5.3 | 6.0 | 6.8 |

SSES - FSAR

TABLE 2.3-35

PROBABLE MAXIMUM PRECIPITATION FOR VARYING
RAINFALL DURATIONS AND AREAS (Ref. 2.3-21) (INCHES)

| AREA | DURATION (HOURS) | | | | |
|--------------------|------------------|------|------|------|------|
| (Mi ²) | 6 | 12 | 24 | 48 | 72 |
| 10 | 25.5 | 29.5 | 31.0 | 35.0 | 36.5 |
| 200 | 17.0 | 20.5 | 23.0 | 26.0 | 27.0 |

SSES - FSAR

TABLE 2.3-36

PRECIPITATION DATA FOR THE SUSQUEHANNA SITE

(Inches of Water) (1973-1976)

| MONTH | TOTAL |
|-----------|-------|
| January | 3.68 |
| February | 2.53 |
| March | 3.67 |
| April | 3.73 |
| May | 4.19 |
| June | 4.82 |
| July | 4.73 |
| August | 3.59 |
| September | 7.54 |
| October | 4.40 |
| November | 2.76 |
| December | 2.21 |
| Annual | 47.83 |

TABLE 2.3-37

FREQUENCY DISTRIBUTION OF PRECIPITATION
DATA PERIOD: JANUARY 1973-1976

| PRECIPITATION CLASS INTERVAL (INCHES) | | | FREQUENCY DISTRIBUTION OF PRECIPITATION | | FREQUENCY DISTRIBUTION OF PRECIPITATION | | FREQUENCY DISTRIBUTION OF PRECIPITATION | | FREQUENCY DISTRIBUTION OF PRECIPITATION | | FREQUENCY DISTRIBUTION OF PRECIPITATION | | FREQUENCY DISTRIBUTION OF PRECIPITATION | |
|---|----|------|---|--------|---|--------|---|--------|---|--------|---|--------|---|------|
| | | | 1 HOUR DURATION | | 2 HOUR DURATION | | 3 HOUR DURATION | | 6 HOUR DURATION | | 12 HOUR DURATION | | 24 HOUR DURATION | |
| .0 | TO | .1 | 190 | 89.20 | 34 | 45.95 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| .1 | TO | .2 | 15 | 7.04 | 33 | 44.59 | 28 | 75.68 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| .2 | TO | .3 | 3 | 1.41 | 2 | 2.70 | 5 | 13.51 | 3 | 27.27 | 0 | 0.00 | 0 | 0.00 |
| .3 | TO | .4 | 2 | .94 | 2 | 2.70 | 2 | 5.41 | 6 | 54.55 | 0 | 0.00 | 0 | 0.00 |
| .4 | TO | .5 | 1 | .47 | 0 | 0.00 | 1 | 2.70 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| .5 | TO | .6 | 0 | 0.00 | 1 | 1.35 | 1 | 2.70 | 1 | 9.09 | 0 | 0.00 | 0 | 0.00 |
| .6 | TO | .7 | 1 | .47 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| .7 | TO | .8 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| .8 | TO | .9 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| .9 | TO | 1.0 | 1 | .47 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 1.0 | TO | 1.1 | 0 | 0.00 | 1 | 1.35 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 1.1 | TO | 1.2 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 1 | 50.00 | 0 | 0.00 |
| 1.2 | TO | 1.3 | 0 | 0.00 | 1 | 1.35 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 1.3 | TO | 1.4 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 1.4 | TO | 1.5 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 1.5 | TO | 1.6 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 1.6 | TO | 1.7 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 1.7 | TO | 1.8 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 1.8 | TO | 1.9 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 1.9 | TO | 2.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 2.0 | TO | 2.2 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 2.2 | TO | 2.4 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 2.4 | TO | 2.6 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 2.6 | TO | 2.8 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 2.8 | TO | 3.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 3.0 | TO | 3.2 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 3.2 | TO | 3.4 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 3.4 | TO | 3.6 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 3.6 | TO | 3.8 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 3.8 | TO | 4.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 4.0 | TO | 4.5 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 4.5 | TO | 5.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 5.0 | TO | 5.5 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 5.5 | TO | 6.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 6.0 | TO | 6.5 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 6.5 | TO | 7.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 7.0 | TO | 7.5 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 7.5 | TO | 8.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 8.0 | TO | 9.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 9.0 | TO | 10.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 10.0 | TO | 11.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 11.0 | TO | 12.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| | GT | 12.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| TOTAL | | | 213 | 100.00 | 74 | 100.00 | 37 | 100.00 | 11 | 100.00 | 2 | 100.00 | 0 | 0.00 |
| MAXIMUM AMT. | | | .91 | | 1.30 | | .60 | | .76 | | 1.12 | | 0.00 | |
| TOTAL PRECIPITATION FOR DATA PERIOD | | | | | | | 14.71 INCHES | | | | | | | |
| OBSERVATIONS WITH NO PRECIPITATION | | | | | NO. | | PCT. | | | | NO. | | PCT. | |
| OBSERVATIONS WITH PRECIPITATION GE 0.01NCH | | | | | 2763 | | 92.84 | | VALID OBSERVATIONS | | 2976 | | 100.00 | |
| TOTAL VALID OBSERVATIONS | | | | | 213 | | 7.16 | | INVALID OBSERVATIONS | | 0 | | 0.00 | |
| | | | | | 2976 | | 100.00 | | TOTAL OBSERVATIONS | | 2976 | | 100.00 | |

**FREQUENCY DISTRIBUTION OF PRECIPITATION
DATA PERIOD: FEBRUARY 1973-1976**

88E9 - 78AR

FREQUENCY DISTRIBUTION OF PRECIPITATION
DATA PERIOD: MARCH 1973-1976

BSIS - ISAR

FREQUENCY DISTRIBUTION OF PRECIPITATION
DATA PERIOD: APRIL 1973-1976

85ES - PSAT

| NO. | PCT. |
|------|--------|
| 2607 | 92.09 |
| 224 | 7.91 |
| 2831 | 100.00 |

Rev. 35, 07/84

TABLE 2.3-41

FREQUENCY DISTRIBUTION OF PRECIPITATION
DATE PERIOD: MAY 1973-1976

| PRECIPITATION CLASS INTERVAL (INCHES) | FREQUENCY DISTRIBUTION OF PRECIPITATION 1 HOUR DURATION | | FREQUENCY DISTRIBUTION OF PRECIPITATION 2 HOUR DURATION | | FREQUENCY DISTRIBUTION OF PRECIPITATION 3 HOUR DURATION | | FREQUENCY DISTRIBUTION OF PRECIPITATION 6 HOUR DURATION | | FREQUENCY DISTRIBUTION OF PRECIPITATION 12 HOUR DURATION | | FREQUENCY DISTRIBUTION OF PRECIPITATION 24 HOUR DURATION | |
|--|---|--------|---|--------|---|--------|---|--------|--|------|--|------|
| | NO. | PCT. | NO. | PCT. | NO. | PCT. | NO. | PCT. | NO. | PCT. | NO. | PCT. |
| 0.0 TO 0.1 | 182 | 81.98 | 37 | 50.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 0.1 TO 0.2 | 29 | 13.06 | 24 | 32.43 | 19 | 25.88 | 1 | 1.33 | 0 | 0.00 | 0 | 0.00 |
| 0.2 TO 0.3 | 3 | 1.35 | 2 | 2.70 | 10 | 13.51 | 2 | 2.67 | 0 | 0.00 | 0 | 0.00 |
| 0.3 TO 0.4 | 2 | 0.90 | 1 | 1.35 | 0 | 0.00 | 1 | 1.33 | 0 | 0.00 | 0 | 0.00 |
| 0.4 TO 0.5 | 1 | 0.45 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 0.5 TO 0.6 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 0.6 TO 0.7 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 0.7 TO 0.8 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 0.8 TO 0.9 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 0.9 TO 1.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 1.0 TO 1.1 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 1.1 TO 1.2 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 1.2 TO 1.3 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 1.3 TO 1.4 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 1.4 TO 1.5 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 1.5 TO 1.6 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 1.6 TO 1.7 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 1.7 TO 1.8 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 1.8 TO 1.9 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 1.9 TO 2.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 2.0 TO 2.1 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 2.1 TO 2.2 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 2.2 TO 2.3 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 2.3 TO 2.4 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 2.4 TO 2.5 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 2.5 TO 2.6 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 2.6 TO 2.7 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 2.7 TO 2.8 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 2.8 TO 2.9 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 2.9 TO 3.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 3.0 TO 3.1 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 3.1 TO 3.2 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 3.2 TO 3.3 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 3.3 TO 3.4 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 3.4 TO 3.5 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 3.5 TO 3.6 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 3.6 TO 3.7 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 3.7 TO 3.8 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 3.8 TO 3.9 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 3.9 TO 4.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 4.0 TO 4.1 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 4.1 TO 4.2 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 4.2 TO 4.3 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 4.3 TO 4.4 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 4.4 TO 4.5 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 4.5 TO 4.6 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 4.6 TO 4.7 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 4.7 TO 4.8 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 4.8 TO 4.9 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 4.9 TO 5.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 5.0 TO 5.1 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 5.1 TO 5.2 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 5.2 TO 5.3 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 5.3 TO 5.4 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 5.4 TO 5.5 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 5.5 TO 5.6 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 5.6 TO 5.7 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 5.7 TO 5.8 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 5.8 TO 5.9 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 5.9 TO 6.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 6.0 TO 6.1 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 6.1 TO 6.2 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 6.2 TO 6.3 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 6.3 TO 6.4 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 6.4 TO 6.5 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 6.5 TO 6.6 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 6.6 TO 6.7 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 6.7 TO 6.8 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 6.8 TO 6.9 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 6.9 TO 7.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 7.0 TO 7.1 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 7.1 TO 7.2 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 7.2 TO 7.3 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 7.3 TO 7.4 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 7.4 TO 7.5 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 7.5 TO 7.6 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 7.6 TO 7.7 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 7.7 TO 7.8 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 7.8 TO 7.9 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 7.9 TO 8.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 8.0 TO 8.1 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 8.1 TO 8.2 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 8.2 TO 8.3 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 8.3 TO 8.4 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 8.4 TO 8.5 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 8.5 TO 8.6 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 8.6 TO 8.7 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 8.7 TO 8.8 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 8.8 TO 8.9 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 8.9 TO 9.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 9.0 TO 9.1 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 9.1 TO 9.2 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 9.2 TO 9.3 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 9.3 TO 9.4 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 9.4 TO 9.5 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 9.5 TO 9.6 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 9.6 TO 9.7 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 9.7 TO 9.8 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 9.8 TO 9.9 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 9.9 TO 10.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| TOTAL | 222 | 100.00 | 74 | 100.00 | 34 | 100.00 | 5 | 100.00 | 0 | 0.00 | 0 | 0.00 |
| MAXIMUM AMT. | 1.06 | | 1.10 | | 1.14 | | .99 | | 0.00 | | 0.00 | |
| TOTAL PRECIPITATION FOR DATA PERIOD | | | | | 16.75 INCHES | | | | | | | |

OBSERVATIONS WITH NO PRECIPITATION
OBSERVATIONS WITH PRECIPITATION GE 0.01 INCH
TOTAL VALID OBSERVATIONS

NO.
2754
222
2976

PCT.
92.54
7.46
100.00

VALID OBSERVATIONS
INVALID OBSERVATIONS
TOTAL OBSERVATIONS

NO.
2976
0
2976

PCT.
100.00
0.00
100.00

SES - FSAR

TABLE 2.3-42

FREQUENCY DISTRIBUTION OF PRECEIPITATION
DATA PERIOD: JUNE 1973-1976

| PRECIPITATION CLASS INTERVAL (INCHES) | | | FREQUENCY DISTRIBUTION OF PRECIPITATION | | FREQUENCY DISTRIBUTION OF PRECIPITATION | | FREQUENCY DISTRIBUTION OF PRECIPITATION | | FREQUENCY DISTRIBUTION OF PRECIPITATION | | FREQUENCY DISTRIBUTION OF PRECIPITATION | | FREQUENCY DISTRIBUTION OF PRECIPITATION | |
|---|----|------|---|--------|---|--------|---|--------------|---|--------|---|------|---|------|
| | | | 1 HOUR DURATION | | 2 HOUR DURATION | | 3 HOUR DURATION | | 6 HOUR DURATION | | 12 HOUR DURATION | | 24 HOUR DURATION | |
| .0 | TO | .1 | 180 | 78.60 | 44 | 58.67 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| .1 | TO | .2 | 33 | 14.41 | 16 | 21.33 | 22 | 68.75 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| .2 | TO | .3 | 5 | 2.18 | 5 | 6.67 | 5 | 15.63 | 4 | 57.14 | 0 | 0.00 | 0 | 0.00 |
| .3 | TO | .4 | 4 | 1.75 | 4 | 5.33 | 1 | 3.13 | 1 | 14.29 | 0 | 0.00 | 0 | 0.00 |
| .4 | TO | .5 | 2 | .87 | 2 | 2.67 | 1 | 3.13 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| .5 | TO | .6 | 3 | 1.31 | 2 | 2.67 | 0 | 0.00 | 2 | 28.57 | 0 | 0.00 | 0 | 0.00 |
| .6 | TO | .7 | 2 | .87 | 1 | 1.33 | 2 | 6.25 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| .7 | TO | .8 | 0 | 0.00 | 1 | 1.33 | 1 | 2.94 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| .8 | TO | .9 | 0 | 0.00 | 0 | 0.00 | 1 | 2.94 | 1 | 20.00 | 0 | 0.00 | 0 | 0.00 |
| .9 | TO | 1.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 1 | 20.00 | 0 | 0.00 | 0 | 0.00 |
| 1.0 | TO | 1.1 | 1 | .45 | 1 | 1.35 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 1.1 | TO | 1.2 | 0 | 0.00 | 0 | 0.00 | 1 | 2.94 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 1.2 | TO | 1.3 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 1.3 | TO | 1.4 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 1.4 | TO | 1.5 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 1.5 | TO | 1.6 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 1.6 | TO | 1.7 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 1.7 | TO | 1.8 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 1.8 | TO | 1.9 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 1.9 | TO | 2.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 2.0 | TO | 2.2 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 2.2 | TO | 2.4 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 2.4 | TO | 2.6 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 2.6 | TO | 2.8 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 2.8 | TO | 3.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 3.0 | TO | 3.2 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 3.2 | TO | 3.4 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 3.4 | TO | 3.6 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 3.6 | TO | 3.8 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 3.8 | TO | 4.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 4.0 | TO | 4.5 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 4.5 | TO | 5.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 5.0 | TO | 5.5 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 5.5 | TO | 6.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 6.0 | TO | 6.5 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 6.5 | TO | 7.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 7.0 | TO | 7.5 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 7.5 | TO | 8.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 8.0 | TO | 9.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 9.0 | TO | 10.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 10.0 | TO | 11.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 11.0 | TO | 12.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| | GT | 12.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| TOTAL | | | 229 | 100.00 | 75 | 100.00 | 32 | 100.00 | 7 | 100.00 | 1 | 0.00 | 0 | 0.00 |
| MAXIMUM AMT. | | | | .67 | | .71 | | .99 | | .60 | | .48 | | 0.00 |
| TOTAL PRECIPITATION FOR DATA PERIOD | | | | | | | | 19.29 INCHES | | | | | | |
| OBSERVATIONS WITH NO PRECIPITATION | | | | | NO. | | PCT. | | | | NO. | | PCT. | |
| OBSERVATIONS WITH PRECIPITATION GE 0.01NCH | | | | | 2651 | | 92.05 | | VALID OBSERVATIONS | | 2880 | | 100.00 | |
| TOTAL VALID OBSERVATIONS | | | | | 229 | | 7.95 | | INVALID OBSERVATIONS | | 0 | | 0.00 | |
| | | | | | 2880 | | 100.00 | | TOTAL OBSERVATIONS | | 2880 | | 100.00 | |

TABLE 2.3-43

FREQUENCY DISTRIBUTION OF PRECIPITATION
DATA PERIOD: JULY 1973-1976

| PRECIPITATION CLASS INTERVAL (INCHES) | | | FREQUENCY DISTRIBUTION OF PRECIPITATION | | FREQUENCY DISTRIBUTION OF PRECIPITATION | | FREQUENCY DISTRIBUTION OF PRECIPITATION | | FREQUENCY DISTRIBUTION OF PRECIPITATION | | FREQUENCY DISTRIBUTION OF PRECIPITATION | | FREQUENCY DISTRIBUTION OF PRECIPITATION | |
|---|----|------|---|--------|---|--------|---|--------|---|--------|---|------|---|------|
| | | | 1 HOUR DURATION | | 2 HOUR DURATION | | 3 HOUR DURATION | | 6 HOUR DURATION | | 12 HOUR DURATION | | 24 HOUR DURATION | |
| .0 | TO | .1 | 128 | 72.73 | 14 | 33.33 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| .1 | TO | .2 | 34 | 19.32 | 15 | 35.71 | 8 | 40.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| .2 | TO | .3 | 3 | 1.70 | 3 | 7.14 | 4 | 20.00 | 1 | 33.33 | 0 | 0.00 | 0 | 0.00 |
| .3 | TO | .4 | 3 | 1.70 | 6 | 14.29 | 4 | 20.00 | 1 | 14.29 | 0 | 0.00 | 0 | 0.00 |
| .4 | TO | .5 | 1 | .57 | 0 | 0.00 | 1 | 5.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| .5 | TO | .6 | 2 | 1.14 | 0 | 0.00 | 0 | 0.00 | 1 | 33.33 | 0 | 0.00 | 0 | 0.00 |
| .6 | TO | .7 | 1 | .57 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| .7 | TO | .8 | 1 | .57 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| .8 | TO | .9 | 1 | .57 | 1 | 2.38 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| .9 | TO | 1.0 | 0 | 0.00 | 1 | 2.38 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 1.0 | TO | 1.1 | 1 | .57 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 1.1 | TO | 1.2 | 0 | 0.00 | 1 | 2.38 | 2 | 10.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 1.2 | TO | 1.3 | 0 | 0.00 | 1 | 2.38 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 1.3 | TO | 1.4 | 0 | 0.00 | 0 | 0.00 | 1 | 5.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 1.4 | TO | 1.5 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 1 | 33.33 | 0 | 0.00 | 0 | 0.00 |
| 1.5 | TO | 1.6 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 1.6 | TO | 1.7 | 1 | .57 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 1.7 | TO | 1.8 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 1.8 | TO | 1.9 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 1.9 | TO | 2.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 2.0 | TO | 2.2 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 2.2 | TO | 2.4 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 2.4 | TO | 2.6 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 2.6 | TO | 2.8 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 2.8 | TO | 3.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 3.0 | TO | 3.2 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 3.2 | TO | 3.4 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 3.4 | TO | 3.6 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 3.6 | TO | 3.8 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 3.8 | TO | 4.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 4.0 | TO | 4.5 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 4.5 | TO | 5.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 5.0 | TO | 5.5 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 5.5 | TO | 6.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 6.0 | TO | 6.5 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 6.5 | TO | 7.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 7.0 | TO | 7.5 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 7.5 | TO | 8.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 8.0 | TO | 9.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 9.0 | TO | 10.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 10.0 | TO | 11.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 11.0 | TO | 12.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| | GT | 12.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| TOTAL | | | 176 | 100.00 | 42 | 100.00 | 20 | 100.00 | 3 | 100.00 | 0 | 0.00 | 0 | 0.00 |
| MAXIMUM AMT. | | | 1.61 | | 1.22 | | 1.38 | | 1.46 | | 0.00 | | 0.00 | |
| TOTAL PRECIPITATION FOR DATA PERIOD | | | | | | | 18.90 INCHES | | | | | | | |
| OBSERVATIONS WITH NO PRECIPITATION | | | | | NO. | | PCT. | | | | NO. | | PCT. | |
| OBSERVATIONS WITH PRECIPITATION GE 0.01NCH | | | | | 2799 | | 94.08 | | VALID OBSERVATIONS | | 2975 | | 99.97 | |
| TOTAL VALID OBSERVATIONS | | | | | 176 | | 5.92 | | INVALID OBSERVATIONS | | 1 | | .03 | |
| | | | | | 2975 | | 100.00 | | TOTAL OBSERVATIONS | | 2976 | | 100.00 | |

**FREQUENCY DISTRIBUTION OF PRECIPITATION
DATA PERIOD: AUGUST 1973-1976**

1685 - PSAR

TABLE 2.3-45

FREQUENCY DISTRIBUTION OF PRECIPITATION
DATA PERIOD: SEPTEMBER 1973-1976

| PRECIPITATION CLASS INTERVAL (INCHES) | | | FREQUENCY DISTRIBUTION OF PRECIPITATION | | FREQUENCY DISTRIBUTION OF PRECIPITATION | | FREQUENCY DISTRIBUTION OF PRECIPITATION | | FREQUENCY DISTRIBUTION OF PRECIPITATION | | FREQUENCY DISTRIBUTION OF PRECIPITATION | | FREQUENCY DISTRIBUTION OF PRECIPITATION | |
|---|----|------|---|--------|---|--------|---|--------|---|--------|---|-------|---|------|
| | | | 1 HOUR DURATION | | 2 HOUR DURATION | | 3 HOUR DURATION | | 6 HOUR DURATION | | 12 HOUR DURATION | | 24 HOUR DURATION | |
| .0 | TO | .1 | 225 | 76.01 | 47 | 41.59 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| .1 | TO | .2 | 37 | 12.50 | 31 | 27.43 | 27 | 49.09 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| .2 | TO | .3 | 14 | 4.73 | 7 | 6.19 | 4 | 12.73 | 1 | 6.25 | 0 | 0.00 | 0 | 0.00 |
| .3 | TO | .4 | 8 | 2.70 | 10 | 8.85 | 4 | 7.27 | 3 | 18.75 | 0 | 0.00 | 0 | 0.00 |
| .4 | TO | .5 | 6 | 2.03 | 5 | 4.42 | 0 | 1.82 | 1 | 6.25 | 0 | 0.00 | 0 | 0.00 |
| .5 | TO | .6 | 4 | 1.35 | 5 | 4.42 | 0 | 10.91 | 1 | 6.25 | 1 | 33.33 | 0 | 0.00 |
| .6 | TO | .7 | 0 | 0.00 | 2 | 1.77 | 0 | 3.64 | 2 | 12.50 | 0 | 0.00 | 0 | 0.00 |
| .7 | TO | .8 | 1 | .34 | 3 | 2.65 | 2 | 7.27 | 1 | 6.25 | 0 | 0.00 | 0 | 0.00 |
| .8 | TO | .9 | 0 | 0.00 | 1 | .88 | 0 | 5.45 | 1 | 6.25 | 0 | 0.00 | 0 | 0.00 |
| .9 | TO | 1.0 | 0 | 0.00 | 0 | 0.00 | 1 | 0.00 | 1 | 25.00 | 0 | 0.00 | 0 | 0.00 |
| 1.0 | TO | 1.1 | 0 | .34 | 1 | .88 | 0 | 0.00 | 4 | 6.25 | 0 | 0.00 | 0 | 0.00 |
| 1.1 | TO | 1.2 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 1 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 1.2 | TO | 1.3 | 0 | 0.00 | 0 | 0.00 | 0 | 1.82 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 1.3 | TO | 1.4 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 1.4 | TO | 1.5 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 1.5 | TO | 1.6 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 1.6 | TO | 1.7 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 1.7 | TO | 1.8 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 1.8 | TO | 1.9 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 1.9 | TO | 2.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 2.0 | TO | 2.2 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 2.2 | TO | 2.4 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 2.4 | TO | 2.6 | 1 | .34 | 1 | .88 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 2.6 | TO | 2.8 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 2.8 | TO | 3.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 3.0 | TO | 3.2 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 3.2 | TO | 3.4 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 3.4 | TO | 3.6 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 3.6 | TO | 3.8 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 3.8 | TO | 4.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 4.0 | TO | 4.5 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 4.5 | TO | 5.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 5.0 | TO | 5.5 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 5.5 | TO | 6.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 6.0 | TO | 6.5 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 6.5 | TO | 7.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 7.0 | TO | 7.5 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 7.5 | TO | 8.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 8.0 | TO | 9.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 9.0 | TO | 10.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 10.0 | TO | 11.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 11.0 | TO | 12.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| | GT | 12.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| TOTAL | | | 296 | 100.00 | 113 | 100.00 | 55 | 100.00 | 16 | 100.00 | 3 | 0.00 | 0 | 0.00 |
| MAXIMUM AMT. | | | 2.56 | | 2.60 | | 1.27 | | 1.11 | | 2.19 | | 0.00 | |
| TOTAL PRECIPITATION FOR DATA PERIOD | | | | | | | 30.17 INCHES | | | | | | | |
| OBSERVATIONS WITH NO PRECIPITATION | | | | | NO. | | PCT. | | | | NO. | | PCT. | |
| OBSERVATIONS WITH PRECIPITATION GE 0.01NCH | | | | | 2578 | | 89.70 | | VALID OBSERVATIONS | | 2874 | | 99.79 | |
| TOTAL VALID OBSERVATIONS | | | | | 296 | | 10.30 | | INVALID OBSERVATIONS | | 6 | | .21 | |
| | | | | | 2874 | | 100.00 | | TOTAL OBSERVATIONS | | 2880 | | 100.00 | |

FREQUENCY DISTRIBUTION OF PRECIPITATION
DATA PERIOD: OCTOBER 1973-1976

BSRS - PSAR

TABLE 2.3-47

FREQUENCY DISTRIBUTION OF PRECIPITATION
DATA PERIOD: NOVEMBER 1973-1976

| PRECIPITATION CLASS INTERVAL (INCHES) | | | FREQUENCY DISTRIBUTION OF PRECIPITATION | | FREQUENCY DISTRIBUTION OF PRECIPITATION | | FREQUENCY DISTRIBUTION OF PRECIPITATION | | FREQUENCY DISTRIBUTION OF PRECIPITATION | | FREQUENCY DISTRIBUTION OF PRECIPITATION | | FREQUENCY DISTRIBUTION OF PRECIPITATION | |
|---|----|------|---|--------|---|--------|---|--------------|---|--------|---|-------|---|------|
| | | | 1 HOUR DURATION | | 2 HOUR DURATION | | 3 HOUR DURATION | | 6 HOUR DURATION | | 12 HOUR DURATION | | 24 HOUR DURATION | |
| .0 | TO | .1 | 156 | 86.67 | 34 | 58.62 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| .1 | TO | .2 | 19 | 10.56 | 15 | 25.86 | 18 | 75.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| .2 | TO | .3 | 4 | 2.22 | 6 | 10.34 | 0 | 0.00 | 3 | 42.86 | 0 | 0.00 | 0 | 0.00 |
| .3 | TO | .4 | 1 | .56 | 3 | 5.17 | 5 | 20.83 | 1 | 14.29 | 0 | 0.00 | 0 | 0.00 |
| .4 | TO | .5 | 0 | 0.00 | 0 | 0.00 | 1 | 4.17 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| .5 | TO | .6 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 1 | 14.29 | 0 | 50.0 | 0 | 0.00 |
| .6 | TO | .7 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 1 | 14.29 | 0 | 0.00 | 0 | 0.00 |
| .7 | TO | .8 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| .8 | TO | .9 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 1 | 14.29 | 0 | 0.00 | 0 | 0.00 |
| .9 | TO | 1.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 1.0 | TO | 1.1 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 1 | 50.00 | 0 | 0.00 |
| 1.1 | TO | 1.2 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 1.2 | TO | 1.3 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 1.3 | TO | 1.4 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 1.4 | TO | 1.5 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 1.5 | TO | 1.6 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 1.6 | TO | 1.7 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 1.7 | TO | 1.8 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 1.8 | TO | 1.9 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 1.9 | TO | 2.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 2.0 | TO | 2.2 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 2.2 | TO | 2.4 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 2.4 | TO | 2.6 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 2.6 | TO | 2.8 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 2.8 | TO | 3.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 3.0 | TO | 3.2 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 3.2 | TO | 3.4 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 3.4 | TO | 3.6 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 3.6 | TO | 3.8 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 3.8 | TO | 4.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 4.0 | TO | 4.5 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 4.5 | TO | 5.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 5.0 | TO | 5.5 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 5.5 | TO | 6.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 6.0 | TO | 6.5 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 6.5 | TO | 7.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 7.0 | TO | 7.5 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 7.5 | TO | 8.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 8.0 | TO | 9.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 9.0 | TO | 10.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 10.0 | TO | 11.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 11.0 | TO | 12.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| | GT | 12.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| TOTAL | | | 180 | 100.00 | 58 | 100.00 | 24 | 100.00 | 7 | 100.00 | 2 | 0.00 | 0 | 0.00 |
| MAXIMUM AMT. | | | | .35 | | .40 | | .48 | | .84 | | 0.00 | | 0.00 |
| TOTAL PRECIPITATION FOR DATA PERIOD | | | | | | | | 11.03 INCHES | | | | | | |
| OBSERVATIONS WITH NO PRECIPITATION | | | | | NO. | | PCT. | | | | NO. | | PCT. | |
| OBSERVATIONS WITH PRECIPITATION GE 0.01NCH | | | | | 2700 | | 93.75 | | VALID OBSERVATIONS | | 2880 | | 100.00 | |
| TOTAL VALID OBSERVATIONS | | | | | 180 | | 6.25 | | INVALID OBSERVATIONS | | 0 | | 0.00 | |
| | | | | | 2880 | | 100.00 | | TOTAL OBSERVATIONS | | 2880 | | 100.00 | |

TABLE 2.3-48

SSBS - TSAR

| NO. | PCT. |
|------|--------|
| 1645 | 95.53 |
| 77 | 4.47 |
| 1722 | 100.00 |

Rev 25. 07/84

TABLE 2.3-49

FREQUENCY DISTRIBUTION OF PRECIPITATION
DATA PERIOD: JANUARY 1973 - DECEMBER 1976

| PRECIPITATION CLASS INTERVAL (INCHES) | | | FREQUENCY DISTRIBUTION OF PRECIPITATION | | FREQUENCY DISTRIBUTION OF PRECIPITATION | | FREQUENCY DISTRIBUTION OF PRECIPITATION | | FREQUENCY DISTRIBUTION OF PRECIPITATION | | FREQUENCY DISTRIBUTION OF PRECIPITATION | | | |
|---|----|------|---|--------|---|--------|---|--------|---|--------|---|--------|------------------|------|
| | | | 1 HOUR DURATION | | 2 HOUR DURATION | | 3 HOUR DURATION | | 6 HOUR DURATION | | 12 HOUR DURATION | | 24 HOUR DURATION | |
| .0 | TO | .1 | 1993 | 82.15 | 385 | 48.25 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| .1 | TO | .2 | 298 | 12.28 | 255 | 31.95 | 220 | 60.11 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| .2 | TO | .3 | 53 | 2.18 | 53 | 6.64 | 54 | 14.75 | 19 | 22.89 | 0 | 0.00 | 0 | 0.00 |
| .3 | TO | .4 | 33 | 1.36 | 47 | 5.89 | 38 | 10.38 | 18 | 21.69 | 0 | 0.00 | 0 | 0.00 |
| .4 | TO | .5 | 17 | .70 | 14 | 1.75 | 11 | 3.01 | 6 | 7.23 | 1 | 7.69 | 0 | 0.00 |
| .5 | TO | .6 | 12 | .49 | 20 | 2.51 | 13 | 3.55 | 13 | 15.66 | 3 | 23.08 | 0 | 0.00 |
| .6 | TO | .7 | 6 | .25 | 4 | .50 | 8 | 2.19 | 7 | 8.43 | 0 | 0.00 | 0 | 0.00 |
| .7 | TO | .8 | 5 | .21 | 7 | .88 | 7 | 1.91 | 5 | 6.02 | 1 | 7.69 | 0 | 0.00 |
| .8 | TO | .9 | 2 | .08 | 2 | .25 | 5 | 1.37 | 5 | 6.02 | 0 | 0.00 | 0 | 0.00 |
| .9 | TO | 1.0 | 1 | .04 | 2 | .25 | 2 | .55 | 3 | 3.61 | 0 | 0.00 | 0 | 0.00 |
| 1.0 | TO | 1.1 | 3 | .12 | 3 | .38 | 0 | 0.00 | 4 | 4.82 | 0 | 0.00 | 0 | 0.00 |
| 1.1 | TO | 1.2 | 1 | .04 | 2 | .25 | 4 | 1.09 | 1 | 1.20 | 4 | 30.77 | 0 | 0.00 |
| 1.2 | TO | 1.3 | 0 | 0.00 | 3 | .38 | 2 | .55 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 1.3 | TO | 1.4 | 0 | 0.00 | 0 | 0.00 | 1 | .27 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 1.4 | TO | 1.5 | 0 | 0.00 | 0 | 0.00 | 1 | .27 | 1 | 1.20 | 0 | 0.00 | 0 | 0.00 |
| 1.5 | TO | 1.6 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 1.6 | TO | 1.7 | 1 | .04 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 1 | 7.69 | 0 | 0.00 |
| 1.7 | TO | 1.8 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 1.8 | TO | 1.9 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 1 | 1.20 | 0 | 0.00 | 0 | 0.00 |
| 1.9 | TO | 2.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 2.0 | TO | 2.2 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 1 | 7.69 | 0 | 0.00 |
| 2.2 | TO | 2.4 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 2.4 | TO | 2.6 | 1 | .04 | 1 | .13 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 2.6 | TO | 2.8 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 1 | 7.69 | 0 | 0.00 |
| 2.8 | TO | 3.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 3.0 | TO | 3.2 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 3.2 | TO | 3.4 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 3.4 | TO | 3.6 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 3.6 | TO | 3.8 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 3.8 | TO | 4.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 4.0 | TO | 4.5 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 4.5 | TO | 5.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 5.0 | TO | 5.5 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 5.5 | TO | 6.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 6.0 | TO | 6.5 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 6.5 | TO | 7.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 7.0 | TO | 7.5 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 7.5 | TO | 8.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 8.0 | TO | 9.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 9.0 | TO | 10.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 10.0 | TO | 11.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 11.0 | TO | 12.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| | GT | 12.0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| TOTAL | | | 2426 | 100.00 | 798 | 100.00 | 366 | 100.00 | 83 | 100.00 | 13 | 100.00 | 0 | 0.00 |
| MAXIMUM AMT. | | | 2.56 | | 2.60 | | 1.50 | | 1.90 | | 2.74 | | 0.00 | |
| TOTAL PRECIPITATION FOR DATA PERIOD | | | 191.33 INCHES | | | | | | | | | | | |
| | | | | | NO. | | PCT. | | | | NO. | | PCT. | |
| OBSERVATIONS WITH NO PRECIPITATION | | | | | 31326 | | 92.81 | | VALID OBSERVATIONS | | 33752 | | 96.26 | |
| OBSERVATIONS WITH PRECIPITATION GE 0.01NCH | | | | | 2426 | | 7.19 | | INVALID OBSERVATIONS | | 1312 | | 3.74 | |
| TOTAL VALID OBSERVATIONS | | | | | 33752 | | 100.00 | | TOTAL OBSERVATIONS | | 35064 | | 100.00 | |

TABLE 2.3-50
PRECIPITATION WIND ROSE
JANUARY 1973 - 1976

| WIND SECTOR | WIND SPEED CATEGORIES (METERS PER SECOND) | | | | | | TOTAL | MEAN SPEED |
|--|---|---------------------|---------------------|--------------------|-------------------|-------------------|-----------------------|---------------|
| | 0.0-1.5 | 1.5-3.0 | 3.0-5.0 | 5.0-7.5 | 7.5-10.0 | >10.0 | | |
| NNE | 3.88 ⁸ | 3.88 ⁸ | 0.00 ⁰ | 0.00 ⁰ | 0.00 ⁰ | 0.00 ⁰ | 7.77 ¹⁶ | 1.53 |
| NE | 3.40 ⁷ | 2.91 ⁶ | 0.00 ⁰ | 0.00 ⁰ | 0.00 ⁰ | 0.00 ⁰ | 6.31 ¹³ | 1.56 |
| ENE | 2.91 ⁶ | 1.94 ⁴ | 0.00 ⁰ | 0.00 ⁰ | 0.00 ⁰ | 0.00 ⁰ | 4.85 ¹⁰ | 1.44 |
| E | 1.46 ³ | 2.91 ⁶ | 0.00 ⁰ | 0.00 ⁰ | 0.00 ⁰ | 0.00 ⁰ | 4.37 ⁹ | 2.09 |
| ESE | 4.85 ¹⁰ | 3.88 ⁸ | .97 ² | 0.00 ⁰ | 0.00 ⁰ | 0.00 ⁰ | 9.71 ²⁰ | 1.70 |
| SE | 1.94 ⁴ | 1.94 ⁴ | 0.00 ⁰ | .97 ² | 0.00 ⁰ | 0.00 ⁰ | 4.85 ¹⁰ | 2.38 |
| SSE | 3.40 ⁷ | 2.43 ⁵ | .49 ¹ | .49 ¹ | 0.00 ⁰ | 0.00 ⁰ | 6.80 ¹⁴ | 1.89 |
| S | 3.40 ⁷ | 2.43 ⁵ | 1.46 ³ | 0.00 ⁰ | 0.00 ⁰ | 0.00 ⁰ | 7.28 ¹⁵ | 2.03 |
| SSW | 1.94 ⁴ | .97 ² | 2.43 ⁵ | 1.94 ⁴ | 0.00 ⁰ | 0.00 ⁰ | 7.28 ¹⁵ | 3.69 |
| SW | 1.94 ⁴ | 1.94 ⁴ | 1.46 ³ | 0.00 ⁰ | 0.00 ⁰ | 0.00 ⁰ | 5.34 ¹¹ | 2.05 |
| | 1.46 ³ | 1.94 ⁴ | 1.94 ⁴ | .97 ² | 0.00 ⁰ | 0.00 ⁰ | 6.31 ¹³ | 3.29 |
| W | 4.37 ⁹ | 0.00 ⁰ | 1.94 ⁴ | 1.46 ³ | 0.00 ⁰ | 0.00 ⁰ | 7.77 ¹⁶ | 2.70 |
| WNW | 2.91 ⁶ | .97 ² | 0.00 ⁰ | .49 ¹ | 0.00 ⁰ | 0.00 ⁰ | 4.37 ⁹ | 1.83 |
| NW | 4.85 ¹⁰ | .49 ¹ | 0.00 ⁰ | 0.00 ⁰ | 0.00 ⁰ | 0.00 ⁰ | 5.34 ¹¹ | 1.25 |
| NNW | 3.40 ⁷ | 0.00 ⁰ | .49 ¹ | 0.00 ⁰ | 0.00 ⁰ | 0.00 ⁰ | 3.88 ⁸ | 1.32 |
| N | 3.40 ⁷ | 3.40 ⁷ | 0.00 ⁰ | 0.00 ⁰ | 0.00 ⁰ | 0.00 ⁰ | 6.80 ¹⁴ | 1.51 |
| CALM | .97 ² | | | | | | .97 ² | CALM |
| TOTAL | 50.49 ¹⁰⁴ | 32.04 ⁶⁶ | 11.17 ²³ | 6.31 ¹³ | 0.00 ⁰ | 0.00 ⁰ | 100.00 ²⁰⁶ | 2.03 |
| NUMBER OF VALID OBSERVATIONS WITH PRECIPITATION | | | | | | | 206 | |
| NUMBER OF VALID OBSERVATIONS WITHOUT PRECIPITATION | | | | | | | 2112 | |
| NUMBER OF INVALID OBSERVATIONS | | | | | | | 658 | |
| TOTAL NUMBER OF OBSERVATIONS | | | | | | | 2976 | |
| TOTAL AMOUNT OF PRECIPITATION FOR DATA PERIOD | | | | | | | 14.08 INCHES | |
| KEY XXX NUMBER OF OCCURRENCES | | | | | | | 6.92 PCT. | |
| XXX PERCENT OCCURRENCES | | | | | | | 70.97 PCT. | |
| | | | | | | | 22.11 PCT. | |
| | | | | | | | 100.00 PCT. | |

8SES - 75AR

TABLE 2.3-51
PRECIPITATION WIND ROSE
FEBRUARY 1973 - 1976

| WIND SECTOR | 0.0-1.5 | 1.5-3.0 | 3.0-5.0 | 5.0-7.5 | 7.5-10.0 | >10.0 | TOTAL | MEAN SPEED |
|--|---------------------|---------------------|---------------------|--------------------|-------------------|-------------------|-----------------------|---------------|
| NNE | 7.50 ¹² | 3.12 ⁵ | 0.00 ⁰ | 0.00 ⁰ | 0.00 ⁰ | 0.00 ⁰ | 10.62 ¹⁷ | 1.32 |
| NE | 1.25 ² | 2.50 ⁴ | 0.00 ⁰ | 0.00 ⁰ | 0.00 ⁰ | 0.00 ⁰ | 3.75 ⁶ | 1.87 |
| ENE | 3.75 ⁶ | 3.12 ⁵ | 1.25 ² | 0.00 ⁰ | 0.00 ⁰ | 0.00 ⁰ | 8.12 ¹³ | 1.96 |
| E | 2.50 ⁴ | 1.25 ² | 1.87 ³ | 0.00 ⁰ | 0.00 ⁰ | 0.00 ⁰ | 5.62 ⁹ | 2.10 |
| ESE | 3.12 ⁵ | 1.25 ² | 0.00 ⁰ | 0.00 ⁰ | 0.00 ⁰ | 0.00 ⁰ | 4.37 ⁷ | 1.26 |
| SE | 3.12 ⁵ | 3.75 ⁶ | .62 ¹ | .62 ¹ | 0.00 ⁰ | 0.00 ⁰ | 8.12 ¹³ | 2.05 |
| SSE | 4.37 ⁷ | 1.25 ² | 2.50 ⁴ | 0.00 ⁰ | 0.00 ⁰ | 0.00 ⁰ | 8.12 ¹³ | 2.05 |
| S | 1.25 ² | 2.50 ⁴ | .62 ¹ | 3.75 ⁶ | 1.25 ² | 0.00 ⁰ | 9.37 ¹⁵ | 4.55 |
| SSW | 1.87 ³ | .62 ¹ | 2.50 ⁴ | 3.75 ⁶ | 0.00 ⁰ | 0.00 ⁰ | 8.75 ¹⁴ | 4.37 |
| SW | 1.87 ³ | 0.00 ⁰ | 0.00 ⁰ | 0.00 ⁰ | 0.00 ⁰ | 0.00 ⁰ | 1.87 ³ | .83 |
| WSW | 2.50 ⁴ | 1.25 ² | 1.25 ² | 0.00 ⁰ | 0.00 ⁰ | 0.00 ⁰ | 5.00 ⁸ | 2.06 |
| W | .62 ¹ | 0.00 ⁰ | 1.25 ² | .62 ¹ | 0.00 ⁰ | 0.00 ⁰ | 2.50 ⁴ | 3.87 |
| WNW | 1.87 ³ | 3.75 ⁶ | .62 ¹ | 0.00 ⁰ | 0.00 ⁰ | 0.00 ⁰ | 6.25 ¹⁰ | 1.95 |
| NW | 1.25 ² | 5.62 ⁹ | .62 ¹ | 0.00 ⁰ | 0.00 ⁰ | 0.00 ⁰ | 7.50 ¹² | 2.13 |
| NNW | .62 ¹ | 1.25 ² | .62 ¹ | 0.00 ⁰ | 0.00 ⁰ | 0.00 ⁰ | 2.50 ⁴ | 2.17 |
| N | 5.62 ⁹ | 1.87 ³ | 0.00 ⁰ | 0.00 ⁰ | 0.00 ⁰ | 0.00 ⁰ | 7.50 ¹² | 1.21 |
| CALM | 0.00 ⁰ | | | | | | 0.00 ⁰ | CALM |
| TOTAL | 43.12 ⁶⁹ | 33.12 ⁵³ | 13.75 ²² | 8.75 ¹⁴ | 1.25 ² | 0.00 ⁰ | 100.00 ¹⁶⁰ | 2.33 |
| NUMBER OF VALID OBSERVATIONS WITH PRECIPITATION | | | | | | | 160 | 5.90 PCT. |
| NUMBER OF VALID OBSERVATIONS WITHOUT PRECIPITATION | | | | | | | 1951 | 71.94 PCT. |
| NUMBER OF INVALID OBSERVATIONS | | | | | | | 601 | 22.16 PCT. |
| TOTAL NUMBER OF OBSERVATIONS | | | | | | | 2712 | 100.00 PCT. |
| TOTAL AMOUNT OF PRECIPITATION FOR DATA PERIOD | | | | | | | | 8.92 INCHES |

KEY XXX NUMBER OF OCCURRENCES
 XXX PERCENT OCCURRENCES

8325 - PSAR

TABLE 2.3-52

PRECIPITATION WIND ROSE
FEBRUARY 1973 - 1976

| WIND SECTOR | WIND SPEED CATEGORIES (METERS PER SECOND) | | | | | | TOTAL | MEAN SPEED |
|----------------|---|-------------|-------------|-------------|-----------|-----------|---------------|---------------|
| | 0.0-1.5 | 1.5-3.0 | 3.0-5.0 | 5.0-7.5 | 7.5-10.0 | >10.0 | | |
| NNE | 3 1.36 | 6 2.71 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 9 4.07 | 1.92 |
| NE | 2 2.26 | 12 5.43 | 2 .90 | 3 1.36 | 0 0.00 | 0 0.00 | 22 9.95 | 2.71 |
| ENE | 3 1.36 | 11 4.98 | 6 2.71 | 1 .45 | 0 0.00 | 0 0.00 | 21 9.50 | 2.70 |
| E | 7 3.17 | 8 3.62 | 9 4.07 | 2 .90 | 0 0.00 | 0 0.00 | 26 11.76 | 2.92 |
| ESE | 3 1.36 | 4 1.81 | 4 1.81 | 0 0.00 | 0 0.00 | 0 0.00 | 11 4.98 | 2.41 |
| SE | 3 1.36 | 6 2.71 | 3 1.36 | 0 0.00 | 0 0.00 | 0 0.00 | 12 5.43 | 2.14 |
| SSE | 3 1.36 | 2 .90 | 0 0.00 | 1 .45 | 0 0.00 | 0 0.00 | 6 2.71 | 1.97 |
| S | 5 2.26 | 4 1.81 | 2 .90 | 2 .90 | 0 0.00 | 0 0.00 | 13 5.88 | 2.53 |
| SSW | 7 3.17 | 2 .90 | 3 1.36 | 1 .45 | 0 0.00 | 0 0.00 | 13 5.88 | 2.23 |
| SW | 5 2.26 | 4 1.81 | 0 0.00 | 1 .45 | 0 0.00 | 0 0.00 | 10 4.52 | 1.92 |
| WSW | 3 1.36 | 5 2.26 | 2 .90 | 5 2.26 | 0 0.00 | 0 0.00 | 15 6.79 | 3.21 |
| W | 8 3.62 | 2 .90 | 7 3.17 | 7 3.17 | 0 0.00 | 0 0.00 | 24 10.86 | 3.43 |
| WNW | 4 1.81 | 0 0.00 | 1 .45 | 4 1.81 | 1 .45 | 0 0.00 | 10 4.52 | 4.20 |
| NW | 5 2.26 | 0 0.00 | 2 .90 | 0 0.00 | 0 0.00 | 0 0.00 | 7 3.17 | 1.60 |
| NNW | 2 .90 | 6 2.71 | 1 .45 | 1 .45 | 0 0.00 | 0 0.00 | 10 4.52 | 2.62 |
| N | 2 .90 | 3 1.36 | 1 .45 | 4 1.81 | 0 0.00 | 0 0.00 | 10 4.52 | 3.73 |
| CALM | 2 .90 | | | | | | 2 .90 | CALM |
| TOTAL | 70 31.67 | 75 33.94 | 43 19.46 | 32 14.48 | 1 .45 | 0 0.00 | 221 100.00 | 2.72 |

NUMBER OF VALID OBSERVATIONS WITH PRECIPITATION
 NUMBER OF VALID OBSERVATIONS WITHOUT PRECIPITATION
 NUMBER OF INVALID OBSERVATIONS
 TOTAL NUMBER OF OBSERVATIONS
 TOTAL AMOUNT OF PRECIPITATION FOR DATA PERIOD

221
2730
25
2979
7.43 PCT.
91.73 PCT.
.84 PCT.
100.00 PCT.
14.62 INCHES

KEY XXX NUMBER OF OCCURRENCES
 XXX PERCENT OCCURRENCES

TABLE 2.3-53

PRECIPITATION WIND ROSE
APRIL 1973 - 1976

| WIND SECTOR | WIND SPEED CATEGORIES (METERS PER SECOND) | | | | | | TOTAL | MEAN SPEED |
|----------------|---|-------------|-------------|------------|-----------|-----------|---------------|---------------|
| | 0.0-1.5 | 1.5-3.0 | 3.0-5.0 | 5.0-7.5 | 7.5-10.0 | >10.0 | | |
| NNE | 4 1.79 | 14 6.25 | 8 3.57 | 0 0.00 | 0 0.00 | 0 0.00 | 26 11.161 | 2.53 |
| NE | 4 1.79 | 10 4.46 | 32 14.29 | 0 0.00 | 0 0.00 | 0 0.00 | 46 20.54 | 3.25 |
| ENE | 3 1.34 | 5 2.23 | 4 1.79 | 3 1.34 | 0 0.00 | 0 0.00 | 15 6.70 | 3.23 |
| E | 4 1.79 | 4 1.79 | 4 1.79 | 0 0.00 | 0 0.00 | 0 0.00 | 12 5.36 | 2.26 |
| ESE | 4 1.79 | 1 .45 | 1 .45 | 0 0.00 | 0 0.00 | 0 0.00 | 6 2.68 | 1.83 |
| SE | 2 .89 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 2 .89 | .80 |
| SSE | 6 2.68 | 2 .89 | 0 0.00 | 1 .45 | 0 0.00 | 0 0.00 | 9 4.02 | 1.81 |
| S | 7 3.12 | 1 .45 | 3 1.34 | 1 .45 | 0 0.00 | 0 0.00 | 12 5.36 | 2.29 |
| SSW | 5 2.23 | 1 .45 | 2 .89 | 0 0.00 | 0 0.00 | 0 0.00 | 8 3.57 | 1.85 |
| SW | 7 3.12 | 4 1.79 | 1 .45 | 0 0.00 | 0 0.00 | 0 0.00 | 12 5.36 | 1.51 |
| WSW | 4 1.79 | 16 7.14 | 5 2.23 | 2 .89 | 0 0.00 | 0 0.00 | 27 12.05 | 2.70 |
| W | 4 1.79 | 4 1.79 | 8 3.57 | 1 .45 | 0 0.00 | 0 0.00 | 17 7.59 | 3.02 |
| WNW | 0 0.00 | 2 .89 | 7 3.12 | 3 1.34 | 0 0.00 | 0 0.00 | 12 5.36 | 4.34 |
| NW | 1 .45 | 0 0.00 | 4 1.79 | 1 .45 | 0 0.00 | 0 0.00 | 6 2.68 | 3.42 |
| NNW | 1 .45 | 2 .89 | 3 1.34 | 2 .89 | 0 0.00 | 0 0.00 | 8 3.57 | 3.69 |
| N | 2 .89 | 2 .89 | 1 .45 | 0 0.00 | 0 0.00 | 0 0.00 | 5 2.23 | 1.98 |
| CALM | 1 .45 | | | | | | 1 .45 | CALM |
| TOTAL | 59 26.34 | 68 30.36 | 83 37.05 | 14 6.25 | 0 0.00 | 0 0.00 | 224 100.00 | 2.75 |

NUMBER OF VALID OBSERVATIONS WITH PRECIPITATION

224

7.78 PCT.

NUMBER OF VALID OBSERVATIONS WITHOUT PRECIPITATION

2604

90.42 PCT.

NUMBER OF INVALID OBSERVATIONS

52

1.81 PCT.

TOTAL NUMBER OF OBSERVATIONS

2880

100.00 PCT.

TOTAL AMOUNT OF PRECIPITATION FOR DATA PERIOD

14.92 INCHES

KEY XXX NUMBER OF OCCURRENCES
 XXX PERCENT OCCURRENCES

TABLE 2.3-54
PRECIPITATION WIND ROSE
MAY 1973 - 1976

| WIND SECTOR | WIND SPEED CATEGORIES (METERS PER SECOND) | | | | | | TOTAL | MEAN SPEED |
|----------------|---|-------------|-------------|-----------|-----------|-----------|---------------|---------------|
| | 0.0-1.5 | 1.5-3.0 | 3.0-5.0 | 5.0-7.5 | 7.5-10.0 | >10.0 | | |
| NNE | 4 1.80 | 5 2.25 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 9 4.05 | 1.58 |
| NE | 5 2.25 | 10 4.50 | 1 .45 | 0 0.00 | 0 0.00 | 0 0.00 | 16 7.21 | 1.90 |
| ENE | 10 4.50 | 7 3.15 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 17 7.66 | 1.52 |
| E | 7 3.15 | 5 2.25 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 12 5.41 | 1.44 |
| ESE | 5 2.25 | 3 1.35 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 8 3.60 | 1.36 |
| SE | 5 2.25 | 1 .45 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 6 2.70 | 1.17 |
| SSE | 9 4.05 | 10 4.50 | 4 1.80 | 0 0.00 | 0 0.00 | 0 0.00 | 23 10.36 | 2.00 |
| S | 8 3.60 | 4 1.80 | 4 1.80 | 0 0.00 | 0 0.00 | 0 0.00 | 16 7.21 | 2.08 |
| SSW | 8 3.60 | 2 .90 | 2 .90 | 0 0.00 | 0 0.00 | 0 0.00 | 12 5.41 | 1.66 |
| SW | 8 3.60 | 10 4.50 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 18 8.11 | 1.67 |
| WSW | 4 1.80 | 8 3.60 | 3 1.35 | 0 0.00 | 0 0.00 | 0 0.00 | 15 6.76 | 2.46 |
| W | 8 3.60 | 13 5.86 | 6 2.70 | 5 2.25 | 0 0.00 | 0 0.00 | 32 14.41 | 2.82 |
| WNW | 6 2.70 | 3 1.35 | 2 .90 | 0 0.00 | 0 0.00 | 0 0.00 | 11 4.95 | 1.94 |
| NW | 3 1.35 | 4 1.80 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 7 3.15 | 2.06 |
| NNW | 5 2.25 | 3 1.35 | 1 .45 | 1 .45 | 0 0.00 | 0 0.00 | 10 4.50 | 2.06 |
| N | 5 2.25 | 4 1.80 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 9 4.05 | 1.54 |
| CALM | 1 .45 | | | | | | 1 .45 | CALM |
| TOTAL | 101 45.50 | 92 41.44 | 23 10.36 | 6 2.70 | 0 0.00 | 0 0.00 | 222 100.00 | 1.95 |

NUMBER OF VALID OBSERVATIONS WITH PRECIPITATION 222
NUMBER OF VALID OBSERVATIONS WITHOUT PRECIPITATION 2705
NUMBER OF INVALID OBSERVATIONS 49
TOTAL NUMBER OF OBSERVATIONS 2976
TOTAL AMOUNT OF PRECIPITATION FOR DATA PERIOD

7.46 PCT.
90.89 PCT.
1.65 PCT.
100.00 PCT.
16.75 INCHES

KEY XXX NUMBER OF OCCURRENCES
XXX PERCENT OCCURRENCES

TABLE 2.3-55
PRECIPITATION WIND ROSE
JUNE 1973 - 1976

| WIND SECTOR | WIND SPEED CATEGORIES (METERS PER SECOND) | WIND SPEED CATEGORIES (METERS PER SECOND) | WIND SPEED CATEGORIES (METERS PER SECOND) | WIND SPEED CATEGORIES (METERS PER SECOND) | WIND SPEED CATEGORIES (METERS PER SECOND) | WIND SPEED CATEGORIES (METERS PER SECOND) | TOTAL | MEAN SPEED |
|--|--|--|--|--|--|--|---------------|---------------|
| | 0.0-1.5 | 1.5-3.0 | 3.0-5.0 | 5.0-7.5 | 7.5-10.0 | >10.0 | | |
| NNE | 7 3.18 | 4 1.82 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 11 5.00 | 1.43 |
| NE | 19 8.64 | 9 4.09 | 3 1.36 | 0 0.00 | 0 0.00 | 0 0.00 | 31 14.09 | 1.62 |
| ENE | 11 5.00 | 12 5.45 | 1 .45 | 0 0.00 | 0 0.00 | 0 0.00 | 24 10.91 | 1.77 |
| E | 17 7.73 | 10 4.55 | 1 .45 | 0 0.00 | 0 0.00 | 0 0.00 | 28 12.73 | 1.47 |
| ESE | 4 1.82 | 4 1.82 | 1 .45 | 0 0.00 | 0 0.00 | 0 0.00 | 9 4.09 | 1.89 |
| SE | 1 .45 | 8 3.64 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 9 4.09 | 1.81 |
| SSE | 7 3.18 | 4 1.82 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 11 5.00 | 1.30 |
| S | 8 3.64 | 2 .91 | 2 .91 | 0 0.00 | 0 0.00 | 0 0.00 | 12 5.45 | 1.55 |
| SSW | 4 1.82 | 3 1.36 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 7 3.18 | 1.59 |
| SW | 11 5.00 | 5 2.27 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 16 7.27 | 1.48 |
| WSW | 8 3.64 | 8 3.64 | 2 .91 | 0 0.00 | 0 0.00 | 0 0.00 | 18 8.18 | 1.68 |
| W | 9 4.09 | 9 4.09 | 3 1.36 | 0 0.00 | 0 0.00 | 0 0.00 | 21 9.55 | 1.95 |
| WNW | 4 1.82 | 2 .91 | 1 .45 | 0 0.00 | 0 0.00 | 0 0.00 | 7 3.18 | 1.86 |
| NW | 3 1.36 | 1 .45 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 4 1.82 | 1.15 |
| NNW | 5 2.27 | 2 .91 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 7 3.18 | 1.29 |
| N | 2 .91 | 1 .45 | 1 .45 | 0 0.00 | 0 0.00 | 0 0.00 | 4 1.82 | 1.97 |
| CALM | 1 .45 | | | | | | 1 .45 | CALM |
| TOTAL | 121 55.00 | 84 38.18 | 15 6.82 | 0 0.00 | 0 0.00 | 0 0.00 | 220 100.00 | 1.62 |
| NUMBER OF VALID OBSERVATIONS WITH PRECIPITATION | | | | | | | 220 | 7.64 PCT. |
| NUMBER OF VALID OBSERVATIONS WITHOUT PRECIPITATION | | | | | | | 2452 | 85.14 PCT. |
| NUMBER OF INVALID OBSERVATIONS | | | | | | | 208 | 7.22 PCT. |
| TOTAL NUMBER OF OBSERVATIONS | | | | | | | 2880 | 100.00 PCT. |
| TOTAL AMOUNT OF PRECIPITATION FOR DATA PERIOD | | | | | | | | 18.49 INCHES |

SEAS - TSAR

TABLE 2.3-56
PRECIPITATION WIND ROSE
JULY 1973 - 1976

| WIND SECTOR | WIND SPEED CATEGORIES (METERS PER SECOND) | | | | | | TOTAL | MEAN SPEED |
|--|---|---------------------|---------------------|-------------------|-------------------|-------------------|-----------------------|---------------|
| | 0.0-1.5 | 1.5-3.0 | 3.0-5.0 | 5.0-7.5 | 7.5-10.0 | >10.0 | | |
| NNE | 3.41 ⁶ | .57 ¹ | .57 ¹ | 0.00 ⁰ | 0.00 ⁰ | 0.00 ⁰ | 4.55 ⁸ | 1.35 |
| NE | 6.25 ¹¹ | 3.41 ⁶ | .57 ¹ | 0.00 ⁰ | 0.00 ⁰ | 0.00 ⁰ | 10.23 ¹⁸ | 1.48 |
| ENE | 4.55 ⁸ | 2.27 ⁴ | 0.00 ⁰ | 0.00 ⁰ | 0.00 ⁰ | 0.00 ⁰ | 6.82 ¹² | 1.19 |
| E | 6.25 ¹¹ | 1.14 ² | 0.00 ⁰ | 0.00 ⁰ | 0.00 ⁰ | 0.00 ⁰ | 7.39 ¹³ | 1.10 |
| ESE | 1.14 ² | 1.70 ³ | 0.00 ⁰ | 0.00 ⁰ | 0.00 ⁰ | 0.00 ⁰ | 2.84 ⁵ | 1.54 |
| SE | 1.14 ² | .57 ¹ | 0.00 ⁰ | 0.00 ⁰ | 0.00 ⁰ | 0.00 ⁰ | 1.70 ³ | 1.23 |
| SSE | .57 ¹ | .57 ¹ | .57 ¹ | 0.00 ⁰ | 0.00 ⁰ | 0.00 ⁰ | 1.70 ³ | 2.07 |
| S | 1.70 ³ | 2.27 ⁴ | 0.00 ⁰ | 0.00 ⁰ | 0.00 ⁰ | 0.00 ⁰ | 3.98 ⁷ | 1.83 |
| SSW | 5.11 ⁹ | 2.84 ⁵ | 0.00 ⁰ | 0.00 ⁰ | 0.00 ⁰ | 0.00 ⁰ | 7.95 ¹⁴ | 1.36 |
| SW | 5.11 ⁹ | 1.70 ³ | 0.00 ⁰ | 0.00 ⁰ | 0.00 ⁰ | 0.00 ⁰ | 6.82 ¹² | 1.37 |
| WSW | 3.98 ⁷ | 2.27 ⁴ | 2.27 ⁴ | 0.00 ⁰ | 0.00 ⁰ | 0.00 ⁰ | 8.52 ¹⁵ | 2.13 |
| W | 3.41 ⁶ | 2.84 ⁵ | 5.11 ⁹ | .57 ¹ | 0.00 ⁰ | 0.00 ⁰ | 11.93 ²¹ | 2.86 |
| WNW | 6.25 ¹¹ | 0.00 ⁰ | 2.27 ⁴ | 0.00 ⁰ | 0.00 ⁰ | 0.00 ⁰ | 8.52 ¹⁵ | 1.63 |
| NW | 1.70 ³ | .57 ¹ | 2.27 ⁴ | 0.00 ⁰ | 0.00 ⁰ | 0.00 ⁰ | 4.55 ⁸ | 2.42 |
| NNW | 2.84 ⁵ | 1.70 ³ | 1.70 ³ | .57 ¹ | 0.00 ⁰ | 0.00 ⁰ | 6.82 ¹² | 2.43 |
| N | 1.70 ³ | 3.41 ⁶ | 0.00 ⁰ | 0.00 ⁰ | 0.00 ⁰ | 0.00 ⁰ | 5.11 ⁹ | 1.91 |
| CALM | .57 ¹ | | | | | | .57 ¹ | CALM |
| TOTAL | 55.68 ⁹⁸ | 27.84 ⁴⁹ | 15.34 ²⁷ | 1.14 ² | 0.00 ⁰ | 0.00 ⁰ | 100.00 ¹⁷⁶ | 1.79 |
| NUMBER OF VALID OBSERVATIONS WITH PRECIPITATION | | | | | | | 176 | |
| NUMBER OF VALID OBSERVATIONS WITHOUT PRECIPITATION | | | | | | | 2798 | |
| NUMBER OF INVALID OBSERVATIONS | | | | | | | 2 | |
| TOTAL NUMBER OF OBSERVATIONS | | | | | | | 2976 | |
| TOTAL AMOUNT OF PRECIPITATION FOR DATA PERIOD | | | | | | | 18.90 INCHES | |
| | | | | | | | 5.91 PCT. | |
| | | | | | | | 94.02 PCT. | |
| | | | | | | | .07 PCT. | |
| | | | | | | | 100.00 PCT. | |

KEY XXX NUMBER OF OCCURRENCES
XXX PERCENT OCCURRENCES

TABLE 2.3-57
PRECIPITATION WIND ROSE
AUGUST 1973 - 1976

| WIND SECTOR | WIND SPEED CATEGORIES (METERS PER SECOND) | 0.0-1.5 | 1.5-3.0 | 3.0-5.0 | 5.0-7.5 | 7.5-10.0 | >10.0 | TOTAL | MEAN SPEED |
|--|--|-------------|------------|-----------|-----------|-----------|-----------|---------------|---------------|
| NNE | 7 3.83 | 10 5.46 | 1 .55 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 18 9.84 | 1.79 |
| NE | 8 4.37 | 12 6.56 | 4 2.19 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 24 13.11 | 1.98 |
| ENE | 9 4.92 | 2 1.09 | 2 1.09 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 13 7.10 | 1.51 |
| E | 8 4.37 | 3 1.64 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 11 6.01 | 1.17 |
| ESE | 15 8.20 | 3 1.64 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 18 9.84 | 1.11 |
| SE | 4 2.19 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 4 2.19 | .92 |
| SSE | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 0.00 |
| S | 3 1.64 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 3 1.64 | .70 |
| SSW | 7 3.83 | 1 .55 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 8 4.37 | 1.10 |
| SW | 12 6.56 | 11 6.01 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 23 12.57 | 1.55 |
| WSW | 2 1.09 | 11 6.01 | 2 1.09 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 15 8.20 | 2.17 |
| W | 7 3.83 | 10 5.46 | 3 1.64 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 20 10.93 | 2.12 |
| WNW | 7 3.83 | 1 .55 | 1 .55 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 9 4.92 | 1.20 |
| NW | 1 .55 | 2 1.09 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 3 1.64 | 1.63 |
| NNW | 2 1.09 | 2 1.09 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 4 2.19 | 1.37 |
| N | 7 3.83 | 1 .55 | 1 .55 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 9 4.92 | 1.49 |
| CALM | 1 .55 | | | | | | | 1 .55 | CALM |
| TOTAL | 100 54.64 | 69 37.70 | 14 7.65 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 183 100.00 | 1.60 |
| NUMBER OF VALID OBSERVATIONS WITH PRECIPITATION | | | | | | | | 183 | 6.15 PCT. |
| NUMBER OF VALID OBSERVATIONS WITHOUT PRECIPITATION | | | | | | | | 2791 | 93.78 PCT. |
| NUMBER OF INVALID OBSERVATIONS | | | | | | | | 2 | .07 PCT. |
| TOTAL NUMBER OF OBSERVATIONS | | | | | | | | 2976 | 100.00 PCT. |
| TOTAL AMOUNT OF PRECIPITATION FOR DATA PERIOD | | | | | | | | | 14.37 INCHES |

SSRS - FSAR

TABLE 2.3-58

PRECIPITATION WIND ROSE
SEPTEMBER 1973 - 1976

| WIND SECTOR | WIND SPEED CATEGORIES (METERS PER SECOND) | | | | | | TOTAL | MEAN SPEED |
|----------------|---|-----------------------|-----------------------|---------------------|-------------------|-------------------|----------------------|---------------|
| | 0.0-1.5 | 1.5-3.0 | 3.0-5.0 | 5.0-7.5 | 7.5-10.0 | >10.0 | | |
| NNE | 18 6.08 22 | 18 6.08 30 | 2 .68 8 | 1 .34 0 | 0 0.00 0 | 0 0.00 0 | 39 13.18 60 | 1.77 1.98 |
| NE | 7.43 16 5.41 | 10.14 15 5.07 | 2.70 11 3.72 | 0.00 0 0.00 | 0 0 0 | 0 0 0 | 20.27 42 14.19 | 2.13 |
| ENE | 13 4.39 6 | 9 3.04 3 | 5 1.69 0 | 1 .34 0 | 0 0.00 0 | 0 0.00 0 | 28 9.46 9 | 1.93 1.38 |
| E | 2.03 4 1.35 | 1.01 1 .34 | 0 0 0.00 | 0 0 0.00 | 0 0 0 | 0 0 0 | 3.04 5 1.69 | 1.00 |
| ESE | 8 2.70 5 | 0 0.00 1 | 0 0.00 0 | 0 0.00 0 | 0 0 0 | 0 0 0 | 8 2.70 6 | .96 .88 |
| S | 1.69 11 3.72 | .34 3 1.01 | 0 1 .34 | 0 0 0.00 | 0 0 0 | 0 0 0 | 2.03 15 5.07 | 1.13 |
| SSW | 8 2.70 3 | 10 3.38 10 | 2 .68 2 | 0 0.00 0 | 0 0 0 | 0 0 0 | 20 6.76 15 | 1.82 2.05 |
| SW | 1.10 4 1.35 | 3.38 8 2.70 | .68 3 1.01 | 0 0 0 | 0 0 0 | 0 0 0 | 5.07 15 5.07 | 2.15 |
| WSW | 3 1.01 4 | 3 1.01 2 | 0 0.00 0 | 0 0 0 | 0 0 0 | 0 0 0 | 6 2.03 6 | 1.68 |
| W | 1.35 3 1.01 | 8 2.70 1.01 | 3 1.01 0 | 0 0 0 | 0 0 0 | 0 0 0 | 15 5.07 6 | 2.15 |
| WNW | 1.01 4 1.35 | 1.01 2 .68 | 0 0 0.00 | 0 0 0 | 0 0 0 | 0 0 0 | 2.03 6 2.03 | 1.17 |
| NW | 1.35 5 1.69 | .68 0 0.00 | 0 0 0.00 | 0 0 0 | 0 0 0 | 0 0 0 | 5 1.69 10 | 1.12 |
| NNW | 5 1.69 1.35 | 0 0.00 1.69 | 0 0.00 0 | 0 0 0 | 0 0 0 | 0 0 0 | 1.69 10 3.38 | 1.48 |
| N | 1.69 7 2.36 | 1.69 1.69 1.18 | 0.00 0.00 34 | 0.00 0.00 2 | 0.00 0.00 0 | 0.00 0.00 0 | 3.38 7 2.36 | CALM |
| CALM | 7 2.36 142 | 1.69 1.69 39.86 | 0.00 0.00 11.49 | 0.00 0.00 .68 | 0.00 0.00 2 | 0.00 0.00 0 | 7 2.36 296 | 1.74 |
| TOTAL | 47.97 | 39.86 | 11.49 | .68 | 2 | 0 | 100.00 | |

NUMBER OF VALID OBSERVATIONS WITH PRECIPITATION
NUMBER OF VALID OBSERVATIONS WITHOUT PRECIPITATION
NUMBER OF INVALID OBSERVATIONS
TOTAL NUMBER OF OBSERVATIONS
TOTAL AMOUNT OF PRECIPITATION FOR DATA PERIOD

296
2574
10
2880

10.28 PCT.
89.28 PCT.
.35 PCT.
100.00 PCT.
30.17 INCHES

KEY XXX NUMBER OF OCCURRENCES
 XXX PERCENT OCCURRENCES

TABLE 2.3-59
PRECIPITATION WIND ROSE
OCTOBER 1973 - 1976

| WIND SECTOR | WIND SPEED CATEGORIES (METERS PER SECOND) | | | | | | TOTAL | MEAN SPEED |
|--|---|-------------|-------------|------------|-----------|-----------|---------------|---------------|
| | 0.0-1.5 | 1.5-3.0 | 3.0-5.0 | 5.0-7.5 | 7.5-10.0 | >10.0 | | |
| NNE | 8 3.52 | 19 8.37 | 4 1.76 | 0 0.00 | 0 0.00 | 0 0.00 | 31 13.66 | 2.18 |
| NE | 12 5.29 | 26 11.45 | 14 6.17 | 0 0.00 | 0 0.00 | 0 0.00 | 52 22.91 | 2.31 |
| ENE | 10 4.41 | 15 6.61 | 3 1.32 | 1 .44 | 0 0.00 | 0 0.00 | 29 12.78 | 2.08 |
| E | 13 5.73 | 4 1.76 | 0 0.00 | 6 2.64 | 0 0.00 | 0 0.00 | 23 10.13 | 2.64 |
| ESE | 4 1.76 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 4 1.76 | .87 |
| SE | 2 .88 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 2 .88 | 1.05 |
| SSE | 2 .88 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 2 .88 | .80 |
| S | 5 2.20 | 1 .44 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 6 2.64 | 1.03 |
| SSW | 7 3.08 | 2 .88 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 9 3.96 | 1.36 |
| SW | 3 1.32 | 3 1.32 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 6 2.64 | 1.63 |
| WSW | 7 3.08 | 4 1.76 | 7 3.08 | 3 1.32 | 0 0.00 | 0 0.00 | 21 9.25 | 2.97 |
| W | 2 .88 | 1 .44 | 2 .88 | 2 .88 | 0 0.00 | 0 0.00 | 7 3.08 | 3.16 |
| WNW | 5 2.20 | 3 1.32 | 0 0.00 | 2 .88 | 0 0.00 | 0 0.00 | 10 4.41 | 2.20 |
| NW | 0 0.00 | 3 1.32 | 1 .44 | 0 0.00 | 0 0.00 | 0 0.00 | 4 1.76 | 2.62 |
| NNW | 4 1.76 | 1 .44 | 1 .44 | 0 0.00 | 0 0.00 | 0 0.00 | 6 2.64 | 1.57 |
| N | 7 3.08 | 3 1.32 | 4 1.76 | 0 0.00 | 0 0.00 | 0 0.00 | 14 6.17 | 2.11 |
| CALM | 1 .44 | | | | | | 1 .44 | CALM |
| TOTAL | 92 40.53 | 85 37.44 | 36 15.86 | 14 6.17 | 0 0.00 | 0 0.00 | 227 100.00 | 2.20 |
| NUMBER OF VALID OBSERVATIONS WITH PRECIPITATION | | | | | | | 227 | 7.63 PCT. |
| NUMBER OF VALID OBSERVATIONS WITHOUT PRECIPITATION | | | | | | | 2732 | 91.80 PCT. |
| NUMBER OF INVALID OBSERVATIONS | | | | | | | 17 | .57 PCT. |
| TOTAL NUMBER OF OBSERVATIONS | | | | | | | 2976 | 100.00 PCT. |
| TOTAL AMOUNT OF PRECIPITATION FOR DATA PERIOD | | | | | | | | 17.55 INCHES |

KEY XXX NUMBER OF OCCURRENCES
 XXX PERCENT OCCURRENCES

TABLE 2.3-60
PRECIPITATION WIND ROSE
NOVEMBER 1973 - 1976

| WIND SECTOR | WIND 0.0-1.5 | SPEED CATEGORIES (METERS PER SECOND) 1.5-3.0 | 3.0-5.0 | 5.0-7.5 | 7.5-10.0 | >10.0 | TOTAL | MEAN SPEED |
|--|-----------------|---|-------------|-----------|-----------|--------------|---------------|---------------|
| NNE | 5 2.91 | 4 2.33 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 9 5.23 | 1.64 |
| NE | 4 2.33 | 4 2.33 | 1 .58 | 0 0.00 | 0 0.00 | 0 0.00 | 9 5.23 | 1.74 |
| ENE | 8 4.65 | 4 2.33 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 12 6.98 | 1.27 |
| E | 4 2.33 | 1 .58 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 5 2.91 | .96 |
| ESE | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 0.00 |
| SE | 3 1.74 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 3 1.74 | .73 |
| SSE | 6 3.49 | 2 1.16 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 8 4.65 | 1.22 |
| S | 7 4.07 | 12 6.98 | 2 1.16 | 2 1.16 | 0 0.00 | 0 0.00 | 23 13.37 | 2.33 |
| SSW | 5 2.91 | 5 2.91 | 2 1.16 | 0 0.00 | 0 0.00 | 0 0.00 | 12 6.98 | 1.91 |
| SW | 9 5.23 | 4 2.33 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 13 7.56 | 1.44 |
| WSW | 8 4.65 | 8 4.65 | 14 8.14 | 7 4.07 | 0 0.00 | 0 0.00 | 37 21.51 | 3.33 |
| W | 7 4.07 | 3 1.74 | 10 5.81 | 0 0.00 | 0 0.00 | 0 0.00 | 20 11.63 | 2.46 |
| WNW | 1 .58 | 0 0.00 | 2 1.16 | 0 0.00 | 0 0.00 | 0 0.00 | 3 1.74 | 3.53 |
| NW | 0 0.00 | 0 0.00 | 1 .58 | 0 0.00 | 0 0.00 | 0 0.00 | 1 .58 | 3.80 |
| NNW | 1 .58 | 2 1.16 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 3 1.74 | 1.93 |
| N | 9 5.23 | 2 1.16 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 11 6.40 | 1.20 |
| CALM | 3 1.74 | | | | | | 3 1.74 | CALM |
| TOTAL | 80 46.51 | 51 29.65 | 32 18.60 | 9 5.23 | 0 0.00 | 0 0.00 | 172 100.00 | 2.11 |
| NUMBER OF VALID OBSERVATIONS WITH PRECIPITATION | | | | | 172 | 5.97 PCT. | | |
| NUMBER OF VALID OBSERVATIONS WITHOUT PRECIPITATION | | | | | 2552 | 88.61 PCT. | | |
| NUMBER OF INVALID OBSERVATIONS | | | | | 156 | 5.42 PCT. | | |
| TOTAL NUMBER OF OBSERVATIONS | | | | | 2880 | 100.00 PCT. | | |
| TOTAL AMOUNT OF PRECIPITATION FOR DATA PERIOD | | | | | | 10.63 INCHES | | |

KEY XXX NUMBER OF OCCURRENCES
XXX PERCENT OCCURRENCES

TABLE 2.3-61
PRECIPITATION WIND ROSE
DECEMBER 1973 - 1976

| WIND SECTOR | WIND SPEED CATEGORIES (METERS PER SECOND) | | | | | | TOTAL | MEAN SPEED |
|----------------|---|-------------|------------|------------|-----------|-----------|--------------|---------------|
| | 0.0-1.5 | 1.5-3.0 | 3.0-5.0 | 5.0-7.5 | 7.5-10.0 | >10.0 | | |
| NNE | 1 1.30 | 3 3.90 | 1 1.30 | 0 0.00 | 0 0.00 | 0 0.00 | 5 6.49 | 1.96 |
| NE | 0 0.00 | 14 18.18 | 2 2.60 | 0 0.00 | 0 0.00 | 0 0.00 | 16 20.78 | 2.37 |
| ENE | 0 0.00 | 2 2.60 | 1 1.30 | 0 0.00 | 0 0.00 | 0 0.00 | 3 3.90 | 2.43 |
| E | 1 1.30 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 1 1.30 | 1.10 |
| ESE | 2 2.60 | 0 0.00 | 0 0.00 | 1 1.30 | 0 0.00 | 0 0.00 | 3 3.90 | 2.40 |
| SE | 1 1.30 | 0 0.00 | 1 1.30 | 0 0.00 | 0 0.00 | 0 0.00 | 2 2.60 | 2.95 |
| SSE | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 0.00 |
| S | 4 5.19 | 6 7.79 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 10 12.99 | 1.88 |
| SSW | 4 5.19 | 5 6.49 | 1 1.30 | 0 0.00 | 0 0.00 | 0 0.00 | 10 12.99 | 1.85 |
| SW | 6 7.79 | 3 3.90 | 1 1.30 | 0 0.00 | 0 0.00 | 0 0.00 | 10 12.99 | 1.51 |
| WSW | 1 1.30 | 2 2.60 | 1 1.30 | 0 0.00 | 0 0.00 | 0 0.00 | 4 5.19 | 1.85 |
| W | 0 0.00 | 1 1.30 | 0 0.00 | 3 3.90 | 0 0.00 | 0 0.00 | 4 5.19 | 5.60 |
| WNW | 2 2.60 | 1 1.30 | 0 0.00 | 2 2.60 | 0 0.00 | 0 0.00 | 5 6.49 | 2.72 |
| NW | 0 0.00 | 1 1.30 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 1 1.30 | 1.80 |
| NNW | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 0 0.00 | 0.00 |
| N | 0 0.00 | 1 1.30 | 0 0.00 | 2 2.60 | 0 0.00 | 0 0.00 | 3 3.90 | 4.83 |
| CALM | 0 0.00 | | | | | | 0 0.00 | CALM |
| TOTAL | 22 28.57 | 39 50.65 | 8 10.39 | 8 10.39 | 0 0.00 | 0 0.00 | 77 100.00 | 2.35 |

NUMBER OF VALID OBSERVATIONS WITH PRECIPITATION 77
NUMBER OF VALID OBSERVATIONS WITHOUT PRECIPITATION 1522
NUMBER OF INVALID OBSERVATIONS 1377
TOTAL NUMBER OF OBSERVATIONS 2976
TOTAL AMOUNT OF PRECIPITATION FOR DATA PERIOD 8.62 INCHES

2.59 PCT.
51.14 PCT.
46.27 PCT.
100.00 PCT.

SSES - TSAR

TABLE 2.3-62
PRECIPITATION WIND ROSE
JANUARY 1973 - DECEMBER 1976

| WIND SECTOR | WIND SPEED CATEGORIES (METERS PER SECOND) | | | | | | TOTAL | MEAN SPEED |
|--|---|--------------|--------------|-------------|-----------|-----------|----------------|---------------|
| | 0.0-1.5 | 1.5-3.0 | 3.0-5.0 | 5.0-7.5 | 7.5-10.0 | >10.0 | | |
| NNE | 83 3.48 | 97 4.07 | 17 .71 | 1 .04 | 0 0.00 | 0 0.00 | 198 8.31 | 1.84 |
| NE | 99 4.15 | 143 6.00 | 68 2.85 | 3 .13 | 0 0.00 | 0 0.00 | 313 13.13 | 2.20 |
| ENE | 90 3.78 | 86 3.61 | 30 1.26 | 5 .21 | 0 0.00 | 0 0.00 | 211 8.85 | 1.99 |
| E | 92 3.86 | 54 2.27 | 22 .92 | 9 .38 | 0 0.00 | 0 0.00 | 177 7.42 | 1.96 |
| ESE | 60 2.52 | 31 1.30 | 8 .34 | 1 .04 | 0 0.00 | 0 0.00 | 100 4.19 | 1.59 |
| SE | 36 1.51 | 27 1.13 | 5 .21 | 3 .13 | 0 0.00 | 0 0.00 | 71 2.98 | 1.74 |
| SSE | 56 2.35 | 28 1.17 | 10 .42 | 3 .13 | 0 0.00 | 0 0.00 | 97 4.07 | 1.72 |
| S | 64 2.68 | 44 1.85 | 17 .71 | 11 .46 | 2 .08 | 0 0.00 | 138 5.79 | 2.24 |
| SSW | 74 3.10 | 32 1.34 | 20 .84 | 11 .46 | 0 0.00 | 0 0.00 | 137 5.75 | 2.11 |
| SW | 85 3.57 | 61 2.56 | 7 .29 | 1 .04 | 0 0.00 | 0 0.00 | 154 6.46 | 1.61 |
| WSW | 54 2.27 | 82 3.44 | 48 2.01 | 19 .80 | 0 0.00 | 0 0.00 | 203 8.52 | 2.64 |
| W | 65 2.73 | 56 2.35 | 57 2.39 | 23 .96 | 0 0.00 | 0 0.00 | 201 8.43 | 2.75 |
| WNW | 52 2.18 | 23 .96 | 19 .80 | 12 .50 | 1 .04 | 0 0.00 | 107 4.49 | 2.39 |
| NW | 32 1.34 | 24 1.01 | 13 .55 | 1 .04 | 0 0.00 | 0 0.00 | 70 2.94 | 1.96 |
| NNW | 38 1.59 | 23 .96 | 11 .46 | 5 .21 | 0 0.00 | 0 0.00 | 77 3.23 | 2.08 |
| N | 58 2.43 | 38 1.59 | 8 .34 | 6 .25 | 0 0.00 | 0 0.00 | 110 4.61 | 1.88 |
| CALM | 20 .84 | | | | | | 20 .84 | CALM |
| TOTAL | 1058 44.38 | 849 35.61 | 360 15.10 | 114 4.78 | 3 .13 | 0 0.00 | 2384 100.00 | 2.08 |
| NUMBER OF VALID OBSERVATIONS WITH PRECIPITATION | | | | | | | 2384 | 6.80 PCT. |
| NUMBER OF VALID OBSERVATIONS WITHOUT PRECIPITATION | | | | | | | 2523 | 84.20 PCT. |
| NUMBER OF INVALID OBSERVATIONS | | | | | | | 3157 | 9.00 PCT. |
| TOTAL NUMBER OF OBSERVATIONS | | | | | | | 35064 | 100.00 PCT. |
| TOTAL AMOUNT OF PRECIPITATION FOR DATA PERIOD | | | | | | | | 188.22 INCHES |

SSS - PSAR

SSS - FSAR

TABLE 2.3-63

HEAVY FOG (VISIBILITY 1/4 MILE OR LESS) AT AVOCA, PA. (Rev. 2.3-11)

| Month | YEAR | | | |
|-----------|------|------|------|------|
| | 1972 | 1973 | 1974 | 1975 |
| January | 3 | 3 | 0 | 3 |
| February | 0 | 0 | 1 | 3 |
| March | 1 | 3 | 1 | 2 |
| April | 2 | 2 | 0 | 1 |
| May | 3 | 3 | 0 | 0 |
| June | 2 | 0 | 1 | 2 |
| July | 5 | 2 | 0 | 0 |
| August | 0 | 1 | 2 | 4 |
| September | 1 | 2 | 7 | 3 |
| October | 3 | 4 | 2 | 0 |
| November | 0 | 1 | 2 | 3 |
| December | 8 | 2 | 0 | 3 |
| Annual | 28 | 23 | 16 | 24 |

SSES - FSAR

TABLE 2.3-64

JOINT FREQUENCY (%) OF WIND
DIRECTION, WIND SPEED AND STABILITY (Ref. 2.3-4)

Stability Class A

Wind Speed (kts)

| Sector | 0-3 | 4-6 | 7-10 | 11-16 | 17-21 | >21 | Total |
|--------|-------|-------|------|-------|-------|-----|-------|
| N | .0139 | .0205 | 0 | 0 | 0 | 0 | .0345 |
| NNE | .0046 | .0068 | 0 | 0 | 0 | 0 | .0115 |
| NE | .0230 | .0000 | 0 | 0 | 0 | 0 | .0230 |
| ENE | .0046 | .0068 | 0 | 0 | 0 | 0 | .0115 |
| E | .0000 | 0 | 0 | 0 | 0 | 0 | 0 |
| ESE | .0046 | .0068 | 0 | 0 | 0 | 0 | .0115 |
| SE | .0000 | 0 | 0 | 0 | 0 | 0 | 0 |
| SSE | .0046 | .0068 | 0 | 0 | 0 | 0 | .0115 |
| S | .0254 | .0205 | 0 | 0 | 0 | 0 | .0460 |
| SSW | .0093 | .0137 | 0 | 0 | 0 | 0 | .0230 |
| SW | .0046 | .0068 | 0 | 0 | 0 | 0 | .0115 |
| WSW | .0139 | .0205 | 0 | 0 | 0 | 0 | .0345 |
| W | .0186 | .0274 | 0 | 0 | 0 | 0 | .0460 |
| SNW | .0093 | .0137 | 0 | 0 | 0 | 0 | .0230 |
| NW | .0046 | .0068 | 0 | 0 | 0 | 0 | .0115 |
| NNW | .0093 | .0137 | 0 | 0 | 0 | 0 | .0230 |
| Total | .1507 | .1712 | 0 | 0 | 0 | 0 | |

Relative frequency of occurrences of A Stability = .3219
Relative frequency of calms distributed with A Stability = .1301

Wilkes-Barre/Scranton Airport
1971-1975
Three Hourly Observations

SSS - FSAR

TABLE 2.3-65

JOINT FREQUENCY (%) OF WIND
DIRECTION, WIND SPEED AND STABILITY (Ref. 2.3-4)

Stability Class B

Wind Speed (kts)

| Sector | 0-3 | 4-6 | 7-10 | 11-16 | 17-21 | >21 | .2871 |
|--------|------|--------|--------|-------|-------|-----|-------|
| N | 898 | .1507 | .1164 | 0 | 0 | 0 | .3569 |
| NNE | 975 | .0548 | .0548 | 0 | 0 | 0 | .2071 |
| NE | 654 | .0548 | .0616 | 0 | 0 | 0 | .1819 |
| ENE | 1112 | .0411 | .0137 | 0 | 0 | 0 | .1660 |
| E | 768 | .0274 | .0342 | 0 | 0 | 0 | .1385 |
| ESE | 516 | .0205 | 0 | 0 | 0 | 0 | .0721 |
| SE | 528 | .0274 | .0068 | 0 | 0 | 0 | .0870 |
| SSE | 424 | .0137 | .0137 | 0 | 0 | 0 | .0698 |
| S | 1675 | .0890 | .0205 | 0 | 0 | 0 | .2771 |
| SSW | 898 | .1507 | .0959 | 0 | 0 | 0 | .3364 |
| SW | 991 | .2055 | .1507 | 0 | 0 | 0 | .4553 |
| WSW | 1773 | .2877 | .2123 | 0 | 0 | 0 | .6773 |
| W | 2118 | .2493 | .1301 | 0 | 0 | 0 | .6913 |
| WNW | 1449 | .1918 | .1164 | 0 | 0 | 0 | .4531 |
| NW | 1449 | .1986 | .0890 | 0 | 0 | 0 | .3856 |
| NNW | 748 | .1096 | .1027 | 0 | 0 | 0 | .2871 |
| Total | 6507 | 1.9726 | 1.2192 | | | | |

Relative frequency of occurrences of B Stability = 4.8425

Relative frequency of calms distributed with B Stability = .5274

Wilkes-Barre/Scranton Airport
1971-1975

Three Hourly Observations

SSSES - FSAR

TABLE 2.3-66

JOINT FREQUENCY (%) OF WIND
DIRECTION, WIND SPEED AND STABILITY (Ref. 2.3-4)

Stability Class C

Wind Speed (kts)

| Sector | 0-3 | 4-6 | 7-10 | 11-16 | 17-21 | >21 | Total |
|--------|-------|--------|--------|-------|--------|-----|--------|
| N | .0707 | .2808 | .3014 | .0274 | 0 | 0 | .6803 |
| NNE | .0631 | .1164 | .0822 | .0137 | 0 | 0 | .2754 |
| NE | .0488 | .2055 | .0959 | .0137 | 0 | 0 | .3639 |
| ENE | .1069 | .2671 | .0685 | 0 | 0 | 0 | .4425 |
| E | .0712 | .1233 | .1233 | .0068 | 0 | 0 | .3246 |
| ESE | .0132 | .0616 | .0411 | 0 | 0 | 0 | .1159 |
| SE | .0175 | .0274 | .0479 | 0 | 0 | 0 | .0928 |
| SSE | .0480 | .0342 | .0411 | .0068 | 0 | 0 | .1302 |
| S | .0556 | .1164 | .1781 | .0753 | .0068 | 0 | .1302 |
| SSW | .0326 | .1918 | .5000 | .1096 | .00137 | 0 | .8340 |
| SW | .0413 | .2055 | .7877 | .1507 | 0 | 0 | 1.1989 |
| WSW | .0415 | .3699 | .6164 | .1027 | 0 | 0 | 1.1306 |
| W | .0714 | .2877 | .3630 | .0342 | 0 | 0 | .7563 |
| WNW | .0681 | .1712 | .3493 | .0959 | 0 | 0 | .6846 |
| NW | .0613 | .1781 | .3836 | .0890 | .0068 | 0 | .7188 |
| NNW | .0313 | .1781 | .4178 | .1096 | .0068 | 0 | .7347 |
| Total | .8425 | 2.8151 | 4.3973 | .8356 | .0342 | 0 | |

Relative frequency of occurrence of C Stability = 8.9247

Relative frequency of calms distributed with C Stability = .3082

Wilkes-Barre/Scranton Airport
1971-1975
Three Hourly Observations

SSSES - FSAR

TABLE 2.3-67

JOINT FREQUENCY (%) OF WIND
DIRECTION, WIND SPEED AND STABILITY (Ref. 2.3-4)

Stability Class D

Wind Speed (kts)

| Sector | 0-3 | 4-6 | 7-10 | 11-16 | 17-21 | >21 | Total |
|--------|--------|---------|---------|---------|--------|-------|--------|
| N | .4311 | 1.2808 | 1.6027 | .7671 | .0137 | 0 | 4.0955 |
| NNE | .2648 | .9041 | 1.0342 | .1918 | .068 | 0 | 2.4018 |
| NE | .2677 | 1.0068 | .8425 | .3562 | .0205 | 0 | 2.4937 |
| ENE | .4100 | 1.4452 | .9863 | .4726 | .0274 | .0137 | 3.3552 |
| E | .2648 | .9041 | 1.0959 | .3973 | .0479 | 0 | 2.7100 |
| ESE | .1397 | .5616 | .5616 | .1233 | .0205 | 0 | 1.4068 |
| SE | .1684 | .3973 | .3493 | .1644 | .0274 | .0068 | 1.1136 |
| SSE | .1610 | .5479 | .5205 | .4932 | .0342 | 0 | 1.7568 |
| S | .4506 | 1.5479 | 1.8288 | 1.2945 | .1027 | .0068 | 5.2314 |
| SSW | .2837 | 1.2397 | 2.7123 | 1.4658 | .0685 | .0068 | 5.7768 |
| SW | .2740 | 1.2192 | 3.3082 | 2.8699 | .1507 | .0205 | 7.8425 |
| WSW | .3542 | 1.1164 | 1.2945 | 1.2192 | .1164 | .0205 | 4.1213 |
| W | .2210 | .9178 | .7808 | .8562 | .1514 | .0274 | 2.9607 |
| WNW | .1836 | .5479 | 1.0753 | 1.7740 | .2949 | .0411 | 3.9165 |
| NW | .1995 | .7055 | 1.8767 | 2.5822 | .2123 | .0205 | 5.5968 |
| NNW | .2344 | .6027 | 1.4589 | 1.5068 | .0616 | 0 | 3.8645 |
| Total | 4.3082 | 14.9452 | 21.3288 | 16.5342 | 1.3630 | .1644 | |

Relative frequency occurrence of D Stability = 58.6438

Relative frequency of calms distributed with D Stability = 1.7671

Wilkes-Barre/Scranton Airport
1971-1975
Three Hourly Observations

SSES - FSAR

TABLE 2.3-68

JOINT FREQUENCY (%) OF WIND
DIRECTION, WIND SPEED AND STABILITY (2.3-4)

Stability Class E

Wind Speed (kts)

| Sector | 0-3 | 4-6 | 7-10 | 11-16 | 17-21 | >21 | Total |
|--------|-----|--------|--------|-------|-------|-----|--------|
| N | 0 | .3904 | .4521 | 0 | 0 | 0 | .8425 |
| NNE | 0 | .2329 | .0781 | 0 | 0 | 0 | .3110 |
| NE | 0 | .2534 | .0479 | 0 | 0 | 0 | .3014 |
| ENE | 0 | .6574 | .2945 | 0 | 0 | 0 | .9521 |
| E | 0 | .7055 | .6849 | 0 | 0 | 0 | 1.3904 |
| ESE | 0 | .3836 | .6918 | 0 | 0 | 0 | 1.0753 |
| SE | 0 | .2603 | .1096 | 0 | 0 | 0 | .3699 |
| SSE | 0 | .4726 | .1096 | 0 | 0 | 0 | .5822 |
| S | 0 | 1.0753 | .5685 | 0 | 0 | 0 | 1.6438 |
| SSW | 0 | .6906 | .6507 | 0 | 0 | 0 | 1.2603 |
| SW | 0 | .3973 | .8288 | 0 | 0 | 0 | 1.2260 |
| WSW | 0 | .3836 | .3014 | 0 | 0 | 0 | .6849 |
| W | 0 | .2123 | .2534 | 0 | 0 | 0 | .4658 |
| WNW | 0 | .1575 | .3151 | 0 | 0 | 0 | .4726 |
| NW | 0 | .2740 | .5137 | 0 | 0 | 0 | .7877 |
| NNW | 0 | .2055 | .4178 | 0 | 0 | 0 | .6233 |
| Total | 0 | 6.6712 | 6.4178 | 0 | 0 | 0 | |

Relative frequency of occurrence of E Stability = 13.0890
Relative frequency of calms distributed with E Stability = 0

Wilkes-Barre/Scranton Airport
1971-1975
Three Hourly Observations

SSS - FSAR

TABLE 2.3-69

JOINT FREQUENCY (%) OF WIND
DIRECTION, WIND SPEED AND STABILITY (2.3-4)

Stability Class F

Wind Speed (kts)

| Sector | 0-3 | 4-6 | 7-10 | 11-16 | 17-21 | >21 | Total |
|--------|--------|--------|------|-------|-------|-----|--------|
| N | .0986 | .4247 | 0 | 0 | 0 | 0 | .5232 |
| NNE | .0335 | .2466 | 0 | 0 | 0 | 0 | .2800 |
| NE | .0813 | .2945 | 0 | 0 | 0 | 0 | .3758 |
| ENE | .2463 | 1.1096 | 0 | 0 | 0 | 0 | 1.3559 |
| E | .2782 | 1.3356 | 0 | 0 | 0 | 0 | 1.6139 |
| ESE | .1387 | .8562 | 0 | 0 | 0 | 0 | .9948 |
| SE | .1323 | .3836 | 0 | 0 | 0 | 0 | .5158 |
| SSE | .1647 | .6164 | 0 | 0 | 0 | 0 | .7811 |
| S | .2420 | 1.2466 | 0 | 0 | 0 | 0 | 1.4886 |
| SSW | .1241 | .6644 | 0 | 0 | 0 | 0 | .7885 |
| SW | .0875 | .4726 | 0 | 0 | 0 | 0 | .5601 |
| WSW | .1028 | .3836 | 0 | 0 | 0 | 0 | .4864 |
| W | .0809 | .1918 | 0 | 0 | 0 | 0 | .2727 |
| WNW | .0440 | .1918 | 0 | 0 | 0 | 0 | .2358 |
| NW | .0581 | .3767 | 0 | 0 | 0 | 0 | .4348 |
| NNW | .0939 | .3630 | 0 | 0 | 0 | 0 | .4569 |
| Total | 2.0068 | 9.1575 | 0 | 0 | 0 | 0 | |

Relative frequency of occurrence of F Stability = 11.1644
Relative frequency of calms distributed with F Stability = .7877

Wilkes-Barre/Scranton Airport
1971-1975
Three Hourly Observation

SSSES - FSAR

TABLE 2.3-70

JOINT FREQUENCY (%) OF WIND
DIRECTION, WIND SPEED AND STABILITY (2.3-4)

Stability Class G

Wind Speed (kts)

| Sector | 0-3 | 4-6 | 7-10 | 11-16 | 17-21 | >21 | Total |
|--------|--------|-----|------|-------|-------|-----|-------|
| N | .0976 | 0 | 0 | 0 | 0 | 0 | .0976 |
| NNE | .0366 | 0 | 0 | 0 | 0 | 0 | .0366 |
| NE | .1464 | 0 | 0 | 0 | 0 | 0 | .1464 |
| ENE | .3416 | 0 | 0 | 0 | 0 | 0 | .3416 |
| E | .6467 | 0 | 0 | 0 | 0 | 0 | .6467 |
| ESE | .2684 | 0 | 0 | 0 | 0 | 0 | .2884 |
| SE | .1342 | 0 | 0 | 0 | 0 | 0 | .1342 |
| SSE | .2562 | 0 | 0 | 0 | 0 | 0 | .2562 |
| S | .3782 | 0 | 0 | 0 | 0 | 0 | .3782 |
| SSW | .1586 | 0 | 0 | 0 | 0 | 0 | .1586 |
| SW | .0732 | 0 | 0 | 0 | 0 | 0 | .0732 |
| WSW | .1342 | 0 | 0 | 0 | 0 | 0 | .1342 |
| W | .0732 | 0 | 0 | 0 | 0 | 0 | .0732 |
| WNW | .0732 | 0 | 0 | 0 | 0 | 0 | .0732 |
| NW | .0732 | 0 | 0 | 0 | 0 | 0 | .0732 |
| NWN | .1220 | 0 | 0 | 0 | 0 | 0 | .1220 |
| Total | 3.0137 | 0 | 0 | 0 | 0 | 0 | |

Relative frequency of occurrence of G Stability = 3.0137

Relative frequency of calms distributed with G Stability = 1.3219

Wilkes-Barre/Scranton Airport
1971-1975
Three Hourly Observations

SSSES - FSAR

TABLE 2.3-71

JOINT FREQUENCY (%) OF WIND
DIRECTION, WIND SPEED AND STABILITY (2.3-4)

All Stability Classes

Wind Speed (kts)

| Sector | 0-3 | 4-6 | 7-10 | 11-16 | 17-21 | >21 | Total |
|--------|---------|---------|---------|---------|--------|-------|---------|
| N | .8291 | 2.5479 | 2.4726 | .7945 | .0137 | 0 | 6.6579 |
| NNE | .5271 | 1.5616 | 1.3493 | .2055 | .0068 | 0 | 3.6504 |
| NE | .6243 | 1.8151 | 1.0479 | .3699 | .0205 | 0 | 3.8778 |
| ENE | 1.2294 | 3.5274 | 1.3630 | .4726 | .0274 | .0137 | 6.335 |
| E | 1.2417 | 3.0959 | 1.9384 | .4041 | .0479 | 0 | 6.7280 |
| ESE | .5947 | 1.8904 | 1.2945 | .1233 | .0205 | 0 | 3.9235 |
| SE | .5050 | 1.0959 | .5137 | .1644 | .0274 | .0068 | 2.3132 |
| SSE | .6638 | 1.6918 | .6840 | .5000 | .0342 | 0 | 3.5747 |
| S | 1.3470 | 4.0959 | 2.5959 | 1.3699 | .1092 | .0068 | 9.5251 |
| SSW | .7359 | 2.8699 | 3.9589 | 1.5753 | .0685 | .0068 | 9.2153 |
| SW | .6186 | 2.5068 | 5.0753 | 3.0205 | .1644 | .0205 | 11.4063 |
| WSW | .8230 | 2.5616 | 2.4247 | 1.3219 | .1164 | .0205 | 7.2682 |
| W | .6589 | 1.9863 | 1.5274 | .8904 | .1574 | .0274 | 5.2480 |
| WNW | .5098 | 1.2740 | 1.8562 | 1.8699 | .2945 | .0411 | 5.8455 |
| NW | .5091 | 1.7397 | 2.8630 | 2.6712 | .2192 | .0205 | 8.0228 |
| NNW | .5551 | 1.4726 | 2.3973 | 1.6164 | .0685 | 0 | 6.1099 |
| Total | 11.9726 | 35.7328 | 33.3630 | 17.3699 | 1.3973 | .1644 | |

Relative frequency of occurrence of observations = 100
Relative frequency of calms distributed above = 4.8425

Wilkes-Barre/Scranton Airport
1971-1975
Three Hourly Observations

SSES - FSAR

TABLE 2.3-72

MIXING HEIGHTS (meters)

| Time | Spring | Summer | Autumn | Winter |
|-------------|--------|--------|--------|--------|
| 4 AM-9 PM | 706 | 510 | 562 | 774 |
| 4 PM-9 PM | 1750 | 1816 | 1306 | 979 |
| Other Times | 1228 | 1163 | 934 | 877 |

| TABLE 2.3-73 Heights of Meteorological Sensors | | | | |
|--|---------------------------|---------------------|----------------------|---|
| 200 Foot Primary Tower | | | | |
| Parameter | 60M (849.8' MSL) | 10M (685.8' MSL) | SFC (653.21' MSL) | 10 Meter Nescopeck ¹ Tower 10 Meters |
| Wind Speed | 1 | 1 | | 1 |
| Wind Direction | 1 | 1 | | 1 |
| Ambient Temperature | | 1 | | 1 ² |
| Dew Point Temperature | | 1 | | |
| Temperature Difference (using the 10 m temperature as reference) | 2 | 2 | | |
| Precipitation | | | 1 | |
| 10 Meter Backup Tower | | | | |
| Parameter | 10 Meters (622.8' MSL) | | | |
| Wind Speed | 1 | | | |
| Wind Direction | 1 | | | |
| 1. Nescopeck supplemental tower added per PLA-2467. 2. Measurements made at 8' height of tower. | | | | |

SSES - FSAR

Table Rev. 49

| <p>TABLE 2.3-74 METEOROLOGICAL DATA RECOVERY RATES 1998 THROUGH 2003</p> | | | | | | |
|--|------|-------|-------|-------|-------|-------------|
| | 1999 | 2000 | 2001 | 2002 | 2003 | 5 YR AVG |
| Wind Speed 10m Primary | 99.7 | 99.8 | 100.0 | 99.5 | 99.6 | 99.7 |
| Wind Speed 60m Primary | 99.7 | 99.4 | 99.4 | 99.5 | 99.2 | 99.4 |
| Wind Direction 10m Primary | 99.7 | 100.0 | 100.0 | 99.4 | 99.7 | 99.8 |
| Wind Direction 60m Primary | 99.6 | 100.0 | 99.3 | 99.5 | 99.7 | 99.6 |
| Delta Temperature 60-10m A Primary | 99.6 | 99.8 | 99.3 | 99.0 | 99.1 | 99.4 |
| Temperature 10m Primary | 99.6 | 99.7 | 99.9 | 99.6 | 99.0 | 99.6 |
| Dew Point 10m Primary | 99.3 | 87.2 | 98.8 | 98.6 | 98.8 | 96.5 |
| Precipitation | 99.7 | 100.0 | 100.0 | 100.0 | 100.0 | 99.9 |
| <u>Composite</u> | | | | | | |
| Wind Speed 10m, Wind Direction 10m, Delta Temperature 60-10m | 99.5 | 99.7 | 99.3 | 99.0 | 99.0 | 99.3 |
| Wind Speed 60m, Wind Direction 60m Delta Temperature 60-10m | 99.5 | 99.3 | 99.2 | 99.0 | 98.6 | 99.1 |

SSSES - FSAR

Table Rev. 36

TABLE 2.3-75

Joint Frequency Distribution

Hours at Each Wind Speed and Direction
 Period of Record = 01/01/99 1:00 - 12/31/03 23:00 Total Period
 Elevation: Speed: 10M SPD Direction: 10M WD Lapse: DT60-10

Stability Class A

Delta Temperature Extremely Unstable

| <u>Wind Direction From</u> | <u>Wind Speed (m/s)</u> | | | | | | | | | | | | <u>Total</u> |
|------------------------------------|-------------------------|-----------------------|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|----------------------|-----------------------|-----------------------|------------------|--------------|
| | <u>0.23 0.50</u> | <u>0.51- 0.75</u> | <u>0.76- 1.0</u> | <u>1.1- 1.5</u> | <u>1.6- 2.0</u> | <u>2.1- 3.0</u> | <u>3.1- 5.0</u> | <u>5.1- 7.0</u> | <u>7.1- 10.0</u> | <u>10.1- 13.0</u> | <u>13.1- 18.0</u> | <u>> 18.0</u> | |
| N | 1 | 0 | 0 | 2 | 3 | 11 | 28 | 4 | 0 | 0 | 0 | 0 | 49 |
| NNE | 0 | 0 | 0 | 3 | 1 | 28 | 58 | 4 | 0 | 0 | 0 | 0 | 94 |
| NE | 0 | 0 | 0 | 7 | 15 | 45 | 23 | 0 | 0 | 0 | 0 | 0 | 90 |
| ENE | 0 | 0 | 1 | 8 | 17 | 11 | 4 | 0 | 0 | 0 | 0 | 0 | 41 |
| E | 0 | 0 | 4 | 26 | 8 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 43 |
| ESE | 0 | 1 | 7 | 12 | 7 | 8 | 6 | 0 | 0 | 0 | 0 | 0 | 41 |
| SE | 0 | 0 | 2 | 6 | 14 | 33 | 20 | 0 | 0 | 0 | 0 | 0 | 75 |
| SSE | 0 | 0 | 2 | 6 | 19 | 36 | 14 | 1 | 0 | 0 | 0 | 0 | 78 |
| S | 0 | 0 | 2 | 10 | 28 | 62 | 63 | 1 | 0 | 0 | 0 | 0 | 166 |
| SSW | 0 | 0 | 0 | 12 | 38 | 105 | 88 | 4 | 0 | 0 | 0 | 0 | 247 |
| SW | 0 | 0 | 1 | 10 | 38 | 177 | 261 | 28 | 1 | 0 | 0 | 0 | 516 |
| WSW | 0 | 0 | 0 | 4 | 7 | 29 | 125 | 35 | 2 | 0 | 0 | 0 | 202 |
| W | 0 | 0 | 0 | 1 | 2 | 4 | 48 | 5 | 0 | 0 | 0 | 0 | 60 |
| WNW | 0 | 0 | 0 | 1 | 2 | 6 | 12 | 0 | 0 | 0 | 0 | 0 | 21 |
| NW | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 3 | 0 | 0 | 0 | 0 | 10 |
| NNW | 0 | 0 | 0 | 1 | 0 | 1 | 12 | 4 | 0 | 0 | 0 | 0 | 18 |
| Totals | 1 | 1 | 19 | 109 | 200 | 560 | 769 | 89 | 3 | 0 | 0 | 0 | 1751 |

Number of Calm Hours for this Table 18
 Number of Variable Direction Hours for this Table 0
 Number of Invalid Hours 297
 Number of Valid Hours for this Table 1751
 Total Hours for the Period 43823

SSSES - FSAR

Table Rev. 36

TABLE 2.3-76

Joint Frequency Distribution

Hours at Each Wind Speed and Direction
Period of Record = 01/01/99 1:00 - 12/31/03 23:00 Total Period
Elevation: Speed: 10M SPD Direction: 10M WDLapse: DT60-10

Stability Class B

Delta Temperature Moderately Unstable

| <u>Wind</u> <u>Direction</u> <u>From</u> | Wind Speed (m/s) | | | | | | | | | | | | <u>Total</u> |
|--|----------------------------|-----------------------------|----------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|----------------------------|-----------------------------|-----------------------------|------------------|--------------|
| | <u>0.23</u> <u>0.50</u> | <u>0.51-</u> <u>0.75</u> | <u>0.76-</u> <u>1.0</u> | <u>1.1-</u> <u>1.5</u> | <u>1.6-</u> <u>2.0</u> | <u>2.1-</u> <u>3.0</u> | <u>3.1-</u> <u>5.0</u> | <u>5.1-</u> <u>7.0</u> | <u>7.1-</u> <u>10.0</u> | <u>10.1-</u> <u>13.0</u> | <u>13.1-</u> <u>18.0</u> | <u>> 18.0</u> | |
| N | 0 | 1 | 0 | 1 | 5 | 9 | 42 | 8 | 0 | 0 | 0 | 0 | 66 |
| NNE | 0 | 0 | 0 | 3 | 20 | 47 | 34 | 3 | 0 | 0 | 0 | 0 | 107 |
| NE | 0 | 0 | 0 | 12 | 16 | 46 | 24 | 0 | 0 | 0 | 0 | 0 | 98 |
| ENE | 0 | 0 | 1 | 24 | 13 | 10 | 2 | 0 | 0 | 0 | 0 | 0 | 50 |
| E | 0 | 0 | 9 | 15 | 7 | 10 | 3 | 0 | 0 | 0 | 0 | 0 | 44 |
| ESE | 0 | 0 | 4 | 11 | 14 | 5 | 5 | 0 | 0 | 0 | 0 | 0 | 39 |
| SE | 0 | 0 | 2 | 10 | 11 | 16 | 11 | 0 | 0 | 0 | 0 | 0 | 50 |
| SSE | 0 | 0 | 0 | 4 | 11 | 11 | 6 | 0 | 0 | 0 | 0 | 0 | 32 |
| S | 0 | 0 | 2 | 11 | 14 | 38 | 21 | 0 | 0 | 0 | 0 | 0 | 86 |
| SSW | 0 | 0 | 1 | 11 | 39 | 55 | 28 | 3 | 0 | 0 | 0 | 0 | 137 |
| SW | 0 | 0 | 0 | 4 | 36 | 105 | 175 | 31 | 4 | 0 | 0 | 0 | 355 |
| WSW | 0 | 0 | 1 | 1 | 7 | 23 | 100 | 43 | 2 | 0 | 0 | 0 | 177 |
| W | 0 | 0 | 0 | 0 | 1 | 8 | 34 | 4 | 0 | 0 | 0 | 0 | 47 |
| WNW | 0 | 0 | 0 | 0 | 1 | 1 | 18 | 1 | 0 | 0 | 0 | 0 | 21 |
| NW | 0 | 0 | 0 | 0 | 1 | 5 | 10 | 2 | 0 | 0 | 0 | 0 | 18 |
| NNW | 0 | 0 | 0 | 0 | 4 | 8 | 19 | 3 | 2 | 0 | 0 | 0 | 36 |
| Totals | 0 | 1 | 20 | 107 | 200 | 397 | 532 | 98 | 8 | 0 | 0 | 0 | 1363 |

Number of Calm Hours for this Table 18
Number of Variable Direction Hours for this Table 0
Number of Invalid Hours 297
Number of Valid Hours for this Table 1363
Total Hours for the Period 43823

SSES - FSAR

Table Rev. 36

TABLE 2.3-77

Joint Frequency Distribution

| Hours at Each Wind Speed and Direction | | | | | | | | | | | | | |
|---|------------------|-------------------|-----------------|------------|------------|-------------------|--------------|------------|-------------|-------------|-------------|------------------|--------------|
| Period of Record = | 01/01/99 | | 1:00 - 12/31/03 | | 23:00 | | Total Period | | | | | | |
| Elevation: | Speed: 10M SPD | | Direction: | | 10M WD | | Lapse: | | DT60-10 | | | | |
| Stability Class C | | Delta Temperature | | | | Slightly Unstable | | | | | | | |
| | Wind Speed (m/s) | | | | | | | | | | | | |
| <u>Wind</u> | 0.23 | 0.51- | 0.76- | 1.1- | 1.6- | 2.1- | 3.1- | 5.1- | 7.1- | 10.1- | 13.1- | | |
| <u>Direction</u> | <u>0.50</u> | <u>0.75</u> | <u>1.0</u> | <u>1.5</u> | <u>2.0</u> | <u>3.0</u> | <u>5.0</u> | <u>7.0</u> | <u>10.0</u> | <u>13.0</u> | <u>18.0</u> | <u>> 18.0</u> | <u>Total</u> |
| <u>From</u> | | | | | | | | | | | | | |
| N | 0 | 0 | 0 | 3 | 7 | 23 | 73 | 6 | 0 | 0 | 0 | 0 | 112 |
| NNE | 0 | 0 | 1 | 8 | 21 | 52 | 59 | 6 | 0 | 0 | 0 | 0 | 147 |
| NE | 0 | 0 | 0 | 12 | 24 | 45 | 20 | 0 | 0 | 0 | 0 | 0 | 101 |
| ENE | 0 | 0 | 2 | 25 | 20 | 14 | 4 | 0 | 0 | 0 | 0 | 0 | 65 |
| E | 0 | 1 | 7 | 19 | 8 | 8 | 3 | 0 | 0 | 0 | 0 | 0 | 46 |
| ESE | 0 | 1 | 6 | 15 | 16 | 10 | 3 | 0 | 0 | 0 | 0 | 0 | 51 |
| SE | 1 | 0 | 7 | 9 | 17 | 13 | 11 | 0 | 0 | 0 | 0 | 0 | 58 |
| SSE | 0 | 1 | 4 | 12 | 18 | 21 | 12 | 0 | 0 | 0 | 0 | 0 | 68 |
| S | 0 | 0 | 4 | 26 | 28 | 50 | 28 | 0 | 0 | 0 | 0 | 0 | 136 |
| SSW | 0 | 0 | 1 | 24 | 35 | 76 | 17 | 2 | 0 | 0 | 0 | 0 | 155 |
| SW | 0 | 0 | 1 | 18 | 43 | 146 | 186 | 37 | 1 | 0 | 0 | 0 | 432 |
| WSW | 0 | 0 | 1 | 3 | 11 | 38 | 139 | 61 | 7 | 0 | 0 | 0 | 260 |
| W | 0 | 0 | 0 | 8 | 7 | 7 | 51 | 21 | 1 | 0 | 0 | 0 | 95 |
| WNW | 0 | 0 | 0 | 0 | 2 | 14 | 31 | 1 | 0 | 0 | 0 | 0 | 48 |
| NW | 0 | 0 | 1 | 0 | 3 | 9 | 30 | 4 | 0 | 0 | 0 | 0 | 47 |
| NNW | 0 | 0 | 0 | 1 | 1 | 19 | 31 | 16 | 2 | 0 | 0 | 0 | 70 |
| Totals | 1 | 3 | 35 | 183 | 261 | 545 | 698 | 154 | 11 | 0 | 0 | 0 | 1891 |
| Number of Calm Hours for this Table | | | | | | | | 18 | | | | | |
| Number of Variable Direction Hours for this Table | | | | | | | | 0 | | | | | |
| Number of Invalid Hours | | | | | | | | 297 | | | | | |
| Number of Valid Hours for this Table | | | | | | | | 1891 | | | | | |
| Total Hours for the Period | | | | | | | | 43823 | | | | | |

SSSES - FSAR

Table Rev. 36

TABLE 2.3-78

Joint Frequency Distribution

| Period of Record = Elevation: | | Hours at Each Wind Speed and Direction | | | | | | | | | | | Total Period | DT60-10 |
|--|----------------------------|--|-------------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|----------------------------|-----------------------------|-----------------------------|------------------|--------------|---------|
| | | 01/01/99 Speed: 10M SPD | 1:00 - 12/31/03 Direction: | | | | | | | | 23:00 10M WD | | | |
| Stability Class D | | Delta Temperature | | | | | Neutral | | | | | | | |
| | | Wind Speed (m/s) | | | | | | | | | | | | |
| <u>Wind</u> <u>Direction</u> <u>From</u> | <u>0.23</u> <u>0.50</u> | <u>0.51-</u> <u>0.75</u> | <u>0.76-</u> <u>1.0</u> | <u>1.1-</u> <u>1.5</u> | <u>1.6-</u> <u>2.0</u> | <u>2.1-</u> <u>3.0</u> | <u>3.1-</u> <u>5.0</u> | <u>5.1-</u> <u>7.0</u> | <u>7.1-</u> <u>10.0</u> | <u>10.1-</u> <u>13.0</u> | <u>13.1-</u> <u>18.0</u> | <u>> 18.0</u> | <u>Total</u> | |
| N | 2 | 7 | 23 | 74 | 119 | 433 | 716 | 98 | 0 | 0 | 0 | 0 | 1472 | |
| NNE | 1 | 16 | 64 | 214 | 267 | 519 | 324 | 15 | 0 | 0 | 0 | 0 | 1420 | |
| NE | 9 | 33 | 119 | 276 | 281 | 418 | 164 | 6 | 0 | 0 | 0 | 0 | 1306 | |
| ENE | 8 | 51 | 130 | 219 | 153 | 158 | 54 | 3 | 0 | 0 | 0 | 0 | 776 | |
| E | 10 | 85 | 158 | 202 | 124 | 119 | 32 | 5 | 0 | 0 | 0 | 0 | 735 | |
| ESE | 15 | 67 | 144 | 144 | 117 | 146 | 58 | 7 | 3 | 1 | 0 | 0 | 702 | |
| SE | 7 | 53 | 110 | 219 | 169 | 200 | 121 | 14 | 1 | 0 | 0 | 0 | 894 | |
| SSE | 10 | 38 | 74 | 163 | 158 | 179 | 89 | 9 | 1 | 0 | 0 | 0 | 721 | |
| S | 3 | 26 | 84 | 210 | 204 | 257 | 106 | 7 | 0 | 0 | 0 | 0 | 897 | |
| SSW | 0 | 15 | 54 | 220 | 242 | 368 | 139 | 2 | 0 | 0 | 0 | 0 | 1040 | |
| SW | 1 | 8 | 29 | 193 | 242 | 594 | 864 | 170 | 7 | 0 | 0 | 0 | 2108 | |
| WSW | 0 | 3 | 15 | 87 | 132 | 254 | 627 | 425 | 90 | 1 | 0 | 0 | 1634 | |
| W | 0 | 1 | 6 | 38 | 80 | 196 | 396 | 172 | 35 | 0 | 0 | 0 | 924 | |
| WNW | 0 | 2 | 4 | 23 | 49 | 157 | 314 | 108 | 19 | 0 | 0 | 0 | 676 | |
| NW | 1 | 2 | 11 | 31 | 45 | 225 | 632 | 178 | 6 | 0 | 0 | 0 | 1131 | |
| NNW | 0 | 4 | 8 | 33 | 52 | 268 | 752 | 280 | 8 | 0 | 0 | 0 | 1405 | |
| Totals | 67 | 411 | 1033 | 2346 | 2434 | 4491 | 5388 | 1499 | 170 | 2 | 0 | 0 | 17841 | |

Number of Calm Hours for this Table 18
 Number of Variable Direction Hours for this Table 0
 Number of Invalid Hours 297
 Number of Valid Hours for this Table 17841
 Total Hours for the Period 43823

SSES - FSAR

Table Rev. 36

TABLE 2.3-79

Joint Frequency Distribution

Hours at Each Wind Speed and Direction
 Period of Record = 01/01/99 1:00 - 12/31/03 23:00 Total Period
 Elevation: Speed: 10M SPD Direction: 10M WD Lapse: DT60-10

Stability Class E

Delta Temperature Slightly Stable

| <u>Wind</u> <u>Direction</u> <u>From</u> | Wind Speed (m/s) | | | | | | | | | | | | <u>Total</u> |
|--|----------------------------|-----------------------------|----------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|----------------------------|-----------------------------|-----------------------------|------------------|--------------|
| | <u>0.23</u> <u>0.50</u> | <u>0.51-</u> <u>0.75</u> | <u>0.76-</u> <u>1.0</u> | <u>1.1-</u> <u>1.5</u> | <u>1.6-</u> <u>2.0</u> | <u>2.1-</u> <u>3.0</u> | <u>3.1-</u> <u>5.0</u> | <u>5.1-</u> <u>7.0</u> | <u>7.1-</u> <u>10.0</u> | <u>10.1-</u> <u>13.0</u> | <u>13.1-</u> <u>18.0</u> | <u>> 18.0</u> | |
| N | 1 | 14 | 28 | 90 | 138 | 144 | 53 | 2 | 0 | 0 | 0 | 0 | 470 |
| NNE | 3 | 33 | 112 | 324 | 269 | 254 | 79 | 1 | 0 | 0 | 0 | 0 | 1075 |
| NE | 13 | 124 | 289 | 551 | 197 | 159 | 54 | 0 | 0 | 0 | 0 | 0 | 1387 |
| ENE | 20 | 279 | 467 | 493 | 87 | 29 | 7 | 3 | 0 | 0 | 0 | 0 | 1385 |
| E | 41 | 378 | 361 | 154 | 33 | 29 | 5 | 0 | 0 | 0 | 0 | 0 | 1001 |
| ESE | 45 | 265 | 207 | 99 | 30 | 24 | 8 | 5 | 0 | 0 | 0 | 0 | 683 |
| SE | 37 | 201 | 229 | 152 | 48 | 50 | 23 | 10 | 4 | 0 | 0 | 0 | 754 |
| SSE | 19 | 109 | 183 | 213 | 95 | 63 | 40 | 6 | 0 | 0 | 0 | 0 | 728 |
| S | 10 | 75 | 216 | 413 | 193 | 151 | 49 | 18 | 0 | 0 | 0 | 0 | 1125 |
| SSW | 3 | 42 | 126 | 397 | 334 | 309 | 84 | 4 | 0 | 0 | 0 | 0 | 1299 |
| SW | 2 | 14 | 39 | 188 | 209 | 343 | 210 | 10 | 1 | 0 | 0 | 0 | 1016 |
| WSW | 0 | 4 | 12 | 64 | 80 | 83 | 61 | 14 | 3 | 0 | 0 | 0 | 321 |
| W | 2 | 1 | 9 | 36 | 33 | 37 | 19 | 4 | 0 | 0 | 0 | 0 | 141 |
| WNW | 0 | 2 | 7 | 16 | 23 | 34 | 13 | 0 | 0 | 0 | 0 | 0 | 95 |
| NW | 1 | 2 | 4 | 19 | 42 | 87 | 24 | 2 | 0 | 0 | 0 | 0 | 181 |
| NNW | 0 | 5 | 6 | 21 | 41 | 116 | 35 | 2 | 0 | 0 | 0 | 0 | 226 |
| Totals | 197 | 1548 | 2295 | 3230 | 1852 | 1912 | 764 | 81 | 8 | 0 | 0 | 0 | 11887 |

Number of Calm Hours for this Table 18
 Number of Variable Direction Hours for this Table 0
 Number of Invalid Hours 297
 Number of Valid Hours for this Table 11887
 Total Hours for the Period 43823

SSSES - FSAR

Table Rev. 36

TABLE 2.3-80

Joint Frequency Distribution

| Period of Record = | | Hours at Each Wind Speed and Direction | | | | | | | | | | Total Period | |
|---------------------|--------------|--|--------------|-------------|-------------|-------------|-------------|-------------|--------------|---------------|---------------|-------------------|-------|
| Elevation: | | 01/01/99 1:00 - 12/31/03 23:00 | | | | | | | | | | 10M WDLapse: | |
| Speed: | | 10M SPD | | | | | | | | | | DT60-10 | |
| Direction: | | | | | | | | | | | | | |
| Stability Class | | Delta Temperature | | | | | | | | | | Moderately Stable | |
| | | Wind Speed (m/s) | | | | | | | | | | | |
| Wind Direction From | 0.23 0.50 | 0.51- 0.75 | 0.76- 1.0 | 1.1- 1.5 | 1.6- 2.0 | 2.1- 3.0 | 3.1- 5.0 | 5.1- 7.0 | 7.1- 10.0 | 10.1- 13.0 | 13.1- 18.0 | > 18.0 | Total |
| N | 1 | 5 | 6 | 25 | 11 | 5 | 2 | 0 | 0 | 0 | 0 | 0 | 55 |
| NNE | 5 | 21 | 34 | 66 | 32 | 9 | 1 | 0 | 0 | 0 | 0 | 0 | 168 |
| NE | 13 | 92 | 198 | 257 | 50 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 612 |
| ENE | 21 | 361 | 806 | 994 | 149 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 2337 |
| E | 44 | 371 | 356 | 149 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 929 |
| ESE | 23 | 160 | 122 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 320 |
| SE | 14 | 82 | 82 | 25 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 205 |
| SSE | 8 | 32 | 78 | 49 | 6 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 174 |
| S | 2 | 29 | 78 | 121 | 14 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 246 |
| SSW | 1 | 16 | 24 | 81 | 37 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 164 |
| SW | 1 | 4 | 15 | 38 | 21 | 19 | 2 | 0 | 0 | 0 | 0 | 0 | 100 |
| WSW | 0 | 0 | 5 | 6 | 4 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 19 |
| W | 2 | 2 | 3 | 5 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| WNW | 1 | 0 | 0 | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| NW | 0 | 0 | 2 | 1 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 7 |
| NNW | 1 | 0 | 3 | 2 | 5 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 15 |
| Totals | 137 | 1175 | 1812 | 1836 | 343 | 55 | 12 | 0 | 0 | 0 | 0 | 0 | 5370 |

Number of Calm Hours for this Table 18
 Number of Variable Direction Hours for this Table 0
 Number of Invalid Hours 297
 Number of Valid Hours for this Table 5370
 Total Hours for the Period 43823

SSSES - FSAR

Table Rev. 36

TABLE 2.3-81

Joint Frequency Distribution

| Hours at Each Wind Speed and Direction | | | | | | | | | | | | | |
|---|----------------------------|-----------------------------|----------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|----------------------------|-----------------------------|-----------------------------|------------------|--------------|
| Period of Record = 01/01/99 | | | | 1:00 - 12/31/03 | | | | 23:00 | | Total Period | | | |
| Elevation: | | | | Speed: 10M SPD | | | | Direction: 10M WD | | Lapse: DT60-10 | | | |
| Stability Class G | | | | Delta Temperature | | | | Extremely Stable | | | | | |
| <u>Wind</u> <u>Direction</u> <u>From</u> | <u>0.23</u> <u>0.50</u> | <u>0.51-</u> <u>0.75</u> | <u>0.76-</u> <u>1.0</u> | <u>1.1-</u> <u>1.5</u> | <u>1.6-</u> <u>2.0</u> | <u>2.1-</u> <u>3.0</u> | <u>3.1-</u> <u>5.0</u> | <u>5.1-</u> <u>7.0</u> | <u>7.1-</u> <u>10.0</u> | <u>10.1-</u> <u>13.0</u> | <u>13.1-</u> <u>18.0</u> | <u>> 18.0</u> | <u>Total</u> |
| N | 1 | 2 | 2 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| NNE | 1 | 16 | 17 | 17 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 55 |
| NE | 2 | 71 | 168 | 162 | 19 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 423 |
| ENE | 8 | 167 | 690 | 1065 | 186 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 2120 |
| E | 13 | 120 | 219 | 102 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 457 |
| ESE | 4 | 63 | 55 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 131 |
| SE | 3 | 31 | 35 | 12 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 84 |
| SSE | 0 | 14 | 23 | 15 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 55 |
| S | 0 | 5 | 12 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 34 |
| SSW | 1 | 2 | 8 | 7 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 24 |
| SW | 0 | 2 | 3 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| WSW | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| W | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| WNW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NW | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| NNW | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| Totals | 33 | 497 | 1232 | 1411 | 222 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 3405 |
| Number of Calm Hours for this Table | | | | | | | | 18 | | | | | |
| Number of Variable Direction Hours for this Table | | | | | | | | 0 | | | | | |
| Number of Invalid Hours | | | | | | | | 297 | | | | | |
| Number of Valid Hours for this Table | | | | | | | | 3405 | | | | | |
| Total Hours for the Period | | | | | | | | 43823 | | | | | |

SSSES - FSAR

Table Rev. 36

Table 2.3-82

Joint Frequency Distribution

Hours at Each Wind Speed and Direction

Period of Record = 01/01/99 1:00 - 12/31/03 23:00 Total Period
Elevation: Speed: 10M SPD Direction: 10M WDLapse: DT60-10

Summary of All Stability Classes Delta Temperature

| <u>Wind</u> <u>Direction</u> <u>From</u> | Wind Speed (m/s) | | | | | | | | | | | | Total |
|--|------------------|---------------|--------------|-------------|-------------|-------------|-------------|-------------|--------------|---------------|---------------|--------|-------|
| | 0.23 0.50 | 0.51- 0.75 | 0.76- 1.0 | 1.1- 1.5 | 1.6- 2.0 | 2.1- 3.0 | 3.1- 5.0 | 5.1- 7.0 | 7.1- 10.0 | 10.1- 13.0 | 13.1- 18.0 | > 18.0 | |
| N | 6 | 29 | 59 | 198 | 284 | 625 | 914 | 118 | 0 | 0 | 0 | 0 | 2233 |
| NNE | 10 | 86 | 228 | 635 | 613 | 910 | 555 | 29 | 0 | 0 | 0 | 0 | 3066 |
| NE | 37 | 320 | 774 | 1277 | 602 | 715 | 286 | 60 | 0 | 0 | 0 | 0 | 4017 |
| ENE | 57 | 858 | 2097 | 2828 | 625 | 232 | 71 | 6 | 0 | 0 | 0 | 0 | 6774 |
| E | 108 | 955 | 1114 | 667 | 192 | 170 | 44 | 5 | 0 | 0 | 0 | 0 | 3255 |
| ESE | 87 | 557 | 545 | 305 | 184 | 193 | 80 | 12 | 3 | 1 | 0 | 0 | 1967 |
| SE | 62 | 367 | 467 | 433 | 263 | 313 | 186 | 24 | 5 | 0 | 0 | 0 | 2120 |
| SSE | 37 | 194 | 364 | 462 | 310 | 311 | 161 | 16 | 1 | 0 | 0 | 0 | 1856 |
| S | 15 | 135 | 398 | 808 | 481 | 559 | 268 | 26 | 0 | 0 | 0 | 0 | 2690 |
| SSW | 5 | 75 | 214 | 752 | 730 | 918 | 357 | 1 | 0 | 0 | 0 | 0 | 3066 |
| SW | 4 | 28 | 88 | 452 | 589 | 1385 | 1698 | 276 | 14 | 0 | 0 | 0 | 4534 |
| WSW | 0 | 8 | 34 | 165 | 241 | 430 | 1053 | 578 | 104 | 1 | 0 | 0 | 2614 |
| W | 4 | 4 | 18 | 88 | 123 | 254 | 548 | 206 | 36 | 0 | 0 | 0 | 1281 |
| WNW | 1 | 4 | 11 | 42 | 79 | 213 | 388 | 110 | 19 | 0 | 0 | 0 | 867 |
| NW | 2 | 5 | 18 | 51 | 93 | 328 | 703 | 189 | 6 | 0 | 0 | 0 | 1395 |
| NNW | 1 | 11 | 17 | 59 | 103 | 414 | 851 | 305 | 12 | 0 | 0 | 0 | 1773 |
| Totals | 436 | 3636 | 6446 | 9222 | 5512 | 7970 | 8163 | 1921 | 200 | 2 | 0 | 0 | 43508 |

Number of Calm Hours for this Table 18
Number of Variable Direction Hours for this Table 0
Number of Invalid Hours 297
Number of Valid Hours for this Table 1751
Total Hours for the Period 43823

SSSES - FSAR

Table Rev 36

TABLE 2.3-84

Joint Frequency Distribution

| Hours at Each Wind Speed and Direction | | | | | | | | | | | | | |
|--|------|-------|-------|-------------------|------|------|------|--------------------|------|--------------|-------|---------------|-------|
| Period of Record = 01/01/99 | | | | 1:00-12/31/03 | | | | 23:00 | | Total Period | | | |
| Elevation: Speed: | | | | 60M SPD | | | | Direction: | | 60M WD | | Lapse:DT60-10 | |
| Stability Class A | | | | Delta Temperature | | | | Extremely Unstable | | | | | |
| Wind Speed (m/s) | | | | | | | | | | | | | |
| Wind | 0.23 | 0.51- | 0.76- | 1.1- | 1.6- | 2.1- | 3.1- | 5.1- | 7.1- | 10.1- | 13.1- | | |
| Direction | 0.50 | 0.75 | 1.0 | 1.5 | 2.0 | 3.0 | 5.0 | 7.0 | 10.0 | 13.0 | 18.0 | > 18.0 | Total |
| From | | | | | | | | | | | | | |
| N | 0 | 0 | 0 | 0 | 1 | 2 | 30 | 12 | 4 | 0 | 0 | 0 | 49 |
| NNE | 0 | 0 | 0 | 0 | 1 | 14 | 45 | 32 | 7 | 0 | 0 | 0 | 99 |
| NE | 1 | 0 | 1 | 11 | 16 | 23 | 47 | 11 | 3 | 0 | 0 | 0 | 113 |
| ENE | 0 | 2 | 2 | 11 | 12 | 9 | 3 | 0 | 1 | 0 | 0 | 0 | 40 |
| E | 0 | 0 | 2 | 5 | 9 | 5 | 1 | 0 | 1 | 0 | 0 | 0 | 23 |
| ESE | 0 | 0 | 2 | 6 | 4 | 8 | 5 | 5 | 0 | 0 | 0 | 0 | 30 |
| SE | 0 | 0 | 1 | 3 | 4 | 7 | 27 | 18 | 1 | 0 | 0 | 0 | 61 |
| SSE | 0 | 0 | 0 | 2 | 3 | 11 | 33 | 17 | 1 | 0 | 0 | 0 | 67 |
| S | 0 | 1 | 3 | 5 | 6 | 24 | 46 | 55 | 10 | 1 | 0 | 0 | 151 |
| SSW | 0 | 0 | 0 | 6 | 13 | 49 | 85 | 62 | 22 | 0 | 0 | 0 | 237 |
| SW | 0 | 0 | 0 | 8 | 12 | 49 | 239 | 169 | 28 | 1 | 0 | 0 | 506 |
| WSW | 0 | 0 | 0 | 2 | 2 | 13 | 85 | 121 | 34 | 3 | 0 | 0 | 260 |
| W | 0 | 0 | 0 | 1 | 2 | 0 | 26 | 40 | 3 | 0 | 0 | 0 | 72 |
| WNW | 0 | 0 | 0 | 0 | 1 | 1 | 5 | 9 | 0 | 0 | 0 | 0 | 16 |
| NW | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 6 | 0 | 0 | 0 | 0 | 8 |
| NNW | 0 | 0 | 0 | 0 | 0 | 1 | 7 | 9 | 0 | 0 | 0 | 0 | 17 |
| Totals | 1 | 3 | 12 | 60 | 86 | 216 | 685 | 566 | 115 | 5 | 0 | 0 | 1749 |

| | |
|---|-------|
| Number of Calm Hours for this Table | 3 |
| Number of Variable Direction Hours for this Table | 0 |
| Number of Invalid Hours | 385 |
| Number of Valid Hours for this Table | 1749 |
| Total Hours for the Period | 43823 |

SSSES - FSAR

Table 36

TABLE 2.3-85

Joint Frequency Distribution

Hours at Each Wind Speed and Direction
Period of Record = 01/01/99 1:00- 12/31/03 23:00 Total Period
Elevation: Speed: 60M SPD Direction: 60M WD Lapse: DT60-10
Stability Class B Delta Temperature Moderately Unstable

| <u>Wind</u> <u>Direction</u> <u>From</u> | Wind Speed (m/s) | | | | | | | | | | | | Total |
|--|------------------|---------------|--------------|-------------|-------------|-------------|-------------|-------------|--------------|---------------|---------------|--------|-------|
| | 0.23 0.50 | 0.51- 0.75 | 0.76- 1.0 | 1.1- 1.5 | 1.6- 2.0 | 2.1- 3.0 | 3.1- 5.0 | 5.1- 7.0 | 7.1- 10.0 | 10.1- 13.0 | 13.1- 18.0 | > 18.0 | |
| N | 0 | 0 | 0 | 1 | 3 | 8 | 27 | 27 | 3 | 0 | 0 | 0 | 69 |
| NNE | 0 | 0 | 0 | 4 | 10 | 22 | 57 | 19 | 5 | 0 | 0 | 0 | 117 |
| NE | 0 | 0 | 4 | 11 | 22 | 30 | 33 | 12 | 1 | 0 | 0 | 0 | 113 |
| ENE | 0 | 0 | 2 | 9 | 8 | 15 | 5 | 1 | 0 | 0 | 0 | 0 | 40 |
| E | 0 | 0 | 3 | 7 | 4 | 9 | 4 | 2 | 1 | 0 | 0 | 0 | 30 |
| ESE | 0 | 0 | 2 | 4 | 8 | 5 | 11 | 2 | 0 | 0 | 0 | 0 | 32 |
| SE | 0 | 0 | 1 | 6 | 0 | 10 | 12 | 10 | 2 | 0 | 0 | 0 | 41 |
| SSE | 0 | 0 | 0 | 0 | 1 | 4 | 20 | 5 | 0 | 0 | 0 | 0 | 30 |
| S | 0 | 0 | 0 | 3 | 6 | 10 | 28 | 22 | 3 | 0 | 0 | 0 | 72 |
| SSW | 0 | 0 | 2 | 2 | 11 | 31 | 47 | 25 | 13 | 1 | 0 | 0 | 132 |
| SW | 0 | 0 | 0 | 2 | 10 | 51 | 145 | 101 | 28 | 4 | 0 | 0 | 341 |
| WSW | 0 | 0 | 0 | 0 | 2 | 6 | 67 | 86 | 55 | 1 | 0 | 0 | 217 |
| W | 0 | 0 | 0 | 0 | 0 | 3 | 21 | 28 | 6 | 0 | 0 | 0 | 58 |
| WNW | 0 | 0 | 0 | 0 | 0 | 2 | 8 | 7 | 0 | 0 | 0 | 0 | 17 |
| NW | 0 | 0 | 0 | 0 | 3 | 2 | 13 | 5 | 1 | 0 | 0 | 0 | 24 |
| NNW | 0 | 0 | 0 | 0 | 1 | 3 | 10 | 12 | 1 | 1 | 0 | 0 | 28 |
| Totals | 0 | 0 | 14 | 49 | 89 | 211 | 508 | 364 | 119 | 7 | 0 | 0 | 1361 |

Number of Calm Hours for this Table 3
Number of Variable Direction Hours for this Table 0
Number of Invalid Hours 385
Number of Valid Hours for this Table 1361
Total Hours for the Period 43823

SSES - FSAR

Table Rev. 36

TABLE 2.3-86

Joint Frequency Distribution

Hours at Each Wind Speed and Direction

Period of Record = 01/01/99 1:00- 12/31/03 23:00 Total Period
Elevation: Speed: 60M SPD Direction: 60M WDLapse: DT60-10

Stability Class C

Delta Temperature Slightly Unstable

| <u>Wind Direction From</u> | Wind Speed (m/s) | | | | | | | | | | | | Total |
|------------------------------------|------------------|---------------|--------------|-------------|-------------|-------------|-------------|-------------|--------------|---------------|---------------|--------|-------|
| | 0.23 0.50 | 0.51- 0.75 | 0.76- 1.0 | 1.1- 1.5 | 1.6- 2.0 | 2.1- 3.0 | 3.1- 5.0 | 5.1- 7.0 | 7.1- 10.0 | 10.1- 13.0 | 13.1- 18.0 | > 18.0 | |
| N | 0 | 0 | 0 | 2 | 6 | 9 | 45 | 43 | 1 | 0 | 0 | 0 | 106 |
| NNE | 0 | 0 | 0 | 9 | 18 | 30 | 74 | 37 | 5 | 0 | 0 | 0 | 173 |
| NE | 0 | 0 | 4 | 10 | 8 | 31 | 32 | 11 | 1 | 0 | 0 | 0 | 97 |
| ENE | 0 | 2 | 6 | 13 | 11 | 21 | 7 | 4 | 0 | 0 | 0 | 0 | 64 |
| E | 0 | 1 | 3 | 13 | 9 | 5 | 5 | 1 | 0 | 0 | 0 | 0 | 37 |
| ESE | 0 | 1 | 1 | 1 | 4 | 10 | 11 | 3 | 0 | 0 | 0 | 0 | 31 |
| SE | 0 | 0 | 3 | 6 | 7 | 14 | 16 | 8 | 2 | 0 | 0 | 0 | 56 |
| SSE | 0 | 1 | 1 | 3 | 7 | 10 | 15 | 7 | 3 | 0 | 0 | 0 | 47 |
| S | 0 | 0 | 5 | 9 | 11 | 23 | 37 | 23 | 6 | 0 | 0 | 0 | 114 |
| SSW | 0 | 0 | 0 | 15 | 18 | 52 | 57 | 27 | 9 | 0 | 0 | 0 | 178 |
| SW | 0 | 0 | 0 | 3 | 15 | 69 | 187 | 77 | 31 | 1 | 0 | 0 | 383 |
| WSW | 0 | 0 | 0 | 1 | 7 | 18 | 88 | 140 | 78 | 7 | 0 | 0 | 339 |
| W | 0 | 0 | 0 | 1 | 2 | 4 | 24 | 51 | 20 | 1 | 0 | 0 | 103 |
| WNW | 0 | 1 | 0 | 1 | 0 | 5 | 28 | 12 | 1 | 0 | 0 | 0 | 48 |
| NW | 0 | 0 | 0 | 0 | 0 | 3 | 26 | 12 | 2 | 0 | 0 | 0 | 43 |
| NNW | 0 | 0 | 0 | 87 | 124 | 310 | 683 | 480 | 165 | 9 | 0 | 0 | 68 |
| Totals | 0 | 6 | 23 | 87 | 124 | 310 | 683 | 480 | 165 | 9 | 0 | 0 | 1887 |

Number of Calm Hours for this Table 3
Number of Variable Direction Hours for this Table 0
Number of Invalid Hours 385
Number of Valid Hours for this Table 1887
Total Hours for the Period 43823

SSES - FSAR

Table Rev. 36

TABLE 2.3-87

Joint Frequency Distribution

Hours at Each Wind Speed and Direction

Period of Record = 01/01/99 1:00 - 12/31/03 23:00 Total Period
Elevation: Speed: 60M SPD Direction: 60M WD Lapse: DT60-10

Stability Class D

Delta Temperature Neutral

| <u>Wind</u> <u>Direction</u> <u>From</u> | Wind Speed (m/s) | | | | | | | | | | | | Total |
|--|------------------|---------------|--------------|-------------|-------------|-------------|-------------|-------------|--------------|---------------|---------------|--------|-------|
| | 0.23 0.50 | 0.51- 0.75 | 0.76- 1.0 | 1.1- 1.5 | 1.6- 2.0 | 2.1- 3.0 | 3.1- 5.0 | 5.1- 7.0 | 7.1- 10.0 | 10.1- 13.0 | 13.1- 18.0 | > 18.0 | |
| N | 0 | 6 | 5 | 45 | 52 | 159 | 578 | 343 | 50 | 0 | 0 | 0 | 1238 |
| NNE | 4 | 6 | 33 | 124 | 154 | 289 | 584 | 283 | 46 | 2 | 0 | 0 | 1525 |
| NE | 1 | 25 | 82 | 183 | 131 | 288 | 455 | 139 | 16 | 1 | 0 | 0 | 1321 |
| ENE | 3 | 26 | 60 | 106 | 83 | 169 | 143 | 35 | 3 | 3 | 0 | 0 | 631 |
| E | 4 | 28 | 50 | 71 | 60 | 146 | 156 | 26 | 14 | 1 | 0 | 0 | 556 |
| ESE | 1 | 26 | 39 | 52 | 51 | 107 | 170 | 54 | 12 | 1 | 3 | 0 | 516 |
| SE | 2 | 20 | 45 | 75 | 53 | 130 | 241 | 82 | 22 | 8 | 0 | 0 | 678 |
| SSE | 2 | 13 | 41 | 88 | 59 | 115 | 258 | 88 | 26 | 7 | 0 | 0 | 697 |
| S | 1 | 15 | 39 | 115 | 76 | 105 | 221 | 122 | 44 | 5 | 0 | 0 | 743 |
| SSW | 1 | 9 | 32 | 131 | 156 | 202 | 255 | 192 | 66 | 4 | 0 | 0 | 1048 |
| SW | 1 | 2 | 23 | 112 | 187 | 405 | 625 | 403 | 110 | 5 | 0 | 0 | 1873 |
| WSW | 0 | 2 | 9 | 26 | 70 | 177 | 583 | 849 | 678 | 99 | 9 | 0 | 2502 |
| W | 2 | 5 | 2 | 7 | 23 | 77 | 361 | 423 | 230 | 34 | 5 | 0 | 1169 |
| WNW | 0 | 1 | 3 | 8 | 13 | 75 | 329 | 238 | 107 | 7 | 0 | 0 | 781 |
| NW | 1 | 2 | 3 | 5 | 9 | 81 | 531 | 482 | 98 | 1 | 0 | 0 | 1213 |
| NNW | 0 | 2 | 3 | 23 | 18 | 86 | 550 | 506 | 133 | 0 | 0 | 0 | 1321 |
| Totals | 23 | 188 | 469 | 1171 | 1195 | 2611 | 6040 | 4265 | 1655 | 178 | 17 | 0 | 17812 |

Number of Calm Hours for this Table 3
Number of Variable Direction Hours for this Table 0
Number of Invalid Hours 385
Number of Valid Hours for this Table 17812
Total Hours for the Period 43823

SSSES - FSAR

Table Rev, 36

TABLE 2.3-88

Joint Frequency Distribution

| Hours at Each Wind Speed and Direction | | | | | | | | | | | | | |
|---|-------------|-------------|------------|-------------------|------------|------------|------------|-----------------|-------------|-------------|-------------|------------------|--------------|
| Period of Record = 01/01/99 | | | | 1:00 - | | | | 12/31/03 23:00 | | | | Total Period | |
| Elevation: Speed: | | | | 60M SPDDirection: | | | | 60M WD Lapse: | | | | DT60-10 | |
| Stability Class E | | | | Delta Temperature | | | | Slightly Stable | | | | | |
| Wind Speed (m/s) | | | | | | | | | | | | | |
| <u>Wind</u> | 0.23 | 0.51- | 0.76- | 1.1- | 1.6- | 2.1- | 3.1- | 5.1- | 7.1- | 10.1- | 13.1- | | |
| <u>Direction</u> | <u>0.50</u> | <u>0.75</u> | <u>1.0</u> | <u>1.5</u> | <u>2.0</u> | <u>3.0</u> | <u>5.0</u> | <u>7.0</u> | <u>10.0</u> | <u>13.0</u> | <u>18.0</u> | <u>> 18.0</u> | <u>Total</u> |
| <u>From</u> | | | | | | | | | | | | | |
| N | 0 | 16 | 28 | 57 | 93 | 197 | 190 | 25 | 1 | 0 | 0 | 0 | 607 |
| NNE | 2 | 19 | 66 | 254 | 364 | 482 | 331 | 101 | 12 | 0 | 0 | 0 | 1631 |
| NE | 4 | 51 | 139 | 373 | 200 | 277 | 277 | 82 | 6 | 0 | 0 | 0 | 1409 |
| ENE | 9 | 50 | 112 | 139 | 84 | 140 | 73 | 7 | 1 | 3 | 0 | 0 | 618 |
| E | 9 | 54 | 87 | 107 | 61 | 71 | 76 | 10 | 2 | 1 | 0 | 0 | 478 |
| ESE | 5 | 48 | 70 | 78 | 36 | 62 | 63 | 11 | 7 | 2 | 0 | 0 | 382 |
| SE | 6 | 33 | 61 | 103 | 63 | 68 | 85 | 30 | 16 | 7 | 0 | 0 | 472 |
| SSE | 4 | 37 | 71 | 130 | 61 | 132 | 163 | 38 | 22 | 5 | 0 | 0 | 663 |
| S | 5 | 24 | 75 | 141 | 108 | 154 | 242 | 81 | 42 | 14 | 1 | 0 | 887 |
| SSW | 5 | 8 | 47 | 126 | 136 | 183 | 434 | 190 | 59 | 2 | 1 | 0 | 1191 |
| SW | 1 | 14 | 33 | 108 | 136 | 324 | 579 | 213 | 29 | 1 | 1 | 0 | 1439 |
| WSW | 0 | 6 | 17 | 42 | 85 | 157 | 419 | 384 | 57 | 3 | 0 | 0 | 1170 |
| W | 0 | 3 | 11 | 22 | 26 | 57 | 81 | 29 | 8 | 1 | 0 | 0 | 238 |
| WNW | 0 | 2 | 2 | 6 | 11 | 68 | 77 | 6 | 0 | 0 | 0 | 0 | 172 |
| NW | 0 | 3 | 5 | 15 | 13 | 49 | 168 | 35 | 3 | 0 | 0 | 0 | 291 |
| NNW | 1 | 6 | 10 | 14 | 14 | 54 | 118 | 15 | 0 | 1 | 0 | 0 | 233 |
| Totals | 51 | 374 | 834 | 1715 | 1491 | 2475 | 3376 | 1257 | 265 | 40 | 3 | 0 | 11881 |
| Number of Calm Hours for this Table | | | | | | | | | 3 | | | | |
| Number of Variable Direction Hours for this Table | | | | | | | | | 0 | | | | |
| Number of Invalid Hours | | | | | | | | | 385 | | | | |
| Number of Valid Hours for this Table | | | | | | | | | 11881 | | | | |
| Total Hours for the Period | | | | | | | | | 43823 | | | | |

SSSES - FSAR

Table Rev. 36

TABLE 2.3-89

Joint Frequency Distribution

| Period of Record = 01/01/99 | | Hours at Each Wind Speed and Direction | | | | | | | | | | 23:00 | | Total Period | | | |
|---|-------------|--|--------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|--------------|--------------------|--------------|---------------|--|---------|--|
| Elevation: Speed: | | 1:00 - 12/31/03 | | | | | | | | | | 60M SPD Direction: | | 60M WD Lapse: | | DT60-10 | |
| Stability Class F | | Delta Temperature | | | | | | | | | | Moderately Stable | | | | | |
| | | Wind Speed (m/s) | | | | | | | | | | | | | | | |
| <u>Wind</u> | <u>0.23</u> | <u>0.51-</u> | <u>0.76-</u> | <u>1.1-</u> | <u>1.6-</u> | <u>2.1-</u> | <u>3.1-</u> | <u>5.1-</u> | <u>7.1-</u> | <u>10.1-</u> | <u>13.1-</u> | | | | | | |
| <u>Direction</u> | <u>0.50</u> | <u>0.75</u> | <u>1.0</u> | <u>1.5</u> | <u>2.0</u> | <u>3.0</u> | <u>5.0</u> | <u>7.0</u> | <u>10.0</u> | <u>13.0</u> | <u>18.0</u> | <u>> 18.0</u> | <u>Total</u> | | | | |
| <u>From</u> | | | | | | | | | | | | | | | | | |
| N | 2 | 3 | 13 | 47 | 82 | 176 | 37 | 3 | 0 | 0 | 0 | 0 | 363 | | | | |
| NNE | 0 | 16 | 33 | 269 | 503 | 677 | 100 | 0 | 0 | 0 | 0 | 0 | 1598 | | | | |
| NE | 7 | 28 | 97 | 340 | 243 | 154 | 34 | 0 | 0 | 0 | 0 | 0 | 903 | | | | |
| ENE | 8 | 28 | 87 | 132 | 47 | 20 | 3 | 0 | 0 | 0 | 0 | 0 | 325 | | | | |
| E | 7 | 20 | 65 | 101 | 36 | 15 | 4 | 1 | 0 | 0 | 0 | 0 | 249 | | | | |
| ESE | 3 | 26 | 55 | 64 | 23 | 9 | 2 | 0 | 0 | 0 | 0 | 0 | 182 | | | | |
| SE | 1 | 20 | 45 | 90 | 24 | 13 | 5 | 0 | 0 | 0 | 0 | 0 | 198 | | | | |
| SSE | 1 | 8 | 29 | 87 | 30 | 22 | 12 | 1 | 0 | 0 | 0 | 0 | 190 | | | | |
| S | 1 | 8 | 17 | 82 | 53 | 57 | 33 | 1 | 0 | 0 | 0 | 0 | 252 | | | | |
| SSW | 1 | 4 | 16 | 41 | 72 | 97 | 80 | 8 | 1 | 0 | 0 | 0 | 320 | | | | |
| SW | 0 | 4 | 3 | 31 | 44 | 128 | 142 | 16 | 1 | 0 | 0 | 0 | 369 | | | | |
| WSW | 0 | 2 | 5 | 8 | 14 | 22 | 124 | 65 | 2 | 0 | 0 | 0 | 242 | | | | |
| W | 0 | 3 | 3 | 6 | 5 | 11 | 6 | 0 | 0 | 0 | 0 | 0 | 34 | | | | |
| WNW | 0 | 2 | 2 | 2 | 7 | 8 | 5 | 0 | 0 | 0 | 0 | 0 | 26 | | | | |
| NW | 0 | 1 | 2 | 5 | 7 | 20 | 11 | 2 | 0 | 0 | 0 | 0 | 48 | | | | |
| NNW | 0 | 1 | 4 | 10 | 11 | 14 | 10 | 1 | 0 | 0 | 0 | 0 | 51 | | | | |
| Totals | 31 | 174 | 476 | 1315 | 1201 | 1443 | 608 | 98 | 4 | 0 | 0 | 0 | 5350 | | | | |
| Number of Calm Hours for this Table | | | | | | | | | 3 | | | | | | | | |
| Number of Variable Direction Hours for this Table | | | | | | | | | 0 | | | | | | | | |
| Number of Invalid Hours | | | | | | | | | 385 | | | | | | | | |
| Number of Valid Hours for this Table | | | | | | | | | 5350 | | | | | | | | |
| Total Hours for the Period | | | | | | | | | 43823 | | | | | | | | |

SSES - FSAR

Table Rev. 36

TABLE 2.3-90

Joint Frequency Distribution

Hours at Each Wind Speed and Direction

Period of Record = 01/01/99 1:00 - 12/31/03 23:00 Total Period
Elevation:Speed: 60M SPD Direction: 60M WD Lapse: DT60-10

Stability Class G

Delta Temperature Extremely Stable

| <u>Wind</u> <u>Direction</u> <u>From</u> | Wind Speed (m/s) | | | | | | | | | | | | Total |
|--|------------------|---------------|--------------|-------------|-------------|-------------|-------------|-------------|--------------|---------------|---------------|--------|-------|
| | 0.23 0.50 | 0.51- 0.75 | 0.76- 1.0 | 1.1- 1.5 | 1.6- 2.0 | 2.1- 3.0 | 3.1- 5.0 | 5.1- 7.0 | 7.1- 10.0 | 10.1- 13.0 | 13.1- 18.0 | > 18.0 | |
| N | 0 | 3 | 6 | 29 | 62 | 163 | 42 | 0 | 0 | 0 | 0 | 0 | 305 |
| NNE | 1 | 6 | 21 | 169 | 418 | 365 | 39 | 0 | 0 | 0 | 0 | 0 | 1019 |
| NE | 3 | 11 | 53 | 226 | 208 | 108 | 12 | 0 | 0 | 0 | 0 | 0 | 621 |
| ENE | 0 | 10 | 53 | 105 | 45 | 20 | 3 | 0 | 0 | 0 | 0 | 0 | 236 |
| E | 1 | 8 | 50 | 84 | 10 | 10 | 1 | 0 | 0 | 0 | 0 | 0 | 164 |
| ESE | 2 | 14 | 31 | 68 | 19 | 5 | 3 | 0 | 0 | 0 | 0 | 0 | 142 |
| SE | 0 | 4 | 26 | 66 | 16 | 12 | 1 | 0 | 0 | 0 | 0 | 0 | 125 |
| SSE | 1 | 5 | 19 | 47 | 32 | 10 | 1 | 1 | 0 | 0 | 0 | 0 | 116 |
| S | 0 | 3 | 11 | 41 | 47 | 60 | 18 | 2 | 0 | 0 | 0 | 0 | 182 |
| SSW | 0 | 1 | 4 | 23 | 31 | 72 | 49 | 6 | 0 | 0 | 0 | 0 | 186 |
| SW | 0 | 0 | 5 | 16 | 24 | 70 | 48 | 5 | 0 | 0 | 0 | 0 | 168 |
| WSW | 0 | 0 | 3 | 4 | 8 | 9 | 25 | 13 | 1 | 0 | 0 | 0 | 63 |
| W | 0 | 0 | 1 | 3 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 7 |
| WNW | 0 | 0 | 1 | 3 | 0 | 6 | 3 | 0 | 0 | 0 | 0 | 0 | 13 |
| NW | 1 | 1 | 0 | 4 | 3 | 8 | 6 | 0 | 0 | 0 | 0 | 0 | 23 |
| NNW | 0 | 0 | 0 | 4 | 0 | 14 | 7 | 0 | 0 | 0 | 0 | 0 | 25 |
| Totals | 9 | 66 | 284 | 892 | 924 | 933 | 259 | 27 | 1 | 0 | 0 | 0 | 3395 |

Number of Calm Hours for this Table 3
Number of Variable Direction Hours for this Table 0
Number of Invalid Hours 385
Number of Valid Hours for this Table 3395
Total Hours for the Period 43823

SSSES - FSAR

Table Rev. 36

TABLE 2.3-91

Joint Frequency Distribution

| Hours at Each Wind Speed and Direction | | | | | | | | | | | | | |
|---|-------------|--------------|--------------|-------------|-------------|-------------------|-------------|-------------|-------------|--------------|--------------|------------------|--------------|
| Period of Record = 01/01/99 | | | | 1:00- | | 12/31/03 | | 23:00 | | Total Period | | | |
| Elevation: Speed: | | | | 60M SPD | | Direction: | | 60M WD | | Lapse: | | DT60-10 | |
| Summary of All Stability Classes | | | | | | Delta Temperature | | | | | | | |
| <u>Wind</u> | <u>0.23</u> | <u>0.51-</u> | <u>0.76-</u> | <u>1.1-</u> | <u>1.6-</u> | <u>2.1-</u> | <u>3.1-</u> | <u>5.1-</u> | <u>7.1-</u> | <u>10.1-</u> | <u>13.1-</u> | | |
| <u>Direction</u> | <u>0.50</u> | <u>0.75</u> | <u>1.0</u> | <u>1.5</u> | <u>2.0</u> | <u>3.0</u> | <u>5.0</u> | <u>7.0</u> | <u>10.0</u> | <u>13.0</u> | <u>18.0</u> | <u>> 18.0</u> | <u>Total</u> |
| <u>From</u> | | | | | | | | | | | | | |
| N | 2 | 28 | 52 | 181 | 299 | 714 | 949 | 453 | 59 | 0 | 0 | 0 | 2737 |
| NNE | 7 | 47 | 153 | 829 | 1468 | 1879 | 1230 | 472 | 75 | 2 | 0 | 0 | 6162 |
| NE | 16 | 115 | 380 | 1154 | 828 | 911 | 890 | 255 | 27 | 1 | 0 | 0 | 4577 |
| ENE | 20 | 118 | 322 | 515 | 290 | 394 | 237 | 47 | 5 | 6 | 0 | 0 | 1954 |
| E | 21 | 111 | 260 | 388 | 189 | 261 | 247 | 40 | 18 | 2 | 0 | 0 | 1537 |
| ESE | 11 | 115 | 200 | 273 | 145 | 206 | 265 | 75 | 19 | 3 | 3 | 0 | 1315 |
| SE | 9 | 77 | 182 | 349 | 167 | 254 | 387 | 148 | 43 | 15 | 0 | 0 | 1631 |
| SSE | 8 | 64 | 161 | 357 | 193 | 304 | 502 | 157 | 52 | 12 | 0 | 0 | 1810 |
| S | 7 | 51 | 150 | 396 | 307 | 433 | 625 | 306 | 105 | 20 | 1 | 0 | 2401 |
| SSW | 7 | 22 | 101 | 344 | 437 | 686 | 1007 | 510 | 170 | 7 | 1 | 0 | 3292 |
| SW | 2 | 20 | 64 | 280 | 428 | 1096 | 1965 | 984 | 227 | 12 | 1 | 0 | 5079 |
| WSW | 0 | 10 | 34 | 83 | 188 | 402 | 1391 | 1658 | 905 | 113 | 9 | 0 | 4793 |
| W | 2 | 11 | 17 | 40 | 59 | 153 | 520 | 571 | 267 | 36 | 5 | 0 | 1681 |
| WNW | 0 | 6 | 8 | 20 | 32 | 165 | 455 | 272 | 108 | 7 | 0 | 0 | 1073 |
| NW | 2 | 7 | 11 | 29 | 35 | 163 | 756 | 542 | 104 | 1 | 0 | 0 | 1650 |
| NNW | 1 | 9 | 17 | 51 | 45 | 178 | 733 | 567 | 140 | 2 | 0 | 0 | 1743 |
| Totals | 115 | 811 | 2112 | 5289 | 5110 | 8199 | 12159 | 7057 | 2324 | 239 | 20 | 0 | 43435 |
| Number of Calm Hours for this Table | | | | | | | | | | 3 | | | |
| Number of Variable Direction Hours for this Table | | | | | | | | | | 0 | | | |
| Number of Invalid Hours | | | | | | | | | | 385 | | | |
| Number of Valid Hours for this Table | | | | | | | | | | 43435 | | | |
| Total Hours for the Period | | | | | | | | | | 43823 | | | |

SSES-FSAR

Table Rev. 36

Table 2.3-92

| SUMMARY OF SHORT-TERM X/Q (SEC/M3) RESULTS AT 549 METER EAB | | | | |
|--|-------------|---------------------------------------|-------------------------------------|---------------------------------------|
| Period of Record | Data Source | 1-hour 5% Direction Independent | 1-hour 5% Direction Dependent | 1-hour 5% Direction Independent |
| 1999 | SSES Tower | 6.5E-4 | 8.4E-4 | 1.2E-4 |
| 2000 | SSES Tower | 6.5E-4 | 8.2E-4 | 1.3E-4 |
| 2001 | SSES Tower | 6.6E-4 | 8.3E-4 | 1.4E-4 |
| 2002 | SSES Tower | 6.6E-4 | 8.4E-4 | 1.2E-4 |
| 2003 | SSES Tower | 4.9E-4 | 7.9E-4 | 1.2E-4 |
| 5-Year Combined | SSES Tower | 6.5E-4 | 8.3E-4 | 1.3E-4 |

SSES - FSAR

Table Rev 36

| Table 2.3-93 | | | | | | | | | | | | | | | | |
|---|-----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1999 Probability values for 1 hour at SSES EAB | | | | | | | | | | | | | | | | |
| Probability that the X/Q is Greater than the Adjacent Quantized Level | | | | | | | | | | | | | | | | |
| QUANTIZED LEVEL | DIRECTION | | | | | | | | | | | | | | | |
| | N | NNE | NE | ENE | E | ESE | SE | SSE | S | SSW | SW | WSW | W | WNW | NW | NNW |
| 0.00E+00 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1.00E-10 | 0.0616 | 0.0757 | 0.0964 | 0.1616 | 0.0759 | 0.0447 | 0.0445 | 0.0366 | 0.0521 | 0.0667 | 0.1023 | 0.063 | 0.0313 | 0.0177 | 0.0306 | 0.0393 |
| 3.50E-09 | 0.0616 | 0.0757 | 0.0964 | 0.1616 | 0.0759 | 0.0447 | 0.0445 | 0.0366 | 0.0521 | 0.0667 | 0.1023 | 0.063 | 0.0313 | 0.0177 | 0.0306 | 0.0393 |
| 1.00E-08 | 0.0616 | 0.0757 | 0.0964 | 0.1616 | 0.0759 | 0.0447 | 0.0445 | 0.0366 | 0.0521 | 0.0667 | 0.1023 | 0.063 | 0.0313 | 0.0177 | 0.0306 | 0.0393 |
| 2.50E-08 | 0.0616 | 0.0757 | 0.0964 | 0.1616 | 0.0759 | 0.0447 | 0.0445 | 0.0366 | 0.0521 | 0.0667 | 0.1023 | 0.063 | 0.0313 | 0.0177 | 0.0306 | 0.0393 |
| 7.00E-08 | 0.0616 | 0.0757 | 0.0964 | 0.1616 | 0.0759 | 0.0447 | 0.0445 | 0.0366 | 0.0521 | 0.0667 | 0.1023 | 0.063 | 0.0313 | 0.0177 | 0.0306 | 0.0393 |
| 1.00E-07 | 0.0616 | 0.0757 | 0.0964 | 0.1616 | 0.0759 | 0.0447 | 0.0445 | 0.0366 | 0.0521 | 0.0667 | 0.1023 | 0.063 | 0.0313 | 0.0177 | 0.0306 | 0.0393 |
| 1.50E-07 | 0.0616 | 0.0757 | 0.0964 | 0.1616 | 0.0759 | 0.0447 | 0.0445 | 0.0366 | 0.0521 | 0.0667 | 0.1023 | 0.063 | 0.0313 | 0.0177 | 0.0306 | 0.0393 |
| 2.20E-07 | 0.0616 | 0.0757 | 0.0964 | 0.1616 | 0.0759 | 0.0447 | 0.0445 | 0.0366 | 0.0521 | 0.0667 | 0.1023 | 0.063 | 0.0313 | 0.0177 | 0.0306 | 0.0393 |
| 3.20E-07 | 0.0616 | 0.0757 | 0.0964 | 0.1616 | 0.0759 | 0.0447 | 0.0445 | 0.0366 | 0.0521 | 0.0667 | 0.1023 | 0.063 | 0.0313 | 0.0177 | 0.0306 | 0.0393 |
| 4.80E-07 | 0.0616 | 0.0757 | 0.0964 | 0.1616 | 0.0759 | 0.0447 | 0.0445 | 0.0366 | 0.0521 | 0.0667 | 0.1023 | 0.063 | 0.0313 | 0.0177 | 0.0306 | 0.0393 |
| 7.00E-07 | 0.0616 | 0.0757 | 0.0964 | 0.1616 | 0.0759 | 0.0447 | 0.0445 | 0.0366 | 0.0521 | 0.0667 | 0.1023 | 0.063 | 0.0313 | 0.0177 | 0.0306 | 0.0393 |
| 1.00E-06 | 0.0616 | 0.0757 | 0.0964 | 0.1616 | 0.0759 | 0.0447 | 0.0445 | 0.0366 | 0.0521 | 0.0667 | 0.1023 | 0.063 | 0.0313 | 0.0177 | 0.0306 | 0.0393 |
| 1.50E-06 | 0.0616 | 0.0757 | 0.0964 | 0.1616 | 0.0759 | 0.0447 | 0.0445 | 0.0366 | 0.0521 | 0.0667 | 0.1023 | 0.063 | 0.0313 | 0.0177 | 0.0306 | 0.0393 |
| 2.00E-06 | 0.0616 | 0.0757 | 0.0964 | 0.1616 | 0.0759 | 0.0447 | 0.0445 | 0.0366 | 0.0521 | 0.0667 | 0.1023 | 0.063 | 0.0313 | 0.0177 | 0.0306 | 0.0393 |
| 3.00E-06 | 0.0616 | 0.0757 | 0.0964 | 0.1616 | 0.0759 | 0.0447 | 0.0445 | 0.0366 | 0.0521 | 0.0667 | 0.1023 | 0.0626 | 0.0313 | 0.0177 | 0.0306 | 0.0393 |
| 4.00E-06 | 0.0616 | 0.0747 | 0.0962 | 0.1615 | 0.0758 | 0.0447 | 0.0445 | 0.0366 | 0.0519 | 0.0665 | 0.1017 | 0.0611 | 0.0307 | 0.0177 | 0.0306 | 0.0393 |
| 5.00E-06 | 0.0616 | 0.0739 | 0.096 | 0.1615 | 0.0758 | 0.0446 | 0.0444 | 0.0366 | 0.0518 | 0.0663 | 0.0997 | 0.0572 | 0.0289 | 0.0169 | 0.0304 | 0.0393 |
| 7.00E-06 | 0.0604 | 0.0725 | 0.0947 | 0.1612 | 0.0758 | 0.0446 | 0.0436 | 0.036 | 0.0502 | 0.063 | 0.092 | 0.055 | 0.0272 | 0.0166 | 0.0304 | 0.0391 |
| 8.50E-06 | 0.0604 | 0.0719 | 0.0937 | 0.1611 | 0.0757 | 0.0444 | 0.0422 | 0.0358 | 0.049 | 0.0614 | 0.0905 | 0.0547 | 0.0272 | 0.0166 | 0.0304 | 0.039 |
| 1.00E-05 | 0.0602 | 0.0717 | 0.0935 | 0.1608 | 0.0755 | 0.0444 | 0.0416 | 0.0349 | 0.0481 | 0.0609 | 0.0889 | 0.054 | 0.0272 | 0.0166 | 0.0303 | 0.039 |
| 1.50E-05 | 0.0596 | 0.0708 | 0.0921 | 0.1601 | 0.0751 | 0.0438 | 0.0414 | 0.0347 | 0.0475 | 0.0602 | 0.0861 | 0.0529 | 0.0263 | 0.0164 | 0.03 | 0.0389 |
| 2.00E-05 | 0.0592 | 0.0695 | 0.0916 | 0.16 | 0.0743 | 0.0433 | 0.0411 | 0.0347 | 0.0469 | 0.0594 | 0.0836 | 0.0501 | 0.0258 | 0.0159 | 0.0298 | 0.0386 |
| 2.50E-05 | 0.0584 | 0.0688 | 0.0901 | 0.1599 | 0.0741 | 0.0429 | 0.0407 | 0.0344 | 0.0459 | 0.0587 | 0.082 | 0.049 | 0.0251 | 0.0157 | 0.0297 | 0.0382 |
| 3.00E-05 | 0.0573 | 0.0673 | 0.089 | 0.1594 | 0.074 | 0.0424 | 0.0404 | 0.0337 | 0.0456 | 0.0579 | 0.0807 | 0.0469 | 0.0237 | 0.0157 | 0.0292 | 0.0381 |
| 3.50E-05 | 0.0571 | 0.0662 | 0.0886 | 0.1592 | 0.0739 | 0.0422 | 0.0403 | 0.0337 | 0.0455 | 0.0575 | 0.0795 | 0.0456 | 0.0233 | 0.0155 | 0.029 | 0.0373 |
| 4.00E-05 | 0.0564 | 0.0655 | 0.0882 | 0.1587 | 0.0737 | 0.0421 | 0.0392 | 0.0336 | 0.0453 | 0.0565 | 0.078 | 0.0417 | 0.0225 | 0.015 | 0.0286 | 0.0347 |
| 5.00E-05 | 0.051 | 0.0633 | 0.0872 | 0.158 | 0.0728 | 0.0419 | 0.0385 | 0.0326 | 0.0446 | 0.0555 | 0.0739 | 0.0333 | 0.0193 | 0.0136 | 0.0257 | 0.0281 |
| 6.00E-05 | 0.0409 | 0.0603 | 0.0861 | 0.1577 | 0.0725 | 0.0417 | 0.0373 | 0.0325 | 0.0442 | 0.0545 | 0.0653 | 0.0255 | 0.015 | 0.0112 | 0.0205 | 0.0212 |
| 7.00E-05 | 0.0325 | 0.0555 | 0.0842 | 0.1569 | 0.0721 | 0.0412 | 0.0365 | 0.0308 | 0.0429 | 0.0534 | 0.0581 | 0.0214 | 0.0119 | 0.0088 | 0.0163 | 0.0164 |
| 8.50E-05 | 0.0214 | 0.0432 | 0.0763 | 0.1538 | 0.07 | 0.0383 | 0.0336 | 0.0286 | 0.0397 | 0.0467 | 0.0455 | 0.0167 | 0.0084 | 0.0048 | 0.0095 | 0.0099 |
| 1.00E-04 | 0.0153 | 0.0338 | 0.0679 | 0.1506 | 0.0683 | 0.0359 | 0.0314 | 0.0248 | 0.0351 | 0.0398 | 0.038 | 0.0119 | 0.0062 | 0.0036 | 0.0067 | 0.0067 |
| 1.30E-04 | 0.0087 | 0.0201 | 0.0534 | 0.1447 | 0.0647 | 0.0337 | 0.0257 | 0.0195 | 0.0267 | 0.0266 | 0.0185 | 0.0056 | 0.0033 | 0.0017 | 0.0021 | 0.0021 |
| 1.70E-04 | 0.0056 | 0.0144 | 0.046 | 0.1399 | 0.0612 | 0.031 | 0.0225 | 0.0166 | 0.0224 | 0.0183 | 0.0123 | 0.003 | 0.0019 | 0.0009 | 0.0011 | 0.0007 |
| 2.00E-04 | 0.0046 | 0.0111 | 0.04 | 0.1356 | 0.0571 | 0.0287 | 0.02 | 0.0146 | 0.0188 | 0.0125 | 0.0091 | 0.0021 | 0.0015 | 0.0005 | 0.0007 | 0.0006 |
| 2.50E-04 | 0.003 | 0.0071 | 0.0299 | 0.1235 | 0.0531 | 0.0257 | 0.0172 | 0.0112 | 0.0111 | 0.0071 | 0.0041 | 0.0009 | 0.0008 | 0.0002 | 0.0003 | 0.0003 |
| 3.00E-04 | 0.0023 | 0.0052 | 0.0237 | 0.1102 | 0.0479 | 0.0234 | 0.0147 | 0.0094 | 0.0081 | 0.0049 | 0.003 | 0.0006 | 0.0006 | 0 | 0.0002 | 0.0002 |
| 3.50E-04 | 0.0016 | 0.0034 | 0.0177 | 0.0935 | 0.039 | 0.0171 | 0.0103 | 0.0056 | 0.0058 | 0.0022 | 0.0017 | 0.0005 | 0.0003 | 0 | 0 | 0.0002 |
| 4.00E-04 | 0.0009 | 0.0028 | 0.0144 | 0.0784 | 0.0317 | 0.0142 | 0.0081 | 0.0038 | 0.0036 | 0.001 | 0.0011 | 0.0002 | 0.0001 | 0 | 0 | 0.0001 |
| 5.00E-04 | 0.0006 | 0.0022 | 0.0106 | 0.0544 | 0.0259 | 0.011 | 0.0056 | 0.0019 | 0.0021 | 0.0005 | 0.0006 | 0.0002 | 0 | 0 | 0 | 0.0001 |
| 6.00E-04 | 0.0006 | 0.0017 | 0.0078 | 0.0268 | 0.015 | 0.008 | 0.0036 | 0.0011 | 0.0009 | 0.0002 | 0.0002 | 0 | 0 | 0 | 0 | 0.0001 |
| 7.00E-04 | 0.0003 | 0.0009 | 0.004 | 0.0133 | 0.0078 | 0.0052 | 0.0021 | 0.0007 | 0.0008 | 0.0002 | 0.0001 | 0 | 0 | 0 | 0 | 0.0001 |
| 8.50E-04 | 0.0001 | 0.0005 | 0.0018 | 0.0046 | 0.004 | 0.0029 | 0.0013 | 0.0006 | 0.0003 | 0.0001 | 0 | 0 | 0 | 0 | 0 | 0.0001 |
| 1.00E-03 | 0.0001 | 0.0002 | 0.001 | 0.0023 | 0.0025 | 0.0015 | 0.0007 | 0.0001 | 0.0002 | 0.0001 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1.40E-03 | 0 | 0 | 0.0001 | 0.0003 | 0.0003 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

SSES-FSAR

Table 2.3-94

2000 Probability values for 1 hour at SSES EAB

Probability that the X/Q is Greater than the Adjacent Quantized Level

DIRECTION

| QUANTIZED LEVEL | N | NNE | NE | ENE | E | ESE | SE | SSE | S | SSW | SW | WSW | W | WNW | NW | NNW |
|-----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0.00E+00 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1.00E-10 | 0.0542 | 0.0685 | 0.0978 | 0.1613 | 0.0783 | 0.0403 | 0.0439 | 0.0365 | 0.0623 | 0.0669 | 0.0986 | 0.0558 | 0.0296 | 0.0235 | 0.0344 | 0.0479 |
| 3.50E-09 | 0.0542 | 0.0685 | 0.0978 | 0.1613 | 0.0783 | 0.0403 | 0.0439 | 0.0365 | 0.0623 | 0.0669 | 0.0986 | 0.0558 | 0.0296 | 0.0235 | 0.0344 | 0.0479 |
| 1.00E-08 | 0.0542 | 0.0685 | 0.0978 | 0.1613 | 0.0783 | 0.0403 | 0.0439 | 0.0365 | 0.0623 | 0.0669 | 0.0986 | 0.0558 | 0.0296 | 0.0235 | 0.0344 | 0.0479 |
| 2.50E-08 | 0.0542 | 0.0685 | 0.0978 | 0.1613 | 0.0783 | 0.0403 | 0.0439 | 0.0365 | 0.0623 | 0.0669 | 0.0986 | 0.0558 | 0.0296 | 0.0235 | 0.0344 | 0.0479 |
| 7.00E-08 | 0.0542 | 0.0685 | 0.0978 | 0.1613 | 0.0783 | 0.0403 | 0.0439 | 0.0365 | 0.0623 | 0.0669 | 0.0986 | 0.0558 | 0.0296 | 0.0235 | 0.0344 | 0.0479 |
| 1.00E-07 | 0.0542 | 0.0685 | 0.0978 | 0.1613 | 0.0783 | 0.0403 | 0.0439 | 0.0365 | 0.0623 | 0.0669 | 0.0986 | 0.0558 | 0.0296 | 0.0235 | 0.0344 | 0.0479 |
| 1.50E-07 | 0.0542 | 0.0685 | 0.0978 | 0.1613 | 0.0783 | 0.0403 | 0.0439 | 0.0365 | 0.0623 | 0.0669 | 0.0986 | 0.0558 | 0.0296 | 0.0235 | 0.0344 | 0.0479 |
| 2.20E-07 | 0.0542 | 0.0685 | 0.0978 | 0.1613 | 0.0783 | 0.0403 | 0.0439 | 0.0365 | 0.0623 | 0.0669 | 0.0986 | 0.0558 | 0.0296 | 0.0235 | 0.0344 | 0.0479 |
| 3.20E-07 | 0.0542 | 0.0685 | 0.0978 | 0.1613 | 0.0783 | 0.0403 | 0.0439 | 0.0365 | 0.0623 | 0.0669 | 0.0986 | 0.0558 | 0.0296 | 0.0235 | 0.0344 | 0.0479 |
| 4.80E-07 | 0.0542 | 0.0685 | 0.0978 | 0.1613 | 0.0783 | 0.0403 | 0.0439 | 0.0365 | 0.0623 | 0.0669 | 0.0986 | 0.0558 | 0.0296 | 0.0235 | 0.0344 | 0.0479 |
| 7.00E-07 | 0.0542 | 0.0685 | 0.0978 | 0.1613 | 0.0783 | 0.0403 | 0.0439 | 0.0365 | 0.0623 | 0.0669 | 0.0986 | 0.0558 | 0.0296 | 0.0235 | 0.0344 | 0.0479 |
| 1.50E-06 | 0.0542 | 0.0685 | 0.0978 | 0.1613 | 0.0783 | 0.0403 | 0.0439 | 0.0365 | 0.0623 | 0.0669 | 0.0986 | 0.0558 | 0.0296 | 0.0235 | 0.0344 | 0.0479 |
| 2.00E-06 | 0.0542 | 0.0685 | 0.0978 | 0.1613 | 0.0783 | 0.0403 | 0.0439 | 0.0365 | 0.0623 | 0.0669 | 0.0986 | 0.0558 | 0.0296 | 0.0235 | 0.0344 | 0.0479 |
| 3.00E-06 | 0.0542 | 0.0685 | 0.0978 | 0.1613 | 0.0783 | 0.0403 | 0.0439 | 0.0365 | 0.0623 | 0.0669 | 0.0986 | 0.0558 | 0.0296 | 0.0235 | 0.0344 | 0.0479 |
| 4.00E-06 | 0.0542 | 0.0685 | 0.0978 | 0.1613 | 0.0783 | 0.0403 | 0.0439 | 0.0365 | 0.0623 | 0.0669 | 0.0974 | 0.0546 | 0.0295 | 0.0235 | 0.0344 | 0.0479 |
| 5.00E-06 | 0.054 | 0.0683 | 0.0977 | 0.1611 | 0.0783 | 0.0403 | 0.0435 | 0.0364 | 0.0618 | 0.0666 | 0.095 | 0.0534 | 0.029 | 0.0234 | 0.0344 | 0.0479 |
| 7.00E-06 | 0.0535 | 0.0663 | 0.0967 | 0.161 | 0.0783 | 0.0402 | 0.0434 | 0.0363 | 0.0597 | 0.065 | 0.089 | 0.053 | 0.0288 | 0.0234 | 0.0342 | 0.0479 |
| 8.50E-06 | 0.0534 | 0.0661 | 0.0961 | 0.161 | 0.0782 | 0.0401 | 0.0433 | 0.0358 | 0.0589 | 0.064 | 0.0866 | 0.0526 | 0.0288 | 0.0234 | 0.0342 | 0.0478 |
| 1.00E-05 | 0.0531 | 0.0656 | 0.0955 | 0.1607 | 0.0782 | 0.0398 | 0.043 | 0.0356 | 0.0581 | 0.0634 | 0.0856 | 0.0519 | 0.0283 | 0.0234 | 0.0342 | 0.0476 |
| 1.50E-05 | 0.0524 | 0.0651 | 0.0944 | 0.1605 | 0.0779 | 0.0394 | 0.0429 | 0.0352 | 0.0574 | 0.0624 | 0.0828 | 0.0499 | 0.0265 | 0.0228 | 0.0339 | 0.0474 |
| 2.00E-05 | 0.0523 | 0.064 | 0.0938 | 0.16 | 0.0774 | 0.0389 | 0.0427 | 0.0349 | 0.0568 | 0.062 | 0.0801 | 0.0485 | 0.026 | 0.0226 | 0.0338 | 0.0469 |
| 2.50E-05 | 0.0518 | 0.0634 | 0.0934 | 0.1598 | 0.0773 | 0.0385 | 0.0425 | 0.0347 | 0.0564 | 0.061 | 0.078 | 0.0475 | 0.0256 | 0.0225 | 0.0338 | 0.0468 |
| 3.00E-05 | 0.0513 | 0.0627 | 0.093 | 0.1597 | 0.0771 | 0.0382 | 0.0424 | 0.0345 | 0.0554 | 0.0602 | 0.0766 | 0.0453 | 0.0251 | 0.0223 | 0.0337 | 0.0467 |
| 3.50E-05 | 0.0509 | 0.0623 | 0.0919 | 0.1594 | 0.0771 | 0.038 | 0.0422 | 0.0345 | 0.0547 | 0.0589 | 0.0753 | 0.0432 | 0.0244 | 0.0221 | 0.0336 | 0.0465 |
| 4.00E-05 | 0.05 | 0.0622 | 0.0912 | 0.1591 | 0.0768 | 0.0377 | 0.0422 | 0.0342 | 0.0546 | 0.0584 | 0.0733 | 0.0393 | 0.0242 | 0.021 | 0.0331 | 0.0451 |
| 5.00E-05 | 0.0467 | 0.0615 | 0.0905 | 0.1588 | 0.0767 | 0.0366 | 0.0418 | 0.034 | 0.0537 | 0.058 | 0.0689 | 0.0315 | 0.0215 | 0.0185 | 0.0303 | 0.0381 |
| 6.00E-05 | 0.0411 | 0.0608 | 0.0897 | 0.1584 | 0.0763 | 0.0362 | 0.0414 | 0.0338 | 0.0527 | 0.0567 | 0.0632 | 0.025 | 0.0174 | 0.0158 | 0.0236 | 0.0297 |
| 7.00E-05 | 0.0355 | 0.0588 | 0.0892 | 0.1582 | 0.0758 | 0.0357 | 0.041 | 0.0336 | 0.0521 | 0.0561 | 0.0575 | 0.0205 | 0.014 | 0.0124 | 0.0168 | 0.0218 |
| 8.50E-05 | 0.0225 | 0.049 | 0.0828 | 0.1547 | 0.074 | 0.0341 | 0.0394 | 0.0321 | 0.0477 | 0.0513 | 0.0441 | 0.0138 | 0.0079 | 0.0073 | 0.0084 | 0.0112 |
| 1.00E-04 | 0.0175 | 0.0406 | 0.0726 | 0.1514 | 0.0696 | 0.0318 | 0.0361 | 0.0295 | 0.043 | 0.0451 | 0.0349 | 0.0097 | 0.005 | 0.0042 | 0.0062 | 0.0078 |
| 1.30E-04 | 0.0097 | 0.0297 | 0.0599 | 0.1467 | 0.0651 | 0.0293 | 0.0306 | 0.0248 | 0.0356 | 0.0301 | 0.0177 | 0.0053 | 0.0027 | 0.001 | 0.0024 | 0.003 |
| 1.70E-04 | 0.0051 | 0.0193 | 0.0495 | 0.1395 | 0.0618 | 0.0269 | 0.0265 | 0.021 | 0.028 | 0.0207 | 0.0092 | 0.0027 | 0.0016 | 0.0007 | 0.0014 | 0.0018 |
| 2.00E-04 | 0.0039 | 0.0139 | 0.0424 | 0.1317 | 0.0574 | 0.0245 | 0.0224 | 0.0183 | 0.0226 | 0.0144 | 0.0056 | 0.0015 | 0.0009 | 0.0005 | 0.0008 | 0.001 |
| 2.50E-04 | 0.0023 | 0.009 | 0.0316 | 0.1169 | 0.051 | 0.0201 | 0.0183 | 0.0132 | 0.0147 | 0.0086 | 0.0029 | 0.0003 | 0.0007 | 0.0002 | 0.0002 | 0.0005 |
| 3.00E-04 | 0.0011 | 0.0061 | 0.0257 | 0.1024 | 0.0446 | 0.0166 | 0.0152 | 0.0098 | 0.0107 | 0.0057 | 0.0017 | 0.0001 | 0.0006 | 0.0001 | 0.0002 | 0.0002 |
| 3.50E-04 | 0.0007 | 0.0042 | 0.0196 | 0.0813 | 0.0381 | 0.014 | 0.0114 | 0.0068 | 0.007 | 0.003 | 0.001 | 0.0001 | 0.0003 | 0.0001 | 0.0001 | 0.0001 |
| 4.00E-04 | 0.0005 | 0.003 | 0.0161 | 0.0685 | 0.0311 | 0.011 | 0.0091 | 0.0053 | 0.0047 | 0.0023 | 0.0006 | 0.0001 | 0.0003 | 0.0001 | 0.0001 | 0.0001 |
| 5.00E-04 | 0.0002 | 0.0015 | 0.0122 | 0.0438 | 0.0218 | 0.0073 | 0.0058 | 0.0032 | 0.0023 | 0.001 | 0.0006 | 0 | 0.0003 | 0.0001 | 0.0001 | 0 |
| 6.00E-04 | 0.0001 | 0.0011 | 0.0079 | 0.025 | 0.0148 | 0.0051 | 0.0042 | 0.0017 | 0.0011 | 0.0009 | 0.0002 | 0 | 0.0003 | 0.0001 | 0 | 0 |
| 7.00E-04 | 0 | 0.0008 | 0.0049 | 0.013 | 0.0075 | 0.0021 | 0.0025 | 0.0007 | 0.0002 | 0.0006 | 0 | 0 | 0.0001 | 0.0001 | 0 | 0 |
| 8.50E-04 | 0 | 0.0005 | 0.0016 | 0.0031 | 0.0027 | 0.001 | 0.001 | 0.0001 | 0.0001 | 0.0001 | 0 | 0 | 0.0001 | 0 | 0 | 0 |
| 1.00E-03 | 0 | 0.0002 | 0.0009 | 0.0016 | 0.0014 | 0.0002 | 0.0006 | 0.0001 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1.40E-03 | 0 | 0 | 0.0001 | 0.0002 | 0.0001 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2.00E-03 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

SSES - FSAR

Table Rev. 36

| Table 2.3-95 | | | | | | | | | | | | | | | |
|---|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 2001 Probability values for 1 hour at SSES EAB | | | | | | | | | | | | | | | |
| Probability that the X/Q is Greater than the Adjacent Quantized Level | | | | | | | | | | | | | | | |
| DIRECTION | | | | | | | | | | | | | | | |
| QUANTIZED LEVEL | N | NNE | NE | ENE | E | ESE | SE | SSE | S | SSW | SW | WSW | W | WNW | NNW |
| 0.00E+00 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1.00E-10 | 0.0515 | 0.0592 | 0.0751 | 0.1698 | 0.0853 | 0.0466 | 0.0507 | 0.0465 | 0.0659 | 0.0674 | 0.1049 | 0.0558 | 0.0296 | 0.0235 | 0.0344 |
| 3.50E-09 | 0.0515 | 0.0592 | 0.0751 | 0.1698 | 0.0853 | 0.0466 | 0.0507 | 0.0465 | 0.0659 | 0.0674 | 0.1049 | 0.0558 | 0.0296 | 0.0235 | 0.0344 |
| 1.00E-08 | 0.0515 | 0.0592 | 0.0751 | 0.1698 | 0.0853 | 0.0466 | 0.0507 | 0.0465 | 0.0659 | 0.0674 | 0.1049 | 0.0558 | 0.0296 | 0.0235 | 0.0344 |
| 2.50E-08 | 0.0515 | 0.0592 | 0.0751 | 0.1698 | 0.0853 | 0.0466 | 0.0507 | 0.0465 | 0.0659 | 0.0674 | 0.1049 | 0.0558 | 0.0296 | 0.0235 | 0.0344 |
| 7.00E-08 | 0.0515 | 0.0592 | 0.0751 | 0.1698 | 0.0853 | 0.0466 | 0.0507 | 0.0465 | 0.0659 | 0.0674 | 0.1048 | 0.0554 | 0.0296 | 0.0235 | 0.0344 |
| 1.00E-07 | 0.0508 | 0.0585 | 0.0751 | 0.1698 | 0.0853 | 0.0466 | 0.0506 | 0.0465 | 0.0654 | 0.0669 | 0.0998 | 0.0526 | 0.0284 | 0.0234 | 0.0344 |
| 1.50E-07 | 0.0485 | 0.0562 | 0.0738 | 0.1697 | 0.0851 | 0.0465 | 0.0496 | 0.0457 | 0.0629 | 0.0645 | 0.0875 | 0.0495 | 0.0264 | 0.0226 | 0.0339 |
| 2.20E-07 | 0.0482 | 0.0542 | 0.0718 | 0.1685 | 0.0846 | 0.0457 | 0.0473 | 0.0436 | 0.0596 | 0.0591 | 0.08 | 0.0485 | 0.0259 | 0.0225 | 0.0338 |
| 3.20E-07 | 0.048 | 0.053 | 0.0707 | 0.1672 | 0.0835 | 0.0448 | 0.0455 | 0.0422 | 0.0575 | 0.0569 | 0.0768 | 0.0481 | 0.0258 | 0.0225 | 0.0337 |
| 4.80E-07 | 0.0477 | 0.0528 | 0.0698 | 0.1658 | 0.0825 | 0.0442 | 0.045 | 0.0417 | 0.0568 | 0.0559 | 0.0756 | 0.0476 | 0.0256 | 0.0225 | 0.0337 |
| 7.00E-07 | 0.0474 | 0.0524 | 0.0697 | 0.1656 | 0.0818 | 0.0436 | 0.045 | 0.0416 | 0.0565 | 0.0558 | 0.0741 | 0.0458 | 0.0251 | 0.0224 | 0.0336 |
| 1.00E-06 | 0.0454 | 0.0521 | 0.0695 | 0.1656 | 0.0818 | 0.0436 | 0.045 | 0.0415 | 0.0561 | 0.0554 | 0.0721 | 0.0445 | 0.0249 | 0.0218 | 0.0334 |
| 1.50E-06 | 0.0453 | 0.052 | 0.0692 | 0.1654 | 0.0815 | 0.0434 | 0.0447 | 0.0415 | 0.055 | 0.0545 | 0.0706 | 0.042 | 0.0243 | 0.0215 | 0.0333 |
| 2.00E-06 | 0.0451 | 0.0515 | 0.0688 | 0.1648 | 0.0813 | 0.043 | 0.0446 | 0.0413 | 0.0542 | 0.054 | 0.0681 | 0.0345 | 0.0229 | 0.0201 | 0.0316 |
| 3.00E-06 | 0.0322 | 0.0483 | 0.0674 | 0.1633 | 0.081 | 0.0429 | 0.043 | 0.0404 | 0.0534 | 0.0523 | 0.0545 | 0.0201 | 0.0136 | 0.0116 | 0.0156 |
| 4.00E-06 | 0.02 | 0.0421 | 0.0646 | 0.1624 | 0.0795 | 0.0411 | 0.0394 | 0.0385 | 0.0497 | 0.0485 | 0.0428 | 0.0137 | 0.0072 | 0.0068 | 0.008 |
| 5.00E-06 | 0.0166 | 0.0367 | 0.0622 | 0.1606 | 0.0774 | 0.039 | 0.0362 | 0.0348 | 0.0438 | 0.0447 | 0.0374 | 0.0103 | 0.005 | 0.0042 | 0.0061 |
| 7.00E-06 | 0.0129 | 0.0302 | 0.0555 | 0.1564 | 0.0747 | 0.0367 | 0.0324 | 0.03 | 0.0386 | 0.0373 | 0.0259 | 0.0058 | 0.0027 | 0.0024 | 0.005 |
| 8.50E-06 | 0.0097 | 0.0243 | 0.0511 | 0.1536 | 0.0721 | 0.0354 | 0.0297 | 0.0264 | 0.034 | 0.0307 | 0.0169 | 0.0038 | 0.0019 | 0.0015 | 0.0023 |
| 1.00E-05 | 0.007 | 0.0194 | 0.0473 | 0.1502 | 0.07 | 0.0327 | 0.0275 | 0.0241 | 0.0304 | 0.0244 | 0.0133 | 0.003 | 0.0017 | 0.0007 | 0.0015 |
| 1.50E-05 | 0.0032 | 0.0112 | 0.0368 | 0.1387 | 0.0639 | 0.0281 | 0.0217 | 0.0178 | 0.0206 | 0.0118 | 0.0063 | 0.0013 | 0.0008 | 0.0002 | 0.0008 |
| 2.00E-05 | 0.0018 | 0.0063 | 0.0301 | 0.1264 | 0.057 | 0.0238 | 0.0167 | 0.0124 | 0.0129 | 0.0062 | 0.0033 | 0.0002 | 0.0007 | 0.0001 | 0.0005 |
| 2.50E-05 | 0.0014 | 0.0041 | 0.0243 | 0.1159 | 0.0492 | 0.0198 | 0.0117 | 0.0082 | 0.0086 | 0.0044 | 0.0024 | 0.0002 | 0.0006 | 0.0001 | 0.0002 |
| 3.00E-05 | 0.001 | 0.0028 | 0.0202 | 0.1037 | 0.043 | 0.0163 | 0.0093 | 0.0064 | 0.0074 | 0.003 | 0.0016 | 0.0001 | 0.0005 | 0.0001 | 0.0001 |
| 3.50E-05 | 0.0007 | 0.0024 | 0.0162 | 0.0921 | 0.0381 | 0.0132 | 0.0074 | 0.0057 | 0.0062 | 0.0023 | 0.0014 | 0 | 0.0005 | 0.0001 | 0 |
| 4.00E-05 | 0.0006 | 0.0016 | 0.0139 | 0.0783 | 0.0346 | 0.011 | 0.0063 | 0.0044 | 0.0043 | 0.0016 | 0.0011 | 0 | 0.0003 | 0.0001 | 0 |
| 5.00E-05 | 0.0003 | 0.0011 | 0.0109 | 0.0588 | 0.0284 | 0.0092 | 0.0048 | 0.003 | 0.0024 | 0.001 | 0.0007 | 0 | 0.0002 | 0.0001 | 0 |
| 6.00E-05 | 0.0003 | 0.0009 | 0.0077 | 0.0393 | 0.0201 | 0.0067 | 0.0028 | 0.0017 | 0.0014 | 0.0009 | 0.0005 | 0 | 0.0002 | 0.0001 | 0 |
| 7.00E-05 | 0.0001 | 0.0008 | 0.0051 | 0.0248 | 0.0133 | 0.0046 | 0.0021 | 0.0014 | 0.0008 | 0.0005 | 0.0003 | 0 | 0.0001 | 0.0001 | 0 |
| 8.50E-05 | 0.0001 | 0.0002 | 0.0029 | 0.0107 | 0.0072 | 0.0018 | 0.0013 | 0.0003 | 0.0001 | 0.0001 | 0.0003 | 0 | 0.0001 | 0 | 0 |
| 1.00E-04 | 0.0001 | 0.0002 | 0.0016 | 0.0037 | 0.0034 | 0.0017 | 0.0011 | 0.0002 | 0 | 0 | 0.0001 | 0 | 0 | 0 | 0 |
| 1.30E-04 | 0 | 0.0001 | 0.0001 | 0.0002 | 0.0002 | 0.0001 | 0.0003 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1.70E-04 | 0 | 0 | 0 | 0.0001 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2.00E-04 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

SSSES-FSAR

Table Rev. 36

| Table 2.3-96 2002 Probability values for 1 hour at SSES EAB Probability that the X/Q is Greater than the Adjacent Quantized Level | | | | | | | | | | | | | | | | |
|---|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| DIRECTION | | | | | | | | | | | | | | | | |
| QUANTIZED LEVEL | N | NNE | NE | ENE | E | ESE | SE | SSE | S | SSW | SW | WSW | W | WNW | NW | NNW |
| 0.00E+00 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1.00E-10 | 0.0499 | 0.072 | 0.0827 | 0.1446 | 0.0676 | 0.0451 | 0.0424 | 0.0463 | 0.0678 | 0.083 | 0.1147 | 0.0628 | 0.0314 | 0.0204 | 0.0296 | 0.0398 |
| 3.50E-09 | 0.0499 | 0.072 | 0.0827 | 0.1446 | 0.0676 | 0.0451 | 0.0424 | 0.0463 | 0.0678 | 0.083 | 0.1147 | 0.0628 | 0.0314 | 0.0204 | 0.0296 | 0.0398 |
| 1.00E-08 | 0.0499 | 0.072 | 0.0827 | 0.1446 | 0.0676 | 0.0451 | 0.0424 | 0.0463 | 0.0678 | 0.083 | 0.1147 | 0.0628 | 0.0314 | 0.0204 | 0.0296 | 0.0398 |
| 2.50E-08 | 0.0499 | 0.072 | 0.0827 | 0.1446 | 0.0676 | 0.0451 | 0.0424 | 0.0463 | 0.0678 | 0.083 | 0.1147 | 0.0628 | 0.0314 | 0.0204 | 0.0296 | 0.0398 |
| 7.00E-08 | 0.0499 | 0.072 | 0.0827 | 0.1446 | 0.0676 | 0.0451 | 0.0424 | 0.0463 | 0.0678 | 0.083 | 0.1147 | 0.0628 | 0.0314 | 0.0204 | 0.0296 | 0.0398 |
| 1.00E-07 | 0.0499 | 0.072 | 0.0827 | 0.1446 | 0.0676 | 0.0451 | 0.0424 | 0.0463 | 0.0678 | 0.083 | 0.1147 | 0.0628 | 0.0314 | 0.0204 | 0.0296 | 0.0398 |
| 1.50E-07 | 0.0499 | 0.072 | 0.0827 | 0.1446 | 0.0676 | 0.0451 | 0.0424 | 0.0463 | 0.0678 | 0.083 | 0.1147 | 0.0628 | 0.0314 | 0.0204 | 0.0296 | 0.0398 |
| 2.20E-07 | 0.0499 | 0.072 | 0.0827 | 0.1446 | 0.0676 | 0.0451 | 0.0424 | 0.0463 | 0.0678 | 0.083 | 0.1147 | 0.0628 | 0.0314 | 0.0204 | 0.0296 | 0.0398 |
| 3.20E-07 | 0.0499 | 0.072 | 0.0827 | 0.1446 | 0.0676 | 0.0451 | 0.0424 | 0.0463 | 0.0678 | 0.083 | 0.1147 | 0.0628 | 0.0314 | 0.0204 | 0.0296 | 0.0398 |
| 4.80E-07 | 0.0499 | 0.072 | 0.0827 | 0.1446 | 0.0676 | 0.0451 | 0.0424 | 0.0463 | 0.0678 | 0.083 | 0.1147 | 0.0628 | 0.0314 | 0.0204 | 0.0296 | 0.0398 |
| 7.00E-07 | 0.0499 | 0.072 | 0.0827 | 0.1446 | 0.0676 | 0.0451 | 0.0424 | 0.0463 | 0.0678 | 0.083 | 0.1147 | 0.0628 | 0.0314 | 0.0204 | 0.0296 | 0.0398 |
| 1.00E-06 | 0.0499 | 0.072 | 0.0827 | 0.1446 | 0.0676 | 0.0451 | 0.0424 | 0.0463 | 0.0678 | 0.083 | 0.1147 | 0.0628 | 0.0314 | 0.0204 | 0.0296 | 0.0398 |
| 1.50E-06 | 0.0499 | 0.072 | 0.0827 | 0.1446 | 0.0676 | 0.0451 | 0.0424 | 0.0463 | 0.0678 | 0.083 | 0.1147 | 0.0628 | 0.0314 | 0.0204 | 0.0296 | 0.0398 |
| 2.00E-06 | 0.0499 | 0.072 | 0.0827 | 0.1446 | 0.0676 | 0.0451 | 0.0424 | 0.0463 | 0.0678 | 0.083 | 0.1147 | 0.0628 | 0.0314 | 0.0204 | 0.0296 | 0.0398 |
| 3.00E-06 | 0.0499 | 0.072 | 0.0827 | 0.1446 | 0.0676 | 0.0451 | 0.0424 | 0.0463 | 0.0678 | 0.083 | 0.1147 | 0.0628 | 0.0314 | 0.0204 | 0.0296 | 0.0398 |
| 4.00E-06 | 0.0491 | 0.0718 | 0.0827 | 0.1446 | 0.0676 | 0.0451 | 0.0424 | 0.0462 | 0.0672 | 0.0821 | 0.1114 | 0.061 | 0.0314 | 0.0204 | 0.0295 | 0.0395 |
| 5.00E-06 | 0.0477 | 0.0707 | 0.0827 | 0.1446 | 0.0676 | 0.0447 | 0.042 | 0.0458 | 0.0661 | 0.0803 | 0.1064 | 0.059 | 0.031 | 0.0204 | 0.0295 | 0.0392 |
| 7.00E-06 | 0.0466 | 0.0699 | 0.0823 | 0.1446 | 0.0674 | 0.0447 | 0.0418 | 0.0456 | 0.0655 | 0.0768 | 0.1001 | 0.058 | 0.0309 | 0.0204 | 0.0295 | 0.039 |
| 8.50E-06 | 0.0465 | 0.0694 | 0.0816 | 0.1446 | 0.0674 | 0.0446 | 0.0418 | 0.0455 | 0.0655 | 0.0756 | 0.0981 | 0.0575 | 0.0309 | 0.0204 | 0.0295 | 0.0388 |
| 1.00E-05 | 0.0463 | 0.0693 | 0.0813 | 0.1443 | 0.0674 | 0.0446 | 0.0418 | 0.0454 | 0.0649 | 0.0752 | 0.0964 | 0.0568 | 0.0307 | 0.0204 | 0.0295 | 0.0386 |
| 1.50E-05 | 0.0451 | 0.0685 | 0.0805 | 0.1437 | 0.0672 | 0.0443 | 0.0417 | 0.0451 | 0.0639 | 0.0741 | 0.0903 | 0.0538 | 0.0303 | 0.0201 | 0.0292 | 0.0378 |
| 2.00E-05 | 0.0441 | 0.0677 | 0.0802 | 0.1436 | 0.0669 | 0.0443 | 0.0414 | 0.0451 | 0.0634 | 0.0727 | 0.0848 | 0.0514 | 0.0299 | 0.0201 | 0.029 | 0.0373 |
| 2.50E-05 | 0.0438 | 0.0669 | 0.08 | 0.1435 | 0.0667 | 0.0443 | 0.0414 | 0.0447 | 0.0625 | 0.0712 | 0.0825 | 0.0504 | 0.0297 | 0.0201 | 0.0289 | 0.0369 |
| 3.00E-05 | 0.0429 | 0.0663 | 0.0794 | 0.1435 | 0.0666 | 0.0443 | 0.041 | 0.0447 | 0.0622 | 0.0707 | 0.0808 | 0.0496 | 0.0287 | 0.0201 | 0.0288 | 0.0365 |
| 3.50E-05 | 0.0427 | 0.0661 | 0.0793 | 0.1433 | 0.0665 | 0.044 | 0.041 | 0.0443 | 0.0618 | 0.07 | 0.0793 | 0.0478 | 0.0277 | 0.0194 | 0.0285 | 0.0362 |
| 4.00E-05 | 0.0423 | 0.0652 | 0.0792 | 0.1432 | 0.0663 | 0.0439 | 0.0408 | 0.044 | 0.0612 | 0.0696 | 0.075 | 0.0451 | 0.0266 | 0.0186 | 0.0277 | 0.0348 |
| 5.00E-05 | 0.0418 | 0.0644 | 0.0786 | 0.1431 | 0.0659 | 0.0433 | 0.0406 | 0.0437 | 0.0604 | 0.0688 | 0.0719 | 0.0372 | 0.0218 | 0.0146 | 0.0234 | 0.0295 |
| 6.00E-05 | 0.0384 | 0.0635 | 0.0782 | 0.1429 | 0.0657 | 0.043 | 0.04 | 0.0431 | 0.0583 | 0.0676 | 0.0641 | 0.0295 | 0.0173 | 0.0118 | 0.0181 | 0.0235 |
| 7.00E-05 | 0.0338 | 0.0614 | 0.0772 | 0.1428 | 0.0655 | 0.0423 | 0.0388 | 0.0415 | 0.0554 | 0.0651 | 0.0572 | 0.0237 | 0.0148 | 0.0092 | 0.0135 | 0.0184 |
| 8.50E-05 | 0.022 | 0.0513 | 0.0716 | 0.1416 | 0.064 | 0.0402 | 0.0353 | 0.0362 | 0.0514 | 0.0582 | 0.0414 | 0.0171 | 0.0099 | 0.0047 | 0.0067 | 0.0092 |
| 1.00E-04 | 0.0171 | 0.0432 | 0.0632 | 0.1386 | 0.0618 | 0.0371 | 0.0309 | 0.032 | 0.0448 | 0.0482 | 0.0311 | 0.0124 | 0.0061 | 0.0033 | 0.0047 | 0.0074 |
| 1.30E-04 | 0.0091 | 0.0261 | 0.0549 | 0.1349 | 0.0584 | 0.0338 | 0.0258 | 0.0259 | 0.0331 | 0.0288 | 0.0136 | 0.0055 | 0.0029 | 0.0016 | 0.0021 | 0.0033 |
| 1.70E-04 | 0.0054 | 0.0175 | 0.0459 | 0.1306 | 0.0545 | 0.0308 | 0.0224 | 0.0205 | 0.0252 | 0.0165 | 0.0066 | 0.0027 | 0.0018 | 0.001 | 0.0009 | 0.0018 |
| 2.00E-04 | 0.0032 | 0.0134 | 0.0399 | 0.1268 | 0.052 | 0.028 | 0.0194 | 0.0176 | 0.0196 | 0.0114 | 0.0043 | 0.0014 | 0.0014 | 0.0006 | 0.0006 | 0.0015 |
| 2.50E-04 | 0.0022 | 0.0089 | 0.032 | 0.1183 | 0.0473 | 0.024 | 0.0152 | 0.0127 | 0.0122 | 0.007 | 0.0021 | 0.0008 | 0.0005 | 0.0005 | 0.0001 | 0.0007 |
| 3.00E-04 | 0.0016 | 0.0067 | 0.0277 | 0.1093 | 0.0415 | 0.0219 | 0.012 | 0.0106 | 0.0082 | 0.0045 | 0.0015 | 0.0003 | 0 | 0.0003 | 0.0001 | 0.0002 |
| 3.50E-04 | 0.0009 | 0.005 | 0.0213 | 0.0929 | 0.035 | 0.0168 | 0.0093 | 0.0078 | 0.0055 | 0.0028 | 0.0008 | 0.0002 | 0 | 0.0003 | 0.0001 | 0.0002 |
| 4.00E-04 | 0.0007 | 0.0037 | 0.0179 | 0.0801 | 0.0308 | 0.0142 | 0.0074 | 0.0061 | 0.0035 | 0.0017 | 0.0006 | 0.0002 | 0 | 0.0001 | 0.0001 | 0.0002 |
| 5.00E-04 | 0.0005 | 0.0029 | 0.0119 | 0.0568 | 0.0233 | 0.0108 | 0.0046 | 0.0038 | 0.0015 | 0.0007 | 0.0003 | 0.0001 | 0 | 0 | 0 | 0.0001 |
| 6.00E-04 | 0.0003 | 0.0018 | 0.0071 | 0.0329 | 0.0146 | 0.0073 | 0.0031 | 0.0016 | 0.0008 | 0.0005 | 0.0003 | 0.0001 | 0 | 0 | 0 | 0 |
| 7.00E-04 | 0.0002 | 0.0012 | 0.0032 | 0.0145 | 0.0073 | 0.0038 | 0.0017 | 0.0014 | 0.0002 | 0.0001 | 0.0001 | 0.0001 | 0 | 0 | 0 | 0 |
| 8.50E-04 | 0.0001 | 0.0005 | 0.0015 | 0.0041 | 0.0022 | 0.0016 | 0.0006 | 0.0003 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0 | 0 | 0 | 0 |
| 1.00E-03 | 0.0001 | 0.0005 | 0.0008 | 0.0014 | 0.0009 | 0.0007 | 0.0003 | 0.0001 | 0 | 0 | 0 | 0.0001 | 0 | 0 | 0 | 0 |
| 1.40E-03 | 0 | 0 | 0 | 0 | 0.0001 | 0.0001 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2.00E-03 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3.00E-03 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

SSES-FSAR

Table Rev. 36

| Table 2.3-97 2003 Probability values for 1 hour at SSES EAB Probability that the X/Q is Greater than the Adjacent Quantized Level | | | | | | | | | | | | | | | | |
|---|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| DIRECTION | | | | | | | | | | | | | | | | |
| QUANTIZED LEVEL | N | NNE | NE | ENE | E | ESE | SE | SSE | S | SSW | SW | WSW | W | WNW | NW | NNW |
| 0.00E+00 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1.00E-10 | 0.0392 | 0.0769 | 0.1096 | 0.1414 | 0.0673 | 0.0497 | 0.062 | 0.0474 | 0.061 | 0.0683 | 0.1004 | 0.0621 | 0.0297 | 0.0214 | 0.0287 | 0.0348 |
| 3.50E-09 | 0.0392 | 0.0769 | 0.1096 | 0.1414 | 0.0673 | 0.0497 | 0.062 | 0.0474 | 0.061 | 0.0683 | 0.1004 | 0.0621 | 0.0297 | 0.0214 | 0.0287 | 0.0348 |
| 1.00E-08 | 0.0392 | 0.0769 | 0.1096 | 0.1414 | 0.0673 | 0.0497 | 0.062 | 0.0474 | 0.061 | 0.0683 | 0.1004 | 0.0621 | 0.0297 | 0.0214 | 0.0287 | 0.0348 |
| 2.50E-08 | 0.0392 | 0.0769 | 0.1096 | 0.1414 | 0.0673 | 0.0497 | 0.062 | 0.0474 | 0.061 | 0.0683 | 0.1004 | 0.0621 | 0.0297 | 0.0214 | 0.0287 | 0.0348 |
| 7.00E-08 | 0.0392 | 0.0769 | 0.1096 | 0.1414 | 0.0673 | 0.0497 | 0.062 | 0.0474 | 0.061 | 0.0683 | 0.1004 | 0.0621 | 0.0297 | 0.0214 | 0.0287 | 0.0348 |
| 1.00E-07 | 0.0392 | 0.0769 | 0.1096 | 0.1414 | 0.0673 | 0.0497 | 0.062 | 0.0474 | 0.061 | 0.0683 | 0.1004 | 0.0621 | 0.0297 | 0.0214 | 0.0287 | 0.0348 |
| 1.50E-07 | 0.0392 | 0.0769 | 0.1096 | 0.1414 | 0.0673 | 0.0497 | 0.062 | 0.0474 | 0.061 | 0.0683 | 0.1004 | 0.0621 | 0.0297 | 0.0214 | 0.0287 | 0.0348 |
| 2.20E-07 | 0.0392 | 0.0769 | 0.1096 | 0.1414 | 0.0673 | 0.0497 | 0.062 | 0.0474 | 0.061 | 0.0683 | 0.1004 | 0.0621 | 0.0297 | 0.0214 | 0.0287 | 0.0348 |
| 3.20E-07 | 0.0392 | 0.0769 | 0.1096 | 0.1414 | 0.0673 | 0.0497 | 0.062 | 0.0474 | 0.061 | 0.0683 | 0.1004 | 0.0621 | 0.0297 | 0.0214 | 0.0287 | 0.0348 |
| 4.80E-07 | 0.0392 | 0.0769 | 0.1096 | 0.1414 | 0.0673 | 0.0497 | 0.062 | 0.0474 | 0.061 | 0.0683 | 0.1004 | 0.0621 | 0.0297 | 0.0214 | 0.0287 | 0.0348 |
| 7.00E-07 | 0.0392 | 0.0769 | 0.1096 | 0.1414 | 0.0673 | 0.0497 | 0.062 | 0.0474 | 0.061 | 0.0683 | 0.1004 | 0.0621 | 0.0297 | 0.0214 | 0.0287 | 0.0348 |
| 1.00E-06 | 0.0392 | 0.0769 | 0.1096 | 0.1414 | 0.0673 | 0.0497 | 0.062 | 0.0474 | 0.061 | 0.0683 | 0.1004 | 0.0621 | 0.0297 | 0.0214 | 0.0287 | 0.0348 |
| 1.50E-06 | 0.0392 | 0.0769 | 0.1096 | 0.1414 | 0.0673 | 0.0497 | 0.062 | 0.0474 | 0.061 | 0.0683 | 0.1004 | 0.0621 | 0.0297 | 0.0214 | 0.0287 | 0.0348 |
| 2.00E-06 | 0.0392 | 0.0769 | 0.1096 | 0.1414 | 0.0673 | 0.0497 | 0.062 | 0.0474 | 0.061 | 0.0683 | 0.1004 | 0.0621 | 0.0297 | 0.0214 | 0.0287 | 0.0348 |
| 3.00E-06 | 0.0391 | 0.0769 | 0.1096 | 0.1414 | 0.0673 | 0.0497 | 0.062 | 0.0474 | 0.061 | 0.0683 | 0.1002 | 0.0619 | 0.0297 | 0.0214 | 0.0287 | 0.0348 |
| 4.00E-06 | 0.039 | 0.0769 | 0.1096 | 0.1414 | 0.0673 | 0.0497 | 0.062 | 0.0474 | 0.061 | 0.0682 | 0.0974 | 0.0605 | 0.0293 | 0.0213 | 0.0282 | 0.034 |
| 5.00E-06 | 0.0384 | 0.0764 | 0.1089 | 0.1414 | 0.0673 | 0.0497 | 0.0612 | 0.0468 | 0.0599 | 0.0674 | 0.096 | 0.0592 | 0.0289 | 0.021 | 0.0277 | 0.0333 |
| 7.00E-06 | 0.038 | 0.075 | 0.1082 | 0.1413 | 0.0672 | 0.0496 | 0.0609 | 0.0466 | 0.0584 | 0.0656 | 0.0924 | 0.0575 | 0.0286 | 0.0205 | 0.0277 | 0.0331 |
| 8.50E-06 | 0.038 | 0.075 | 0.1081 | 0.1412 | 0.0671 | 0.0494 | 0.0609 | 0.046 | 0.058 | 0.0644 | 0.0908 | 0.0565 | 0.0285 | 0.0203 | 0.0277 | 0.0326 |
| 1.00E-05 | 0.038 | 0.0749 | 0.1078 | 0.1411 | 0.067 | 0.0493 | 0.0606 | 0.0455 | 0.0573 | 0.0629 | 0.0894 | 0.0559 | 0.0282 | 0.0202 | 0.0277 | 0.0325 |
| 1.50E-05 | 0.0376 | 0.0746 | 0.1073 | 0.1408 | 0.0665 | 0.0491 | 0.0605 | 0.045 | 0.0566 | 0.0614 | 0.0867 | 0.0538 | 0.0277 | 0.0195 | 0.0273 | 0.032 |
| 2.00E-05 | 0.0372 | 0.0742 | 0.1072 | 0.1406 | 0.0657 | 0.049 | 0.0601 | 0.0446 | 0.056 | 0.0605 | 0.0847 | 0.0524 | 0.0271 | 0.0194 | 0.0273 | 0.0319 |
| 2.50E-05 | 0.037 | 0.0741 | 0.1066 | 0.1405 | 0.0655 | 0.0489 | 0.0601 | 0.044 | 0.056 | 0.0605 | 0.0838 | 0.0523 | 0.0267 | 0.0191 | 0.027 | 0.0316 |
| 3.00E-05 | 0.0365 | 0.0739 | 0.1062 | 0.1405 | 0.0654 | 0.0489 | 0.0597 | 0.0439 | 0.0559 | 0.0601 | 0.0829 | 0.0503 | 0.0257 | 0.0188 | 0.0263 | 0.0314 |
| 3.50E-05 | 0.0364 | 0.0738 | 0.1062 | 0.1404 | 0.0652 | 0.0488 | 0.0594 | 0.0436 | 0.0559 | 0.0597 | 0.0816 | 0.0488 | 0.0254 | 0.0174 | 0.026 | 0.0314 |
| 4.00E-05 | 0.0362 | 0.0728 | 0.1059 | 0.1398 | 0.0651 | 0.0486 | 0.059 | 0.0435 | 0.0558 | 0.0595 | 0.0805 | 0.0453 | 0.024 | 0.0164 | 0.0252 | 0.0307 |
| 5.00E-05 | 0.0348 | 0.0719 | 0.1057 | 0.1395 | 0.0648 | 0.0481 | 0.0584 | 0.0431 | 0.0557 | 0.0591 | 0.0751 | 0.0378 | 0.021 | 0.0148 | 0.0216 | 0.026 |
| 6.00E-05 | 0.0319 | 0.071 | 0.105 | 0.1389 | 0.0643 | 0.0473 | 0.0568 | 0.0422 | 0.0549 | 0.0581 | 0.0664 | 0.0312 | 0.0165 | 0.0111 | 0.0164 | 0.0195 |
| 7.00E-05 | 0.0289 | 0.0679 | 0.103 | 0.1381 | 0.0634 | 0.0464 | 0.0552 | 0.0413 | 0.0529 | 0.0566 | 0.0566 | 0.0258 | 0.013 | 0.0099 | 0.0126 | 0.0145 |
| 8.50E-05 | 0.0201 | 0.0561 | 0.0936 | 0.1357 | 0.0617 | 0.0424 | 0.0485 | 0.038 | 0.0483 | 0.05 | 0.0379 | 0.0179 | 0.0093 | 0.0071 | 0.0076 | 0.0089 |
| 1.00E-04 | 0.0075 | 0.032 | 0.0723 | 0.1269 | 0.0561 | 0.034 | 0.0362 | 0.0265 | 0.0317 | 0.0258 | 0.0121 | 0.006 | 0.0027 | 0.002 | 0.0021 | 0.0023 |
| 1.70E-04 | 0.0041 | 0.0217 | 0.0619 | 0.1229 | 0.0528 | 0.0302 | 0.03 | 0.0209 | 0.0243 | 0.0158 | 0.006 | 0.0029 | 0.0016 | 0.0009 | 0.0013 | 0.0014 |
| 2.00E-04 | 0.003 | 0.0151 | 0.0535 | 0.1168 | 0.0499 | 0.0271 | 0.0252 | 0.0176 | 0.0184 | 0.0112 | 0.0041 | 0.0017 | 0.0013 | 0.0007 | 0.0008 | 0.0009 |
| 2.50E-04 | 0.0015 | 0.0084 | 0.0385 | 0.1037 | 0.0441 | 0.0216 | 0.0195 | 0.0123 | 0.01 | 0.0054 | 0.0017 | 0.0009 | 0.0006 | 0.0003 | 0.0005 | 0.0006 |
| 3.00E-04 | 0.001 | 0.0045 | 0.0318 | 0.0927 | 0.0368 | 0.0173 | 0.0156 | 0.0083 | 0.0067 | 0.0038 | 0.0006 | 0.0005 | 0.0006 | 0.0001 | 0.0002 | 0.0005 |
| 3.50E-04 | 0.0008 | 0.0027 | 0.0243 | 0.0732 | 0.0297 | 0.0128 | 0.0114 | 0.0052 | 0.0038 | 0.0015 | 0.0003 | 0.0002 | 0.0005 | 0 | 0.0001 | 0.0002 |
| 4.00E-04 | 0.0005 | 0.0021 | 0.0212 | 0.0622 | 0.0258 | 0.0113 | 0.0078 | 0.0038 | 0.0027 | 0.001 | 0.0002 | 0.0002 | 0.0005 | 0 | 0.0001 | 0.0001 |
| 5.00E-04 | 0.0002 | 0.0013 | 0.0142 | 0.0411 | 0.0183 | 0.0068 | 0.0045 | 0.0014 | 0.0013 | 0.0008 | 0 | 0 | 0.0003 | 0 | 0 | 0 |
| 6.00E-04 | 0.0001 | 0.001 | 0.0093 | 0.0225 | 0.0115 | 0.0035 | 0.0031 | 0.0009 | 0.0008 | 0.0003 | 0 | 0 | 0.0001 | 0 | 0 | 0 |
| 7.00E-04 | 0 | 0.0007 | 0.0051 | 0.0093 | 0.0055 | 0.0018 | 0.0017 | 0.0006 | 0.0002 | 0 | 0 | 0 | 0.0001 | 0 | 0 | 0 |
| 8.50E-04 | 0 | 0.0002 | 0.0012 | 0.0023 | 0.0024 | 0.0008 | 0.0003 | 0.0002 | 0 | 0 | 0 | 0 | 0.0001 | 0 | 0 | 0 |
| 1.00E-03 | 0 | 0.0001 | 0.0003 | 0.0008 | 0.0006 | 0.0003 | 0.0002 | 0.0001 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1.40E-03 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2.00E-03 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

SSES-FSAR

TABLE 2.3-98
1999 – 2003 Probability Values for 1 hour at SSES EAB
Probability that the X/Q is Greater than the Adjacent Quantized Level

| QUANTIZED LEVEL | DIRECTION | | | | | | | | | | | | | | |
|--------------------|-----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| | N | NNE | NE | ENE | E | ESE | SE | SSE | S | SSW | SW | WSW | W | WNW | NNW |
| 1.00E-10 | 0.0513 | 0.0705 | 0.0923 | 0.1558 | 0.0749 | 0.0453 | 0.0487 | 0.0426 | 0.0618 | 0.0704 | 0.1042 | 0.0599 | 0.0303 | 0.0213 | 0.0315 |
| 3.50E-09 | 0.0513 | 0.0705 | 0.0923 | 0.1558 | 0.0749 | 0.0453 | 0.0487 | 0.0426 | 0.0618 | 0.0704 | 0.1042 | 0.0599 | 0.0303 | 0.0213 | 0.0315 |
| 1.00E-08 | 0.0513 | 0.0705 | 0.0923 | 0.1558 | 0.0749 | 0.0453 | 0.0487 | 0.0426 | 0.0618 | 0.0704 | 0.1042 | 0.0599 | 0.0303 | 0.0213 | 0.0315 |
| 2.50E-08 | 0.0513 | 0.0705 | 0.0923 | 0.1558 | 0.0749 | 0.0453 | 0.0487 | 0.0426 | 0.0618 | 0.0704 | 0.1042 | 0.0599 | 0.0303 | 0.0213 | 0.0315 |
| 7.00E-08 | 0.0513 | 0.0705 | 0.0923 | 0.1558 | 0.0749 | 0.0453 | 0.0487 | 0.0426 | 0.0618 | 0.0704 | 0.1042 | 0.0599 | 0.0303 | 0.0213 | 0.0315 |
| 1.00E-07 | 0.0513 | 0.0705 | 0.0923 | 0.1558 | 0.0749 | 0.0453 | 0.0487 | 0.0426 | 0.0618 | 0.0704 | 0.1042 | 0.0599 | 0.0303 | 0.0213 | 0.0315 |
| 1.50E-07 | 0.0513 | 0.0705 | 0.0923 | 0.1558 | 0.0749 | 0.0453 | 0.0487 | 0.0426 | 0.0618 | 0.0704 | 0.1042 | 0.0599 | 0.0303 | 0.0213 | 0.0315 |
| 2.20E-07 | 0.0513 | 0.0705 | 0.0923 | 0.1558 | 0.0749 | 0.0453 | 0.0487 | 0.0426 | 0.0618 | 0.0704 | 0.1042 | 0.0599 | 0.0303 | 0.0213 | 0.0315 |
| 3.20E-07 | 0.0513 | 0.0705 | 0.0923 | 0.1558 | 0.0749 | 0.0453 | 0.0487 | 0.0426 | 0.0618 | 0.0704 | 0.1042 | 0.0599 | 0.0303 | 0.0213 | 0.0315 |
| 4.80E-07 | 0.0513 | 0.0705 | 0.0923 | 0.1558 | 0.0749 | 0.0453 | 0.0487 | 0.0426 | 0.0618 | 0.0704 | 0.1042 | 0.0599 | 0.0303 | 0.0213 | 0.0315 |
| 7.00E-07 | 0.0513 | 0.0705 | 0.0923 | 0.1558 | 0.0749 | 0.0453 | 0.0487 | 0.0426 | 0.0618 | 0.0704 | 0.1042 | 0.0599 | 0.0303 | 0.0213 | 0.0315 |
| 1.00E-06 | 0.0513 | 0.0705 | 0.0923 | 0.1558 | 0.0749 | 0.0453 | 0.0487 | 0.0426 | 0.0618 | 0.0704 | 0.1042 | 0.0599 | 0.0303 | 0.0213 | 0.0315 |
| 1.50E-06 | 0.0513 | 0.0705 | 0.0923 | 0.1558 | 0.0749 | 0.0453 | 0.0487 | 0.0426 | 0.0618 | 0.0704 | 0.1042 | 0.0599 | 0.0303 | 0.0213 | 0.0315 |
| 2.00E-06 | 0.0513 | 0.0705 | 0.0923 | 0.1558 | 0.0749 | 0.0453 | 0.0487 | 0.0426 | 0.0618 | 0.0704 | 0.1042 | 0.0599 | 0.0303 | 0.0213 | 0.0315 |
| 3.00E-06 | 0.0513 | 0.0705 | 0.0923 | 0.1558 | 0.0749 | 0.0453 | 0.0487 | 0.0426 | 0.0618 | 0.0704 | 0.1040 | 0.0597 | 0.0303 | 0.0213 | 0.0315 |
| 4.00E-06 | 0.0510 | 0.0702 | 0.0923 | 0.1557 | 0.0749 | 0.0453 | 0.0487 | 0.0426 | 0.0616 | 0.0702 | 0.1022 | 0.0584 | 0.0301 | 0.0213 | 0.0314 |
| 5.00E-06 | 0.0505 | 0.0695 | 0.0921 | 0.1557 | 0.0749 | 0.0452 | 0.0483 | 0.0424 | 0.0610 | 0.0695 | 0.0992 | 0.0564 | 0.0294 | 0.0210 | 0.0313 |
| 7.00E-06 | 0.0499 | 0.0682 | 0.0912 | 0.1556 | 0.0748 | 0.0451 | 0.0479 | 0.0420 | 0.0594 | 0.0670 | 0.0929 | 0.0553 | 0.0289 | 0.0209 | 0.0312 |
| 8.50E-06 | 0.0498 | 0.0678 | 0.0905 | 0.1555 | 0.0747 | 0.0450 | 0.0475 | 0.0416 | 0.0586 | 0.0655 | 0.0906 | 0.0548 | 0.0288 | 0.0208 | 0.0312 |
| 1.00E-05 | 0.0497 | 0.0676 | 0.0901 | 0.1551 | 0.0747 | 0.0448 | 0.0470 | 0.0411 | 0.0578 | 0.0646 | 0.0891 | 0.0541 | 0.0285 | 0.0208 | 0.0312 |
| 1.50E-05 | 0.0486 | 0.0669 | 0.0893 | 0.1546 | 0.0742 | 0.0444 | 0.0467 | 0.0407 | 0.0570 | 0.0634 | 0.0857 | 0.0521 | 0.0275 | 0.0203 | 0.0314 |
| 2.00E-05 | 0.0482 | 0.0660 | 0.0888 | 0.1544 | 0.0736 | 0.0440 | 0.0463 | 0.0404 | 0.0564 | 0.0626 | 0.0826 | 0.0502 | 0.0270 | 0.0201 | 0.0307 |
| 2.50E-05 | 0.0478 | 0.0654 | 0.0863 | 0.1543 | 0.0734 | 0.0438 | 0.0461 | 0.0401 | 0.0559 | 0.0618 | 0.0809 | 0.0493 | 0.0265 | 0.0200 | 0.0306 |
| 3.00E-05 | 0.0470 | 0.0646 | 0.0876 | 0.1541 | 0.0732 | 0.0436 | 0.0458 | 0.0399 | 0.0554 | 0.0612 | 0.0794 | 0.0475 | 0.0257 | 0.0198 | 0.0306 |
| 3.50E-05 | 0.0468 | 0.0642 | 0.0873 | 0.1539 | 0.0731 | 0.0434 | 0.0456 | 0.0396 | 0.0550 | 0.0606 | 0.0779 | 0.0457 | 0.0250 | 0.0193 | 0.0303 |
| 4.00E-05 | 0.0462 | 0.0636 | 0.0869 | 0.1535 | 0.0730 | 0.0432 | 0.0452 | 0.0394 | 0.0547 | 0.0600 | 0.0763 | 0.0421 | 0.0243 | 0.0184 | 0.0295 |
| 5.00E-05 | 0.0438 | 0.0626 | 0.0862 | 0.1531 | 0.0726 | 0.0427 | 0.0448 | 0.0389 | 0.0540 | 0.0593 | 0.0716 | 0.0343 | 0.0210 | 0.0160 | 0.0263 |
| 6.00E-05 | 0.0384 | 0.0614 | 0.0855 | 0.1527 | 0.0721 | 0.0423 | 0.0440 | 0.0384 | 0.0529 | 0.0582 | 0.0642 | 0.0272 | 0.0167 | 0.0131 | 0.0204 |
| 7.00E-05 | 0.0329 | 0.0585 | 0.0843 | 0.1521 | 0.0717 | 0.0417 | 0.0430 | 0.0375 | 0.0514 | 0.0568 | 0.0570 | 0.0224 | 0.0135 | 0.0105 | 0.0142 |
| 8.50E-05 | 0.0213 | 0.0485 | 0.0778 | 0.1498 | 0.0699 | 0.0393 | 0.0394 | 0.0347 | 0.0474 | 0.0511 | 0.0425 | 0.0159 | 0.0087 | 0.0062 | 0.0078 |
| 1.00E-04 | 0.0163 | 0.0406 | 0.0703 | 0.1467 | 0.0675 | 0.0366 | 0.0353 | 0.0310 | 0.0421 | 0.0441 | 0.0334 | 0.0113 | 0.0057 | 0.0040 | 0.0058 |
| 1.30E-04 | 0.0088 | 0.0268 | 0.0589 | 0.1419 | 0.0637 | 0.0333 | 0.0299 | 0.0253 | 0.0326 | 0.0285 | 0.0160 | 0.0055 | 0.0029 | 0.0015 | 0.0021 |
| 1.70E-04 | 0.0052 | 0.0181 | 0.0503 | 0.1369 | 0.0603 | 0.0307 | 0.0259 | 0.0205 | 0.0258 | 0.0183 | 0.0090 | 0.0028 | 0.0017 | 0.0008 | 0.0011 |
| 2.00E-04 | 0.0038 | 0.0132 | 0.0433 | 0.1310 | 0.0571 | 0.0280 | 0.0224 | 0.0177 | 0.0207 | 0.0128 | 0.0061 | 0.0016 | 0.0012 | 0.0006 | 0.0008 |
| 2.50E-04 | 0.0022 | 0.0080 | 0.0328 | 0.1185 | 0.0515 | 0.0237 | 0.0182 | 0.0129 | 0.0129 | 0.0072 | 0.0030 | 0.0006 | 0.0007 | 0.0003 | 0.0004 |
| 3.00E-04 | 0.0015 | 0.0054 | 0.0270 | 0.1058 | 0.0454 | 0.0205 | 0.0147 | 0.0099 | 0.0090 | 0.0047 | 0.0017 | 0.0003 | 0.0005 | 0.0001 | 0.0002 |
| 3.50E-04 | 0.0010 | 0.0036 | 0.0204 | 0.0873 | 0.0378 | 0.0161 | 0.0108 | 0.0068 | 0.0059 | 0.0025 | 0.0011 | 0.0002 | 0.0003 | 0.0001 | 0.0002 |
| 4.00E-04 | 0.0007 | 0.0027 | 0.0170 | 0.0738 | 0.0318 | 0.0134 | 0.0083 | 0.0050 | 0.0040 | 0.0016 | 0.0007 | 0.0002 | 0.0002 | 0.0001 | 0.0001 |
| 5.00E-04 | 0.0004 | 0.0019 | 0.0118 | 0.0469 | 0.0236 | 0.0093 | 0.0052 | 0.0028 | 0.0019 | 0.0008 | 0.0004 | 0.0001 | 0.0002 | 0.0000 | 0.0001 |
| 6.00E-04 | 0.0003 | 0.0013 | 0.0077 | 0.0273 | 0.0149 | 0.0062 | 0.0034 | 0.0014 | 0.0010 | 0.0005 | 0.0002 | 0.0000 | 0.0002 | 0.0000 | 0.0000 |
| 7.00E-04 | 0.0001 | 0.0008 | 0.0042 | 0.0128 | 0.0076 | 0.0032 | 0.0019 | 0.0009 | 0.0003 | 0.0002 | 0.0001 | 0.0000 | 0.0001 | 0.0000 | 0.0000 |
| 8.50E-04 | 0.0001 | 0.0004 | 0.0015 | 0.0036 | 0.0030 | 0.0016 | 0.0009 | 0.0003 | 0.0001 | 0.0001 | 0.0000 | 0.0000 | 0.0001 | 0.0000 | 0.0000 |
| 1.00E-03 | 0.0001 | 0.0002 | 0.0007 | 0.0015 | 0.0013 | 0.0007 | 0.0005 | 0.0001 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| 1.40E-03 | 0.0000 | 0.0000 | 0.0000 | 0.0001 | 0.0001 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| 2.00E-03 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

SSES-FSAR

Table Rev. 36

Table 2.3-99

1999 Probability values for 1 hour at SSES LPZ

Probability that the X/Q is Greater than the Adjacent Quantized Level

DIRECTION

| QUANTIZED LEVEL | N | NNE | NE | ENE | E | ESE | SE | SSE | S | SSW | SW | WSW | W | WNW | NW | NNW |
|--------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0.00E+00 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1.00E-10 | 0.0616 | 0.0757 | 0.0964 | 0.1616 | 0.0759 | 0.0447 | 0.0445 | 0.0366 | 0.0521 | 0.0667 | 0.1023 | 0.063 | 0.0313 | 0.0177 | 0.0306 | 0.0393 |
| 3.50E-09 | 0.0616 | 0.0757 | 0.0964 | 0.1616 | 0.0759 | 0.0447 | 0.0445 | 0.0366 | 0.0521 | 0.0667 | 0.1023 | 0.063 | 0.0313 | 0.0177 | 0.0306 | 0.0393 |
| 1.00E-08 | 0.0616 | 0.0757 | 0.0964 | 0.1616 | 0.0759 | 0.0447 | 0.0445 | 0.0366 | 0.0521 | 0.0667 | 0.1023 | 0.063 | 0.0313 | 0.0177 | 0.0306 | 0.0393 |
| 2.50E-08 | 0.0616 | 0.0757 | 0.0964 | 0.1616 | 0.0759 | 0.0447 | 0.0445 | 0.0366 | 0.0521 | 0.0667 | 0.1023 | 0.063 | 0.0313 | 0.0177 | 0.0306 | 0.0393 |
| 7.00E-08 | 0.0616 | 0.0756 | 0.0964 | 0.1616 | 0.0759 | 0.0447 | 0.0445 | 0.0366 | 0.0521 | 0.0667 | 0.1022 | 0.0623 | 0.0313 | 0.0177 | 0.0306 | 0.0393 |
| 1.00E-07 | 0.0616 | 0.0736 | 0.096 | 0.1615 | 0.0758 | 0.0447 | 0.0444 | 0.0366 | 0.0518 | 0.0663 | 0.0997 | 0.0567 | 0.029 | 0.0169 | 0.0304 | 0.0393 |
| 1.50E-07 | 0.0597 | 0.0709 | 0.0936 | 0.1611 | 0.0757 | 0.0446 | 0.0436 | 0.036 | 0.0498 | 0.0625 | 0.0889 | 0.0528 | 0.026 | 0.0161 | 0.0302 | 0.0389 |
| 2.20E-07 | 0.0588 | 0.0688 | 0.0908 | 0.1603 | 0.0751 | 0.044 | 0.0412 | 0.0344 | 0.0464 | 0.0594 | 0.0836 | 0.051 | 0.0258 | 0.0158 | 0.0297 | 0.0385 |
| 3.20E-07 | 0.0587 | 0.0681 | 0.0892 | 0.1593 | 0.0748 | 0.0431 | 0.0406 | 0.0337 | 0.0458 | 0.0576 | 0.0819 | 0.0507 | 0.0257 | 0.0158 | 0.0297 | 0.0383 |
| 4.80E-07 | 0.0587 | 0.0679 | 0.0891 | 0.1584 | 0.0733 | 0.0424 | 0.0399 | 0.0336 | 0.0455 | 0.0571 | 0.0815 | 0.0497 | 0.0257 | 0.0158 | 0.0297 | 0.0383 |
| 7.00E-07 | 0.0577 | 0.067 | 0.0889 | 0.1584 | 0.0731 | 0.0423 | 0.0396 | 0.0335 | 0.0454 | 0.0571 | 0.0807 | 0.0472 | 0.0245 | 0.0157 | 0.0294 | 0.038 |
| 1.00E-06 | 0.0568 | 0.0653 | 0.0881 | 0.1583 | 0.0729 | 0.0422 | 0.0396 | 0.0333 | 0.0453 | 0.0564 | 0.0787 | 0.0461 | 0.0236 | 0.0149 | 0.0289 | 0.037 |
| 1.50E-06 | 0.0564 | 0.0642 | 0.0873 | 0.1578 | 0.0727 | 0.0419 | 0.0392 | 0.0329 | 0.0443 | 0.0548 | 0.0768 | 0.0445 | 0.0231 | 0.0148 | 0.0288 | 0.0366 |
| 2.00E-06 | 0.0539 | 0.0639 | 0.0872 | 0.1573 | 0.0725 | 0.0414 | 0.0377 | 0.0319 | 0.0435 | 0.0542 | 0.074 | 0.0367 | 0.0205 | 0.0142 | 0.0279 | 0.0313 |
| 3.00E-06 | 0.0312 | 0.0546 | 0.0837 | 0.1563 | 0.0717 | 0.0405 | 0.0357 | 0.0303 | 0.0425 | 0.0521 | 0.0567 | 0.0204 | 0.0114 | 0.0086 | 0.0156 | 0.0159 |
| 4.00E-06 | 0.0201 | 0.0423 | 0.0742 | 0.1529 | 0.0695 | 0.037 | 0.0331 | 0.0281 | 0.0393 | 0.0458 | 0.0451 | 0.0165 | 0.0079 | 0.0045 | 0.0091 | 0.0088 |
| 5.00E-06 | 0.0155 | 0.0351 | 0.0683 | 0.1503 | 0.0681 | 0.0354 | 0.0314 | 0.0255 | 0.0351 | 0.0399 | 0.0391 | 0.0125 | 0.0062 | 0.0037 | 0.0068 | 0.0067 |
| 7.00E-06 | 0.0122 | 0.0281 | 0.0595 | 0.1451 | 0.0646 | 0.0333 | 0.0264 | 0.0202 | 0.0304 | 0.0336 | 0.0281 | 0.0083 | 0.0047 | 0.0026 | 0.005 | 0.0048 |
| 8.50E-06 | 0.0091 | 0.0213 | 0.0537 | 0.1429 | 0.0624 | 0.0317 | 0.0237 | 0.0189 | 0.0268 | 0.0273 | 0.019 | 0.0056 | 0.0032 | 0.0017 | 0.0033 | 0.0021 |
| 1.00E-05 | 0.0069 | 0.0177 | 0.0502 | 0.1407 | 0.0592 | 0.0295 | 0.0214 | 0.0163 | 0.0226 | 0.0222 | 0.015 | 0.0041 | 0.0021 | 0.0009 | 0.0016 | 0.0011 |
| 1.50E-05 | 0.0038 | 0.0095 | 0.0372 | 0.1321 | 0.0541 | 0.0268 | 0.0183 | 0.0132 | 0.0164 | 0.01 | 0.0073 | 0.0018 | 0.0014 | 0.0005 | 0.0007 | 0.0006 |
| 2.00E-05 | 0.0029 | 0.006 | 0.0272 | 0.1211 | 0.049 | 0.0232 | 0.0147 | 0.0095 | 0.0088 | 0.0061 | 0.0042 | 0.001 | 0.0007 | 0.0003 | 0.0003 | 0.0003 |
| 2.50E-05 | 0.0021 | 0.0048 | 0.0231 | 0.1118 | 0.0419 | 0.0169 | 0.0109 | 0.006 | 0.0072 | 0.0039 | 0.0031 | 0.0008 | 0.0006 | 0.0001 | 0 | 0.0002 |
| 3.00E-05 | 0.0014 | 0.004 | 0.0198 | 0.1021 | 0.0373 | 0.0141 | 0.0093 | 0.0047 | 0.0058 | 0.0029 | 0.0023 | 0.0006 | 0.0003 | 0 | 0 | 0.0001 |
| 3.50E-05 | 0.0013 | 0.0032 | 0.0169 | 0.0923 | 0.0339 | 0.0125 | 0.0073 | 0.0041 | 0.0045 | 0.0021 | 0.0016 | 0.0005 | 0.0002 | 0 | 0 | 0.0001 |
| 4.00E-05 | 0.0009 | 0.0028 | 0.0139 | 0.0812 | 0.0299 | 0.0118 | 0.0063 | 0.0031 | 0.003 | 0.0009 | 0.0009 | 0.0002 | 0.0001 | 0 | 0 | 0.0001 |
| 5.00E-05 | 0.0005 | 0.0023 | 0.0111 | 0.064 | 0.026 | 0.0104 | 0.0056 | 0.0021 | 0.0019 | 0.0005 | 0.0006 | 0.0002 | 0 | 0 | 0 | 0.0001 |
| 6.00E-05 | 0.0005 | 0.0019 | 0.0083 | 0.0394 | 0.0167 | 0.0078 | 0.0033 | 0.001 | 0.001 | 0.0002 | 0.0002 | 0 | 0 | 0 | 0 | 0.0001 |
| 7.00E-05 | 0.0003 | 0.0013 | 0.0068 | 0.0241 | 0.0111 | 0.006 | 0.0026 | 0.0008 | 0.0009 | 0.0002 | 0.0002 | 0 | 0 | 0 | 0 | 0.0001 |
| 8.50E-05 | 0.0002 | 0.0008 | 0.0033 | 0.0108 | 0.0067 | 0.0041 | 0.0016 | 0.0007 | 0.0003 | 0.0001 | 0 | 0 | 0 | 0 | 0 | 0.0001 |
| 1.00E-04 | 0.0001 | 0.0005 | 0.0018 | 0.0046 | 0.004 | 0.0029 | 0.001 | 0.0006 | 0.0003 | 0.0001 | 0 | 0 | 0 | 0 | 0 | 0.0001 |
| 1.30E-04 | 0.0001 | 0 | 0.0003 | 0.0008 | 0.001 | 0.0003 | 0.0003 | 0.0001 | 0.0002 | 0.0001 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1.70E-04 | 0 | 0 | 0.0001 | 0.0001 | 0.0001 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2.00E-04 | 0 | 0 | 0.0001 | 0.0001 | 0.0001 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2.50E-04 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

SSES-FSAR

Table 2.3-100

2000 Probability values for 1 hour at SSES LPZ

Probability that the X/Q is Greater than the Adjacent Quantized Level

DIRECTION

| QUANTIZED LEVEL | N | NNE | NE | ENE | E | ESE | SE | SSE | S | SSW | SW | WSW | W | WNW | NW | NNW |
|--------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0.00E+00 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1.00E-10 | 0.0542 | 0.0685 | 0.0978 | 0.1613 | 0.0783 | 0.0403 | 0.0439 | 0.0365 | 0.0623 | 0.0669 | 0.0986 | 0.0558 | 0.0296 | 0.0235 | 0.0344 | 0.0479 |
| 3.50E-09 | 0.0542 | 0.0685 | 0.0978 | 0.1613 | 0.0783 | 0.0403 | 0.0439 | 0.0365 | 0.0623 | 0.0669 | 0.0986 | 0.0558 | 0.0296 | 0.0235 | 0.0344 | 0.0479 |
| 1.00E-08 | 0.0542 | 0.0685 | 0.0978 | 0.1613 | 0.0783 | 0.0403 | 0.0439 | 0.0365 | 0.0623 | 0.0669 | 0.0986 | 0.0558 | 0.0296 | 0.0235 | 0.0344 | 0.0479 |
| 2.50E-08 | 0.0542 | 0.0685 | 0.0978 | 0.1613 | 0.0783 | 0.0403 | 0.0439 | 0.0365 | 0.0623 | 0.0669 | 0.0986 | 0.0558 | 0.0296 | 0.0235 | 0.0344 | 0.0479 |
| 7.00E-08 | 0.0542 | 0.0685 | 0.0978 | 0.1613 | 0.0783 | 0.0403 | 0.0439 | 0.0365 | 0.0622 | 0.0669 | 0.0985 | 0.0554 | 0.0296 | 0.0235 | 0.0344 | 0.0479 |
| 1.00E-07 | 0.0538 | 0.0682 | 0.0978 | 0.1612 | 0.0783 | 0.0403 | 0.0435 | 0.0364 | 0.062 | 0.0663 | 0.0951 | 0.0526 | 0.0284 | 0.0234 | 0.0344 | 0.0478 |
| 1.50E-07 | 0.0525 | 0.0659 | 0.0967 | 0.1607 | 0.0783 | 0.0402 | 0.0432 | 0.036 | 0.0584 | 0.0644 | 0.0854 | 0.0495 | 0.0264 | 0.0226 | 0.0339 | 0.0476 |
| 2.20E-07 | 0.0522 | 0.0637 | 0.0942 | 0.1604 | 0.0779 | 0.0393 | 0.0427 | 0.0349 | 0.0571 | 0.0619 | 0.0795 | 0.0485 | 0.0259 | 0.0225 | 0.0338 | 0.0471 |
| 3.20E-07 | 0.0515 | 0.0628 | 0.092 | 0.1595 | 0.0775 | 0.0385 | 0.0426 | 0.0346 | 0.0551 | 0.059 | 0.0773 | 0.0481 | 0.0258 | 0.0225 | 0.0337 | 0.047 |
| 4.80E-07 | 0.0514 | 0.0626 | 0.0916 | 0.159 | 0.0767 | 0.0374 | 0.0424 | 0.0345 | 0.0547 | 0.0586 | 0.0771 | 0.0476 | 0.0256 | 0.0225 | 0.0337 | 0.0469 |
| 7.00E-07 | 0.0509 | 0.0623 | 0.0916 | 0.1589 | 0.0764 | 0.0371 | 0.0422 | 0.0344 | 0.0545 | 0.0586 | 0.0764 | 0.0458 | 0.0251 | 0.0224 | 0.0336 | 0.0467 |
| 1.00E-06 | 0.0506 | 0.062 | 0.0909 | 0.1588 | 0.0764 | 0.0371 | 0.0421 | 0.0342 | 0.0542 | 0.0583 | 0.074 | 0.0445 | 0.0249 | 0.0218 | 0.0334 | 0.0466 |
| 1.50E-06 | 0.0506 | 0.0614 | 0.0896 | 0.1584 | 0.0763 | 0.0368 | 0.042 | 0.0339 | 0.0533 | 0.0567 | 0.0713 | 0.042 | 0.0243 | 0.0215 | 0.0333 | 0.0462 |
| 2.00E-06 | 0.0491 | 0.0611 | 0.0894 | 0.1582 | 0.076 | 0.0364 | 0.042 | 0.0337 | 0.0527 | 0.0566 | 0.0691 | 0.0345 | 0.0229 | 0.0201 | 0.0316 | 0.0418 |
| 3.00E-06 | 0.0344 | 0.0583 | 0.0884 | 0.1578 | 0.0755 | 0.0354 | 0.0409 | 0.0332 | 0.0514 | 0.0559 | 0.0564 | 0.0201 | 0.0136 | 0.0116 | 0.0156 | 0.0204 |
| 4.00E-06 | 0.0217 | 0.0476 | 0.0803 | 0.1541 | 0.0734 | 0.0334 | 0.0387 | 0.0318 | 0.0475 | 0.051 | 0.0434 | 0.0137 | 0.0072 | 0.0068 | 0.008 | 0.0104 |
| 5.00E-06 | 0.0174 | 0.0408 | 0.0726 | 0.1513 | 0.0694 | 0.0317 | 0.036 | 0.0298 | 0.0435 | 0.046 | 0.0357 | 0.0103 | 0.005 | 0.0042 | 0.0061 | 0.0078 |
| 7.00E-06 | 0.0122 | 0.0322 | 0.0621 | 0.1465 | 0.0647 | 0.029 | 0.0309 | 0.0244 | 0.0374 | 0.0368 | 0.0247 | 0.0058 | 0.0027 | 0.0024 | 0.005 | 0.0062 |
| 8.50E-06 | 0.0091 | 0.0261 | 0.0547 | 0.1425 | 0.0622 | 0.0274 | 0.0276 | 0.0219 | 0.0338 | 0.0301 | 0.0152 | 0.0038 | 0.0019 | 0.0015 | 0.0023 | 0.0029 |
| 1.00E-05 | 0.0072 | 0.0224 | 0.0505 | 0.1384 | 0.0584 | 0.0253 | 0.0239 | 0.0205 | 0.0309 | 0.0241 | 0.0112 | 0.003 | 0.0017 | 0.0007 | 0.0015 | 0.0019 |
| 1.50E-05 | 0.0029 | 0.0122 | 0.0377 | 0.1264 | 0.0517 | 0.0194 | 0.0184 | 0.0153 | 0.0204 | 0.0128 | 0.004 | 0.0013 | 0.0008 | 0.0002 | 0.0007 | 0.0008 |
| 2.00E-05 | 0.0022 | 0.0075 | 0.0282 | 0.1123 | 0.0454 | 0.0164 | 0.015 | 0.0102 | 0.012 | 0.0076 | 0.0029 | 0.0002 | 0.0007 | 0.0001 | 0.0002 | 0.0005 |
| 2.50E-05 | 0.0014 | 0.0058 | 0.0226 | 0.1022 | 0.0394 | 0.0132 | 0.0112 | 0.0068 | 0.0087 | 0.0053 | 0.0017 | 0.0002 | 0.0006 | 0.0001 | 0.0002 | 0.0002 |
| 3.00E-05 | 0.0008 | 0.0042 | 0.0202 | 0.0927 | 0.035 | 0.011 | 0.0095 | 0.0057 | 0.0073 | 0.0038 | 0.001 | 0.0001 | 0.0005 | 0.0001 | 0.0002 | 0.0001 |
| 3.50E-05 | 0.0006 | 0.0034 | 0.0182 | 0.0793 | 0.0314 | 0.0088 | 0.0075 | 0.0048 | 0.0056 | 0.0023 | 0.0008 | 0 | 0.0005 | 0.0001 | 0.0001 | 0 |
| 4.00E-05 | 0.0003 | 0.0027 | 0.0156 | 0.068 | 0.0273 | 0.0081 | 0.0063 | 0.0038 | 0.0035 | 0.0019 | 0.0006 | 0 | 0.0003 | 0.0001 | 0 | 0 |
| 5.00E-05 | 0.0003 | 0.0015 | 0.0126 | 0.0519 | 0.0216 | 0.0068 | 0.0051 | 0.0029 | 0.0023 | 0.001 | 0.0006 | 0 | 0.0002 | 0.0001 | 0 | 0 |
| 6.00E-05 | 0.0001 | 0.0014 | 0.0089 | 0.0329 | 0.016 | 0.0046 | 0.004 | 0.0017 | 0.0011 | 0.0009 | 0.0002 | 0 | 0.0002 | 0.0001 | 0 | 0 |
| 7.00E-05 | 0 | 0.0011 | 0.0066 | 0.0217 | 0.0105 | 0.0032 | 0.0027 | 0.001 | 0.0008 | 0.0006 | 0 | 0 | 0.0001 | 0.0001 | 0 | 0 |
| 8.50E-05 | 0 | 0.0006 | 0.0035 | 0.009 | 0.0055 | 0.0016 | 0.0018 | 0.0002 | 0.0001 | 0.0005 | 0 | 0 | 0.0001 | 0 | 0 | 0 |
| 1.00E-04 | 0 | 0.0005 | 0.0015 | 0.0027 | 0.0024 | 0.001 | 0.0008 | 0.0001 | 0.0001 | 0.0001 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1.30E-04 | 0 | 0 | 0.0001 | 0.0002 | 0.0006 | 0 | 0.0003 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1.70E-04 | 0 | 0 | 0 | 0 | 0.0001 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2.00E-04 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

SSES-FSAR

Table Rev. 36

| Table 2.3-101 | | | | | | | | | | | | | | | | |
|---|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 2001 Probability values for 1 hour at SSES LPZ | | | | | | | | | | | | | | | | |
| Probability that the X/Q is Greater than the Adjacent Quantized Level | | | | | | | | | | | | | | | | |
| DIRECTION | | | | | | | | | | | | | | | | |
| QUANTIZED LEVEL | N | NNE | NE | ENE | E | ESE | SE | SSE | S | SSW | SW | WSW | W | WNW | NW | NNW |
| 0.00E+00 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1.00E-10 | 0.0515 | 0.0592 | 0.0751 | 0.1698 | 0.0853 | 0.0466 | 0.0507 | 0.0465 | 0.0659 | 0.0674 | 0.1049 | 0.0558 | 0.0296 | 0.0235 | 0.0344 | 0.0479 |
| 3.50E-09 | 0.0515 | 0.0592 | 0.0751 | 0.1698 | 0.0853 | 0.0466 | 0.0507 | 0.0465 | 0.0659 | 0.0674 | 0.1049 | 0.0558 | 0.0296 | 0.0235 | 0.0344 | 0.0479 |
| 1.00E-08 | 0.0515 | 0.0592 | 0.0751 | 0.1698 | 0.0853 | 0.0466 | 0.0507 | 0.0465 | 0.0659 | 0.0674 | 0.1049 | 0.0558 | 0.0296 | 0.0235 | 0.0344 | 0.0479 |
| 2.50E-08 | 0.0515 | 0.0592 | 0.0751 | 0.1698 | 0.0853 | 0.0466 | 0.0507 | 0.0465 | 0.0659 | 0.0674 | 0.1049 | 0.0558 | 0.0296 | 0.0235 | 0.0344 | 0.0479 |
| 7.00E-08 | 0.0515 | 0.0592 | 0.0751 | 0.1698 | 0.0853 | 0.0466 | 0.0507 | 0.0465 | 0.0659 | 0.0674 | 0.1048 | 0.0554 | 0.0296 | 0.0235 | 0.0344 | 0.0479 |
| 1.00E-07 | 0.0508 | 0.0585 | 0.0751 | 0.1698 | 0.0853 | 0.0466 | 0.0506 | 0.0465 | 0.0654 | 0.0669 | 0.0998 | 0.0526 | 0.0284 | 0.0234 | 0.0344 | 0.0478 |
| 1.50E-07 | 0.0485 | 0.0562 | 0.0738 | 0.1697 | 0.0851 | 0.0465 | 0.0496 | 0.0457 | 0.0629 | 0.0645 | 0.0875 | 0.0495 | 0.0264 | 0.0226 | 0.0339 | 0.0476 |
| 2.20E-07 | 0.0482 | 0.0542 | 0.0718 | 0.1685 | 0.0846 | 0.0457 | 0.0473 | 0.0436 | 0.0596 | 0.0591 | 0.08 | 0.0485 | 0.0259 | 0.0225 | 0.0338 | 0.0471 |
| 3.20E-07 | 0.048 | 0.053 | 0.0707 | 0.1672 | 0.0835 | 0.0448 | 0.0455 | 0.0422 | 0.0575 | 0.0569 | 0.0768 | 0.0481 | 0.0258 | 0.0225 | 0.0337 | 0.047 |
| 4.80E-07 | 0.0477 | 0.0528 | 0.0698 | 0.1658 | 0.0825 | 0.0442 | 0.045 | 0.0417 | 0.0568 | 0.0559 | 0.0756 | 0.0476 | 0.0256 | 0.0225 | 0.0337 | 0.0469 |
| 7.00E-07 | 0.0474 | 0.0524 | 0.0697 | 0.1656 | 0.0818 | 0.0436 | 0.045 | 0.0416 | 0.0565 | 0.0558 | 0.0741 | 0.0458 | 0.0251 | 0.0224 | 0.0336 | 0.0467 |
| 1.00E-06 | 0.0454 | 0.0521 | 0.0695 | 0.1656 | 0.0818 | 0.0436 | 0.045 | 0.0415 | 0.0561 | 0.0554 | 0.0721 | 0.0445 | 0.0249 | 0.0218 | 0.0334 | 0.0466 |
| 1.50E-06 | 0.0453 | 0.052 | 0.0692 | 0.1654 | 0.0815 | 0.0434 | 0.0447 | 0.0415 | 0.055 | 0.0545 | 0.0706 | 0.042 | 0.0243 | 0.0215 | 0.0333 | 0.0462 |
| 2.00E-06 | 0.0451 | 0.0515 | 0.0688 | 0.1648 | 0.0813 | 0.043 | 0.0446 | 0.0413 | 0.0542 | 0.054 | 0.0681 | 0.0345 | 0.0229 | 0.0201 | 0.0316 | 0.0418 |
| 3.00E-06 | 0.0322 | 0.0483 | 0.0674 | 0.1633 | 0.081 | 0.0429 | 0.043 | 0.0404 | 0.0534 | 0.0523 | 0.0545 | 0.0201 | 0.0136 | 0.0116 | 0.0156 | 0.0204 |
| 4.00E-06 | 0.02 | 0.0421 | 0.0646 | 0.1624 | 0.0795 | 0.0411 | 0.0394 | 0.0385 | 0.0497 | 0.0485 | 0.0428 | 0.0137 | 0.0072 | 0.0068 | 0.008 | 0.0104 |
| 5.00E-06 | 0.0166 | 0.0367 | 0.0622 | 0.1606 | 0.0774 | 0.039 | 0.0362 | 0.0348 | 0.0438 | 0.0447 | 0.0374 | 0.0103 | 0.005 | 0.0042 | 0.0061 | 0.0078 |
| 7.00E-06 | 0.0129 | 0.0302 | 0.0555 | 0.1564 | 0.0747 | 0.0367 | 0.0324 | 0.03 | 0.0386 | 0.0373 | 0.0259 | 0.0058 | 0.0027 | 0.0024 | 0.005 | 0.0062 |
| 8.50E-06 | 0.0097 | 0.0243 | 0.0511 | 0.1536 | 0.0721 | 0.0354 | 0.0297 | 0.0264 | 0.034 | 0.0307 | 0.0169 | 0.0038 | 0.0019 | 0.0015 | 0.0023 | 0.0029 |
| 1.00E-05 | 0.007 | 0.0194 | 0.0473 | 0.1502 | 0.07 | 0.0327 | 0.0275 | 0.0241 | 0.0304 | 0.0244 | 0.0133 | 0.003 | 0.0017 | 0.0007 | 0.0015 | 0.0019 |
| 1.50E-05 | 0.0032 | 0.0112 | 0.0368 | 0.1387 | 0.0639 | 0.0281 | 0.0217 | 0.0178 | 0.0206 | 0.0118 | 0.0063 | 0.0013 | 0.0008 | 0.0002 | 0.0007 | 0.0008 |
| 2.00E-05 | 0.0018 | 0.0063 | 0.0301 | 0.1264 | 0.057 | 0.0238 | 0.0167 | 0.0124 | 0.0129 | 0.0062 | 0.0033 | 0.0002 | 0.0007 | 0.0001 | 0.0002 | 0.0005 |
| 2.50E-05 | 0.0014 | 0.0041 | 0.0243 | 0.1159 | 0.0492 | 0.0198 | 0.0117 | 0.0082 | 0.0086 | 0.0044 | 0.0024 | 0.0002 | 0.0006 | 0.0001 | 0.0002 | 0.0002 |
| 3.00E-05 | 0.001 | 0.0028 | 0.0202 | 0.1037 | 0.043 | 0.0163 | 0.0093 | 0.0064 | 0.0074 | 0.003 | 0.0016 | 0.0001 | 0.0005 | 0.0001 | 0.0002 | 0.0001 |
| 3.50E-05 | 0.0007 | 0.0024 | 0.0162 | 0.0921 | 0.0381 | 0.0132 | 0.0074 | 0.0057 | 0.0062 | 0.0023 | 0.0014 | 0 | 0.0005 | 0.0001 | 0.0001 | 0 |
| 4.00E-05 | 0.0006 | 0.0016 | 0.0139 | 0.0783 | 0.0346 | 0.011 | 0.0063 | 0.0044 | 0.0043 | 0.0016 | 0.0011 | 0 | 0.0003 | 0.0001 | 0 | 0 |
| 5.00E-05 | 0.0003 | 0.0011 | 0.0109 | 0.0588 | 0.0284 | 0.0092 | 0.0048 | 0.003 | 0.0024 | 0.001 | 0.0007 | 0 | 0.0002 | 0.0001 | 0 | 0 |
| 6.00E-05 | 0.0003 | 0.0009 | 0.0077 | 0.0393 | 0.0201 | 0.0067 | 0.0028 | 0.0017 | 0.0014 | 0.0009 | 0.0005 | 0 | 0.0002 | 0.0001 | 0 | 0 |
| 7.00E-05 | 0.0001 | 0.0008 | 0.0051 | 0.0248 | 0.0133 | 0.0046 | 0.0021 | 0.0014 | 0.0008 | 0.0005 | 0.0003 | 0 | 0.0001 | 0.0001 | 0 | 0 |
| 8.50E-05 | 0.0001 | 0.0002 | 0.0029 | 0.0107 | 0.0072 | 0.0018 | 0.0013 | 0.0003 | 0.0001 | 0.0001 | 0.0003 | 0 | 0.0001 | 0 | 0 | 0 |
| 1.00E-04 | 0.0001 | 0.0002 | 0.0016 | 0.0037 | 0.0034 | 0.0017 | 0.0011 | 0.0002 | 0 | 0 | 0.0001 | 0 | 0 | 0 | 0 | 0 |
| 1.30E-04 | 0 | 0.0001 | 0.0001 | 0.0002 | 0.0002 | 0.0001 | 0.0003 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1.70E-04 | 0 | 0 | 0 | 0.0001 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2.00E-04 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

SSES-FSAR

| Table 2.3-102 | | | | | | | | | | | | | | | |
|---|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 2002 Probability values for 1 hour at SSES LPZ | | | | | | | | | | | | | | | |
| Probability that the X/Q is Greater than the Adjacent Quantized Level | | | | | | | | | | | | | | | |
| DIRECTION | | | | | | | | | | | | | | | |
| QUANTIZED LEVEL | N | NNE | NE | ENE | E | ESE | SE | SSE | S | SSW | SW | WSW | W | WNW | NNW |
| 0.00E+00 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1.00E-10 | 0.0499 | 0.072 | 0.0827 | 0.1446 | 0.0676 | 0.0451 | 0.0424 | 0.0463 | 0.0678 | 0.083 | 0.1147 | 0.0628 | 0.0314 | 0.0204 | 0.0296 |
| 3.50E-09 | 0.0499 | 0.072 | 0.0827 | 0.1446 | 0.0676 | 0.0451 | 0.0424 | 0.0463 | 0.0678 | 0.083 | 0.1147 | 0.0628 | 0.0314 | 0.0204 | 0.0296 |
| 1.00E-08 | 0.0499 | 0.072 | 0.0827 | 0.1446 | 0.0676 | 0.0451 | 0.0424 | 0.0463 | 0.0678 | 0.083 | 0.1147 | 0.0628 | 0.0314 | 0.0204 | 0.0296 |
| 2.50E-08 | 0.0499 | 0.072 | 0.0827 | 0.1446 | 0.0676 | 0.0451 | 0.0424 | 0.0463 | 0.0678 | 0.083 | 0.1147 | 0.0628 | 0.0314 | 0.0204 | 0.0296 |
| 7.00E-08 | 0.0495 | 0.0719 | 0.0827 | 0.1446 | 0.0676 | 0.0451 | 0.0424 | 0.0463 | 0.0678 | 0.0829 | 0.1131 | 0.0624 | 0.0314 | 0.0204 | 0.0296 |
| 1.00E-07 | 0.0476 | 0.0707 | 0.0827 | 0.1446 | 0.0676 | 0.045 | 0.042 | 0.0458 | 0.0663 | 0.0807 | 0.1052 | 0.0582 | 0.031 | 0.0204 | 0.0295 |
| 1.50E-07 | 0.045 | 0.0689 | 0.0822 | 0.1446 | 0.0674 | 0.0447 | 0.0418 | 0.0455 | 0.0648 | 0.076 | 0.0916 | 0.0539 | 0.0303 | 0.0202 | 0.0292 |
| 2.20E-07 | 0.0439 | 0.0674 | 0.0807 | 0.1442 | 0.0673 | 0.0444 | 0.0415 | 0.0451 | 0.0632 | 0.0723 | 0.0838 | 0.0524 | 0.03 | 0.0202 | 0.0292 |
| 3.20E-07 | 0.0435 | 0.0664 | 0.0793 | 0.1433 | 0.0667 | 0.044 | 0.041 | 0.0444 | 0.0626 | 0.0704 | 0.0817 | 0.0521 | 0.0297 | 0.0201 | 0.0292 |
| 4.80E-07 | 0.0435 | 0.0663 | 0.0792 | 0.1431 | 0.0658 | 0.0436 | 0.0408 | 0.0441 | 0.0617 | 0.0702 | 0.0816 | 0.0512 | 0.0295 | 0.0201 | 0.029 |
| 7.00E-07 | 0.043 | 0.0661 | 0.0792 | 0.1431 | 0.0656 | 0.0436 | 0.0407 | 0.044 | 0.0612 | 0.0699 | 0.0805 | 0.0496 | 0.0292 | 0.0201 | 0.0288 |
| 1.00E-06 | 0.0423 | 0.0651 | 0.0791 | 0.1431 | 0.0656 | 0.0436 | 0.0405 | 0.044 | 0.0607 | 0.0694 | 0.0776 | 0.0483 | 0.029 | 0.0199 | 0.0287 |
| 1.50E-06 | 0.0423 | 0.0643 | 0.0782 | 0.1429 | 0.0656 | 0.0435 | 0.0402 | 0.0436 | 0.0603 | 0.0687 | 0.0755 | 0.0473 | 0.0278 | 0.0196 | 0.0284 |
| 2.00E-06 | 0.0422 | 0.0637 | 0.0778 | 0.1427 | 0.0652 | 0.0429 | 0.04 | 0.0435 | 0.0602 | 0.0682 | 0.074 | 0.0412 | 0.0243 | 0.0164 | 0.0257 |
| 3.00E-06 | 0.0329 | 0.0609 | 0.0768 | 0.142 | 0.0649 | 0.0416 | 0.0386 | 0.0407 | 0.0558 | 0.0648 | 0.0558 | 0.0232 | 0.0139 | 0.0088 | 0.0126 |
| 4.00E-06 | 0.0214 | 0.0508 | 0.0705 | 0.1407 | 0.0636 | 0.0399 | 0.0344 | 0.0355 | 0.0515 | 0.058 | 0.0407 | 0.0163 | 0.0097 | 0.0043 | 0.0068 |
| 5.00E-06 | 0.0173 | 0.0435 | 0.0632 | 0.1383 | 0.0618 | 0.037 | 0.0307 | 0.032 | 0.0453 | 0.0503 | 0.0326 | 0.0131 | 0.0065 | 0.0033 | 0.0053 |
| 7.00E-06 | 0.0136 | 0.0335 | 0.0563 | 0.1344 | 0.058 | 0.0334 | 0.0255 | 0.0269 | 0.0377 | 0.0384 | 0.0224 | 0.0071 | 0.004 | 0.0025 | 0.003 |
| 8.50E-06 | 0.01 | 0.025 | 0.0521 | 0.1315 | 0.0552 | 0.0312 | 0.0231 | 0.0244 | 0.0323 | 0.0295 | 0.0133 | 0.0047 | 0.0031 | 0.0018 | 0.0016 |
| 1.00E-05 | 0.0071 | 0.0206 | 0.0488 | 0.13 | 0.0533 | 0.0292 | 0.0209 | 0.0224 | 0.0289 | 0.0239 | 0.0096 | 0.0038 | 0.002 | 0.0013 | 0.0012 |
| 1.50E-05 | 0.0029 | 0.0121 | 0.0368 | 0.124 | 0.0486 | 0.0251 | 0.0172 | 0.0156 | 0.0172 | 0.0104 | 0.004 | 0.0012 | 0.001 | 0.0005 | 0.0006 |
| 2.00E-05 | 0.0021 | 0.0077 | 0.0301 | 0.1159 | 0.043 | 0.022 | 0.013 | 0.0116 | 0.0104 | 0.0068 | 0.0022 | 0.0006 | 0.0002 | 0.0003 | 0.0001 |
| 2.50E-05 | 0.0012 | 0.0063 | 0.0262 | 0.1095 | 0.0361 | 0.0169 | 0.0093 | 0.0089 | 0.0081 | 0.0051 | 0.0014 | 0.0003 | 0.0001 | 0.0003 | 0.0001 |
| 3.00E-05 | 0.0009 | 0.0052 | 0.0236 | 0.1016 | 0.0332 | 0.0146 | 0.0077 | 0.0083 | 0.0067 | 0.0033 | 0.0012 | 0.0002 | 0 | 0.0003 | 0.0001 |
| 3.50E-05 | 0.0006 | 0.0044 | 0.0201 | 0.0916 | 0.0311 | 0.0135 | 0.0074 | 0.0074 | 0.005 | 0.0024 | 0.0008 | 0.0002 | 0 | 0.0002 | 0.0001 |
| 4.00E-05 | 0.0005 | 0.0036 | 0.0166 | 0.0793 | 0.0281 | 0.0126 | 0.0067 | 0.0056 | 0.0029 | 0.0017 | 0.0005 | 0.0002 | 0 | 0 | 0.0001 |
| 5.00E-05 | 0.0003 | 0.0029 | 0.0119 | 0.0621 | 0.0225 | 0.0104 | 0.0046 | 0.0037 | 0.0015 | 0.0009 | 0.0002 | 0.0001 | 0 | 0 | 0 |
| 6.00E-05 | 0.0003 | 0.0018 | 0.0084 | 0.0432 | 0.0151 | 0.0071 | 0.0031 | 0.0018 | 0.001 | 0.0005 | 0.0002 | 0.0001 | 0 | 0 | 0 |
| 7.00E-05 | 0.0002 | 0.0015 | 0.0061 | 0.0273 | 0.01 | 0.0048 | 0.0023 | 0.0015 | 0.0003 | 0.0001 | 0.0002 | 0.0001 | 0 | 0 | 0 |
| 8.50E-05 | 0.0002 | 0.0008 | 0.0025 | 0.0107 | 0.0041 | 0.0024 | 0.0009 | 0.0008 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0 | 0 | 0 |
| 1.00E-04 | 0.0001 | 0.0005 | 0.0015 | 0.0038 | 0.0017 | 0.0015 | 0.0005 | 0.0003 | 0 | 0.0001 | 0.0001 | 0.0001 | 0 | 0 | 0 |
| 1.30E-04 | 0 | 0.0001 | 0.0002 | 0.0003 | 0.0002 | 0.0002 | 0.0002 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1.70E-04 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

SSES-FSAR

Table Rev. 36

Table 2.3-103

2003 Probability values for 1 hour at SSES LPZ

Probability that the X/Q is Greater than the Adjacent Quantized Level

| DIRECTION | | | | | | | | | | | | | | |
|-----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| QUANTIZED LEVEL | N | NNE | NE | ENE | E | ESE | SE | SSE | S | SSW | SW | WSW | W | WNW |
| 0.00E+00 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1.00E-10 | 0.0392 | 0.0769 | 0.1096 | 0.1414 | 0.0673 | 0.0497 | 0.062 | 0.0474 | 0.061 | 0.0683 | 0.1004 | 0.0621 | 0.0297 | 0.0287 |
| 3.50E-09 | 0.0392 | 0.0769 | 0.1096 | 0.1414 | 0.0673 | 0.0497 | 0.062 | 0.0474 | 0.061 | 0.0683 | 0.1004 | 0.0621 | 0.0297 | 0.0287 |
| 1.00E-08 | 0.0392 | 0.0769 | 0.1096 | 0.1414 | 0.0673 | 0.0497 | 0.062 | 0.0474 | 0.061 | 0.0683 | 0.1004 | 0.0621 | 0.0297 | 0.0287 |
| 2.50E-08 | 0.0392 | 0.0769 | 0.1096 | 0.1414 | 0.0673 | 0.0497 | 0.062 | 0.0474 | 0.061 | 0.0683 | 0.1004 | 0.0621 | 0.0297 | 0.0287 |
| 7.00E-08 | 0.039 | 0.0769 | 0.1096 | 0.1414 | 0.0673 | 0.0497 | 0.062 | 0.0474 | 0.061 | 0.0683 | 0.0996 | 0.0615 | 0.0297 | 0.0287 |
| 1.00E-07 | 0.0385 | 0.0764 | 0.109 | 0.1414 | 0.0673 | 0.0497 | 0.0613 | 0.0469 | 0.0603 | 0.0677 | 0.096 | 0.0587 | 0.0287 | 0.0274 |
| 1.50E-07 | 0.0377 | 0.0746 | 0.108 | 0.1412 | 0.067 | 0.0494 | 0.0607 | 0.0461 | 0.0579 | 0.0656 | 0.09 | 0.0549 | 0.028 | 0.0273 |
| 2.20E-07 | 0.0373 | 0.0743 | 0.1068 | 0.141 | 0.0666 | 0.049 | 0.0603 | 0.0448 | 0.0564 | 0.0619 | 0.0854 | 0.053 | 0.0273 | 0.0271 |
| 3.20E-07 | 0.0371 | 0.0739 | 0.1064 | 0.1405 | 0.0657 | 0.0489 | 0.0598 | 0.044 | 0.056 | 0.0601 | 0.0846 | 0.0527 | 0.0272 | 0.0271 |
| 4.80E-07 | 0.0371 | 0.0737 | 0.1063 | 0.1397 | 0.065 | 0.0482 | 0.0595 | 0.0437 | 0.0557 | 0.0595 | 0.0843 | 0.0523 | 0.027 | 0.0271 |
| 7.00E-07 | 0.0365 | 0.0737 | 0.106 | 0.1397 | 0.0649 | 0.0482 | 0.0595 | 0.0436 | 0.0554 | 0.0594 | 0.0829 | 0.0516 | 0.0266 | 0.0266 |
| 1.00E-06 | 0.0363 | 0.0728 | 0.1059 | 0.1397 | 0.0649 | 0.0482 | 0.0591 | 0.0435 | 0.0553 | 0.0591 | 0.0808 | 0.0513 | 0.0266 | 0.0264 |
| 1.50E-06 | 0.0361 | 0.0725 | 0.1056 | 0.1397 | 0.0649 | 0.0479 | 0.0587 | 0.0432 | 0.0553 | 0.0587 | 0.0799 | 0.0485 | 0.0255 | 0.026 |
| 2.00E-06 | 0.0353 | 0.0724 | 0.1055 | 0.1391 | 0.0648 | 0.0479 | 0.0583 | 0.043 | 0.0551 | 0.0581 | 0.0779 | 0.0416 | 0.0222 | 0.0231 |
| 3.00E-06 | 0.0286 | 0.0667 | 0.1025 | 0.138 | 0.0633 | 0.0463 | 0.0549 | 0.0413 | 0.0522 | 0.0558 | 0.0551 | 0.0258 | 0.0124 | 0.0141 |
| 4.00E-06 | 0.0198 | 0.0551 | 0.0928 | 0.1353 | 0.0618 | 0.0428 | 0.0481 | 0.0377 | 0.0475 | 0.0496 | 0.037 | 0.0182 | 0.0092 | 0.0086 |
| 5.00E-06 | 0.016 | 0.0499 | 0.0868 | 0.1322 | 0.0604 | 0.0392 | 0.0421 | 0.0346 | 0.0441 | 0.0438 | 0.0279 | 0.0139 | 0.0066 | 0.0074 |
| 7.00E-06 | 0.0108 | 0.0379 | 0.0753 | 0.1285 | 0.0566 | 0.0353 | 0.0364 | 0.0288 | 0.0358 | 0.034 | 0.0179 | 0.0081 | 0.0038 | 0.0051 |
| 8.50E-06 | 0.0075 | 0.0318 | 0.0688 | 0.1251 | 0.0542 | 0.0318 | 0.0324 | 0.024 | 0.0299 | 0.025 | 0.0106 | 0.0055 | 0.0025 | 0.0022 |
| 1.00E-05 | 0.0058 | 0.025 | 0.0633 | 0.1215 | 0.0512 | 0.029 | 0.0289 | 0.0219 | 0.0256 | 0.0189 | 0.008 | 0.0043 | 0.0018 | 0.0013 |
| 1.50E-05 | 0.0024 | 0.0123 | 0.0485 | 0.1126 | 0.0446 | 0.0228 | 0.0226 | 0.0149 | 0.0146 | 0.0097 | 0.0037 | 0.0014 | 0.001 | 0.0008 |
| 2.00E-05 | 0.0014 | 0.0066 | 0.0358 | 0.0989 | 0.0382 | 0.0182 | 0.0165 | 0.01 | 0.0082 | 0.0053 | 0.0017 | 0.0007 | 0.0005 | 0.0006 |
| 2.50E-05 | 0.0013 | 0.0046 | 0.0303 | 0.0893 | 0.0302 | 0.0129 | 0.0118 | 0.0056 | 0.0059 | 0.0029 | 0.0009 | 0.0002 | 0.0005 | 0.0003 |
| 3.00E-05 | 0.0008 | 0.003 | 0.0272 | 0.0823 | 0.0271 | 0.0114 | 0.0086 | 0.0046 | 0.0045 | 0.0023 | 0.0002 | 0.0002 | 0.0005 | 0.0001 |
| 3.50E-05 | 0.0005 | 0.0027 | 0.0236 | 0.0709 | 0.0229 | 0.0091 | 0.0066 | 0.0038 | 0.0033 | 0.0016 | 0 | 0.0001 | 0.0005 | 0.0001 |
| 4.00E-05 | 0.0002 | 0.0021 | 0.0209 | 0.0604 | 0.0212 | 0.0084 | 0.0053 | 0.003 | 0.0024 | 0.0009 | 0 | 0.0001 | 0.0005 | 0.0001 |
| 5.00E-05 | 0.0002 | 0.0014 | 0.0152 | 0.0448 | 0.0175 | 0.0066 | 0.0043 | 0.0015 | 0.0013 | 0.0007 | 0 | 0.0001 | 0.0003 | 0 |
| 6.00E-05 | 0.0002 | 0.0012 | 0.0109 | 0.0322 | 0.012 | 0.0035 | 0.003 | 0.0009 | 0.001 | 0.0005 | 0 | 0 | 0.0002 | 0 |
| 7.00E-05 | 0 | 0.001 | 0.0081 | 0.019 | 0.0071 | 0.0025 | 0.0018 | 0.0007 | 0.0006 | 0 | 0 | 0 | 0.0001 | 0 |
| 8.50E-05 | 0 | 0.0005 | 0.0036 | 0.006 | 0.0038 | 0.0012 | 0.0009 | 0.0005 | 0.0001 | 0 | 0 | 0 | 0.0001 | 0 |
| 1.00E-04 | 0 | 0.0002 | 0.0012 | 0.0023 | 0.0021 | 0.0007 | 0.0003 | 0.0002 | 0 | 0 | 0 | 0 | 0.0001 | 0 |
| 1.30E-04 | 0 | 0 | 0.0001 | 0 | 0 | 0 | 0.0001 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1.70E-04 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Table 2.3-104

| 1999 - 2003 Average Probability Values for 1 hour at SSES LPZ Probability that the X/Q is Greater than the Adjacent Quantized Level | | | | | | | | | | | | | | | |
|--|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| DIRECTION | | | | | | | | | | | | | | | |
| QUANTIZED LEVEL | N | NNE | NE | ENE | E | ESE | SE | SSE | S | SSW | SW | WSW | W | WNW | NNW |
| 0.00E+00 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1.00E-10 | 5.13E-02 | 7.05E-02 | 9.23E-02 | 1.56E-01 | 7.49E-02 | 4.53E-02 | 4.87E-02 | 4.26E-02 | 6.18E-02 | 7.04E-02 | 1.04E-01 | 5.99E-02 | 3.03E-02 | 2.13E-02 | 3.15E-02 |
| 3.50E-09 | 5.13E-02 | 7.05E-02 | 9.23E-02 | 1.56E-01 | 7.49E-02 | 4.53E-02 | 4.87E-02 | 4.26E-02 | 6.18E-02 | 7.04E-02 | 1.04E-01 | 5.99E-02 | 3.03E-02 | 2.13E-02 | 3.15E-02 |
| 1.00E-08 | 5.13E-02 | 7.05E-02 | 9.23E-02 | 1.56E-01 | 7.49E-02 | 4.53E-02 | 4.87E-02 | 4.26E-02 | 6.18E-02 | 7.04E-02 | 1.04E-01 | 5.99E-02 | 3.03E-02 | 2.13E-02 | 3.15E-02 |
| 2.50E-08 | 5.13E-02 | 7.05E-02 | 9.23E-02 | 1.56E-01 | 7.49E-02 | 4.53E-02 | 4.87E-02 | 4.26E-02 | 6.18E-02 | 7.04E-02 | 1.04E-01 | 5.99E-02 | 3.03E-02 | 2.13E-02 | 3.15E-02 |
| 7.00E-08 | 5.12E-02 | 7.04E-02 | 9.23E-02 | 1.56E-01 | 7.49E-02 | 4.53E-02 | 4.87E-02 | 4.26E-02 | 6.18E-02 | 7.04E-02 | 1.04E-01 | 5.94E-02 | 3.03E-02 | 2.13E-02 | 3.15E-02 |
| 1.00E-07 | 5.05E-02 | 6.95E-02 | 9.21E-02 | 1.56E-01 | 7.49E-02 | 4.53E-02 | 4.83E-02 | 4.24E-02 | 6.12E-02 | 6.96E-02 | 9.92E-02 | 5.58E-02 | 2.91E-02 | 2.10E-02 | 3.12E-02 |
| 1.50E-07 | 6.73E-02 | 9.09E-02 | 9.09E-02 | 1.55E-01 | 7.47E-02 | 4.51E-02 | 4.78E-02 | 4.18E-02 | 5.90E-02 | 6.66E-02 | 8.87E-02 | 5.21E-02 | 2.74E-02 | 2.02E-02 | 3.09E-02 |
| 2.20E-07 | 4.81E-02 | 6.57E-02 | 8.89E-02 | 1.55E-01 | 7.43E-02 | 4.45E-02 | 4.66E-02 | 4.05E-02 | 5.55E-02 | 6.29E-02 | 8.25E-02 | 5.07E-02 | 2.70E-02 | 2.00E-02 | 3.07E-02 |
| 3.20E-07 | 4.78E-02 | 6.48E-02 | 8.75E-02 | 1.54E-01 | 7.37E-02 | 4.38E-02 | 4.59E-02 | 3.98E-02 | 5.54E-02 | 6.08E-02 | 8.05E-02 | 5.03E-02 | 2.68E-02 | 2.00E-02 | 3.07E-02 |
| 4.80E-07 | 4.77E-02 | 6.47E-02 | 8.72E-02 | 1.53E-01 | 7.27E-02 | 4.31E-02 | 4.55E-02 | 3.95E-02 | 5.49E-02 | 6.03E-02 | 8.00E-02 | 4.97E-02 | 2.67E-02 | 2.00E-02 | 3.06E-02 |
| 7.00E-07 | 4.71E-02 | 6.43E-02 | 8.71E-02 | 1.53E-01 | 7.24E-02 | 4.29E-02 | 4.54E-02 | 3.94E-02 | 5.46E-02 | 6.02E-02 | 7.89E-02 | 4.80E-02 | 2.61E-02 | 1.99E-02 | 3.04E-02 |
| 1.00E-06 | 4.63E-02 | 6.35E-02 | 8.67E-02 | 1.53E-01 | 7.23E-02 | 4.29E-02 | 4.52E-02 | 3.93E-02 | 5.43E-02 | 5.97E-02 | 7.66E-02 | 4.69E-02 | 2.58E-02 | 1.94E-02 | 3.02E-02 |
| 2.00E-06 | 4.62E-02 | 6.29E-02 | 8.60E-02 | 1.53E-01 | 7.22E-02 | 4.27E-02 | 4.49E-02 | 3.90E-02 | 5.36E-02 | 5.87E-02 | 7.48E-02 | 4.49E-02 | 2.50E-02 | 1.90E-02 | 3.00E-02 |
| 1.50E-06 | 4.51E-02 | 6.25E-02 | 8.57E-02 | 1.52E-01 | 7.20E-02 | 4.23E-02 | 4.45E-02 | 3.87E-02 | 5.31E-02 | 5.82E-02 | 7.26E-02 | 3.77E-02 | 2.26E-02 | 1.72E-02 | 2.80E-02 |
| 3.00E-06 | 3.19E-02 | 5.78E-02 | 8.38E-02 | 1.52E-01 | 7.13E-02 | 4.13E-02 | 4.26E-02 | 3.72E-02 | 5.11E-02 | 5.62E-02 | 5.57E-02 | 2.19E-02 | 1.30E-02 | 1.01E-02 | 1.43E-02 |
| 4.00E-06 | 2.06E-02 | 4.76E-02 | 7.65E-02 | 1.49E-01 | 6.96E-02 | 3.88E-02 | 3.87E-02 | 3.43E-02 | 4.71E-02 | 5.06E-02 | 4.18E-02 | 1.57E-02 | 8.24E-03 | 5.80E-03 | 7.80E-03 |
| 5.00E-06 | 1.66E-02 | 4.12E-02 | 7.06E-02 | 1.47E-01 | 6.74E-02 | 3.65E-02 | 3.53E-02 | 3.13E-02 | 4.24E-02 | 4.49E-02 | 3.45E-02 | 1.20E-02 | 5.86E-03 | 4.04E-03 | 5.96E-03 |
| 7.00E-06 | 1.23E-02 | 3.24E-02 | 6.17E-02 | 1.42E-01 | 6.37E-02 | 3.35E-02 | 3.03E-02 | 2.61E-02 | 3.60E-02 | 3.60E-02 | 3.60E-02 | 7.02E-03 | 3.58E-03 | 2.52E-03 | 4.30E-03 |
| 8.50E-06 | 9.08E-03 | 2.57E-02 | 5.61E-02 | 1.39E-01 | 6.12E-02 | 3.15E-02 | 2.73E-02 | 2.31E-02 | 3.14E-02 | 2.85E-02 | 1.50E-02 | 4.68E-03 | 2.52E-03 | 1.64E-03 | 2.34E-03 |
| 1.00E-05 | 6.80E-03 | 2.10E-02 | 5.20E-02 | 1.36E-01 | 5.84E-02 | 2.91E-02 | 2.45E-02 | 2.10E-02 | 2.77E-02 | 2.27E-02 | 1.14E-02 | 3.64E-03 | 1.86E-03 | 9.19E-04 | 1.46E-03 |
| 1.50E-05 | 3.04E-03 | 1.15E-02 | 3.94E-02 | 1.27E-01 | 5.26E-02 | 2.44E-02 | 1.96E-02 | 1.54E-02 | 1.78E-02 | 1.09E-02 | 5.05E-03 | 1.40E-03 | 1.00E-03 | 4.00E-04 | 6.60E-04 |
| 2.00E-05 | 2.08E-03 | 6.82E-03 | 3.03E-02 | 1.15E-01 | 4.65E-02 | 2.07E-02 | 1.52E-02 | 1.07E-02 | 1.05E-02 | 6.40E-03 | 2.86E-03 | 5.40E-04 | 5.60E-04 | 2.00E-04 | 2.20E-04 |
| 2.50E-05 | 1.48E-03 | 5.12E-03 | 2.53E-02 | 1.06E-01 | 3.94E-02 | 1.59E-02 | 1.10E-02 | 7.10E-03 | 7.70E-03 | 4.32E-03 | 1.90E-03 | 3.40E-04 | 4.80E-04 | 1.20E-04 | 1.20E-04 |
| 3.00E-05 | 9.80E-04 | 3.84E-03 | 2.22E-02 | 9.65E-02 | 3.51E-02 | 1.35E-02 | 8.88E-03 | 5.94E-03 | 6.34E-03 | 3.06E-03 | 1.26E-03 | 2.40E-04 | 3.60E-04 | 9.99E-05 | 1.00E-04 |
| 3.50E-05 | 7.40E-04 | 3.22E-03 | 1.90E-02 | 8.52E-02 | 3.15E-02 | 1.14E-02 | 7.24E-03 | 5.16E-03 | 4.92E-03 | 2.14E-03 | 9.21E-04 | 1.60E-04 | 3.40E-04 | 8.00E-05 | 6.00E-05 |
| 4.00E-05 | 5.00E-04 | 2.56E-03 | 1.62E-02 | 7.34E-02 | 2.82E-02 | 1.04E-02 | 6.18E-03 | 3.98E-03 | 3.22E-03 | 1.40E-03 | 6.20E-04 | 9.99E-05 | 2.40E-04 | 4.01E-05 | 1.99E-05 |
| 5.00E-05 | 3.20E-04 | 1.84E-03 | 1.23E-02 | 5.63E-02 | 2.32E-02 | 8.68E-03 | 4.88E-03 | 2.64E-03 | 1.88E-03 | 8.20E-04 | 4.21E-04 | 7.99E-05 | 1.40E-04 | 4.01E-05 | 0.00E+00 |
| 6.00E-05 | 2.80E-04 | 1.44E-03 | 8.84E-03 | 3.74E-02 | 1.60E-02 | 5.94E-03 | 3.24E-03 | 1.42E-03 | 1.10E-03 | 6.00E-04 | 2.20E-04 | 1.99E-05 | 1.20E-04 | 4.01E-05 | 0.00E+00 |
| 7.00E-05 | 1.20E-04 | 1.14E-03 | 6.54E-03 | 2.34E-02 | 1.04E-02 | 4.22E-03 | 2.30E-03 | 1.08E-03 | 6.81E-04 | 2.81E-04 | 1.40E-04 | 1.99E-05 | 6.00E-05 | 4.01E-05 | 0.00E+00 |
| 8.50E-05 | 9.99E-05 | 5.80E-04 | 3.16E-03 | 9.44E-03 | 5.46E-03 | 2.22E-03 | 1.30E-03 | 5.00E-04 | 1.40E-04 | 1.61E-04 | 7.99E-05 | 1.99E-05 | 6.00E-05 | 0.00E+00 | 0.00E+00 |
| 1.00E-04 | 5.99E-05 | 3.80E-04 | 1.52E-03 | 3.42E-03 | 2.72E-03 | 1.56E-03 | 7.41E-04 | 2.80E-04 | 8.02E-05 | 6.01E-05 | 3.99E-05 | 1.99E-05 | 1.99E-05 | 0.00E+00 | 0.00E+00 |
| 1.30E-04 | 2.00E-05 | 3.99E-05 | 1.60E-04 | 3.00E-04 | 4.01E-04 | 1.20E-04 | 2.40E-04 | 2.00E-05 | 4.01E-05 | 2.00E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 1.70E-04 | 0.00E+00 | 0.00E+00 | 2.00E-05 | 4.00E-05 | 4.02E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 2.00E-04 | 0.00E+00 | 0.00E+00 | 2.00E-05 | 2.00E-05 | 2.00E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 2.50E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 3.00E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 3.50E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 4.00E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 5.00E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 6.00E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 7.00E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 8.50E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 1.00E-03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 1.40E-03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 2.00E-03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 3.00E-03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 4.00E-03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |

TABLE 2.3-105

SUMMARY OF LONG-TERM X/Q (SEC/M3) RESULTS AT 4827 METER LPZ

| Period of Record | USNRC Reg. Guide 1.145 Interpolation Methodology | | | | | | | | Annual Average | |
|---|--|---------|------------|---------|-------------|---------|--------------|---------|---------------------|-----------------------|
| | 0-8 hours | | 8-24 hours | | 24-96 hours | | 96-720 hours | | 8760 hours | |
| | 0.5%* | 50%** | 0.5%* | 50%** | 0.5%* | 50%** | 0.5%* | 50%** | Direction Dependent | Direction Independent |
| 1999 | 5.4E-05 | 4.6E-06 | 3.8E-05 | 3.7E-06 | 1.8E-05 | 2.3E-06 | 6.3E-06 | 1.1E-06 | 1.7E-06 | 4.8E-07 |
| 2000 | 4.9E-05 | 4.8E-06 | 3.5E-05 | 3.8E-06 | 1.7E-05 | 2.3E-06 | 6.0E-06 | 1.1E-06 | 1.7E-06 | 4.8E-07 |
| 2001 | 5.0E-05 | 5.4E-06 | 3.6E-05 | 4.3E-06 | 1.7E-05 | 2.6E-06 | 6.1E-06 | 1.3E-06 | 1.7E-06 | 5.3E-07 |
| 2002 | 5.0E-05 | 4.5E-06 | 3.6E-05 | 3.6E-06 | 1.7E-05 | 2.2E-06 | 6.1E-06 | 1.1E-06 | 1.7E-06 | 4.5E-07 |
| 2003 | 4.6E-05 | 4.7E-06 | 3.3E-05 | 3.7E-06 | 1.6E-05 | 2.2E-06 | 5.9E-06 | 1.1E-06 | 1.7E-06 | 4.4E-07 |
| 5-year Combined | 4.9E-05 | 4.8E-06 | 3.5E-05 | 3.8E-06 | 1.7E-05 | 2.3E-06 | 6.1E-06 | 1.1E-06 | 1.7E-06 | 4.7E-07 |
| *direction dependent values (see Figure 2.3-10) **direction independent values (see Figure 2.3-10) | | | | | | | | | | |

**TABLE 2.3-106
DISTANCES AND TERRAIN/RECIRCULATION CORRECTION FACTORS
FOR SSES 2003 LAND USE CENSUS LOCATIONS**

| RESIDENCE | | | GARDEN | | |
|---|--------------|----------------------------------|------------------------|--------------|----------------------------------|
| AFFECTED SECTOR | MILES | Terrain Correction Factor | AFFECTED SECTOR | MILES | Terrain Correction Factor |
| N | 1.3 | 2.15 | N | 3.2 | 2.19 |
| NNE | 1 | 2.50 | NNE | 2.3 | 2.55 |
| NE | 0.9 | 2.33 | NE | 2.7 | 2.47 |
| ENE | 2.1 | 2.42 | ENE | 2.4 | 2.48 |
| E | 1.4 | 2.09 | E | 1.8 | 2.07 |
| ESE | 0.5 | 2.58 | ESE | 2.5 | 2.00 |
| SE | 0.5 | 2.43 | SE | 0.6 | 2.44 |
| SSE | 0.6 | 2.71 | SSE | 1.5 | 2.44 |
| S | 1 | 2.46 | S | 1.1 | 2.43 |
| SSW | 0.9 | 2.39 | SSW | 1.2 | 2.35 |
| SW | 1.5 | 2.14 | SW | 1.9 | 2.11 |
| WSW | 1.3 | 2.32 | WSW | 1.3 | 2.32 |
| W | 1.2 | 2.18 | W | 1.2 | 2.18 |
| WNW | 0.8 | 2.74 | WNW | | |
| NW | 0.8 | 3.30 | NW | 1.8 | 3.06 |
| NNW | 0.6 | 2.53 | NNW | 4 | 2.40 |
| PRODUCTION ANIMAL | | | DAIRY ANIMAL | | |
| AFFECTED SECTOR | MILES | Terrain Correction Factor | AFFECTED SECTOR | MILES | Terrain Correction Factor |
| NNE | 2.3 | 2.55 | E | 4.5 | 1.80 |
| ENE | 2.4 | 2.48 | ESE | 2.7 | 1.96 |
| E | 1.4 | 2.09 | ESE | 4.2 | 1.58 |
| SSW | 3 | 2.35 | SSW | 3 | 2.11 |
| SSW | 3.5 | 1.88 | SSW | 3.1 | 2.06 |
| WSW | 1.7 | 2.34 | SSW | 3.5 | 1.88 |
| NW | 1.8 | 3.06 | SSW | 14.01 | 1.03 |
| | | | WSW | 1.7 | 2.34 |
| | | | W | 5 | 1.46 |
| | | | NNW | 4.2 | 2.4 |
| Distances to the nearest garden, residence, dairy animal and production animal in each of the affected sectors was provided by the 2003 SSES Land Use Census. The terrain/recirculation correction factors listed for the distances in the above tables were mathematically interpolated from the terrain/recirculation factors quoted for standard distances in the SSES Final Safety Analysis Report. | | | | | |

Table 2.3-107

| 1999 AVERAGE RELATIVE CONCENTRATION (sec/meter ³) AND DEPOSITION (meter ⁻²) ESTIMATES AT THE SITE BOUNDARY | | | | | |
|--|------------------|--|-------------------------------|----------------------------|----------------------------|
| Affected Sector | | Relative Concentration (sec/meter ³) | | | Deposition |
| | Distance (miles) | No Decay Undepleted | 2.26 Days of Decay Undepleted | 8.0 Days of Decay Depleted | D/Q (meter ⁻²) |
| N | 0.59 | 5.57E-06 | 5.55E-06 | 5.03E-06 | 1.75E-08 |
| NNE | 0.78 | 3.88E-06 | 3.86E-06 | 3.43E-06 | 1.51E-08 |
| NE | 0.7 | 4.40E-06 | 4.39E-06 | 3.93E-06 | 2.70E-08 |
| ENE | 0.86 | 1.50E-06 | 1.50E-06 | 1.32E-06 | 1.29E-08 |
| E | 0.8 | 8.48E-07 | 8.46E-07 | 7.50E-07 | 6.68E-09 |
| ESE | 0.5 | 1.13E-06 | 1.13E-06 | 1.03E-06 | 9.26E-09 |
| SE | 0.43 | 2.39E-06 | 2.39E-06 | 2.21E-06 | 1.97E-08 |
| SSE | 0.41 | 3.14E-06 | 3.14E-06 | 2.91E-06 | 2.88E-08 |
| S | 0.38 | 6.71E-06 | 6.70E-06 | 6.25E-06 | 4.66E-08 |
| SSW | 0.39 | 1.07E-05 | 1.07E-05 | 9.96E-06 | 5.41E-08 |
| SW | 0.61 | 1.13E-05 | 1.13E-05 | 1.02E-05 | 2.86E-08 |
| WSW | 1.22 | 1.28E-05 | 1.27E-05 | 1.10E-05 | 1.66E-08 |
| W | 1.03 | 7.68E-06 | 7.61E-06 | 6.67E-06 | 1.00E-08 |
| WNW | 0.61 | 1.04E-05 | 1.04E-05 | 9.38E-06 | 1.72E-08 |
| NW | 0.66 | 7.44E-06 | 7.40E-06 | 6.67E-06 | 1.70E-08 |
| NNW | 0.59 | 5.14E-06 | 5.12E-06 | 4.64E-06 | 1.42E-08 |
| The above values were calculated using the XDCALC atmospheric dispersion model with terrain/recirculation factors included. | | | | | |

Table 2.3-108

| 2000 AVERAGE RELATIVE CONCENTRATION (sec/meter ³) AND DEPOSITION (meter ⁻²) ESTIMATES AT THE SITE BOUNDARY | | | | | |
|--|------------------|--|-------------------------------|----------------------------|----------------------------|
| Affected Sector | | Relative Concentration (sec/meter ³) | | | Deposition |
| | Distance (miles) | No Decay Undepleted | 2.26 Days of Decay Undepleted | 8.0 Days of Decay Depleted | D/Q (meter ⁻²) |
| N | 0.59 | 6.83E-06 | 6.80E-06 | 6.16E-06 | 2.10E-08 |
| NNE | 0.78 | 4.35E-06 | 4.33E-06 | 3.86E-06 | 1.51E-08 |
| NE | 0.7 | 4.17E-06 | 4.16E-06 | 3.73E-06 | 2.61E-08 |
| ENE | 0.86 | 1.40E-06 | 1.39E-06 | 1.23E-06 | 1.14E-08 |
| E | 0.8 | 8.89E-07 | 8.86E-07 | 7.86E-07 | 6.31E-09 |
| ESE | 0.5 | 1.57E-06 | 1.56E-06 | 1.43E-06 | 1.23E-08 |
| SE | 0.43 | 2.60E-06 | 2.60E-06 | 2.40E-06 | 2.20E-08 |
| SSE | 0.41 | 4.09E-06 | 4.09E-06 | 3.79E-06 | 3.52E-08 |
| S | 0.38 | 6.21E-06 | 6.20E-06 | 5.78E-06 | 4.11E-08 |
| SSW | 0.39 | 1.22E-05 | 1.22E-05 | 1.14E-05 | 4.90E-08 |
| SW | 0.61 | 1.24E-05 | 1.24E-05 | 1.12E-05 | 2.90E-08 |
| WSW | 1.22 | 1.24E-05 | 1.23E-05 | 1.07E-05 | 1.65E-08 |
| W | 1.03 | 7.62E-06 | 7.55E-06 | 6.61E-06 | 1.03E-08 |
| WNW | 0.61 | 8.27E-06 | 8.23E-06 | 7.45E-06 | 1.55E-08 |
| NW | 0.66 | 8.40E-06 | 8.36E-06 | 7.53E-06 | 1.68E-08 |
| NNW | 0.59 | 5.99E-06 | 5.96E-06 | 5.41E-06 | 1.41E-08 |
| The above values were calculated using the XDCALC atmospheric dispersion model with terrain/recirculation factors included. | | | | | |

TABLE 2.3-109

| 2001 AVERAGE RELATIVE CONCENTRATION (sec/meter ³) AND DEPOSITION (meter ⁻²) ESTIMATES AT THE SITE BOUNDARY | | | | | |
|--|------------------|--|-------------------------------|----------------------------|----------------------------|
| Affected Sector | | Relative Concentration (sec/meter ³) | | | Deposition |
| | Distance (miles) | No Decay Undepleted | 2.26 Days of Decay Undepleted | 8.0 Days of Decay Depleted | D/Q (meter ⁻²) |
| N | 0.59 | 7.27E-06 | 7.24E-06 | 6.56E-06 | 2.22E-08 |
| NNE | 0.78 | 4.18E-06 | 4.16E-06 | 3.70E-06 | 1.52E-08 |
| NE | 0.7 | 4.34E-06 | 4.33E-06 | 3.87E-06 | 2.77E-08 |
| ENE | 0.86 | 1.35E-06 | 1.34E-06 | 1.19E-06 | 1.16E-08 |
| E | 0.8 | 7.05E-07 | 7.03E-07 | 6.24E-07 | 5.37E-09 |
| ESE | 0.5 | 1.17E-06 | 1.17E-06 | 1.07E-06 | 8.69E-09 |
| SE | 0.43 | 2.89E-06 | 2.88E-06 | 2.66E-06 | 2.37E-08 |
| SSE | 0.41 | 3.85E-06 | 3.84E-06 | 3.56E-06 | 3.06E-08 |
| S | 0.38 | 6.07E-06 | 6.06E-06 | 5.65E-06 | 3.90E-08 |
| SSW | 0.39 | 1.01E-05 | 1.01E-05 | 9.35E-06 | 4.23E-08 |
| SW | 0.61 | 1.07E-05 | 1.06E-05 | 9.60E-06 | 2.23E-08 |
| WSW | 1.22 | 1.37E-05 | 1.36E-05 | 1.18E-05 | 1.74E-08 |
| W | 1.03 | 8.94E-06 | 8.86E-06 | 7.76E-06 | 1.12E-08 |
| WNW | 0.61 | 1.09E-05 | 1.08E-06 | 9.77E-06 | 1.79E-08 |
| NW | 0.66 | 8.76E-06 | 8.72E-06 | 7.85E-06 | 1.94E-08 |
| NNW | 0.59 | 7.07E-06 | 7.04E-06 | 6.38E-06 | 1.80E-08 |
| The above values were calculated using the XDCALC atmospheric dispersion model with terrain/recirculation factors included. | | | | | |

TABLE 2.3-110

| 2002 AVERAGE RELATIVE CONCENTRATION (sec/meter ³) AND DEPOSITION (meter ⁻²) ESTIMATES AT THE SITE BOUNDARY | | | | | |
|--|------------------|--|-------------------------------|----------------------------|----------------------------|
| Affected Sector | | Relative Concentration (sec/meter ³) | | | Deposition |
| | Distance (miles) | No Decay Undepleted | 2.26 Days of Decay Undepleted | 8.0 Days of Decay Depleted | D/Q (meter ⁻²) |
| N | 0.59 | 6.61E-06 | 6.58E-06 | 5.97E-06 | 2.28E-08 |
| NNE | 0.78 | 4.44E-06 | 4.43E-06 | 3.94E-06 | 1.87E-08 |
| NE | 0.7 | 4.03E-06 | 4.02E-06 | 3.60E-06 | 3.03E-08 |
| ENE | 0.86 | 1.58E-06 | 1.57E-06 | 1.39E-06 | 1.28E-08 |
| E | 0.8 | 9.13E-07 | 9.10E-07 | 8.08E-07 | 6.69E-09 |
| ESE | 0.5 | 1.30E-06 | 1.30E-06 | 1.19E-06 | 1.07E-08 |
| SE | 0.43 | 2.10E-06 | 2.10E-06 | 1.94E-06 | 1.90E-08 |
| SSE | 0.41 | 3.28E-06 | 3.28E-06 | 3.04E-06 | 2.91E-08 |
| S | 0.38 | 5.71E-06 | 5.70E-06 | 5.31E-06 | 3.78E-08 |
| SSW | 0.39 | 1.24E-05 | 1.23E-05 | 1.15E-05 | 5.14E-08 |
| SW | 0.61 | 1.13E-05 | 1.13E-05 | 1.02E-05 | 2.45E-08 |
| WSW | 1.22 | 1.26E-05 | 1.25E-05 | 1.08E-05 | 1.48E-08 |
| W | 1.03 | 6.95E-06 | 6.89E-06 | 6.04E-06 | 8.88E-09 |
| WNW | 0.61 | 1.02E-05 | 1.02E-05 | 9.19E-06 | 1.74E-08 |
| NW | 0.66 | 7.22E-06 | 7.18E-06 | 6.46E-06 | 1.63E-08 |
| NNW | 0.59 | 6.63E-06 | 6.61E-06 | 5.99E-06 | 1.79E-08 |
| The above values were calculated using the XDCALC atmospheric dispersion model with terrain/recirculation factors included. | | | | | |

TABLE 2.3-111

| 2003 AVERAGE RELATIVE CONCENTRATION (sec/meter ³) AND DEPOSITION (meter ⁻²) ESTIMATES AT THE SITE BOUNDARY | | | | | |
|--|------------------|--|-------------------------------|----------------------------|----------------------------|
| Affected Sector | | Relative Concentration (sec/meter ³) | | | Deposition |
| | Distance (miles) | No Decay Undepleted | 2.26 Days of Decay Undepleted | 8.0 Days of Decay Depleted | D/Q (meter ⁻²) |
| N | 0.59 | 6.10E-06 | 6.08E-06 | 5.51E-06 | 2.05E-08 |
| NNE | 0.78 | 3.87E-06 | 3.86E-06 | 3.43E-06 | 1.54E-08 |
| NE | 0.7 | 3.70E-06 | 3.69E-06 | 3.30E-06 | 2.65E-08 |
| ENE | 0.86 | 1.61E-06 | 1.61E-06 | 1.42E-06 | 1.27E-08 |
| E | 0.8 | 9.09E-07 | 9.06E-07 | 8.04E-07 | 6.37E-09 |
| ESE | 0.5 | 1.33E-06 | 1.33E-06 | 1.22E-06 | 1.12E-08 |
| SE | 0.43 | 2.09E-06 | 2.09E-06 | 1.93E-06 | 1.84E-08 |
| SSE | 0.41 | 2.80E-06 | 2.80E-06 | 2.59E-06 | 2.55E-08 |
| S | 0.38 | 4.69E-06 | 4.69E-06 | 4.37E-06 | 2.97E-08 |
| SSW | 0.39 | 1.28E-05 | 1.28E-05 | 1.19E-06 | 5.49E-08 |
| SW | 0.61 | 1.45E-05 | 1.45E-05 | 1.31E-05 | 3.25E-08 |
| WSW | 1.22 | 1.10E-05 | 1.09E-05 | 9.46E-06 | 1.45E-08 |
| W | 1.03 | 6.36E-06 | 6.31E-06 | 5.53E-06 | 8.85E-09 |
| WNW | 0.61 | 9.16E-06 | 9.12E-06 | 8.25E-06 | 1.91E-08 |
| NW | 0.66 | 9.36E-06 | 9.32E-06 | 8.39E-06 | 2.37E-08 |
| NNW | 0.59 | 6.10E-06 | 6.08E-06 | 5.51E-06 | 1.83E-08 |
| The above values were calculated using the XDCALC atmospheric dispersion model with terrain/recirculation factors included. | | | | | |

TABLE 2.3-112

| 1999 - 2003 AVERAGE RELATIVE CONCENTRATION (sec/meter ³) AND DEPOSITION (meter ⁻²) ESTIMATES AT THE SITE BOUNDARY | | | | | |
|---|------------------|--|-------------------------------|----------------------------|----------------------------|
| Affected Sector | | Relative Concentration (sec/meter ³) | | | Deposition |
| | Distance (miles) | No Decay Undepleted | 2.26 Days of Decay Undepleted | 8.0 Days of Decay Depleted | D/Q (meter ⁻²) |
| N | 0.59 | 6.47E-06 | 6.45E-06 | 5.85E-06 | 2.08E-08 |
| NNE | 0.78 | 4.15E-06 | 4.13E-06 | 3.67E-06 | 1.59E-08 |
| NE | 0.7 | 4.13E-06 | 4.12E-06 | 3.69E-06 | 2.75E-08 |
| ENE | 0.86 | 1.49E-06 | 1.48E-06 | 1.31E-06 | 1.23E-08 |
| E | 0.8 | 8.53E-07 | 8.50E-07 | 7.55E-07 | 6.28E-09 |
| ESE | 0.5 | 1.30E-06 | 1.30E-06 | 1.19E-06 | 1.05E-08 |
| SE | 0.43 | 2.42E-06 | 2.41E-06 | 2.23E-06 | 2.06E-08 |
| SSE | 0.41 | 3.43E-06 | 3.43E-06 | 3.18E-06 | 2.98E-08 |
| S | 0.38 | 5.88E-06 | 5.87E-06 | 5.47E-06 | 3.88E-08 |
| SSW | 0.39 | 1.16E-05 | 1.16E-05 | 1.08E-05 | 5.03E-08 |
| SW | 0.61 | 1.21E-05 | 1.20E-05 | 1.09E-05 | 2.74E-08 |
| WSW | 1.22 | 1.25E-05 | 1.24E-05 | 1.07E-05 | 1.60E-08 |
| W | 1.03 | 7.51E-06 | 7.45E-06 | 6.52E-06 | 9.85E-09 |
| WNW | 0.61 | 9.78E-06 | 9.73E-06 | 8.81E-06 | 1.74E-08 |
| NW | 0.66 | 8.24E-06 | 8.19E-06 | 7.38E-06 | 1.86E-08 |
| NNW | 0.59 | 6.19E-06 | 6.16E-06 | 5.59E-06 | 1.65E-08 |
| The above values were calculated using the XDCALC atmospheric dispersion model with terrain/recirculation factors included. | | | | | |

TABLE 2.3-113

| 1999 AVERAGE RELATIVE CONCENTRATION (sec/meter ³) AND DEPOSITION (meter ⁻²) ESTIMATES AT THE EXCLUSION AREA BOUNDARY | | | | | |
|--|------------------|--|-------------------------------|----------------------------|----------------------------|
| Affected Sector | | Relative Concentration (sec/meter ³) | | | Deposition |
| | Distance (miles) | No Decay Undepleted | 2.26 Days of Decay Undepleted | 8.0 Days of Decay Depleted | D/Q (meter ⁻²) |
| N | 0.34 | 1.23E-05 | 1.23E-05 | 1.15E-05 | 4.43E-08 |
| NNE | 0.34 | 1.09E-05 | 1.09E-05 | 1.02E-05 | 5.21E-08 |
| NE | 0.34 | 1.18E-05 | 1.18E-05 | 1.10E-05 | 8.56E-08 |
| ENE | 0.34 | 5.60E-06 | 5.60E-06 | 5.25E-06 | 5.80E-08 |
| E | 0.34 | 2.98E-06 | 2.98E-06 | 2.80E-06 | 2.81E-08 |
| ESE | 0.34 | 2.16E-06 | 2.16E-06 | 2.03E-06 | 1.92E-08 |
| SE | 0.34 | 3.39E-06 | 3.39E-06 | 3.18E-06 | 2.94E-08 |
| SSE | 0.34 | 4.01E-06 | 4.00E-06 | 3.76E-06 | 3.82E-08 |
| S | 0.34 | 7.75E-06 | 7.74E-06 | 7.27E-06 | 5.51E-08 |
| SSW | 0.34 | 1.32E-05 | 1.32E-05 | 1.24E-05 | 6.85E-08 |
| SW | 0.34 | 2.50E-05 | 2.49E-05 | 2.34E-05 | 7.10E-08 |
| WSW | 0.34 | 6.81E-05 | 6.80E-05 | 6.38E-05 | 1.06E-07 |
| W | 0.34 | 4.22E-05 | 4.22E-05 | 3.96E-05 | 6.73E-08 |
| WNW | 0.34 | 2.38E-05 | 2.37E-05 | 2.23E-05 | 4.43E-08 |
| NW | 0.34 | 1.96E-05 | 1.96E-05 | 1.84E-05 | 5.20E-08 |
| NNW | 0.34 | 1.03E-05 | 1.03E-05 | 9.68E-06 | 3.23E-08 |
| The above values were calculated using the XDCALC atmospheric dispersion model with terrain/recirculation factors included. | | | | | |

TABLE 2.3-114

| 2000 AVERAGE RELATIVE CONCENTRATION (sec/meter ³) AND DEPOSITION (meter ⁻²) ESTIMATES AT THE EXCLUSION AREA BOUNDARY | | | | | |
|--|------------------|--|-------------------------------|----------------------------|----------------------------|
| Affected Sector | | Relative Concentration (sec/meter ³) | | | Deposition |
| | Distance (miles) | No Decay Undepleted | 2.26 Days of Decay Undepleted | 8.0 Days of Decay Depleted | D/Q (meter ⁻²) |
| N | 0.34 | 1.50E-05 | 1.50E-05 | 1.41E-05 | 5.30E-08 |
| NNE | 0.34 | 1.23E-05 | 1.23E-05 | 1.15E-05 | 5.22E-08 |
| NE | 0.34 | 1.14E-05 | 1.13E-05 | 1.06E-05 | 8.26E-08 |
| ENE | 0.34 | 5.29E-06 | 5.29E-06 | 4.96E-06 | 5.14E-08 |
| E | 0.34 | 3.16E-06 | 3.15E-06 | 2.96E-06 | 2.66E-08 |
| ESE | 0.34 | 3.00E-06 | 3.00E-06 | 2.82E-06 | 2.55E-08 |
| SE | 0.34 | 3.69E-06 | 3.69E-06 | 3.47E-06 | 3.30E-08 |
| SSE | 0.34 | 5.22E-06 | 5.22E-06 | 4.89E-06 | 4.66E-08 |
| S | 0.34 | 7.17E-06 | 7.17E-06 | 6.72E-06 | 4.85E-08 |
| SSW | 0.34 | 1.50E-05 | 1.50E-05 | 1.41E-05 | 6.20E-08 |
| SW | 0.34 | 2.74E-05 | 2.74E-05 | 2.57E-05 | 7.20E-08 |
| WSW | 0.34 | 6.45E-05 | 6.45E-05 | 6.05E-05 | 1.05E-07 |
| W | 0.34 | 4.12E-05 | 4.11E-05 | 3.86E-05 | 6.93E-08 |
| WNW | 0.34 | 1.88E-05 | 1.87E-05 | 1.76E-05 | 4.00E-08 |
| NW | 0.34 | 2.21E-05 | 2.21E-05 | 2.07E-05 | 5.14E-08 |
| NNW | 0.34 | 1.19E-05 | 1.19E-05 | 1.12E-05 | 3.22E-08 |
| The above values were calculated using the XDCALC atmospheric dispersion model with terrain/recirculation factors included. | | | | | |

TABLE 2.3-115

| 2001 AVERAGE RELATIVE CONCENTRATION (sec/meter ³) AND DEPOSITION (meter ⁻²) ESTIMATES AT THE EXCLUSION AREA BOUNDARY | | | | | |
|--|------------------|--|-------------------------------|----------------------------|----------------------------|
| Affected Sector | | Relative Concentration (sec/meter ³) | | | Deposition |
| | Distance (miles) | No Decay Undepleted | 2.26 Days of Decay Undepleted | 8.0 Days of Decay Depleted | D/Q (meter ⁻²) |
| N | 0.34 | 1.61E-05 | 1.60E-05 | 1.51E-05 | 5.61E-08 |
| NNE | 0.34 | 1.17E-05 | 1.17E-05 | 1.10E-05 | 5.26E-08 |
| NE | 0.34 | 1.19E-05 | 1.18E-05 | 1.11E-05 | 8.78E-08 |
| ENE | 0.34 | 5.14E-06 | 5.14E-06 | 4.82E-06 | 5.23E-08 |
| E | 0.34 | 2.51E-06 | 2.51E-06 | 2.35E-06 | 2.26E-08 |
| ESE | 0.34 | 2.23E-06 | 2.23E-06 | 2.09E-06 | 1.80E-08 |
| SE | 0.34 | 4.12E-06 | 4.12E-06 | 3.86E-06 | 3.54E-08 |
| SSE | 0.34 | 4.90E-06 | 4.90E-06 | 4.60E-06 | 4.05E-08 |
| S | 0.34 | 7.01E-06 | 7.00E-06 | 6.57E-06 | 4.61E-08 |
| SSW | 0.34 | 1.23E-05 | 1.23E-05 | 1.16E-05 | 5.35E-08 |
| SW | 0.34 | 2.34E-05 | 2.34E-05 | 2.20E-05 | 5.53E-08 |
| WSW | 0.34 | 7.16E-05 | 7.15E-05 | 6.71E-05 | 1.11E-07 |
| W | 0.34 | 4.83E-05 | 4.83E-05 | 4.53E-05 | 7.56E-08 |
| WNW | 0.34 | 2.44E-05 | 2.43E-05 | 2.28E-05 | 4.62E-08 |
| NW | 0.34 | 2.29E-05 | 2.29E-05 | 2.15E-05 | 5.93E-08 |
| NNW | 0.34 | 1.40E-05 | 1.40E-05 | 1.31E-05 | 4.10E-08 |
| The above values were calculated using the XDCALC atmospheric dispersion model with terrain/recirculation factors included. | | | | | |

TABLE 2.3-116

| 2002 AVERAGE RELATIVE CONCENTRATION (sec/meter ³) AND DEPOSITION (meter ⁻²) ESTIMATES AT THE EXCLUSION AREA BOUNDARY | | | | | |
|--|------------------|--|-------------------------------|----------------------------|----------------------------|
| Affected Sector | | Relative Concentration (sec/meter ³) | | | Deposition |
| | Distance (miles) | No Decay Undepleted | 2.26 Days of Decay Undepleted | 8.0 Days of Decay Depleted | D/Q (meter ⁻²) |
| N | 0.34 | 1.45E-05 | 1.45E-05 | 1.36E-05 | 5.77E-08 |
| NNE | 0.34 | 1.25E-05 | 1.25E-05 | 1.17E-05 | 6.47E-08 |
| NE | 0.34 | 1.10E-05 | 1.10E-05 | 1.03E-05 | 9.60E-08 |
| ENE | 0.34 | 5.93E-06 | 5.93E-06 | 5.56E-06 | 5.79E-08 |
| E | 0.34 | 3.20E-06 | 3.20E-06 | 3.00E-06 | 2.82E-08 |
| ESE | 0.34 | 2.48E-06 | 2.48E-06 | 2.32E-06 | 2.22E-08 |
| SE | 0.34 | 2.99E-06 | 2.99E-06 | 2.81E-06 | 2.84E-08 |
| SSE | 0.34 | 4.19E-06 | 4.19E-06 | 3.93E-06 | 3.86E-08 |
| S | 0.34 | 6.58E-06 | 6.57E-06 | 6.17E-06 | 4.47E-08 |
| SSW | 0.34 | 1.52E-05 | 1.52E-05 | 1.42E-05 | 6.51E-08 |
| SW | 0.34 | 2.51E-05 | 2.51E-05 | 2.36E-05 | 6.08E-08 |
| WSW | 0.34 | 6.65E-05 | 6.64E-05 | 6.24E-05 | 9.45E-08 |
| W | 0.34 | 3.72E-05 | 3.71E-05 | 3.49E-05 | 5.98E-08 |
| WNW | 0.34 | 2.32E-05 | 2.31E-05 | 2.17E-05 | 4.47E-08 |
| NW | 0.34 | 1.91E-05 | 1.90E-05 | 1.79E-05 | 4.97E-08 |
| NNW | 0.34 | 1.33E-05 | 1.33E-05 | 1.25E-05 | 4.09E-08 |
| The above values were calculated using the XDCALC atmospheric dispersion model with terrain/recirculation factors included. | | | | | |

TABLE 2.3-117

| 2003 AVERAGE RELATIVE CONCENTRATION (sec/meter ³) AND DEPOSITION (meter ⁻²) ESTIMATES AT THE EXCLUSION AREA BOUNDARY | | | | | |
|--|------------------|--|-------------------------------|----------------------------|----------------------------|
| Affected Sector | | Relative Concentration (sec/meter ³) | | | Deposition |
| | Distance (miles) | No Decay Undepleted | 2.26 Days of Decay Undepleted | 8.0 Days of Decay Depleted | D/Q (meter ⁻²) |
| N | 0.34 | 1.34E-05 | 1.34E-05 | 1.26E-05 | 5.19E-08 |
| NNE | 0.34 | 1.08E-05 | 1.08E-05 | 1.02E-05 | 5.33E-08 |
| NE | 0.34 | 1.00E-05 | 1.00E-05 | 9.38E-06 | 8.40E-08 |
| ENE | 0.34 | 5.94E-06 | 5.93E-06 | 5.57E-06 | 5.73E-08 |
| E | 0.34 | 3.18E-06 | 3.18E-06 | 2.98E-06 | 2.68E-08 |
| ESE | 0.34 | 2.53E-06 | 2.53E-06 | 2.38E-06 | 2.33E-08 |
| SE | 0.34 | 2.97E-06 | 2.97E-06 | 2.79E-06 | 2.75E-08 |
| SSE | 0.34 | 3.56E-06 | 3.56E-06 | 3.34E-06 | 3.38E-08 |
| S | 0.34 | 5.41E-06 | 5.40E-06 | 5.07E-06 | 3.51E-08 |
| SSW | 0.34 | 1.57E-05 | 1.57E-05 | 1.47E-05 | 6.96E-08 |
| SW | 0.34 | 3.21E-05 | 3.21E-05 | 3.01E-05 | 8.07E-08 |
| WSW | 0.34 | 5.65E-05 | 5.65E-05 | 5.30E-05 | 9.25E-08 |
| W | 0.34 | 3.37E-05 | 3.37E-05 | 3.16E-05 | 5.96E-08 |
| WNW | 0.34 | 2.05E-05 | 2.05E-05 | 1.92E-05 | 4.93E-08 |
| NW | 0.34 | 2.43E-05 | 2.43E-05 | 2.28E-05 | 7.25E-08 |
| NNW | 0.34 | 1.21E-05 | 1.21E-05 | 1.14E-05 | 4.18E-08 |
| The above values were calculated using the XDCALC atmospheric dispersion model with terrain/recirculation factors included. | | | | | |

TABLE 2.3-118

| 1999 - 2003 AVERAGE RELATIVE CONCENTRATION (sec/meter ³) AND DEPOSITION (meter ⁻²) ESTIMATES AT THE EXCLUSION AREA BOUNDARY | | | | | |
|---|------------------|--|-------------------------------|----------------------------|----------------------------|
| Affected Sector | | Relative Concentration (sec/meter ³) | | | Deposition |
| | Distance (miles) | No Decay Undepleted | 2.26 Days of Decay Undepleted | 8.0 Days of Decay Depleted | D/Q (meter ⁻²) |
| N | 0.34 | 1.43E-05 | 1.43E-05 | 1.34E-05 | 5.26E-08 |
| NNE | 0.34 | 1.16E-05 | 1.16E-05 | 1.09E-05 | 5.50E-08 |
| NE | 0.34 | 1.12E-05 | 1.12E-05 | 1.05E-05 | 8.72E-08 |
| ENE | 0.34 | 5.58E-06 | 5.58E-06 | 5.23E-06 | 5.54E-08 |
| E | 0.34 | 3.01E-06 | 3.00E-06 | 2.82E-06 | 2.65E-08 |
| ESE | 0.34 | 2.48E-06 | 2.48E-06 | 2.33E-06 | 2.16E-08 |
| SE | 0.34 | 3.43E-06 | 3.43E-06 | 3.22E-06 | 3.08E-08 |
| SSE | 0.34 | 4.38E-06 | 4.37E-06 | 4.11E-06 | 3.96E-08 |
| S | 0.34 | 6.78E-05 | 6.78E-06 | 6.36E-06 | 4.59E-08 |
| SSW | 0.34 | 1.43E-05 | 1.43E-05 | 1.34E-05 | 6.37E-08 |
| SW | 0.34 | 2.66E-05 | 2.66E-05 | 2.49E-05 | 6.80E-08 |
| WSW | 0.34 | 6.54E-05 | 6.54E-05 | 6.14E-05 | 1.02E-07 |
| W | 0.34 | 4.05E-05 | 4.05E-05 | 3.80E-05 | 6.64E-08 |
| WNW | 0.34 | 2.21E-05 | 2.21E-05 | 2.07E-05 | 4.49E-08 |
| NW | 0.34 | 2.16E-05 | 2.16E-05 | 2.02E-05 | 5.70E-08 |
| NNW | 0.34 | 1.23E-05 | 1.23E-05 | 1.16E-05 | 3.76E-08 |
| The above values were calculated using the XDCALC atmospheric dispersion model with terrain/recirculation factors included. | | | | | |

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Table Rev. 49

TABLE 2.3-119

1999 ATMOSPHERIC DISPERSION ESTIMATES FOR NEAREST RESIDENCE AND GARDEN*

NEAREST RESIDENCE WITHIN A 5-MILE RADIUS OF SSES BY SECTOR

| SECTOR NUMBER | AFFECTED SECTOR | MILES | X/Q | X/Q DEC | X/Q DEC+DEP | DEPOSITION |
|---------------|-----------------|-------|----------|----------|-------------|------------|
| 1 | N | 1.3 | 1.72E-06 | 1.71E-06 | 1.47E-06 | 4.44E-09 |
| 2 | NNE | 1 | 2.85E-06 | 2.83E-06 | 2.48E-06 | 1.04E-08 |
| 3 | NE | 0.9 | 3.07E-06 | 3.05E-06 | 2.69E-06 | 1.77E-08 |
| 4 | ENE | 2.1 | 4.03E-07 | 4.01E-07 | 3.32E-07 | 3.06E-09 |
| 5 | E | 1.4 | 3.28E-07 | 3.27E-07 | 2.80E-07 | 2.30E-09 |
| 6 | ESE | 0.5 | 1.13E-06 | 1.13E-06 | 1.03E-06 | 9.24E-09 |
| 7 | SE | 0.5 | 1.90E-06 | 1.90E-06 | 1.74E-06 | 1.51E-08 |
| 8 | SSE | 0.6 | 1.87E-06 | 1.87E-06 | 1.69E-06 | 1.58E-08 |
| 9 | S | 1 | 1.69E-06 | 1.68E-06 | 1.47E-06 | 9.42E-09 |
| 10 | SSW | 0.9 | 3.23E-06 | 3.21E-06 | 2.83E-06 | 1.35E-08 |
| 11 | SW | 1.5 | 3.06E-06 | 3.03E-06 | 2.59E-06 | 6.42E-09 |
| 12 | WSW | 1.3 | 1.16E-05 | 1.15E-05 | 9.90E-06 | 1.49E-08 |
| 13 | W | 1.2 | 5.96E-06 | 5.90E-06 | 5.12E-06 | 7.54E-09 |
| 14 | WNW | 0.8 | 7.13E-06 | 7.08E-06 | 6.30E-06 | 1.12E-08 |
| 15 | NW | 0.8 | 6.11E-06 | 6.06E-06 | 5.40E-06 | 1.34E-08 |
| 16 | NNW | 0.6 | 5.02E-06 | 5.00E-06 | 4.52E-06 | 1.38E-08 |

NEAREST GARDEN WITHIN A 5-MILE RADIUS OF SSES BY SECTOR

| SECTOR NUMBER | AFFECTED SECTOR | MILES | X/Q | X/Q DEC | X/Q DEC+DEP | DEPOSITION |
|---------------|-----------------|-------|----------|----------|-------------|------------|
| 1 | N | 3.2 | 4.61E-07 | 4.52E-07 | 3.61E-07 | 9.99E-10 |
| 2 | NNE | 2.3 | 8.50E-07 | 8.40E-07 | 6.92E-07 | 2.73E-09 |
| 3 | NE | 2.7 | 6.27E-07 | 6.21E-07 | 5.02E-07 | 3.07E-09 |
| 4 | ENE | 2.1 | 4.03E-07 | 4.01E-07 | 3.32E-07 | 3.06E-09 |
| 5 | E | 1.8 | 2.21E-07 | 2.20E-07 | 1.84E-07 | 1.52E-09 |
| 6 | ESE | 2.5 | 7.59E-08 | 7.54E-08 | 6.14E-08 | 4.97E-10 |
| 7 | SE | 0.6 | 1.46E-06 | 1.46E-06 | 1.32E-06 | 1.11E-08 |
| 8 | SSE | 1.5 | 4.28E-07 | 4.26E-07 | 3.63E-07 | 2.99E-09 |
| 9 | S | 1.1 | 1.45E-06 | 1.44E-06 | 1.25E-06 | 7.92E-09 |
| 10 | SSW | 1.2 | 2.07E-06 | 2.06E-06 | 1.78E-06 | 8.11E-09 |
| 11 | SW | 1.9 | 2.15E-06 | 2.12E-06 | 1.78E-06 | 4.38E-09 |
| 12 | WSW | 1.3 | 1.16E-05 | 1.15E-05 | 9.90E-06 | 1.49E-08 |
| 13 | W | 1.2 | 5.96E-06 | 5.90E-06 | 5.12E-06 | 7.54E-09 |
| 14 | WNW | (1) | - | - | - | - |
| 15 | NW | 1.8 | 1.71E-06 | 1.69E-06 | 1.43E-06 | 3.19E-09 |
| 16 | NNW | 4 | 2.87E-07 | 2.80E-07 | 2.18E-07 | 5.10E-10 |

(1) No garden within 5 miles for this sector

*Locations use the 2003 Land Use Census Locations

SSSES-FSAR

Table Rev. 49

TABLE 2.3-120

2000 ATMOSPHERIC DISPERSION ESTIMATES FOR NEAREST RESIDENCE AND GARDEN*

NEAREST RESIDENCE WITHIN A 5-MILE RADIUS OF SSES BY SECTOR

| SECTOR NUMBER | AFFECTED SECTOR | MILES | X/Q | X/Q DEC | X/Q DEC+DEP | DEPOSITION |
|---------------|-----------------|-------|----------|----------|-------------|------------|
| 1 | N | 1.3 | 2.11E-06 | 2.10E-06 | 1.81E-06 | 5.31E-09 |
| 2 | NNE | 1 | 3.19E-06 | 3.18E-06 | 2.78E-06 | 1.04E-08 |
| 3 | NE | 0.9 | 2.89E-06 | 2.88E-06 | 2.54E-06 | 1.71E-08 |
| 4 | ENE | 2.1 | 3.66E-07 | 3.64E-07 | 3.01E-07 | 2.71E-09 |
| 5 | E | 1.4 | 3.42E-07 | 3.40E-07 | 2.91E-07 | 2.17E-09 |
| 6 | ESE | 0.5 | 1.56E-06 | 1.56E-06 | 1.43E-06 | 1.23E-08 |
| 7 | SE | 0.5 | 2.07E-06 | 2.06E-06 | 1.89E-06 | 1.69E-08 |
| 8 | SSE | 0.6 | 2.44E-06 | 2.44E-06 | 2.20E-06 | 1.94E-08 |
| 9 | S | 1 | 1.56E-06 | 1.55E-06 | 1.35E-06 | 8.29E-09 |
| 10 | SSW | 0.9 | 3.69E-06 | 3.67E-06 | 3.24E-06 | 1.22E-08 |
| 11 | SW | 1.5 | 3.33E-06 | 3.30E-06 | 2.82E-06 | 6.51E-09 |
| 12 | WSW | 1.3 | 1.13E-05 | 1.12E-05 | 9.65E-06 | 1.49E-08 |
| 13 | W | 1.2 | 5.92E-06 | 5.87E-06 | 5.09E-06 | 7.77E-09 |
| 14 | WNW | 0.8 | 5.68E-06 | 5.64E-06 | 5.02E-06 | 1.00E-08 |
| 15 | NW | 0.8 | 6.90E-06 | 6.85E-06 | 6.10E-06 | 1.32E-08 |
| 16 | NNW | 0.6 | 5.84E-06 | 5.82E-06 | 5.27E-06 | 1.37E-08 |

NEAREST GARDEN WITHIN A 5-MILE RADIUS OF SSES BY SECTOR

| SECTOR NUMBER | AFFECTED SECTOR | MILES | X/Q | X/Q DEC | X/Q DEC+DEP | DEPOSITION |
|---------------|-----------------|-------|----------|----------|-------------|------------|
| 1 | N | 3.2 | 5.63E-07 | 5.53E-07 | 4.41E-07 | 1.20E-09 |
| 2 | NNE | 2.3 | 9.52E-07 | 9.41E-07 | 7.75E-07 | 2.74E-09 |
| 3 | NE | 2.7 | 5.76E-07 | 5.70E-07 | 4.62E-07 | 2.96E-09 |
| 4 | ENE | 2.1 | 3.66E-07 | 3.64E-07 | 3.01E-07 | 2.71E-09 |
| 5 | E | 1.8 | 2.30E-07 | 2.29E-07 | 1.92E-07 | 1.44E-09 |
| 6 | ESE | 2.5 | 1.04E-07 | 1.03E-07 | 8.43E-08 | 6.62E-10 |
| 7 | SE | 0.6 | 1.58E-06 | 1.58E-06 | 1.43E-06 | 1.25E-08 |
| 8 | SSE | 1.5 | 5.59E-07 | 5.56E-07 | 4.73E-07 | 3.65E-09 |
| 9 | S | 1.1 | 1.34E-06 | 1.33E-06 | 1.16E-06 | 6.97E-09 |
| 10 | SSW | 1.2 | 2.37E-06 | 2.36E-06 | 2.04E-06 | 7.34E-09 |
| 11 | SW | 1.9 | 2.33E-06 | 2.31E-06 | 1.93E-06 | 4.44E-09 |
| 12 | WSW | 1.3 | 1.13E-05 | 1.12E-05 | 9.65E-06 | 1.49E-08 |
| 13 | W | 1.2 | 5.92E-06 | 5.87E-06 | 5.09E-06 | 7.77E-09 |
| 15 | NW | 1.8 | 1.93E-06 | 1.91E-06 | 1.61E-06 | 3.15E-09 |
| 16 | NNW | 4 | 3.36E-07 | 3.27E-07 | 2.55E-07 | 5.09E-10 |

(1) No garden within 5 miles for this sector

*Locations use the 2003 Land Use Census Locations

SSES – FSAR

Table Rev. 49

TABLE 2.3-121

2001 ATMOSPHERIC DISPERSION ESTIMATES FOR NEAREST RESIDENCE AND GARDEN*

NEAREST RESIDENCE WITHIN A 5-MILE RADIUS OF SSES BY SECTOR

| SECTOR NUMBER | AFFECTED SECTOR | MILES | X/Q | X/Q DEC | X/Q DEC+DEP | DEPOSITION |
|---------------|-----------------|-------|----------|----------|-------------|------------|
| 1 | N | 1.3 | 2.24E-06 | 2.22E-06 | 1.92E-06 | 5.62E-09 |
| 2 | NNE | 1 | 3.07E-06 | 3.06E-06 | 2.68E-06 | 1.05E-08 |
| 3 | NE | 0.9 | 3.00E-06 | 2.99E-06 | 2.63E-06 | 1.82E-08 |
| 4 | ENE | 2.1 | 3.52E-07 | 3.50E-07 | 2.89E-07 | 2.75E-09 |
| 5 | E | 1.4 | 2.71E-07 | 2.70E-07 | 2.31E-07 | 1.85E-09 |
| 6 | ESE | 0.5 | 1.17E-06 | 1.16E-06 | 1.07E-06 | 8.67E-09 |
| 7 | SE | 0.5 | 2.28E-06 | 2.28E-06 | 2.09E-06 | 1.82E-08 |
| 8 | SSE | 0.6 | 2.30E-06 | 2.29E-06 | 2.07E-06 | 1.68E-08 |
| 9 | S | 1 | 1.51E-06 | 1.51E-06 | 1.32E-06 | 7.88E-09 |
| 10 | SSW | 0.9 | 3.06E-06 | 3.05E-06 | 2.69E-06 | 1.05E-08 |
| 11 | SW | 1.5 | 2.88E-06 | 2.86E-06 | 2.44E-06 | 5.00E-09 |
| 12 | WSW | 1.3 | 1.24E-05 | 1.23E-05 | 1.06E-05 | 1.57E-08 |
| 13 | W | 1.2 | 6.95E-06 | 6.88E-06 | 5.97E-06 | 8.47E-09 |
| 14 | WNW | 0.8 | 7.49E-06 | 7.43E-06 | 6.62E-06 | 1.16E-08 |
| 15 | NW | 0.8 | 7.21E-06 | 7.16E-06 | 6.37E-06 | 1.52E-08 |
| 16 | NNW | 0.6 | 6.90E-06 | 6.87E-06 | 6.22E-06 | 1.75E-08 |

NEAREST GARDEN WITHIN A 5-MILE RADIUS OF SSES BY SECTOR

| SECTOR NUMBER | AFFECTED SECTOR | MILES | X/Q | X/Q DEC | X/Q DEC+DEP | DEPOSITION |
|---------------|-----------------|-------|----------|----------|-------------|------------|
| 1 | N | 3.2 | 5.95E-07 | 5.84E-07 | 4.66E-07 | 1.26E-09 |
| 2 | NNE | 2.3 | 9.17E-07 | 9.06E-07 | 7.46E-07 | 2.75E-09 |
| 3 | NE | 2.7 | 6.01E-07 | 5.94E-07 | 4.81E-07 | 3.15E-09 |
| 4 | ENE | 2.1 | 3.52E-07 | 3.50E-07 | 2.89E-07 | 2.75E-09 |
| 5 | E | 1.8 | 1.82E-07 | 1.81E-07 | 1.51E-07 | 1.23E-09 |
| 6 | ESE | 2.5 | 7.86E-08 | 7.80E-08 | 6.36E-08 | 4.66E-10 |
| 7 | SE | 0.6 | 1.74E-06 | 1.74E-06 | 1.57E-06 | 1.34E-08 |
| 8 | SSE | 1.5 | 5.27E-07 | 5.25E-07 | 4.47E-07 | 3.17E-09 |
| 9 | S | 1.1 | 1.30E-06 | 1.29E-06 | 1.12E-06 | 6.63E-09 |
| 10 | SSW | 1.2 | 1.98E-06 | 1.96E-06 | 1.70E-06 | 6.34E-09 |
| 11 | SW | 1.9 | 2.03E-06 | 2.00E-06 | 1.68E-06 | 3.41E-09 |
| 12 | WSW | 1.3 | 1.24E-05 | 1.23E-05 | 1.06E-05 | 1.57E-08 |
| 13 | W | 1.2 | 6.95E-06 | 6.88E-06 | 5.97E-06 | 8.47E-09 |
| 14 | NWW | (1) | - | - | - | - |
| 15 | NW | 1.8 | 2.03E-06 | 2.01E-06 | 1.69E-06 | 3.63E-09 |
| 16 | NNW | 4 | 4.02E-07 | 3.91E-07 | 3.05E-07 | 6.48E-10 |

(1) No garden within 5 miles for this sector

*Locations use the 2003 Land Use Census Locations

SSSES – FSAR

Table Rev. 49

TABLE 2.3-122

2002 ATMOSPHERIC DISPERSION ESTIMATES FOR NEAREST RESIDENCE AND GARDEN*

NEAREST RESIDENCE WITHIN A 5-MILE RADIUS OF SSES BY SECTOR

| SECTOR NUMBER | AFFECTED SECTOR | MILES | X/Q | X/Q DEC | X/Q DEC+DEP | DEPOSITION |
|---------------|-----------------|-------|----------|----------|-------------|------------|
| 1 | N | 1.3 | 2.06E-06 | 2.04E-06 | 1.76E-06 | 5.79E-09 |
| 2 | NNE | 1 | 3.26E-06 | 3.25E-06 | 2.84E-06 | 1.29E-08 |
| 3 | NE | 0.9 | 2.78E-06 | 2.77E-06 | 2.44E-06 | 1.99E-08 |
| 4 | ENE | 2.1 | 4.18E-07 | 4.15E-07 | 3.43E-07 | 3.05E-09 |
| 5 | E | 1.4 | 3.55E-07 | 3.53E-07 | 3.02E-07 | 2.30E-09 |
| 6 | ESE | 0.5 | 1.30E-06 | 1.30E-06 | 1.19E-06 | 1.07E-08 |
| 7 | SE | 0.5 | 1.67E-06 | 1.67E-06 | 1.53E-06 | 1.46E-08 |
| 8 | SSE | 0.6 | 1.96E-06 | 1.95E-06 | 1.76E-06 | 1.60E-08 |
| 9 | S | 1 | 1.45E-06 | 1.44E-06 | 1.26E-06 | 7.63E-09 |
| 10 | SSW | 0.9 | 3.73E-06 | 3.71E-06 | 3.27E-06 | 1.28E-08 |
| 11 | SW | 1.5 | 3.03E-06 | 3.00E-06 | 2.56E-06 | 5.50E-09 |
| 12 | WSW | 1.3 | 1.14E-05 | 1.13E-05 | 9.74E-06 | 1.33E-08 |
| 13 | W | 1.2 | 5.41E-06 | 5.36E-06 | 4.65E-06 | 6.70E-09 |
| 14 | WNW | 0.8 | 7.00E-06 | 6.95E-06 | 6.19E-06 | 1.12E-08 |
| 15 | NW | 0.8 | 5.92E-06 | 5.88E-06 | 5.23E-06 | 1.28E-08 |
| 16 | NNW | 0.6 | 6.47E-06 | 6.45E-06 | 5.84E-06 | 1.74E-08 |

NEAREST GARDEN WITHIN A 5-MILE RADIUS OF SSES BY SECTOR

| SECTOR NUMBER | AFFECTED SECTOR | MILES | X/Q | X/Q DEC | X/Q DEC+DEP | DEPOSITION |
|---------------|-----------------|-------|----------|----------|-------------|------------|
| 1 | N | 3.2 | 5.51E-07 | 5.42E-07 | 4.31E-07 | 1.30E-09 |
| 2 | NNE | 2.3 | 9.70E-07 | 9.61E-07 | 7.90E-07 | 3.39E-09 |
| 3 | NE | 2.7 | 5.50E-07 | 5.45E-07 | 4.41E-07 | 3.44E-09 |
| 4 | ENE | 2.1 | 4.18E-07 | 4.15E-07 | 3.43E-07 | 3.05E-09 |
| 5 | E | 1.8 | 2.38E-07 | 2.37E-07 | 1.99E-07 | 1.52E-09 |
| 6 | ESE | 2.5 | 8.95E-08 | 8.89E-08 | 7.24E-08 | 5.74E-10 |
| 7 | SE | 0.6 | 1.28E-06 | 1.28E-06 | 1.15E-06 | 1.07E-08 |
| 8 | SSE | 1.5 | 4.46E-07 | 4.44E-07 | 3.78E-07 | 3.02E-09 |
| 9 | S | 1.1 | 1.25E-06 | 1.24E-06 | 1.08E-06 | 6.42E-09 |
| 10 | SSW | 1.2 | 2.40E-06 | 2.39E-06 | 2.07E-06 | 7.71E-09 |
| 11 | SW | 1.9 | 2.13E-06 | 2.11E-06 | 1.76E-06 | 3.76E-09 |
| 12 | WSW | 1.3 | 1.14E-05 | 1.13E-05 | 9.74E-06 | 1.33E-08 |
| 13 | W | 1.2 | 5.41E-06 | 5.36E-06 | 4.65E-06 | 6.70E-09 |
| 14 | NWW | (1) | - | - | - | - |
| 15 | NW | 1.8 | 1.65E-06 | 1.63E-06 | 1.38E-06 | 3.05E-09 |
| 16 | NNW | 4 | 3.82E-07 | 3.73E-07 | 2.90E-07 | 6.46E-10 |

(1) No garden within 5 miles for this sector

*Locations use the 2003 Land Use Census Locations

SSSES – FSAR

Table Rev. 49

TABLE 2.3-123

2003 ATMOSPHERIC DISPERSION ESTIMATES FOR NEAREST RESIDENCE AND GARDEN*

NEAREST RESIDENCE WITHIN A 5-MILE RADIUS OF SSES BY SECTOR

| SECTOR NUMBER | AFFECTED SECTOR | MILES | X/Q | X/Q DEC | X/Q DEC+DEP | DEPOSITION |
|---------------|-----------------|-------|----------|----------|-------------|------------|
| 1 | N | 1.3 | 1.89E-06 | 1.87E-06 | 1.61E-06 | 5.20E-09 |
| 2 | NNE | 1 | 2.85E-06 | 2.83E-06 | 2.48E-06 | 1.06E-08 |
| 3 | NE | 0.9 | 2.56E-06 | 2.55E-06 | 2.25E-06 | 1.74E-08 |
| 4 | ENE | 2.1 | 4.35E-07 | 4.32E-07 | 3.57E-07 | 3.02E-09 |
| 5 | E | 1.4 | 3.53E-07 | 3.51E-07 | 3.01E-07 | 2.19E-09 |
| 6 | ESE | 0.5 | 1.33E-06 | 1.33E-06 | 1.21E-06 | 1.12E-08 |
| 7 | SE | 0.5 | 1.66E-06 | 1.66E-06 | 1.52E-06 | 1.42E-08 |
| 8 | SSE | 0.6 | 1.68E-06 | 1.67E-06 | 1.51E-06 | 1.40E-08 |
| 9 | S | 1 | 1.20E-06 | 1.20E-06 | 1.05E-06 | 5.99E-09 |
| 10 | SSW | 0.9 | 3.92E-06 | 3.90E-06 | 3.44E-06 | 1.37E-08 |
| 11 | SW | 1.5 | 3.91E-06 | 3.88E-06 | 3.31E-06 | 7.30E-09 |
| 12 | WSW | 1.3 | 1.00E-05 | 9.93E-06 | 8.56E-06 | 1.30E-08 |
| 13 | W | 1.2 | 4.96E-06 | 4.91E-06 | 4.26E-06 | 6.68E-09 |
| 14 | WNW | 0.8 | 6.33E-06 | 6.29E-06 | 5.59E-06 | 1.24E-08 |
| 15 | NW | 0.8 | 7.72E-06 | 7.67E-06 | 6.82E-06 | 1.86E-08 |
| 16 | NNW | 0.6 | 5.96E-06 | 5.94E-06 | 5.37E-06 | 1.78E-08 |

NEAREST GARDEN WITHIN A 5-MILE RADIUS OF SSES BY SECTOR

| SECTOR NUMBER | AFFECTED SECTOR | MILES | X/Q | X/Q DEC | X/Q DEC+DEP | DEPOSITION |
|---------------|-----------------|-------|----------|----------|-------------|------------|
| 1 | N | 3.2 | 4.97E-07 | 4.89E-07 | 3.89E-07 | 1.17E-09 |
| 2 | NNE | 2.3 | 8.48E-07 | 8.39E-07 | 6.90E-07 | 2.79E-09 |
| 3 | NE | 2.7 | 5.08E-07 | 5.04E-07 | 4.07E-07 | 3.01E-09 |
| 4 | ENE | 2.1 | 4.35E-07 | 4.32E-07 | 3.57E-07 | 3.02E-09 |
| 5 | E | 1.8 | 2.38E-07 | 2.37E-07 | 1.99E-07 | 1.45E-09 |
| 6 | ESE | 2.5 | 8.98E-08 | 8.92E-08 | 7.27E-08 | 6.03E-10 |
| 7 | SE | 0.6 | 1.27E-06 | 1.27E-06 | 1.15E-06 | 1.04E-08 |
| 8 | SSE | 1.5 | 3.88E-07 | 3.86E-07 | 3.29E-07 | 2.65E-09 |
| 9 | S | 1.1 | 1.03E-06 | 1.03E-06 | 8.95E-07 | 5.04E-09 |
| 10 | SSW | 1.2 | 2.53E-06 | 2.52E-06 | 2.18E-06 | 8.24E-09 |
| 11 | SW | 1.9 | 2.75E-06 | 2.72E-06 | 2.28E-06 | 4.98E-09 |
| 12 | WSW | 1.3 | 1.00E-05 | 9.93E-06 | 8.56E-06 | 1.30E-08 |
| 13 | W | 1.2 | 4.96E-06 | 4.91E-06 | 4.26E-06 | 6.68E-09 |
| 14 | NWW | - | - | - | - | - |
| 15 | NW | 1.8 | 2.18E-06 | 2.16E-06 | 1.82E-06 | 4.44E-09 |
| 16 | NNW | 4 | 3.42E-07 | 3.34E-07 | 2.60E-07 | 6.60E-10 |

(1) No garden within 5 miles for this sector

*Locations use the 2003 Land Use Census Locations

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Table Rev. 49

TABLE 2.3-124

1999 - 2003 ATMOSPHERIC DISPERSION ESTIMATES FOR NEAREST RESIDENCE AND GARDEN*

NEAREST RESIDENCE WITHIN A 5-MILE RADIUS OF SSES BY SECTOR

| SECTOR NUMBER | AFFECTED SECTOR | MILES | X/Q | X/Q DEC | X/Q DEC+DEP | DEPOSITION |
|---------------|-----------------|-------|----------|----------|-------------|------------|
| 1 | N | 1.3 | 2.00E-06 | 1.99E-06 | 1.71E-06 | 5.27E-09 |
| 2 | NNE | 1 | 3.05E-06 | 3.03E-06 | 2.65E-06 | 1.10E-08 |
| 3 | NE | 0.9 | 2.86E-06 | 2.85E-06 | 2.51E-06 | 1.81E-08 |
| 4 | ENE | 2.1 | 3.95E-07 | 3.92E-07 | 3.24E-07 | 2.92E-09 |
| 5 | E | 1.4 | 3.30E-07 | 3.28E-07 | 2.81E-07 | 2.16E-09 |
| 6 | ESE | 0.5 | 1.30E-06 | 1.30E-06 | 1.19E-06 | 1.04E-08 |
| 7 | SE | 0.5 | 1.92E-06 | 1.92E-06 | 1.75E-06 | 1.58E-08 |
| 8 | SSE | 0.6 | 2.05E-06 | 2.05E-06 | 1.85E-06 | 1.64E-08 |
| 9 | S | 1 | 1.48E-06 | 1.48E-06 | 1.29E-06 | 7.84E-09 |
| 10 | SSW | 0.9 | 3.53E-06 | 3.51E-06 | 3.09E-06 | 1.25E-08 |
| 11 | SW | 1.5 | 3.24E-06 | 3.21E-06 | 2.74E-06 | 6.15E-09 |
| 12 | WSW | 1.3 | 1.14E-05 | 1.13E-05 | 9.70E-06 | 1.43E-08 |
| 13 | W | 1.2 | 5.84E-06 | 5.79E-06 | 5.02E-06 | 7.43E-09 |
| 14 | WNW | 0.8 | 6.73E-06 | 6.68E-06 | 5.94E-06 | 1.13E-08 |
| 15 | NW | 0.8 | 6.77E-06 | 6.72E-06 | 5.98E-06 | 1.46E-08 |
| 16 | NNW | 0.6 | 6.04E-06 | 6.01E-06 | 5.44E-06 | 1.60E-08 |

NEAREST GARDEN WITHIN A 5-MILE RADIUS OF SSES BY SECTOR

| SECTOR NUMBER | AFFECTED SECTOR | MILES | X/Q | X/Q DEC | X/Q DEC+DEP | DEPOSITION |
|---------------|-----------------|-------|----------|----------|-------------|------------|
| 1 | N | 3.2 | 5.34E-07 | 5.24E-07 | 4.17E-07 | 1.19E-09 |
| 2 | NNE | 2.3 | 9.07E-07 | 8.98E-07 | 7.39E-07 | 2.88E-09 |
| 3 | NE | 2.7 | 5.72E-07 | 5.67E-07 | 4.59E-07 | 3.13E-09 |
| 4 | ENE | 2.1 | 3.95E-07 | 3.92E-07 | 3.24E-07 | 2.92E-09 |
| 5 | E | 1.8 | 2.22E-07 | 2.21E-07 | 1.85E-07 | 1.43E-09 |
| 6 | ESE | 2.5 | 8.76E-08 | 8.70E-08 | 7.09E-08 | 5.60E-10 |
| 7 | SE | 0.6 | 1.47E-06 | 1.47E-06 | 1.32E-06 | 1.16E-08 |
| 8 | SSE | 1.5 | 4.70E-07 | 4.68E-07 | 3.98E-07 | 3.10E-09 |
| 9 | S | 1.1 | 1.27E-06 | 1.27E-06 | 1.10E-06 | 6.60E-09 |
| 10 | SSW | 1.2 | 2.27E-06 | 2.26E-06 | 1.95E-06 | 7.55E-09 |
| 11 | SW | 1.9 | 2.28E-06 | 2.25E-06 | 1.89E-06 | 4.20E-09 |
| 12 | WSW | 1.3 | 1.14E-05 | 1.13E-05 | 9.70E-06 | 1.43E-08 |
| 13 | W | 1.2 | 5.84E-06 | 5.79E-06 | 5.02E-06 | 7.43E-09 |
| 14 | NWW | (1) | - | - | - | - |
| 15 | NW | 1.8 | 1.90E-06 | 1.88E-06 | 1.58E-06 | 3.49E-09 |
| 16 | NNW | 4 | 3.50E-07 | 3.41E-07 | 2.65E-07 | 5.94E-10 |

(1) No garden within 5 miles for this sector

*Locations use the 2003 Land Use Census Locations

SSES – FSAR

Table Rev. 49

TABLE 2.3-125

1999 ATMOSPHERIC DISPERSION ESTIMATES FOR NEAREST MEAT ANIMAL DAIRY LOCATIONS AND SPECIAL RECEPTORS*

ANIMAL RAISED FOR MEAT CONSUMPTION WITHIN A 5-MILE RADIUS OF SSES BY SECTOR

| SECTOR NUMBER | AFFECTED SECTOR | MILES | X/Q | X/Q DEC | X/Q DEC+DEP | DEPOSITION |
|---------------|-----------------|-------|----------|----------|-------------|------------|
| 2 | NNE | 2.3 | 8.50E-07 | 8.40E-07 | 6.92E-07 | 2.73E-09 |
| 4 | ENE | 2.4 | 3.37E-07 | 3.35E-07 | 2.74E-07 | 2.55E-09 |
| 5 | E | 1.4 | 3.28E-07 | 3.27E-07 | 2.80E-07 | 2.30E-09 |
| 10 | SSW | 3 | 4.70E-07 | 4.63E-07 | 3.71E-07 | 1.58E-09 |
| 10 | SSW | 3.5 | 3.30E-07 | 3.25E-07 | 2.56E-07 | 1.05E-09 |
| 12 | WSW | 1.7 | 7.90E-06 | 7.82E-06 | 6.61E-06 | 9.71E-09 |
| 15 | NW | 1.8 | 1.71E-06 | 1.69E-06 | 1.43E-06 | 3.19E-09 |

ALL DAIRY LOCATIONS WITHIN A 5-MILE RADIUS OF SSES

| SECTOR NUMBER | AFFECTED SECTOR | MILES | X/Q | X/Q DEC | X/Q DEC+DEP | DEPOSITION |
|---------------|-----------------|-------|----------|----------|-------------|------------|
| 5 | E | 4.5 | 4.62E-08 | 4.56E-08 | 3.46E-08 | 2.66E-10 |
| 6 | ESE | 2.7 | 6.54E-08 | 6.50E-08 | 5.24E-08 | 4.19E-10 |
| 6 | ESE | 4.2 | 2.64E-08 | 2.61E-08 | 2.00E-08 | 1.49E-10 |
| 10 | SSW | 3 | 4.70E-07 | 4.63E-07 | 3.71E-07 | 1.58E-09 |
| 10 | SSW | 3.1 | 4.37E-07 | 4.31E-07 | 3.43E-07 | 1.46E-09 |
| 10 | SSW | 3.5 | 3.30E-07 | 3.25E-07 | 2.56E-07 | 1.05E-09 |
| 12 | WSW | 1.7 | 7.90E-06 | 7.82E-06 | 6.61E-06 | 9.71E-09 |
| 13 | W | 5 | 5.49E-07 | 5.28E-07 | 4.03E-07 | 4.36E-10 |
| 16 | NNW | 4.2 | 2.69E-07 | 2.62E-07 | 2.03E-07 | 4.68E-10 |

SPECIAL RECEPTOR LOCATIONS

| SECTOR NUMBER | AFFECTED SECTOR | LOCATION | MILES | X/Q ⁽¹⁾ | X/Q DEC ⁽²⁾ | X/Q DEC+DEP ⁽³⁾ | DEPOSITION ⁽⁴⁾ |
|---------------|-----------------|------------------|-------|--------------------|------------------------|----------------------------|---------------------------|
| 3 | NE | Riverlands / EIC | 0.7 | 4.40E-06 | 4.39E-06 | 3.93E-06 | 2.70E-08 |
| 12 | WSW | Tower's Club | 0.5 | 4.06E-05 | 4.05E-05 | 3.71E-05 | 5.97E-08 |
| 5 | E | East Gate | 0.5 | 1.70E-06 | 1.70E-06 | 1.55E-06 | 1.48E-08 |

*Locations use the 2003 Land Use Census Locations

- (1) Relative concentration (sec/m³)
- (2) Decayed and undepleted, half-life 2.26 days (sec/m³)
- (3) Decayed and depleted, half-life 8 days (sec/m³)
- (4) Relative deposition rate (l/m²)

SSES - FSAR

TABLE 2.3-126

2000 ATMOSPHERIC DISPERSION ESTIMATES
FOR NEAREST MEAT ANIMAL, DAIRY LOCATIONS
AND SPECIAL RECEPTORS*

ANIMAL RAISED FOR MEAT CONSUMPTION
WITHIN A 5-MILE RADIUS OF SSES BY SECTOR

| SECTOR NUMBER | AFFECTED SECTOR | MILES | X/Q | X/Q DEC | X/Q DEC+DEP | DEPOSITION |
|---------------|-----------------|-------|----------|----------|-------------|------------|
| 2 | NNE | 2.3 | 9.52E-07 | 9.41E-07 | 7.75E-07 | 2.74E-09 |
| 4 | ENE | 2.4 | 3.04E-07 | 3.02E-07 | 2.47E-07 | 2.26E-09 |
| 5 | E | 1.4 | 3.42E-07 | 3.40E-07 | 2.91E-07 | 2.17E-09 |
| 10 | SSW | 3 | 5.36E-07 | 5.28E-07 | 4.23E-07 | 1.43E-09 |
| 10 | SSW | 3.5 | 3.77E-07 | 3.70E-07 | 2.92E-07 | 9.52E-10 |
| 12 | WSW | 1.7 | 7.71E-06 | 7.63E-06 | 6.45E-06 | 9.69E-09 |
| 15 | NW | 1.8 | 1.93E-06 | 1.91E-06 | 1.61E-06 | 3.15E-09 |

ALL DAIRY LOCATIONS WITHIN A 5-MILE RADIUS OF SSES

| SECTOR NUMBER | AFFECTED SECTOR | MILES | X/Q | X/Q DEC | X/Q DEC+DEP | DEPOSITION |
|---------------|-----------------|-------|----------|----------|-------------|------------|
| 5 | E | 4.5 | 4.78E-08 | 4.70E-08 | 3.58E-08 | 2.51E-10 |
| 6 | ESE | 2.7 | 8.98E-08 | 8.90E-08 | 7.20E-08 | 5.58E-10 |
| 6 | ESE | 4.2 | 3.60E-08 | 3.55E-08 | 2.72E-08 | 1.99E-10 |
| 10 | SSW | 3 | 5.36E-07 | 5.28E-07 | 4.23E-07 | 1.43E-09 |
| 10 | SSW | 3.1 | 4.99E-07 | 4.91E-07 | 3.92E-07 | 1.32E-09 |
| 10 | SSW | 3.5 | 3.77E-07 | 3.70E-07 | 2.92E-07 | 9.52E-10 |
| 12 | WSW | 1.7 | 7.71E-06 | 7.63E-06 | 6.45E-06 | 9.69E-09 |
| 13 | W | 5 | 5.35E-07 | 5.15E-07 | 3.93E-07 | 4.49E-10 |
| 16 | NNW | 4.2 | 3.15E-07 | 3.06E-07 | 2.37E-07 | 4.68E-10 |

SPECIAL RECEPTOR LOCATIONS

| SECTOR NUMBER | AFFECTED SECTOR | LOCATION | MILES | X/Q ⁽¹⁾ | X/Q DEC ⁽²⁾ | X/Q DEC+DEP ⁽³⁾ | DEPOSITION ⁽⁴⁾ |
|---------------|-----------------|----------------|-------|--------------------|------------------------|----------------------------|---------------------------|
| 3 | NE | Riverlands/EIC | 0.7 | 4.17E-06 | 4.16E-06 | 3.73E-06 | 2.61E-08 |
| 12 | WSW | Towers Club | 0.5 | 3.88E-05 | 3.87E-05 | 3.54E-05 | 5.96E-08 |
| 5 | E | East Gate | 0.5 | 1.79E-06 | 1.79E-06 | 1.63E-06 | 1.39E-08 |

*Locations use the 2003 Land Use Census Locations. Only sectors with animals or dairy within 5 miles are shown.

- (1) Relative concentration (sec/m³)
- (2) Decayed and undepleted, half-life 2.26 days (sec/m³)
- (3) Decayed and depleted, half-life 8 days (sec/m³)
- (4) Relative deposition rate (1/m²)

TABLE 2.3-127

2001 ATMOSPHERIC DISPERSION ESTIMATES
FOR NEAREST MEAT ANIMAL, DAIRY LOCATIONS
AND SPECIAL RECEPTORS*

ANIMAL RAISED FOR MEAT CONSUMPTION WITHIN A 5-MILE RADIUS OF SSES BY SECTOR

| SECTOR NUMBER | AFFECTED SECTOR | MILES | X/Q | X/Q DEC | X/Q DEC+DEP | DEPOSITION |
|---------------|-----------------|-------|----------|----------|-------------|------------|
| 2 | NNE | 2.3 | 9.17E-07 | 9.06E-07 | 7.46E-07 | 2.75E-09 |
| 4 | ENE | 2.4 | 2.93E-07 | 2.91E-07 | 2.38E-07 | 2.30E-09 |
| 5 | E | 1.4 | 2.71E-07 | 2.70E-07 | 2.31E-07 | 1.85E-09 |
| 10 | SSW | 3 | 4.46E-07 | 4.39E-07 | 3.52E-07 | 1.24E-09 |
| 10 | SSW | 3.5 | 3.13E-07 | 3.08E-07 | 2.42E-07 | 8.22E-10 |
| 12 | WSW | 1.7 | 8.49E-06 | 8.40E-06 | 7.10E-06 | 1.02E-08 |
| 15 | NW | 1.8 | 2.03E-06 | 2.01E-06 | 1.69E-06 | 3.63E-09 |

ALL DAIRY LOCATIONS WITHIN A 5-MILE RADIUS OF SSES

| SECTOR NUMBER | AFFECTED SECTOR | MILES | X/Q | X/Q DEC | X/Q DEC+DEP | DEPOSITION |
|---------------|-----------------|-------|----------|----------|-------------|------------|
| 5 | E | 4.5 | 3.70E-08 | 3.64E-08 | 2.77E-08 | 2.14E-10 |
| 6 | ESE | 2.7 | 6.77E-08 | 6.71E-08 | 5.42E-08 | 3.93E-10 |
| 6 | ESE | 4.2 | 2.71E-08 | 2.67E-08 | 2.05E-08 | 1.40E-10 |
| 10 | SSW | 3 | 4.46E-07 | 4.39E-07 | 3.52E-07 | 1.24E-09 |
| 10 | SSW | 3.1 | 4.15E-07 | 4.08E-07 | 3.26E-07 | 1.14E-09 |
| 10 | SSW | 3.5 | 3.13E-07 | 3.08E-07 | 2.42E-07 | 8.22E-10 |
| 12 | WSW | 1.7 | 8.49E-06 | 8.40E-06 | 7.10E-06 | 1.02E-08 |
| 13 | W | 5 | 6.35E-07 | 6.11E-07 | 4.66E-07 | 4.89E-10 |
| 16 | NNW | 4.2 | 3.76E-07 | 3.66E-07 | 2.84E-07 | 5.95E-10 |

SPECIAL RECEPTOR LOCATIONS

| SECTOR NUMBER | AFFECTED SECTOR | LOCATION | MILES | X/Q ⁽¹⁾ | X/Q DEC ⁽²⁾ | X/Q DEC+DEP ⁽³⁾ | DEPOSITION ⁽⁴⁾ |
|---------------|-----------------|----------------|-------|--------------------|------------------------|----------------------------|---------------------------|
| 3 | NE | Riverlands/EIC | 0.7 | 4.34E-06 | 4.33E-06 | 3.87E-06 | 2.77E-08 |
| 12 | WSW | Towers Club | 0.5 | 4.29E-05 | 4.28E-05 | 3.92E-05 | 6.28E-08 |
| 5 | E | East Gate | 0.5 | 1.42E-06 | 1.42E-06 | 1.30E-06 | 1.19E-08 |

*Locations use the 2003 Land Use Census Locations. Only sectors with animals or dairy within 5 miles are shown

- (1) Relative concentration (sec/m³)
- (2) Decayed and undepleted, half-life 2.26 days (sec/m³)
- (3) Decayed and depleted, half-life 8 days (sec/m³)
- (4) Relative deposition rate (1/m²)

SSES - FSAR

Table Rev. 49

TABLE 2.3-128

2002 ATMOSPHERIC DISPERSION ESTIMATES FOR NEAREST MEAT ANIMAL, DAIRY LOCATIONS AND SPECIAL RECEPTORS*

ANIMAL RAISED FOR MEAT CONSUMPTION WITHIN A 5-MILE RADIUS OF SSES BY SECTOR

| SECTOR NUMBER | AFFECTED SECTOR | MILES | X/Q | X/Q DEC | X/Q DEC+DEP | DEPOSITION |
|---------------|-----------------|-------|----------|----------|-------------|------------|
| 2 | NNE | 2.3 | 9.70E-07 | 9.61E-07 | 7.90E-07 | 3.39E-09 |
| 4 | ENE | 2.4 | 3.48E-07 | 3.45E-07 | 2.82E-07 | 2.54E-09 |
| 5 | E | 1.4 | 3.55E-07 | 3.53E-07 | 3.02E-07 | 2.30E-09 |
| 10 | SSW | 3 | 5.49E-07 | 5.40E-07 | 4.33E-07 | 1.50E-09 |
| 10 | SSW | 3.5 | 3.87E-07 | 3.80E-07 | 2.99E-07 | 1.00E-09 |
| 12 | WSW | 1.7 | 7.78E-06 | 7.70E-06 | 6.51E-06 | 8.69E-08 |
| 15 | NW | 1.8 | 1.65E-06 | 1.63E-06 | 1.38E-06 | 3.05E-09 |

ALL DAIRY LOCATIONS WITHIN A 5-MILE RADIUS OF SSES

| SECTOR NUMBER | AFFECTED SECTOR | MILES | X/Q | X/Q DEC | X/Q DEC+DEP | DEPOSITION |
|---------------|-----------------|-------|----------|----------|-------------|------------|
| 5 | E | 4.5 | 4.86E-08 | 4.79E-08 | 3.64E-08 | 2.66E-10 |
| 6 | ESE | 2.7 | 7.72E-08 | 7.66E-08 | 6.19E-08 | 4.85E-10 |
| 6 | ESE | 4.2 | 3.11E-08 | 3.07E-08 | 2.36E-08 | 1.72E-10 |
| 10 | SSW | 3 | 5.49E-07 | 5.40E-07 | 4.33E-07 | 1.50E-09 |
| 10 | SSW | 3.1 | 5.11E-07 | 5.03E-07 | 4.01E-07 | 1.38E-09 |
| 10 | SSW | 3.5 | 3.87E-07 | 3.80E-07 | 2.99E-07 | 1.00E-09 |
| 12 | WSW | 1.7 | 7.78E-06 | 7.70E-06 | 6.51E-06 | 8.69E-09 |
| 13 | W | 5 | 4.98E-07 | 4.78E-07 | 3.65E-07 | 3.87E-10 |
| 16 | NNW | 4.2 | 3.58E-07 | 3.49E-07 | 2.70E-07 | 5.93E-10 |

SPECIAL RECEPTOR LOCATIONS

| SECTOR NUMBER | AFFECTED SECTOR | LOCATION | MILES | X/Q ⁽¹⁾ | X/Q DEC ⁽²⁾ | X/Q DEC+DEP ⁽³⁾ | DEPOSITION ⁽⁴⁾ |
|---------------|-----------------|------------------|-------|--------------------|------------------------|----------------------------|---------------------------|
| 3 | NE | Riverlands / EIC | 0.7 | 4.03E-06 | 4.02E-06 | 3.60E-06 | 3.03E-08 |
| 12 | WSW | Tower's Club | 0.5 | 3.97E-05 | 3.96E-05 | 3.63E-05 | 5.34E-08 |
| 5 | E | East Gate | 0.5 | 1.82E-06 | 1.82E-06 | 1.67E-06 | 1.48E-08 |

*Locations use the 2003 Land Use Census Locations. Only sectors with animals or dairy within 5 miles are shown.

- (1) Relative concentration (sec/m³)
- (2) Decayed and undepleted, half-life 2.26 days (sec/m³)
- (3) Decayed and depleted, half-life 8 days (sec/m³)
- (4) Relative deposition rate (1/m²)

SSES - FSAR

Table Rev. 49

TABLE 2.3-129

2003 ATMOSPHERIC DISPERSION ESTIMATES FOR NEAREST MEAT ANIMAL, DAIRY LOCATIONS AND SPECIAL RECEPTORS*

ANIMAL RAISED FOR MEAT CONSUMPTION WITHIN A 5-MILE RADIUS OF SSES BY SECTOR

| SECTOR NUMBER | AFFECTED SECTOR | MILES | X/Q | X/Q DEC | X/Q DEC+DEP | DEPOSITION |
|---------------|-----------------|-------|----------|----------|-------------|------------|
| 2 | NNE | 2.3 | 8.48E-07 | 8.39E-07 | 6.90E-07 | 2.79E-09 |
| 4 | ENE | 2.4 | 3.62E-07 | 3.60E-07 | 2.94E-07 | 2.52E-09 |
| 5 | E | 1.4 | 3.53E-07 | 3.51E-07 | 3.01E-07 | 2.19E-09 |
| 10 | SSW | 3 | 5.71E-07 | 5.63E-07 | 4.51E-07 | 1.61E-09 |
| 10 | SSW | 3.5 | 4.00E-07 | 3.94E-07 | 3.10E-07 | 1.07E-09 |
| 12 | WSW | 1.7 | 6.85E-06 | 6.77E-06 | 5.73E-06 | 8.50E-09 |
| 15 | NW | 1.8 | 2.18E-06 | 2.16E-06 | 1.82E-06 | 4.44E-09 |

ALL DAIRY LOCATIONS NEAR SSES

| SECTOR NUMBER | AFFECTED SECTOR | MILES | X/Q | X/Q DEC | X/Q DEC+DEP | DEPOSITION |
|---------------|-----------------|-------|----------|----------|-------------|------------|
| 5 | E | 4.5 | 4.99E-08 | 4.90E-08 | 3.73E-08 | 2.53E-10 |
| 6 | ESE | 2.7 | 7.74E-08 | 7.67E-08 | 6.20E-08 | 5.09E-10 |
| 6 | ESE | 4.2 | 3.10E-08 | 3.06E-08 | 2.35E-08 | 1.81E-10 |
| 10 | SSW | 3 | 5.71E-07 | 5.63E-07 | 4.51E-07 | 1.61E-09 |
| 10 | SSW | 3.1 | 5.30E-07 | 5.23E-07 | 4.17E-07 | 1.48E-09 |
| 10 | SSW | 3.5 | 4.00E-07 | 3.94E-07 | 3.10E-07 | 1.07E-09 |
| 12 | WSW | 1.7 | 6.85E-06 | 6.77E-06 | 5.73E-06 | 8.50E-09 |
| 13 | W | 5 | 4.42E-07 | 4.25E-07 | 3.25E-07 | 3.86E-10 |
| 16 | NNW | 4.2 | 3.20E-07 | 3.13E-07 | 2.42E-07 | 6.07E-10 |

SPECIAL RECEPTOR LOCATIONS

| SECTOR NUMBER | AFFECTED SECTOR | LOCATION | MILES | X/Q ⁽¹⁾ | X/Q DEC ⁽²⁾ | X/Q DEC+DEP ⁽³⁾ | DEPOSITION ⁽⁴⁾ |
|---------------|-----------------|------------------|-------|--------------------|------------------------|----------------------------|---------------------------|
| 3 | NE | Riverlands / EIC | 0.7 | 3.70E-06 | 3.69E-06 | 3.30E-06 | 2.65E-08 |
| 12 | WSW | Tower's Club | 0.5 | 3.41E-05 | 3.40E-05 | 3.11E-05 | 5.22E-08 |
| 5 | E | East Gate | 0.5 | 1.82E-06 | 1.81E-06 | 1.66E-06 | 1.41E-08 |

*Locations use the 2003 Land Use Census Locations

- (1) Relative concentration (sec/m³)
- (2) Decayed and undepleted, half-life 2.26 days (sec/m³)
- (3) Decayed and depleted, half-life 8 days (sec/m³)
- (4) Relative deposition rate (1/m²)

SSES - FSAR

Table Rev 49

TABLE 2.3-130

1999 - 2003 ATMOSPHERIC DISPERSION ESTIMATES FOR NEAREST MEAT ANIMAL, DAIRY LOCATIONS AND SPECIAL RECEPTORS*

ANIMAL RAISED FOR MEAT CONSUMPTION WITHIN A 5-MILE RADIUS OF SSES BY SECTOR

| SECTOR NUMBER | AFFECTED SECTOR | MILES | X/Q | X/Q DEC | X/Q DEC+DEP | DEPOSITION |
|---------------|-----------------|-------|----------|----------|-------------|------------|
| 2 | NNE | 2.3 | 9.07E-07 | 8.98E-07 | 7.39E-07 | 2.88E-09 |
| 4 | ENE | 2.4 | 3.29E-07 | 3.26E-07 | 2.67E-07 | 2.43E-09 |
| 5 | E | 1.4 | 3.30E-07 | 3.28E-07 | 2.81E-07 | 2.16E-09 |
| 10 | SSW | 3 | 5.14E-07 | 5.07E-07 | 4.06E-07 | 1.47E-09 |
| 10 | SSW | 3.5 | 3.61E-07 | 3.55E-07 | 2.80E-07 | 9.79E-10 |
| 12 | WSW | 1.7 | 7.75E-06 | 7.66E-06 | 6.48E-06 | 9.36E-09 |
| 15 | NW | 1.8 | 1.90E-06 | 1.88E-06 | 1.58E-06 | 3.49E-09 |

ALL DAIRY LOCATIONS NEAR SSES

| SECTOR NUMBER | AFFECTED SECTOR | MILES | X/Q | X/Q DEC | X/Q DEC+DEP | DEPOSITION |
|---------------|-----------------|-------|----------|----------|-------------|------------|
| 5 | E | 4.5 | 4.59E-08 | 4.52E-08 | 3.44E-08 | 2.50E-10 |
| 6 | ESE | 2.7 | 7.55E-08 | 7.49E-08 | 6.05E-08 | 4.73E-10 |
| 6 | ESE | 4.2 | 3.03E-08 | 2.99E-08 | 2.29E-08 | 1.68E-10 |
| 10 | SSW | 3 | 5.14E-07 | 5.07E-07 | 4.06E-07 | 1.47E-09 |
| 10 | SSW | 3.1 | 4.78E-07 | 4.71E-07 | 3.76E-07 | 1.35E-09 |
| 10 | SSW | 3.5 | 3.61E-07 | 3.55E-07 | 2.80E-07 | 9.79E-10 |
| 12 | WSW | 1.7 | 7.75E-06 | 7.66E-06 | 6.48E-06 | 9.36E-09 |
| 13 | W | 5 | 5.32E-07 | 5.12E-07 | 3.90E-07 | 4.29E-10 |
| 16 | NNW | 4.2 | 3.28E-07 | 3.19E-07 | 2.47E-07 | 5.46E-10 |

SPECIAL RECEPTOR LOCATIONS

| SECTOR NUMBER | AFFECTED SECTOR | LOCATION | MILES | X/Q ⁽¹⁾ | X/Q DEC ⁽²⁾ | X/Q DEC+DEP ⁽³⁾ | DEPOSITION ⁽⁴⁾ |
|---------------|-----------------|------------------|-------|--------------------|------------------------|----------------------------|---------------------------|
| 3 | NE | Riverlands / EIC | 0.7 | 4.13E-06 | 4.12E-06 | 3.69E-06 | 2.75E-08 |
| 12 | WSW | Tower's Club | 0.5 | 3.92E-05 | 3.91E-05 | 3.58E-05 | 5.75E-08 |
| 5 | E | East Gate | 0.5 | 1.71E-06 | 1.71E-06 | 1.56E-06 | 1.39E-08 |

*Locations use the 2003 Land Use Census Locations. Only sectors with animals or dairy within 5 miles are shown.

- (1) Relative concentration (sec/m³)
- (2) Decayed and undepleted, half-life 2.26 days (sec/m³)
- (3) Decayed and depleted, half-life 8 days (sec/m³)
- (4) Relative deposition rate (1/m²)

TABLE 2.3-131

1999 ATMOSPHERIC DISPERSION ESTIMATES
AT SELECTED LOCATIONS

| SECTOR NUMBER | AFFECTED SECTOR | LOCATION | MILES | X/Q ⁽¹⁾ | X/Q DEC ⁽²⁾ | X/Q DEC+DEP ⁽³⁾ | DEPOSITION ⁽⁴⁾ |
|------------------|--------------------|-----------------------------|-------|--------------------|------------------------|-------------------------------|---------------------------|
| 12 | WSW | Maximum (X/Q) Site Boundary | 1.22 | 1.28E-05 | 1.27E-05 | 1.10E-05 | 1.66E-08 |
| 9 | S | Closest (X/Q) Site Boundary | 0.38 | 6.71E-06 | 6.70E-06 | 6.25E-06 | 4.66E-08 |
| 12 | WSW | Maximum (X/Q) Residence | 1.3 | 1.16E-05 | 1.15E-05 | 9.90E-06 | 1.49E-08 |
| 3 | NE | Maximum (D/Q) Residence | 0.9 | 3.07E-06 | 3.05E-06 | 2.69E-06 | 1.77E-08 |
| 12 | WSW | Maximum (D/Q) Garden | 1.3 | 1.15E-05 | 9.90E-06 | 1.49E-08 | 1.16E-05 |
| 12 | WSW | Maximum (D/Q) Dairy | 1.7 | 7.90E-06 | 7.82E-06 | 6.61E-06 | 9.71E-09 |
| 12 | WSW | Maximum (D/Q) Meat Producer | 1.7 | 7.90E-06 | 7.82E-06 | 6.61E-06 | 9.71E-09 |
| 3 | NE | Riverlands / EIC | 0.7 | 4.40E-06 | 4.39E-06 | 3.93E-06 | 2.70E-08 |
| 12 | WSW | Tower's Club | 0.5 | 4.06E-05 | 4.05E-05 | 3.71E-05 | 5.97E-08 |
| 5 | E | East Gate | 0.5 | 1.70E-06 | 1.70E-06 | 1.55E-06 | 1.48E-08 |

- (1) Relative concentration (sec/m³)
 (2) Decayed and undepleted, half-life 2.26 days (sec/m³)
 (3) Decayed and depleted, half-life 8 days (sec/m³)
 (4) Relative deposition rate (1/m²)

TABLE 2.3-132

2000 ATMOSPHERIC DISPERSION ESTIMATES
AT SELECTED LOCATIONS

| SECTOR NUMBER | AFFECTED SECTOR | LOCATION | MILES | X/Q ⁽¹⁾ | X/Q DEC ⁽²⁾ | X/Q DEC+DEP ⁽³⁾ | DEPOSITION ⁽⁴⁾ |
|---------------|-----------------|-----------------------------|-------|--------------------|------------------------|----------------------------|---------------------------|
| 12 | WSW | Maximum (X/Q) Site Boundary | 1.22 | 1.24E-05 | 1.23E-05 | 1.07E-05 | 1.65E-08 |
| 9 | S | Closest (X/Q) Site Boundary | 0.38 | 6.21E-06 | 6.20E-06 | 5.78E-06 | 4.11E-08 |
| 12 | WSW | Maximum (X/Q) Residence | 1.3 | 1.13E-05 | 1.12E-05 | 9.65E-06 | 1.49E-08 |
| 3 | NE | Maximum (D/Q) Residence | 0.6 | 2.44E-06 | 2.44E-06 | 2.20E-06 | 1.94E-08 |
| 12 | WSW | Maximum (D/Q) Garden | 1.3 | 1.13E-05 | 1.12E-05 | 9.65E-06 | 1.49E-08 |
| 12 | WSW | Maximum (D/Q) Dairy | 1.7 | 7.71E-06 | 7.63E-06 | 6.45E-06 | 9.69E-09 |
| 12 | WSW | Maximum (D/Q) Meat Producer | 1.7 | 7.71E-06 | 7.63E-06 | 6.45E-06 | 9.69E-09 |
| 3 | NE | Riverlands / EIC | 0.7 | 4.17E-06 | 4.16E-06 | 3.73E-06 | 2.61E-08 |
| 12 | WSW | Tower's Club | 0.5 | 3.88E-05 | 3.87E-05 | 3.54E-05 | 5.96E-08 |
| 5 | E | East Gate | 0.5 | 1.79E-06 | 1.79E-06 | 1.63E-06 | 1.39E-08 |

- (1) Relative concentration (sec/m³)
 (2) Decayed and undepleted, half-life 2.26 days (sec/m³)
 (3) Decayed and depleted, half-life 8 days (sec/m³)
 (4) Relative deposition rate (1/m²)

TABLE 2.3-133

2001 ATMOSPHERIC DISPERSION ESTIMATES
AT SELECTED LOCATIONS

| AFFECTED SECTOR | LOCATION | MILES | X/Q ⁽¹⁾ | X/Q DEC ⁽²⁾ | X/Q DEC+DEP ⁽³⁾ | DEPOSITION ⁽⁴⁾ |
|--------------------|-----------------------------|-------|--------------------|------------------------|----------------------------|---------------------------|
| 12/WSW | Maximum (X/Q) Site Boundary | 1.22 | 1.37E-05 | 1.36E-05 | 1.18E-05 | 1.74E-08 |
| 9/S | Closest (X/Q) Site Boundary | 0.38 | 6.07E-06 | 6.06E-06 | 5.65E-06 | 3.90E-08 |
| 12/WSW | Maximum (X/Q) Residence | 1.3 | 1.24E-05 | 1.23E-05 | 1.06E-05 | 1.57E-08 |
| 3/NE | Maximum (D/Q) Residence | 0.9 | 3.00E-06 | 2.99E-06 | 2.63E-06 | 1.82E-08 |
| 12/WSW | Maximum (D/Q) Garden | 1.3 | 1.24E-05 | 1.23E-05 | 1.06E-05 | 1.57E-08 |
| 12/SW | Maximum (D/Q) Dairy | 1.7 | 8.49E-06 | 8.40E-06 | 7.10E-06 | 1.02E-08 |
| 12/WSW | Maximum (D/Q) Meat Producer | 1.7 | 8.49E-06 | 8.40E-06 | 7.10E-06 | 1.02E-08 |
| 3/NE | Riverlands / EIC | 0.7 | 4.34E-06 | 4.33E-06 | 3.87E-06 | 2.77E-08 |
| 12/WSW | Tower's Club | 0.5 | 4.29E-05 | 4.28E-05 | 3.92E-05 | 6.28E-08 |
| 5/E | East Gate | 0.5 | 1.42E-06 | 1.42E-06 | 1.30E-06 | 1.19E-08 |

- (1) Relative concentration (sec/m³)
 (2) Decayed and undepleted, half-life 2.26 days (sec/m³)
 (3) Decayed and depleted, half-life 8 days (sec/m³)
 (4) Relative deposition rate (1/m²)

TABLE 2.3-134

2002 ATMOSPHERIC DISPERSION ESTIMATES
AT SELECTED LOCATIONS

| AFFECTED SECTOR | LOCATION | MILES | X/Q ⁽¹⁾ | X/Q DEC ⁽²⁾ | X/Q DEC+DEP ⁽³⁾ | DEPOSITION ⁽⁴⁾ |
|--------------------|-----------------------------|-------|--------------------|------------------------|-------------------------------|---------------------------|
| 12/WSW | Maximum (X/Q) Site Boundary | 1.22 | 1.26E-05 | 1.25E-05 | 1.08E-05 | 1.48E-08 |
| 9/S | Closest (X/Q) Site Boundary | 0.38 | 5.71E-06 | 5.70E-06 | 5.31E-06 | 3.78E-08 |
| 12/WSW | Maximum (X/Q) Residence | 1.3 | 1.14E-05 | 1.13E-05 | 9.74E-06 | 1.33E-08 |
| 3/NE | Maximum (D/Q) Residence | 0.9 | 2.78E-06 | 2.77E-06 | 2.44E-06 | 1.99E-08 |
| 12/WSW | Maximum (D/Q) Garden | 1.3 | 1.14E-05 | 1.13E-05 | 9.74E-06 | 1.33E-08 |
| 12/SW | Maximum (D/Q) Dairy | 1.7 | 7.78E-06 | 7.70E-06 | 6.51E-06 | 8.69E-09 |
| 12/WSW | Maximum (D/Q) Meat Producer | 1.7 | 7.78E-06 | 7.70E-06 | 6.51E-06 | 8.69E-09 |
| 3/NE | Riverlands / EIC | 0.7 | 4.03E-06 | 4.02E-06 | 3.60E-06 | 3.03E-08 |
| 12/WSW | Tower's Club | 0.5 | 3.97E-05 | 3.96E-05 | 3.63E-05 | 5.34E-08 |
| 5/E | East Gate | 0.5 | 1.82E-06 | 1.82E-06 | 1.67E-06 | 1.48E-08 |

- (1) Relative concentration (sec/m³)
 (2) Decayed and undepleted, half-life 2.26 days (sec/m³)
 (3) Decayed and depleted, half-life 8 days (sec/m³)
 (4) Relative deposition rate (1/m²)

TABLE 2.3-135

2003 ATMOSPHERIC DISPERSION ESTIMATES
AT SELECTED LOCATIONS

| AFFECTED SECTOR | LOCATION | MILES | X/Q ⁽¹⁾ | X/Q DEC ⁽²⁾ | X/Q DEC+DEP ⁽³⁾ | DEPOSITION ⁽⁴⁾ |
|--------------------|-----------------------------|-------|--------------------|---------------------------|-------------------------------|---------------------------|
| 11WS | Maximum (X/Q) Site Boundary | 0.61 | 1.45E-05 | 1.45E-05 | 1.31E-05 | 3.25E-08 |
| 9/S | Closest (X/Q) Site Boundary | 0.38 | 4.69E-06 | 4.69E-06 | 4.37E-06 | 2.97E-08 |
| 12/WSW | Maximum (X/Q) Residence | 1.3 | 1.00E-05 | 9.93E-06 | 8.56E-06 | 1.30E-08 |
| 15/NW | Maximum (D/Q) Residence | 0.8 | 7.72E-06 | 7.67E-06 | 6.82E-06 | 1.86E-08 |
| 12/WSW | Maximum (D/Q) Garden | 1.3 | 1.00E-05 | 9.93E-06 | 8.56E-06 | 1.30E-08 |
| 12/SW | Maximum (D/Q) Dairy | 1.7 | 6.85E-06 | 6.77E-06 | 5.73E-06 | 8.50E-09 |
| 12/WSW | Maximum (D/Q) Meat Producer | 1.7 | 6.85E-06 | 6.77E-06 | 5.73E-06 | 8.50E-09 |
| 3/NE | Riverlands / EIC | 0.7 | 3.70E-06 | 3.69E-06 | 3.30E-06 | 2.65E-08 |
| 12/WSW | Tower's Club | 0.5 | 3.41E-05 | 3.40E-05 | 3.11E-05 | 5.22E-08 |
| 5/E | East Gate | 0.5 | 1.82E-06 | 1.81E-06 | 1.66E-06 | 1.41E-08 |

- (1) Relative concentration (sec/m³)
 (2) Decayed and undepleted, half-life 2.26 days (sec/m³)
 (3) Decayed and depleted, half-life 8 days (sec/m³)
 (4) Relative deposition rate (1/m²)

TABLE 2.3-136

1999 - 2003 ATMOSPHERIC DISPERSION ESTIMATES
AT SELECTED LOCATIONS

| AFFECTED SECTOR | LOCATION | MILES | X/Q ⁽¹⁾ | X/Q DEC ⁽²⁾ | X/Q DEC+DEP ⁽³⁾ | DEPOSITION ⁽⁴⁾ |
|--------------------|-----------------------------|-------|--------------------|---------------------------|-------------------------------|---------------------------|
| 12/WSW | Maximum (X/Q) Site Boundary | 1.22 | 1.25E-05 | 1.24E-05 | 1.07E-05 | 1.60E-08 |
| 9/S | Closest (X/Q) Site Boundary | 0.38 | 5.88E-06 | 5.87E-06 | 5.47E-06 | 3.88E-08 |
| 12/WSW | Maximum (X/Q) Residence | 1.3 | 1.14E-05 | 1.13E-05 | 9.70E-06 | 1.43E-08 |
| 3/NE | Maximum (D/Q) Residence | 0.9 | 2.86E-06 | 2.85E-06 | 2.51E-06 | 1.81E-08 |
| 12/WSW | Maximum (D/Q) Garden | 1.3 | 1.14E-05 | 1.13E-05 | 9.70E-06 | 1.43E-08 |
| 12/WSW | Maximum (D/Q) Dairy | 1.7 | 7.75E-06 | 7.66E-06 | 6.48E-06 | 9.36E-09 |
| 12/WSW | Maximum (D/Q) Meat Producer | 1.7 | 7.75E-06 | 7.66E-06 | 6.48E-06 | 9.36E-09 |
| 3/NE | Riverlands / EIC | 0.7 | 4.13E-06 | 4.12E-06 | 3.69E-06 | 2.75E-08 |
| 12/WSW | Tower's Club | 0.5 | 3.92E-05 | 3.91E-05 | 3.58E-05 | 5.75E-08 |
| 5/E | East Gate | 0.5 | 1.71E-06 | 1.71E-06 | 1.56E-06 | 1.39E-08 |

- (1) Relative concentration (sec/m³)
 (2) Decayed and undepleted, half-life 2.26 days (sec/m³)
 (3) Decayed and depleted, half-life 8 days (sec/m³)
 (4) Relative deposition rate (1/m²)

SSES – FSAR

TABLE 2.3-137

Table Rev. 0

| 1999-2003 SSES RELATIVE CONCENTRATIONS NO DECAY, UNDEPLETED X/Q X/Q ACCUMULATION FOR GROUND AVERAGE (seconds per cubic meter) | | | | | | | | | | |
|--|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Direction From | 0.5-1 | 1-2 | 2-3 | 3-4 | 4-5 | 5-10 | 10-20 | 20-30 | 30-40 | 40-50 |
| N | 4.13E-06 | 7.83E-07 | 3.25E-07 | 1.71E-07 | 1.10E-07 | 4.05E-08 | 1.11E-08 | 5.34E-09 | 3.35E-09 | 2.37E-09 |
| NNE | 8.11E-06 | 1.63E-06 | 7.28E-07 | 3.91E-07 | 2.53E-07 | 9.40E-08 | 2.59E-08 | 1.27E-08 | 8.10E-09 | 5.80E-09 |
| NE | 1.71E-05 | 3.22E-06 | 1.47E-06 | 8.32E-07 | 5.51E-07 | 2.18E-07 | 6.61E-08 | 3.32E-08 | 2.14E-08 | 1.55E-08 |
| ENE | 4.96E-05 | 9.15E-06 | 4.48E-06 | 2.66E-06 | 1.78E-06 | 7.05E-07 | 2.06E-07 | 9.99E-08 | 6.47E-08 | 4.76E-08 |
| E | 2.24E-05 | 4.08E-06 | 1.80E-06 | 1.02E-06 | 6.83E-07 | 2.78E-07 | 8.81E-08 | 4.46E-08 | 2.88E-08 | 2.10E-08 |
| ESE | 1.27E-05 | 2.45E-06 | 1.11E-06 | 6.23E-07 | 4.13E-07 | 1.67E-07 | 4.64E-08 | 2.04E-08 | 1.31E-08 | 9.49E-09 |
| SE | 1.26E-05 | 2.48E-06 | 1.13E-06 | 6.41E-07 | 4.25E-07 | 1.74E-07 | 4.35E-08 | 1.61E-08 | 1.03E-08 | 7.42E-09 |
| SSE | 9.08E-06 | 1.77E-06 | 7.87E-07 | 4.42E-07 | 2.98E-07 | 1.28E-07 | 3.37E-08 | 1.21E-08 | 7.71E-09 | 5.55E-09 |
| S | 7.81E-06 | 1.65E-06 | 8.08E-07 | 4.70E-07 | 3.23E-07 | 1.50E-07 | 4.18E-08 | 1.44E-08 | 9.23E-09 | 6.63E-09 |
| SSW | 8.36E-06 | 1.69E-06 | 7.78E-07 | 4.42E-07 | 2.94E-07 | 1.22E-07 | 3.21E-08 | 1.23E-08 | 7.80E-09 | 5.59E-09 |
| SW | 6.65E-06 | 1.34E-06 | 6.36E-07 | 3.65E-07 | 2.45E-07 | 1.08E-07 | 2.80E-08 | 9.42E-09 | 5.96E-09 | 4.23E-09 |
| WSW | 3.41E-06 | 6.56E-07 | 3.05E-07 | 1.79E-07 | 1.23E-07 | 5.80E-08 | 1.82E-08 | 6.82E-09 | 3.49E-09 | 1.91E-09 |
| W | 1.58E-06 | 2.99E-07 | 1.30E-07 | 7.11E-08 | 4.67E-08 | 1.91E-08 | 5.18E-09 | 2.10E-09 | 1.31E-09 | 9.15E-10 |
| WNW | 1.20E-06 | 2.19E-07 | 8.80E-08 | 4.60E-08 | 2.93E-08 | 1.08E-08 | 2.93E-09 | 1.39E-09 | 8.58E-10 | 5.96E-10 |
| NW | 2.03E-06 | 3.78E-07 | 1.50E-07 | 7.66E-08 | 4.86E-08 | 1.75E-08 | 4.62E-09 | 2.18E-09 | 1.34E-09 | 9.32E-10 |
| NNW | 2.58E-06 | 4.83E-07 | 2.04E-07 | 1.08E-07 | 6.83E-08 | 2.38E-08 | 5.94E-09 | 2.82E-09 | 1.75E-09 | 1.22E-09 |

SSES – FSAR

TABLE 2.3-138

Table Rev. 0

| 1999-2003 SSES RELATIVE CONCENTRATIONS, 2.26-DAY DECAY UNDEPLETED X/Q X/Q ACCUMULATION FOR GROUND DECAYED SECTOR AVERAGE (seconds per cubic meter) | | | | | | | | | | | |
|---|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|--|
| MILES | | | | | | | | | | | |
| Direction From | 0.5-1 | 1-2 | 2-3 | 3-4 | 4-5 | 5-10 | 10-20 | 20-30 | 30-40 | 40-50 | |
| N | 4.13E-06 | 7.79E-07 | 3.22E-07 | 1.69E-07 | 1.08E-07 | 3.94E-08 | 1.04E-08 | 4.84E-09 | 2.92E-09 | 1.98E-09 | |
| NNE | 8.09E-06 | 1.62E-06 | 7.19E-07 | 3.84E-07 | 2.47E-07 | 9.06E-08 | 2.40E-08 | 1.12E-08 | 6.80E-09 | 4.63E-09 | |
| NE | 1.71E-05 | 3.19E-06 | 1.45E-06 | 8.15E-07 | 5.37E-07 | 2.08E-07 | 6.03E-08 | 2.85E-08 | 1.73E-08 | 1.18E-08 | |
| ENE | 4.95E-05 | 9.06E-06 | 4.41E-06 | 2.60E-06 | 1.73E-06 | 6.72E-07 | 1.87E-07 | 8.55E-08 | 5.21E-08 | 3.60E-08 | |
| E | 2.23E-05 | 4.03E-06 | 1.77E-06 | 9.95E-07 | 6.60E-07 | 2.62E-07 | 7.85E-08 | 3.69E-08 | 2.21E-08 | 1.49E-08 | |
| ESE | 1.26E-05 | 2.43E-06 | 1.09E-06 | 6.06E-07 | 3.99E-07 | 1.57E-07 | 4.12E-08 | 1.67E-08 | 9.93E-09 | 6.65E-09 | |
| SE | 1.26E-06 | 2.45E-06 | 1.11E-06 | 6.25E-07 | 4.12E-07 | 1.64E-07 | 3.90E-08 | 1.34E-08 | 7.95E-09 | 5.33E-09 | |
| SSE | 9.05E-06 | 1.75E-06 | 7.75E-07 | 4.33E-07 | 2.89E-07 | 1.22E-07 | 3.06E-08 | 1.03E-08 | 6.16E-09 | 4.16E-09 | |
| S | 7.79E-06 | 1.64E-06 | 7.97E-07 | 4.61E-07 | 3.15E-07 | 1.44E-07 | 3.84E-08 | 1.26E-08 | 7.59E-09 | 5.16E-09 | |
| SSW | 8.34E-06 | 1.68E-06 | 7.69E-07 | 4.35E-07 | 2.88E-07 | 1.18E-07 | 2.99E-08 | 1.09E-08 | 6.64E-09 | 4.54E-09 | |
| SW | 6.64E-06 | 1.33E-06 | 6.31E-07 | 3.61E-07 | 2.41E-07 | 1.05E-07 | 2.65E-08 | 8.60E-09 | 5.25E-09 | 3.59E-09 | |
| WSW | 3.41E-06 | 6.53E-07 | 3.03E-07 | 1.78E-07 | 1.21E-07 | 5.67E-08 | 1.73E-08 | 6.30E-09 | 3.13E-09 | 1.66E-09 | |
| W | 1.58E-06 | 2.98E-07 | 1.29E-07 | 7.03E-08 | 4.60E-08 | 1.86E-08 | 4.91E-09 | 1.92E-09 | 1.16E-09 | 7.79E-10 | |
| WNV | 1.20E-06 | 2.18E-07 | 8.73E-08 | 4.55E-08 | 2.89E-08 | 1.06E-08 | 2.80E-09 | 1.28E-09 | 7.67E-10 | 5.16E-10 | |
| NW | 2.03E-06 | 3.76E-07 | 1.49E-07 | 7.58E-08 | 4.80E-08 | 1.72E-08 | 4.42E-09 | 2.03E-09 | 1.22E-09 | 8.19E-10 | |
| NNW | 2.57E-06 | 4.81E-07 | 2.02E-07 | 1.07E-07 | 6.74E-08 | 2.33E-08 | 5.67E-09 | 2.61E-09 | 1.57E-09 | 1.06E-09 | |

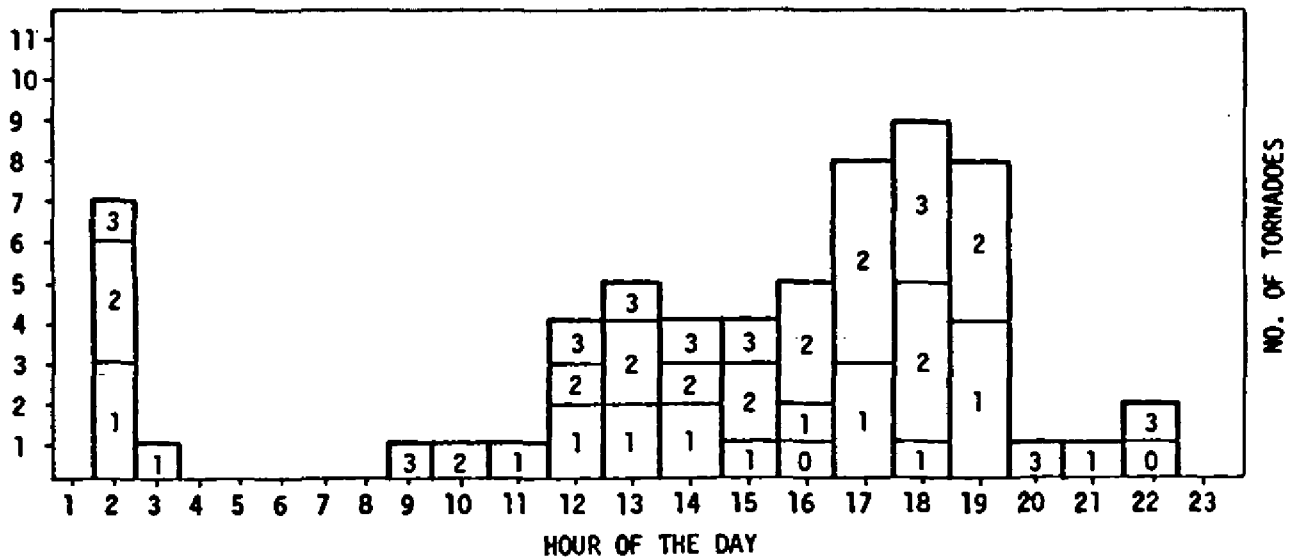
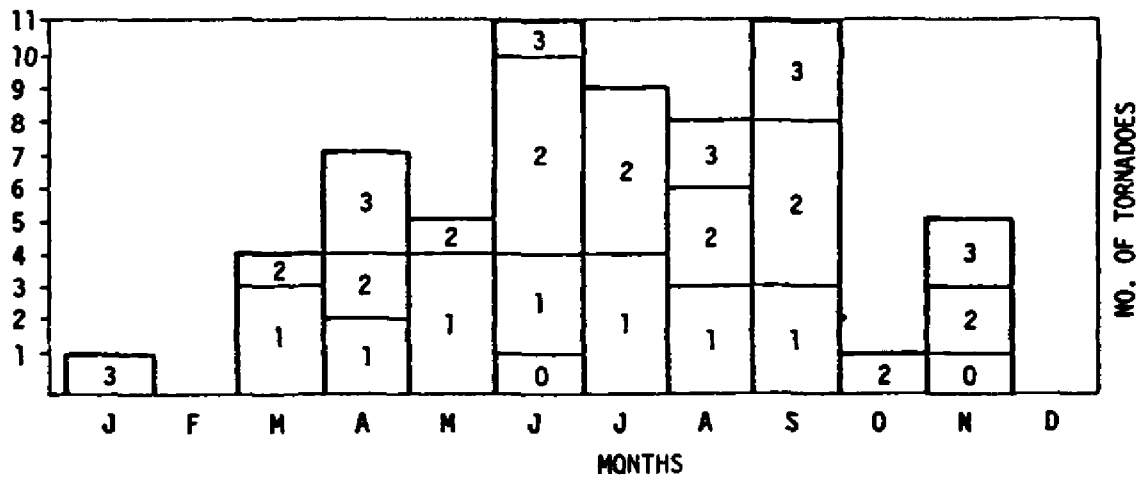
TABLE 2.3-139

| 1999-2003 SSES RELATIVE CONCENTRATIONS 8-DAY DECAY, DEPLETED X/Q X/Q ACCUMULATION FOR DECAYED DEPLETION (seconds per cubic meter) | | | | | | | | | | | |
|--|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|--|
| MILES | | | | | | | | | | | |
| Direction From | 0.5-1 | 1-2 | 2-3 | 3-4 | 4-5 | 5-10 | 10-20 | 20-30 | 30-40 | 40-50 | |
| N | 3.78E-06 | 6.63E-07 | 2.63E-07 | 1.33E-07 | 8.22E-08 | 2.82E-08 | 6.81E-09 | 2.87E-09 | 1.61E-09 | 1.03E-09 | |
| NNE | 7.41E-06 | 1.38E-06 | 5.88E-07 | 3.02E-07 | 1.89E-07 | 6.52E-08 | 1.59E-08 | 6.80E-09 | 3.86E-09 | 2.50E-09 | |
| NE | 1.56E-05 | 2.73E-06 | 1.19E-06 | 6.43E-07 | 4.12E-07 | 1.51E-07 | 4.04E-08 | 1.76E-08 | 1.01E-08 | 6.61E-09 | |
| ENE | 4.53E-05 | 7.74E-06 | 3.61E-06 | 2.05E-06 | 1.33E-06 | 4.88E-07 | 1.25E-07 | 5.28E-08 | 3.05E-08 | 2.02E-08 | |
| E | 2.04E-05 | 3.45E-06 | 1.46E-06 | 7.89E-07 | 5.09E-07 | 1.92E-07 | 5.34E-08 | 2.34E-08 | 1.34E-08 | 8.78E-09 | |
| ESE | 1.16E-05 | 2.07E-06 | 8.96E-07 | 4.80E-07 | 3.08E-07 | 1.15E-07 | 2.81E-08 | 1.07E-08 | 6.07E-09 | 3.94E-09 | |
| SE | 1.15E-05 | 2.10E-06 | 9.15E-07 | 4.95E-07 | 3.17E-07 | 1.20E-07 | 2.64E-08 | 8.44E-09 | 4.79E-09 | 3.10E-09 | |
| SSE | 8.29E-06 | 1.50E-06 | 6.35E-07 | 3.42E-07 | 2.22E-07 | 8.87E-08 | 2.05E-08 | 6.38E-09 | 3.62E-09 | 2.35E-09 | |
| S | 7.13E-06 | 1.40E-06 | 6.53E-07 | 3.64E-07 | 2.41E-07 | 1.04E-07 | 2.56E-08 | 7.67E-09 | 4.37E-09 | 2.84E-09 | |
| SSW | 7.63E-06 | 1.43E-06 | 6.29E-07 | 3.42E-07 | 2.20E-07 | 8.50E-08 | 1.97E-08 | 6.55E-09 | 3.73E-09 | 2.42E-09 | |
| SW | 6.07E-06 | 1.13E-06 | 5.15E-07 | 2.83E-07 | 1.84E-07 | 7.50E-08 | 1.72E-08 | 5.07E-09 | 2.88E-09 | 1.86E-09 | |
| WSW | 3.12E-06 | 5.56E-07 | 2.47E-07 | 1.39E-07 | 9.20E-08 | 4.04E-08 | 1.12E-08 | 3.68E-09 | 1.69E-09 | 8.43E-10 | |
| W | 1.45E-06 | 2.54E-07 | 1.05E-07 | 5.51E-08 | 3.50E-08 | 1.33E-08 | 3.20E-09 | 1.13E-09 | 6.33E-10 | 4.01E-10 | |
| WNW | 1.10E-06 | 1.86E-07 | 7.12E-08 | 3.57E-08 | 2.20E-08 | 7.53E-09 | 1.81E-09 | 7.49E-10 | 4.16E-10 | 2.63E-10 | |
| NW | 1.86E-06 | 3.20E-07 | 1.22E-07 | 5.94E-08 | 3.64E-08 | 1.22E-08 | 2.86E-09 | 1.18E-09 | 6.54E-10 | 4.13E-10 | |
| NNW | 2.35E-06 | 4.09E-07 | 1.65E-07 | 8.40E-08 | 5.12E-08 | 1.66E-08 | 3.67E-09 | 1.52E-09 | 8.48E-10 | 5.37E-10 | |

SSES – FSAR

TABLE 2.3-140

| 1999-2003 SSES RELATIVE DEPOSITION D/Q X/Q ACCUMULATION FOR DEPOSITION (per square meter) | | | | | | | | | | | | |
|--|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|--|--|
| MILES | | | | | | | | | | | | |
| Direction From | 0.5-1 | 1-2 | 2-3 | 3-4 | 4-5 | 5-10 | 10-20 | 20-30 | 30-40 | 40-50 | | |
| N | 2.57E-08 | 3.78E-09 | 1.55E-09 | 7.35E-10 | 4.34E-10 | 1.38E-10 | 3.29E-11 | 1.21E-11 | 6.47E-12 | 4.06E-12 | | |
| NNE | 3.31E-08 | 5.13E-09 | 2.23E-09 | 1.06E-09 | 6.23E-10 | 1.94E-10 | 4.53E-11 | 1.67E-11 | 8.89E-12 | 5.59E-12 | | |
| NE | 4.05E-08 | 6.11E-09 | 2.61E-09 | 1.27E-09 | 7.51E-10 | 2.42E-10 | 5.93E-11 | 2.18E-11 | 1.16E-11 | 7.31E-12 | | |
| ENE | 7.28E-08 | 1.13E-08 | 5.04E-09 | 2.46E-09 | 1.46E-09 | 4.61E-10 | 1.05E-10 | 3.68E-11 | 1.96E-11 | 1.23E-11 | | |
| E | 3.40E-08 | 4.96E-09 | 2.02E-09 | 9.65E-10 | 5.76E-10 | 1.90E-10 | 4.81E-11 | 1.77E-11 | 9.45E-12 | 5.94E-12 | | |
| ESE | 2.36E-08 | 3.57E-09 | 1.52E-09 | 7.36E-10 | 4.40E-10 | 1.46E-10 | 3.31E-11 | 1.07E-11 | 5.71E-12 | 3.59E-12 | | |
| SE | 3.04E-08 | 4.62E-09 | 2.02E-09 | 9.97E-10 | 5.98E-10 | 2.02E-10 | 4.21E-11 | 1.15E-11 | 6.14E-12 | 3.86E-12 | | |
| SSE | 2.52E-08 | 3.76E-09 | 1.60E-09 | 7.92E-10 | 4.83E-10 | 1.73E-10 | 3.79E-11 | 1.01E-11 | 5.38E-12 | 3.38E-12 | | |
| S | 2.61E-08 | 4.19E-09 | 1.97E-09 | 1.01E-09 | 6.30E-10 | 2.44E-10 | 5.69E-11 | 1.46E-11 | 7.80E-12 | 4.90E-12 | | |
| SSW | 3.58E-08 | 5.48E-09 | 2.46E-09 | 1.24E-09 | 7.53E-10 | 2.63E-10 | 5.84E-11 | 1.67E-11 | 8.89E-12 | 5.59E-12 | | |
| SW | 4.76E-08 | 7.56E-09 | 3.56E-09 | 1.84E-09 | 1.14E-09 | 4.28E-10 | 9.66E-11 | 2.46E-11 | 1.31E-11 | 8.25E-12 | | |
| WSW | 3.14E-08 | 4.84E-09 | 2.26E-09 | 1.21E-09 | 7.69E-10 | 3.17E-10 | 8.93E-11 | 2.58E-11 | 1.13E-11 | 5.54E-12 | | |
| W | 1.29E-08 | 1.93E-09 | 8.36E-10 | 4.17E-10 | 2.54E-10 | 9.10E-11 | 2.22E-11 | 6.96E-12 | 3.71E-12 | 2.33E-12 | | |
| WNW | 9.68E-09 | 1.40E-09 | 5.63E-10 | 2.69E-10 | 1.60E-10 | 5.17E-11 | 1.28E-11 | 4.71E-12 | 2.51E-12 | 1.58E-12 | | |
| NW | 1.67E-08 | 2.45E-09 | 9.82E-10 | 4.57E-10 | 2.70E-10 | 8.57E-11 | 2.06E-11 | 7.57E-12 | 4.04E-12 | 2.54E-12 | | |
| NNW | 2.15E-08 | 3.19E-09 | 1.35E-09 | 6.51E-10 | 3.81E-10 | 1.16E-10 | 2.62E-11 | 9.63E-12 | 5.14E-12 | 3.23E-12 | | |



Fugita Intensity Classification

| F-Scale | Wind Speed (MPH) | Description |
|---------|------------------|-------------------------------------|
| 0 | 40-75 | Very Weak Tornado (light damage) |
| 1 | 73-112 | Weak Tornado |
| 2 | 113-154 | Strong Tornado |
| 3 | 155-206 | Severe Tornado |
| 4 | 207-260 | Devastating Tornado |
| 5 | 261-318 | Incredible Tornado |
| 6 | 319 and higher | Inconceivable Tornado |

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SUSQUEHANNA STEAM ELECTRIC STATION UNITS 1 & 2 FINAL SAFETY ANALYSIS REPORT

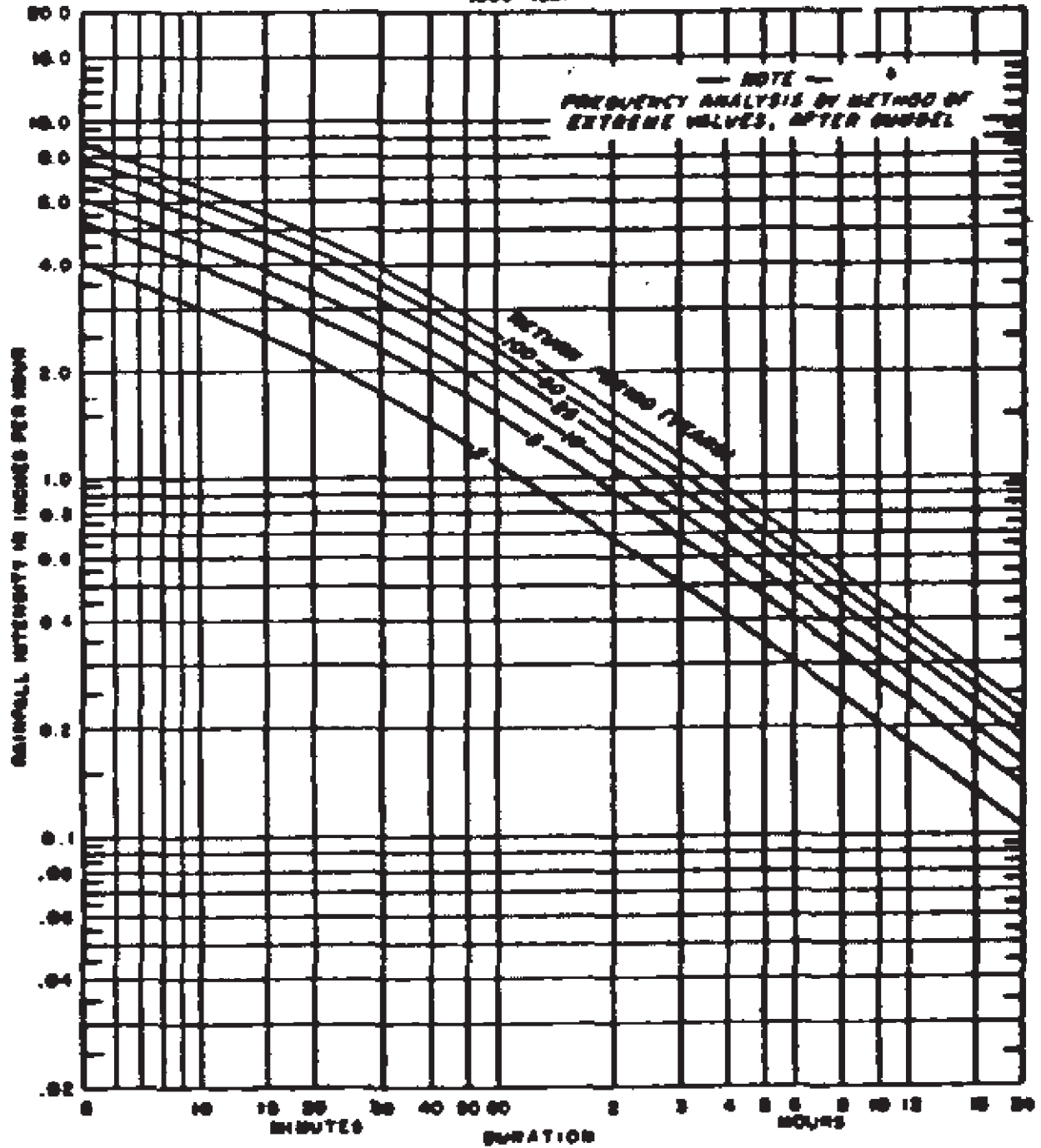
TORNADO OCCURRENCE AND INTENSITY IN SUSQUEHANNA REGION

FIGURE 2.3-1, Rev 47

AutoCAD: Figure Fsar 2_3_1.dwg

SCRANTON, PENNSYLVANIA

1903 - 1984



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FREQUENCY CURVES
USDC WB, 1955

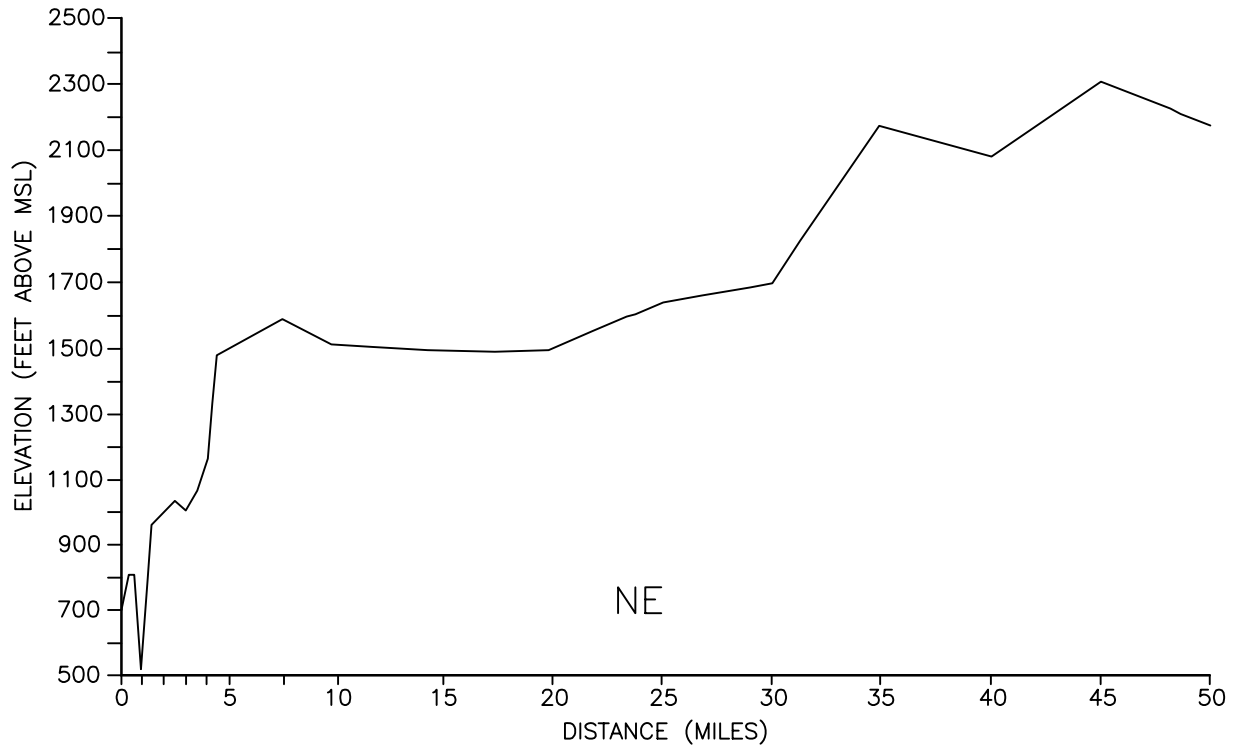
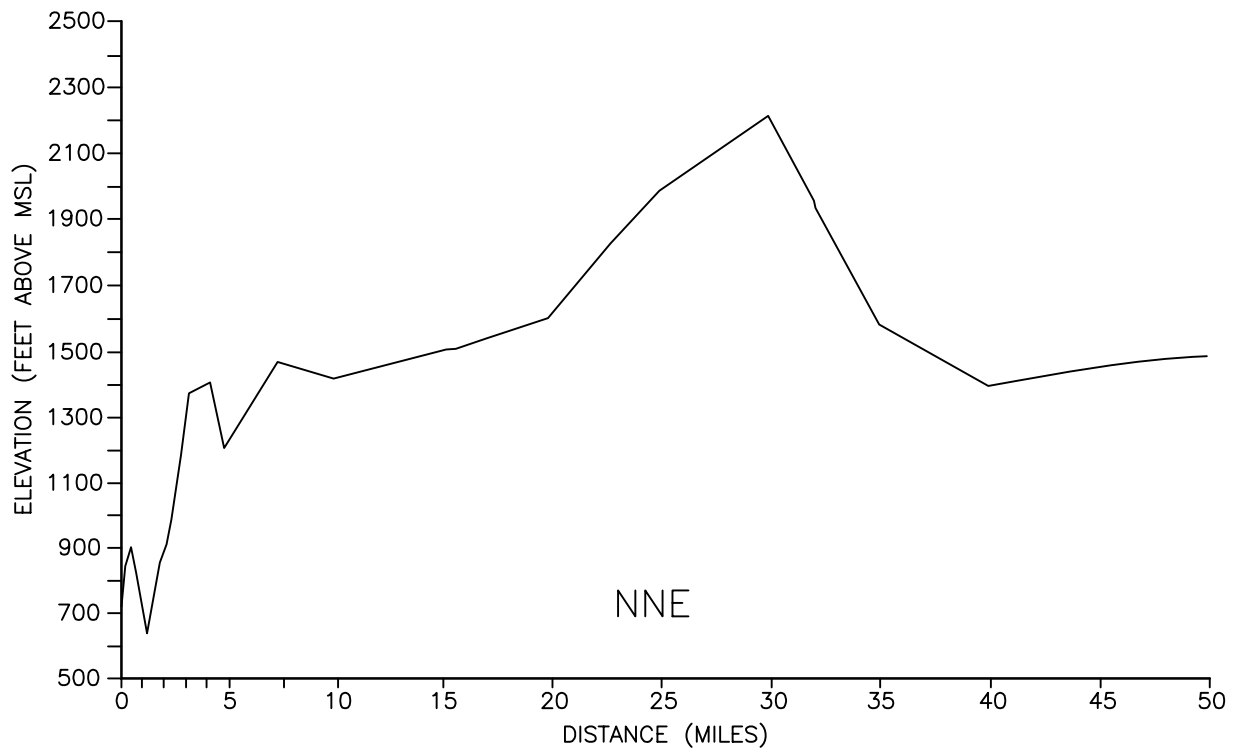
FIGURE 2.3-2, Rev 47

AutoCAD: Figure Fsar 2_3_2.dwg

Security-Related Information

Figure Withheld Under 10 CFR 2.390

| |
|---|
| SUSQUEHANNA STEAM ELECTRIC STATION UNITS 1 & 2 FINAL SAFETY ANALYSIS REPORT |
| TOPOGRAPHY WITHIN 5 MILES |
| FIGURE 2.3-3 |



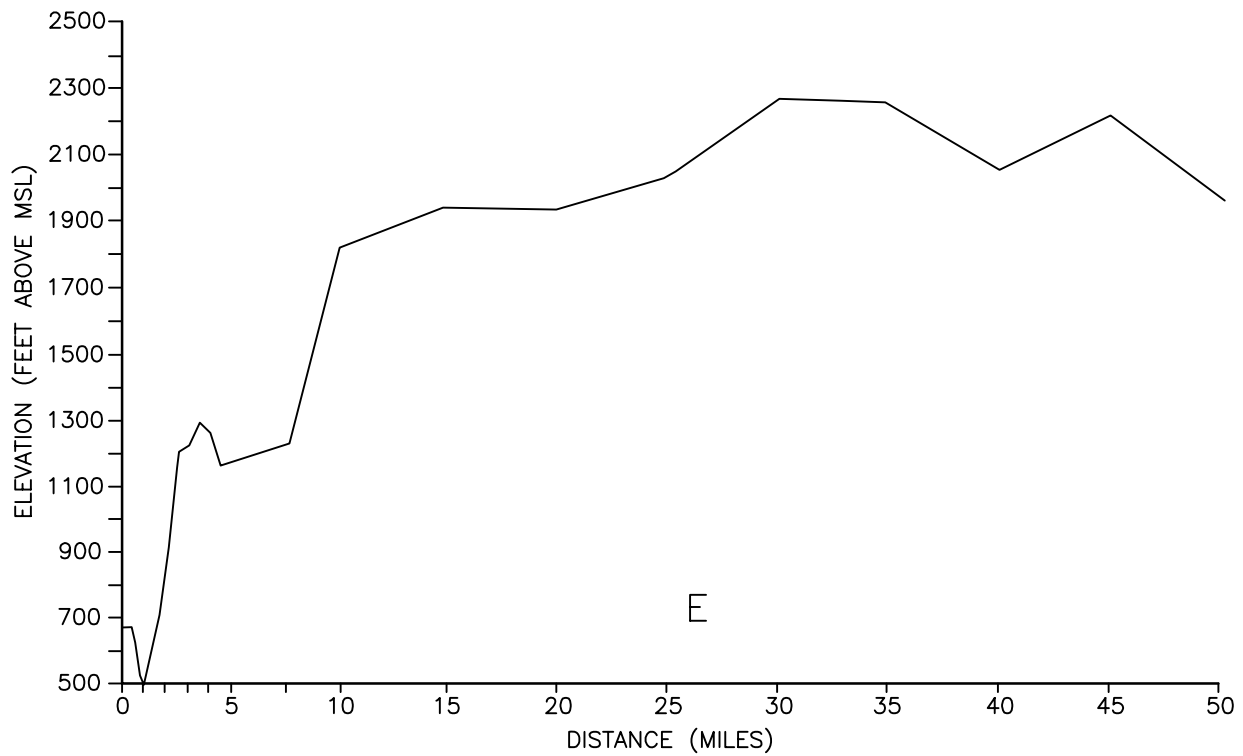
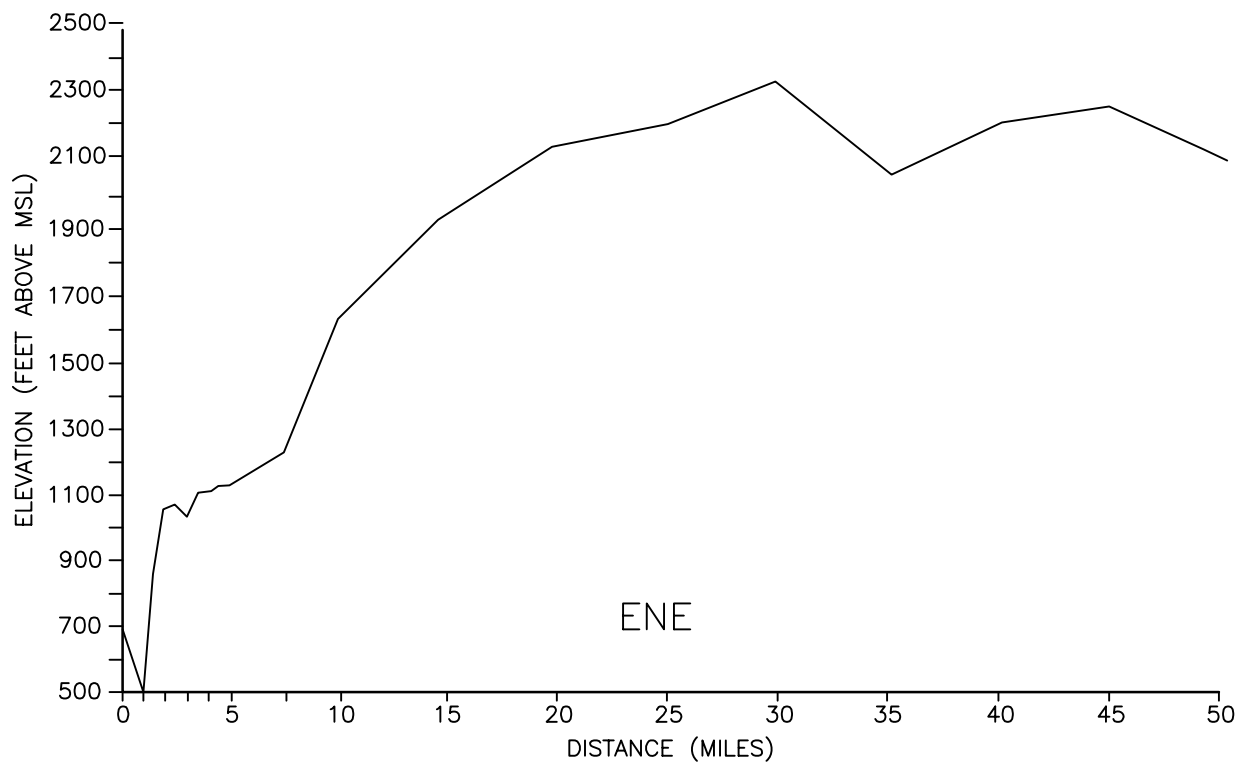
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MAXIMUM TERRAIN ELEVATION
VERSUS
DISTANCE BY SECTOR

FIGURE 2.3-4-1, Rev 47

Sh. 1 of 8



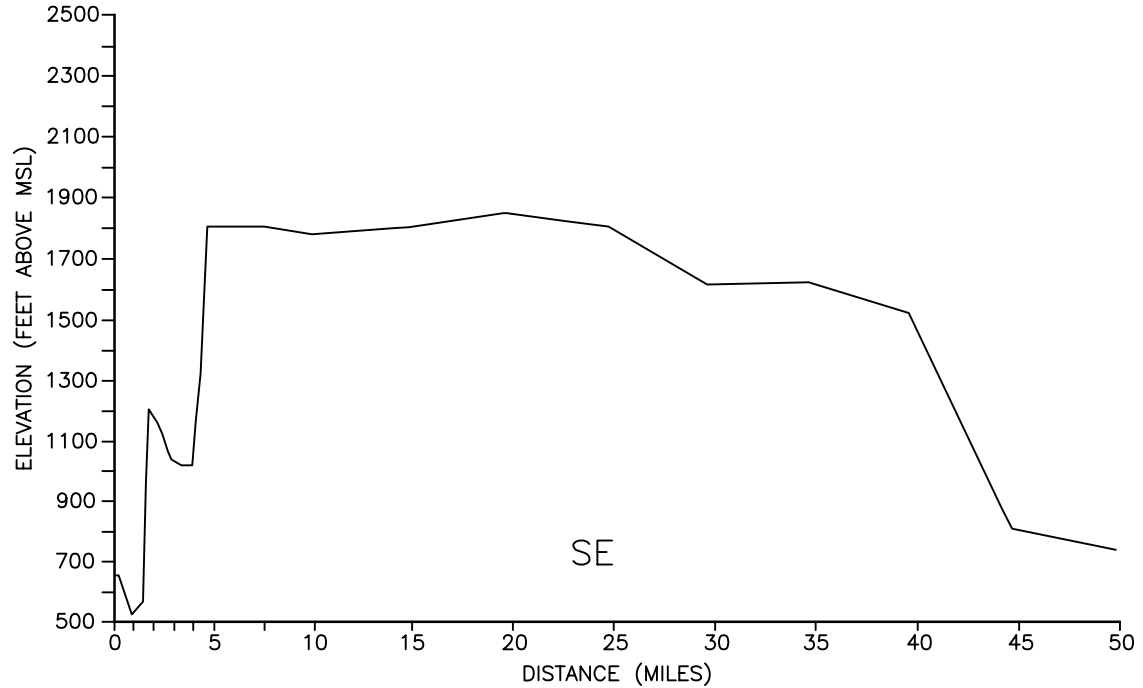
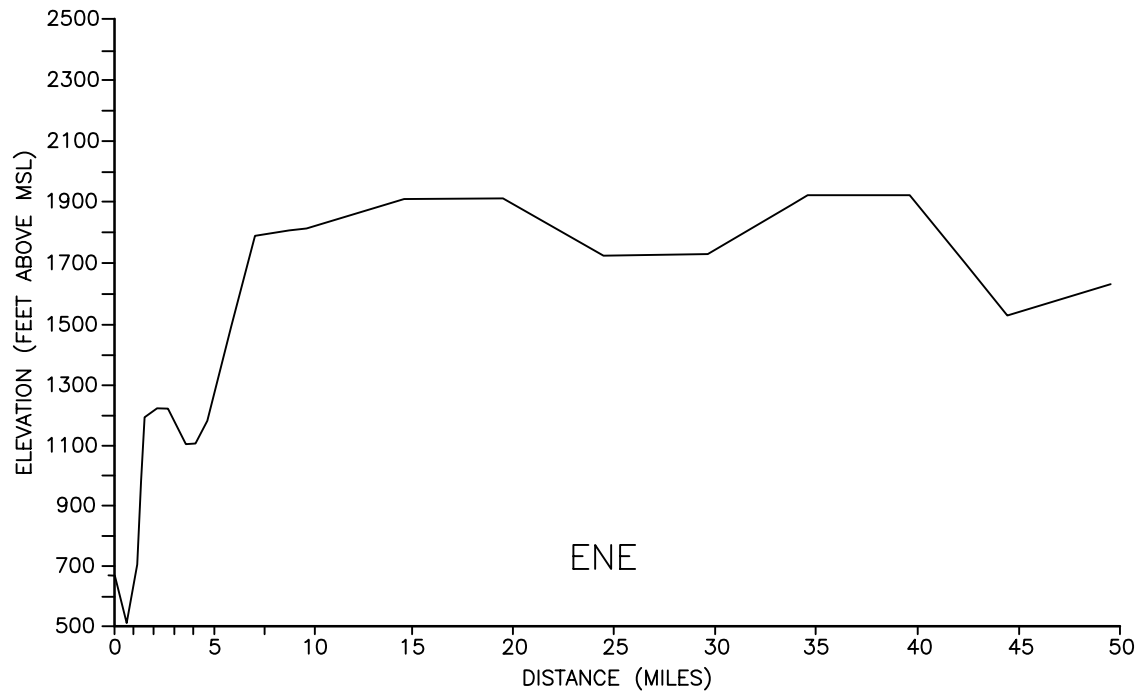
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VERSUS
DISTANCE BY SECTOR

FIGURE 2.3-4-2, Rev 47

(Cont'd) Sh. 2 of 8



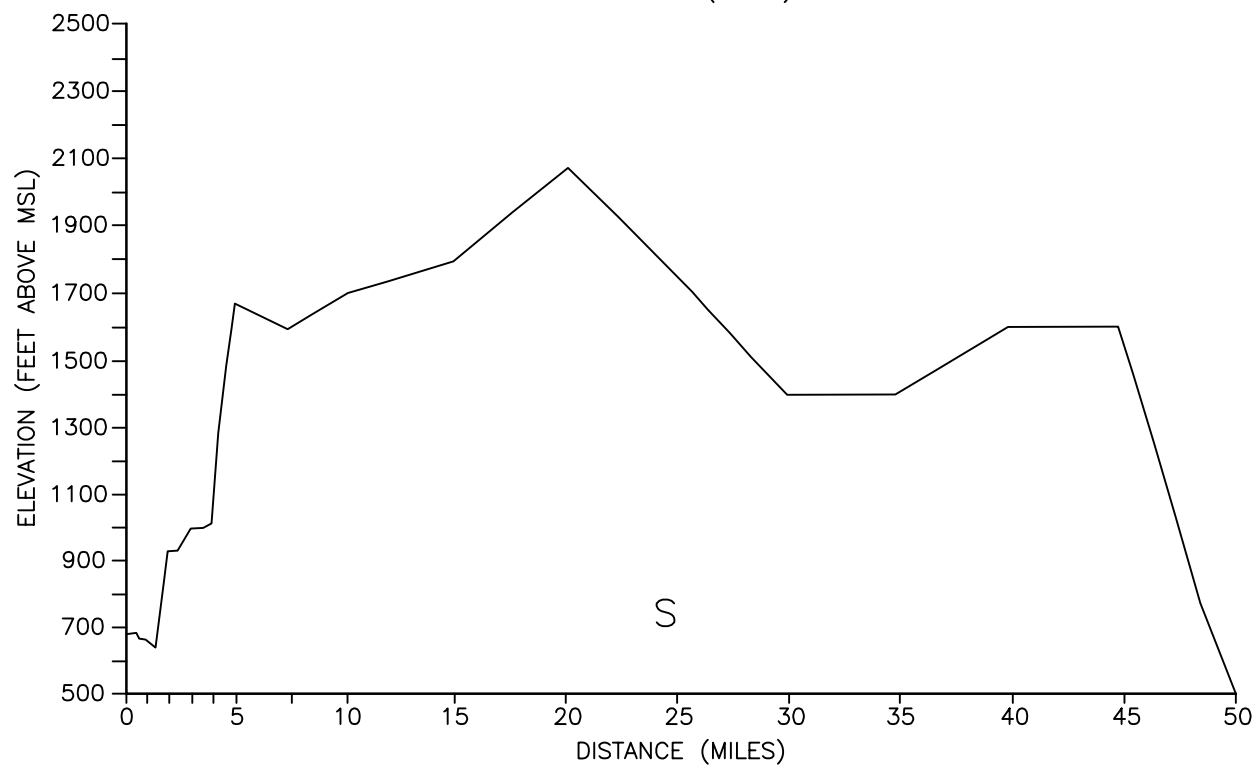
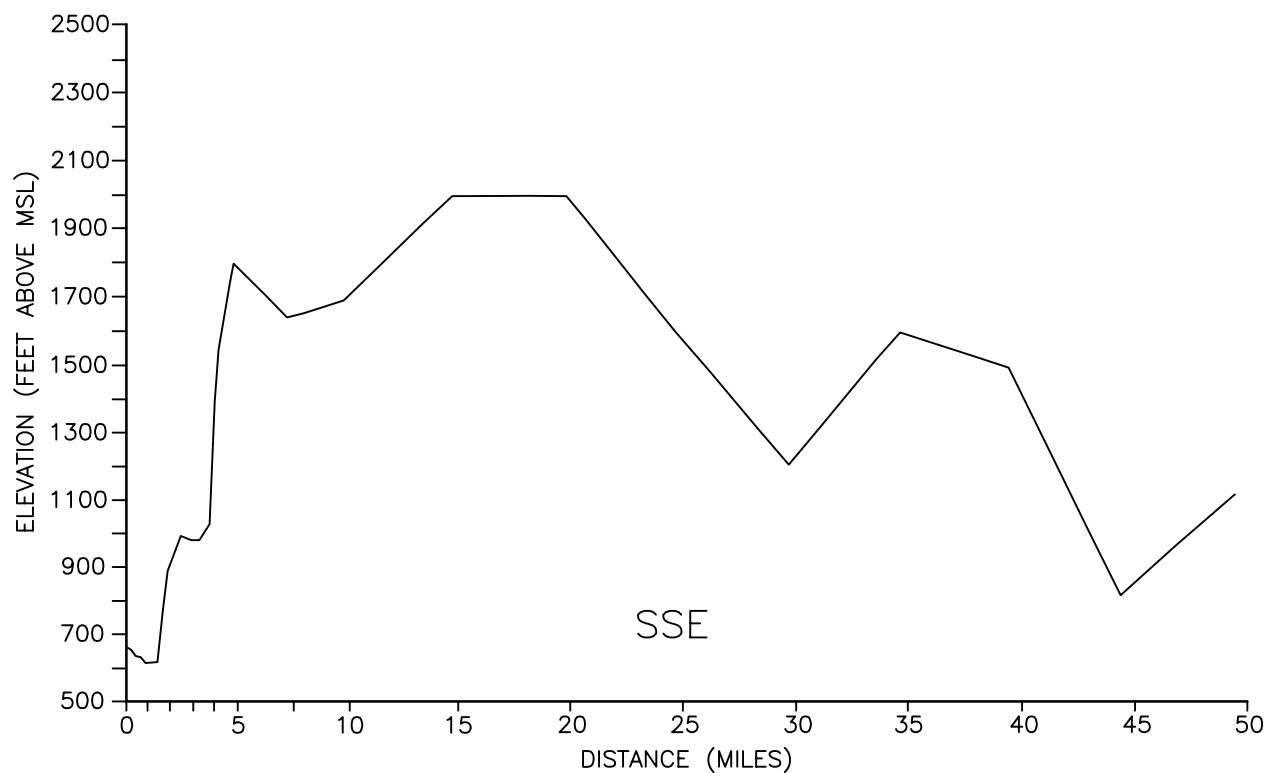
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VERSUS
DISTANCE BY SECTOR

FIGURE 2.3-4-3, Rev 47

Sh. 3 of 8



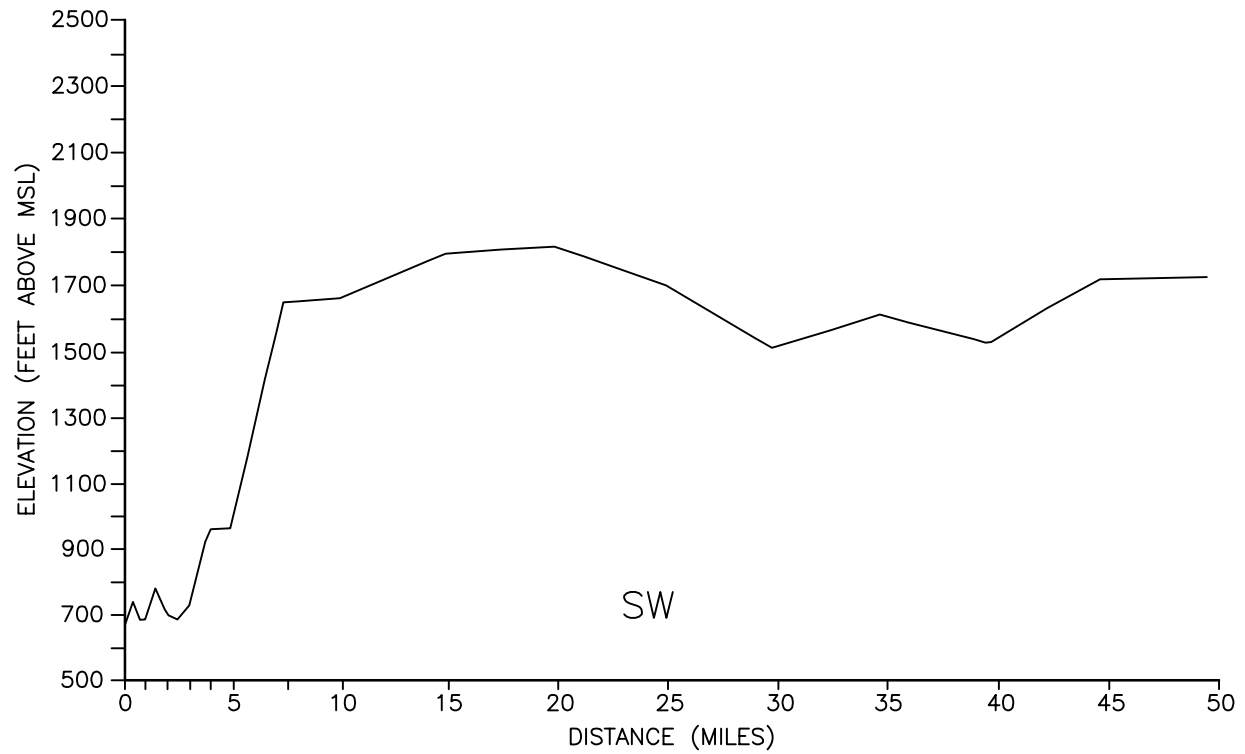
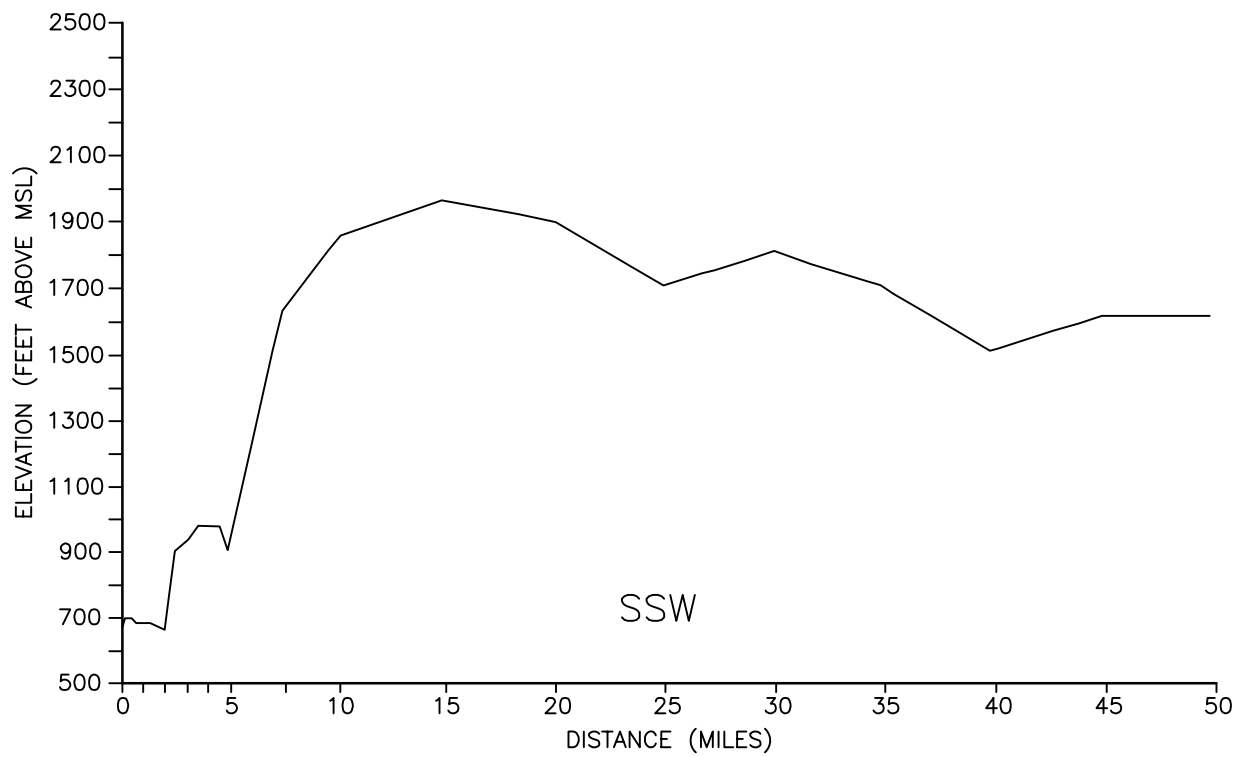
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VERSUS
DISTANCE BY SECTOR

FIGURE 2.3-4-4, Rev 47

Sh. 4 of 8



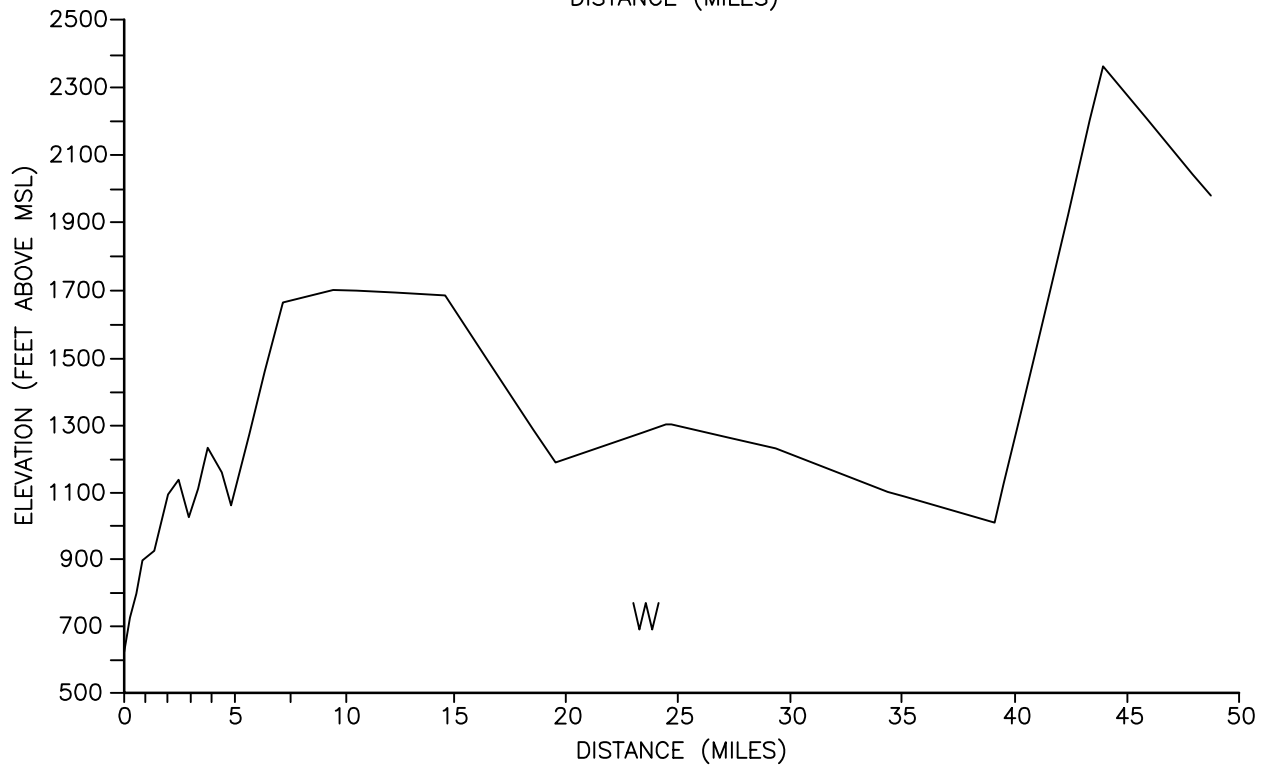
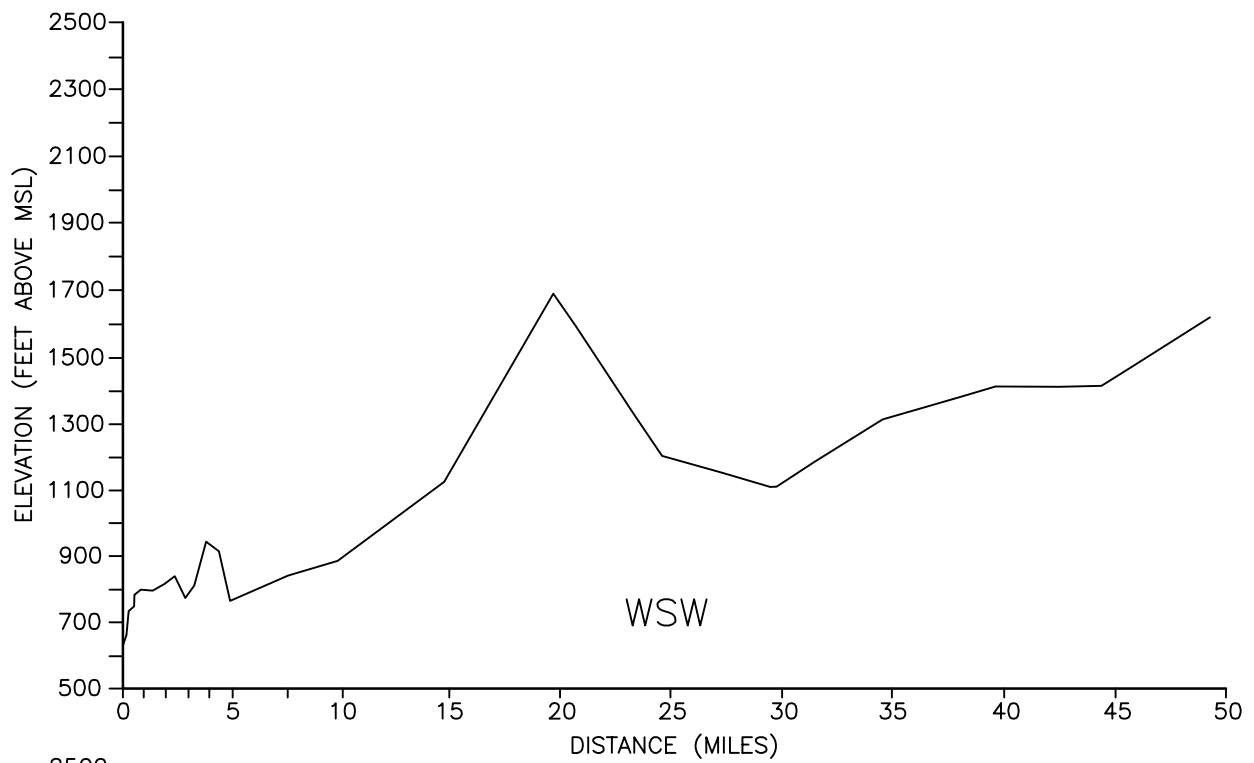
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MAXIMUM TERRAIN ELEVATION
VERSUS
DISTANCE BY SECTOR

FIGURE 2.3-4-5, Rev 47

Sh. 5 of 8



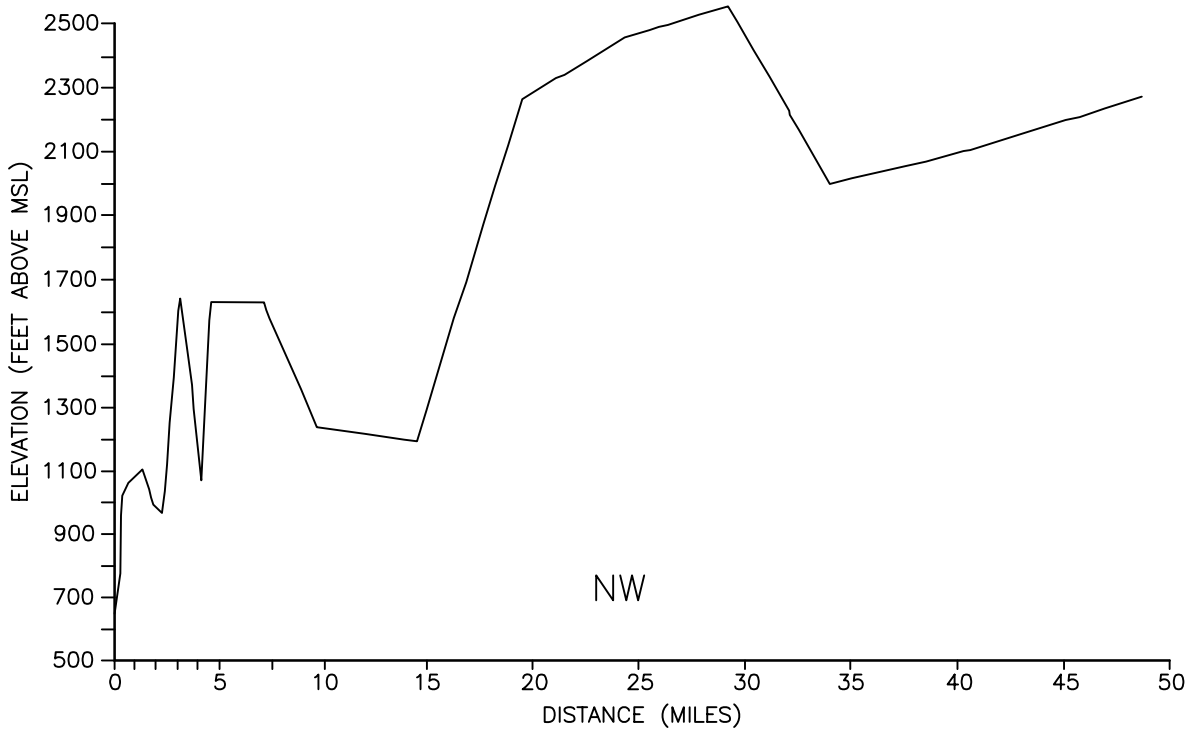
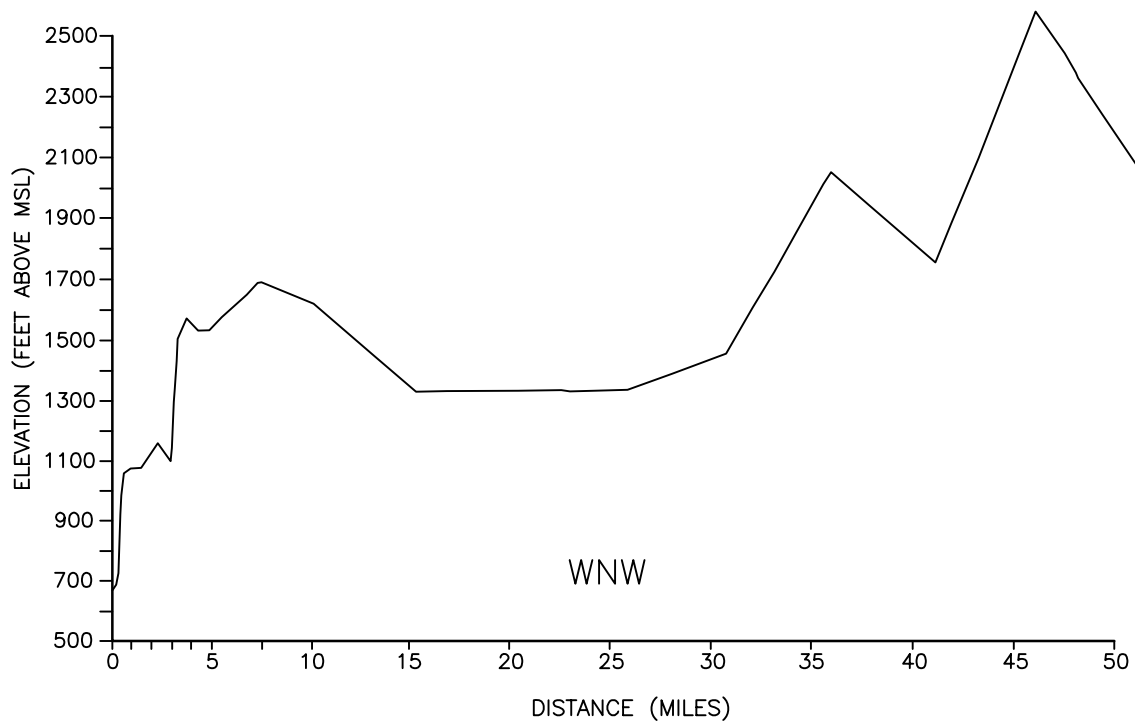
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MAXIMUM TERRAIN ELEVATION
VERSUS
DISTANCE BY SECTOR

FIGURE 2.3-4-6, Rev 47

Sh. 6 of 8



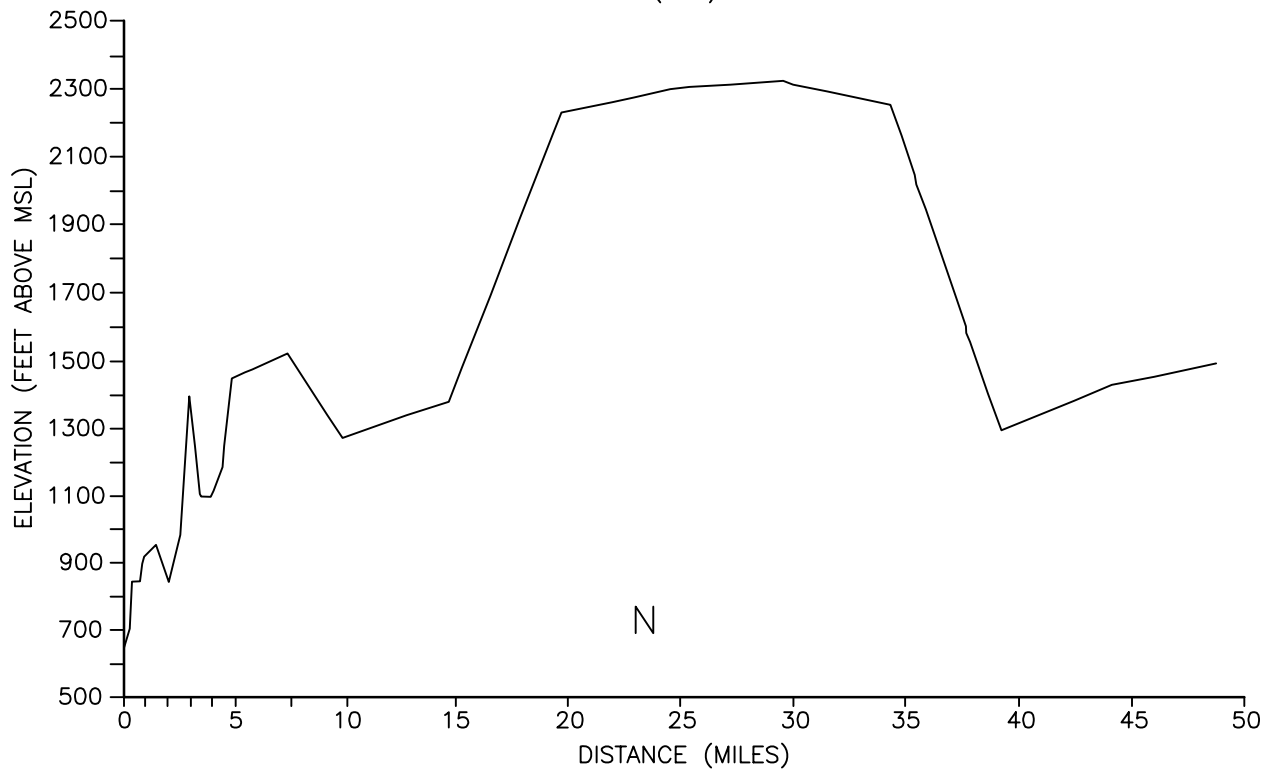
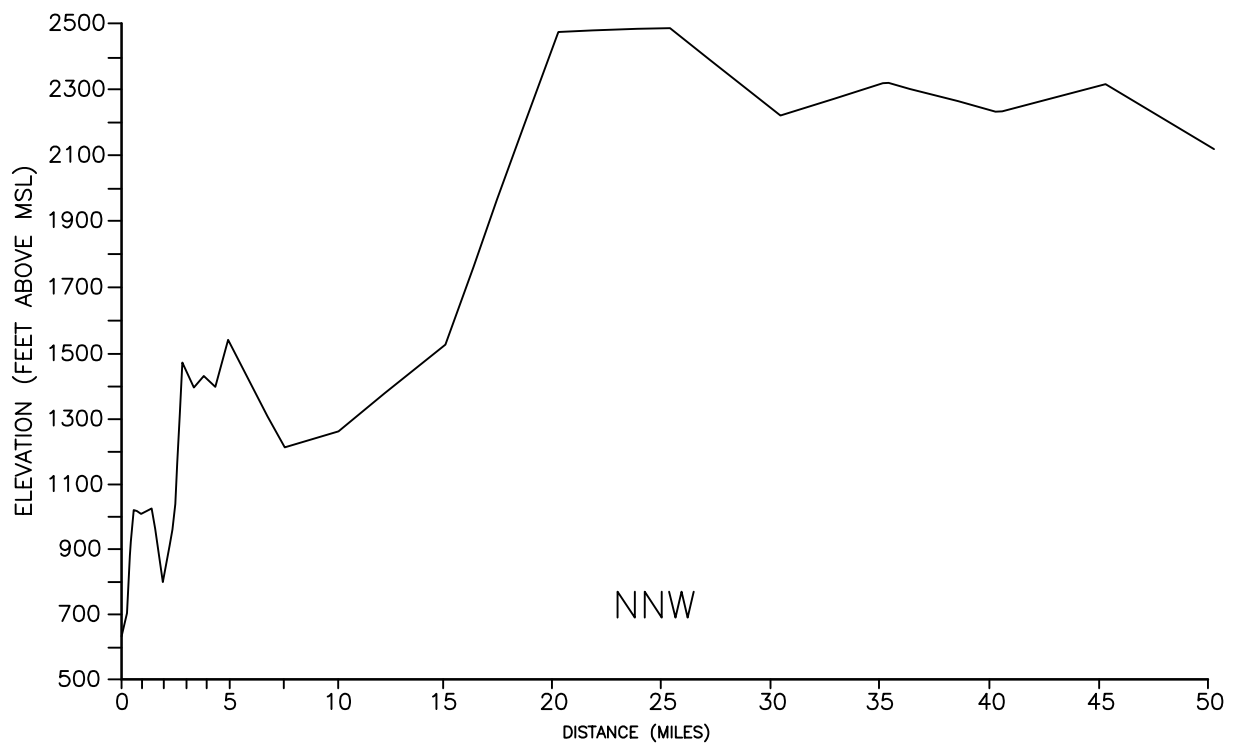
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MAXIMUM TERRAIN ELEVATION
VERSUS
DISTANCE BY SECTOR

FIGURE 2.3-4-7, Rev 47

Sh. 7 of 8



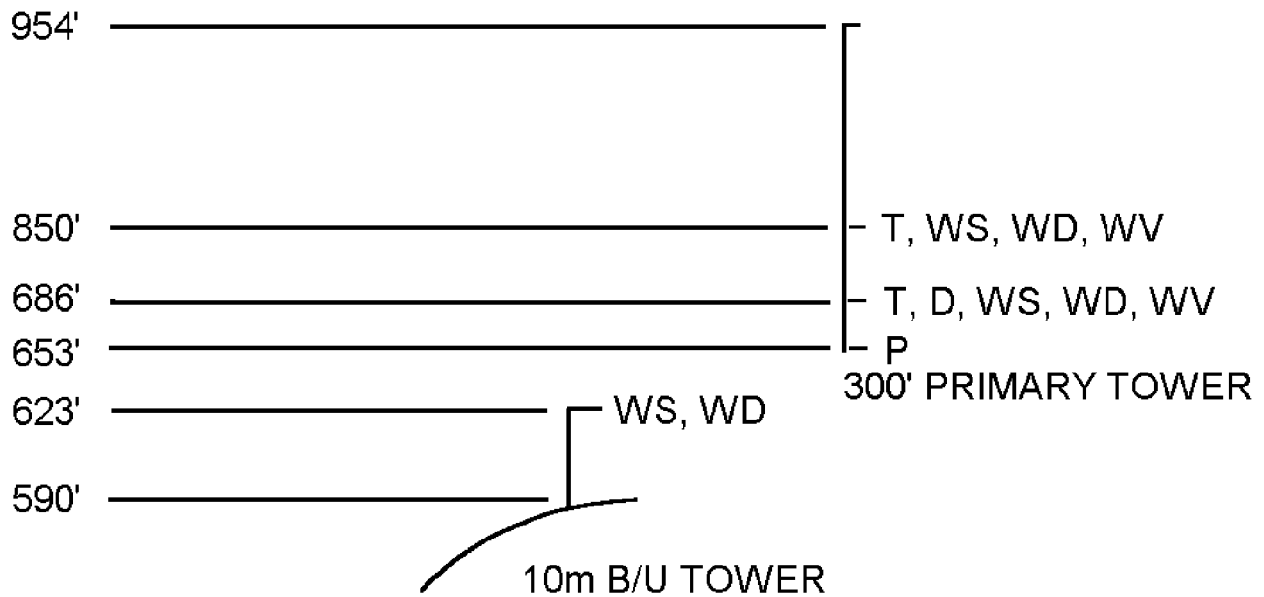
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MAXIMUM TERRAIN ELEVATION
VERSUS
DISTANCE BY SECTOR

FIGURE 2.3-4-8, Rev 47

Sh. 8 of 8



KEY TO INSTRUMENTATION

T = TEMPERATURE
 D = DEW POINT TEMPERATURE
 WS = WIND SPEED
 WD = WIND DIRECTION
 WV = WIND VARIABILITY (NOTE 1)
 P = PRECIPITATION

NOTE:

1. WIND VARIABILITY IS NOT A DIRECT MEASUREMENT AT THE TOWER, BUT TRANSLATED AT THE MAINFRAME IN THE TOWER BUILDING FROM WD DATA.

FSAR REV. 65

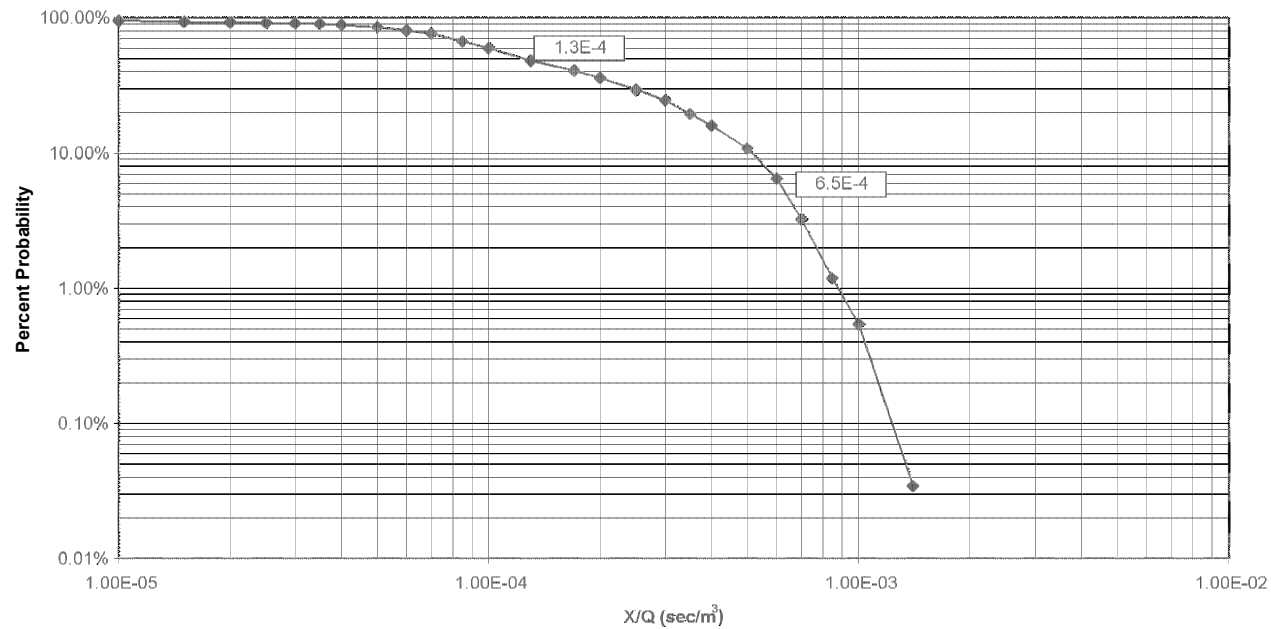
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SCHEMATIC OF INSTRUMENTATION

FIGURE 2.3-5, Rev 54

AutoCAD: Figure Fsar 2_3_5.dwg

Figure 2.3-6 - 1 Hour Direction Independent X/Q at the EAB
(Weighted Average of 1999, 2000, 2001, 2002, 2003 Calculations)



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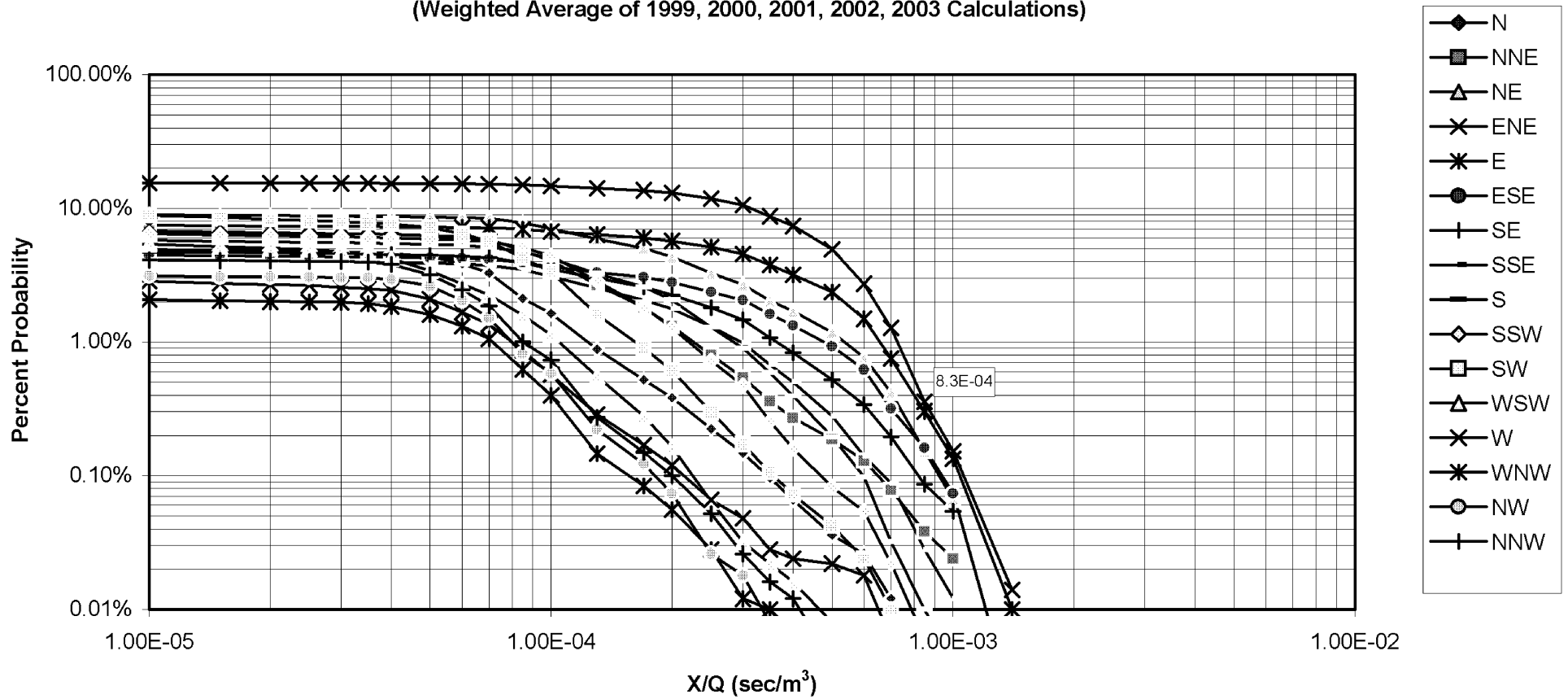
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ONE HOUR DIRECTION INDEPENDENT X/Q
AT THE EAB
(WEIGHTED AVERAGE OF 1999, 2000, 2001,
2002, 2003 CALCULATIONS)

FIGURE 2.3-6, Rev 1

AutoCAD: Figure Fsar 2_3_6.dwg

Figure 2.3-7 - 1 hr Direction Dependent X/Q Values at the EAB
 (Weighted Average of 1999, 2000, 2001, 2002, 2003 Calculations)



FSAR REV. 65

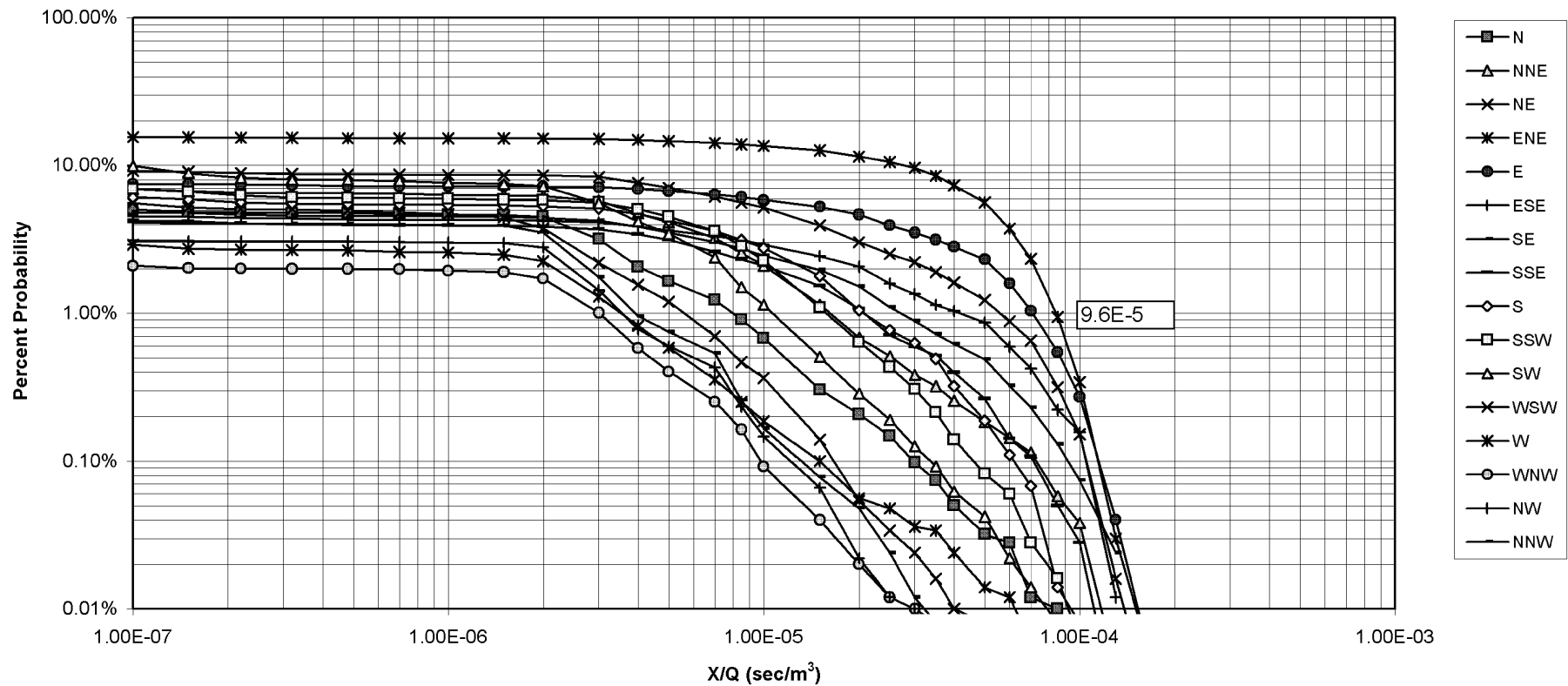
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 UNITS 1 & 2
 FINAL SAFETY ANALYSIS REPORT

ONE HOUR DIRECTION DEPENDENT X/Q VALUES
 AT THE EAB
 (WEIGHTED AVERAGE OF 1999, 2000, 2001,
 2002, 2003 CALCULATIONS)

FIGURE 2.3-7, Rev 1

AutoCAD: Figure Fsar 2_3_7.dwg

Figure 2.3-8 -1 Hour Direction Dependent X/Q Values at the LPZ
 (Weighted Average of 1999, 2000, 2001, 2002, 2003 Calculations)



FSAR REV. 65

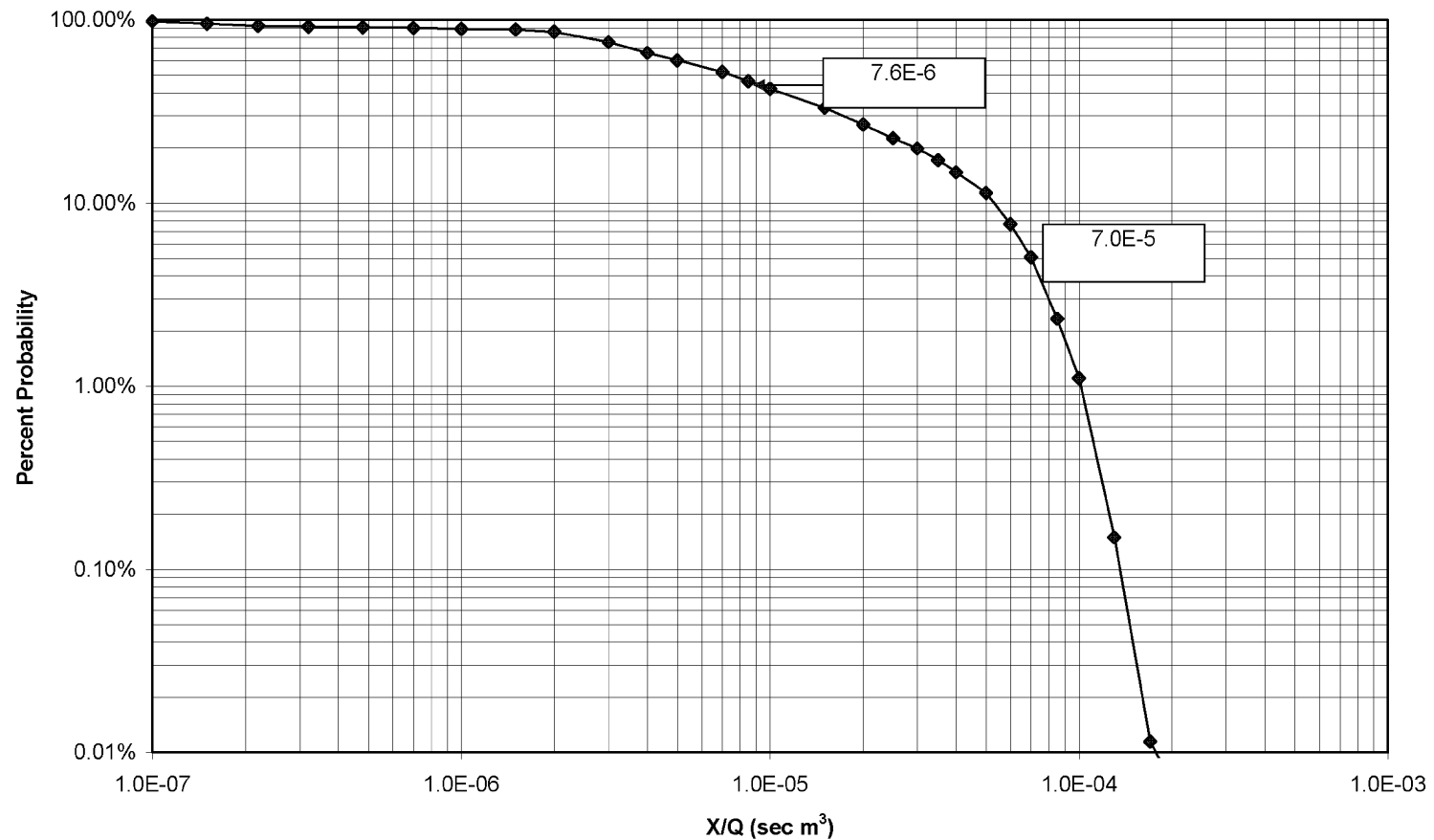
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ONE HOUR DIRECTION DEPENDENT X/Q VALVES
 AT THE LPZ
 (WEIGHTED AVERAGE OF 1999, 2000, 2001,
 2002, 2003 CALCULATIONS)

FIGURE 2.3-8, Rev 1

AutoCAD: Figure Fsar 2_3_8.dwg

Figure 2.3-9 - 1 Hour Direction Independent X/Q at the LPZ
(weighted average of 1999, 2000, 2001, 2002, 2003 Calculations)



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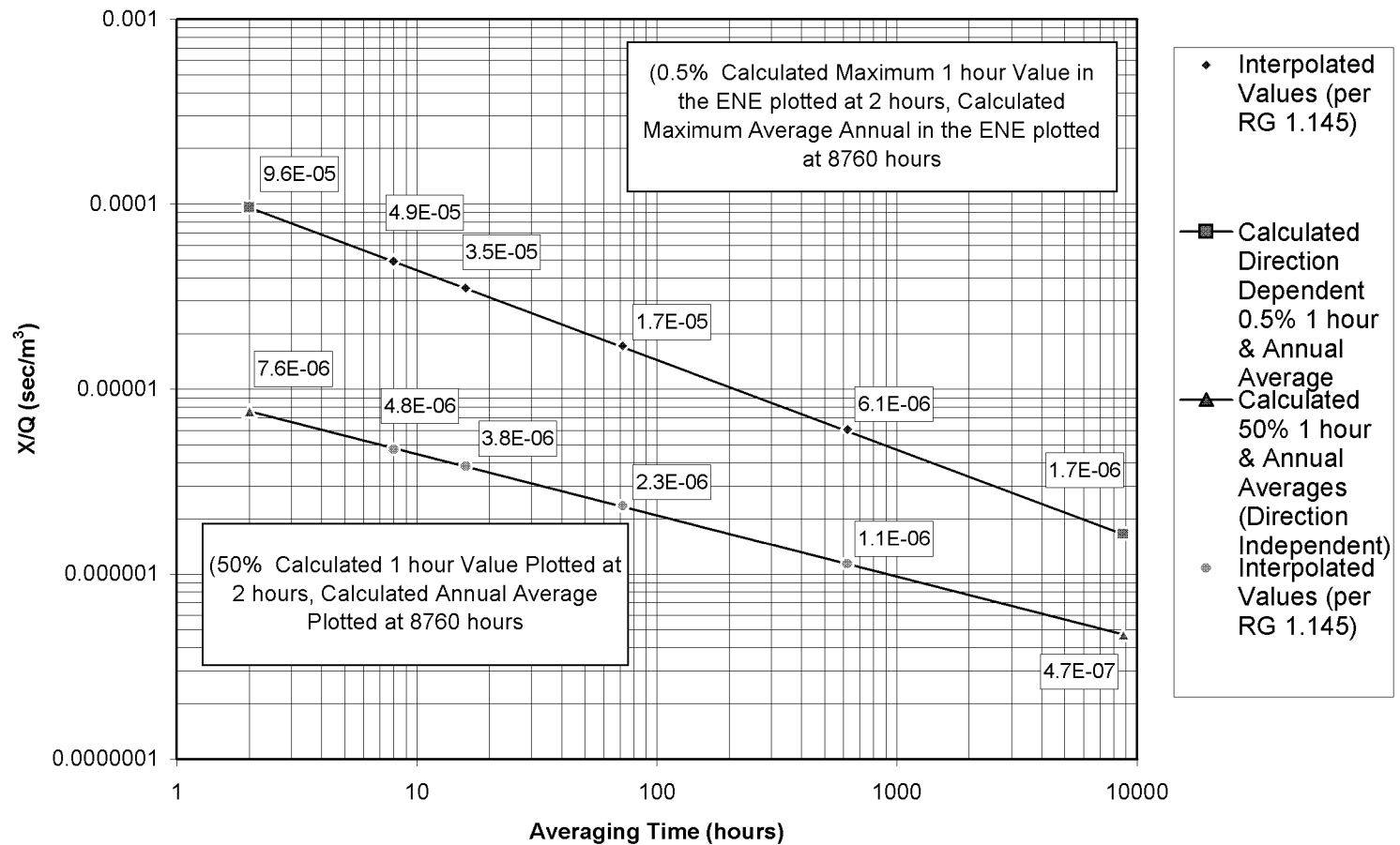
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ONE HOUR DIRECTION DEPENDENT X/Q
 AT THE LPZ
 (WEIGHTED AVERAGE OF 1999, 2000, 2001,
 2002, 2003 CALCULATIONS)

FIGURE 2.3-9, Rev 1

AutoCAD: Figure Fsar 2_3_9.dwg

Figure 2.3-10 - Interpolated X/Q Values at the LPZ
(Weighted Average of 1999, 2000, 2001, 2002, 2003 Calculations)



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INTERPOLATED X/Q VALUES AT THE LPZ
 (WEIGHTED AVERAGE OF 1999, 2000, 2001,
 2002, 2003 CALCULATIONS)

FIGURE 2.3-10, Rev 1

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