

2.3 METEOROLOGY

2.3.1 REGIONAL CLIMATOLOGY

2.3.1.1 General Climate

The climate of southeastern Louisiana is classified as humid subtropical<sup>(1)</sup>. It is influenced to a large degree by the many water surfaces, provided by lakes and streams and by proximity to the Gulf of Mexico.<sup>(2)</sup>

During mid-June to mid-September, the prevailing southeast to southwest winds carry inland warm, moist tropical air favorable for sporadic, often quite localized development of thunderstorms. Occasionally the pressure distribution of the atmosphere changes to bring in a flow of hotter and drier air.

The prevailing southeast to southwest winds in the summer months<sup>(3)</sup> are usually associated with the "Bermuda High" that often remains stationary in the Atlantic Ocean off the southeast coast of the United States; on some days, however, such winds merely reflect a localized sea breeze. The hotter drier conditions on the other hand are usually caused by the formation of a high pressure system over the Western Gulf of Mexico. Cool continental air rarely reaches the site region in summer. If a cold front does occur, the cold air behind the front has usually been greatly moderated by solar heating over the plains states to the north or northwest.

From late fall until early spring, bursts of cold air do reach southeastern Louisiana, but the cool temperatures which result seldom last more than a few days<sup>(2)</sup>. Even during these seasons the weather is still usually dominated by maritime tropical air from the Gulf of Mexico.<sup>(4)</sup> The interaction between this moist air and the much colder, drier air to the north often generates or intensifies winter storms which then usually pass to the north of the site<sup>(2,4)</sup>. Throughout the year, the many water surfaces in the site area modify the relative humidity and temperature by decreasing the range between extremes.<sup>(2)</sup> During periods of southerly wind flow, these effects are increased, imparting the characteristics of a marine climate. Relative humidities of less than 50 percent occur in each month of the year; however, they are less frequent in the summer than during the other seasons<sup>(2)</sup>. Freezing temperatures are not common and are generally restricted to the period mid-December to mid-March. Some years have none<sup>(2)</sup>.

Measureable snowfall in the region is rare. Only four times in the 100 years of data prior to 1975 has the snowfall depth exceeded two inches<sup>(2)</sup>. A fairly definite rainy period exists from mid-December to mid-March. Rainy weather conditions in this period often persist for several days at a time.

Damaging hail and sleet are not frequently reported in the site area<sup>(2,4)</sup>.

2.3.1.2 Regional Meteorological Conditions for Design and Operating Bases

2.3.1.2.1 Maximum Winds and Design Wind Speeds

### WSES-FSAR-UNIT-3

High wind speeds in the area are associated with hurricanes, thunderstorms, frontal passage, and extratropical cyclones. The highest sustained wind speed officially measured at New Orleans was 98 mph from the north on September 19, 1947 during the passage of a hurricane.<sup>(2)</sup>

Thom<sup>(5)</sup> has computed the return period for extreme winds (fastest mile of wind exclusive of tornado winds at height 30 ft. above the ground). According to these statistics, an extreme wind of 100 mph (36 second mean wind) can be expected to occur on the average once every 100 years. Based on a gustiness factor developed by Huss<sup>(6)</sup>, the highest instantaneous gust expected once in 100 years is 130 mph.

The fastest mile wind speeds for recurrence intervals from 2 to 100 years presented in Table 2.3-1. For comparison purposes, the observed fastest mile wind speeds and concurrent directions at Moisant International Airport for the 47 year period 1921-1967 are presented in Table 2.3-2.

Of concern to plant designers is the distribution of high wind speeds with height. Using the once in a hundred year fastest mile of wind discussed above (100 mph) and a standard vertical wind profile, the distribution of extreme winds with height at the site is as follows:

0-50 ft.	50-150 ft.	150-400 ft.
100 mph	119 mph	138 mph

#### 2.3.1.2.2 Hurricanes

During the period 1871-1977, 55 tropical storms or hurricanes passed within 100 nautical miles of the Waterford 3 site<sup>(7)(18)</sup>. Beginning with 1886, the National Weather Bureau has differentiated between tropical storms (maximum wind  $\leq 74$  mph) and hurricanes ( $\geq 74$  mph). Since 1886, there have been 26 passages of hurricanes and 23 of tropical storms within 100 nautical miles of the site. Since 1900, the centers of three hurricanes have passed over New Orleans.

At 9:12 a.m. on September 19, 1947, during the passage of a hurricane, the highest wind of record at Moisant International Airport was measured as 98 mph. Afterwards, but shortly before the eye of the hurricane passed over the station, the velocity indicator became difficult to read; the wind was estimated to reach as high as 110 mph with gusts estimated to 125 mph.

In 1965, Hurricane "Betsy" brought destructive winds to the New Orleans Metropolitan area. On September 9, 1965, at 11:47 pm, the winds at New Orleans International Airport reached 85 mph from the east, with gusts to 112 mph. In New Orleans, an extreme wind of 125 mph from the east was estimated atop the Federal Building. Since 1963, five tropical cyclones with winds in excess of 50 mph, all hurricanes (including Betsy), have passed within 100 nautical miles of the Waterford Site. Of these, Betsy was by far the most severe in the New Orleans-Waterford site area. A summary of these five hurricanes is presented in Table 2.3-137.

## WSES-FSAR-UNIT-3

### 2.3.1.2.3 Thunderstorms

Thunderstorms with damaging winds and hail are relatively infrequent. The most damaging thunderstorms are those associated with the passage of a cold front or squall line.<sup>(2)</sup>

Based on 21 years of records of the US Weather Bureau at Moisant International Airport (1949-1969), the mean number of days with thunderstorms is:

Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Annual
2	2	3	5	6	9	16	13	7	2	1	2	68

The maximum thunderstorm occurrence during the months of July and August is also reflected in the monthly average precipitation.

During the period 1955-1967, hail 0.75 in. or greater in diameter was reported 13 times in the one-degree latitude-longitude square containing the site<sup>(8)</sup>. These occurrences are relatively infrequent especially when compared to over 100 such hail reports at some locations in Oklahoma.

The site area experiences an annual average of 75 days with observable lightning or thunder. There are about 19 cloud to ground strikes per square mile per year<sup>(19)</sup>. The most serious lightning displays will obviously occur in those thunderstorms associated with frontal passages.

The probability of the Waterford Reactor Building being struck by lightning in any year may be calculated using the procedures presented in Lightning Protection by J. L. Marshall as 0.78 or approximately one lightning strike every 1.3 years.<sup>(19)</sup> All critical components and structures at the Waterford plant are protected against lightning damage by an extensive electrical grounding system.

### 2.3.1.2.4 Tornadoes

A few of the more severe thunderstorms and hurricanes generate tornadoes. According to Thom<sup>(9)</sup>, the total frequency of tornadoes for the 10 year period, 1953-1962, by one-degree latitude-longitude squares for southeastern Louisiana is:

	89-90 W	90-91 W
29-30 N	9	9
30-31 N	12	11

The mean annual frequency of tornadoes per one degree square in the site area, therefore, is about one.

Thom<sup>(9)</sup> also gives the probability of a tornado striking a point based on the path width and length of all tornadoes reported in Iowa during 1953-1962. The average path area of these storms is given by Thom as 2.8209 square miles. Using this information, the tornado frequency presented above and the method suggested by Thom, the annual probability of a tornado striking the site is approximately  $6.3 \times 10^{-4}$  or about once every 1585 years.

### WSES-FSAR-UNIT-3

An examination of tornado statistics for 1950-1977<sup>(20)</sup> showed that during this period a total of 112 tornadoes had been reported within 50 nautical miles (58 statute miles) of the Waterford site. The average path length and width of these 112 tornadoes is 3.36 miles and 318 ft. respectively; these values yield an average path area of 0.20 square miles.

→ (DRN 00-1171)

Using the above, site specific, statistics and Thom's method the probability of a tornado striking the Waterford site is  $7.68 \times 10^{-5}$  or once in 13,029 years. See section 3.5.1.4.2 for the annual probability of tornado strike used in the "TORMIS" analysis.

← (DRN 00-1171)

The site specific tornado data described above shows that the two most severe tornadoes to occur in the site vicinity were classed F4 according to the Fujita Tornado intensity scale<sup>(21)</sup>. This scale, which was developed by T.T. Fujita of the University of Chicago, classifies tornado intensity and maximum wind speed based upon the observed extent of damage attributable to the storm. The F4 classification is associated with wind speeds (rotational and translational combined) estimated to be between 207 and 260 mph.

→ (DRN 00-1171)

Even though the probability of a tornado at the site is small, all structures and equipment necessary to initiate and maintain a safe plant shutdown have been designed to withstand short-term loadings resulting from a tornado funnel with a peripheral tangential velocity of 300 mph and a translational velocity of 60 mph with an external pressure drop of three psi in three seconds. Protection from the design basis tornado is provided by design margins and the judicious use of missile barriers such that the probability does not exceed acceptable value.

A "TORMIS" analysis was performed using tornado data for the years 1954-1995 to compute tornado strike probability at Waterford 3. The "TORMIS" analysis was then used to evaluate the protection requirements of certain components vulnerable to tornado generated missiles. The "TORMIS" analysis uses a NRC approved methodology developed by the Electric Power Research Institute (EPRI). The methodology is implemented using the computer program TORMIS.

Should the Waterford 3 evaluations using the TORMIS methodology provide results indicating that the plant configuration exceed Waterford 3's  $10^{-6}$  acceptance criteria, then missile protective barrier will be utilized to reduce the total cumulative probability value to below the acceptance criteria value of  $10^{-6}$ .

← (DRN 00-1171)

#### 2.3.1.2.5

#### Air Pollution Potential

Qualitative estimates of the dispersion characteristics of a site can be made from tabulated summaries of meteorological data. Two types of summaries readily available to meteorologists consist of tabulations of mixing heights and tabulations of stagnating anticyclone (i.e., high pressure system) occurrences.

The mixing height of the atmosphere is defined as the height of that surface based layer through which pollutant material released to the atmosphere will be thoroughly mixed. The lower the mixing height, the more unfavorable dispersion conditions become. When low mixing heights are in turn combined with low wind speeds in the mixing layer air pollution problems can result. Using mixing height and wind speed data for the period 1960-1964, Holzworth<sup>(10)</sup> examined and generally summarized the relative potential for adverse dispersion conditions for urban areas throughout the contiguous United States. Although the Waterford 3 site is located in a rural area, Holzworth's analyses are reasonably applicable. Holzworth's results indicate that the site area can expect to experience between 10 and 15 days each year of "limited dispersion". This value is somewhat high in comparison to much of the eastern US where 5-10 such days generally occur each year but is quite low in comparison to those parts of the U.S. west of the Rocky Mountains.

### WSES-FSAR-UNIT-3

As indicated earlier, the occurrence frequency of stagnating anticyclones represents another easily obtainable index of high air pollution potential. Stagnating anticyclones are in fact a cause of low mixing heights, so the two sets of data are interrelated. Using pressure gradient and low wind speed criteria, Korshover<sup>(11)</sup> has determined that from 1936 through 1965, approximately 30 stagnation incidents covering a total of 110 days occurred in the site area. Such statistics are higher than those for the northeastern U.S. and the mid-west but considerably lower than those for the southeast, especially the inland Carolinas and northern Georgia. Korshover also has concluded that only two stagnation incidents lasting for seven days or longer occurred in the site area in the entire 30-year period examined.

In summary it is apparent that both the mixing height and anticyclone data indicate similar conclusions regarding air pollution potential in the site area. Limited dispersion days occur with greater frequency in the New Orleans area than much of the eastern U.S., but this frequency is far below that experienced west of the Rocky Mountains.

Terrain features can also have an unfavorable impact upon the atmospheric dispersion of pollutant material. The terrain in the vicinity of the Waterford site, however, is relatively flat and thus no terrain induced dispersion problems are likely.

#### 2.3.1.2.6 Snow, Glaze

Snow or freezing precipitation is not a serious concern for a power plant in the New Orleans area. Snowfall amounts in excess of two inches have only been recorded four times in the 100 years of data available prior to 1975 (five in. in January 1881, 8.2 in. in February 1895, three in. in February 1899, and 2.7 in. in December 1963<sup>(23)(24)</sup>).

Similarly, only one glaze storm was reported in the region by the U.S. Weather Bureau in the 28 year period of record (1925-1953).<sup>(12)</sup> However, the Weather Bureau data contains only limited information on glaze occurrences in the New Orleans area. Through conversations with the Lead Forecaster at the National Weather Service New Orleans Office<sup>(22)</sup>, who has been a resident of the area for over 60 years, it was learned that since the early 1920's there have been only three significant glaze occurrences in the site vicinity. The most severe occurred in the early 1920's when approximately 1/4 in. of glaze ice accumulated on vegetation in the area. The accumulated glaze completely melted within less than 24 hours. The other two glaze storms occurred on January 22 and 23, 1940 and in the mid to late 1950's. Each of these storms deposited less than 1/4 in. of glaze on vegetation, automobiles, etc. and in both cases the glaze accumulations melted within several hours. In view of the absence of extreme phenomena of this type in the site region, no attempt was made to estimate the weight of a maximum 100-year snowpack in conjunction with the weight of 100-year, 48-hour maximum winter precipitation value.

#### 2.3.1.2.7 Dry Bulb and Wet Bulb Temperatures

Dry bulb and wet bulb data from a 17 year period of record (1948-1964) for Moisant International Airport were examined to obtain the design basis conditions for the ultimate heat sink. Where necessary, statistical extrapolations of observed results to longer return periods were accomplished.

The results of the analyses are presented in Table 2.3-2(a).

### 2.3.2 LOCAL METEOROLOGY

#### 2.3.2.1 Normal and Extreme Values of Meteorological Parameters

## 2.3.2.1.1

## Winds

Surface wind data for New Orleans (Moisant International Airport) for the 10 year period 1951-1960<sup>(3)</sup> were used to define long-term wind conditions for the New Orleans area. The annual wind rose shows a south wind to be the predominant direction (nine percent of the total hours) although eight of the remaining 15 directions have a percentage frequency of six to eight percent. This feature strongly suggests a wide variation in wind direction. Calms occur 12 percent of the total hours. Figures 2.3-1 through 2.3-13 show annual and monthly wind roses for Moisant International Airport. This data is reproduced in tabular form in Tables 2.3-3 through 2.3-15.

Joint frequencies of three-hourly wind speed and direction recorded at New Orleans International Airport during the period July 1972 through June 1975 and February 1977 to February 1978 are presented in Table 2.3-15a. During this four year period southerly winds predominated (approximately 11 percent of the total hours) although several other directions occurred more than six percent of the time. During this period the average wind speed was 8.2 mph and calms occurred during 10.5 percent of the hours.

Tabulated wind rose data and actual wind roses for the onsite meteorological station (30 foot level) for the periods July 1973 through June 1975 and February 1977 to February 1978 are presented in Tables 2.3-16 through 28 and Figures 2.3-14 through 2.3-26. As the onsite data indicate, the site experiences fewer calms and more frequent south-easterly winds than does the airport. The decrease in calm conditions recorded at the site as opposed to the airport may be due to the low wind speed threshold for the anemometer and a longer averaging period of the observation (60 minute) at the site. The directional differences are most likely due to the effects of Lake Pontchartrain and the different relative location of the lake with respect to the airport and the Waterford site.

The onsite wind data were used in all of the diffusion analyses performed in conjunction with this report. Since a substantial base of onsite data now exists, no attempts were made to account for any differences between the onsite and offsite data.

## 2.3.2.1.2

## Temperature

On the average there are only about seven days a year in the New Orleans area when the temperature rises to 95°F or higher<sup>(2)</sup> and 102°F is the highest temperature of record occurring most recently on June 30, 1954 in Orleans Parish. The longest period in New Orleans with temperatures of 90°F or higher on successive days was 64 days, June 21 - August 23, 1917, but the temperature did not exceed 96°F. The warmest summer was 1951, when the temperature for June, July and August averaged 84.7°F.

From about mid-November to mid-March, the area is subjected alternately to tropical air and cold continental air in periods of varying length. About 80 percent of the December-February hourly temperatures range from 41 to 69°F. The mean date of the first occurrence of 32°F or lower is about December 12, while the mean date of the last occurrence is about February 13. Between these dates, temperatures are above freezing more than six days out of seven entirely with some afternoons having temperatures in the seventies and eighties. The mean length of the freeze-free period is about 302 days. The latest freeze date in spring was March 27, 1955, with 30°F reported. The earliest freeze date in the fall was November 11, 1894 when a reading of 32°F was recorded. The usual track of winter storms is to the

north of New Orleans, but occasionally one moves into the area, bringing large and rather sudden drops in temperature. However, the cold spells seldom last more than three or four days. In about two-thirds of the years, the annual lowest temperature is 24°F or warmer, with some years entirely above freezing. The all-time record low temperature recorded in New Orleans was 7°F on February 13, 1899. The coldest winter on record was 1885-1886, when the temperature for December, January and February averaged 50.9°F.

→(DRN 01-464)

The long-term temperature records of the area show the typical annual cycle. The monthly average temperature varies from a minimum of 54.6°F in January to a maximum of 81.9°F in August at Moisant International Airport. Temperature records for New Orleans (Audubon Park) and Reserve show similar annual cycles (Table 2.3-29) The average diurnal temperature distribution at Moisant International Airport is presented in Table 2.3-30. Extremes in temperature range from 7° F recorded in February, 1899 to 102°F in June, 1954 (Table 2.3-31). Mean numbers of days when maximum and minimum temperatures exceed threshold values of 0°F, 32°F, and 90°F are listed in Table 2.3-32.

←(DRN 01-464)

For comparison purposes onsite temperature data for the period July, 1972-June, 1975, and the period from mid-February 1977 to mid-February 1978 were tabulated and are presented in Table 2.3-33. The onsite temperature data show the same tendencies as the New Orleans data. Although the diurnal temperature range is several degrees lower at the site, the annual mean temperature for New Orleans and the site are within 0.7° F.

#### 2.3.2.1.3 Relative Humidity and Fog

From December to May, the waters of the Mississippi River are usually colder than the air temperature favoring the formation of river fog, particularly with light southerly winds. Nearby lakes also serve to modify the extremes of temperature and to increase the incidence of fog over narrow strips along the shores. January is the month with the greatest frequency of fog occurrences.

Mean relative humidity at midnight, 6 AM, noon, and 6 PM Central Standard Time and mean number of days with heavy fog are listed in Table 2.3-34. In about half of the winter hours, however, the relative humidity is under 80 percent, and values less than 50 percent are about twice as frequent in winter as in the summer.

#### 2.3.2.1.4 Precipitation

A fairly definite rainy period occurs from mid-December to mid-March. Measurable precipitation occurs on about one-third of the days in conjunction with a warm front or a cold front which has stalled over the northern Gulf of Mexico. Rain is generally continuous and may last for several days. Snowfall amounts are generally light, with the snow usually melting as it lands. Snowfalls of two inches or more occurred in December, 1963, January, 1881, and February, 1899 and 1895.

→(DRN 02-217)

April, May, October and November are generally dry, but there have been some extremely heavy showers in those months. The greatest 24-hour amount of precipitation since 1871 was 14.01 inches which fell on April 15-16, 1927, while 13.68 inches fell October 1-2, 1937. The heaviest recorded rate of rainfall in the New Orleans area was one inch in five minutes measured during a thunderstorm on February 5, 1955; however, such a rate is never long sustained. In contrast, one can expect a period of three consecutive weeks without measurable rainfall about once in 10 years. The longest period was 53 days from September 29 to November 20, 1924.

←(DRN 02-217)

→(DRN 02-217, R11-A)

←(DRN 02-217, R11-A)

Average monthly and annual precipitation values representative of the area are shown in Table 2.3-35. Extreme monthly and daily precipitation data and the mean number of days per month when precipitation equaled or exceeded 0.01 inch are listed in Table 2.3-36. Maximum short period precipitation<sup>(13)</sup> data are shown in Table 2.3-37.

Table 2.3-38 shows monthly frequencies of occurrence of precipitation by time of day at Moisant International Airport for the period 1951 through 1960.

Annual and seasonal precipitation wind rose data were obtained from the 17 year period of record 1949-1965 for the U.S Naval Air Station at New Orleans located about 26 miles ESE of the site<sup>(14)</sup>. Table 2.3-39 presents the percentage frequency of wind direction during precipitation at this station. The data show that the highest annual frequency (13.6 percent) of precipitation occurs when the wind is calm ( $\leq 2$  mph) and the lowest annual frequency (1.9 percent) of precipitation occurs with wind directions of WSW and WNW.

#### 2.3.2.1.5 Atmospheric Stability

→(EC-1837, R301)

Onsite temperature difference data recorded during the periods July, 1972 through June, 1975 and February 1977 until February 1978 indicate that stable atmospheric conditions (stability classes E, F, and G) occurred about 56 percent of the time and unstable conditions (A, B, and C) occurred about 19 percent of the time. The remaining observations (about 25 percent) fell into the neutral (D) category. The average monthly and annual frequency of the various stability categories (defined in accordance with Safety Guide 23, 2/17/72) for the same period of record are presented in Table 2.3-40. Persistence of certain stable conditions was analyzed for the four years of data gathered. Stable conditions (E, F or G) persisted for up to 47 hours with longest period occurring in September 1974. Extremely stable conditions (Class G) persisted for 15 hours on six different occasions - all during the first three years of data in the months October through January.

←(EC-1837, R301)

#### 2.3.2.1.6 Mixing Height Data

Seasonal morning and afternoon mixing heights as obtained by Holzworth<sup>(10)</sup> are shown in Table 2.3-41. As expected, mixing heights are higher in summer than winter; the fall values on the average are slightly higher than spring values. Strong, low inversions are a common phenomenon in the area on winter mornings when the colder Mississippi Delta is surrounded by warmer water.

#### 2.3.2.2 Potential Influence of The Plant and Its Facilities on Local Meteorology

The Circulating Water System for the Waterford 3 plant is a once-through system. Although the discharge of warm water from the plant into the receiving water body will result in some small changes in evaporation rates, temperature and relative humidity, the atmospheric effects of plant operation should not be noticeable by the local populace.

## WSES-FSAR-UNIT-3

Figure 2.3-27(a) through (d) show profiles of the highest terrain for each directional segment in 16 directions at mile intervals out to 10 miles from the proposed plant. It can be seen from these profiles that the terrain is quite flat in the surrounding area, as it is on all the Mississippi Delta.

Figure 2.3-28 presents a map of the general topographic features that exist within a five mile radius of the proposed plant.

### 2.3.2.3 Local Meteorological Conditions For Design and Operating Bases

The meteorological parameters used as input for the design and operation of the plant (exclusive of radiological considerations) are discussed in Subsection 2.3.1.2.

### 2.3.3 ONSITE METEOROLOGICAL MEASUREMENTS PROGRAM

#### 2.3.3.1 Preoperational Monitoring Program

An onsite preoperational meteorological monitoring program was initiated at the Waterford 3 site on June 11, 1971 in order to evaluate the effects of topography on the diffusion climatology of the site. Data were collected continuously at this site through June of 1975. At that time the tower monitoring program was temporarily discontinued. In February of 1977, the meteorological monitoring program was reactivated and operated until February of 1978 in order that an additional year of site meteorological data would be available to support this Report.

The system consisted of a 130 ft. instrument tower and a temperature controlled shelter at the base of the tower housing the instrument signal conditioning equipment and the digital and analog recording equipment. The installation was located approximately 1760 ft. east of the Reactor Building in a sugar cane field in an essentially flat area ranging in elevation from 12 to 15 ft. MSL. During most of the year the field was clear of vegetation. However, during the late summer and early fall, the canes have stood as high as 8-10 ft. During all seasons, an area of approximately 30 ft. in diameter around the tower was kept clear of all vegetation (see Figure 2.3-29).

#### 2.3.3.1.1 Equipment

The Onsite Preoperational Monitoring System consisted of the following equipment:

##### a) Meteorological Tower

The instruments were mounted on a 130 foot guyed and grounded open lattice triangular tower measuring approximately 12 inches on a side. The tower was a Tri-Ex Model 15 modified by the installation of motorized instrument carriage assemblies. The movable carriage assemblies greatly facilitated instrument inspection, servicing and calibration.

During the period 1971-1975, the wind instruments at each level were mounted on a three foot crossarm at the end of a five foot long boom which was oriented so that it pointed slightly south of west. The aspirated radiation shields were counted on 2 1/2 foot long booms which pointed towards the northwest. With the addition of several meteorological sensors in 1977 a second five foot boom was added to each carriage assembly in place of the 2 1/2 foot boom. During the 1977-1978 period all

## WSES-FSAR-UNIT-3

wind sensors at each level were mounted on three foot crossarms at the end of each boom and each of the four motor aspirated radiation shields were mounted on the same booms roughly 2 1/2 feet from the tower.

### b) Wind Sensors

The Waterford 3 Onsite Preoperational Monitoring System was equipped with three wind measurement sensors during the period 1971 through 1975; one at the 30 foot level and two at the 130 foot level. A fourth sensor was added at 30 ft. in 1977.

#### 1) Thirty Foot Wind Sensors

A Weather Measure Corporation W1034 Low Threshold Recording Wind System was installed at the 30 foot level. This system is especially suited for atmospheric diffusion studies and offers a low threshold, high response record of wind direction and windspeed. The system was composed of the following components:

- W103/6L low torque, high frequency tachometer, six-cup anemometer with a threshold response of 0.6 mph (0.26 m/s) and a distance constant of five feet.
- W104 lightweight vane. Response characteristics for the two-wiper vane are a zero degree dead band, 0.4 percent damping ratio, approximately 3.5 ft. distance constant, and a 0.75 mph (0.34 m/s) threshold, and
- W1034/540 degree translator. Signal conditioning, power stabilization, and ranging of the sensor outputs were provided by a 0 to 540 degree translator. Specifications and a photograph of the W1034 wind system are shown on Figures 2.3-30 through 2.3-32.

In 1977, a Gill Bivane was installed at the 30 foot level to record vertical and horizontal wind directional fluctuations. A description of this bivane is included under part (b) below. Only the directional vane portion was installed.

#### 2) One Hundred Thirty Foot Primary Wind Sensors

A Gill Anemometer Bivane was located at the 130 foot level to record wind direction and speed.

The anemometer bivane is a further development of the well known Gill Bivane. While the wind direction sensitivity characteristics of the bivane have been retained, a windspeed sensor of comparable sensitivity was incorporated as an internal part of the basic instrument for the period 1971 through 1975 only. The vane portion alone was used starting in 1977.

The windspeed sensor was a four-bladed polystyrene foam propeller molded in the form of a true helix providing one revolution for each foot of passing wind. Due to the extreme light weight of the propeller, it had almost negligible inertia thus providing excellent dynamic response both accelerating and decelerating. Threshold sensitivity was 0.3-0.5 mph yet the propeller was rugged enough to withstand winds in excess of 60 mph.

### WSES-FSAR-UNIT-3

The propeller drove a miniature dc tachometer generator mounted in the counter-weight section of the vane. The signal was fed through two tiny wires in the vertical shaft to a precision slip ring assembly in the lower section. The signal was then coupled through suitable calibrating and damping circuitry in the power supply translator to the digital data logger. Tachometer life expectancy was in excess of a billion revolutions or three to four years of normal operation.

A synchronous 110 volt, 60 hz external drive motor was supplied with the instrument for calibration of windspeed after installation of the system.

Complete specifications and a photograph of the Gill Anemometer Bivane are shown on Figures 2.3-33 and 2.3-34.

When the reactivation of the meteorological tower took place in February of 1977, a Weather Measure Low Threshold Wind System was installed at the 130 foot level as the primary wind sensor. This sensor is identical to the one discussed above for the 30 ft. wind measurements, except that it has a three-cup anemometer with a distance constant of 7.3 ft.

#### 3) One Hundred Thirty Foot Backup Wind Sensor

A four bladed Weather Measure Corporation W101-P Skyvane 1 Wind Sensor was installed at the 130 foot level as a backup instrument to record windspeed and direction. The starting speed of this instrument is approximately 1 mph (0.45 m/s) with complete tracking beginning at approximately 3 mph (1.35 m/s). The distance constant at a windspeed of 30 mph (13.5 m/s) was 6.2 feet with a time constant of 0.145 second. The accuracy was +/-1 mph below 25 mph and +/- 5 percent above 25 mph. A 540 degree translator was used for signal conditioning. Complete specifications and a photograph of the W101-P Skyvane 1 System are shown on Figures 2.3-35 and 2.3-36.

When the meteorological program was reactivated in February of 1977, the skyvane sensor was deleted from meteorological system.

#### 2.3.3.1.2 Temperature Sensors

Temperature difference between the 30 and 130 foot levels was measured by four Weather Measure Corporation TMT-1 temperature probes. Two probes were housed at each level in stainless steel tubes. A Weather Measure Corporation IS6 Motor Aspirated Radiation Shield provided continuous aspiration of the temperature sensors. This solar radiation shield is constructed of aluminum and painted with white epoxy enamel for maximum reflection of radiant energy.

For the first few years of operation, two of the temperature probes were linked in an electrical bridge to yield direct temperature difference ( $\Delta T$ ) measurements. The other two probes measured temperature directly and were used for backup  $\Delta T$  measurements. When the system was reestablished in February of 1977, two complete, bridged T621-TP20  $\Delta T$  systems were installed and ambient temperature data was extracted electronically at the 30 foot level.

## WSES-FSAR-UNIT-3

→(EC-1837, R301)

The TMT-1 temperature probe consisted of a thermistor composite and a resistance composite of known resistance value. The TMT-1 sensor had an absolute accuracy of  $+0.055^{\circ}\text{F}$  and when bridged satisfied the  $\Delta T$  accuracy requirements of NRC Safety Guide 23 (2/17/72).

→(EC-8688, R303)

The T621-TP20 probe was a three-thermistor composite element. The element provided a large change in resistance in response to a relatively small change in temperature. The probe had an accuracy and interchangeability of  $\pm 0.1^{\circ}\text{C}$  ( $\pm 0.18^{\circ}\text{F}$ ) and when bridged satisfied the  $\Delta T$  requirements for Safety Guide 23.

←(EC-1837, R301; EC-8688, R303)

### 2.3.3.1.3 Data Acquisition System

A Weather Measure M731 Digital Data Logger was originally used to scan, digitize and record the input data. The data logger checked all sensors once every five minutes and recorded the instantaneous data on punched paper tape.

Complete specifications and a photograph of the M731 appear on Figures 2.3-37 and 2.3-38, respectively.

In February 1973 an Analog Data Acquisition System was installed at the site as a backup for the Digital System. The Analog System consisted of two Weather Measure REW-2P-12V Potentiometric Recorders and one Weather Measure REW-12-3 Potentiometric Recorder. The Analog Data Acquisition System continuously recorded windspeed, wind direction and temperature at the 30 and 130 foot levels and differential temperature between the levels.

In February of 1977, when the system was reactivated, two important data acquisition changes were made. First, the paper tape recorder was replaced with a magnetic tape recorder. Second, the scanning rate of the data logger was changed from once every five minutes to once per minute. Additionally, averaging cards were added to the W1034 wind circuitry to yield 60 second average, rather than one minute instantaneous values for the wind speed and direction data measured by these sensors.

These changes allowed the monitored data to provide a better representation of hourly conditions since the more rapid scanning rate of the data logger more closely approaches true integration of all the data. This effect was further enhanced by the averaging cards used with the wind direction and windspeed sensors since averages generated by these circuits were based upon a sampling (scanning) rate of several times per second. Overall equipment accuracies are presented in Table 2.3-138.

### 2.3.3.1.4 Overall System Accuracies

The overall system accuracies associated with the meteorological parameters recorded at the Waterford 3 site are presented in Table 2.3-138. These overall accuracies included the accuracies associated with the instrumentation i.e., sensor probes, signal conditioners, electronic averaging circuitry (as applicable), digital data logger and potentiometric chart recorder (as applicable), and data processing procedures (specifically, chart trace reading errors). The overall accuracy of each one hour average in Table 2.3-138 is equal to the square root of the sum of the squares of the component accuracies described above, divided by the square root of the number of samples used to define the one hour average. It should be noted that a slight decrease in the overall system accuracies of the W103 and W104 wind sensors occurred with the 1977-1978 data because electronic averaging circuits (with their

## WSES-FSAR-UNIT-3

intrinsic accuracies) were retrofitted to these sensors only.

### 2.3.3.1.5 Quality Control and System Maintenance

→(EC-1837, R301)

In order to assure the necessary data recovery of greater than 90 percent as specified by NRC Safety Guide 23 the monitoring system was inspected each workday by an employee of the Louisiana Power & Light Company. Additionally, a more thorough check of all instruments was made at each magnetic tape and strip chart change, and the entire system was checked and calibrated on a regular 90 day schedule by a qualified vendor representative.

←(EC-1837, R301)

### 2.3.3.1.6 Data Processing

The meteorological data acquired at the site was placed on disc file in the Ebasco Services Incorporated computer center. After a quality control check hourly averages were generated from valid instantaneous or averaged data points taken during the hour. During the period 1971-1975 only those hours with a minimum of six instantaneous observations (taken at five minute intervals) of lower level windspeed, wind direction and temperature difference were considered as "valid" hours of data. After 1977, when the meteorological system was upgraded, 60 data points taken once per minute were averaged to form hourly values. Only hours with a minimum of 15 consecutive minutes of temperature difference, and lower level windspeed and direction data were considered "valid" during this period.

One exception to this procedure occurred during several relatively brief periods of data logger malfunction when data were taken at ten minute intervals. Data from these periods were considered valid provided that all six of the observations taken during the hour were present. This procedure was considered acceptable since the observations were evenly distributed throughout the hour and since it was consistent with the practice followed during the 1971-1975 monitoring period of using a minimum of six observations to represent an hour of valid data. These valid hourly values were used to prepare the monthly and annual joint frequency distributions of wind direction and speed by stability class.

Occasionally, a failure in the digital data acquisition system would require reliance upon the backup data acquisition system for short periods of data. These data were subjected to the same rigorous quality control inspection as the digital data and then were digitized to hourly average values which were inserted into the hourly average data base in place of the missing or erroneous data from the data logger. (Data for which no backup was available were replaced by 999 in the database.)

During the 1972-1975 monitoring period, strip chart data were digitized manually by a professional meteorologist. Digitizing of strip chart data during the 1977-1978 monitoring period was performed by Envirodata Corporation of Burlington, Massachusetts using electronic digitizing equipment. The hourly values were returned on computer punch cards for merging with the hourly database.

Less than 10 percent of the data collected during the 1972-1975 monitoring period was acquired by digitizing of strip charts. During the 1977-1978 monitoring period approximately two months (17 percent) of the hourly data were obtained from the analog data acquisition system.

### 2.3.3.1.7 Joint Wind/Stability Data

→(EC-1837, R301)

Tables 2.3-42 through 2.3-132 are monthly average and annual average joint frequency tables (windspeed/wind direction/stability class) for the four years of record July 1972 through June 1975 and February 1977 to February 1978. The tables are based upon wind data collected at the 30 foot level of the Waterford 3 meteorological tower and upon data for the temperature difference between 130 ft. and 30 ft. The temperature difference data were converted to stability class summaries using the procedures outlined in Safety Guide 23. Data recovery percentages for the onsite program on a monthly basis are summarized in Table 2.3-133.

←(EC-1837, R301)

As indicated earlier, onsite meteorological data is available for four full annual cycles, three from July of 1972 through June of 1975 and one from mid-February of 1977 to mid-February of 1978. Sufficient data thus exists to determine the diffusion characteristics of the Waterford 3 site without the need for consideration of offsite data sources or data representativeness.

### 2.3.3.2 Operational Monitoring Program

This section describes the monitoring program that is currently established and will be utilized by Louisiana Power & Light Company during the operation of Waterford 3. The operational monitoring program will be a continuation, for the most part of the monitoring program conducted prior to the operation of Waterford 3. The preoperational monitoring program has been described in detail in Subsection 2.3.3.1.

→(DRN 01-156, R11-A; 02-217, R11-A; EC-1837, R301)

The operational phase Meteorological Monitoring Program is designed to comply with the NRC requirements presented in Regulatory Guide 1.23 proposed Revision 1 (September 1980) concerning meteorological monitoring systems at nuclear power plants and NUREG-0654 Revision 1 (November 1980) concerning emergency response plans and preparedness. The Onsite Meteorological Monitoring Program is comprised of two completely independent monitoring systems, designated as the Primary and Backup Meteorological Monitoring Systems. A generalized plot plan of the Meteorological Monitoring System compound and the site specific location of the primary and backup system compounds are presented on Figures 2.3-46 and 2.3-47 respectively. Each system consists of an equipment shelter and a meteorological tower with associated instrumentation. The Primary and Backup Meteorological Monitoring Systems are also equipped with an independent power supply, lightning protection equipment, electronic signal conditioning and communication cables which link the equipment at the shelters with the Plant Monitoring Computer (PMC). Values of meteorological parameters are simultaneously recorded on Data Loggers located in each of the equipment shelters and by the PMC. The redundancy between these independent monitoring systems as well as the distance separating the two compounds, (1200 ft. approximately 4 times the mean path width of a site specific tornado), is provided to ensure that basic meteorological information will be available to the plant operators during and immediately following any potential accidental airborne radiological release. The Meteorological Monitoring System will provide updated meteorological data to the Plant Monitoring Computer (PMC). The software on the PMC will quality assure and store the data. The PMC software will provide the data to the Control Room, Technical Support Center, Emergency Operations Facility, and the Backup Emergency Operations Facility. In the event of an emergency situation at the Waterford 3 plant, real time 15 minute average meteorological data on the PMC will be used by an atmospheric transport and diffusion model to calculate offsite

←(DRN 01-156, R11-A; 02-217, R11-A; EC-1837, R301)

→(DRN 02-217)

radiological dose estimates. (See the Waterford 3 Emergency Plan for more detailed information).

←(DRN 02-217)

#### 2.3.3.2.1 Objectives

The important objectives of the operational Meteorological Monitoring Program include provision of the following:

- a) Real time data to be used as input for radiological diffusion estimates in the event of an accidental release of radioactive material into the atmosphere;
- b) Data to be combined with previously collected data in order to continually update and archive the onsite meteorological record used for long-term (normal release) radiological diffusion estimates; and
- c) Correlation between atmospheric diffusion conditions and the Environmental Surveillance Program.

#### 2.3.3.2.2 Equipment

The onsite monitoring system consists of the following equipment:

##### a) Meteorological Towers

→(DRN 01-156)

The monitoring system utilizes a 200 ft. (61 m) tower at the primary system compound and a 200 ft. (61 m) tower at the backup system. Both towers are open lattice, guyed and grounded structures equipped with pulley elevator systems for raising and lowering sensors during maintenance, calibration and servicing. Standard boom arms, approximately 8 feet in length (and oriented into the prevailing wind directions are located at 33 ft.(10 m), 199 ft. (61.6 m) on the primary and backup towers. The prevailing wind direction is not readily apparent on the annual wind rose for Waterford 3 (Figure 2.3-26), however it shows equal predominance of SE and NE winds as well as minimal frequency of WSW through WNW winds. Therefore the boom arms are pointed on the east direction from the tower to minimize the frequency of wind blowing through the tower lattice toward the sensors. A summary of the meteorological parameters measured at each compound (primary and backup) is presented in Table 2.3-139.

##### b) Wind Sensors

The monitoring system is equipped with Wind Sensors. The wind speed sensors meet the RG 1.23 performance requirements summarized in Table 2.3-141.

##### Wind Direction

The monitoring system is equipped with Wind Direction Sensors. The wind direction sensors meet the RG 1.23 performance requirements summarized in Table 2.3-141.

←(DRN 01-156)

→(DRN 01-156)

c) Temperature Sensors

Measurements of temperature difference between the 33 and 199 ft. (10 and 61.6 m) levels and of ambient temperature at 33 ft. (10 m) are made within performance requirements specified in Table 2.3-141.

d) Precipitation

Precipitation is measured by a recording rain gauge. The performance of this gauge meets requirements summarized in Table 2.3-141.

e) Data Acquisition System

The acquisition of the meteorological data from the Primary and Backup Meteorological Monitoring Systems is accomplished via a data link to the Plant Monitoring Computer System (PMC). The program averages data from the Environmental Monitoring System. The incoming data undergoes quality assurance checks for validity and are flagged if obvious errors are detected. The flag which is assigned to each data point indicates whether the data are valid, invalid, or suspicious. In the event of an accidental release of high levels of radiation at the plant, the quality assured 15 minute averages of meteorological parameters which are used to calculate offsite radiological dose estimates in compliance with NUREG-0654. (See the Waterford 3 Emergency Plan for more detailed information.)

←(DRN 01-156)

f) Overall System Accuracies

The overall system accuracies associated with the meteorological parameters at the Waterford 3 site are compared to NRC requirements and are presented in Table 2.3-141. These overall accuracies include the accuracies associated with the instrumentation

## WSES-FSAR-UNIT-3

and electronic signal conditioning. The overall accuracy is equal to the root of the sum of the squares of the individual errors associated with the components described above.

→ (DRN 03-2055, R14)

### 2.3.4 SHORT-TERM (ACCIDENT) DIFFUSION ESTIMATES

#### 2.3.4.1 Objective

Five years of onsite meteorological data from the WSES facility, 1997 through 2001, was used to evaluate the accident meteorology for the Waterford area. Accidents are postulated to characterize upper limit concentrations and dosages that might occur in the event of an inadvertent release. Among the basic inputs to the accident analysis are the meteorological conditions that determine the dilution capacity of the atmosphere.

#### 2.3.4.2 Calculations – Offsite Diffusion Estimates

Dilution factors (X/Q's) for ground level releases were determined using the methodology presented in Regulatory Guide 1.145 (Reference 25). The X/Q values applicable for accident releases were calculated at the exclusion area boundary (EAB) and at the outer boundary of the low population zone (LPZ) using the joint frequency distributions of wind speed and wind direction by atmospheric stability class. The EAB and LPZ distances are 914 meters and 3,200 meters, respectively. Winds were determined at the 10-meter level and the stability class was based on the vertical temperature gradient between 10 meters and 60 meters.

Atmospheric dispersion values (X/Q values) as functions of direction for various time periods at the exclusion area boundary (EAB) and the outer boundary of the low population zone (LPZ), were determined by the use of the computer code PAVAN. The X/Q calculations are based on the theory that material released to the atmosphere will be normally distributed (Gaussian) about the plume centerline. A straight-line trajectory is assumed between the point of release and all distances for which X/Q values are calculated (References 25, 26). Using joint frequency distributions of wind direction and wind speed by atmospheric stability, the PAVAN code provides the X/Q values as functions of direction for various time periods at the EAB and LPZ.

The PAVAN code manual (Reference 26) divides release configurations into two modes, ground release and stack release. A ground release includes all release points that are effectively lower than two and one-half times the height of the adjacent solid structures. The identified release point to be evaluated at Waterford 3 is effectively lower than two and one-half times the height of the reactor building (61.0 meters). Therefore, the Waterford 3 release mode is classified as a ground release.

Within the ground level release class, two sets of meteorological conditions are treated differently. During neutral (D) or stable (E, F, or G) atmospheric stability conditions when the wind speed at the 10-meter level is less than 6 meters per second (m/s), horizontal plume meander is considered. X/Q values are determined through the selective use of the following set of equations for ground-level relative concentrations at the plume centerline.

← (DRN 03-2055, R14)

→ (DRN 03-2055, R14)

$$\chi/Q = \frac{1}{u_{10}(\pi\sigma_y\sigma_z + A/2)} \quad \text{Equation 1}$$

$$\chi/Q = \frac{1}{u_{10}(3\pi\sigma_y\sigma_z)} \quad \text{Equation 2}$$

$$\chi/Q = \frac{1}{u_{10}\pi\Sigma_y\sigma_z} \quad \text{Equation 3}$$

Where:

- $\chi/Q$  is relative concentration, in sec/m<sup>3</sup>
- $U_{10}$  is average wind speed at 10 meters above plant grade, in m/sec
- $\sigma_y$  is lateral plume spread, in meters, a function of atmospheric stability and distance
- $\sigma_z$  is vertical plume spread, in meters, a function of atmospheric stability and distance
- $\Sigma_y$  is lateral plume spread with meander and building wake effects, in meters, a function of atmospheric stability, wind speed, and distance
- $A$  is the smallest vertical-plane cross-sectional area of the reactor building, in meters<sup>2</sup>

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

During all other meteorological conditions, unstable (A, B, or C) atmospheric stability and/or 10-meter level wind speeds of 6 m/s or more, plume meander is not considered. The higher value calculated from equation 1 or 2 is used as the appropriate  $\chi/Q$  value.

From these results, PAVAN constructs a cumulative probability distribution of  $\chi/Q$  values for each of the 16 directional sectors. This distribution is the probability of the given  $\chi/Q$  values being exceeded in that sector during the total time. The sector  $\chi/Q$  values and the maximum sector  $\chi/Q$  value is determined by effectively “plotting” the  $\chi/Q$  versus probability of being exceeded and selecting the  $\chi/Q$  value that is exceeded 0.5% of the total time. This same method is used to determine the 5% overall site  $\chi/Q$  value.

Table 2.3-136 presents the 0.5% maximum and five percent atmospheric dispersion coefficients calculated for the plant exclusion area boundary and the outer boundary of the low population zone.

#### 2.3.4.3 Calculations – Onsite Diffusion Estimates

The atmospheric dispersion estimates for the Waterford 3 control room were calculated based on the guidance provided in draft Regulatory Guide 1111 (Reference 28). The control room  $\chi/Q$ s were calculated for all probable release points (e.g., east and west side ADVs and main steam safety valves (MSSVs) to both control room emergency air intakes using the ARCON96 computer code (Reference 27) using the hourly meteorological data for the years 1997 through 2001. The approximate locations of the assumed release points and approximate locations of the control room intakes are shown on Figure 2.3-48. In all cases, the intervening structures between the release point and the control room intake were ignored for calculational simplicity, thereby underestimating the true distance to the control room intakes. Atmospheric stability was determined by the vertical temperature difference ( $\Delta T$ ) measured over the difference in measurement height and the stability classes given in Regulatory Guide 1.23 (Ref. 29). All releases were assumed to be point ground-level releases. For each of the source-to-receptor combinations, the  $\chi/Q$  value that is not exceeded more than 5.0 percent of the total hours in the meteorological data set (e.g., 95-percentile  $\chi/Q$ ) was determined. The  $\chi/Q$  values for source-receptor pairs are shown in Table 2.3-136. Historical graphically frequency distributions are presented in Figures 2.3-41 through 2.3-45.

← (DRN 03-2055, R14)

## WSES-FSAR-UNIT-3

### 2.3.5 LONG-TERM (ROUTINE) DIFFUSION ESTIMATES

#### 2.3.5.1 Objective

Annual joint frequencies of wind direction, windspeed and stability class were determined from hourly averages of temperature difference, wind speed and wind direction at the 30 ft. level of the onsite tower. These Parameters were used as input to a computerized Gaussian diffusion model which calculates annual average X/Q values for distances out to 80.5 kilometers from Waterford 3. The basic equation used in this diffusion model is:

→(DRN 06-905, R15)

$$X/Q = \frac{2.032}{X} \sum_{ij} \left\{ F_{ij} \left[ \bar{u}_i \sum_{zj} (x) \right]^{-1} \right\}$$

←(DRN 06-905, R15)

where:

$X/Q$  = average annual dilution factor, sec/m<sup>3</sup>

$x$  = downwind distance, m

$F_{ij}$  = joint frequency of i<sup>th</sup> speed class j<sup>th</sup>, stability class and given wind direction

$\bar{u}_i$  = mid-point of windspeed class for 30 ft. wind level, m/sec

$\sum_{zj} (x)$  = vertical dispersion coefficient with a volumetric correction for a release within the building cavity, at a distance x, for the j<sup>th</sup> stability class.  
This correction is of the form:

$$\sum_{zj} (x) = \left( \sigma_{zj}^2 + cD^2/\pi \right)^{1/2} \leq \sqrt{3} \sigma_{zj}$$

where:

$D$  = maximum adjacent building height (61 m)

$\sigma_{zj}$  = vertical dispersion coefficient (m) for the j<sup>th</sup> stability class and downwind distance x.

$c$  = building wake constant (assumed to be 0.5).

The X/Q values calculated using the model described above were adjusted to reflect the results of an NRC analysis of the straight line trajectory model (Regulatory Guide 1.111, March, 1976). This adjustment is accomplished by multiplying the X/Q values by the following correction factors which-apply in areas with terrain features similar to those at the Waterford 3 site.

Distance (dis)	<u>Correction</u>
dis ≤ 1 mile	4.0
1 mile < dis ≤ 2 miles	2.0
2 miles < dis ≤ 3 miles	1.5
3 miles < dis ≤ 10 miles	1.25
dis >10 miles	1.0

→(DRN 06-869, R15)

←(DRN 06-869, R15)

2.3.5.2 Calculations

Table 2.3-135 presents the annual average X/Q values at the site exclusion area boundary for each of the 16 cardinal directions. Table 2.3-134 presents annual average X/Q values for the sixteen directions out to a distance of 80.5 kilometers (50 miles) from the plant.

## SECTION 2.3: REFERENCES

- 1) Trewartha, G T, An Introduction to Climate, McGraw-Hill, New York, 1954.
- 2) Local Climatological Data, Annual Summary with Comparative Data for New Orleans, Louisiana, U.S. Dept. of Commerce, National Oceanic and Atmospheric Administration, Environmental Data Service, 1972.
- 3) Summary of Hourly Observations for New Orleans, Louisiana, Moisant International Airport 1951 - 1960, Climatology of the United States No. 82-16, 1962.
- 4) Climates of the States for Louisiana, U.S. Dept. of Commerce, Weather Bureau, Climatology of the United States No. 60-16, December 1959.
- 5) Thom, H.C.S., New Distribution of Extreme Winds in the United States, Proceedings of the ASCE, Journal of the Structural Division, July 1968.
- 6) Huss, P.O., Relation Between Gusts and Average Wind Speed, Report 140, David Guggenheim Airship Institute, Cleveland, Ohio, 1946.
- 7) Tropical Cyclones of the North Atlantic Ocean, Weather Bureau Technical Paper No. 55, 1965.
- 8) Severe Local Storm Occurrences, ESSA, U.S. Dept. of Commerce Technical Memorandum WBTM FCST 12, 1969.
- 9) Thom, H.C.S., Tornado Probabilities, Monthly Weather Review, U.S. Weather Bureau, Washington, D.C., October-December 1963, pp 730-736.
- 10) Holzworth, George C., "Mixing Heights, Wind Speeds, and Potential for Urban Air Pollution Throughout the Contiguous United States", AP-101, Division of Meteorology, EPA, Office of Air Programs, Research Triangle Park, North Carolina, January 1972.
- 11) Korshover, Julius, Climatology of Stagnating Anticyclones East of the Rocky Mountains, 1936 - 1965, ESSA, U.S. Dept. of Commerce, U.S. Dept. of HEW, National Center for Air Pollution Control, Cincinnati, Ohio, 1967.
- 12) Bennett, Ivan, Glaze - Its Meteorology and Climatology, Geographical Distribution, and Economic Effects, U.S. Army Environmental Protection Research Division Technical Report EP-105, March 1959.
- 13) Maximum Recorded United States Point Rainfall for 5 minutes to 24 hours at 296 First-Order Stations, Weather Bureau Technical Paper No. 2, U.S. Dept. of Commerce, Weather Bureau, Revised 1963.
- 14) Summary of Meteorological Observations for Naval Air Station, New Orleans, Louisiana, 1949-1965.

## WSES-FSAR-UNIT-3

### SECTION 2.3: REFERENCES (Cont'd)

- 15) Sagendorf, J. F., Nuclear Power Station Evaluation Program, NOAA, Air Resources Laboratories.
- 16) Personal Communication with a member of the Site Analysis Branch, U.S. Atomic Energy Commission, May 29, 1973.
- 17) Electrical Transmission and Distribution Reference Books, Westinghouse, 1950, p. 557.
- 18) Neuman, C.J. al, 1978: Tropical Cyclones of the North Atlantic Ocean, 1871-1977, U.S. Department of Commerce, NOAA, National Climatic Center, Asheville, North Carolina.
- 19) Marshall, J.L., 1973: Lightning Protection, John Wiley & Sons Inc, New York.
- 20) U.S. Department of Commerce, NOAA, National Severe Storms Forecast Center, Listing of Reported Tornadoes within 50 miles of the Waterford Site for the period 1950-1977.
- 21) Fujita, T.T., 1973: Memo to National Weather Service Offices re: FPP Classification of Tornado.
- 22) Personal communication with R.F. Hasling, National Oceanic and Atmospheric Administration, National Weather Service, New Orleans, Louisiana; December 12, 1978.
- 23) Climatological Record, New Orleans, La, supplied by the National Climatic Center, Asheville, North Carolina.
- 24) U.S. Department of Commerce, Weather Bureau, Local Climatological Data, New Orleans, Louisiana (Moisant Field); December 1963.

→(DRN 03-2055, R14)

- 25) Regulatory Guide 1.145, "Atmospheric Dispersion Models for Potential Accident Consequence Assessments at Nuclear Power Plants", August 1979.
- 26) NUREG/CR-2858, PNL-4413, "PAVAN: An Atmospheric Dispersion Program for Evaluating Design Basis Accidental Releases of Radioactive Materials from Nuclear Power Stations", November 1982.
- 27) ARCON96, NUREG/CR-6331, Revision 1, May 1997, "Atmospheric Relative Concentrations in Building Wakes".
- 28) United States Nuclear Regulatory Commission, Draft Regulatory Guide DG-1111, "Atmospheric Relative Concentrations for Control Room Radiological Habitability Assessments", December 2001.

→(EC-1837, R301)

- 29) USNRC, "Onsite Meteorological Programs", Safety Guide 23, February 1972.

←(DRN 03-2055, R14)

- 30) USNRC, "Proposed Revision 1 to Regulatory Guide 1.23 Meteorological Programs in Support of Nuclear Power Plants," September 1980.

←(EC-1837, R301)

WSES-FSR-UNIT-3

TABLE 2.3-1

RECURRENCE INTERVAL AND WIND SPEED (FASTEST MILE)  
AT NEW ORLEAS, LOUSIANA (at 30 ft.)

<u>Recurrence Interval (yrs)</u>	<u>Wind Speed (mph)</u>
2	49
10	67
25	70
50	90
100	100

WSES-FSAR-UNIT-3

TABLE 2.3-2

FASTEST MILE SPEED AND WIND DIRECTION  
NEW ORLEANS, LOUISIANA

<u>Month</u>	<u>Direction</u>	<u>Speed (mph)</u>
January	NE	41
February	E	44
March	NW	43
April	SE	35
May	SE	43
June	NE	40
July	NW	37
August	SE	41
September	SE	98
October	SE	31
November	NW	28
December	SW	31

TABLE 2.3-2(a)

Revision 11-A (02/02)

ULTIMATE HEAT SINK  
METEOROLOGICAL DESIGN PARAMETERS

<u>PARAMETER</u>	<u>TEMPERATURE (F)</u>	<u>PERIOD OF RECORD/LOCATION</u>
Maximum one hour dry bulb	102	1870-1972/New Orleans City office
Maximum 24 hour dry bulb/associated wet bulb	92/76	1870-1972/New Orleans City office
Maximum one hour wet bulb	83	1946-1976/New Orleans Inter- national Airport (Moisant Field)
Maximum 3 day dry bulb	89	1959-1964/New Orleans Inter- national Airport (Moisant Field) Statistically extra- polated to a 30 year return period.
Maximum 7 day dry bulb	86	1959-1964/New Orleans Inter- national Airport (Moisant Field) Statistically extra- polated to a 30 year return period
→ (DRN 01-464) Maximum one hour dry bulb/associated wet bulb	102/78	1870-1972/New Orleans City office
← (DRN 01-464) Maximum one hour wet bulb/associated dry bulb	83/98	1946-1977/New Orleans Inter- national Airport (Moisant field)

## WSES-FSAR-UNIT-3

TABLE 2.3-3

NEW ORLEANS LA.January  
7440 Obs.MOISANT INTERNATIONAL AIRPORTPERCENTAGE FREQUENCIES  
OF WIND DIRECTION AND SPEED

(1951-1960)

HOURLY OBSERVATIONS OF WIND SPEED											
DIRECTION	(In Miles Per Hour)										
	0-3	4-7	8-12	13-18	19-24	25-31	32-38	39-46	46+	Total	Av Speed
N	+	1	2	3	1	+	+	+		7	13.9
NNE	+	1	2	3	1	+				6	12.8
NE	+	2	3	3	+	+				8	11.0
EKE	+	2	4	2	+	+	+			8	9.9
E	+	2	3	1	+					6	9.1
ESE	+	1	1	1						3	8.4
SE	+	2	2	+	+					5	7.8
SSE	+	3	3	1	+	+		+		9	9.9
S	+	3	4	2	+	+				10	9.8
SSW	+	1	3	2	1	+				7	12.0
SW	+	1	1	+	+	+				3	8.6
WSW	+	1	1	+	+	+	+			2	10.7
W	+	1	1	1	+	+	+			2	11.8
WMW	+	1	1	1	+	+	+			3	12.5
MW	+	1	1	1	1	+	+			5	13.9
NNW	+	1	2	2	2	1	+	+		8	14.7
CALM	8									8	
TOTAL	11	22	34	23	7	2	+	+		100	10.3

+ indicates frequency greater than 0 but less than 0.5

## WSES-FSAR-UNIT-3

TABLE 2.3-4

NEW ORLEANS, LA.February  
6792 Obs.MOISANT INTERNATIONAL AIRPORTPERCENTAGE FREQUENCIES  
OF WIND DIRECTION AND SPEED

(1951-1960)

DIRECTION	HOURLY OBSERVATIONS OF WIND SPEED (In Miles Per Hour)									Total	Av Speed
	0-3	4-7	8-12	13-18	19-24	25-31	32-38	39-46	46+		
N	+	1	2	3	2	+				7	14.1
NNE	+	1	2	3	1	+				7	12.9
NE	+	2	3	3	1	+		+		8	11.5
ENE	+	2	3	2	+	+	+			7	10.7
E	+	2	2	1	+	+				6	9.7
ESE	+	1	2	1	+	+				4	11.1
SE	+	2	2	1	+	+				5	9.5
SSE	+	2	3	2	+					7	10.3
S	+	3	4	3	1	+				10	11.0
SSW	+	1	3	2	1	+				8	12.3
SW	+	1	1	1	+	+				5	10.8
WSW	+	1	1	+	+	+				2	9.9
W	+	1	1	1	+		+			3	11.0
WNW	+	1	1	1	1	+				4	12.3
NW	+	+	1	1	1	+				4	14.4
NNW	+			3	1	+				7	14.8
CALM	7								7		
TOTAL	9	20	33	28	9	1	+	+		100	10.7

+indicates frequency greater than 0 but less than 0.5

## WSES-FSAR-UNIT-3

TABLE 2.3-5

NEW ORLEANS, LA.March  
7440 Obs.MOISANT INTERNATIONAL AIRPORTPERCENTAGE FREQUENCIES  
OF WIND DIRECTION AND SPEED

(1951-1960)

DIRECTION	HOURLY OBSERVATIONS OF WIND SPEED (In Miles Per Hour)									Total	Av Speed
	0-3	4-7	8-12	13-18	19-24	25-31	32-38	39-46	46+		
N	+	1	2	2	1	+	+			6	14.0
NNE	+	1	2	2	1	+	+			6	13.0
NE	+	1	3	3	+	+				7	11.6
ENE	+	2	3	3	+					7	10.9
E	+	2	2	1	+	+				5	9.2
ESE	+	1	2	1	+	+				4	10.1
SE	+	2	2	1	+					5	9.3
SSE	+	3	3	2	1	+				9	10.6
S	+	3	4	4	1	+	+			12	11.8
SSW	+	1	3	3	1	+	+			9	12.2
SW	+	1	2	1	+	+				4	10.5
WSW	+	1	1	1	+					3	10.5
W	+	1	1	1	+	+				3	10.8
WNW	+	1	1	1	+	+				4	12.1
NW	+	1	1	2	1	+	+			5	14.0
NNW	+	1	1	2	1	+	+			6	14.4
CALM	7									7	
TOTAL	9	21	32	28	8	2	+			100	10.9

+indicates frequency greater than 0 but less than 0.5

## WSES-FSAR-UNIT-3

TABLE 2.3-6

NEW ORLEANS, LA.April  
7200 Obs.MOISANT INTERNATIONAL AIRPORTPERCENTAGE FREQUENCIES  
OF WIND DIRECTION AND SPEED

(1951-1960)

DIRECTION	HOURLY OBSERVATIONS OF WIND SPEED (In Miles Per Hour)									Total	Av Speed
	0-3	4-7	8-12	13-18	19-24	25-31	32-38	39-46	46+		
N	+	1	2	1	1	+				5	12.7
NNE	+	1	2	2	+	+				4	12.6
NE	+	1	2	1	+	+				5	10.2
ENE	+	2	2	2	+					6	9.9
E	+	2	2	1	+					5	9.1
ESE	+	2	2	1	+	+				6	9.4
SE	+	3	4	2	+	+				9	9.2
SSE	+	3	6	3	1	+	+			13	11.2
S	+	3	5	4	1	+	+			13	11.9
SWW	+	1	3	2	+	+				6	11.0
SW	+	1	1	1	+					4	9.6
WSW	+	1	1	1	+					2	9.9
W	+	1	1	1	+	+				2	10.3
WNW	+	1	1	1	+	+	+	+		3	11.6
NW	+	1	1	1	+	+	+			4	12.6
NNW	+	1	1	2	1	+				5	13.5
CALM	9									9	
TOTAL	11	23	35	24	6	1	+	+		100	9.7

+Indicates frequency greater than 0 but less than 0.5

## WSES-FSAR-UNIT-3

TABLE 2.3-7

NEW ORLEANS, LA.May  
7440 Obs.MOISANT INTERNATIONAL AIRPORTPERCENTAGE FREQUENCIES  
OF WIND DIRECTION AND SPEED

(1951-1960)

DIRECTION	HOURLY OBSERVATIONS OF WIND SPEED (In Miles Per Hour)									Total	Av Speed
	0-3	4-7	8-12	13-18	19-24	25-31	32-38	39-46	46+		
N	+	1	2	1	+	+				5	11.4
NNE	+	1	2	1	+	+				4	11.2
NE	+	1	2	1	+	+				5	11.1
ENE	+	1	2	1	+	+				5	9.8
E	+	2	2	1	+					5	8.8
ESE	+	2	2	1	+					5	8.8
SE	+	3	3	1	+	+				7	9.0
SSE	+	3	5	3	1	+				13	10.6
S	+	4	5	3	1	+				13	10.7
SSW	+	3	3	1	+					8	9.0
SW	+	2	2	+	+					5	7.8
WSW	+	1	1	+						2	7.5
W	+	1	1	+	+	+				3	8.1
WNW	+	1	1	+	+	+				2	8.4
NW	+	1	1	1	+			+		3	9.8
NW	+	1	2	1	+	+	+			5	11.6
CALM	11									11	
TOTAL	14	28	35	19	3	+	+	+		100	8.8

+indicates frequency greater than 0 but less than 0.5

## WSES-FSAR-UNIT-3

TABLE 2.3-8

NEW ORLEANS, LA.June  
7200 Obs.MOISANT INTERNATIONAL AIRPORTPERCENTAGE FREQUENCIES  
OF WIND DIRECTION AND SPEED

(1951-1960)

DIRECTION	HOURLY OBSERVATIONS OF WIND SPEED (In Miles Per Hour)									Total	Av Speed
	0-3	4-7	8-12	13-18	19-24	25-31	32-38	39-46	46+		
N	+	1	2	+	+					4	8.8
NNE	+	1	2	1	+					3	9.4
NE	+	1	2	1		+				4	9.6
ENE	+	2	2	1	+					5	9.5
E	+	2	1	+	+					4	7.9
ESE	+	2	1	1	+					4	8.5
SE	+	3	2	1	+					6	7.7
SSE	+	4	4	2	+	+	+			10	9.0
S	1	4	5	2	+	+	+			12	8.8
SSW	+	5	5	1	+					12	8.4
SW	+	3	3	1	+					7	7.9
WSW	+	2	1	+	+					4	8.1
W	+	2	1	+	+					3	7.7
WUW	+	1	1	+	+					3	8.2
NW	+	1	1	+	+	+				3	8.4
NNW	+	1	2	+	+	+				3	9.1
CALM	13									13	
TOTAL	17	34	35	12	1	+	+			100	7.1

+indicates frequency greater than 0 but less than 0.5

## WSES-FSAR-UNIT-3

TABLE 2.3-9

NEW ORLEANS, LA.July  
7440 Obs.MOISANT INTERNATIONAL AIRPORTPERCENTAGE FREQUENCIES  
OF WIND DIRECTION AND SPEED

(1951-1960)

DIRECTION	HOURLY OBSERVATIONS OF WIND SPEED (In Miles Per Hour)									Total	Av Speed
	0-3	4-7	8-12	13-18	19-24	25-31	32-38	39-46	46+		
N	+	1	2	+	+					3	8.5
NNE	+	1	1	1	+	+	+			3	9.2
NE	+	2	2	1	+	+				5	8.6
ENE	+	2	2	1	+	+		+		5	8.7
E	+	2	2	1	+	+	+			5	8.6
ESE	+	2	1	+	+	+				4	7.9
SE	+	2	2	+	+					5	7.9
SSE	+	3	2	1	+					6	8.2
S	1	5	3	1	+	+				10	7.5
SSW	+	4	4	1	+					9	7.9
SW	1	3	3	1	+	+				7	7.4
WSW	+	2	2	+	+					5	7.7
W	1	3	1	+	+					5	7.0
WNW	1	2	2	1	+					5	7.8
NW	+	2	1	+		+				4	7.9
NNW	+	1	2	1	+					4	9.2
CALM	16									16	
TOTAL	23	37	31	9	1	+	+	+		100	6.7

+indicates frequency greater than 0 but less than 0.5

## WSES-FSAR-UNIT-3

TABLE 2.3-10

NEW ORLEANS, LA.August  
7440 Obs.MOISANT INTERNATIONAL AIRPORTPERCENTAGE FREQUENCIES  
OF WIND DIRECTION AND SPEED

(1951-1960)

DIRECTION	HOURLY OBSERVATIONS OF WIND SPEED (In Miles Per Hour)									Total	Av Speed
	0-3	4-7	8-12	13-18	19-24	25-31	32-38	39-46	46+		
N	+	1	2	1	+	+		+		4	8.8
NNE	+	1	2	1	+					4	9.6
NE	+	2	3	1	+					6	9.1
ENE	+	3	3	1	+	+				7	9.1
E	+	3	2	1	+					6	8.2
ESE	+	2	1	+	+					3	7.2
SE	+	2	1	+						4	7.0
SSE	+	3	2	+	+					6	7.9
S	+	4	2	1	+	+				7	7.7
SSW	+	5	3	+	+					8	7.4
SW	+	4	2	+	+					6	7.0
WSW	+	2	1	+	+					4	7.3
W	1	2	1	+	+					4	6.9
WNW	+	1	1	+	+	+				3	7.8
NW	+	2	1	1						4	7.8
NNW	+	1	2	1	+	+				4	9.7
CALM	18									18	
TOTAL	24	37	30	9	1	+		+		100	6.2

+indicates frequency greater than 0 but less than 0.5

## WSES-FSAR-UNIT-3

TABLE 2.3-11

NEW ORLEANS, LA.September  
7200 Obs.MOISANT INTERNATIONAL AIRPORTPERCENTAGE FREQUENCIES  
OF WIND DIRECTION AND SPEED

(1951-1960)

DIRECTION	HOURLY OBSERVATIONS OF WIND SPEED									Total	Av Speed
	(In Miles Per Hour)										
	0-3	4-7	8-12	13-18	19-24	25-31	32-38	39-46	46+		
N	+	1	2	2	+	+	+			6	11.2
NNE	+	1	3	2	1	+				7	11.7
NE	+	3	5	4	1	+	+	+		13	10.7
ENE	+	4	5	5	1	+	+	+	+	16	11.4
E	+	3	3	2	+	+				8	9.6
ESE	+	2	1	+		+				4	7.6
SE	+	2	1	+						5	7.1
SSE	+	2	2	1	+					5	8.4
S	+	2	2	+	+					5	7.8
SSW	+	1	1	+						3	7.3
SW	+	1	1	+		+				2	6.9
WSW	+	1	+	+						1	6.8
W	+	1	+	+						1	6.7
WNW	+	1	1	+	+					2	6.4
NW	+	1	1	+	+			+		2	8.0
NNW	+	1	1	1	+	+				4	10.6
CALM	17									17	
TOTAL	22	28	29	17	3	1	+	+	+	100	7.6

+indicates frequency greater than 0 but less than 0.5

## WSES-FSAR-UNIT-3

TABLE 2.3-12

NEW ORLEANS, LA.October  
7440 Obs.MOISANT INTERNATIONAL AIRPORTPERCENTAGE FREQUENCIES  
OF WIND DIRECTION AND SPEED

(1951-1960)

DIRECTION	HOURLY OBSERVATIONS OF WIND SPEED (In Miles Per Hour)									Total	Av Speed
	0-3	4-7	8-12	13-18	19-24	25-31	32-38	39-46	46+		
N	1	1	2	3	1	+	+			8	12.3
NNE	+	1	3	3	1	+	+			9	12.2
NE	+	2	5	3	1	+				12	11.0
ENE	1	3	5	3	+	+				11	10.1
E	+	3	2	1	+					7	8.9
ESE	+	2	2	+	+					4	8.0
SE	+	2	2	+						4	7.5
SSE	+	2	2	1	+					4	8.5
S	+	2	1	+	+	+				4	7.6
SSW	+	1	1	+	+					2	8.3
SW	+	1	+	+	+					1	7.1
WSW	+	1	+	+	+					1	7.9
W	+	1	1	+	+					2	7.2
WNW	+	1	1	+	+	+				3	9.3
NW	+	1	1	1	+					4	10.1
NNW	+	1	2	2	1	+				7	12.1
CALM	17									17	
TOTAL	22	25	30	19	4	1	+			100	8.2

+indicates frequency greater than 0 but less 0.5

## WSES-FSAR-UNIT-3

TABLE 2.3-13

NEW ORLEANS, LA.November  
7200 Obs.MOISANT INTERNATIONAL AIRPORTPERCENTAGE FREQUENCIES  
OF WIND DIRECTION AND SPEED

(1951-1960)

DIRECTION	HOURLY OBSERVATIONS OF WIND SPEED (In Miles Per Hour)									Total	Av Speed
	0-3	4-7	8-12	13-18	19-24	25-31	32-38	39-46	46+		
N	+	1	2	3	2	+	+			9	13.9
NNE	+	1	2	3	1	+				8	12.6
NE	1	2	3	3	1					10	10.6
ENE	+	3	4	2	+	+				10	10.2
E	+	2	3	1	+					7	9.1
ESE	+	1	2	1	+					4	8.6
SE	+	2	2	1	+					5	8.7
SSE	+	2	3	2	+	+				8	10.6
S	+	1	3	2	+	+				6	10.4
SSW	+	1	2	+	+	+				4	9.0
SW	+	1	1	+	+	+				2	9.0
WSW	+	1	+	+	+	+				1	8.4
W	+	1	1	+	+					2	8.2
WMW	+	1	1	1	+	+	+			3	9.6
NW	+	1	1	1	1	+	+			5	12.8
NNW	+	1	2	2	1	1	+			7	14.2
CALM	11									11	
TOTAL	15	23	31	23	7	2	+			100	9.5

+indicates frequency greater than 0 but less than 0.5

## WSES-FSAR-UNIT-3

TABLE 2.3-14

NEW ORLEANS, LA.December  
7440 Obs.MOISANT INTERNATIONAL AIRPORTPERCENTAGE FREQUENCIES  
OF WIND DIRECTION AND SPEED

(1951-1960)

DIRECTION	HOURLY OBSERVATIONS OF WIND SPEED (In Miles Per Hour)									Total	Av Speed
	0-3	4-7	8-12	13-18	19-24	25-31	32-38	39-46	46+		
N	+	1	2	2	1	+	+			6	13.5
NNE	+	1	3	3	1	+				8	12.7
NE	+	2	3	2	+					8	9.8
ENE	+	2	3	2	+					8	9.9
E	+	3	3	1	+					7	8.7
ESE	1	1	2	1	+					5	8.8
SE	+	2	2	1	+					4	8.3
SSE	+	3	2	1	+	+				7	8.8
S	+	2	3	2	+	+				8	10.5
SSW	+	1	2	1	+	+	+			5	11.1
SW	+	1	1	+	+	+				3	9.3
WSW	+	1	1	+	+	+				2	10.0
W	+	1	1	+	+	+	+			3	9.5
WNW	+	1	1	1	+	+				3	11.5
NW	+	1	1	2	1	+	+			5	13.0
NNW	+	1	2	3	1	+	+			7	13.9
CALM	10									10	
TOTAL	14	23	33	22	6	1	+			100	9.3

+indicates frequency greater than 0 but less than 0.5

## WSES-FSAR-UNIT-3

TABLE 2.3-15

NEW ORLEANS, LA.Annual  
87,672 Obs.MOISANT INTERNATIONAL AIRPORTPERCENTAGE FREQUENCIES  
OF WIND DIRECTION AND SPEED

(1951-1960)

DIRECTION	HOURLY OBSERVATIONS OF WIND SPEED (In Miles Per Hour)									Total	Av Speed
	0-3	4-7	8-12	13-18	19-24	25-31	32-38	39-46	46+		
N	+	1	2	2	1	+	+	+		6	12.4
NNE	+	1	2	2	1	+	+			6	12.0
HE	+	2	3	2	+	+	+	+		8	10.5
ENF	+	2	3	2	+	+	+	+	+	8	10.2
E	+	2	2	1	+	+	+			6	8.9
ESE	+	2	1	1	+	+				4	8.0
SE	+	2	2	1	+	+				5	8.4
SSE	+	3	3	2	+	+	+	+		8	9.8
S	+	3	3	2	+	+	+			9	9.9
SSW	+	2	3	1	+	+	+			7	9.8
SW	+	2	1	1	+	+				4	8.4
WSW	+	1	1	+	+	+	+			2	8.6
W	+	1	1	+	+	+	+			3	8.6
WNW	+	1	1	1	+	+	+	+		3	8.9
NW	+	1	1	1	+	+	+	+		4	11.4
NNW	+		2	2	1	+	+	+		6	12.8
CALM	12									12	
TOTAL	16	27	32	19	5	1	+	+	+	100	9.0

+indicates frequency greater than 0 but less than 0.5

## WSES-FSAR-UNIT-3

TABLE 2.3-15A

NEW ORLEANS, LA.Annual  
11,688 Obs.MOISANT INTERNATIONAL AIRPORTPERCENTAGE FREQUENCIES  
OF WIND DIRECTION AND SPEED(July 1972-June 1975  
and Feb. 1977- Feb.1978)

DIRECTION	HOURLY OBSERVATIONS OF WIND SPEED							Total
	(In Miles Per Hour)							
	0-3	4-7	8-12	13-18	19-24	25-32	>32	
N	0.8	2.7	3.6	2.4	0.2	0.0	0.0	9.6
NNE	0.3	2.1	2.6	1.0	0.0	0.0	0.0	6.1
NE	0.4	1.7	2.3	1.0	0.0	0.0	0.0	5.4
NNE	0.6	1.8	2.3	1.0	0.0	0.0	0.0	5.7
E	0.8	2.0	2.2	1.0	0.1	0.0	0.0	6.0
ESE	0.5	2.1	2.0	1.0	0.1	0.0	0.0	5.7
SE	0.3	2.0	2.5	1.5	0.2	0.0	0.0	6.5
SSE	0.1	1.6	3.1	1.7	0.3	0.1	0.0	6.9
S	0.3	2.6	4.3	3.0	0.5	0.1	0.0	10.8
SSW	0.4	2.3	1.6	0.7	0.1	0.0	0.0	5.1
SW	0.4	1.6	1.1	0.5	0.0	0.0	0.0	3.6
WS	0.5	1.4	0.8	0.5	0.0	0.0	0.0	3.2
W	0.9	1.7	0.9	0.6	0.1	0.0	0.0	4.2
WNW	0.5	1.1	0.9	0.5	0.0	0.0	0.0	2.9
NW	0.4	1.0	1.0	0.8	0.0	0.0	0.0	3.2
NNW	0.5	1.3	1.2	1.3	0.1	0.0	0.0	4.4
CALM	10.5	0.0	0.0	0.0	0.0	0.0	0.0	10.5
TOTAL	17.9	29.1	32.3	18.5	1.8	0.4	0.0	100.0

(a) Subject to computer round-off

## WSES-FSAR-UNIT-3

TABLE 2.3-16

[WIND ROSE DATA FOR JANUARY] 1973-1975 AND 1978  
AT WATERFORD 3 SITE  
 2734.OBSERVATIONS

DIRECTION	SPEED (MPH)								TOTAL
	CALM	0.8-3	3.1-7	7.1-12	12.1-18	18.1-24	24.1-32	>32	
N	0.000	0.005	0.014	0.021	0.012	0.001	0.000	0.000	0.054
NNE	0.000	0.007	0.029	0.042	0.008	0.000	0.000	0.000	0.086
NE	0.000	0.009	0.049	0.045	0.007	0.000	0.000	0.000	0.110
EKE	0.000	0.007	0.047	0.031	0.010	0.001	0.000	0.000	0.095
E	0.000	0.003	0.017	0.018	0.005	0.000	0.000	0.000	0.044
ESE	0.000	0.006	0.036	0.033	0.006	0.000	0.000	0.000	0.080
SE	0.000	0.010	0.043	0.030	0.010	0.001	0.000	0.000	0.094
SSE	0.000	0.010	0.034	0.016	0.007	0.003	0.000	0.000	0.071
S	0.000	0.003	0.018	0.013	0.003	0.000	0.000	0.000	0.037
SSW	0.000	0.005	0.015	0.015	0.004	0.001	0.000	0.000	0.040
SW	0.000	0.007	0.006	0.011	0.006	0.000	0.000	0.000	0.030
WSW	0.000	0.006	0.005	0.004	0.004	0.000	0.000	0.000	0.019
W	0.000	0.005	0.007	0.007	0.002	0.000	0.001	0.000	0.022
WNW	0.000	0.007	0.009	0.008	0.007	0.000	0.000	0.000	0.033
NW	0.000	0.007	0.021	0.023	0.018	0.001	0.000	0.000	0.070
NNW	0.000	0.010	0.016	0.050	0.020	0.003	0.000	0.000	0.099
<u>CALM</u>	<u>0.018</u>	<u>0.000</u>	<u>0.000</u>	<u>0.000</u>	<u>0.000</u>	<u>0.000</u>	<u>0.000</u>	<u>0.000</u>	<u>0.018</u>
TOTAL	0.018	0.106	0.365	0.368	0.130	0.012	0.001	0.000	1.000

## WSES-FSAR-UNIT-3

TABLE 2.3-17

[WIND ROSE DATA FOR FEBRUARY] 1972-1975 AND 1977-1978  
 AT WATERFORD 3 SITE  
 2585.OBSERVATIONS

DIRECTION	SPEED (MPH)								TOTAL
	CALM	0.8-3	3.1-7	7.1-12	12.1-18	18.1-24	24.1-32	>32	
N	0,000	0.004	0.020	0.030	0.012	0.000	0.000	0.000	0.066
NNE	0,000	0.005	0.025	0.022	0.004	0.000	0.000	0.000	0.055
NE	0,000	0.010	0.032	0.034	0.003	0.000	0.000	0.000	0.080
ENE	0,000	0.007	0.021	0.009	0.011	0.002	0.000	0.000	0.049
E	0,000	0.001	0.005	0.010	0.001	0.000	0.000	0.000	0.018
ESE	0,000	0.005	0.017	0.029	0.007	0.000	0.000	0.000	0.058
SE	0,000	0.007	0.019	0.015	0.011	0.001	0.000	0.000	0.054
SSE	0,000	0.015	0.033	0.028	0.015	0.002	0.002	0.000	0.095
S	0,000	0.016	0.027	0.021	0.014	0.005	0.000	0.000	0.084
SSW	0,000	0.008	0.019	0.013	0.011	0.004	0.000	0.000	0.055
SW	0,000	0.006	0.022	0.019	0.009	0.001	0.000	0.000	0.056
WSW	0,000	0.007	0.018	0.010	0.007	0.003	0.000	0.000	0.044
W	0,000	0.008	0.009	0.014	0.013	0.000	0.000	0.000	0.044
WNW	0,000	0.005	0.012	0.010	0.009	0.000	0.000	0.000	0.037
NW	0,000	0.010	0.030	0.025	0.015	0.000	0.000	0.000	0.081
NNW	0,000	0.007	0.037	0.056	0.020	0.000	0.000	0.000	0.120
<u>CALM</u>	<u>0,005</u>	<u>0.000</u>	<u>0.000</u>	<u>0.000</u>	<u>0.000</u>	<u>0.000</u>	<u>0.000</u>	<u>0.000</u>	<u>0.005</u>
TOTAL	0,005,	0.122	0.347	0.344	0.161	0.019	0.002	0.000	1.000

## WSES-FSAR-UNIT-3

TABLE 2.3-18

[WIND ROSE DATA FOR MARCH] 1973-1977  
AT WATERFORD 3 SITE  
 2706.OBSERVATIONS

DIRECTION	SPEED (MPH)								TOTAL
	CALM	0.8-3	3.1-7	7.1-12	12.1-18	18.1-24	24.1-32	>32	
N	0.000	0.004	0.010	0.014	0.007	0.000	0.000	0.000	0.034
NNE	0.000	0.006	0.011	0.028	0.010	0.001	0.000	0.000	0.056
NE	0.000	0.006	0.034	0.032	0.013	0.001	0.000	0.000	0.085
ENE	0.000	0.005	0.029	0.041	0.013	0.000	0.000	0.000	0.088
E	0.000	0.002	0.014	0.014	0.001	0.000	0.000	0.000	0.032
ESE	0.000	0.003	0.034	0.030	0.018	0.002	0.000	0.000	0.088
SE	0.000	0.008	0.033	0.042	0.034	0.007	0.000	0.000	0.123
SSE	0.000	0.007	0.030	0.037	0.035	0.015	0.003	0.000	0.126
S	0.000	0.004	0.021	0.030	0.028	0.005	0.000	0.000	0.090
SSW	0.000	0.006	0.018	0.023	0.017	0.002	0.000	0.000	0.067
SW	0.000	0.004	0.011	0.019	0.013	0.001	0.000	0.000	0.048
WSW	0.000	0.003	0.008	0.012	0.008	0.001	0.000	0.000	0.031
W	0.000	0.003	0.008	0.005	0.005	0.000	0.000	0.000	0.021
WNW	0.000	0.003	0.005	0.006	0.006	0.000	0.000	0.000	0.020
NW	0.000	0.004	0.008	0.009	0.006	0.000	0.000	0.000	0.027
NNW	0.000	0.004	0.014	0.022	0.009	0.000	0.000	0.000	0.049
<u>CALM</u>	<u>0.015</u>	<u>0.000</u>	<u>0.000</u>	<u>0.000</u>	<u>0.000</u>	<u>0.000</u>	<u>0.000</u>	<u>0.000</u>	<u>0.015</u>
TOTAL	0.015	0.071	0.290	0.364	0.221	0.035	0.004	0.000	1.000

## WSES-FSAR-UNIT-3

TABLE 2.3-19

[WIND ROSE DATA FOR APRIL]1973-1977  
AT WATERFORD 3 SITE  
 2751.OBSERVATIONS

DIRECTION	SPEED (MPH)								TOTAL
	CALM	0.8-3	3.1-7	7.1-12	12.1-18	18.1-24	24.1-32	>32	
N	0.000	0.002	0.011	0.013	0.001	0.000	0.000	0.000	0.027
NWE	0.000	0.009	0.023	0.018	0.003	0.000	0.000	0.000	0.053
NE	0.000	0.007	0.036	0.026	0.005	0.000	0.000	0.000	0.073
EME	0.000	0.010	0.028	0.017	0.004	0.000	0.000	0.000	0.059
E	0.000	0.007	0.012	0.015	0.005	0.000	0.000	0.000	0.039
ESE	0.000	0.007	0.041	0.064	0.028	0.001	0.000	0.000	0.141
SE	0.000	0.007	0.036	0.051	0.040	0.005	0.001	0.000	0.140
SSE	0.000	0.007	0.028	0.041	0.025	0.005	0.000	0.000	0.105
S	0.000	0.007	0.013	0.026	0.021	0.004	0.000	0.000	0.072
SSW	0.000	0.005	0.011	0.011	0.007	0.002	0.000	0.000	0.035
SW	0.000	0.008	0.007	0.004	0.001	0.000	0.000	0.000	0.021
WSW	0.000	0.008	0.009	0.003	0.001	0.000	0.000	0.000	0.022
W	0.000	0.008	0.011	0.009	0.008	0.000	0.000	0.000	0.036
WNW	0.000	0.012	0.013	0.018	0.012	0.000	0.000	0.000	0.055
NW	0.000	0.012	0.015	0.012	0.009	0.000	0.000	0.000	0.048
NNW	0.000	0.008	0.015	0.021	0.006	0.000	0.000	0.000	0.049
<u>CALM</u>	<u>0.027</u>	<u>0.000</u>	<u>0.000</u>	<u>0.000</u>	<u>0.000</u>	<u>0.000</u>	<u>0.000</u>	<u>0.000</u>	<u>0.027</u>
TOTAL	0.027	0.122	0.306	0.349	0.176	0.019	0.001	0.000	1.000

## WSES-FSAR-UNIT-3

TABLE 2.3-20

WIND ROSE DATA FOR MAY 1973-1975 AND 1977  
AT WATERFORD 3 SITE  
2790.OBSERVATIONS

DIRECTION	SPEED (MPH)								TOTAL
	CALM	0.8-3	3.1-7	7.1-12	12.1-18	18.1-24	24.1-32	>32	
N	0.000	0.010	0.020	0.004	0.001	0.000	0.000	0.000	0.035
NNE	0.000	0.007	0.026	0.020	0.002	0.000	0.000	0.000	0.056
NE	0.000	0.013	0.044	0.021	0.000	0.000	0.000	0.000	0.078
ENE	0.000	0.007	0.034	0.018	0.004	0.000	0.000	0.000	0.063
E	0.000	0.001	0.012	0.010	0.001	0.000	0.000	0.000	0.024
ESE	0.000	0.005	0.030	0.032	0.006	0.000	0.000	0.000	0.073
SE	0.000	0.010	0.049	0.046	0.014	0.001	0.000	0.000	0.121
SSE	0.000	0.015	0.057	0.041	0.018	0.000	0.000	0.000	0.132
S	0.000	0.015	0.052	0.021	0.007	0.000	0.000	0.000	0.096
SSW	0.000	0.012	0.024	0.023	0.015	0.000	0.000	0.000	0.074
SW	0.000	0.010	0.014	0.020	0.005	0.000	0.000	0.000	0.049
WSW	0.000	0.008	0.018	0.006	0.001	0.000	0.000	0.000	0.034
W	0.000	0.007	0.014	0.005	0.001	0.000	0.000	0.000	0.027
WUW	0.000	0.012	0.015	0.004	0.001	0.000	0.000	0.000	0.032
NW	0.000	0.010	0.018	0.003	0.000	0.000	0.000	0.000	0.031
NNW	0.000	0.010	0.022	0.012	0.001	0.000	0.000	0.000	0.045
<u>CALM</u>	<u>0.031</u>	<u>0.000</u>	<u>0.000</u>	<u>0.000</u>	<u>0.000</u>	<u>0.000</u>	<u>0.000</u>	<u>0.000</u>	<u>0.031</u>
TOTAL	0.031	0.153	0.450	0.286	0.077	0.002	0.001	0.000	1.000

## WSES-FSAR-UNIT-3

TABLE 2.3-21

WIND ROSE DATA FOR JUNE 1973-1975 AND 1977  
AT WATERFORD 3 SITE  
2716.OBSERVATIONS

DIRECTION	SPEED (MPH)								TOTAL
	CALM	0.8-3	3.1-7	7.1-12	12.1-18	18.1-24	24.1-32	>32	
N	0.000	0.008	0.021	0.012	0.003	0.000	0.000	0.000	0.044
NNE	0.000	0.013	0.023	0.008	0.003	0.000	0.000	0.000	0.048
NE	0.000	0.009	0.041	0.013	0.003	0.000	0.000	0.000	0.065
ENE	0.000	0.009	0.032	0.011	0.001	0.000	0.000	0.000	0.052
E	0.000	0.006	0.010	0.003	0.000	0.000	0.000	0.000	0.019
ESE	0.000	0.009	0.022	0.004	0.000	0.000	0.000	0.000	0.035
SE	0.000	0.016	0.036	0.027	0.003	0.000	0.000	0.000	0.081
SSE	0.000	0.021	0.051	0.032	0.014	0.000	0.000	0.000	0.119
S	0.000	0.027	0.061	0.027	0.004	0.000	0.000	0.000	0.119
SSW	0.000	0.024	0.052	0.016	0.001	0.000	0.000	0.000	0.093
SW	0.000	0.020	0.044	0.022	0.001	0.000	0.000	0.000	0.087
WSW	0.000	0.021	0.027	0.008	0.001	0.000	0.000	0.000	0.056
W	0.000	0.012	0.014	0.007	0.001	0.000	0.000	0.000	0.034
WNW	0.000	0.016	0.008	0.006	0.000	0.000	0.000	0.000	0.030
NW	0.000	0.013	0.023	0.003	0.001	0.000	0.000	0.000	0.040
NNW	0.000	0.013	0.032	0.008	0.001	0.000	0.000	0.000	0.054
<u>CALM</u>	<u>0.025</u>	<u>0.000</u>	<u>0.000</u>	<u>0.000</u>	<u>0.000</u>	<u>0.000</u>	<u>0.000</u>	<u>0.000</u>	<u>0.025</u>
TOTAL	0.025	0.236	0.496	0.207	0.035	0.001	0.000	0.000	1.000

## WSES-FSAR-UNIT-3

TABLE 2.3-22

WIND ROSE DATA FOR JULY 1972-1974 AND 1977  
AT WATERFORD 3 SITE  
 2886.OBSERVATIONS

DIRECTION	SPEED (MPH)								TOTAL
	CALM	0.8-3	3.1-7	7.1-12	12.1-18	18.1-24	24.1-32	>32	
N	0.000	0.013	0.013	0.003	0.000	0.000	0.000	0.000	0.029
NNE	0.000	0.011	0.020	0.012	0.000	0.000	0.000	0.000	0.042
NE	0.000	0.015	0.026	0.010	0.001	0.000	0.000	0.000	0.052
ENE	0.000	0.034	0.030	0.015	0.001	0.000	0.000	0.000	0.080
E	0.000	0.019	0.016	0.005	0.000	0.000	0.000	0.000	0.040
ESE	0.000	0.027	0.034	0.008	0.000	0.000	0.000	0.000	0.069
SE	0.000	0.035	0.036	0.009	0.000	0.000	0.000	0.000	0.079
SSE	0.000	0.032	0.045	0.010	0.000	0.000	0.000	0.000	0.087
S	0.000	0.029	0.036	0.007	0.000	0.000	0.000	0.000	0.073
SSW	0.000	0.036	0.043	0.010	0.000	0.000	0.000	0.000	0.088
SW	0.000	0.025	0.033	0.009	0.000	0.000	0.000	0.000	0.067
WSW	0.000	0.033	0.031	0.011	0.000	0.000	0.000	0.000	0.075
W	0.000	0.018	0.030	0.009	0.000	0.000	0.000	0.000	0.058
WNW	0.000	0.013	0.021	0.005	0.000	0.000	0.000	0.000	0.040
MW	0.000	0.012	0.027	0.005	0.000	0.000	0.000	0.000	0.044
NNW	0.000	0.008	0.028	0.003	0.001	0.000	0.000	0.000	0.041
<u>CALM</u>	<u>0.036</u>	<u>0.000</u>	<u>0.000</u>	<u>0.000</u>	<u>0.000</u>	<u>0.000</u>	<u>0.000</u>	<u>0.000</u>	<u>0.036</u>
TOTAL	0.036	0.360	0.468	0.130	0.005	0.000	0.000	0.000	1.000

## WSES-FSAR-UNIT-3

TABLE 2.3-23

[WIND ROSE DATA FOR AUGUST] 1972-1974 AND 1977  
AT WATERFORD 3 SITE  
2746.OBSERVATIONS

DIRECTION	SPEED (MPH)								TOTAL
	CALM	0.8-3	3.1-7	7.1-12	12.1-18	18.1-24	24.1-32	>32	
N	0.000	0.011	0.020	0.004	0.000	0.000	0.000	0.000	0.035
NNE	0.000	0.014	0.054	0.015	0.001	0.000	0.000	0.000	0.084
NE	0.000	0.011	0.038	0.030	0.000	0.000	0.000	0.000	0.080
ENE	0.000	0.008	0.023	0.013	0.007	0.000	0.000	0.000	0.052
E	0.000	0.008	0.023	0.021	0.008	0.000	0.000	0.000	0.060
ESE	0.000	0.011	0.032	0.013	0.005	0.000	0.000	0.000	0.062
SE	0.000	0.023	0.040	0.013	0.001	0.000	0.000	0.000	0.077
SSE	0.000	0.034	0.049	0.008	0.001	0.000	0.000	0.000	0.091
S	0.000	0.035	0.020	0.004	0.000	0.000	0.000	0.000	0.059
SSW	0.000	0.035	0.027	0.005	0.000	0.000	0.000	0.000	0.067
SW	0.000	0.028	0.028	0.004	0.000	0.000	0.000	0.000	0.060
WSW	0.000	0.026	0.028	0.005	0.001	0.000	0.000	0.000	0.059
W	0.000	0.024	0.016	0.006	0.000	0.000	0.000	0.000	0.047
WNW	0.000	0.015	0.023	0.003	0.000	0.000	0.000	0.000	0.040
NW	0.000	0.014	0.031	0.004	0.000	0.000	0.000	0.000	0.049
NNW	0.000	0.009	0.033	0.003	0.000	0.000	0.000	0.000	0.045
<u>CALM</u>	<u>0.034</u>	<u>0.000</u>	<u>0.000</u>	<u>0.000</u>	<u>0.000</u>	<u>0.000</u>	<u>0.000</u>	<u>0.000</u>	<u>0.034</u>
TOTAL	0.034	0.306	0.485	0.151	0.024	0.000	0.000	0.000	1.000

## WSES-FSAR-UNIT-3

TABLE 2.3-24

[WIND ROSE DATA FOR SEPTEMBER] 1972-1974 AND 1977  
 AT WATERFORD 3 SITE  
 2616.OBSERVATIONS

DIRECTION	SPEED (MPH)								TOTAL
	CALM	0.8-3	3.1-7	7.1-12	12.1-18	18.1-24	24.1-32	>32	
N	0.000	0.008	0.015	0.013	0.000	0.000	0.000	0.000	0.036
NNE	0.000	0.008	0.031	0.022	0.002	0.000	0.000	0.000	0.063
NE	0.000	0.014	0.059	0.043	0.016	0.000	0.000	0.000	0.132
ENE	0.000	0.011	0.036	0.035	0.006	0.000	0.000	0.000	0.087
E	0.000	0.010	0.023	0.022	0.007	0.001	0.000	0.000	0.062
ESE	0.000	0.023	0.051	0.032	0.003	0.000	0.000	0.000	0.110
SE	0.000	0.026	0.041	0.012	0.002	0.001	0.000	0.000	0.081
SSE	0.000	0.031	0.032	0.010	0.004	0.000	0.000	0.000	0.078
S	0.000	0.024	0.029	0.006	0.002	0.000	0.000	0.000	0.061
SSW	0.000	0.023	0.025	0.008	0.001	0.000	0.000	0.000	0.058
SW	0.000	0.018	0.023	0.008	0.001	0.000	0.000	0.000	0.050
WSW	0.000	0.019	0.016	0.008	0.003	0.000	0.000	0.000	0.046
W	0.000	0.009	0.010	0.002	0.001	0.000	0.000	0.000	0.022
WNW	0.000	0.008	0.007	0.002	0.000	0.000	0.000	0.000	0.018
NW	0.000	0.007	0.013	0.002	0.000	0.000	0.000	0.000	0.023
NNW	0.000	0.008	0.015	0.015	0.000	0.000	0.000	0.000	0.039
<u>CALM</u>	<u>0.033</u>	<u>0.000</u>	<u>0.000</u>	<u>0.000</u>	<u>0.000</u>	<u>0.000</u>	<u>0.000</u>	<u>0.000</u>	<u>0.033</u>
TOTAL	0.033	0.248	0.426	0.242	0.048	0.003	0.000	0.000	1.000

## WSES-FSAR-UNIT-3

TABLE 2.3-25

[WIND ROSE DATA FOR OCTOBER] 1972-1974 and 1977  
 AT WATERFORD 3 SITE  
 2647.OBSERVATIONS

DIRECTION	SPEED (MPH)								TOTAL
	CALM	0.8-3	3.1-7	7.1-12	12.1-18	18.1-24	24.1-32	>32	
N	0.000	0.010	0.031	0.022	0.008	0.001	0.000	0.000	0.072
NNE	0.000	0.013	0.056	0.035	0.008	0.000	0.000	0.000	0.111
NE	0.000	0.009	0.061	0.064	0.017	0.000	0.000	0.000	0.151
ENE	0.000	0.007	0.043	0.035	0.005	0.000	0.000	0.000	0.089
E	0.000	0.003	0.019	0.028	0.004	0.000	0.000	0.000	0.054
ESE	0.000	0.010	0.037	0.023	0.002	0.000	0.000	0.000	0.072
SE	0.000	0.008	0.020	0.020	0.005	0.001	0.000	0.000	0.053
SSE	0.000	0.015	0.012	0.007	0.001	0.000	0.000	0.000	0.035
S	0.000	0.007	0.008	0.000	0.001	0.000	0.000	0.000	0.017
SSW	0.000	0.010	0.009	0.004	0.001	0.000	0.000	0.000	0.025
SW	0.000	0.023	0.009	0.004	0.001	0.000	0.000	0.000	0.037
W	0.000	0.012	0.006	0.004	0.001	0.000	0.000	0.000	0.024
WNW	0.000	0.021	0.017	0.005	0.001	0.000	0.000	0.000	0.044
NW	0.000	0.021	0.037	0.010	0.002	0.000	0.000	0.000	0.070
NNW	0.000	0.018	0.041	0.019	0.003	0.000	0.000	0.000	0.080
<u>CALM</u>	<u>0.031</u>	<u>0.000</u>	<u>0.000</u>	<u>0.000</u>	<u>0.000</u>	<u>0.000</u>	<u>0.000</u>	<u>0.000</u>	<u>0.031</u>
TOTAL	0.031	0.202	0.421	0.285	0.060	0.002	0.000	0.000	1.000

## WSES-FSAR-UNIT-3

TABLE 2.3-26

[WIND ROSE DATA FOR NOVEMBER] 1972-1974 and 1977  
 AT WATERFORD 3 SITE  
 2731.OBSERVATIONS

DIRECTION	SPEED (MPH)								TOTAL
	CALM	0.8-3	3.1-7	7.1-12	12.1-18	18.1-24	24.1-32	>32	
N	0.000	0.006	0.021	0.030	0.008	0.000	0.000	0.000	0.066
NNE	0.000	0.006	0.030	0.029	0.004	0.000	0.000	0.000	0.069
NE	0.000	0.007	0.049	0.052	0.014	0.000	0.000	0.000	0.122
ENE	0.000	0.008	0.029	0.025	0.005	0.000	0.000	0.000	0.067
E	0.000	0.005	0.016	0.016	0.002	0.000	0.000	0.000	0.038
ESE	0.000	0.006	0.041	0.023	0.009	0.000	0.000	0.000	0.079
SE	0.000	0.008	0.040	0.034	0.009	0.000	0.000	0.000	0.091
SSE	0.000	0.012	0.033	0.042	0.014	0.001	0.000	0.000	0.103
S	0.000	0.006	0.012	0.013	0.004	0.001	0.000	0.000	0.036
SSW	0.000	0.004	0.015	0.010	0.001	0.000	0.000	0.000	0.030
SW	0.000	0.005	0.006	0.006	0.001	0.000	0.000	0.000	0.018
WSW	0.000	0.009	0.015	0.005	0.001	0.000	0.000	0.000	0.030
W	0.000	0.006	0.017	0.012	0.003	0.000	0.000	0.000	0.038
WNW	0.000	0.005	0.017	0.016	0.004	0.000	0.000	0.000	0.042
NW	0.000	0.007	0.023	0.030	0.008	0.001	0.000	0.000	0.069
NNW	0.000	0.007	0.036	0.041	0.009	0.001	0.000	0.000	0.093
<u>CALM</u>	<u>0.008</u>	<u>0.000</u>	<u>0.000</u>	<u>0.000</u>	<u>0.000</u>	<u>0.000</u>	<u>0.000</u>	<u>0.000</u>	<u>0.008</u>
TOTAL	0.008	0.106	0.399	0.385	0.096	0.006	0.000	0.000	1.000

## WSES-FSAR-UNIT-3

TABLE 2.3-27

[WIND ROSE DATA FOR DECEMBER] 1972-1974 and 1977  
 AT WATERFORD 3 SITE  
 2843.OBSERVATIONS

DIRECTION	SPEED (MPH)								TOTAL
	CALM	0.8-3	3.1-7	7.1-12	12.1-18	18.1-24	24.1-32	>32	
N	0.000	0.006	0.016	0.018	0.005	0.000	0.000	0.000	0.045
NNE	0.000	0.004	0.015	0.020	0.005	0.003	0.000	0.000	0.046
NE	0.000	0.008	0.034	0.021	0.004	0.000	0.000	0.000	0.067
ENE	0.000	0.007	0.031	0.017	0.004	0.000	0.000	0.000	0.058
E	0.000	0.001	0.013	0.013	0.000	0.000	0.000	0.000	0.027
ESE	0.000	0.005	0.035	0.027	0.009	0.001	0.000	0.000	0.077
SE	0.000	0.010	0.031	0.033	0.019	0.002	0.000	0.000	0.095
SSE	0.000	0.007	0.038	0.033	0.009	0.001	0.000	0.000	0.089
S	0.000	0.008	0.039	0.027	0.005	0.000	0.000	0.000	0.079
SSW	0.000	0.007	0.017	0.019	0.010	0.000	0.000	0.000	0.053
SW	0.000	0.006	0.012	0.012	0.007	0.000	0.000	0.000	0.036
WSW	0.000	0.008	0.017	0.006	0.004	0.001	0.000	0.000	0.036
W	0.000	0.012	0.021	0.013	0.005	0.000	0.000	0.000	0.051
WMW	0.000	0.007	0.023	0.021	0.008	0.001	0.000	0.000	0.060
NW	0.000	0.006	0.030	0.020	0.012	0.000	0.000	0.000	0.068
NNW	0.000	0.009	0.025	0.043	0.021	0.003	0.000	0.000	0.101
<u>CALM</u>	<u>0.011</u>	<u>0.000</u>	<u>0.000</u>	<u>0.000</u>	<u>0.000</u>	<u>0.000</u>	<u>0.000</u>	<u>0.000</u>	<u>0.011</u>
TOTAL	0.011	0.111	0.396	0.342	0.128	0.013	0.000	0.000	1.000

## WSES-FSAR-UNIT-3

TABLE 2.3-28

ANNUAL WIND ROSE DATA FOR JULY 1972 - JUNE 1975 and FEBRUARY 1977 - FEBRUARY 1978  
AT WATERFORD 3 SITE  
32751.OBSERVATIVES

DIRECTION	SPEED (MPH)								TOTAL
	CALM	0.8-3	3.1-7	7.1-12	12.1-18	18.1-24	24.1-32	>32	
N	0.000	0.007	0.017	0.015	0.005	0.000	0.000	0.000	0.045
NNE	0.000	0.008	0.028	0.022	0.004	0.000	0.000	0.000	0.064
NE	0.000	0.010	0.042	0.032	0.007	0.000	0.000	0.000	0.091
ENE	0.000	0.010	0.032	0.022	0.006	0.000	0.000	0.000	0.070
E	0.000	0.006	0.015	0.014	0.003	0.000	0.000	0.000	0.038
ESE	0.000	0.010	0.034	0.026	0.008	0.000	0.000	0.000	0.079
SE	0.000	0.014	0.035	0.028	0.012	0.002	0.000	0.000	0.091
SSE	0.000	0.017	0.037	0.026	0.012	0.002	0.000	0.000	0.094
S	0.000	0.015	0.028	0.016	0.008	0.001	0.000	0.000	0.069
SSW	0.000	0.015	0.023	0.013	0.006	0.001	0.000	0.000	0.057
SW	0.000	0.013	0.018	0.012	0.004	0.000	0.000	0.000	0.046
WSW	0.000	0.014	0.017	0.007	0.003	0.000	0.000	0.000	0.041
W	0.000	0.010	0.014	0.008	0.003	0.000	0.000	0.000	0.035
WNW	0.000	0.010	0.014	0.009	0.004	0.000	0.000	0.000	0.038
NW	0.000	0.010	0.023	0.012	0.006	0.000	0.000	0.000	0.052
NNW	0.000	0.009	0.026	0.024	0.008	0.001	0.000	0.000	0.068
<u>CALM</u>	<u>0.023</u>	<u>0.000</u>	<u>0.000</u>	<u>0.000</u>	<u>0.000</u>	<u>0.000</u>	<u>0.000</u>	<u>0.000</u>	<u>0.023</u>
TOTAL	0.023	0.179	0.405	0.287	0.096	0.009	0.001	0.000	1.000

WSES-FSAR-UNIT-3

TABLE 2.3-29

AVERAGE MONTHLY AND ANNUAL TEMPERATURE FOR  
SELECTED STATIONS IN THE NEW ORLEANS AREA (1931-1960)

New Orleans, La - Moisant International Airport													
	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>Aug</u>	<u>Sept</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>	<u>Annual</u>
Temp (F)	54.6	57.1	61.4	67.9	74.4	80.1	81.6	81.9	78.3	70.4	60.0	55.4	68.6
New Orleans, La - Audubon Station													
	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>Aug</u>	<u>Sept</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>	<u>Annual</u>
Temp (F)	55.5	57.7	62.1	68.9	75.5	81.1	82.6	82.5	78.9	71.1	61.1	56.6	69.5
Reserve, La - Cooperative Observer													
	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>Aug</u>	<u>Sept</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>	<u>Annual</u>
Temp (F)	53.8	55.9	60.6	67.8	75.1	80.0	82.5	82.3	78.7	70.4	59.8	54.6	68.5

WSES-FSAR-UNIT-3

TABLE 2.3-30

MEAN MONTHLY AND ANNUAL MAXIMUM, MINIMUM, AVERAGE TEMPERATURES  
MOISANT INTERNATIONAL AIRPORT (1931-1960)

<u>Month</u>	<u>Mean Daily,(F)</u>	<u>Minimum Mean Daily,(F)</u>	<u>Maximum Mean Daily,(F)</u>
January	64.4	44.8	54.6
February	66.7	47.5	57.1
March	71.2	51.6	61.4
April	77.7	58.1	67.9
May	84.4	64.4	74.4
June	89.6	70.5	80.1
July	90.6	72.6	81.6
August	90.7	73.0	81.9
September	87.2	69.3	78.3
October	80.3	60.5	70.4
November	70.3	49.6	60.0
December	<u>65.3</u>	<u>45.5</u>	<u>55.4</u>
Annual	78.2	59.0	68.6

## WSES-FSAR-UNIT-3

TABLE 2.3-31

TEMPERATURE EXTREMES\*  
MOISANT INTERNATIONAL AIRPORT, NEW ORLEANS, LOUISIANA

<u>Month</u>	<u>Extremes</u>			
	<u>Record Maximum,(F)</u>	<u>Year</u>	<u>Record Minimum,(F)</u>	<u>Year</u>
January	83	1957	14	1963
February	84	1948	19	1951
March	87	1955	26	1968
April	91	1948	38	1962
May	96	1953	41	1960
June	100	1954	55	1966
July	99	1951	60	1967
August	100	1951	60	1968
September	97	1954	42	1967
October	92	1962	35	1968
November	86	1951	28	1968
December	83	1951	17	1962
Annual	100	June 1954	14	Jan 1963

Note: \*Maximum and minimum temperature extremes have been exceeded at other sites in the locality as follows: Highest temperature 102°F in June 1954; lowest temperature 7°F in February, 1899.

WSES-FSAR-UNIT-3

TABLE 2.3-32

AVERAGE MONTHLY OCCURENCES OF EXTREME TEMPERATURES  
MOISANT INTERNATIONAL AIRPORT, NEW ORLEANS, LOISIANA (1947-1972)

<u>Month</u>	<u>Mean No. of Days</u>			
	<u>Maximum Temperature</u>		<u>Minimum Temperature</u>	
	90°F	32°F	32°F	0°F
January	0	*	5	0
February	0	0	3	0
March	0	0	1	0
April	*	0	*	0
May	4	0	0	0
June	17	0	0	0
July	20	0	0	0
August	19	0	0	0
September	8	0	0	0
October	1	0	0	0
November	0	0	1	0
December	0	*	3	0
Annual	68	*	12	0

Note: \*Less than one half

WSES-FSAR-UNIT-3

TABLE 2.3-33

MEAN MONTHLY AND ANNUAL MAXIMUM, MINIMUM AND AVERAGE TEMPERATURES  
WATERFORD NUCLEAR UNIT 3 ON SITE DATA  
(JULY 1972-JUNE 1975 AND FEBRUARY 1977-FEBRUARY 1978)

Month	Mean Temperature (F)	Mean Maximum (F)	Mean Minimum (F)
January	53.6	62.4	48.2
February	54.5	62.2	46.9
March	63.5	68.8	53.8
April	67.4	70.9	64.1
May	74.5	81.3	68.2
June	78.5	85.0	72.3
July	79.8	87.8	73.6
August	79.1	86.3	73.6
September	77.7	85.4	73.7
October	70.8	75.9	61.7
November	60.5	67.5	53.6
December	55.0	62.3	45.8
Annual	67.9	74.6	61.3

WSES-FSAR-UNIT-3

TABLE 2.3-34

MEAN RELATIVE HUMIDITY AND NUMBER OF DAYS WITH HEAVY FOG  
MOISANT INTERNATIONAL AIRPORT, NEW ORLEANS, LOUISIANA (1949-1972)

<u>Month</u>	<u>OOOOCST</u>	<u>Relative Humidity (%)</u>		<u>1800CST</u>	<u>Heavy Fog (Mean Days)</u>
		<u>0600CST</u>	<u>1200CST</u>		
January	84	86	67	73	7
February	83	85	64	69	5
March	82	84	60	64	5
April	85	88	60	66	2
May	86	89	60	65	1
June	87	90	62	68	*
July	89	91	66	73	*
August	89	91	66	73	*
September	87	89	65	74	*
October	84	87	58	72	2
November	83	86	59	73	5
December	83	86	66	75	5
Annual	85	88	63	70	32

Note: \*Less than one half.

WSES-FSAR-UNIT-3

TABLE 2.3-35

AVERAGE MONTHLY AND ANNUAL PRECIPITATION  
FOR SELECTED STATIONS IN THE NEW ORLEANS AREA (1931-1960)

New Orleans, La - Moisant International Airport

	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>Aug</u>	<u>Sept</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>	<u>Annual</u>
Precip (in)	3.84	3.99	5.34	4.55	4.38	4.43	6.72	5.34	5.03	2.84	3.34	4.10	53.90

New Orleans, La - Audubon Station

	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>Aug</u>	<u>Sept</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>	<u>Annual</u>
Precip (in)	4.29	4.35	5.91	5.54	4.86	5.59	8.12	6.64	6.41	3.15	3.5	14.59	62.96

Reserve, La - Cooperative Observer

	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>Aug</u>	<u>Sept</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>	<u>Annual</u>
Precip (in)	4.49	5.16	5.64	4.92	4.90	5.31	7.00	5.74	5.14	2.96	3.77	5.54	60.57

WSES-FSAR-UNIT-3

TABLE 2.3-36

EXTREME MONTHLY AND DAILY PRECIPITATION (INCHES)\* (1947-1972) AND  
MEAN NUMBER OF DAYS WITH RAIN (1949-1972)  
MOISANT INTERNATIONAL AIRPORT, NEW ORLEANS, LOUISIANA

<u>Month</u>	<u>Maximum</u> <u>Monthly</u>	<u>Year</u>	<u>Minimum</u> <u>Monthly</u>	<u>Year</u>	<u>Maximum 24</u> <u>Hour Amounts</u>	<u>Year</u>	<u>Mean Number of</u> <u>Day Precipitation&lt;0.01"</u>
Jan	12.62	1966	0.54	1968	4.77	1955	10
Feb	10.56	1959	1.02	1962	5.60	1961	10
Mar	19.09	1948	0.24	1955	7.87	1948	9
April	8.78	1949	0.33	1965	4.35	1953	7
May	14.33	1959	0.99	1949	9.86	1959	8
June	8.87	1962	1.12	1952	4.19	1953	10
July	11.46	1954	3.45	1951	4.30	1966	15
Aug	11.77	1955	2.00	1952	3.06	1969	13
Sept	13-53	1948	0.24	1953	5.46	1957	9
Oct	6.45	1959	0.00	1952	2.58	1960	6
Nov	14.58	1947	0.21	1949	6.38	1953	6
Dec	10.77	1947	1.46	1958	3.94	1952	10

\* These values may have been exceeded at other sites in the locality or at other times.

WSES-FSAR-UNIT-3

TABLE 2.3-37

MAXIMUM SHORT PERIOD PRECIPITATION (INCHES)  
AUDUBON STATION, NEW ORLEANS, LOUISIANA (1889-1969)

	<u>Minutes</u>					<u>Hours</u>				
Time Period	5	10	15	30	1	2	3	6	12	24
Amount	1.00	1.48	1.90	3.18	4.71	5.87	6.54	8.62	12.76	14.01
Date	2/5	4/25	4/25	4/25	4/25	4/25	4/15	9/6	4/15	4/15
Year	1955	1953	1953	1953	1953	1953	1953	1929	1927	1927

WSES-FSAR-UNIT-3

TABLE 2.3-38

NUMBER OF PRECIPITATION OCCURENCE BY HOUR OF DAY FOR  
MOISANT INTERNATIONAL AIRPORT (1951-1960)

MONTH	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
Hour of Day Ending at:													
0100	30	43	33	21	17	8	8	7	23	22	36	38	29
0200	33	43	27	21	18	7	9	6	24	21	32	42	28
0300	39	42	27	25	18	13	10	9	23	21	38	44	31
0400	39	44	28	26	18	16	14	9	19	23	38	37	31
0500	33	45	38	25	15	16	13	10	20	24	33	46	32
0600	31	39	42	22	16	11	10	12	26	27	26	50	31
0700	34	38	39	30	20	16	16	20	28	24	23	45	33
0800	31	39	38	25	22	16	25	19	25	16	25	42	32
0900	33	42	35	26	20	16	27	23	26	16	27	41	33
1000	31	39	34	23	23	25	37	32	34	18	26	43	37
1100	37	37	34	24	24	34	48	48	31	27	28	36	41
1200	26	40	39	29	32	49	58	67	46	28	34	30	48
1300	32	42	35	32	35	55	68	68	53	32	29	35	52
1400	36	36	32	35	32	57	77	67	52	30	30	38	52
1500	36	40	41	34	42	52	78	68	56	35	29	37	55
1600	33	52	37	33	39	40	76	63	50	36	23	31	51
1700	32	43	38	34	38	35	62	50	44	27	28	34	47
1800	30	47	36	29	38	31	59	45	42	25	26	39	45
1900	34	48	43	29	36	26	45	33	36	23	21	40	41
2000	34	46	41	28	32	20	36	27	28	21	20	41	37
2100	30	47	31	19	26	18	26	25	24	18	21	41	33
2200	33	43	32	18	19	13	21	13	17	21	28	40	30
2300	33	44	33	19	21	9	21	10	19	22	34	42	31
2400	<u>34</u>	<u>46</u>	<u>31</u>	<u>22</u>	<u>18</u>	<u>9</u>	<u>13</u>	<u>8</u>	<u>18</u>	<u>19</u>	<u>34</u>	<u>39</u>	<u>29</u>
No. of Days													
(Total)	<u>128</u>	<u>136</u>	<u>134</u>	<u>108</u>	<u>116</u>	<u>137</u>	194	<u>167</u>	140	<u>89</u>	<u>122</u>	<u>137</u>	<u>160</u>

## WSES-FSAR-UNIT-3

TABLE 2.3-39

ANNUAL AND SEASONAL PERCENTAGE FREQUENCY OF  
SURFACE WIND DIRECTION DURING PRECIPITATION  
NAVAL AIR STATION - NEW ORLEANS, LOUISIANA (1949-1965)

	<u>Winter</u>	<u>Spring</u>	<u>Summer</u>	<u>Fall</u>	<u>Annual</u>
N	11.8	7.1	2.4	7.3	6.8
NNE	10.6	5.2	3.0	12.0	8.7
NE	12.2	5.8	5.5	11.3	8.5
ENE	8.6	7.1	4.9	10.7	7.0
E	9.4	11.0	6.1	8.0	8.7
ESE	4.9	6.5	5.5	10.0	7.0
SE	3.7	5.8	7.3	4.0	5.3
SSE	2.0	9.1	4.9	3.3	3.6
S	4.9	10.4	8.5	4.0	7.0
SSW	4.1	5.2	7.3	1.3	5.3
SW	2.0	3.2	7.3	2.0	3.6
WSW	0.8	1.3	4.3	2.0	1.9
W	2.0	3.2	3.0	1.3	3.7
WNW	1.6	2.6	2.4	2.0	1.9
NW	4.5	5.8	3.7	2.0	3.7
NNW	8.2	3.9	1.8	4.0	3.7
CALM	8.6	7.8	21.9	14.7	13.6

## WSES-FSAR-UNIT-3

TABLE 2.3-40

PERCENT FREQUENCY OF ONSITE STABILITY CLASSES  
JULY 1972 - JUNE 1975 AND FEBRUARY 1977 - FEBRUARY 1978  
(N = NUMBER OF OBSERVATIONS)  
STABILITY CLASS

MONTH	A	B	C	O	E	F	G	N
January	6.66	2.85	4.35	37.64	29.92	11.45	7.13	2734
February	9.63	2.59	3.60	26.92	35.24	14.04	7.97	2585
March	11.42	2.43	3.17	32.62	36.51	9.18	4.67	2679
April	21.41	2.63	3.00	22.50	28.91	10.03	11.53	2733
May	18.16	2.10	2.24	20.25	33.13	16.31	7.81	2765
June	16.77	2.84	2.73	22.93	24.59	18.36	11.80	2713
July	15.75	2.67	1.84	22.10	22.21	20.96	14.47	2882
August	13.84	2.60	2.64	21.16	26.78	18.64	14.34	2580
September	13.34	3.52	3.40	20.60	29.66	16.51	12.96	2616
October	17.98	2.15	1.25	18.62	26.22	14.92	18.85	2647
November	10.62	1.76	1.68	26.33	38.19	12.19	9.23	2731
December	10.92	3.14	3.31	29.49	33.05	11.77	8.32	2838
ANNUAL	13.89	2.61	2.76	25.13	30.34	14.53	10.74	32503

WSES-FSAR-UNIT-3

TABLE 2.3-41

SEASONAL AND ANNUAL AVERAGE  
MORNING AND AFTERNOON MIXING HEIGHTS  
WATERFORD AREA

MIXING HEIGHT ABOVE GROUND (meters)

	<u>Morning</u>	<u>Afternoon</u>
Winter	500	800
Spring	600	1000
Summer	900	1300
Fall	700	1200
Annual	700	1100

WSES-FSAR-UNIT-3

TABLE 2.3-42

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD

3 7/72-6/75 & 2/77-2/78

JANUARY, TOTAL FOR PERIOD

STABILITY CLASS A

PERCENTAGE FREQUENCY DISTRIBUTION

NUMBER OF OBSERVATIONS = 182

+----- WIND SPEED (MPH) -----+									
WIND DIRECTION -----	CALM ---	0.8 3.0	3.1 7.0	7.1 12.0	12.1 18.0	18.1 24.0	24.1 32.0	ABOVE 32.0 ---	TOTAL -----
CALM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
N	0.00	0.00	1.10	1.65	1.65	0.00	0.00	0.00	4.40
NNE	0.00	0.55	3.30	4.95	0.00	0.00	0.00	0.00	8.79
NE	0.00	0.00	4.95	9.34	0.55	0.00	0.00	0.00	14.84
ENE	0.00	0.55	3.30	6.59	1.10	0.55	0.00	0.00	12.09
E	0.00	0.00	1.65	1.65	0.00	0.00	0.00	0.00	3.30
ESE	0.00	0.00	1.65	8.79	1.10	0.00	0.00	0.00	11.54
SE	0.00	0.00	1.65	2.20	2.20	1.65	0.00	0.00	7.69
SSE	0.00	0.00	2.75	2.20	1.10	0.55	0.00	0.00	6.59
S	0.00	0.00	1.10	3.30	0.00	0.00	0.00	0.00	4.40
SSW	0.00	0.00	0.55	0.55	0.00	0.55	0.00	0.00	1.65
SW	0.00	0.00	0.00	2.20	1.10	0.55	0.00	0.00	3.85
WSW	0.00	0.00	0.00	0.00	1.10	0.00	0.00	0.00	1.10
W	0.00	0.00	1.10	0.55	0.00	0.00	0.00	0.00	1.65
WNW	0.00	0.55	0.55	1.65	0.00	0.00	0.00	0.00	2.75
NW	0.00	0.00	3.85	3.85	0.00	0.00	0.00	0.00	7.69
NNW	0.00	0.00	2.20	3.30	2.20	0.00	0.00	0.00	7.69
TOTAL	0.00	1.65	29.67	52.75	12.09	3.85	0.00	0.00	
THIS STABILITY CLASS ACCOUNTS FOR					6.66 PERCENT OF THE TOTAL				2734

WSES-FSAR-UNIT-3

TABLE 2.3-43

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD-3								7/72-6/75 & 2/77-2/78	
JANUARY, TOTAL FOR PERIOD								STABILITY CLASS B	
PERCENTAGE FREQUENCY DISTRIBUTION								NUMBER OF OBSERVATIONS 78	
+----- WIND SPEED (MPH) -----+									
WIND DIRECTION	CALM	0.8 3.0	3.1 7.0	7.1 12.0	12.1 18.0	18.1 24.0	24.1 32.0	ABOVE 32.0	TOTAL
-----	----	----	----	----	----	-----	----	-----	-----
CALM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
N	0.00	0.00	1.28	2.56	5.13	0.00	0.00	0.00	8.97
NNE	0.00	0.00	1.28	3.85	1.28	0.00	0.00	0.00	6.41
NE	0.00	1.28	5.13	6.41	1.28	0.00	0.00	0.00	14.10
ENE	0.00	2.56	1.28	7.69	5.13	0.00	0.00	0.00	16.67
E	0.00	0.00	1.28	1.28	1.28	0.00	0.00	0.00	3.85
ESE	0.00	0.00	1.28	5.13	1.28	0.00	0.00	0.00	7.69
SE	0.00	0.00	2.56	2.56	0.00	0.00	0.00	0.00	5.13
SSE	0.00	0.00	1.28	1.28	0.00	0.00	0.00	0.00	2.56
S	0.00	0.00	1.28	2.56	0.00	0.00	0.00	0.00	3.85
SSW	0.00	0.00	0.00	2.56	0.00	0.00	0.00	0.00	2.56
SW	0.00	0.00	0.00	2.56	0.00	0.00	0.00	0.00	2.56
WSW	0.00	0.00	1.28	0.00	1.28	0.00	0.00	0.00	2.56
W	0.00	0.00	0.00	1.28	0.00	0.00	0.00	0.00	1.28
WNW	0.00	1.28	1.28	2.56	0.00	0.00	0.00	0.00	5.13
NW	0.00	0.00	2.56	6.41	3.85	0.00	0.00	0.00	12.82
NNW	0.00	0.00	0.00	1.28	2.56	0.00	0.00	0.00	3.85
TOTAL	0.00	5.13	21.79	50.00	23.08	0.00	0.00	0.00	
THIS STABILITY CLASS ACCOUNTS FOR					2.85 PERCENT OF THE TOTAL				2734

WSES-FSAR-UNIT-3

TABLE 2.3-44

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3

7/72-6/75 & 2/77-2/78

JANUARY, TOTAL FOR PERIOD

STABILITY CLASS C

PERCENTAGE FREQUENCY DISTRIBUTION

NUMBER OF OBSERVATIONS = 119

+----- WIND SPEED (MPH) -----+									
WIND DIRECTION -----	CALM -----	0.8 3.0 ---	3.1 7.0 ---	7.1 12.0 ----	12.1 18.0 ----	18.1 24.0 ----	24.1 32.0 ----	ABOVE 32.0 ----	TOTAL -----
CALM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
N	0.00	0.84	1.68	1.68	5.04	0.00	0.00	0.00	9.24
NNE	0.00	0.00	0.84	4.20	0.84	0.00	0.00	0.00	5.88
NE	0.00	0.00	3.36	5.88	0.84	0.00	0.00	0.00	10.08
ENE	0.00	1.68	1.68	5.88	1.68	0.00	0.00	0.00	10.92
E	0.00	0.00	0.00	0.00	0.84	0.00	0.00	0.00	0.84
ESE	0.00	0.00	0.00	4.20	0.84	0.00	0.00	0.00	5.04
SE	0.00	0.00	1.68	1.68	2.52	0.00	0.00	0.00	5.88
SSE	0.00	0.00	1.68	0.84	2.52	0.84	0.00	0.00	5.88
S	0.00	0.00	1.68	0.84	0.00	0.00	0.00	0.00	2.52
SSW	0.00	0.00	1.68	2.52	0.00	0.00	0.00	0.00	4.20
SW	0.00	0.00	0.00	2.52	1.68	0.00	0.00	0.00	4.20
WSW	0.00	0.00	0.00	0.00	0.84	0.00	0.00	0.00	0.84
W	0.00	0.84	0.00	0.00	0.00	0.00	0.00	0.00	0.84
WNW	0.00	0.00	0.00	1.68	1.68	0.00	0.00	0.00	3.36
NW	0.00	0.00	0.00	10.92	2.52	0.00	0.00	0.00	13.45
NNW	0.00	0.00	0.84	11.76	4.20	0.00	0.00	0.00	16.81
TOTAL	0.00	3.36	15.13	54.62	26.05	0.84	0.00	0.00	
THIS STABILITY CLASS ACCOUNTS FOR					4.35 PERCENT OF THE TOTAL				2734

WSES-FSAR-UNIT-3

TABLE 2.3-45

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3

7/72-6/75 & 2/77-2/78

JANUARY, TOTAL FOR PERIOD

STABILITY CLASS D

PERCENTAGE FREQUENCY DISTRIBUTION

NUMBER OF OBSERVATIONS = 1029

+----- WIND SPEED (MPH) -----+									
WIND DIRECTION -----	CALM ---	0.8 3.0 ---	3.1 7.0 ---	7.1 12.0 ---	12.1 18.0 ---	18.1 24.0 ---	24.1 32.0 ---	ABOVE 32.0 ---	TOTAL -----
CALM	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
N	0.00	0.10	1.65	4.18	1.94	0.39	0.00	0.00	8.26
NNE	0.00	0.49	1.17	7.00	1.85	0.00	0.00	0.00	10.50
NE	0.00	0.29	1.94	4.57	1.26	0.00	0.00	0.00	8.07
ENE	0.00	0.29	1.75	2.72	1.46	0.10	0.00	0.00	6.32
E	0.00	0.00	0.29	1.36	0.19	0.10	0.00	0.00	1.94
ESE	0.00	0.00	1.55	2.92	0.68	0.00	0.00	0.00	5.15
SE	0.00	0.29	3.30	4.47	1.26	0.00	0.00	0.00	9.33
SSE	0.00	0.19	1.75	2.43	1.07	0.39	0.00	0.00	5.83
S	0.00	0.00	1.17	1.17	0.68	0.00	0.00	0.00	3.01
SSW	0.00	0.29	0.87	2.04	0.87	0.10	0.00	0.00	4.18
SW	0.00	0.00	0.49	1.55	0.87	0.00	0.00	0.00	2.92
WSW	0.00	0.00	0.49	0.97	0.58	0.00	0.00	0.00	2.04
W	0.00	0.19	0.49	0.68	0.39	0.00	0.19	0.00	1.94
WNW	0.00	0.39	0.68	1.46	1.75	0.10	0.10	0.00	4.47
NW	0.00	0.10	2.14	3.11	4.18	0.19	0.00	0.00	9.72
NNW	0.00	0.58	1.65	9.23	3.98	0.78	0.00	0.00	16.23
TOTAL	0.10	3.21	21.38	49.85	23.03	2.14	0.29	0.00	
THIS STABILITY CLASS ACCOUNTS FOR					37.64 PERCENT OF THE TOTAL				2734

WSES-FSAR-UNIT-3

TABLE 2.3-46

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3

7/72-6/75 & 2/77-2/78

JANUARY, TOTAL FOR PERIOD

STABILITY CLASS E

PERCENTAGE FREQUENCY DISTRIBUTION

NUMBER OF OBSERVATIONS 818

+----- WIND SPEED (MPH) -----+									
WIND DIRECTION -----	CALM ---	0.8 3.0 ---	3.1 7.0 ---	7.1 12.0 ---	12.1 18.0 ---	18.1 24.0 ---	24.1 32.0 ---	ABOVE 32.0 ---	TOTAL -----
CALM	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.49
N	0.00	0.61	1.59	0.86	0.12	0.00	0.00	0.00	3.18
NNE	0.00	0.49	4.16	2.81	0.12	0.00	0.00	0.00	7.58
NE	0.00	0.86	6.36	4.89	0.37	0.00	0.00	0.00	12.47
ENE	0.00	0.24	6.97	3.67	0.37	0.00	0.00	0.00	11.25
E	0.00	0.49	2.57	3.06	1.22	0.00	0.00	0.00	7.33
ESE	0.00	0.73	6.48	4.16	0.61	0.00	0.00	0.00	11.98
SE	0.00	0.61	6.72	3.42	0.98	0.00	0.00	0.00	11.74
SSE	0.00	1.10	5.87	1.71	0.49	0.24	0.00	0.00	9.41
S	0.00	0.00	3.06	1.83	0.24	0.00	0.12	0.00	5.26
SSW	0.00	0.12	1.96	1.34	0.12	0.00	0.00	0.00	3.55
SW	0.00	0.37	1.10	0.73	0.37	0.00	0.00	0.00	2.57
WSW	0.00	0.12	0.61	0.00	0.12	0.00	0.00	0.00	0.86
w	0.00	0.12	0.49	1.22	0.12	0.00	0.00	0.00	1.96
WNW	0.00	0.24	1.59	0.12	0.00	0.00	0.00	0.00	1.96
NW	0.00	0.24	1.83	0.61	0.12	0.12	0.00	0.00	2.93
NNW	0.00	0.61	2.20	2.20	0.37	0.12	0.00	0.00	5.50
TOTAL	0.49	6.97	53.55	32.64	5.75	0.49	0.12	0.00	
THIS STABILITY CLASS ACCOUNTS FOR					29.92 PERCENT OF THE TOTAL				2734

WSES-FSAR-UNIT-3

TABLE 2.3-47

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3 7/72-6/75 & 2/77-2/78

JANUARY, TOTAL FOR PERIOD

STABILITY CLASS F

PERCENTAGE FREQUENCY DISTRIBUTION

NUMBER OF OBSERVATIONS 313

+----- WIND SPEED (MPH) -----+									
WIND DIRECTION -----	CALM ----	0.8 3.0 ----	3.1 7.0 ----	7.1 12.0 ----	12.1 18.0 ----	18.1 24.0 ----	24.1 32.0 ----	ABOVE 32.0 ----	TOTAL -----
CALM	2.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.56
N	0.00	0.96	1.28	0.00	0.00	0.00	0.00	0.00	2.24
NNE	0.00	1.28	6.71	0.96	0.00	0.00	0.00	0.00	8.95
NE	0.00	1.60	10.54	2.24	0.00	0.00	0.00	0.00	14.38
ENE	0.00	1.28	9.90	0.32	0.00	0.00	0.00	0.00	11.50
E	0.00	1.28	5.43	1.92	0.00	0.00	0.00	0.00	8.63
ESE	0.00	3.19	7.35	0.00	0.00	0.00	0.00	0.00	10.54
SE	0.00	3.19	5.75	0.00	0.00	0.00	0.00	0.00	8.95
SSE	0.00	0.96	5.43	0.00	0.00	0.00	0.00	0.00	6.39
S	0.00	0.64	1.60	0.00	0.00	0.00	0.00	0.00	2.24
SSW	0.00	1.28	2.24	0.96	0.00	0.00	0.00	0.00	4.47
SW	0.00	1.28	0.64	0.00	0.00	0.00	0.00	0.00	1.92
WSW	0.00	2.24	0.96	0.32	0.00	0.00	0.00	0.00	3.51
W	0.00	0.96	1.92	0.00	0.00	0.00	0.00	0.00	2.88
WNW	0.00	1.60	0.96	0.00	0.00	0.00	0.00	0.00	2.56
NW	0.00	1.92	2.56	0.64	0.00	0.00	0.00	0.00	5.11
NNW	0.00	1.92	0.64	0.64	0.00	0.00	0.00	0.00	3.19
TOTAL	2.56	25.56	63.90	7.99	0.00	0.00	0.00	0.00	
THIS STABILITY CLASS ACCOUNTS FOR				11.45 PERCENT OF THE TOTAL					2734

WSES-FSAR-UNIT-3

TABLE 2.3-48

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3

7/72-6/75 & 2/77-2/78

JANUARY, TOTAL FOR PERIOD

STABILITY CLASS G

PERCENTAGE FREQUENCY DISTRIBUTION

NUMBER OF OBSERVATIONS = 195

+----- WIND SPEED (MPH) -----+									
WIND DIRECTION -----	CALM ---	0.8 3.0 ---	3.1 7.0 ---	7.1 12.0 ---	12.1 18.0 ---	18.1 24.0 ---	24.1 32.0 ---	ABOVE 32.0 ---	TOTAL -----
CALM	18.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	18.46
N	0.00	1.54	0.00	0.00	0.00	0.00	0.00	0.00	1.54
NNE	0.00	2.56	1.54	0.00	0.00	0.00	0.00	0.00	4.10
NE	0.00	4.62	5.64	0.00	0.00	0.00	0.00	0.00	10.26
ENE	0.00	2.56	7.18	0.00	0.00	0.00	0.00	0.00	9.74
E	0.00	0.00	1.03	0.00	0.00	0.00	0.00	0.00	1.03
ESE	0.00	0.51	1.03	0.00	0.00	0.00	0.00	0.00	1.54
SE	0.00	4.10	1.54	0.00	0.00	0.00	0.00	0.00	5.64
SSE	0.00	6.15	1.54	0.00	0.00	0.00	0.00	0.00	7.69
S	0.00	3.08	0.51	0.00	0.00	0.00	0.00	0.00	3.59
SSW	0.00	3.59	2.56	0.00	0.00	0.00	0.00	0.00	6.15
SW	0.00	5.64	0.00	0.00	0.00	0.00	0.00	0.00	5.64
WSW	0.00	4.10	0.00	0.00	0.00	0.00	0.00	0.00	4.10
W	0.00	3.59	1.54	0.00	0.00	0.00	0.00	0.00	5.13
WNW	0.00	3.08	0.00	0.00	0.00	0.00	0.00	0.00	3.08
NW	0.00	4.62	1.54	0.00	0.00	0.00	0.00	0.00	6.15
NNW	0.00	5.64	0.51	0.00	0.00	0.00	0.00	0.00	6.15
TOTAL	18.46	55.38	26.15	0.00	0.00	0.00	0.00	0.00	

THIS STABILITY CLASS ACCOUNTS FOR 7.13 PERCENT OF THE TOTAL 2734

WSES-FSAR-UNIT-3

TABLE 2.3-49

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3  
 FEBRUARY, TOTAL FOR PERIOD  
 PERCENTAGE FREQUENCY DISTRIBUTION

7/72-6/75 & 2/77-2/78  
 STABILITY CLASS A  
 NUMBER OF OBSERVATIONS = 249

+----- WIND SPEED (MPH) -----+									
WIND DIRECTION	CALM	0.8 3.0	3.1 7.0	7.1 12.0	12.1 18.0	18.1 24.0	24.1 32.0	ABOVE 32.0	TOTAL
-----	---	---	---	---	---	---	---	---	
CALM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
N	0.00	0.00	1.20	0.80	1.20	0.00	0.00	0.00	3.21
NNE	0.00	0.80	4.42	4.82	0.00	0.00	0.00	0.00	10.04
NE	0.00	0.00	6.43	7.63	0.00	0.00	0.00	0.00	14.06
ENE	0.00	0.00	0.80	1.20	0.00	0.00	0.00	0.00	2.01
E	0.00	0.00	0.40	0.80	0.00	0.00	0.00	0.00	1.20
ESE	0.00	0.00	0.80	4.42	0.80	0.00	0.00	0.00	6.02
SE	0.00	0.00	1.20	1.20	0.40	0.00	0.00	0.00	2.81
SSE	0.00	0.00	0.80	2.81	0.80	0.00	0.00	0.00	4.42
S	0.00	0.00	2.01	2.41	0.80	0.00	0.00	0.00	5.22
SSW	0.00	0.00	1.61	2.01	0.00	0.00	0.00	0.00	3.61
SW	0.00	0.00	2.41	0.80	0.40	0.00	0.00	0.00	3.61
WSW	0.00	0.00	0.40	1.20	1.61	1.61	0.00	0.00	4.82
W	0.00	0.40	0.40	2.81	3.21	0.00	0.00	0.00	6.83
WNW	0.00	0.00	2.41	2.01	1.61	0.00	0.00	0.00	6.02
NW	0.00	0.00	2.81	7.63	2.01	0.00	0.00	0.00	12.45
NNW	0.00	0.40	2.01	8.43	2.81	0.00	0.00	0.00	13.65
TOTAL	0.00	1.61	30.12	51.00	15.66	1.61	0.00	0.00	

THIS STABILITY CLASS ACCOUNTS FOR 9.63 PERCENT OF THE TOTAL 2585

WSES-FSAR-UNIT-3

TABLE 2.3-50

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3

7/72-6/75 & 2/77-2/78

FEBRUARY, TOTAL FOR PERIOD

STABILITY CLASS B

PERCENTAGE FREQUENCY DISTRIBUTION

NUMBER OF OBSERVATIONS 67

+----- WIND SPEED (MPH) -----+									
WIND DIRECTION -----	CALM ----	0.8 3.0 ----	3.1 7.0 ----	7.1 12.0 ----	12.1 18.0 ----	18.1 24.0 ----	24.1 32.0 -----	ABOVE 32.0 ----	TOTAL -----
CALM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
N	0.00	0.00	1.49	4.48	0.00	0.00	0.00	0.00	5.97
NNE	0.00	0.00	0.00	1.49	0.00	0.00	0.00	0.00	1.49
NE	0.00	0.00	8.96	7.46	0.00	0.00	0.00	0.00	16.42
ENE	0.00	0.00	1.49	2.99	0.00	1.49	0.00	0.00	5.97
E	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ESE	0.00	0.00	0.00	0.00	1.49	0.00	0.00	0.00	1.49
SE	0.00	0.00	0.00	2.99	1.49	0.00	0.00	0.00	4.48
SSE	0.00	0.00	1.49	1.49	0.00	0.00	0.00	0.00	2.99
S	0.00	0.00	1.49	1.49	4.48	0.00	0.00	0.00	7.46
SSW	0.00	0.00	0.00	4.48	4.48	0.00	0.00	0.00	8.96
SW	0.00	0.00	0.00	1.49	5.97	0.00	0.00	0.00	7.46
WSW	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
W	0.0	0.00	1.49	1.49	4.48	0.00	0.00	0.00	7.46
WNW	0.00	0.00	0.00	1.49	2.99	0.00	0.00	0.00	4.48
NW	0.00	0.00	0.00	5.97	0.00	0.00	0.00	0.00	5.97
NNW	0.00	0.00	1.49	13.43	4.48	0.00	0.00	0.00	19.40
TOTAL	0.00	0.00	17.91	50.75	29.85	1.49	0.00	0.00	
THIS STABILITY CLASS ACCOUNTS FOR				2.59 PERCENT OF THE TOTAL					2585

WSES-FSAR-UNIT-3

TABLE 2.3-51

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3 7/72-6/75 & 2/77-2/78

FEBRUARY, TOTAL FOR PERIOD

STABILITY CLASS C

PERCENTAGE FREQUENCY DISTRIBUTION

NUMBER OF OBSERVATIONS = 93

+----- WIND SPEED (MPH) -----+									
WIND DIRECTION -----	CALM ----	0.8 3.0 ----	3.1 7.0 ----	7.1 12.0 ----	12.1 18.0 ----	18.1 24.0 ----	24.1 32.0 ----	ABOVE 32.0 ----	TOTAL -----
CALM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
N	0.00	0.00	1.08	3.23	2.15	0.00	0.00	0.00	6.45
NNE	0.00	0.00	2.15	4.30	0.00	0.00	0.00	0.00	6.45
NE	0.00	0.00	4.30	6.45	1.08	0.00	0.00	0.00	11.83
ENE	0.00	0.00	3.23	0.00	0.00	1.08	0.00	0.00	4.30
E	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ESE	0.00	0.00	0.00	1.08	1.08	0.00	0.00	0.00	2.15
SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SSE	0.00	0.00	1.08	4.30	0.00	0.00	0.00	0.00	5.38
S	0.00	0.00	0.00	4.30	2.15	1.08	0.00	0.00	7.53
SSW	0.00	0.00	2.15	4.30	1.08	0.00	0.00	0.00	7.53
SW	0.00	0.00	1.08	6.45	1.08	0.00	0.00	0.00	8.60
WSW	0.00	0.00	0.00	1.08	4.30	0.00	0.00	0.00	5.38
W	0.00	0.00	0.00	0.00	5.38	0.00	0.00	0.00	5.38
WNW	0.00	0.00	1.08	1.08	2.15	0.00	0.00	0.00	4.30
NW	0.00	0.00	4.30	2.15	1.08	0.00	0.00	0.00	7.53
NNW	0.00	1.08	2.15	12.90	1.08	0.00	0.00	0.00	17.20
TOTAL	0.00	1.08	22.58	51.61	22.58	2.15	0.00	0.00	
THIS STABILITY CLASS ACCOUNTS FOR				3.60 PERCENT OF THE TOTAL					2585

WSES-FSAR-UNIT-3

TABLE 2.3-52

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3

7/72-6/75 & 2/77-2/78

FEBRUARY, TOTAL FOR PERIOD

STABILITY CLASS D

PERCENTAGE FREQUENCY DISTRIBUTION

NUMBER OF OBSERVATIONS = 696

WIND DIRECTION -----	+----- WIND SPEED (MPH) -----+								TOTAL -----
	CALM ----	0.8 3.0 ----	3.1 7.0 ----	7.1 12.0 ----	12.1 18.0 ----	18.1 24.0 ----	24.1 32.0 ----	ABOVE 32.0 ----	
CALM	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
N	0.00	0.57	1.58	4.02	2.30	0.14	0.00	0.00	8.62
NNE	0.00	0.29	2.59	3.45	1.29	0.00	0.00	0.00	7.61
NE	0.00	0.72	2.44	5.89	1.01	0.00	0.00	0.00	10.06
ENE	0.00	0.29	1.58	0.57	2.73	0.29	0.00	0.00	5.46
E	0.00	0.14	0.14	1.29	0.14	0.00	0.00	0.00	1.72
ESE	0.00	0.14	1.01	4.45	0.57	0.00	0.00	0.00	6.18
SE	0.00	0.00	1.01	2.30	2.01	0.43	0.00	0.00	5.75
SSE	0.00	0.00	1.87	2.87	1.72	0.86	0.00	0.00	7.33
S	0.00	0.14	0.86	1.87	2.30	0.72	0.00	0.00	5.89
SSW	0.00	0.00	1.01	2.01	2.44	0.72	0.00	0.00	6.18
SW	0.00	0.00	1.01	1.58	1.44	0.14	0.00	0.00	4.17
WSW	0.00	0.43	0.57	1.15	0.57	0.29	0.00	0.00	3.02
W	0.00	0.29	0.43	1.44	1.72	0.00	0.00	0.00	3.88
WNW	0.00	0.14	0.43	1.44	1.15	0.00	0.00	0.00	3.16
NW	0.00	1.15	3.30	1.15	3.16	0.00	0.00	0.00	8.76
NNW	0.00	0.29	3.45	5.32	3.02	0.00	0.00	0.00	12.07
TOTAL	0.14	4.60	23.28	40.80	27.59	3.59	0.00	0.00	

THIS STABILITY CLASS ACCOUNTS FOR

26.92 PERCENT OF THE TOTAL

2585

WSES-FSAR-UNIT-3

TABLE 2.3-53

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3 7/72-6/75 & 2/77-2/78

FEBRUARY, TOTAL FOR PERIOD

STABILITY CLASS E

PERCENTAGE FREQUENCY DISTRIBUTION

NUMBER OF OBSERVATIONS = 911

+----- WIND SPEED (MPH) -----+									
WIND DIRECTION	CALM	0.8 3.0	3.1 7.0	7.1 12.0	12.1 18.0	18.1 24.0	24.1 32.0	ABOVE 32.0	TOTAL
CALM	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
N	0.00	0.22	2.96	4.28	0.99	0.00	0.00	0.00	8.45
NNE	0.00	0.44	2.85	1.65	0.11	0.00	0.00	0.00	5.05
NE	0.00	0.33	1.98	1.87	0.00	0.00	0.00	0.00	4.17
ENE	0.00	0.55	1.98	0.99	0.99	0.00	0.00	0.00	4.50
E	0.00	0.00	0.55	1.10	0.11	0.00	0.00	0.00	1.76
ESE	0.00	0.44	3.29	3.40	1.21	0.00	0.00	0.00	8.34
SE	0.00	0.66	2.20	1.98	1.43	0.00	0.00	0.00	6.26
SSE	0.00	1.32	2.85	4.17	2.63	0.00	0.44	0.00	11.42
S	0.00	0.99	2.96	3.18	1.54	0.77	0.11	0.00	9.55
SSW	0.00	0.66	1.76	0.55	0.77	0.55	0.11	0.00	4.39
SW	0.00	0.55	1.32	1.87	0.77	0.22	0.00	0.00	4.72
WSW	0.00	0.22	1.43	1.10	0.44	0.11	0.00	0.00	3.29
W	0.00	0.11	1.10	1.54	0.55	0.11	0.00	0.00	3.40
WNW	0.00	0.22	1.32	0.88	0.66	0.00	0.00	0.00	3.07
NW	0.00	0.44	3.18	2.96	1.21	0.00	0.00	0.00	7.79
NNW	0.00	0.66	5.27	5.71	2.09	0.00	0.00	0.00	13.72
TOTAL	0.11	7.79	36.99	37.21	15.48	1.76	0.66	0.00	

THIS STABILITY CLASS ACCOUNTS FOR 35.24 PERCENT OF THE TOTAL 2585

## WSES-FSAR-UNIT-3

TABLE 2.3-54

DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3

7/72-6/75 &amp; 2/77-2/78

FEBRUARY, TOTAL FOR PERIOD

STABILITY CLASS F

PERCENTAGE FREQUENCY DISTRIBUTION

NUMBER OF OBSERVATIONS = 363

+----- WIND SPEED (MPH) -----+									
WIND DIRECTION	CALM	0.8 3.0	3.1 7.0	7.1 12.0	12.1 18.0	18.1 24.0	24.1 32.0	ABOVE 32.0	TOTAL
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
CALM	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28
N	0.00	0.55	1.93	0.55	0.00	0.00	0.00	0.00	3.03
NNE	0.00	0.83	1.93	0.00	0.00	0.00	0.00	0.00	2.75
NE	0.00	2.20	4.41	0.00	0.00	0.00	0.00	0.00	6.61
ENE	0.00	2.20	3.86	1.10	0.00	0.00	0.00	0.00	7.16
E	0.00	0.28	1.93	1.65	0.00	0.00	0.00	0.00	3.86
ESE	0.00	1.10	1.38	0.00	0.00	0.00	0.00	0.00	2.48
SE	0.00	1.93	4.41	0.28	0.00	0.00	0.00	0.00	6.61
SSE	0.00	2.48	7.99	0.28	0.00	0.00	0.00	0.00	10.74
S	0.00	1.65	6.06	0.28	0.00	0.00	0.00	0.00	7.99
SSW	0.00	1.10	3.86	0.55	0.00	0.00	0.00	0.00	5.51
SW	0.00	1.10	6.89	3.03	0.00	0.00	0.00	0.00	11.02
WSW	0.00	0.28	7.16	0.83	0.55	0.00	0.00	0.00	8.82
W	0.00	1.38	1.65	1.10	0.00	0.00	0.00	0.00	4.13
WNW	0.00	1.10	1.93	0.28	0.28	0.00	0.00	0.00	3.58
NW	0.00	1.65	2.75	1.38	0.28	0.00	0.00	0.00	6.06
NNW	0.00	1.38	4.41	3.58	0.00	0.00	0.00	0.00	9.37
TOTAL	0.28	21.21	62.53	14.88	1.10	0.00	0.00	0.00	

THIS STABILITY CLASS ACCOUNTS FOR 14.04 PERCENT OF THE TOTAL 2585

WSES-FSAR-UNIT-3

TABLE 2.3-55

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3 7/72-6/75 & 2/77-2/78

FEBRUARY, TOTAL FOR PERIOD

STABILITY CLASS G

PERCENTAGE FREQUENCY DISTRIBUTION

NUMBER OF OBSERVATIONS = 206

+----- WIND SPEED (MPH) -----+									
WIND DIRECTION	CALM	0.8 3.0	3.1 7.0	7.1 12.0	12.1 18.0	18.1 24.0	24.1 32.0	ABOVE 32.0	TOTAL
CALM	4.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.37
N	0.00	0.97	0.97	0.00	0.00	0.00	0.00	0.00	1.94
NNE	0.00	0.97	0.00	0.00	0.00	0.00	0.00	0.00	0.97
NE	0.00	5.34	2.91	0.00	0.00	0.00	0.00	0.00	8.25
ENE	0.00	1.94	2.43	0.00	0.00	0.00	0.00	0.00	4.37
E	0.00	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.49
ESE	0.00	1.46	0.00	0.00	0.00	0.00	0.00	0.00	1.46
SE	0.00	1.94	1.94	0.00	0.00	0.00	0.00	0.00	3.88
SSE	0.00	8.74	6.80	0.97	0.00	0.00	0.00	0.00	16.50
S	0.00	12.14	4.37	0.00	0.00	0.00	0.00	0.00	16.50
SSW	0.00	4.85	2.91	0.00	0.00	0.00	0.00	0.00	7.77
SW	0.00	3.40	2.43	0.00	0.00	0.00	0.00	0.00	5.83
WSW	0.00	5.83	0.97	0.49	0.00	0.00	0.00	0.00	7.28
W	0.00	5.83	1.46	0.00	0.00	0.00	0.00	0.00	7.28
WNW	0.00	3.40	0.97	0.49	0.00	0.00	0.00	0.00	4.85
NW	0.00	3.88	2.43	0.00	0.00	0.00	0.00	0.00	6.31
NNW	0.00	1.94	0.00	0.00	0.00	0.00	0.00	0.00	1.94
TOTAL	4.37	63.11	30.58	1.94	0.00	0.00	0.00	0.00	

THIS STABILITY CLASS ACCOUNTS FOR 7.97 PERCENT OF THE TOTAL 2585

## WSES-FSAR-UNIT-3

TABLE 2.3-56

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3      7/72-6/75&2/77-2/78  
 MARCH, TOTAL FOR PERIOD      STABILITY CLASS A  
 PERCENTAGE FREQUENCY DISTRIBUTION      NUMBER OF OBSERVATIONS = 306

		+----- WIND SPEED (MPH) -----+							
WIND DIRECTION	CALM	0.8 3.0	3.1 7.0	7.1 12.0	12.1 18.0	18.1 24.0	24.1 32.0	ABOVE 32.0	TOTAL
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
CALM	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33
N	0.00	0.00	0.33	0.33	0.65	0.00	0.00	0.00	1.31
NNE	0.00	0.33	1.31	5.56	2.94	0.00	0.00	0.00	10.13
NE	0.00	0.33	5.56	5.23	0.33	0.00	0.00	0.00	11.44
ENE	0.00	0.00	3.92	7.19	0.98	0.00	0.00	0.00	12.09
E	0.00	0.33	0.00	1.31	0.33	0.00	0.00	0.00	1.96
ESE	0.00	0.00	1.96	4.58	3.27	0.00	0.00	0.00	9.80
SE	0.00	0.00	0.65	3.92	2.61	0.00	0.00	0.00	7.19
SSE	0.00	0.98	1.31	4.25	3.59	1.31	0.00	0.00	11.44
S	0.00	0.00	0.33	1.96	2.61	0.00	0.00	0.00	4.90
SSW	0.00	0.65	0.33	1.96	3.27	0.33	0.00	0.00	6.54
SW	0.00	0.00	0.65	1.63	3.27	0.00	0.00	0.00	5.56
WSW	0.00	0.00	0.33	1.63	1.31	0.00	0.00	0.00	3.27
W	0.00	0.33	0.00	0.65	1.63	0.00	0.00	0.00	2.61
WNW	0.00	0.00	0.33	0.65	0.00	0.00	0.00	0.00	0.98
NW	0.00	0.33	0.98	2.61	0.00	0.00	0.00	0.00	3.92
NNW	0.00	0.00	0.98	4.58	0.98	0.00	0.00	0.00	6.54
TOTAL	0.33	3.27	18.95	48.04	27.78	1.63	0.00	0.00	

THIS STABILITY CLASS ACCOUNTS FOR 11.42 PERCENT OF THE TOTAL 2679

## WSES-FSAR-UNIT-3

TABLE 2.3-57

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3 7/72-6/75 & 2/77-2/78  
 MARCH, TOTAL FOR PERIOD STABILITY CLASS B

PERCENTAGE FREQUENCY DISTRIBUTION NUMBER OF OBSERVATIONS 65

		+----- WIND SPEED (MPH) -----+							
WIND DIRECTION	CALM	0.8 3.0	3.1 7.0	7.1 12.0	12.1 18.0	18.1 24.0	24.1 32.0	ABOVE 32.0	TOTAL
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
CALM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NNE	0.00	0.00	1.54	7.69	3.08	0.00	0.00	0.00	12.31
NE	0.00	0.00	1.54	1.54	1.54	0.00	0.00	0.00	4.62
ENE	0.00	0.00	1.54	6.15	3.08	0.00	0.00	0.00	10.77
E	0.00	0.00	1.54	4.62	0.00	0.00	0.00	0.00	6.15
ESE	0.00	0.00	3.08	3.08	4.62	0.00	0.00	0.00	10.77
SE	0.00	0.00	0.00	0.00	6.15	1.54	0.00	0.00	7.69
SSE	0.00	0.00	1.54	3.08	1.54	7.69	0.00	0.00	13.85
S	0.00	0.00	0.00	0.00	3.08	0.00	0.00	0.00	3.08
SSW	0.00	0.00	0.00	1.54	4.62	0.00	0.00	0.00	6.15
SW	0.00	0.00	1.54	4.62	4.62	0.00	0.00	0.00	10.77
WSW	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
W	0.00	0.00	1.54	1.54	3.08	0.00	0.00	0.00	6.15
WNW	0.00	0.00	0.00	1.54	1.54	0.00	0.00	0.00	3.08
NW	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NNW	0.00	0.00	0.00	1.54	3.08	0.00	0.00	0.00	4.62
TOTAL	0.00	0.00	13.85	36.92	40.00	9.23	0.00	0.00	

THIS STABILITY CLASS ACCOUNTS FOR 2.43 PERCENT OF THE TOTAL 2679

WSES-FSAR-UNIT-3

TABLE 2.3-58

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3 7/72-6/75 & 2/77-2/78  
 MARCH, TOTAL FOR PERIOD STABILITY CLASS C  
 PERCENTAGE FREQUENCY DISTRIBUTION NUMBER OF OBSERVATIONS = 85

		+----- WIND SPEED (MPH) -----+							
WIND DIRECTION	CALM	0.8 3.0	3.1 7.0	7.1 12.0	12.1 18.0	18.1 24.0	24.1 32.0	ABOVE 32.0	TOTAL
CALM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
N	0.00	0.00	0.00	1.18	2.35	0.00	0.00	0.00	3.53
NNE	0.00	0.00	1.18	1.18	1.18	0.00	0.00	0.00	3.53
NE	0.00	0.00	2.35	2.35	2.35	1.18	0.00	0.00	8.24
ENE	0.00	1.18	2.35	3.53	1.18	0.00	0.00	0.00	8.24
E	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ESE	0.00	0.00	0.00	3.53	1.18	0.00	0.00	0.00	4.71
SE	0.00	0.00	0.00	3.53	5.88	1.18	0.00	0.00	10.59
SSE	0.00	0.00	1.18	1.18	4.71	5.88	0.00	0.00	12.94
S	0.00	0.00	0.00	1.18	2.35	0.00	0.00	0.00	3.53
SSW	0.00	0.00	2.35	0.00	3.53	0.00	0.00	0.00	5.88
SW	0.00	0.00	1.18	7.06	7.06	0.00	0.00	0.00	15.29
WSW	0.00	0.00	3.53	0.00	4.71	0.00	0.00	0.00	8.24
W	0.00	0.00	0.00	1.18	2.35	0.00	0.00	0.00	3.53
WNW	0.00	0.00	0.00	0.00	3.53	0.00	0.00	0.00	3.53
NW	0.00	0.00	1.18	0.00	0.00	0.00	0.00	0.00	1.18
NNW	0.00	0.00	1.18	2.35	3.53	0.00	0.00	0.00	7.06
TOTAL	0.00	1.18	16.47	28.24	45.88	8.24	0.00	0.00	

THIS STABILITY CLASS ACCOUNTS FOR 3.17 PERCENT OF THE TOTAL 2679

## WSES-FSAR-UNIT-3

TABLE 2.3-59

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3 7/72-6/75 &amp; 2/77-2/78

MARCH, TOTAL FOR PERIOD

STABILITY CLASS D

PERCENTAGE FREQUENCY DISTRIBUTION

NUMBER OF OBSERVATIONS = 874

		+----- WIND SPEED (MPH) -----+							
WIND DIRECTION	CALM	0.8 3.0	3.1 7.0	7.1 12.0	12.1 18.0	18.1 24.0	24.1 32.0	ABOVE 32.0	TOTAL
CALM	0.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.34
N	0.00	0.00	0.23	1.83	0.57	0.00	0.00	0.00	2.63
NNE	0.00	0.23	0.57	2.52	1.26	0.23	0.00	0.00	4.81
NE	0.00	0.11	1.60	2.40	1.83	0.11	0.00	0.00	6.06
ENE	0.00	0.00	1.26	3.89	1.37	0.00	0.00	0.00	6.52
E	0.00	0.00	1.49	1.60	0.23	0.00	0.00	0.00	3.32
ESE	0.00	0.00	1.95	3.20	2.29	0.57	0.00	0.00	8.01
SE	0.00	0.11	1.49	5.61	6.98	1.60	0.11	0.00	15.90
SSE	0.00	0.23	1.26	3.55	7.09	2.52	0.57	0.00	15.22
S	0.00	0.23	1.03	3.20	4.46	1.14	0.11	0.00	10.18
SSW	0.00	0.00	1.03	2.63	2.75	0.23	0.11	0.00	6.75
SW	0.00	0.11	0.46	1.72	1.60	0.11	0.00	0.00	4.00
WSW	0.00	0.00	0.80	1.03	1.03	0.23	0.00	0.00	3.09
W	0.00	0.11	0.34	0.69	0.34	0.00	0.00	0.00	1.49
WNW	0.00	0.00	0.34	1.26	1.37	0.00	0.00	0.00	2.97
NW	0.00	0.00	0.57	1.03	1.49	0.00	0.00	0.00	3.09
NNW	0.00	0.00	1.37	2.63	1.60	0.00	0.00	0.00	5.61
TOTAL	0.34	1.14	15.79	38.79	36.27	6.75	0.92	0.00	

THIS STABILITY CLASS ACCOUNTS FOR 32.62 PERCENT OF THE TOTAL 2679

WSES-FSAR-UNIT-3

TABLE 2.3-60

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3 7/72-6/75 & 2/77-2/78

MARCH, TOTAL FOR PERIOD

STABILITY CLASS E

PERCENTAGE FREQUENCY DISTRIBUTION

NUMBER OF OBSERVATIONS = 978

		+----- WIND SPEED (MPH) -----+							
WIND DIRECTION	CALM	0.8 3.0	3.1 7.0	7.1 12.0	12.1 18.0	18.1 24.0	24.1 32.0	ABOVE 32.0	TOTAL
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
CALM	0.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.51
N	0.00	0.41	1.02	1.64	1.02	0.10	0.00	0.00	4.19
NNE	0.00	0.31	1.33	2.76	0.41	0.10	0.00	0.00	4.91
NE	0.00	0.31	4.70	4.50	1.02	0.00	0.00	0.00	10.53
ENE	0.00	0.31	2.97	4.60	1.33	0.00	0.00	0.00	9.20
E	0.00	0.00	1.94	1.53	0.00	0.00	0.00	0.00	3.48
ESE	0.00	0.41	5.01	3.37	1.53	0.00	0.00	0.00	10.33
SE	0.00	0.51	5.52	4.91	1.33	0.41	0.00	0.00	12.68
SSE	0.00	0.51	3.27	4.91	1.53	0.51	0.20	0.00	10.94
S	0.00	0.10	3.07	4.60	2.56	0.41	0.00	0.00	10-74
SSW	0.00	0.72	2.66	3.27	0.51	0.20	0.00	0.00	7.36
SW	0.00	0.41	1.33	2.04	0.10	0.10	0.00	0.00	3.99
WSW	0.00	0.20	0.72	1.74	0.20	0.00	0.00	0.00	2.86
W	0.00	0.00	1.12	0.41	0.10	0.00	0.00	0.00	1.64
WNW	0.00	0.31	0.72	0.20	0.10	0.00	0.00	0.00	1.33
NW	0.00	0.20	0.51	0.61	0.10	0.00	0.00	0.00	1.43
NNW	0.00	0.41	1.53	1.74	0.20	0.00	0.00	0.00	3.89
TOTAL	0.51	5.11	37.42	42.84	12.07	1.84	0.20	0.00	

THIS STABILITY CLASS ACCOUNTS FOR 36.51 PERCENT OF THE TOTAL 2679

## WSES-FSAR-UNIT-3

TABLE 2.3-61

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3      7/72-6/75 & 2/77-2/78  
 MARCH, TOTAL FOR PERIOD      STABILITY CLASS F  
 PERCENTAGE FREQUENCY DISTRIBUTION      NUMBER OF OBSERVATIONS = 246

+----- WIND SPEED (MPH) -----+									
WIND DIRECTION	CALM	0.8 3.0	3.1 7.0	7.1 12.0	12.1 18.0	18.1 24.0	24.1 32.0	ABOVE 32.0	TOTAL
CALM	4.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.07
N	0.00	0.81	3.66	1.22	0.00	0.00	0.00	0.00	5.69
NNE	0.00	1.63	2.44	0.81	0.00	0.00	0.00	0.00	4.88
NE	0.00	2.03	3.66	0.81	1.22	0.00	0.00	0.00	7.72
ENE	0.00	2.03	7.32	1.63	1.22	0.00	0.00	0.00	12.20
E	0.00	0.81	2.03	1.22	0.00	0.00	0.00	0.00	4.07
ESE	0.00	1.63	6.10	0.81	0.00	0.00	0.00	0.00	8.54
SE	0.00	2.03	5.28	0.41	0.00	0.00	0.00	0.00	7.72
SSE	0.00	1.63	10.98	1.22	0.00	0.00	0.00	0.00	13.82
S	0.00	1.63	5.28	0.81	0.00	0.00	0.00	0.00	7.72
SSW	0.00	0.41	2.85	0.00	0.00	0.00	0.00	0.00	3.25
SW	0.00	0.81	2.44	1.22	0.00	0.00	0.00	0.00	4.47
WSW	0.00	0.41	0.81	0.00	0.00	0.00	0.00	0.00	1.22
W	0.00	1.22	1.63	0.00	0.00	0.00	0.00	0.00	2.85
WNW	0.00	1.63	1.22	0.00	0.00	0.00	0.00	0.00	2.85
NW	0.00	1.63	2.44	0.41	0.00	0.00	0.00	0.00	4.47
NNW	0.00	1.63	2.85	0.00	0.00	0.00	0.00	0.00	4.47
TOTAL	4.07	21.95	60.98	10.57	2.44	0.00	0.00	0.00	

THIS STABILITY CLASS ACCOUNTS FOR 9.18 PERCENT OF THE TOTAL 2679

## WSES-FSAR-UNIT-3

TABLE 2.3-62

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3 7/72-6/75 &amp; 2/77-2/78

MARCH, TOTAL FOR PERIOD

STABILITY CLASS G

PERCENTAGE FREQUENCY DISTRIBUTION

NUMBER OF OBSERVATIONS = 125

		+----- WIND SPEED (MPH) -----+							
WIND DIRECTION	CALM	0.8 3.0	3.1 7.0	7.1 12.0	12.1 18.0	18.1 24.0	24.1 32.0	ABOVE 32.0	TOTAL
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
CALM	16.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.80
N	0.00	3.20	3.20	0.00	0.00	0.00	0.00	0.00	6.40
NNE	0.00	4.00	0.00	0.80	0.00	0.00	0.00	0.00	4.80
NE	0.00	4.00	2.40	0.00	0.00	0.00	0.00	0.00	6.40
ENE	0.00	3.20	3.20	0.00	0.00	0.00	0.00	0.00	6.40
E	0.00	2.40	0.80	0.00	0.00	0.00	0.00	0.00	3.20
ESE	0.00	0.80	2.40	0.00	0.00	0.00	0.00	0.00	3.20
SE	0.00	7.20	4.80	0.00	0.00	0.00	0.00	0.00	12.00
SSE	0.00	3.20	4.00	0.80	0.00	0.00	0.00	0.00	8.00
S	0.00	3.20	2.40	0.00	0.00	0.00	0.00	0.00	5.60
SSW	0.00	3.20	0.00	0.00	0.00	0.00	0.00	0.00	3.20
SW	0.00	3.20	0.80	0.00	0.00	0.00	0.00	0.00	4.00
WSW	0.00	3.20	0.00	0.00	0.00	0.00	0.00	0.00	3.20
W	0.00	3.20	2.40	0.00	0.00	0.00	0.00	0.00	5.60
WNW	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NW	0.00	4.00	2.40	0.00	0.80	0.00	0.00	0.00	7.20
NNW	0.00	1.60	0.80	1.60	0.00	0.00	0.00	0.00	4.00
TOTAL	16.80	49.60	29.60	3.20	0.80	0.00	0.00	0.00	

THIS STABILITY CLASS ACCOUNTS FOR 4.67 PERCENT OF THE TOTAL 2679

WSES-FSAR-UNIT-3

TABLE 2.3-63

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3 7/72-6/75 & 2/77-2/78

APRIL, TOTAL FOR PERIOD

STABILITY CLASS A

PERCENTAGE FREQUENCY DISTRIBUTION

NUMBER OF OBSERVATIONS = 585

		+----- WIND SPEED (MPH) -----+							
WIND DIRECTION	CALM	0.8 3.0	3.1 7.0	7.1 12.0	12.1 18.0	18.1 24.0	24.1 32.0	ABOVE 32.0	TOTAL
CALM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
N	0.00	0.17	1.71	1.03	0.17	0.00	0.00	0.00	3.08
NNE	0.00	0.51	4.44	3.08	0.17	0.00	0.00	0.00	8.21
NE	0.00	0.17	6.50	4.44	0.51	0.17	0.00	0.00	11.79
ENE	0.00	0.17	3.59	2.22	0.00	0.00	0.00	0.00	5.98
E	0.00	0.00	0.51	0.51	0.17	0.00	0.00	0.00	1.20
ESE	0.00	0.17	1.54	7.18	4.79	0.00	0.00	0.00	13.68
SE	0.00	0.17	0.34	5.47	5.30	1.03	0.17	0.00	12.48
SSE	0.00	0.00	1.20	3.76	3.93	1.20	0.00	0.00	10.09
S	0.00	0.00	0.34	1.88	2.22	0.85	0.00	0.00	5.30
SSW	0.00	0.00	1.20	1.88	0.85	0.34	0.00	0.00	4.27
SW	0.00	0.17	1.03	0.34	0.00	0.00	0.00	0.00	1.54
WSW	0.00	0.17	0.85	0.51	0.51	0.00	0.00	0.00	2.05
W	0.00	0.00	0.34	1.88	2.22	0.00	0.00	0.00	4.44
WNW	0.00	0.00	0.34	2.39	2.56	0.00	0.00	0.00	5.30
NW	0.00	0.17	1.20	2.05	0.85	0.00	0.00	0.00	4.27
NNW	0.00	0.17	2.05	2.05	2.05	0.00	0.00	0.00	6.32
TOTAL	0.00	2.05	27.18	40.68	26.32	3.59	0.17	0.00	

THIS STABILITY CLASS ACCOUNTS FOR 21.41 PERCENT OF THE TOTAL 2733

WSES-FSAR-UNIT-3

TABLE 2.3-64

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3 7/72-6/75 & 2/77-2/78

APRIL, TOTAL FOR PERIOD

STABILITY CLASS B

PERCENTAGE FREQUENCY DISTRIBUTION

NUMBER OF OBSERVATIONS = 72

		+----- WIND SPEED (MPH) -----+							
WIND DIRECTION	CALM	0.8 3.0	3.1 7.0	7.1 12.0	12.1 18.0	18.1 24.0	24.1 32.0	ABOVE 32.0	TOTAL
CALM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NNE	0.00	0.00	2.78	0.00	0.00	0.00	0.00	0.00	2.78
NE	0.00	0.00	2.78	0.00	0.00	0.00	0.00	0.00	2.78
ENE	0.00	0.00	2.78	1.39	0.00	0.00	0.00	0.00	4.17
E	0.00	1.39	0.00	1.39	5.56	0.00	0.00	0.00	8.33
ESE	0.00	0.00	0.00	4.17	1.39	0.00	0.00	0.00	5.56
SE	0.00	0.00	0.00	2.78	12.50	1.39	0.00	0.00	16.67
SSE	0.00	0.00	0.00	11.11	2.78	0.00	0.00	0.00	13.89
S	0.00	0.00	0.00	2.78	2.78	1.39	0.00	0.00	6.94
SSW	0.00	0.00	1.39	2.78	4.17	2.78	0.00	0.00	11.11
SW	0.00	0.00	0.00	1.39	0.00	0.00	0.00	0.00	1.39
WSW	0.00	0.00	4.17	0.00	0.00	0.00	0.00	0.00	4.17
W	0.00	0.00	1.39	1.39	0.00	0.00	0.00	0.00	2.78
WNW	0.00	0.00	1.39	4.17	1.39	0.00	0.00	0.00	6.94
NW	0.00	0.00	1.39	0.00	2.78	1.39	0.00	0.00	5.56
NNW	0.00	0.00	5.56	1.39	0.00	0.00	0.00	0.00	6.94
TOTAL	0.00	1.39	23.61	34.72	33.33	6.94	0.00	0.00	

THIS STABILITY CLASS ACCOUNTS FOR 2.63 PERCENT OF THE TOTAL 2733

WSES-FSAR-UNIT-3

TABLE 2.3-65

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3 7/72-6/75 & 2/77-2/78

APRIL, TOTAL FOR PERIOD

STABILITY CLASS C

PERCENTAGE FREQUENCY DISTRIBUTION

NUMBER OF OBSERVATIONS = 82

		+----- WIND SPEED (MPH) -----+							
WIND DIRECTION	CALM	0.8 3.0	3.1 7.0	7.1 12.0	12.1 18.0	18.1 24.0	24.1 32.0	ABOVE 32.0	TOTAL
CALM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NNE	0.00	0.00	1.22	0.00	0.00	0.00	0.00	0.00	1.22
NE	0.00	0.00	1.22	0.00	0.00	0.00	0.00	0.00	1.22
ENE	0.00	0.00	2.44	1.22	0.00	0.00	0.00	0.00	3.66
E	0.00	0.00	0.00	2.44	0.00	0.00	0.00	0.00	2.44
ESE	0.00	0.00	0.00	8.54	3.66	0.00	0.00	0.00	12.20
SE	0.00	0.00	0.00	10.98	9.76	0.00	0.00	0.00	20.73
SSE	0.00	0.00	1.22	6.10	3.66	1.22	0.00	0.00	12.20
S	0.00	0.00	0.00	1.22	4.88	3.66	0.00	0.00	9.76
SSW	0.00	0.00	0.00	4.88	0.00	1.22	0.00	0.00	6.10
SW	0.00	0.00	1.22	0.00	0.00	0.00	0.00	0.00	1.22
WSW	0.00	0.00	0.00	1.22	0.00	0.00	0.00	0.00	1.22
W	0.00	2.44	1.22	1.22	3.66	0.00	0.00	0.00	8.54
WNW	0.00	0.00	0.00	2.44	3.66	0.00	0.00	0.00	6.10
NW	0.00	1.22	3.66	0.00	2.44	0.00	0.00	0.00	7.32
NNW	0.00	1.22	1.22	3.66	0.00	0.00	0.00	0.00	6.10
TOTAL	0.00	4.88	13.41	43.90	31.71	6.10	0.00	0.00	

THIS STABILITY CLASS ACCOUNTS FOR 3.00 PERCENT OF THE TOTAL 2733

WSES-FSAR-UNIT-3

TABLE 2.3-66

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3 7/72-6/75 & 2/77-2/78

APRIL, TOTAL FOR PERIOD

STABILITY CLASS D

PERCENTAGE FREQUENCY DISTRIBUTION

NUMBER OF OBSERVATIONS = 615

+----- WIND SPEED (MPH) -----+									
WIND DIRECTION	CALM	0.8 3.0	3.1 7.0	7.1 12.0	12.1 18.0	18.1 24.0	24.1 32.0	ABOVE 32.0	TOTAL
CALM	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
N	0.00	0.16	1.46	0.98	0.16	0.00	0.00	0.00	2.76
NNE	0.00	0.49	1.30	1.46	0.81	0.00	0.00	0.00	4.07
NE	0.00	0.33	2.44	2.11	0.81	0.00	0.00	0.00	5.69
ENE	0.00	0.81	1.79	1.63	0.81	0.00	0.00	0.00	5.04
E	0.00	0.16	0.81	2.28	0.65	0.00	0.00	0.00	3.90
ESE	0.00	0.00	2.11	11.06	5.37	0.16	0.00	0.00	18.70
SE	0.00	0.00	0.81	6.02	5.85	0.49	0.00	0.00	13.17
SSE	0.00	0.33	1.14	6.02	4.39	0.81	0.00	0.00	12.68
S	0.00	0.16	0.49	5.53	4.88	0.49	0.00	0.00	11.54
SSW	0.00	0.16	0.98	1.79	1.14	0.00	0.00	0.00	4.07
SW	0.00	0.33	0.65	0.98	0.33	0.00	0.00	0.00	2.28
WSW	0.00	0.00	0.49	0.49	0.00	0.00	0.00	0.00	0.98
W	0.00	0.00	0.81	0.65	0.65	0.00	0.00	0.00	2.11
WNW	0.00	0.49	0.65	3.25	1.14	0.00	0.00	0.00	5.53
NW	0.00	0.49	1.30	1.30	0.81	0.00	0.00	0.00	3.90
NNW	0.00	0.00	0.98	1.95	0.49	0.00	0.00	0.00	3.41
TOTAL	0.16	3.90	18.21	47.48	28.29	1.95	0.00	0.00	

THIS STABILITY CLASS ACCOUNTS FOR 22.50 PERCENT OF THE TOTAL 2733

WSES-FSAR-UNIT-3

TABLE 2.3-67

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3 7/72-6/75 & 2/77-2/78

APRIL, TOTAL FOR PERIOD

STABILITY CLASS E

PERCENTAGE FREQUENCY DISTRIBUTION

NUMBER OF OBSERVATIONS = 790

		+----- WIND SPEED (MPH) -----+							
WIND DIRECTION	CALM	0.8 3.0	3.1 7.0	7.1 12.0	12.1 18.0	18.1 24.0	24.1 32.0	ABOVE 32.0	TOTAL
CALM	1.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.14
N	0.00	0.13	0.25	3.04	0.00	0.00	0.00	0.00	3.42
NNE	0.00	0.25	2.03	2.78	0.38	0.00	0.00	0.00	5.44
NE	0.00	0.25	3.42	3.67	0.76	0.00	0.00	0.00	8.10
ENE	0.00	0.51	1.52	2.66	0.89	0.00	0.00	0.00	5.57
E	0.00	0.13	2.15	1.65	0.51	0.00	0.00	0.00	4.43
ESE	0.00	0.51	6.58	5.32	1.01	0.13	0.00	0.00	13.54
SE	0.00	0.13	6.84	7.22	2.91	0.51	0.13	0.00	17.72
SSE	0.00	0.63	3.92	4.81	1.27	0.00	0.00	0.00	10.63
S	0.00	0.51	3.04	2.91	1.01	0.00	0.00	0.00	7.47
SSW	0.00	0.38	1.39	0.13	0.25	0.00	0.00	0.00	2.15
SW	0.00	0.00	0.38	0.25	0.00	0.00	0.00	0.00	0.63
WSW	0.00	0.38	0.38	0.13	0.00	0.13	0.00	0.00	1.01
W	0.00	0.25	1.01	1.01	0.25	0.00	0.00	0.00	2.53
WNW	0.00	0.51	2.41	1.27	0.76	0.00	0.00	0.00	4.94
NW	0.00	1.14	1.65	1.77	1.27	0.00	0.00	0.00	5.82
NNW	0.00	0.38	1.27	3.54	0.25	0.00	0.00	0.00	5.44
TOTAL	1.14	6.08	38.23	42.15	11.52	0.76	0.13	0.00	

THIS STABILITY CLASS ACCOUNTS FOR 28.91 PERCENT OF THE TOTAL 2733

WSES-FSAR-UNIT-3

TABLE 2.3-68

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3 7/72-6/75 & 2/77-2/78

APRIL, TOTAL FOR PERIOD

STABILITY CLASS F

PERCENTAGE FREQUENCY DISTRIBUTION NUMBER OF OBSERVATIONS = 274

		+----- WIND SPEED (MPH) -----+							
WIND DIRECTION	CALM	0.8 3.0	3.1 7.0	7.1 12.0	12.1 18.0	18.1 24.0	24.1 32.0	ABOVE 32.0	TOTAL
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
CALM	3.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.65
N	0.00	0.00	2.92	0.36	0.00	0.00	0.00	0.00	3.28
NNE	0.00	1.82	2.19	0.00	0.00	0.00	0.00	0.00	4.01
NE	0.00	1.82	4.74	0.73	0.00	0.00	0.00	0.00	7.30
ENE	0.00	1.82	8.76	0.00	0.00	0.00	0.00	0.00	10.58
E	0.00	0.73	2.19	1.09	0.00	0.00	0.00	0.00	4.01
ESE	0.00	3.28	8.39	0.73	0.73	0.36	0.00	0.00	13.50
SE	0.00	2.19	9.49	1.09	1.46	0.00	0.36	0.00	14.60
SSE	0.00	1.09	8.39	0.00	0.73	0.00	0.00	0.00	10.22
S	0.00	0.73	1.82	0.00	0.36	0.00	0.00	0.00	2.92
SSW	0.00	1.82	1.46	0.00	0.00	0.00	0.00	0.00	3.28
SW	0.00	1.82	1.46	0.36	6.00	0.00	0.00	0.00	3.65
WSW	0.00	1.46	2.55	0.00	0.00	0.00	0.00	0.00	4.01
W	0.00	0.36	4.01	0.36	0.00	0.00	0.00	0.00	4.74
WNW	0.00	2.55	2.19	0.00	0.00	0.00	0.00	0.00	4.74
NW	0.00	2.19	0.73	0.00	0.00	0.00	0.00	0.00	2.92
NNW	0.00	0.73	1.82	0.00	0.00	0.00	0.00	0.00	2.55
TOTAL	3.65	24.45	63.14	4.74	3.28	0.36	0.36	0.00	

THIS STABILITY CLASS ACCOUNTS FOR 10.03 PERCENT OF THE TOTAL 2733

WSES-FSAR-UNIT-3

TABLE 2.3-69

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3 7/72-6/75 & 2/77-2/78

APRIL, TOTAL FOR PERIOD

STABILITY CLASS G

PERCENTAGE FREQUENCY DISTRIBUTION

NUMBER OF OBSERVATIONS = 315

		+----- WIND SPEED (MPH) -----+							
WIND DIRECTION	CALM	0.8 3.0	3.1 7.0	7.1 12.0	12.1 18.0	18.1 24.0	24.1 32.0	ABOVE 32.0	TOTAL
CALM	17.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	17.46
N	0.00	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.63
NNE	0.00	3.81	1.27	0.00	0.00	0.00	0.00	0.00	5.08
NE	0.00	2.54	0.63	0.00	0.00	0.00	0.00	0.00	3.17
ENE	0.00	3.81	1.27	0.00	0.00	0.00	0.00	0.00	5.08
E	0.00	3.81	0.95	1.59	0.00	0.00	0.00	0.00	6.35
ESE	0.00	1.59	4.44	3.49	0.95	0.00	0.00	0.00	10.48
SE	0.00	3.17	3.17	0.32	0.00	0.00	0.00	0.00	6.67
SSE	0.00	2.22	2.22	0.32	0.00	0.00	0.00	0.00	4.76
S	0.00	4.13	0.32	0.00	0.00	0.00	0.00	0.00	4.44
SSW	0.00	1.27	0.00	0.00	0.00	0.00	0.00	0.00	1.27
SW	0.00	4.76	0.63	0.00	0.00	0.00	0.00	0.00	5.40
WSW	0.00	4.76	0.95	0.00	0.00	0.00	0.00	0.00	5.71
W	0.00	4.44	0.63	0.00	0.00	0.00	0.00	0.00	5.08
WNW	0.00	6.35	1.27	0.00	0.00	0.00	0.00	0.00	7.62
NW	0.00	3.81	1.90	0.00	0.00	0.00	0.00	0.00	5.71
NNW	0.00	4.44	0.63	0.00	0.00	0.00	0.00	0.00	5.08
TOTAL	17.46	55.56	20.32	5.71	0.95	0.00	0.00	0.00	

THIS STABILITY CLASS ACCOUNTS FOR 11.53 PERCENT OF THE TOTAL 2733

WSES-FSAR-UNIT-3

TABLE 2.3-70

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3 7/72-6/75 & 2/77-2/78

MAY, TOTAL FOR PERIOD

STABILITY CLASS A

PERCENTAGE FREQUENCY DISTRIBUTION

NUMBER OF OBSERVATIONS = 502

+----- WIND SPEED (MPH) -----+									
WIND DIRECTION	CALM	0.8 3.0	3.1 7.0	7.1 12.0	12.1 18.0	18.1 24.0	24.1 32.0	ABOVE 32.0	TOTAL
CALM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
N	0.00	0.00	1.59	0.20	0.00	0.00	0.00	0.00	1.79
NNE	0.00	0.00	3.59	5.38	0.40	0.00	0.00	0.00	9.36
NE	0.00	0.20	9.16	6.57	0.00	0.00	0.00	0.00	15.94
ENE	0.00	0.00	3.39	1.20	0.20	0.00	0.00	0.00	4.78
E	0.00	0.00	0.80	1.00	0.00	0.00	0.00	0.00	1.79
ESE	0.00	0.20	2.79	3.98	0.20	0.00	0.00	0.00	7.17
SE	0.00	0.00	1.59	4.18	2.59	0.40	0.00	0.00	8.76
SSE	0.00	0.00	3.19	5.58	3.98	0.20	0.00	0.00	12.95
S	0.00	0.40	1.00	1.79	1.79	0.20	0.00	0.00	5.18
SSW	0.00	0.00	1.00	5.78	5.58	0.20	0.00	0.00	12.55
SW	0.00	0.00	0.40	4.58	2.19	0.00	0.00	0.00	7.17
WSW	0.00	0.00	0.60	1.39	0.40	0.00	0.00	0.00	2.39
W	0.00	0.00	0.40	1.20	0.40	0.00	0.00	0.00	1.99
WNW	0.00	0.00	0.60	0.60	0.00	0.00	0.00	0.00	1.20
NW	0.00	0.00	1.00	1.39	0.00	0.00	0.00	0.00	2.39
NNW	0.00	0.00	2.79	1.79	0.00	0.00	0.00	0.00	4.58
TOTAL	0.00	0.80	33.86	46.61	17.73	1.00	0.00	0.00	

THIS STABILITY CLASS ACCOUNTS FOR 18.16 PERCENT OF THE TOTAL 2765

WSES-FSAR-UNIT-3

TABLE 2.3-71

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3 7/72-6/75 & 2/77-2/78

MAY, TOTAL FOR PERIOD

STABILITY CLASS B

PERCENTAGE FREQUENCY DISTRIBUTION

NUMBER OF OBSERVATIONS = 58

		+----- WIND SPEED (MPH) -----+							
WIND DIRECTION	CALM	0.8 3.0	3.1 7.0	7.1 12.0	12.1 18.0	18.1 24.0	24.1 32.0	ABOVE 32.0	TOTAL
CALM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
N	0.00	0.00	5.17	0.00	0.00	0.00	0.00	0.00	5.17
NNE	0.00	0.00	3.45	1.72	0.00	0.00	0.00	0.00	5.17
NE	0.00	0.00	5.17	1.72	0.00	0.00	0.00	0.00	6.90
ENE	0.00	0.00	6.90	3.45	0.00	0.00	0.00	0.00	10.34
E	0.00	0.00	0.00	1.72	0.00	0.00	0.00	0.00	1.72
ESE	0.00	0.00	0.00	3.45	0.00	0.00	0.00	0.00	3.45
SE	0.00	0.00	0.00	1.72	1.72	0.00	0.00	0.00	3.45
SSE	0.00	0.00	6.90	3.45	12.07	0.00	0.00	0.00	22.41
S	0.00	0.00	1.72	3.45	0.00	0.00	0.00	0.00	5.17
SSW	0.00	0.00	1.72	6.90	5.17	0.00	0.00	0.00	13.79
SW	0.00	0.00	1.72	5.17	1.72	0.00	0.00	0.00	8.62
WSW	0.00	0.00	0.00	1.72	0.00	0.00	0.00	0.00	1.72
W	0.00	0.00	0.00	1.72	0.00	0.00	0.00	0.00	1.72
WNW	0.00	0.00	1.72	0.00	0.00	0.00	0.00	0.00	1.72
NW	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NNW	0.00	0.00	6.90	1.72	0.00	0.00	0.00	0.00	8.62
TOTAL	0.00	0.00	41.38	37.93	20.69	0.00	0.00	0.00	

THIS STABILITY CLASS ACCOUNTS FOR 2.10 PERCENT OF THE TOTAL 2765

WSES-FSAR-UNIT-3

TABLE 2.3-72

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3 7/72-6/75 & 2/77-2/78

MAY, TOTAL FOR PERIOD

STABILITY CLASS C

PERCENTAGE FREQUENCY DISTRIBUTION

NUMBER OF OBSERVATIONS = 62

+----- WIND SPEED (MPH) -----+									
WIND DIRECTION	CALM	0.8 3.0	3.1 7.0	7.1 12.0	12.1 18.0	18.1 24.0	24.1 32.0	ABOVE 32.0	TOTAL
CALM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
N	0.00	0.00	6.45	0.00	0.00	0.00	0.00	0.00	6.45
NNE	0.00	0.00	3.23	1.61	0.00	0.00	0.00	0.00	4.84
NE	0.00	0.00	3.23	3.23	0.00	0.00	0.00	0.00	6.45
ENE	0.00	0.00	6.45	4.84	0.00	0.00	0.00	0.00	11.29
E	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ESE	0.00	0.00	3.23	4.84	1.61	0.00	0.00	0.00	9.68
SE	0.00	0.00	0.00	3.23	0.00	0.00	0.00	0.00	3.23
SSE	0.00	0.00	1.61	11.29	6.45	0.00	0.00	0.00	19.35
S	0.00	0.00	4.84	4.84	0.00	0.00	0.00	0.00	9.68
SSW	0.00	0.00	1.61	6.45	0.00	0.00	0.00	0.00	8.06
SW	0.00	0.00	0.00	6.45	1.61	0.00	0.00	0.00	8.06
WSW	0.00	0.00	1.61	3.23	0.00	0.00	0.00	0.00	4.84
W	0.00	0.00	0.00	1.61	0.00	0.00	0.00	0.00	1.61
WNW	0.00	0.00	1.61	0.00	0.00	0.00	0.00	0.00	1.61
NW	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NNW	0.00	0.00	3.23	1.61	0.00	0.00	0.00	0.00	4.84
TOTAL	0.00	0.00	37.10	53.23	9.68	0.00	0.00	0.00	

THIS STABILITY CLASS ACCOUNTS FOR 2.24 PERCENT OF THE TOTAL 2765

WSES-FSAR-UNIT-3

TABLE 2.3-73

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3 7/72-6/75 & 2/77-2/78

MAY, TOTAL FOR PERIOD

STABILITY CLASS D

PERCENTAGE FREQUENCY DISTRIBUTION

NUMBER OF OBSERVATIONS = 560

		+----- WIND SPEED (MPH) -----+							
WIND DIRECTION	CALM	0.8 3.0	3.1 7.0	7.1 12.0	12.1 18.0	18.1 24.0	24.1 32.0	ABOVE 32.0	TOTAL
CALM	0.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.54
N	0.00	0.18	3.04	0.18	0.00	0.00	0.00	0.00	3.39
NNE	0.00	0.89	2.14	1.79	0.18	0.00	0.00	0.00	5.00
NE	0.00	1.61	7.50	1.96	0.18	0.00	0.00	0.00	11.25
ENE	0.00	0.71	3.93	3.75	0.18	0.00	0.00	0.00	8.57
E	0.00	0.18	1.79	1.07	0.18	0.00	0.00	0.00	3.21
ESE	0.00	0.00	1.79	4.46	1.43	0.00	0.00	0.00	7.68
SE	0.00	0.18	2.86	7.14	2.68	0.00	0.00	0.00	12.86
SSE	0.00	0.36	4.11	8.57	2.14	0.00	0.00	0.00	15.18
S	0.00	0.36	2.68	4.46	1.07	0.00	0.00	0.00	8.57
SSW	0.00	0.36	0.89	3.04	1.61	0.00	0.00	0.00	5.89
SW	0.00	0.00	1.25	3.57	0.00	0.00	0.00	0.00	4.82
WSW	0.00	0.36	0.71	0.18	0.18	0.00	0.00	0.00	1.43
W	0.00	0.18	1.25	0.89	0.18	0.00	0.00	0.00	2.50
WNW	0.00	0.18	1.43	0.54	0.00	0.00	0.00	0.00	2.14
NW	0.00	0.71	1.96	0.36	0.00	0.00	0.00	0.00	3.04
NNW	0.00	0.36	2.68	0.89	0.00	0.00	0.00	0.00	3.93
TOTAL	0.54	6.61	40.00	42.86	10.00	0.00	0.00	0.00	

THIS STABILITY CLASS ACCOUNTS FOR 20.25 PERCENT OF THE TOTAL 2765

## WSES-FSAR-UNIT-3

TABLE 2.3-74

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD

3 7/72-6/75 &amp; 2/77-2/78

MAY, TOTAL FOR PERIOD

STABILITY CLASS E

PERCENTAGE FREQUENCY DISTRIBUTION

NUMBER OF OBSERVATIONS = 916

+----- WIND SPEED (MPH) -----+									
WIND DIRECTION	CALM	0.8 3.0	3.1 7.0	7.1 12.0	12.1 18.0	18.1 24.0	24.1 32.0	ABOVE 32.0	TOTAL
CALM	0.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.98
N	0.00	0.55	1.64	0.87	0.22	0.00	0.00	0.00	3.28
NNE	0.00	0.44	2.73	1.86	0.33	0.00	0.00	0.00	5.35
NE	0.00	1.31	2.29	1.20	0.00	0.00	0.00	0.00	4.80
ENE	0.00	0.66	3.82	1.64	1.09	0.00	0.00	0.00	7.21
E	0.00	0.00	1.75	1.75	0.11	0.00	0.00	0.00	3.60
ESE	0.00	0.44	4.26	3.93	0.44	0.00	0.00	0.00	9.06
SE	0.00	0.55	8.08	5.79	1.20	0.11	0.00	0.00	15.72
SSE	0.00	1.64	7.31	3.17	0.76	0.00	0.00	0.00	12.88
S	0.00	1.20	6.33	1.86	0.44	0.00	0.00	0.00	9.83
SSW	0.00	0.87	3.06	0.87	0.11	0.00	0.11	0.00	5.02
SW	0.00	0.44	2.40	0.55	0.00	0.00	0.00	0.00	3.38
WSW	0.00	0.44	2.18	0.66	0.00	0.00	0.00	0.00	3.28
W	0.00	0.55	2.29	0.00	0.00	0.00	0.00	0.00	2.84
WNW	0.00	0.76	2.40	0.44	0.11	0.00	0.00	0.00	3.71
NW	0.00	0.87	2.95	0.00	0.11	0.00	0.00	0.00	3.93
NNW	0.00	0.66	2.40	1.86	0.22	0.00	0.00	0.00	5.13
TOTAL	0.98	11.35	55.90	26.42	5.13	0.11	0.11	0.00	

THIS STABILITY CLASS ACCOUNTS FOR 33.13 PERCENT OF THE TOTAL 2765

WSES-FSAR-UNIT-3

TABLE 2.3-75

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3 7/72-6/75 & 2/77-2/78

MAY, TOTAL FOR PERIOD

STABILITY CLASS F

PERCENTAGE FREQUENCY DISTRIBUTION

NUMBER OF OBSERVATIONS 451

+----- WIND SPEED (MPH) -----+									
WIND DIRECTION	CALM	0.8 3.0	3.1 7.0	7.1 12.0	12.1 18.0	18.1 24.0	24.1 32.0	ABOVE 32.0	TOTAL
CALM	6.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.43
N	0.00	3.77	1.33	0.00	0.00	0.00	0.00	0.00	5.10
NNE	0.00	1.55	2.44	0.22	0.00	0.00	0.00	0.00	4.21
NE	0.00	1.55	1.77	0.00	0.00	0.00	0.00	0.00	3.33
ENE	0.00	1.55	2.00	0.67	0.00	0.00	0.00	0.00	4.21
E	0.00	0.44	0.67	0.00	0.00	0.00	0.00	0.00	1.11
ESE	0.00	1.55	3.99	0.00	0.22	0.00	0.00	0.00	5.76
SE	0.00	2.66	7.76	0.67	0.00	0.00	0.00	0.00	11.09
SSE	0.00	3.55	8.65	0.22	0.00	0.00	0.22	0.00	12.64
S	0.00	4.21	10.64	0.22	0.22	0.00	0.00	0.00	15.30
SSW	0.00	2.44	4.21	0.00	0.00	0.00	0.00	0.00	6.65
SW	0.00	2.88	0.00	0.22	0.22	0.00	0.00	0.00	3.33
WSW	0.00	2.00	3.77	0.00	0.00	0.00	0.00	0.00	5.76
W	0.00	1.77	1.55	0.00	0.00	0.00	0.00	0.00	3.33
WNW	0.00	3.10	1.77	0.00	0.22	0.00	0.00	0.00	5.10
NW	0.00	1.77	1.11	0.00	0.00	0.00	0.00	0.00	2.88
NNW	0.00	2.44	1.11	0.22	0.00	0.00	0.00	0.00	3.77
TOTAL	6.43	37.25	52.77	2.44	0.89	0.00	0.22	0.00	

THIS STABILITY CLASS ACCOUNTS FOR 16.31 PERCENT OF THE TOTAL 2765

WSES-FSAR-UNIT-3

TABLE 2.3-76

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3 7/72-6/75 & 2/77-2/78

MAY, TOTAL FOR PERIOD

STABILITY CLASS G

PERCENTAGE FREQUENCY DISTRIBUTION

NUMBER OF OBSERVATIONS = 216

		+----- WIND SPEED (MPH) -----+							
WIND DIRECTION	CALM	0.8 3.0	3.1 7.0	7.1 12.0	12.1 18.0	18.1 24.0	24.1 32.0	ABOVE 32.0	TOTAL
CALM	21.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	21.30
N	0.00	2.78	1.85	0.00	0.00	0.00	0.00	0.00	4.63
NNE	0.00	1.85	0.93	0.00	0.00	0.00	0.00	0.00	2.78
NE	0.00	3.24	0.00	0.00	0.00	0.00	0.00	0.00	3.24
ENE	0.00	0.46	0.46	0.00	0.00	0.00	0.00	0.00	0.93
E	0.00	0.46	0.00	0.00	0.00	0.00	0.00	0.00	0.46
ESE	0.00	1.39	0.00	0.46	0.46	0.00	0.00	0.00	2.31
SE	0.00	4.17	1.39	1.85	0.00	0.00	0.46	0.00	7.87
SSE	0.00	4.63	2.31	0.00	0.00	0.00	0.00	0.00	6.94
S	0.00	3.70	5.56	0.46	0.00	0.00	0.00	0.00	9.72
SSW	0.00	5.56	3.24	0.00	0.00	0.00	0.00	0.00	8.80
SW	0.00	4.63	3.24	0.00	0.00	0.00	0.00	0.00	7.87
WSW	0.00	3.70	2.31	0.00	0.00	0.00	0.00	0.00	6.02
W	0.00	2.31	0.93	0.00	0.00	0.00	0.00	0.00	3.24
WNW	0.00	5.56	0.00	0.00	0.00	0.00	0.00	0.00	5.56
NW	0.00	3.24	0.93	0.00	0.00	0.00	0.00	0.00	4.17
NNW	0.00	4.17	0.00	0.00	0.00	0.00	0.00	0.00	4.17
TOTAL	21.30	51.85	23.15	2.78	0.46	0.00	0.46	0.00	

THIS STABILITY CLASS ACCOUNTS FOR 7.81 PERCENT OF THE TOTAL 2765

WSES-FSAR-UNIT-3

TABLE 2.3-77

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3 7/72-6/75 & 2/77-2/78

JUNE, TOTAL FOR PERIOD

STABILITY CLASS A

PERCENTAGE FREQUENCY DISTRIBUTION

NUMBER OF OBSERVATIONS = 455

		+----- WIND SPEED (MPH) -----+							
WIND DIRECTION	CALM	0.8 3.0	3.1 7.0	7.1 12.0	12.1 18.0	18.1 24.0	24.1 32.0	ABOVE 32.0	TOTAL
CALM	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22
N	0.00	0.22	1.10	1.32	0.44	0.00	0.00	0.00	3.08
NNE	0.00	0.44	6.15	3.08	0.88	0.00	0.00	0.00	10.55
NE	0.00	0.22	12.09	5.49	1.32	0.00	0.00	0.00	19.12
ENE	0.00	0.00	4.18	2.42	0.22	0.00	0.00	0.00	6.81
E	0.00	0.00	0.44	0.44	0.22	0.00	0.00	0.00	1.10
ESE	0.00	0.22	0.66	0.66	0.00	0.00	0.00	0.00	1.54
SE	0.00	0.00	0.66	4.18	0.88	0.00	0.00	0.00	5.71
SSE	0.00	0.66	5.27	7.03	1.98	0.00	0.00	0.00	14.95
S	0.00	1.32	2.64	2.64	0.66	0.00	0.00	0.00	7.25
SSW	0.00	0.22	2.64	1.10	0.00	0.00	0.00	0.00	3.96
SW	0.00	0.88	2.42	2.64	0.00	0.00	0.00	0.00	5.93
WSW	0.00	0.22	1.76	1.32	0.00	0.00	0.00	0.00	3.30
W	0.00	0.44	1.10	1.10	0.00	0.00	0.00	0.00	2.64
WNW	0.00	0.00	0.66	0.88	0.00	0.00	0.00	0.00	1.54
NW	0.00	0.00	3.96	0.44	0.22	0.00	0.00	0.00	4.62
NNW	0.00	0.88	5.05	1.54	0.22	0.00	0.00	0.00	7.69
TOTAL	0.22	5.71	50.77	36.26	7.03	0.00	0.00	0.00	

THIS STABILITY CLASS ACCOUNTS FOR 16.77 PERCENT OF THE TOTAL 2713

## WSES-FSAR-UNIT-3

TABLE 2.3-78

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3 7/72-6/75 &amp; 2/77-2/78

JUNE, TOTAL FOR PERIOD

STABILITY CLASS B

PERCENTAGE FREQUENCY DISTRIBUTION

NUMBER OF OBSERVATIONS = 77

		+----- WIND SPEED (MPH) -----+							
WIND DIRECTION	CALM	0.8 3.0	3.1 7.0	7.1 12.0	12.1 18.0	18.1 24.0	24.1 32.0	ABOVE 32.0	TOTAL
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
CALM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
N	0.00	0.00	6.49	0.00	1.30	0.00	0.00	0.00	7.79
NNE	0.00	0.00	3.90	1.30	1.30	0.00	0.00	0.00	6.49
NE	0.00	1.30	10.39	0.00	1.30	0.00	0.00	0.00	12.99
ENE	0.00	0.00	5.19	2.60	0.00	0.00	0.00	0.00	7.79
E	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ESE	0.00	0.00	1.30	0.00	0.00	0.00	0.00	0.00	1.30
SE	0.00	0.00	1.30	1.30	0.00	0.00	0.00	0.00	2.60
SSE	0.00	0.00	0.00	11.69	5.19	0.00	0.00	0.00	16.88
S	0.00	0.00	1.30	6.49	0.00	0.00	0.00	0.00	7.79
SSW	0.00	0.00	1.30	0.00	1.30	0.00	0.00	0.00	2.60
SW	0.00	0.00	6.49	5.19	0.00	0.00	0.00	0.00	11.69
WSW	0.00	0.00	2.60	1.30	0.00	0.00	0.00	0.00	3.90
W	0.00	0.00	5.19	0.00	1.30	0.00	0.00	0.00	6.49
WNW	0.00	2.60	0.00	2.60	0.00	0.00	0.00	0.00	5.19
NW	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NNW	0.00	0.00	5.19	1.30	0.00	0.00	0.00	0.00	6.49
TOTAL	0.00	3.90	50.65	33.77	11.69	0.00	0.00	0.00	

THIS STABILITY CLASS ACCOUNTS FOR 2.84 PERCENT OF THE TOTAL 2713

## WSES-FSAR-UNIT-3

TABLE 2.3-79

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3 7/72-6/75 &amp; 2/77-2/78

JUNE, TOTAL FOR PERIOD

STABILITY CLASS C

PERCENTAGE FREQUENCY DISTRIBUTION

NUMBER OF OBSERVATIONS = 74

+----- WIND SPEED (MPH) -----+									
WIND DIRECTION	CALM	0.8 3.0	3.1 7.0	7.1 12.0	12.1 18.0	18.1 24.0	24.1 32.0	ABOVE 32.0	TOTAL
CALM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
N	0.00	0.00	1.35	0.00	0.00	0.00	0.00	0.00	1.35
NNE	0.00	1.35	0.00	1.35	0.00	0.00	0.00	0.00	2.70
NE	0.00	0.00	5.41	1.35	0.00	0.00	0.00	0.00	6.76
ENE	0.00	0.00	8.11	1.35	0.00	0.00	0.00	0.00	9.46
E	0.00	0.00	5.41	0.00	0.00	0.00	0.00	0.00	5.41
ESE	0.00	0.00	5.41	1.35	0.00	0.00	0.00	0.00	6.76
SE	0.00	0.00	1.35	2.70	0.00	0.00	0.00	0.00	4.05
SSE	0.00	0.00	2.70	2.70	1.35	1.35	0.00	0.00	8.11
S	0.00	0.00	5.41	4.05	0.00	0.00	0.00	0.00	9.46
SSW	0.00	0.00	1.35	2.70	1.35	0.00	0.00	0.00	5.41
SW	0.00	0.00	6.76	0.00	0.00	0.00	0.00	0.00	6.76
WSW	0.00	1.35	6.76	1.35	0.00	0.00	0.00	0.00	9.46
W	0.00	0.00	0.00	1.35	1.35	0.00	0.00	0.00	2.70
WNW	0.00	0.00	0.00	5.41	0.00	0.00	0.00	0.00	5.41
NW	0.00	1.35	2.70	0.00	0.00	0.00	0.00	0.00	4.05
NNW	0.00	1.35	9.46	1.35	0.00	0.00	0.00	0.00	12.16
TOTAL	0.00	5.41	62.16	27.03	4.05	1.35	0.00	0.00	

THIS STABILITY CLASS ACCOUNTS FOR 2.73 PERCENT OF THE TOTAL 2713

## WSES-FSAR-UNIT-3

TABLE 2.3-80

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3 7/72-6/75 &amp; 2/77-2/78

JUNE, TOTAL FOR PERIOD

STABILITY CLASS D

PERCENTAGE FREQUENCY DISTRIBUTION

NUMBER OF OBSERVATIONS = 622

		+----- WIND SPEED (MPH) -----+							
WIND DIRECTION	CALM	0.8 3.0	3.1 7.0	7.1 12.0	12.1 18.0	18.1 24.0	24.1 32.0	ABOVE 32.0	TOTAL
CALM	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32
N	0.00	1.13	2.73	0.96	0.48	0.00	0.00	0.00	5.31
NNE	0.00	1.93	2.57	0.48	0.32	0.00	0.00	0.00	5.31
NE	0.00	1.45	3.38	0.80	0.00	0.00	0.00	0.00	5.63
ENE	0.00	1.13	5.31	1.13	0.16	0.00	0.00	0.00	7.72
E	0.00	0.32	1.13	0.32	0.00	0.00	0.00	0.00	1.77
ESE	0.00	0.32	2.41	0.80	0.00	0.00	0.00	0.00	3.54
SE	0.00	0.96	3.05	3.38	0.32	0.00	0.00	0.00	7.72
SSE	0.00	0.32	3.38	3.54	3.54	0.00	0.00	0.00	10.77
S	0.00	0.64	6.11	6.75	1.13	0.00	0.00	0.00	14.63
SSW	0.00	0.32	4.18	3.05	0.16	0.00	0.00	0.00	7.72
SW	0.00	0.48	4.98	5.14	0.32	0.00	0.00	0.00	10.93
WSW	0.00	0.64	2.25	1.61	0.16	0.00	0.00	0.00	4.66
W	0.00	0.32	1.13	1.13	0.00	0.00	0.00	0.00	2.57
WNW	0.00	1.45	0.48	0.32	0.00	0.00	0.00	0.00	2.25
NW	0.00	0.48	1.61	0.80	0.16	0.00	0.00	0.00	3.05
NNW	0.00	1.45	3.70	0.96	0.00	0.00	0.00	0.00	6.11
TOTAL	0.32	13.34	48.39	31.19	6.75	0.00	0.00	0.00	

THIS STABILITY CLASS ACCOUNTS FOR 22.93 PERCENT OF THE TOTAL 2713

WSES-FSAR-UNIT-3

TABLE 2.3-81

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3 7/72-6/75 & 2/77-2/78

JUNE, TOTAL FOR PERIOD

STABILITY CLASS E

PERCENTAGE FREQUENCY DISTRIBUTION NUMBER OF OBSERVATIONS = 667

		+----- WIND SPEED (MPH) -----+							
WIND DIRECTION	CALM	0.8 3.0	3.1 7.0	7.1 12.0	12.1 18.0	18.1 24.0	24.1 32.0	ABOVE 32.0	TOTAL
CALM	1.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.65
N	0.00	1.20	3.30	2.70	0.15	0.00	0.00	0.00	7.35
NNE	0.00	1.35	1.80	0.60	0.15	0.15	0.00	0.00	4.05
NE	0.00	0.75	1.80	0.45	0.00	0.00	0.00	0.00	3.00
ENE	0.00	0.90	3.00	0.90	0.00	0.00	0.00	0.00	4.80
E	0.00	1.20	1.80	0.30	0.00	0.00	0.00	0.00	3.30
ESE	0.00	1.35	4.50	0.15	0.00	0.00	0.00	0.00	6.00
SE	0.00	1.50	6.30	4.05	0.15	0.00	0.00	0.00	11.99
SSE	0.00	1.80	6.75	2.70	0.15	0.00	0.00	0.00	11.39
S	0.00	1.95	4.05	1.65	0.15	0.00	0.00	0.00	7.80
SSW	0.00	2.55	3.60	2.40	0.00	0.00	0.00	0.00	8.55
SW	0.00	0.75	3.60	1.20	0.00	0.00	0.00	0.00	5.55
WSW	0.00	1.65	3.15	0.45	0.30	0.00	0.00	0.00	5.55
W	0.00	1.05	0.90	0.90	0.00	0.00	0.00	0.00	2.85
WNW	0.00	1.80	1.80	0.60	0.00	0.00	0.00	0.00	4.20
NW	0.00	2.40	2.70	0.30	0.00	0.00	0.00	0.00	5.40
NNW	0.00	1.65	3.60	1.20	0.15	0.00	0.00	0.00	6.60
TOTAL	1.65	23.84	52.62	20.54	1.20	0.15	0.00	0.00	

THIS STABILITY CLASS ACCOUNTS FOR 24.59 PERCENT OF THE TOTAL 2713

## WSES-FSAR-UNIT-3

TABLE 2.3-82

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3      7/72-6/75 & 2/77-2/78  
 JUNE, TOTAL FOR PERIOD      STABILITY CLASS F  
 PERCENTAGE FREQUENCY DISTRIBUTION      NUMBER OF OBSERVATIONS = 498

		+----- WIND SPEED (MPH) -----+							
WIND DIRECTION	CALM	0.8 3.0	3.1 7.0	7.1 12.0	12.1 18.0	18.1 24.0	24.1 32.0	ABOVE 32.0	TOTAL
CALM	4.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.62
N	0.00	1.00	1.61	0.60	0.00	0.00	0.00	0.00	3.21
NNE	0.00	2.01	0.80	0.00	0.00	0.00	0.00	0.00	2.81
NE	0.00	1.20	1.81	0.20	0.00	0.00	0.00	0.00	3.21
ENE	0.00	2.01	0.80	0.20	0.00	0.00	0.00	0.00	3.01
E	0.00	0.60	0.20	0.00	0.00	0.00	0.00	0.00	0.80
ESE	0.00	1.00	1.41	0.20	0.00	0.00	0.00	0.00	2.61
SE	0.00	2.61	5.02	0.40	0.00	0.00	0.00	0.00	8.03
SSE	0.00	4.42	7.03	0.80	0.00	0.00	0.00	0.00	12.25
S	0.00	5.82	9.64	0.00	0.00	0.00	0.00	0.00	15.46
SSW	0.00	4.62	9.64	0.20	0.20	0.00	0.00	0.00	14.66
SW	0.00	3.41	4.82	0.80	0.00	0.00	0.00	0.00	9.04
WSW	0.00	3.61	3.21	0.20	0.00	0.00	0.00	0.00	7.03
W	0.00	2.41	2.21	0.00	0.00	0.00	0.00	0.00	4.62
WNW	0.00	1.41	0.60	0.00	0.00	0.00	0.00	0.00	2.01
NW	0.00	1.61	2.61	0.00	0.00	0.00	0.00	0.00	4.22
NNW	0.00	1.41	1.00	0.00	0.00	0.00	0.00	0.00	2.41
TOTAL	4.62	39.16	52.41	3.61	0.20	0.00	0.00	0.00	

THIS STABILITY CLASS ACCOUNTS FOR 18.36 PERCENT OF THE TOTAL 2713

## WSES-FSAR-UNIT-3

TABLE 2.3-83

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3 7/72-6/75 &amp; 2/77-2/78

JUNE, TOTAL FOR PERIOD

STABILITY CLASS G

PERCENTAGE FREQUENCY DISTRIBUTION

NUMBER OF OBSERVATIONS = 320

		+----- WIND SPEED (MPH) -----+							
WIND DIRECTION	CALM	0.8 3.0	3.1 7.0	7.1 12.0	12.1 18.0	18.1 24.0	24.1 32.0	ABOVE 32.0	TOTAL
CALM	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.00
N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NNE	0.00	0.31	0.00	0.00	0.00	0.00	0.00	0.00	0.31
NE	0.00	0.94	0.31	0.00	0.00	0.00	0.00	0.00	1.25
ENE	0.00	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.63
E	0.00	0.94	0.00	0.00	0.00	0.00	0.00	0.00	0.94
ESE	0.00	2.50	0.00	0.00	0.00	0.00	0.00	0.00	2.50
SE	0.00	4.38	2.19	0.00	0.00	0.00	0.00	0.00	6.56
SSE	0.00	5.94	3.75	0.00	0.00	0.00	0.00	0.00	9.69
S	0.00	6.88	11.25	0.00	0.00	0.00	0.00	0.00	18.13
SSW	0.00	6.88	8.75	0.00	0.00	0.00	0.00	0.00	15.63
SW	0.00	7.50	6.25	0.00	0.00	0.00	0.00	0.00	13.75
WSW	0.00	6.56	1.88	0.00	0.00	0.00	0.00	0.00	8.44
W	0.00	2.81	1.56	0.00	0.00	0.00	0.00	0.00	4.38
WNW	0.00	4.38	0.00	0.00	0.00	0.00	0.00	0.00	4.38
NW	0.00	1.88	0.63	0.00	0.00	0.00	0.00	0.00	2.50
NNW	0.00	0.63	0.31	0.00	0.00	0.00	0.00	0.00	0.94
TOTAL	10.00	53.13	36.88	0.00	0.00	0.00	0.00	0.00	

THIS STABILITY CLASS ACCOUNTS FOR 11.80 PERCENT OF THE TOTAL 2713

WSES-FSAR-UNIT-3

TABLE 2.3-84

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3      7/72-6/75 & 2/77-2/78  
 JULY, TOTAL FOR PERIOD      STABILITY CLASS A  
 PERCENTAGE FREQUENCY DISTRIBUTION      NUMBER OF OBSERVATIONS = 454

		+----- WIND SPEED (MPH) -----+							
WIND DIRECTION	CALM	0.8 3.0	3.1 7.0	7.1 12.0	12.1 18.0	18.1 24.0	24.1 32.0	ABOVE 32.0	TOTAL
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
CALM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
N	0.00	1.98	3.52	0.22	0.00	0.00	0.00	0.00	5.73
NNE	0.00	0.44	5.07	3.74	0.00	0.00	0.00	0.00	9.25
N'E	0.00	0.22	6.39	1.98	0.44	0.00	0.00	0.00	9.03
ENE	0.00	0.66	4.41	2.20	0.44	0.00	0.00	0.00	7.71
E	0.00	0.00	0.88	0.88	0.00	0.00	0.00	0.00	1.76
ESE	0.00	0.44	1.76	1.54	0.00	0.00	0.00	0.00	3.74
SE	0.00	1.10	1.76	0.88	0.00	0.00	0.00	0.00	3.74
SSE	0.00	0.66	4.41	1.76	0.00	0.00	0.00	0.00	6.83
S	0.00	0.66	3.74	1.10	0.22	0.00	0.00	0.00	5.73
SSW	0.00	0.22	3.30	1.76	0.00	0.00	0.00	0.00	5.29
SW	0.00	0.22	2.20	2.20	0.00	0.00	0.00	0.00	4.63
WSW	0.00	0.66	1.54	1.54	0.00	0.00	0.00	0.00	3.74
W	0.00	0.44	3.96	2.86	0.22	0.00	0.00	0.00	7.49
WNW	0.00	0.44	3.96	1.32	0.00	0.00	0.00	0.00	5.73
NW	0.00	1.54	5.73	2.20	0.00	0.00	0.00	0.00	9.47
NNW	0.00	1.32	8.37	0.44	0.00	0.00	0.00	0.00	10.13
TOTAL	0.00	11.01	61.01	26.65	1.32	0.00	0.00	0.00	

THIS STABILITY CLASS ACCOUNTS FOR 15.75 PERCENT OF THE TOTAL 2882

## WSES-FSAR-UNIT-3

TABLE 2.3-85

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3 7/72-6/75 &amp; 2/77-2/78

JULY, TOTAL FOR PERIOD

STABILITY CLASS B

PERCENTAGE FREQUENCY DISTRIBUTION

NUMBER OF OBSERVATIONS = 77

		+----- WIND SPEED (MPH) -----+							
WIND DIRECTION	CALM	0.8 3.0	3.1 7.0	7.1 12.0	12.1 18.0	18.1 24.0	24.1 32.0	ABOVE 32.0	TOTAL
CALM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
N	0.00	5.19	3.90	0.00	0.00	0.00	0.00	0.00	9.09
NNE	0.00	0.00	3.90	0.00	0.00	0.00	0.00	0.00	3.90
NE	0.00	1.30	5.19	2.60	0.00	0.00	0.00	0.00	9.09
ENE	0.00	0.00	1.30	5.19	0.00	0.00	0.00	0.00	6.49
E	0.00	0.00	3.90	2.60	1.30	0.00	0.00	0.00	7.79
ESE	0.00	0.00	2.60	1.30	0.00	0.00	0.00	0.00	3.90
SE	0.00	1.30	2.60	2.60	0.00	0.00	0.00	0.00	6.49
SSE	0.00	0.00	3.90	1.30	0.00	0.00	0.00	0.00	5.19
S	0.00	0.00	1.30	0.00	0.00	0.00	0.00	0.00	1.30
SSW	0.00	1.30	3.90	6.49	0.00	0.00	0.00	0.00	11.69
SW	0.00	0.00	2.60	5.19	0.00	0.00	0.00	0.00	7.79
WSW	0.00	0.00	1.30	5.19	0.00	0.00	0.00	0.00	6.49
W	0.00	1.30	1.30	1.30	0.00	0.00	0.00	0.00	3.90
WNW	0.00	1.30	1.30	1.30	0.00	0.00	0.00	0.00	3.90
NW	0.00	1.30	6.49	1.30	0.00	0.00	0.00	0.00	9.09
NNW	0.00	0.00	1.30	1.30	1.30	0.00	0.00	0.00	3.90
TOTAL	0.00	12.99	46.75	37.66	2.60	0.00	0.00	0.00	

THIS STABILITY CLASS ACCOUNTS FOR 2.67 PERCENT OF THE TOTAL 2882

## WSES-FSAR-UNIT-3

TABLE 2.3-86

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3 7/72-6/75 &amp; 2/77-2/78

JULY, TOTAL FOR PERIOD

STABILITY CLASS C

PERCENTAGE FREQUENCY DISTRIBUTION

NUMBER OF OBSERVATIONS = 53

		+----- WIND SPEED (MPH) -----+							
WIND DIRECTION	CALM	0.8 3.0	3.1 7.0	7.1 12.0	12.1 18.0	18.1 24.0	24.1 32.0	ABOVE 32.0	TOTAL
CALM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
N	0.00	0.00	3.77	0.00	0.00	0.00	0.00	0.00	3.77
NNE	0.00	3.77	0.00	0.00	0.00	0.00	0.00	0.00	3.77
NE	0.00	0.00	13.21	3.77	0.00	0.00	0.00	0.00	16.98
ENE	0.00	0.00	3.77	1.89	0.00	0.00	0.00	0.00	5.66
E	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ESE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SE	0.00	1.89	3.77	1.89	0.00	0.00	0.00	0.00	7.55
SSE	0.00	0.00	5.66	5.66	0.00	0.00	0.00	0.00	11.32
S	0.00	0.00	1.89	1.89	0.00	0.00	0.00	0.00	3.77
SSW	0.00	0.00	3.77	3.77	0.00	0.00	0.00	0.00	7.55
SW	0.00	0.00	3.77	1.89	0.00	0.00	0.00	0.00	5.66
WSW	0.00	1.89	3.77	3.77	0.00	0.00	0.00	0.00	9.43
W	0.00	0.00	3.77	3.77	0.00	0.00	0.00	0.00	7.55
WNW	0.00	1.89	3.77	1.89	1.89	0.00	0.00	0.00	9.43
NW	0.00	1.89	3.77	0.00	0.00	0.00	0.00	0.00	5.66
NNW	0.00	0.00	1.89	0.00	0.00	0.00	0.00	0.00	1.89
TOTAL	0.00	11.32	56.60	30.19	1.89	0.00	0.00	0.00	

THIS STABILITY CLASS ACCOUNTS FOR 1.84 PERCENT OF THE TOTAL 2882

WSES-FSAR-UNIT-3

TABLE 2.3-87

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3 7/72-6/75 & 2/77-2/78

JULY, TOTAL FOR PERIOD

STABILITY CLASS D

PERCENTAGE FREQUENCY DISTRIBUTION

NUMBER OF OBSERVATIONS = 637

		+----- WIND SPEED (MPH) -----+							
WIND DIRECTION	CALM	0.8 3.0	3.1 7.0	7.1 12.0	12.1 18.0	18.1 24.0	24.1 32.0	ABOVE 32.0	TOTAL
CALM	0.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.31
N	0.00	1.57	1.57	0.31	0.00	0.00	0.00	0.00	3.45
NNE	0.00	1.57	1.73	1.73	0.00	0.00	0.00	0.00	5.02
NE	0.00	1.10	2.98	1.10	0.16	0.00	0.00	0.00	5.34
ENE	0.00	2.83	3.92	1.57	0.00	0.00	0.00	0.00	8.32
E	0.00	1.26	2.35	0.78	0.00	0.00	0.00	0.00	4.40
ESE	0.00	3.77	4.08	1.57	0.16	0.00	0.00	0.00	9.58
SE	0.00	2.98	5.97	2.35	0.00	0.00	0.00	0.00	11.30
SSE	0.00	1.10	3.92	2.35	0.00	0.00	0.00	0.00	7.38
S	0.00	0.63	2.67	2.04	0.00	0.00	0.00	0.00	5.34
SSW	0.00	0.47	4.24	1.88	0.00	0.00	0.00	0.00	6.59
SW	0.00	0.47	5.65	1.26	0.16	0.00	0.00	0.00	7.54
WSW	0.00	0.31	4.08	1.88	0.00	0.00	0.00	0.00	6.28
W	0.00	0.63	2.67	1.10	0.00	0.00	0.00	0.00	4.40
WNW	0.00	1.57	2.35	0.78	0.00	0.00	0.00	0.00	4.71
NW	0.00	1.10	3.92	0.16	0.00	0.00	0.00	0.00	5.18
NNW	0.00	0.78	3.45	0.47	0.16	0.00	0.00	0.00	4.87
TOTAL	0.31	22.14	55.57	21.35	0.63	0.00	0.00	0.00	

THIS STABILITY CLASS ACCOUNTS FOR 22.10 PERCENT OF THE TOTAL 2882

WSES-FSAR-UNIT-3

TABLE 2.3-88

Revision 11 (05/01)

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3

7/72-6/75 & 2/77-2/78

JULY, TOTAL FOR PERIOD

STABILITY CLASS E

PERCENTAGE FREQUENCY DISTRIBUTION

NUMBER OF OBSERVATIONS = 640

WIND DIRECTION	+----- WIND SPEED (MPH) -----+								TOTAL
	<u>CALM</u>	<u>0.8</u> <u>3.0</u>	<u>3.1</u> <u>7.0</u>	<u>7.1</u> <u>12.0</u>	<u>12.1</u> <u>18.0</u>	<u>18.1</u> <u>24.0</u>	<u>24.1</u> <u>32.0</u>	<u>ABOVE</u> <u>32.0</u>	
CALM	3.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.44
N	0.00	1.41	0.78	0.78	0.00	0.00	0.00	0.00	2.97
NNE	0.00	1.56	2.97	0.94	0.00	0.00	0.00	0.00	5.47
NE	0.00	1.56	1.72	1.41	0.00	0.00	0.00	0.00	4.69
ENE	0.00	2.50	5.47	2.97	0.16	0.00	0.00	0.00	11.09
E	0.00	1.88	3.28	0.31	0.00	0.00	0.00	0.00	5.47
ESE	0.00	4.06	4.69	0.63	0.00	0.00	0.00	0.00	9.38
SE	0.00	2.97	3.13	0.47	0.00	0.00	0.00	0.00	6.56
SSE	0.00	2.50	4.06	0.16	0.16	0.00	0.00	0.00	6.88
S	0.00	2.03	4.06	0.00	0.00	0.00	0.00	0.00	6.09
SSW	0.00	2.66	3.91	0.31	0.00	0.00	0.00	0.00	6.88
SW	0.00	1.56	3.44	0.31	0.00	0.00	0.00	0.00	5.31
WSW	0.00	3.28	3.91	0.31	0.00	0.00	0.00	0.00	7.50
W	0.00	1.56	3.59	0.31	0.00	0.00	0.00	0.00	5.47
WNW	0.00	0.63	3.13	0.31	0.00	0.00	0.00	0.00	4.06
NW	0.00	1.88	2.50	0.16	0.00	0.00	0.00	0.00	4.53
NNW	0.00	1.09	2.50	0.47	0.00	0.16	0.00	0.00	4.22
TOTAL	3.44	33.13	53.13	9.84	0.31	0.16	0.00	0.00	

→ (DRN 01-282)

THIS STABILITY CLASS ACCOUNTS FOR 22.21 PERCENT OF THE TOTAL 2882

← (DRN 01-282)

WSES-FSAR-UNIT-3

TABLE 2.3-89

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3 7/72-6/75 & 2/77-2/78

JULY, TOTAL FOR PERIOD

STABILITY CLASS F

PERCENTAGE FREQUENCY DISTRIBUTION NUMBER OF OBSERVATIONS = 604

		+----- WIND SPEED (MPH) -----+							
WIND DIRECTION	CALM	0.8 3.0	3.1 7.0	7.1 12.0	12.1 18.0	18.1 24.0	24.1 32.0	ABOVE 32.0	TOTAL
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
CALM	6.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.29
N	0.00	0.66	0.00	0.17	0.00	0.00	0.00	0.00	0.83
NNE	0.00	0.99	0.17	0.00	0.00	0.00	0.00	0.00	1.16
NE	0.00	2.15	0.99	0.17	0.00	0.00	0.00	0.00	3.31
ENE	0.00	4.97	0.50	0.00	0.00	0.00	0.00	0.00	5.46
E	0.00	3.97	0.66	0.00	0.00	0.00	0.00	0.00	4.64
ESE	0.00	3.48	4.97	0.17	0.00	0.00	0.00	0.00	8.61
SE	0.00	4.30	3.15	0.00	0.00	0.00	0.00	0.00	7.45
SSE	0.00	4.47	4.97	0.17	0.00	0.00	0.00	0.00	9.60
S	0.00	5.63	5.13	0.33	0.00	0.00	0.00	0.00	11.09
SSW	0.00	5.79	5.96	0.00	0.00	0.00	0.00	0.00	11.75
SW	0.00	3.97	2.98	0.00	0.00	0.00	0.00	0.00	6.95
WSW	0.00	6.79	4.30	0.00	0.00	0.00	0.00	0.00	11.09
W	0.00	2.81	4.30	0.00	0.00	0.00	0.00	0.00	7.12
WNW	0.00	1.66	0.50	0.00	0.00	0.00	0.00	0.00	2.15
NW	0.00	0.99	0.66	0.00	0.00	0.00	0.00	0.00	1.66
NNW	0.00	0.33	0.50	0.00	0.00	0.00	0.00	0.00	0.83
TOTAL	6.29	52.98	39.74	0.99	0.00	0.00	0.00	0.00	

THIS STABILITY CLASS ACCOUNTS FOR 20.96 PERCENT OF THE TOTAL 2882

## WSES-FSAR-UNIT-3

TABLE 2.3-90

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3 7/72-6/75 &amp; 2/77-2/78

JULY, TOTAL FOR PERIOD

STABILITY CLASS G

PERCENTAGE FREQUENCY DISTRIBUTION

NUMBER OF OBSERVATIONS = 417

		+----- WIND SPEED (MPH) -----+							
WIND DIRECTION	CALM	0.8 3.0	3.1 7.0	7.1 12.0	12.1 18.0	18.1 24.0	24.1 32.0	ABOVE 32.0	TOTAL
-----	---	---	---	---	---	---	---	---	----
CALM	10.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.31
N	0.00	0.24	0.24	0.00	0.00	0.00	0.00	0.00	0.48
NNE	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.24
NE	0.00	2.40	0.00	0.00	0.00	0.00	0.00	0.00	2.40
ENE	0.00	7.67	0.00	0.00	0.00	0.00	0.00	0.00	7.67
E	0.00	2.64	0.00	0.00	0.00	0.00	0.00	0.00	2.64
ESE	0.00	1.20	0.48	0.00	0.00	0.00	0.00	0.00	1.68
SE	0.00	6.71	3.60	0.00	0.00	0.00	0.00	0.00	10.31
SSE	0.00	9.35	5.52	0.00	0.00	0.00	0.00	0.00	14.87
S	0.00	7.43	2.64	0.00	0.00	0.00	0.00	0.00	10.07
SSW	0.00	11.03	3.60	0.00	0.00	0.00	0.00	0.00	14.63
SW	0.00	8.15	0.96	0.00	0.00	0.00	0.00	0.00	9.11
WSW	0.00	6.47	0.72	0.00	0.00	0.00	0.00	0.00	7.19
W	0.00	4.56	0.00	0.00	0.00	0.00	0.00	0.00	4.56
WNW	0.00	2.40	0.24	0.00	0.00	0.00	0.00	0.00	2.64
NW	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.24
NNW	0.00	0.96	0.00	0.00	0.00	0.00	0.00	0.00	0.96
TOTAL	10.31	71.70	17.99	0.00	0.00	0.00	0.00	0.00	

THIS STABILITY CLASS ACCOUNTS FOR 14.47 PERCENT OF THE TOTAL 2882

WSES-FSAR-UNIT-3

TABLE 2.3-91

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3 7/72-6/75 & 2/77-2/78

AUGUST, TOTAL FOR PERIOD

STABILITY CLASS A

PERCENTAGE FREQUENCY DISTRIBUTION

NUMBER OF OBSERVATIONS = 357

+----- WIND SPEED (MPH) -----+									
WIND DIRECTION	CALM	0.8 3.0	3.1 7.0	7.1 12.0	12.1 18.0	18.1 24.0	24.1 32.0	ABOVE 32.0	TOTAL
CALM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
N	0.00	0.84	1.68	0.28	0.00	0.00	0.00	0.00	2.80
NNE	0.00	1.12	12.89	7.56	0.00	0.00	0.00	0.00	21.57
NE	0.00	1.40	11.48	11.20	0.00	0.00	0.00	0.00	24.09
ENE	0.00	0.56	5.04	1.68	1.12	0.28	0.00	0.00	8.68
E	0.00	0.00	0.84	0.28	0.28	0.00	0.00	0.00	1.40
ESE	0.00	0.56	0.56	0.84	1.40	0.00	0.00	0.00	3.36
SE	0.00	0.84	2.24	0.00	0.00	0.00	0.00	0.00	3.08
SSE	0.00	0.28	3.36	1.40	0.28	0.00	0.00	0.00	5.32
S	0.00	0.28	1.96	0.84	0.00	0.00	0.00	0.00	3.08
SSW	0.00	0.56	1.12	0.56	0.00	0.00	0.00	0.00	2.24
SW	0.00	0.28	1.12	0.00	0.00	0.00	0.00	0.00	1.40
WSW	0.00	0.00	1.40	0.56	0.56	0.00	0.00	0.00	2.52
W	0.00	0.00	0.56	1.40	0.00	0.00	0.00	0.00	1.96
WNW	0.00	0.28	1.40	0.84	0.00	0.00	0.00	0.00	2.52
NW	0.00	0.28	7.56	0.84	0.00	0.00	0.00	0.00	8.68
NNW	0.00	0.56	6.44	0.28	0.00	0.00	0.00	0.00	7.28
TOTAL	0.00	7.84	59.66	28.57	3.64	0.28	0.00	0.00	

THIS STABILITY CLASS ACCOUNTS FOR 13.84 PERCENT OF THE TOTAL 2580

WSES-FSAR-UNIT-3

TABLE 2.3-92

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3 7/72-6/75 & 2/77-2/78

AUGUST, TOTAL FOR PERIOD

STABILITY CLASS B

PERCENTAGE FREQUENCY DISTRIBUTION

NUMBER OF OBSERVATIONS = 67

+----- WIND SPEED (MPH) -----+									
WIND DIRECTION	CALM	0.8 3.0	3.1 7.0	7.1 12.0	12.1 18.0	18.1 24.0	24.1 32.0	ABOVE 32.0	TOTAL
CALM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NNE	0.00	2.99	5.97	5.97	0.00	0.00	0.00	0.00	14.93
NE	0.00	1.49	2.99	7.46	1.49	0.00	0.00	0.00	13.43
ENE	0.00	0.00	0.00	0.00	2.99	0.00	0.00	0.00	2.99
E	0.00	0.00	0.00	0.00	2.99	0.00	0.00	0.00	2.99
ESE	0.00	0.00	2.99	1.49	7.46	0.00	0.00	0.00	11.94
SE	0.00	0.00	2.99	1.49	1.49	0.00	0.00	0.00	5.97
SSE	0.00	0.00	4.48	1.49	0.00	0.00	0.00	0.00	5.97
S	0.00	0.00	0.00	1.49	0.00	0.00	0.00	0.00	1.49
SSW	0.00	1.49	2.99	1.49	0.00	0.00	0.00	0.00	5.97
SW	0.00	0.00	8.96	0.00	0.00	0.00	0.00	0.00	8.96
WSW	0.00	0.00	2.99	1.49	0.00	0.00	0.00	0.00	4.48
W	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WNW	0.00	0.00	2.99	0.00	0.00	0.00	0.00	0.00	2.99
NW	0.00	0.00	10.45	0.00	0.00	0.00	0.00	0.00	10.45
NNW	0.00	0.00	5.97	1.49	0.00	0.00	0.00	0.00	7.46
TOTAL	0.00	5.97	53.73	23.88	16.42	0.00	0.00	0.00	

THIS STABILITY CLASS ACCOUNTS FOR 2.60 PERCENT OF THE TOTAL 2580

WSES-FSAR-UNIT-3

TABLE 2.3-93

WIND DISTRUBUTION BY SATBILITY AT WATERFORD 3

7/72-6/75&2/77-2/78

AUGUST, TOTAL FOR PERIOD

STABILITY CLASS C

PERCENTAGE FREQUENCY DISTRIBUTION

NUMBER OF OBSERVATIONS = 68

		+----- WIND SPEED (MPH) -----+							
WIND DIRECTION	CALM	0.8 3.0	3.1 7.0	7.1 12.0	12.1 18.0	18.1 24.0	24.1 32.0	ABOVE 32.0	TOTAL
CALM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
N	0.00	1.47	1.47	0.00	0.00	0.00	0.00	0.00	2.94
NNE	0.00	1.47	2.94	1.47	0.00	0.00	0.00	0.00	5.88
NE	0.00	0.00	5.88	1.47	0.00	0.00	0.00	0.00	7.35
ENE	0.00	0.00	1.47	2.94	2.94	0.00	0.00	0.00	7.35
E	0.00	0.00	0.00	2.94	0.00	0.00	0.00	0.00	2.94
ESE	0.00	0.00	1.47	2.94	1.47	0.00	0.00	0.00	5.88
SE	0.00	1.47	1.47	4.41	1.47	0.00	0.00	0.00	8.82
SSE	0.00	0.00	7.35	0.00	0.00	0.00	0.00	0.00	7.35
S	0.00	0.00	0.00	1.47	0.00	0.00	0.00	0.00	1.47
SSW	0.00	1.47	2.94	0.00	0.00	0.00	0.00	0.00	4.41
SW	0.00	0.00	5.88	2.94	1.47	0.00	0.00	0.00	10.29
WSW	0.00	0.00	11.76	2.94	0.00	0.00	0.00	0.00	14.71
W	0.00	0.00	0.00	2.94	0.00	0.00	0.00	0.00	2.94
WNW	0.00	0.00	2.94	0.00	0.00	0.00	0.00	0.00	2.94
NW	0.00	0.00	2.94	1.47	0.00	0.00	0.00	0.00	4.41
NNW	0.00	1.47	8.82	0.00	0.00	0.00	0.00	0.00	10.29
TOTAL	0.00	7.35	57.35	27.94	7.35	0.00	0.00	0.00	

THIS STABILITY CLASS ACCOUNTS FOR 2.64 PERCENT OF THE TOTAL 2580

## WSES-FSAR-UNIT-3

TABLE 2.3-94

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3 7/72-6/75 &amp; 2/77-2/78

AUGUST, TOTAL FOR PERIOD

STABILITY CLASS D

PERCENTAGE FREQUENCY DISTRIBUTION NUMBER OF OBSERVATIONS = 546

		+----- WIND SPEED (MPH) -----+							
WIND DIRECTION	CALM	0.8 3.0	3.1 7.0	7.1 12.0	12.1 18.0	18.1 24.0	24.1 32.0	ABOVE 32.0	TOTAL
CALM	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
N	0.00	0.73	3.30	1.10	0.00	0.00	0.00	0.00	5.13
NNE	0.00	2.01	5.31	0.73	0.00	0.00	0.00	0.00	8.06
NE	0.00	0.92	4.58	4.95	0.00	0.00	0.00	0.00	10.44
ENE	0.00	0.55	1.83	2.93	2.01	0.00	0.00	0.00	7.33
E	0.00	0.37	1.65	1.83	2.20	0.00	0.00	0.00	6.04
ESE	0.00	0.55	2.20	2.20	0.37	0.00	0.00	0.00	5.31
SE	0.00	0.73	3.48	1.65	0.18	0.00	0.00	0.00	6.04
SSE	0.00	1.10	4.40	0.92	0.18	0.00	0.00	0.00	6.59
S	0.00	1.47	2.75	0.37	0.00	0.00	0.00	0.00	4.58
SSW	0.00	1.28	3.66	1.28	0.00	0.00	0.00	0.00	6.23
SW	0.00	1.28	4.03	0.92	0.00	0.00	0.00	0.00	6.23
WSW	0.00	0.92	3.66	1.10	0.00	0.00	0.00	0.00	5.68
W	0.00	0.37	3.48	1.65	0.00	0.00	0.00	0.00	5.49
WNW	0.00	0.55	3.85	0.18	0.00	0.00	0.00	0.00	4.58
NW	0.00	1.83	4.95	0.55	0.00	0.00	0.00	0.00	7.33
NNW	0.00	0.92	2.93	0.55	0.00	0.00	0.00	0.00	4.40
TOTAL	0.55	15.57	56.04	22.89	4.95	0.00	0.00	0.00	

THIS STABILITY CLASS ACCOUNTS FOR 21.16 PERCENT OF THE TOTAL 2580

WSES-FSAR-UNIT-3

TABLE 2.3-95

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3 7/72-6/75 & 2/77-2/78

AUGUST, TOTAL FOR PERIOD

STABILITY CLASS E

PERCENTAGE FREQUENCY DISTRIBUTION

NUMBER OF OBSERVATIONS = 691

		+----- WIND SPEED (MPH) -----+							
WIND DIRECTION	CALM	0.8 3.0	3.1 7.0	7.1 12.0	12.1 18.0	18.1 24.0	24.1 32.0	ABOVE 32.0	TOTAL
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
CALM	2.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.60
N	0.00	1.16	2.60	0.72	0.00	0.00	0.00	0.00	4.49
NNE	0.00	1.74	5.07	0.43	0.14	0.00	0.00	0.00	7.38
NE	0.00	0.87	3.33	0.87	0.00	0.00	0.00	0.00	5.07
ENE	0.00	0.87	3.62	1.45	0.14	0.00	0.00	0.00	6.08
E	0.00	0.58	3.18	5.50	1.01	0.00	0.00	0.00	10.27
ESE	0.00	1.01	4.34	1.01	0.00	0.00	0.00	0.00	6.37
SE	0.00	1.88	4.78	1.74	0.00	0.00	0.00	0.00	8.39
SSE	0.00	2.17	4.63	1.01	0.00	0.00	0.00	0.00	7.81
S	0.00	2.60	2.32	0.43	0.00	0.00	0.00	0.00	5.35
SSW	0.00	3.33	4.20	0.43	0.00	0.00	0.00	0.00	7.96
SW	0.00	2.60	2.75	0.58	0.00	0.00	0.00	0.00	5.93
WSW	0.00	1.30	2.46	0.00	0.00	0.00	0.00	0.00	3.76
W	0.00	1.59	2.17	0.14	0.00	0.00	0.00	0.00	3.91
WNW	0.00	1.74	2.75	0.43	0.00	0.00	0.00	0.00	4.92
NW	0.00	1.74	2.03	0.29	0.00	0.00	0.00	0.00	4.05
NNW	0.00	1.16	4.20	0.29	0.00	0.00	0.00	0.00	5.64
TOTAL	2.60	26.34	54.41	15.34	1.30	0.00	0.00	0.00	

THIS STABILITY CLASS ACCOUNTS FOR 26.78 PERCENT OF THE TOTAL 2580

WSES-FSAR-UNIT-3

TABLE 2.3-96

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3 7/72-6/75 & 2/77-2/78

AUGUST, TOTAL FOR PERIOD

STABILITY CLASS F

PERCENTAGE FREQUENCY DISTRIBUTION

NUMBER OF OBSERVATIONS = 481

		+----- WIND SPEED (MPH) -----+							
WIND DIRECTION	CALM	0.8 3.0	3.1 7.0	7.1 12.0	12.1 18.0	18.1 24.0	24.1 32.0	ABOVE 32.0	TOTAL
CALM	6.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.03
N	0.00	1.46	1.04	0.00	0.00	0.00	0.00	0.00	2.49
NNE	0.00	0.83	3.53	0.00	0.00	0.00	0.00	0.00	4.37
NE	0.00	1.66	1.04	0.21	0.00	0.00	0.00	0.00	2.91
ENE	0.00	2.08	1.25	0.00	0.00	0.00	0.00	0.00	3.33
E	0.00	2.49	1.66	0.21	0.00	0.00	0.00	0.00	4.37
ESE	0.00	3.12	3.95	0.00	0.00	0.00	0.00	0.00	7.07
SE	0.00	4.37	4.78	0.21	0.00	0.00	0.00	0.00	9.36
SSE	0.00	4.37	7.48	0.00	0.00	0.00	0.00	0.00	11.85
S	0.00	7.69	1.46	0.00	0.00	0.00	0.00	0.00	9.15
SSW	0.00	6.24	2.29	0.00	0.00	0.00	0.00	0.00	8.52
SW	0.00	4.37	1.46	0.00	0.00	0.00	0.00	0.00	5.82
WSW	0.00	5.20	3.74	0.00	0.00	0.00	0.00	0.00	8.94
W	0.00	4.37	1.25	0.00	0.00	0.00	0.00	0.00	5.61
WNW	0.00	2.08	1.66	0.00	0.00	0.00	0.00	0.00	3.74
NW	0.00	1.66	1.46	0.21	0.00	0.00	0.00	0.00	3.33
NNW	0.00	1.04	1.87	0.21	0.00	0.00	0.00	0.00	3.12
TOTAL	6.03	53.01	39.92	1.04	0.00	0.00	0.00	0.00	

THIS STABILITY CLASS ACCOUNTS FOR 18.64 PERCENT OF THE TOTAL 2580

WSES-FSAR-UNIT-3

TABLE 2.3-97

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3 7/72-6/75 & 2/77-2/78

AUGUST, TOTAL FOR PERIOD

STABILITY CLASS G

PERCENTAGE FREQUENCY DISTRIBUTION

NUMBER OF OBSERVATIONS = 370

		+----- WIND SPEED (MPH) -----+							
WIND DIRECTION	CALM	0.8 3.0	3.1 7.0	7.1 12.0	12.1 18.0	18.1 24.0	24.1 32.0	ABOVE 32.0	TOTAL
CALM	10.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.81
N	0.00	1.62	0.81	0.00	0.00	0.00	0.00	0.00	2.43
NNE	0.00	1.08	1.62	0.00	0.00	0.00	0.00	0.00	2.70
NE	0.00	1.08	0.27	0.00	0.00	0.00	0.00	0.00	1.35
ENE	0.00	0.27	0.00	0.00	0.00	0.00	0.00	0.00	0.27
E	0.00	0.27	0.00	0.00	0.00	0.00	0.00	0.00	0.27
ESE	0.00	0.54	0.54	0.00	0.00	0.00	0.00	0.00	1.08
SE	0.00	4.59	3.51	0.00	0.00	0.00	0.00	0.00	8.11
SSE	0.00	12.16	4.86	0.00	0.00	0.00	0.00	0.00	17.03
S	0.00	8.38	2.16	0.00	0.00	0.00	0.00	0.00	10.54
SSW	0.00	8.11	1.62	0.00	0.00	0.00	0.00	0.00	9.73
SW	0.00	7.84	2.16	0.00	0.00	0.00	0.00	0.00	10.00
WSW	0.00	8.38	1.08	0.00	0.00	0.00	0.00	0.00	9.46
W	0.00	8.92	0.54	0.00	0.00	0.00	0.00	0.00	9.46
WNW	0.00	3.51	0.81	0.00	0.00	0.00	0.00	0.00	4.32
NW	0.00	1.35	0.00	0.00	0.00	0.00	0.00	0.00	1.35
NNW	0.00	0.81	0.27	0.00	0.00	0.00	0.00	0.00	1.08
TOTAL	10.81	68.92	20.27	0.00	0.00	0.00	0.00	0.00	

THIS STABILITY CLASS ACCOUNTS FOR 14.34 PERCENT OF THE TOTAL 2580

WSES-FSAR-UNIT-3

TABLE 2.3-98

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3 7/72-6/75 & 2/77-2/78

SEPTEMBER, TOTAL FOR PERIOD

STABILITY CLASS A

PERCENTAGE FREQUENCY DISTRIBUTION

NUMBER OF OBSERVATIONS = 349

		+----- WIND SPEED (MPH) -----+							
WIND DIRECTION	CALM	0.8 3.0	3.1 7.0	7.1 12.0	12.1 18.0	18.1 24.0	24.1 32.0	ABOVE 32.0	TOTAL
CALM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
N	0.00	0.57	0.86	0.86	0.00	0.00	0.00	0.00	2.29
NNE	0.00	0.29	3.72	6.02	0.29	0.00	0.00	0.00	10.32
NE	0.00	0.29	12.32	12.89	1.15	0.00	0.00	0.00	26.65
ENE	0.00	0.29	6.30	6.02	0.00	0.00	0.00	0.00	12.61
E	0.00	0.29	1.72	1.72	0.86	0.00	0.00	0.00	4.58
ESE	0.00	0.00	2.29	3.15	0.00	0.00	0.00	0.00	5.44
SE	0.00	0.29	2.58	2.01	0.57	0.00	0.00	0.00	5.44
SSE	0.00	0.29	1.43	3.15	0.00	0.00	0.00	0.00	4.87
S	0.00	0.29	1.15	0.29	0.00	0.00	0.00	0.00	1.72
SSW	0.00	0.00	1.43	1.72	0.00	0.00	0.00	0.00	3.15
SW	0.00	0.00	1.43	4.30	0.00	0.00	0.00	0.00	5.73
WSW	0.00	0.00	3.44	4.01	0.29	0.00	0.00	0.00	7.74
W	0.00	0.00	0.29	0.86	0.00	0.00	0.00	0.00	1.15
WNW	0.00	0.00	1.15	0.57	0.00	0.00	0.00	0.00	1.72
NW	0.00	0.00	1.15	0.57	0.00	0.00	0.00	0.00	1.72
NNW	0.00	0.00	2.01	2.87	0.00	0.00	0.00	0.00	4.87
TOTAL	0.00	2.58	43.27	51.00	3.15	0.00	0.00	0.00	

THIS STABILITY CLASS ACCOUNTS FOR 13.34 PERCENT OF THE TOTAL 2616

WSES-FSAR-UNIT-3

TABLE 2.3-99

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3 7/72-6/75 & 2/77-2/78

SEPTEMBER, TOTAL FOR PERIOD

STABILITY CLASS B

PERCENTAGE FREQUENCY DISTRIBUTION

NUMBER OF OBSERVATIONS = 92

+----- WIND SPEED (MPH) -----+									
WIND DIRECTION	CALM	0.8 3.0	3.1 7.0	7.1 12.0	12.1 18.0	18.1 24.0	24.1 32.0	ABOVE 32.0	TOTAL
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
CALM	1.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.09
N	0.00	0.00	1.09	0.00	0.00	0.00	0.00	0.00	1.09
NNE	0.00	1.09	7.61	1.09	0.00	0.00	0.00	0.00	9.78
NE	0.00	1.09	10.87	5.43	5.43	0.00	0.00	0.00	22.83
ENE	0.00	0.00	5.43	6.52	4.35	0.00	0.00	0.00	16.30
E	0.00	0.00	0.00	3.26	1.09	0.00	0.00	0.00	4.35
ESE	0.00	0.00	1.09	5.43	0.00	0.00	0.00	0.00	6.52
SE	0.00	0.00	1.09	1.09	0.00	0.00	0.00	0.00	2.17
SSE	0.00	0.00	3.26	1.09	1.09	0.00	0.00	0.00	5.43
S	0.00	0.00	3.26	1.09	0.00	0.00	0.00	0.00	4.35
SSW	0.00	1.09	0.00	2.17	0.00	0.00	0.00	0.00	3.26
SW	0.00	0.00	3.26	0.00	0.00	0.00	0.00	0.00	3.26
WSW	0.00	0.00	0.00	0.00	3.26	0.00	0.00	0.00	3.26
W	0.00	0.00	4.35	1.09	3.26	0.00	0.00	0.00	8.70
WNW	0.00	0.00	2.17	1.09	0.00	0.00	0.00	0.00	3.26
NW	0.00	0.00	3.26	0.00	0.00	0.00	0.00	0.00	3.26
NNW	0.00	1.09	0.00	0.00	0.00	0.00	0.00	0.00	1.09
TOTAL	1.09	4.35	46.74	29.35	18.48	0.00	0.00	0.00	

THIS STABILITY CLASS ACCOUNTS FOR 3.52 PERCENT OF THE TOTAL 2616

WSES-FSAR-UNIT-3

TABLE 2.3-100

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3 7/72-6/75 & 2/77-2/78

SEPTEMBER, TOTAL FOR PERIOD

STABILITY CLASS C

PERCENTAGE FREQUENCY DISTRIBUTION

NUMBER OF OBSERVATIONS = 89

		+----- WIND SPEED (MPH) -----+							
WIND DIRECTION	CALM	0.8 3.0	3.1 7.0	7.1 12.0	12.1 18.0	18.1 24.0	24.1 32.0	ABOVE 32.0	TOTAL
CALM	1.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.12
N	0.00	1.12	4.49	0.00	0.00	0.00	0.00	0.00	5.62
NNE	0.00	1.12	2.25	1.12	0.00	0.00	0.00	0.00	4.49
NE	0.00	1.12	8.99	8.99	3.37	0.00	0.00	0.00	22.47
ENE	0.00	3.37	2.25	7.87	2.25	0.00	0.00	0.00	15.73
E	0.00	1.12	1.12	0.00	2.25	0.00	0.00	0.00	4.49
ESE	0.00	0.00	0.00	4.49	1.12	0.00	0.00	0.00	5.62
SE	0.00	0.00	4.49	0.00	0.00	0.00	0.00	0.00	4.49
SSE	0.00	1.12	3.37	0.00	1.12	0.00	0.00	0.00	5.62
S	0.00	1.12	3.37	1.12	0.00	0.00	0.00	0.00	5.62
SSW	0.00	1.12	3.37	1.12	0.00	0.00	0.00	0.00	5.62
SW	0.00	0.00	3.37	0.00	0.00	0.00	0.00	0.00	3.37
WSW	0.00	0.00	1.12	3.37	1.12	0.00	0.00	0.00	5.62
W	0.00	0.00	2.25	0.00	0.00	0.00	0.00	0.00	2.25
WNW	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NW	0.00	0.00	2.25	0.00	0.00	0.00	0.00	0.00	2.25
NNW	0.00	1.12	3.37	1.12	0.00	0.00	0.00	0.00	5.62
TOTAL	1.12	12.36	46.07	29.21	11.24	0.00	0.00	0.00	

THIS STABILITY CLASS ACCOUNTS FOR 3.40 PERCENT OF THE TOTAL 2616

## WSES-FSAR-UNIT-3

TABLE 2.3-101

Revision 11 (05/01)

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3

7/72-6/75 &amp; 2/77-2/78

SEPTEMBER, TOTAL FOR PERIOD

STABILITY CLASS D

PERCENTAGE FREQUENCY DISTRIBUTION

NUMBER OF OBSERVATIONS = 539

WIND DIRECTION -----	+----- WIND SPEED (MPH) -----+								TOTAL -----
	CALM -----	0.8 3.0 -----	3.1 7.0 -----	7.1 12.0 -----	12.1 18.0 -----	18.1 24.0 -----	24.1 32.0 -----	ABOVE 32.0 -----	
CALM	0.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
N	0.00	0.74	0.74	3.15	0.00	0.00	0.00	0.00	4.64
→ (DRN 01-282)									
NNE	0.00	0.56	3.53	3.53	0.00	0.00	0.00	0.00	7.61
← (DRN 01-282)									
NE	0.00	0.74	7.42	6.31	2.60	0.00	0.00	0.00	17.07
ENE	0.00	0.19	2.78	3.71	1.48	0.00	0.00	0.00	8.16
E	0.00	0.37	1.48	2.41	2.23	0.56	0.00	0.00	7.05
ESE	0.00	0.74	4.08	8.72	0.74	0.19	0.00	0.00	14.47
SE	0.00	0.37	3.15	3.15	0.37	0.56	0.00	0.00	7.61
SSE	0.00	0.37	2.41	2.04	1.11	0.00	0.00	0.00	5.94
S	0.00	0.93	2.97	0.56	0.93	0.00	0.00	0.00	5.38
SSW	0.00	0.93	1.48	0.93	0.56	0.19	0.00	0.00	4.08
SW	0.00	0.56	2.60	0.93	0.56	0.00	0.00	0.00	4.64
WSW	0.00	0.93	1.48	0.74	0.37	0.00	0.00	0.00	3.53
W	0.00	0.19	1.30	0.19	0.00	0.00	0.00	0.00	1.67
WNW	0.00	0.00	0.56	0.37	0.19	0.00	0.00	0.00	1.11
NW	0.00	0.00	0.93	0.19	0.00	0.00	0.00	0.00	1.11
NNW	0.00	0.19	2.23	2.78	0.19	0.00	0.00	0.00	5.38
TOTAL	0.56	7.79	39.15	39.70	11.32	1.48	0.00	0.00	

THIS STABILITY CLASS ACCOUNTS FOR 20.60 PERCENT OF THE TOTAL 2616

## WSES-FSAR-UNIT-3

TABLE 2.3-102

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3 7/72-6/75 &amp; 2/77-2/78

SEPTEMBER, TOTAL FOR PERIOD

STABILITY CLASS E

PERCENTAGE FREQUENCY DISTRIBUTION

NUMBER OF OBSERVATIONS = 776

		+----- WIND SPEED (MPH) -----+							
WIND DIRECTION	CALM	0.8 3.0	3.1 7.0	7.1 12.0	12.1 18.0	18.1 24.0	24.1 32.0	ABOVE 32.0	TOTAL
CALM	1.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.29
N	0.00	0.52	2.32	1.68	0.00	0.00	0.00	0.00	4.51
NNE	0.00	0.90	4.12	2.06	0.52	0.00	0.00	0.00	7.60
NE	0.00	1.93	5.54	2.71	2.06	0.00	0.00	0.00	12.24
ENE	0.00	0.90	4.38	4.77	0.13	0.00	0.00	0.00	10.18
E	0.00	0.77	4.38	4.38	0.00	0.00	0.00	0.00	9.54
ESE	0.00	1.68	7.09	2.19	0.26	0.00	0.00	0.00	11.21
SE	0.00	1.68	5.67	0.77	0.13	0.00	0.00	0.00	8.25
SSE	0.00	2.06	3.48	0.52	0.26	0.00	0.00	0.00	6.31
S	0.00	1.42	2.58	1.03	0.00	0.00	0.00	0.00	5.03
SSW	0.00	0.90	3.09	0.90	0.00	0.00	0.00	0.00	4.90
SW	0.00	1.29	2.96	0.26	0.00	0.00	0.00	0.00	4.51
WSW	0.00	1.55	2.19	0.13	0.00	0.00	0.00	0.00	3.87
W	0.00	0.77	1.42	0.13	0.00	0.00	0.00	0.00	2.32
WNW	0.00	1.29	0.64	0.00	0.00	0.00	0.00	0.00	1.93
NW	0.00	0.52	1.55	0.39	0.13	0.00	0.00	0.00	2.58
NNW	0.00	0.52	1.68	1.55	0.00	0.00	0.00	0.00	3.74
TOTAL	1.29	18.69	53.09	23.45	3.48	0.00	0.00	0.00	

THIS STABILITY CLASS ACCOUNTS FOR 29.66 PERCENT OF THE TOTAL 2616

WSES-FSAR-UNIT-3

TABLE 2.3-103

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3 7/72-6/75 & 2/77-2/78

SEPTEMBER, TOTAL FOR PERIOD

STABILITY CLASS F

PERCENTAGE FREQUENCY DISTRIBUTION

NUMBER OF OBSERVATIONS = 432

		+----- WIND SPEED (MPH) -----+							
WIND DIRECTION	CALM	0.8 3.0	3.1 7.0	7.1 12.0	12.1 18.0	18.1 24.0	24.1 32.0	ABOVE 32.0	TOTAL
CALM	3.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.94
N	0.00	1.85	1.85	0.00	0.00	0.00	0.00	0.00	3.70
NNE	0.00	1.62	1.85	0.00	0.00	0.00	0.00	0.00	3.47
NE	0.00	2.55	2.31	0.00	0.00	0.00	0.00	0.00	4.86
ENE	0.00	3.01	3.47	0.23	0.00	0.00	0.00	0.00	6.71
E	0.00	2.78	2.08	0.23	0.00	0.00	0.00	0.00	5.09
ESE	0.00	4.17	8.10	0.00	0.00	0.00	0.00	0.00	12.27
SE	0.00	5.56	4.63	0.00	0.00	0.00	0.00	0.00	10.19
SSE	0.00	5.56	4.40	0.00	0.00	0.00	0.00	0.00	9.95
S	0.00	5.32	5.09	0.23	0.00	0.00	0.00	0.00	10.65
SSW	0.00	6.48	4.63	0.00	0.00	0.00	0.00	0.00	11.11
SW	0.00	3.47	2.55	0.00	0.00	0.00	0.00	0.00	6.02
WSW	0.00	2.08	0.93	0.00	0.00	0.00	0.00	0.00	3.01
W	0.00	0.93	0.23	0.00	0.00	0.00	0.00	0.00	1.16
WNW	0.00	0.69	0.93	0.00	0.00	0.00	0.00	0.00	1.62
NW	0.00	1.16	1.62	0.00	0.00	0.00	0.00	0.00	2.78
NNW	0.00	1.85	1.16	0.46	0.00	0.00	0.00	0.00	3.47
TOTAL	3.94	49.07	45.83	1.16	0.00	0.00	0.00	0.00	

THIS STABILITY CLASS ACCOUNTS FOR 16.51 PERCENT OF THE TOTAL 2616

## WSES-FSAR-UNIT-3

TABLE 2.3-104

Revision 11 (05/01)

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3 7/72-6/75 & 2/77-2/78  
 SEPTEMBER, TOTAL FOR PERIOD STABILITY CLASS G

PERCENTAGE FREQUENCY DISTRIBUTION NUMBER OF OBSERVATIONS = 339

+----- WIND SPEED (MPH) -----+									
WIND DIRECTION -----	CALM -----	0.8 3.0 -----	3.1 7.0 -----	7.1 12.0 -----	12.1 18.0 -----	18.1 24.0 -----	24.1 32.0 -----	ABOVE 32.0 -----	TOTAL -----
CALM	16.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.22
N	0.00	0.88	0.00	0.00	0.00	0.00	0.00	0.00	0.88
NNE	0.00	0.29	0.29	0.00	0.00	0.00	0.00	0.00	0.59
NE → (DRN 01-282)	0.00	0.88	0.29	0.00	0.00	0.00	0.00	0.00	1.18
ENE ← (DRN 01-282)	0.00	0.88	0.00	0.00	0.00	0.00	0.00	0.00	0.88
E	0.00	1.18	0.29	0.00	0.00	0.00	0.00	0.00	1.47
ESE	0.00	7.67	3.83	0.29	0.00	0.00	0.00	0.00	11.80
SE	0.00	7.96	3.54	0.00	0.00	0.00	0.00	0.00	11.50
SSE	0.00	10.91	4.42	0.00	0.00	0.00	0.00	0.00	15.34
S	0.00	6.49	2.65	0.00	0.00	0.00	0.00	0.00	9.14
SSW	0.00	5.60	1.47	0.00	0.00	0.00	0.00	0.00	7.08
SW	0.00	5.60	0.00	0.00	0.00	0.00	0.00	0.00	5.60
WSW	0.00	6.78	0.00	0.00	0.00	0.00	0.00	0.00	6.78
W	0.00	3.54	0.00	0.00	0.00	0.00	0.00	0.00	3.54
WNW	0.00	2.65	0.00	0.00	0.00	0.00	0.00	0.00	2.65
NW	0.00	2.95	0.29	0.00	0.00	0.00	0.00	0.00	3.24
NNW	0.00	2.06	0.00	0.00	0.00	0.00	0.00	0.00	2.06
TOTAL	16.22	66.37	17.11	0.29	0.00	0.00	0.00	0.00	

THIS STABILITY CLASS ACCOUNTS FOR 12.96 PERCENT OF THE TOTAL 2616

## WSES-FSAR-UNIT-3

TABLE 2.3-105

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3 7/72-6/75 &amp; 2/77-2/78

OCTOBER, TOTAL FOR PERIOD

STABILITY CLASS A

PERCENTAGE FREQUENCY DISTRIBUTION

NUMBER OF OBSERVATIONS = 476

		+----- WIND SPEED (MPH) -----+							
WIND DIRECTION	CALM	0.8 3.0	3.1 7.0	7.1 12.0	12.1 18.0	18.1 24.0	24.1 32.0	ABOVE 32.0	TOTAL
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
CALM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
N	0.00	0.42	1.89	1.47	0.42	0.63	0.00	0.00	4.83
NNE	0.00	0.00	7.77	7.98	1.05	0.00	0.00	0.00	16.81
NE	0.00	0.42	12.82	16.60	3.57	0.00	0.00	0.00	33.40
ENE	0.00	0.00	4.41	7.56	0.42	0.00	0.00	0.00	12.39
E	0.00	0.00	0.42	2.31	0.63	0.00	0.00	0.00	3.36
ESE	0.00	0.21	1.26	2.73	0.42	0.00	0.00	0.00	4.62
SE	0.00	0.00	1.05	2.31	0.42	0.00	0.00	0.00	3.78
SSE	0.00	0.00	0.42	0.63	0.21	0.00	0.00	0.00	1.26
S	0.00	0.00	0.00	0.00	0.42	0.00	0.00	0.00	0.42
SSW	0.00	0.21	0.00	0.00	0.63	0.00	0.00	0.00	0.84
SW	0.00	0.00	0.42	0.42	0.84	0.00	0.00	0.00	1.68
WSW	0.00	0.00	0.21	1.47	0.42	0.00	0.00	0.00	2.10
W	0.00	0.00	0.84	0.84	0.21	0.00	0.00	0.00	1.89
WNW	0.00	0.00	1.26	1.05	0.00	0.00	0.00	0.00	2.31
NW	0.00	0.00	2.31	1.26	0.00	0.00	0.00	0.00	3.57
NNW	0.00	0.21	1.68	4.41	0.42	0.00	0.00	0.00	6.72
TOTAL	0.00	1.47	36.76	51.05	10.08	0.63	0.00	0.00	

THIS STABILITY CLASS ACCOUNTS FOR 17.98 PERCENT OF THE TOTAL 2647

## WSES-FSAR-UNIT-3

TABLE 2.3-106

Revision 11 (05/01)

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3 7/72-6/75 &amp; 2/77-2/78

OCTOBER, TOTAL FOR PERIOD

STABILITY CLASS B

PERCENTAGE FREQUENCY DISTRIBUTION

NUMBER OF OBSERVATIONS = 57

+----- WIND SPEED (MPH) -----+									
WIND DIRECTION	CALM	0.8 3.0	3.1 7.0	7.1 12.0	12.1 18.0	18.1 24.0	24.1 32.0	ABOVE 32.0	TOTAL
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
CALM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
N	0.00	0.00	3.51	0.00	1.75	0.00	0.00	0.00	5.26
NNE	0.00	1.75	5.26	3.51	3.51	0.00	0.00	0.00	14.04
NE	0.00	0.00	8.77	3.51	1.75	0.00	0.00	0.00	14.04
ENE	0.00	0.00	3.51	5.26	1.75	0.00	0.00	0.00	10.53
E	0.00	0.00	1.75	3.51	5.26	0.00	0.00	0.00	10.53
ESE	0.00	0.00	3.51	5.26	0.00	0.00	0.00	0.00	8.77
SE	0.00	0.00	0.00	1.75	0.00	0.00	0.00	0.00	1.75
SSE	0.00	0.00	0.00	3.51	0.00	0.00	0.00	0.00	3.51
S	0.00	0.00	1.75	1.75	0.00	0.00	0.00	0.00	3.51
SSW	0.00	0.00	0.00	1.75	0.00	0.00	0.00	0.00	1.75
SW	0.00	0.00	1.75	5.26	1.75	0.00	0.00	0.00	8.77
WSW	0.00	0.00	1.75	0.00	0.00	0.00	0.00	0.00	1.75
W	0.00	0.00	0.00	3.51	1.75	0.00	0.00	0.00	5.26
WNW	0.00	0.00	1.75	0.00	0.00	0.00	0.00	0.00	1.75
NW	0.00	0.00	3.51	0.00	0.00	0.00	0.00	0.00	3.51
NNW	0.00	0.00	1.75	1.75	1.75	0.00	0.00	0.00	5.26
TOTAL	0.00	1.75	38.60	40.35	19.30	0.00	0.00	0.00	

→ (DRN 01-282)

THIS STABILITY CLASS ACCOUNTS FOR 2.15 PERCENT OF THE TOTAL 2647

← (DRN 01-282)

## WSES-FSAR-UNIT-3

TABLE 2.3-107

Revision 11 (05/01)

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3 7/72-6/75 &amp; 2/77-2/78

OCTOBER, TOTAL FOR PERIOD

STABILITY CLASS C

PERCENTAGE FREQUENCY DISTRIBUTION

NUMBER OF OBSERVATIONS = 33

WIND DIRECTION -----	+----- WIND SPEED (MPH) -----+								TOTAL -----
	CALM -----	0.8 3.0 -----	3.1 7.0 -----	7.1 12.0 -----	12.1 18.0 -----	18.1 24.0 -----	24.1 32.0 -----	ABOVE 32.0 -----	
CALM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
N	0.00	0.00	0.00	3.03	0.00	0.00	0.00	0.00	3.03
NNE	0.00	0.00	15.15	0.00	0.00	0.00	0.00	0.00	15.15
NE	0.00	0.00	9.09	9.09	6.06	0.00	0.00	0.00	24.24
ENE	0.00	3.03	6.06	6.06	0.00	0.00	0.00	0.00	15.15
E	0.00	0.00	3.03	3.03	0.00	0.00	0.00	0.00	6.06
ESE	0.00	0.00	0.00	3.03	0.00	0.00	0.00	0.00	3.03
SE	0.00	0.00	0.00	6.06	0.00	0.00	0.00	0.00	6.06
SSE	0.00	0.00	0.00	0.00	3.03	0.00	0.00	0.00	3.03
S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SSW	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SW → (DRN 01-282)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WSW	0.00	0.00	0.00	6.06	0.00	0.00	0.00	0.00	6.06
W ← (DRN 01-282)	0.00	0.00	0.00	6.06	0.00	0.00	0.00	0.00	6.06
WNW	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NW	0.00	0.00	3.03	0.00	0.00	0.00	0.00	0.00	3.03
NNW	0.00	3.03	3.03	3.03	0.00	0.00	0.00	0.00	9.09
TOTAL	0.00	6.06	39.39	45.45	9.09	0.00	0.00	0.00	

THIS STABILITY CLASS ACCOUNTS FOR 1.25 PERCENT OF THE TOTAL 2647

## WSES-FSAR-UNIT-3

TABLE 2.3-108

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3 7/72-6/75 &amp; 2/77-2/78

OCTOBER, TOTAL FOR PERIOD

STABILITY CLASS D

PERCENTAGE FREQUENCY DISTRIBUTION

NUMBER OF OBSERVATIONS = 493

		+----- WIND SPEED (MPH) -----+							
WIND DIRECTION	CALM	0.8 3.0	3.1 7.0	7.1 12.0	12.1 18.0	18.1 24.0	24.1 32.0	ABOVE 32.0	TOTAL
CALM	0.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41
N	0.00	0.81	3.04	3.25	3.45	0.00	0.00	0.00	10.55
NNE	0.00	0.41	5.27	4.26	1.83	0.00	0.00	0.00	11.76
NE	0.00	0.41	7.71	7.30	3.04	0.00	0.00	0.00	18.46
ENE	0.00	0.61	3.25	4.67	1.62	0.00	0.00	0.00	10.14
E	0.00	0.00	0.61	3.65	1.01	0.00	0.00	0.00	5.27
ESE	0.00	0.41	0.81	5.27	0.20	0.00	0.00	0.00	6.69
SE	0.00	0.20	0.20	2.84	1.83	0.41	0.00	0.00	5.48
SSE	0.00	0.00	1.01	1.42	0.00	0.00	0.00	0.00	2.43
S	0.00	0.00	0.61	0.00	0.00	0.00	0.00	0.00	0.61
SSW	0.00	0.00	1.22	1.42	0.00	0.00	0.00	0.00	2.64
SW	0.00	0.00	1.62	0.81	0.00	0.00	0.00	0.00	2.43
WSW	0.00	0.00	0.81	0.41	0.00	0.00	0.00	0.00	1.22
W	0.00	0.20	0.61	0.61	0.20	0.00	0.00	0.00	1.62
WNW	0.00	0.41	2.23	1.01	0.20	0.00	0.00	0.00	3.85
NW	0.00	1.01	5.07	2.64	0.41	0.00	0.00	0.00	9.13
NNW	0.00	0.41	4.67	1.83	0.41	0.00	0.00	0.00	7.30
TOTAL	0.41	4.87	38.74	41.38	14.20	0.41	0.00	0.00	

THIS STABILITY CLASS ACCOUNTS FOR 18.62 PERCENT OF THE TOTAL 2647

## WSES-FSAR-UNIT-3

TABLE 2.3-109

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3 7/72-6/75 &amp; 2/77-2/78

OCTOBER, TOTAL FOR PERIOD

STABILITY CLASS E

PERCENTAGE FREQUENCY DISTRIBUTION

NUMBER OF OBSERVATIONS = 694

		+----- WIND SPEED (MPH) -----+							
WIND DIRECTION	CALM	0.8 3.0	3.1 7.0	7.1 12.0	12.1 18.0	18.1 24.0	24.1 32.0	ABOVE 32.0	TOTAL
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
CALM	0.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
N	0.00	0.58	3.31	4.61	0.14	0.00	0.00	0.00	8.65
NNE	0.00	1.01	3.31	4.32	0.72	0.00	0.00	0.00	9.37
NE	0.00	1.15	4.32	5.48	1.30	0.00	0.00	0.00	12.25
ENE	0.00	0.29	5.33	3.75	0.14	0.00	0.00	0.00	9.51
E	0.00	0.29	3.60	5.19	0.00	0.00	0.00	0.00	9.08
ESE	0.00	0.58	8.36	2.59	0.14	0.00	0.00	0.00	11.67
SE	0.00	0.00	4.76	3.75	0.14	0.00	0.00	0.00	8.65
SSE	0.00	0.29	1.73	1.01	0.14	0.00	0.00	0.00	3.17
S	0.00	0.00	0.86	0.00	0.00	0.00	0.00	0.00	0.86
SSW	0.00	0.14	1.59	0.43	0.00	0.00	0.00	0.00	2.16
SW	0.00	0.43	1.15	0.14	0.00	0.00	0.00	0.00	1.73
WSW	0.00	0.58	0.86	0.00	0.00	0.00	0.00	0.00	1.44
W	0.00	0.00	0.43	0.00	0.00	0.00	0.00	0.00	0.43
WNW	0.00	0.43	2.45	0.43	0.14	0.00	0.00	0.00	3.46
NW	0.00	1.44	4.32	1.15	0.43	0.00	0.00	0.00	7.35
NNW	0.00	1.15	6.05	2.16	0.43	0.00	0.00	0.00	9.80
TOTAL	0.43	8.36	52.45	35.01	3.75	0.00	0.00	0.00	

THIS STABILITY CLASS ACCOUNTS FOR 26.22 PERCENT OF THE TOTAL 2647

WSES-FSAR-UNIT-3

TABLE 2.3-110

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3 7/72-6/75 & 2177-2178

OCTOBER, TOTAL FOR PERIOD

STABILITY CLASS F

PERCENTAGE FREQUENCY DISTRIBUTION

NUMBER OF OBSERVATIONS = 395

+----- WIND SPEED (MPH) -----+									
WIND DIRECTION	CALM	0.8 3.0	3.1 7.0	7.1 12.0	12.1 18.0	18.1 24.0	24.1 32.0	ABOVE 32.0	TOTAL
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
CALM	4.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.05
N	0.00	2.28	4.81	0.25	0.00	0.00	0.00	0.00	7.34
NNE	0.00	2.53	10.89	0.51	0.00	0.00	0.00	0.00	13.92
NE	0.00	1.77	5.32	3.04	0.00	0.00	0.00	0.00	10.13
ENE	0.00	1.27	7.85	0.76	0.00	0.00	0.00	0.00	9.87
E	0.00	0.51	4.30	1.52	0.00	0.00	0.00	0.00	6.33
ESE	0.00	1.77	6.58	0.00	0.00	0.00	0.00	0.00	8.35
SE	0.00	2.03	2.78	0.00	0.00	0.00	0.00	0.00	4.81
SSE	0.00	0.51	0.25	0.00	0.00	0.00	0.00	0.00	0.76
S	0.00	0.76	1.01	0.00	0.00	0.00	0.00	0.00	1.77
SSW	0.00	0.25	0.51	0.00	0.00	0.00	0.00	0.00	0.76
SW	0.00	1.77	2.78	0.00	0.00	0.00	0.00	0.00	4.56
WSW	0.00	2.53	1.52	0.00	0.00	0.00	0.00	0.00	4.05
W	0.00	0.76	0.76	0.00	0.00	0.00	0.00	0.00	1.52
WNW	0.00	1.77	1.01	0.00	0.00	0.00	0.00	0.00	2.78
NW	0.00	3.54	5.57	0.00	0.00	0.00	0.00	0.00	9.11
NNW	0.00	3.80	5.57	0.51	0.00	0.00	0.00	0.00	9.87
TOTAL	4.05	27.85	61.52	6.58	0.00	0.00	0.00	0.00	

THIS STABILITY CLASS ACCOUNTS FOR 14.92 PERCENT OF THE TOTAL 2647

WSES-FSAR-UNIT-3

TABLE 2.3-111

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3 7/72-6/75 & 2/77-2/78

OCTOBER, TOTAL FOR PERIOD

STABILITY CLASS G

PERCENTAGE FREQUENCY DISTRIBUTION

NUMBER OF OBSERVATIONS = 499

+----- WIND SPEED (MPH) -----+									
WIND DIRECTION	CALM	0.8 3.0	3.1 7.0	7.1 12.0	12.1 18.0	18.1 24.0	24.1 32.0	ABOVE 32.0	TOTAL
CALM	12.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.22
N	0.00	1.60	2.81	0.00	0.00	0.00	0.00	0.00	4.41
NNE	0.00	2.81	2.00	0.00	0.00	0.00	0.00	0.00	4.81
NE	0.00	1.00	0.80	0.00	0.00	0.00	0.00	0.00	1.80
ENE	0.00	1.40	0.80	0.00	0.00	0.00	0.00	0.00	2.20
E	0.00	0.60	0.20	0.00	0.00	0.00	0.00	0.00	0.80
ESE	0.00	2.40	0.60	0.00	0.00	0.00	0.00	0.00	3.01
SE	0.00	2.20	0.40	0.00	0.00	0.00	0.00	0.00	2.61
SSE	0.00	7.01	2.40	0.00	0.00	0.00	0.00	0.00	9.42
S	0.00	3.21	1.60	0.00	0.00	0.00	0.00	0.00	4.81
SSW	0.00	4.61	1.20	0.00	0.00	0.00	0.00	0.00	5.81
SW	0.00	6.21	1.60	0.00	0.00	0.00	0.00	0.00	7.82
WSW	0.00	9.42	1.20	0.00	0.00	0.00	0.00	0.00	10.62
W	0.00	5.81	0.80	0.00	0.00	0.00	0.00	0.00	6.61
WNW	0.00	8.82	1.20	0.00	0.00	0.00	0.00	0.00	10.02
NW	0.00	5.41	1.20	0.00	0.00	0.00	0.00	0.00	6.61
NNW	0.00	4.01	2.40	0.00	0.00	0.00	0.00	0.00	6.41
TOTAL	12.22	66.53	21.24	0.00	0.00	0.00	0.00	0.00	

THIS STABILITY CLASS ACCOUNTS FOR 18.85 PERCENT OF THE TOTAL 2647

WSES-FSAR-UNIT-3

TABLE 2.3-112

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3 7/72-6/75 & 2/77-2/78

NOVEMBER, TOTAL FOR PERIOD

STABILITY CLASS A

PERCENTAGE FREQUENCY DISTRIBUTION

NUMBER OF OBSERVATIONS = 290

+----- WIND SPEED (MPH) -----+									
WIND DIRECTION	CALM	0.8 3.0	3.1 7.0	7.1 12.0	12.1 18.0	18.1 24.0	24.1 32.0	ABOVE 32.0	TOTAL
CALM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
N	0.00	0.34	1.03	1.72	0.00	0.00	0.00	0.00	3.10
NNE	0.00	0.69	3.45	5.52	0.34	0.00	0.00	0.00	10.00
NE	0.00	0.34	11.38	10.34	1.72	0.00	0.00	0.00	23.79
ENE	0.00	0.34	1.38	4.83	0.00	0.00	0.00	0.00	6.55
E	0.00	0.00	0.34	2.07	0.00	0.00	0.00	0.00	2.41
ESE	0.00	0.00	2.41	2.41	0.69	0.00	0.00	0.00	5.52
SE	0.00	0.00	0.34	5.17	3.10	0.00	0.00	0.00	8.62
SSE	0.00	0.00	2.07	4.83	1.38	0.00	0.00	0.00	8.28
S	0.00	0.00	0.69	2.41	0.34	0.00	0.00	0.00	3.45
SSW	0.00	0.00	0.00	1.03	0.00	0.00	0.00	0.00	1.03
SW	0.00	0.00	0.34	1.03	0.69	0.00	0.00	0.00	2.07
WSW	0.00	0.00	0.34	0.69	0.00	0.00	0.00	0.00	1.03
W	0.00	0.00	0.34	2.76	0.69	0.00	0.00	0.00	3.79
WNW	0.00	0.34	1.03	2.41	1.38	0.00	0.00	0.00	5.17
NW	0.00	0.00	1.72	3.79	1.72	0.00	0.00	0.00	7.24
NNW	0.00	0.00	3.10	3.10	1.03	0.69	0.00	0.00	7.93
TOTAL	0.00	2.07	30.00	54.14	13.10	0.69	0.00	0.00	

THIS STABILITY CLASS ACCOUNTS FOR 10.62 PERCENT OF THE TOTAL 2731

## WSES-FSAR-UNIT-3

TABLE 2.3-113

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3 7/72-6/75 &amp; 2/77-2/78

NOVEMBER, TOTAL FOR PERIOD

STABILITY CLASS B

PERCENTAGE FREQUENCY DISTRIBUTION

NUMBER OF OBSERVATIONS = 48

+----- WIND SPEED (MPH) -----+									
WIND DIRECTION	CALM	0.8 3.0	3.1 7.0	7.1 12.0	12.1 18.0	18.1 24.0	24.1 32.0	ABOVE 32.0	TOTAL
CALM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
N	0.00	0.00	4.17	2.08	0.00	0.00	0.00	0.00	6.25
NNE	0.00	0.00	0.00	4.17	0.00	0.00	0.00	0.00	4.17
NE	0.00	0.00	6.25	4.17	2.08	0.00	0.00	0.00	12.50
ENE	0.00	0.00	4.17	2.08	2.08	0.00	0.00	0.00	8.33
E	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ESE	0.00	0.00	2.08	0.00	2.08	0.00	0.00	0.00	4.17
SE	0.00	0.00	0.00	8.33	0.00	0.00	0.00	0.00	8.33
SSE	0.00	0.00	2.08	8.33	2.08	0.00	0.00	0.00	12.50
S	0.00	0.00	0.00	8.33	8.33	0.00	0.00	0.00	16.67
SSW	0.00	0.00	0.00	2.08	0.00	0.00	0.00	0.00	2.08
SW	0.00	0.00	2.08	4.17	0.00	0.00	0.00	0.00	6.25
WSW	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
W	0.00	0.00	0.00	4.17	0.00	0.00	0.00	0.00	4.17
WNW	0.00	0.00	2.08	2.08	0.00	0.00	0.00	0.00	4.17
NW	0.00	0.00	2.08	4.17	0.00	0.00	0.00	0.00	6.25
NNW	0.00	0.00	0.00	4.17	0.00	0.00	0.00	0.00	4.17
TOTAL	0.00	0.00	25.00	58.33	16.67	0.00	0.00	0.00	

THIS STABILITY CLASS ACCOUNTS FOR 1.76 PERCENT OF THE TOTAL 2731

WSES-FSAR-UNIT-3

TABLE 2.3-114

Revision 11 (05/01)

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3 7/72-6/75 & 2/77-2/78

NOVEMBER, TOTAL FOR PERIOD

STABILITY CLASS C

PERCENTAGE FREQUENCY DISTRIBUTION

NUMBER OF OBSERVATIONS = 46

+----- WIND SPEED (MPH) -----+									
WIND DIRECTION -----	CALM -----	0.8 3.0 -----	3.1 7.0 -----	7.1 12.0 -----	12.1 18.0 -----	18.1 24.0 -----	24.1 32.0 -----	ABOVE 32.0 -----	TOTAL -----
CALM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
N	0.00	0.00	2.17	4.35	0.00	0.00	0.00	0.00	6.52
NNE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NE → (DRN 01-282)	0.00	0.00	2.17	6.52	0.00	0.00	0.00	0.00	8.70
ENE ← (DRN 01-282)	0.00	0.00	0.00	0.00	8.70	0.00	0.00	0.00	8.70
E	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ESE	0.00	2.17	2.17	6.52	8.70	0.00	0.00	0.00	19.57
SE	0.00	0.00	2.17	6.52	4.35	0.00	0.00	0.00	13.04
SSE	0.00	0.00	2.17	4.35	8.70	0.00	0.00	0.00	15.22
S	0.00	0.00	0.00	2.17	0.00	0.00	0.00	0.00	2.17
SSW	0.00	0.00	0.00	0.00	2.17	0.00	0.00	0.00	2.17
SW	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WSW	0.00	2.17	0.00	2.17	0.00	0.00	0.00	0.00	4.35
W	0.00	0.00	0.00	2.17	2.17	0.00	0.00	0.00	4.35
WNW	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NW	0.00	0.00	4.35	4.35	0.00	0.00	0.00	0.00	8.70
NNW → (DRN 01-282)	0.00	0.00	2.17	2.17	2.17	0.00	0.00	0.00	6.52
TOTAL ← (DRN 01-282)	0.00	4.35	17.39	41.30	36.96	0.00	0.00	0.00	

THIS STABILITY CLASS ACCOUNTS FOR 1.68 PERCENT OF THE TOTAL 2731

## WSES-FSAR-UNIT-3

TABLE 2.3-115

Revision 11 (05/01)

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3 7/72-6/75 &amp; 2/77-2/78

NOVEMBER, TOTAL FOR PERIOD

STABILITY CLASS D

PERCENTAGE FREQUENCY DISTRIBUTION

NUMBER OF OBSERVATIONS = 719

+----- WIND SPEED (MPH) -----+									
WIND DIRECTION	CALM	0.8 3.0	3.1 7.0	7.1 12.0	12.1 18.0	18.1 24.0	24.1 32.0	ABOVE 32.0	TOTAL
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
CALM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
N	0.00	0.56	1.81	2.64	0.83	0.00	0.00	0.00	5.84
NNE	0.00	0.56	3.89	3.62	0.42	0.00	0.00	0.00	8.48
NE	0.00	0.56	2.92	4.17	2.64	0.14	0.00	0.00	10.43
ENE	0.00	0.14	1.53	2.78	1.11	0.00	0.00	0.00	5.56
→ (DRN 01-282)									
E	0.00	0.14	0.28	2.64	0.70	0.14	0.00	0.00	3.89
← (DRN 01-282)									
ESE	0.00	0.00	2.64	3.89	2.36	0.00	0.00	0.00	8.90
SE	0.00	0.14	1.81	3.06	1.53	0.00	0.00	0.00	6.54
SSE	0.00	0.14	1.53	5.56	3.20	0.42	0.00	0.00	10.85
S	0.00	0.00	1.11	2.09	0.70	0.14	0.00	0.00	4.03
SSW	0.00	0.00	0.97	1.53	0.00	0.00	0.00	0.00	2.50
SW	0.00	0.14	0.28	1.25	0.00	0.00	0.00	0.00	1.67
WSW	0.00	0.14	1.39	1.53	0.42	0.14	0.00	0.00	3.62
W	0.00	0.00	1.25	2.09	0.56	0.00	0.00	0.00	3.89
WNW	0.00	0.14	0.97	2.78	0.14	0.14	0.00	0.00	4.17
NW	0.00	0.14	1.25	4.03	1.11	0.56	0.00	0.00	7.09
NNW	0.00	0.56	5.01	5.29	1.67	0.00	0.00	0.00	12.52
TOTAL	0.00	3.34	28.65	48.96	17.39	1.67	0.00	0.00	

THIS STABILITY CLASS ACCOUNTS FOR 26.33 PERCENT OF THE TOTAL 2731

WSES-FSAR-UNIT-3

TABLE 2.3-116

Revision 11 (05/01)

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3 7/72-6/75 & 2/77-2/78

NOVEMBER, TOTAL FOR PERIOD

STABILITY CLASS E

PERCENTAGE FREQUENCY DISTRIBUTION

NUMBER OF OBSERVATIONS = 1043

+----- WIND SPEED (MPH) -----+									
WIND DIRECTION	CALM	0.8 3.0	3.1 7.0	7.1 12.0	12.1 18.0	18.1 24.0	24.1 32.0	ABOVE 32.0	TOTAL
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
CALM	0.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38
N	0.00	0.77	2.97	5.18	1.63	0.00	0.00	0.00	10.55
NNE	0.00	0.58	2.49	3.26	0.77	0.00	0.00	0.00	7.09
NE	0.00	0.58	4.22	7.09	1.25	0.00	0.00	0.00	13.14
ENE	0.00	0.38	3.26	2.49	0.10	0.00	0.00	0.00	6.23
E	0.00	0.29	1.92	1.44	0.00	0.00	0.00	0.00	3.64
ESE	0.00	0.29	4.79	2.21	0.00	0.00	0.00	0.00	7.29
SE	0.00	0.29	4.70	4.41	0.10	0.10	0.00	0.00	9.59
SSE	0.00	0.19	2.78	5.27	0.48	0.00	0.00	0.00	8.72
S	0.00	0.10	1.25	0.77	0.19	0.10	0.00	0.00	2.40
→ (DRN 01-282)									
SSW	0.00	0.19	2.01	1.25	0.10	0.00	0.00	0.00	3.55
← (DRN 01-282)									
SW	0.00	0.00	0.86	0.19	0.00	0.00	0.00	0.00	1.05
WSW	0.00	0.38	1.53	0.10	0.00	0.00	0.00	0.00	2.01
W	0.00	0.19	1.44	0.67	0.10	0.00	0.00	0.00	2.40
WNW	0.00	0.10	1.63	1.53	0.48	0.00	0.00	0.00	3.74
NW	0.00	0.58	2.30	3.45	0.86	0.00	0.00	0.00	7.19
NNW	0.00	0.58	3.74	5.94	0.77	0.00	0.00	0.00	11.03
TOTAL	0.38	5.47	41.90	45.25	6.81	0.19	0.00	0.00	

THIS STABILITY CLASS ACCOUNTS FOR 38.19 PERCENT OF THE TOTAL 2731

WSES-FSAR-UNIT-3

TABLE 2.3-117

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3 7/72-6/75 & 2/77-2/78

NOVEMBER, TOTAL FOR PERIOD

STABILITY CLASS F

PERCENTAGE FREQUENCY DISTRIBUTION

NUMBER OF OBSERVATIONS = 333

WIND DIRECTION	+----- WIND SPEED (MPH) -----+								TOTAL
	CALM	0.8 3.0	3.1 7.0	7.1 12.0	12.1 18.0	18.1 24.0	24.1 32.0	ABOVE 32.0	
CALM	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.50
N	0.00	0.00	1.80	0.60	0.00	0.00	0.00	0.00	2.40
NNE	0.00	0.90	5.41	0.00	0.00	0.00	0.00	0.00	6.31
NE	0.00	1.50	7.81	0.90	0.00	0.00	0.00	0.00	10.21
ENE	0.00	1.80	6.01	1.80	0.00	0.00	0.00	0.00	9.61
E	0.00	1.20	4.80	0.90	0.00	0.00	0.00	0.00	6.91
ESE	0.00	2.70	9.31	0.90	0.00	0.00	0.00	0.00	12.91
SE	0.00	1.80	9.01	0.60	0.60	0.00	0.00	0.00	12.01
SSE	0.00	3.90	4.20	0.30	0.30	0.00	0.00	0.00	8.71
S	0.00	2.10	2.40	0.00	0.00	0.00	0.00	0.00	4.50
SSW	0.00	0.90	3.00	0.00	0.00	0.00	0.00	0.00	3.90
SW	0.00	0.90	0.30	0.00	0.00	0.00	0.00	0.00	1.20
WSW	0.00	0.60	0.90	0.00	0.00	0.00	0.00	0.00	1.50
W	0.00	0.90	2.70	0.00	0.00	0.00	0.00	0.00	3.60
WNW	0.00	0.60	2.40	0.00	0.00	0.00	0.00	0.00	3.00
NW	0.00	1.50	5.11	0.60	0.00	0.00	0.00	0.00	7.21
NNW	0.00	1.20	3.30	0.00	0.00	0.00	0.00	0.00	4.50
TOTAL	1.50	22.52	68.47	6.61	0.90	0.00	0.00	0.00	

THIS STABILITY CLASS ACCOUNTS FOR 12.19 PERCENT OF THE TOTAL 2731

WSES-FSAR-UNIT-3

TABLE 2.3-118

Revision11 (05/01)

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3 7/72-6/75 & 2/77-2/78

NOVEMBER, TOTAL FOR PERIOD

STABILITY CLASS G

PERCENTAGE FREQUENCY DISTRIBUTION

NUMBER OF OBSERVATIONS = 252

+----- WIND SPEED (MPH) -----+									
WIND DIRECTION	CALM	0.8 3.0	3.1 7.0	7.1 12.0	12.1 18.0	18.1 24.0	24.1 32.0	ABOVE 32.0	TOTAL
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
CALM	5.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.16
N	0.00	1.59	0.00	0.00	0.00	0.00	0.00	0.00	1.59
NNE	0.00	0.40	0.40	0.00	0.00	0.00	0.00	0.00	0.79
NE	0.00	1.19	2.38	0.00	0.00	0.00	0.00	0.00	3.57
ENE	0.00	3.57	3.57	0.00	0.00	0.00	0.00	0.00	7.14
→ (DRN 01-282)									
E	0.00	1.98	1.59	0.00	0.00	0.00	0.00	0.00	3.57
← (DRN 01-282)									
ESE	0.00	1.19	1.19	0.00	0.00	0.00	0.00	0.00	2.38
SE	0.00	4.76	5.56	0.40	0.00	0.00	0.00	0.00	10.71
SSE	0.00	7.14	11.11	0.00	0.00	0.00	0.00	0.00	18.25
S	0.00	3.17	1.19	0.00	0.00	0.00	0.00	0.00	4.37
SSW	0.00	2.78	0.79	0.00	0.00	0.00	0.00	0.00	3.57
SW	0.00	4.37	1.19	0.00	0.00	0.00	0.00	0.00	5.56
WSW	0.00	6.35	3.97	0.00	0.00	0.00	0.00	0.00	10.32
W	0.00	4.37	5.16	0.00	0.00	0.00	0.00	0.00	9.52
WNW	0.00	3.17	4.37	0.00	0.00	0.00	0.00	0.00	7.54
NW	0.00	2.38	1.59	0.00	0.00	0.00	0.00	0.00	3.97
NNW	0.00	1.59	0.40	0.00	0.00	0.00	0.00	0.00	1.98
TOTAL	5.16	50.00	44.44	0.40	0.00	0.00	0.00	0.00	

THIS STABILITY CLASS ACCOUNTS FOR 9.23 PERCENT OF THE TOTAL 2731

WSES-FSAR-UNIT-3

TABLE 2.3-119

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3 7/72-6/75 & 2/77-2/78

DECEMBER, TOTAL FOR PERIOD

STABILITY CLASS A

PERCENTAGE FREQUENCY DISTRIBUTION

NUMBER OF OBSERVATIONS = 310

+----- WIND SPEED (MPH) -----+									
WIND DIRECTION	CALM	0.8 3.0	3.1 7.0	7.1 12.0	12.1 18.0	18.1 24.0	24.1 32.0	ABOVE 32.0	TOTAL
CALM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
N	0.00	0.00	1.29	0.97	0.32	0.00	0.00	0.00	2.58
NNE	0.00	0.32	0.65	1.94	0.32	0.00	0.00	0.00	3.23
NE	0.00	0.00	6.13	3.23	1.94	0.00	0.00	0.00	11.29
ENE	0.00	0.00	4.84	3.23	0.97	0.00	0.00	0.00	9.03
E	0.00	0.00	0.97	0.97	0.00	0.00	0.00	0.00	1.94
ESE	0.00	0.00	1.61	1.61	0.97	0.65	0.00	0.00	4.84
SE	0.00	0.32	1.94	3.87	1.94	0.32	0.00	0.00	8.39
SSE	0.00	0.00	2.90	2.90	0.97	0.00	0.00	0.00	6.77
S	0.00	0.32	0.65	1.94	0.32	0.00	0.00	0.00	3.23
SSW	0.00	0.00	0.32	0.65	1.61	0.00	0.00	0.00	2.58
SW	0.00	0.00	0.97	4.19	0.65	0.00	0.00	0.00	5.81
WSW	0.00	0.00	0.32	1.61	0.97	0.00	0.00	0.00	2.90
W	0.00	0.00	0.00	1.94	0.32	0.00	0.00	0.00	2.26
WNW	0.00	0.00	0.97	3.55	1.61	0.65	0.00	0.00	6.77
NW	0.00	0.00	5.48	4.19	1.61	0.00	0.00	0.00	11.29
NNW	0.00	0.32	5.48	7.74	2.26	1.29	0.00	0.00	17.10
TOTAL	0.00	1.29	34.52	44.52	16.77	2.90	0.00	0.00	

THIS STABILITY CLASS ACCOUNTS FOR 10.92 PERCENT OF THE TOTAL 2838

## WSES-FSAR-UNIT-3

TABLE 2.3-120

Revision 11 (05/01)

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3 7/72-6/75 &amp; 2/77-2/78

DECEMBER, TOTAL FOR PERIOD

STABILITY CLASS B

PERCENTAGE FREQUENCY DISTRIBUTION

NUMBER OF OBSERVATIONS = 89

+----- WIND SPEED (MPH) -----+									
WIND DIRECTION	CALM	0.8 3.0	3.1 7.0	7.1 12.0	12.1 18.0	18.1 24.0	24.1 32.0	ABOVE 32.0	TOTAL
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
CALM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NNE	0.00	1.12	1.12	0.00	1.12	4.49	0.00	0.00	7.87
NE	0.00	0.00	3.37	4.49	2.25	0.00	0.00	0.00	10.11
ENE	0.00	0.00	1.12	2.25	0.00	0.00	0.00	0.00	3.37
E	0.00	0.00	1.12	2.25	0.00	0.00	0.00	0.00	3.37
ESE	0.00	0.00	1.12	1.12	1.12	0.00	0.00	0.00	3.37
SE	0.00	2.25	0.00	2.25	0.00	0.00	0.00	0.00	4.49
SSE	0.00	1.12	0.00	8.99	3.37	0.00	0.00	0.00	13.48
S	0.00	0.00	1.12	5.62	1.12	0.00	0.00	0.00	7.87
SSW	0.00	0.00	1.12	0.00	2.25	0.00	0.00	0.00	3.37
SW	0.00	0.00	0.00	2.25	6.74	0.00	0.00	0.00	8.99
WSW	0.00	0.00	1.12	2.25	2.25	2.25	0.00	0.00	7.87
→ (DRN 01-282)									
W	0.00	1.12	1.12	1.12	1.12	0.00	0.00	0.00	4.49
← (DRN 01-282)									
WNW	0.00	0.00	1.12	2.25	1.12	0.00	0.00	0.00	4.49
NW	0.00	0.00	3.37	3.37	0.00	0.00	0.00	0.00	6.74
NNW	0.00	1.12	3.37	3.37	2.25	0.00	0.00	0.00	10.11
TOTAL	0.00	6.74	20.22	41.57	24.72	6.74	0.00	0.00	

THIS STABILITY CLASS ACCOUNTS FOR 3.14 PERCENT OF THE TOTAL 2838

## WSES-FSAR-UNIT-3

TABLE 2.3-121

Revision 11 (05/01)

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3 7/72-6/75 &amp; 2/77-2/78

DECEMBER, TOTAL FOR PERIOD

STABILITY CLASS C

PERCENTAGE FREQUENCY DISTRIBUTION

NUMBER OF OBSERVATIONS = 94

		+----- WIND SPEED (MPH) -----+							
WIND DIRECTION	CALM	0.8 3.0	3.1 7.0	7.1 12.0	12.1 18.0	18.1 24.0	24.1 32.0	ABOVE 32.0	TOTAL
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
CALM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
N	0.00	2.13	1.06	0.00	4.26	1.06	0.00	0.00	8.51
NNE	0.00	1.06	1.06	1.06	4.26	3.19	0.00	0.00	10.64
NE	0.00	0.00	1.06	2.13	2.13	0.00	0.00	0.00	5.32
ENE	0.00	0.00	2.13	5.32	0.00	0.00	0.00	0.00	7.45
E	0.00	0.00	0.00	1.06	0.00	0.00	0.00	0.00	1.06
ESE	0.00	0.00	1.06	1.06	2.13	0.00	0.00	0.00	4.26
SE	0.00	1.06	0.00	3.19	1.06	1.06	0.00	0.00	6.38
SSE	0.00	0.00	0.00	2.13	2.13	0.00	0.00	0.00	4.26
S	0.00	0.00	3.19	2.13	0.00	0.00	0.00	0.00	5.32
SSW	0.00	0.00	0.00	3.19	6.38	0.00	0.00	0.00	9.57
SW	0.00	0.00	1.06	0.00	0.00	0.00	0.00	0.00	1.06
→ (DRN 01-282)									
WSW	0.00	1.06	2.13	1.06	2.13	0.00	0.00	0.00	6.38
← (DRN 01-282)									
W	0.00	1.06	0.00	3.19	3.19	0.00	0.00	0.00	7.45
WNW	0.00	0.00	1.06	1.06	0.00	0.00	0.00	0.00	2.13
NW	0.00	0.00	2.13	3.19	1.06	0.00	0.00	0.00	6.38
NNW	0.00	0.00	1.06	6.38	6.38	0.00	0.00	0.00	13.83
TOTAL	0.00	6.38	17.02	36.17	35.11	5.32	0.00	0.00	

THIS STABILITY CLASS ACCOUNTS FOR 3.31 PERCENT OF THE TOTAL 2838

## WSES-FSAR-UNIT-3

TABLE 2.3-122

Revision 11 (05/01)

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3

7/72-6/75 &amp; 2/77-2/78

DECEMBER, TOTAL FOR PERIOD

STABILITY CLASS D

PERCENTAGE FREQUENCY DISTRIBUTION

NUMBER OF OBSERVATIONS = 837

+----- WIND SPEED (MPH) -----+									
WIND DIRECTION	CALM	0.8 3.0	3.1 7.0	7.1 12.0	12.1 18.0	18.1 24.0	24.1 32.0	ABOVE 32.0	TOTAL
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
CALM	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24
N	0.00	0.36	0.72	3.70	1.08	0.00	0.00	0.00	5.85
NNE	0.00	0.12	1.31	5.14	0.96	0.24	0.00	0.00	7.77
NE	0.00	0.00	2.63	4.06	0.00	0.00	0.00	0.00	6.69
ENE	0.00	0.12	1.19	1.79	0.84	0.00	0.00	0.00	3.94
E	0.00	0.12	0.60	2.39	0.00	0.00	0.00	0.00	3.11
ESE	0.00	0.12	1.67	2.75	1.91	0.12	0.00	0.00	6.57
SE	0.00	0.48	1.79	3.46	2.15	0.36	0.00	0.00	8.24
→ (DRN 01-282)									
SSE	0.00	0.24	1.67	4.30	1.67	0.12	0.00	0.00	8.00
← (DRN 01-282)									
S	0.00	0.24	2.03	3.94	1.31	0.00	0.00	0.00	7.53
SSW	0.00	0.24	1.19	2.99	1.91	0.12	0.00	0.00	6.45
SW	0.00	0.00	0.60	1.79	1.31	0.00	0.00	0.00	3.70
WSW	0.00	0.12	1.55	1.08	0.36	0.00	0.00	0.00	3.11
W	0.00	0.24	1.08	2.15	1.19	0.00	0.00	0.00	4.66
WNW	0.00	0.36	1.79	2.51	2.03	0.00	0.00	0.00	6.69
NW	0.00	0.24	2.03	1.91	2.99	0.12	0.00	0.00	7.29
NNW	0.00	0.36	0.84	4.18	4.42	0.36	0.00	0.00	10.16
TOTAL	0.24	3.35	22.70	48.15	24.13	1.43	0.00	0.00	

THIS STABILITY CLASS ACCOUNTS FOR 29.49 PERCENT OF THE TOTAL 2838

## WSES-FSAR-UNIT-3

TABLE 2.3-123

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3 7/72-6/75 &amp; 2/77-2/78

DECEMBER, TOTAL FOR PERIOD

STABILITY CLASS E

PERCENTAGE FREQUENCY DISTRIBUTION

NUMBER OF OBSERVATIONS = 938

		+----- WIND SPEED (MPH) -----+							
WIND DIRECTION	CALM	0.8 3.0	3.1 7.0	7.1 12.0	12.1 18.0	18.1 24.0	24.1 32.0	ABOVE 32.0	TOTAL
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
CALM	0.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
N	0.00	0.43	2.56	1.60	0.11	0.00	0.00	0.00	4.69
NNE	0.00	0.00	2.24	0.64	0.00	0.00	0.00	0.00	2.88
NE	0.00	0.75	3.52	0.96	0.00	0.00	0.00	0.00	5.22
ENE	0.00	0.32	3.20	1.81	0.00	0.00	0.00	0.00	5.33
E	0.00	0.11	2.13	1.17	0.00	0.00	0.00	0.00	3.41
ESE	0.00	0.43	5.54	5.01	0.53	0.00	0.00	0.00	11.51
SE	0.00	0.32	4.37	5.01	3.09	0.21	0.00	0.00	13.01
SSE	0.00	0.64	6.18	3.84	0.53	0.11	0.00	0.00	11.30
S	0.00	0.64	5.97	3.09	0.21	0.00	0.00	0.00	9.91
SSW	0.00	0.85	2.13	2.56	0.00	0.00	0.00	0.00	5.54
SW	0.00	0.32	1.39	0.43	0.00	0.00	0.00	0.00	2.13
WSW	0.00	0.21	1.07	0.11	0.00	0.00	0.00	0.00	1.39
W	0.00	0.53	1.60	0.85	0.00	0.00	0.00	0.00	2.99
WNW	0.00	0.21	3.30	2.45	0.00	0.00	0.00	0.00	5.97
NW	0.00	0.32	2.13	2.13	0.32	0.00	0.00	0.00	4.90
NNW	0.00	0.43	2.56	5.44	0.85	0.11	0.00	0.00	9.38
TOTAL	0.43	6.50	49.89	37.10	5.65	0.43	0.00	0.00	

THIS STABILITY CLASS ACCOUNTS FOR 33.05 PERCENT OF THE TOTAL 2838

## WSES-FSAR-UNIT-3

TABLE 2.3-124

Revision 11 (05/01)

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3 7/72-6/75 &amp; 2/77-2/78

DECEMBER, TOTAL FOR PERIOD

STABILITY CLASS F

### PERCENTAGE FREQUENCY DISTRIBUTION

NUMBER OF OBSERVATIONS = 334

		WIND SPEED (MPH)							
		0.8	3.1	7.1	12.1	18.1	24.1	ABOVE	
WIND DIRECTION	CALM	3.0	7.0	12.0	18.0	24.0	32.0	32.0	TOTAL
CALM	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.50
N → (DRN 01-282)	0.00	1.50	2.10	0.30	0.00	0.00	0.00	0.00	3.89
NNE ← (DRN 01-282)	0.00	0.90	0.90	0.00	0.00	0.00	0.00	0.00	1.80
NE	0.00	1.50	3.89	0.30	0.00	0.00	0.00	0.00	5.69
ENE	0.00	2.40	6.89	0.00	0.00	0.00	0.00	0.00	9.28
E	0.00	0.00	1.80	0.00	0.00	0.00	0.00	0.00	1.80
ESE	0.00	1.20	6.89	0.00	0.00	0.00	0.00	0.00	8.08
SE	0.00	2.69	3.89	0.30	0.00	0.00	0.00	0.00	6.89
SSE	0.00	1.50	6.59	0.30	0.00	0.00	0.00	0.00	8.38
S	0.00	0.60	7.19	0.30	0.00	0.00	0.00	0.00	8.08
SSW	0.00	0.90	3.89	0.00	0.00	0.00	0.00	0.00	4.79
SW	0.00	1.80	2.10	0.00	0.00	0.00	0.00	0.00	3.89
WSW	0.00	1.80	3.59	0.00	0.00	0.00	0.00	0.00	5.39
W	0.00	2.10	7.78	0.00	0.00	0.00	0.00	0.00	9.88
WNW → (DRN 01-282)	0.00	1.50	3.59	0.60	0.00	0.00	0.00	0.00	5.69
NW ← (DRN 01-282)	0.00	1.20	5.39	0.30	0.00	0.00	0.00	0.00	6.89
NNW	0.00	2.99	4.19	0.60	0.30	0.00	0.00	0.00	8.08
TOTAL	1.50	24.55	70.66	2.99	0.30	0.00	0.00	0.00	

THIS STABILITY CLASS ACCOUNTS FOR 11.77 PERCENT OF THE TOTAL 2838

← (DRN 01-282)

WSES-FSAR-UNIT-3

TABLE 2.3-125

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3 7/72-6/75 & 2/77-2/78

DECEMBER, TOTAL FOR PERIOD

STABILITY CLASS G

PERCENTAGE FREQUENCY DISTRIBUTION

NUMBER OF OBSERVATIONS = 236

+----- WIND SPEED (MPH) -----+									
WIND DIRECTION	CALM	0.8 3.0	3.1 7.0	7.1 12.0	12.1 18.0	18.1 24.0	24.1 32.0	ABOVE 32.0	TOTAL
CALM	8.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.90
N	0.00	0.85	1.27	0.00	0.00	0.00	0.00	0.00	2.12
NNE	0.00	1.27	1.27	0.00	0.00	0.00	0.00	0.00	2.54
NE	0.00	4.66	2.97	0.00	0.00	0.00	0.00	0.00	7.63
ENE	0.00	2.97	2.97	0.00	0.00	0.00	0.00	0.00	5.93
E	0.00	0.85	0.85	0.00	0.00	0.00	0.00	0.00	1.69
ESE	0.00	2.12	1.27	0.00	0.00	0.00	0.00	0.00	3.39
SE	0.00	3.39	5.51	0.00	0.00	0.00	0.00	0.00	8.90
SSE	0.00	2.97	2.54	0.42	0.00	0.00	0.00	0.00	5.93
S	0.00	5.51	2.97	0.00	0.00	0.00	0.00	0.00	8.47
SSW	0.00	2.97	0.85	0.00	0.00	0.00	0.00	0.00	3.81
SW	0.00	2.97	1.69	0.00	0.00	0.00	0.00	0.00	4.66
WSW	0.00	5.51	4.24	0.00	0.00	0.00	0.00	0.00	9.75
W	0.00	7.63	2.97	0.00	0.00	0.00	0.00	0.00	10.59
WNW	0.00	4.24	0.85	0.00	0.00	0.00	0.00	0.00	5.08
NW	0.00	3.81	1.69	0.00	0.00	0.00	0.00	0.00	5.51
NNW	0.00	2.97	2.12	0.00	0.00	0.00	0.00	0.00	5.08
TOTAL	8.90	54.66	36.02	0.42	0.00	0.00	0.00	0.00	

THIS STABILITY CLASS ACCOUNTS FOR 8.32 PERCENT OF THE TOTAL 2838

WSES-FSAR-UNIT-3

TABLE 2.3-126

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3 7/72-6/75 & 2/77-2/78

ANNUAL, TOTAL FOR PERIOD

STABILITY CLASS A

PERCENTAGE FREQUENCY DISTRIBUTION

NUMBER OF OBSERVATIONS = 4515

		+----- WIND SPEED (MPH) -----+								
WIND DIRECTION	CALM	0.8 3.0	3.1 7.0	7.1 12.0	12.1 18.0	18.1 24.0	24.1 32.0	ABOVE 32.0	TOTAL	
CALM	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	
N	0.00	0.42	1.55	0.86	0.31	0.07	0.00	0.00	3.21	
NNE	0.00	0.42	4.96	4.92	0.53	0.00	0.00	0.00	10.83	
NE	0.00	0.31	9.01	7.73	1.00	0.02	0.00	0.00	18.07	
ENE	0.00	0.20	3.92	3.63	0.40	0.04	0.00	0.00	8.19	
E	0.00	0.04	0.71	1.11	0.22	0.00	0.00	0.00	2.08	
ESE	0.00	0.18	1.62	3.37	1.22	0.04	0.00	0.00	6.42	
SE	0.00	0.24	1.28	3.10	1.77	0.27	0.02	0.00	6.69	
SSE	0.00	0.24	2.48	3.46	1.68	0.29	0.00	0.00	8.15	
S	0.00	0.31	1.31	1.59	0.89	0.13	0.00	0.00	4.23	
SSW	0.00	0.16	1.22	1.73	1.13	0.11	0.00	0.00	4.34	
SW	0.00	0.16	1.15	2.02	0.71	0.02	0.00	0.00	4.05	
WSW	0.00	0.11	1.00	1.35	0.51	0.09	0.00	0.00	3.06	
W	0.00	0.13	0.84	1.57	0.73	0.00	0.00	0.00	3.28	
WNW	0.00	0.11	1.22	1.44	0.62	0.04	0.00	0.00	3.43	
NW	0.00	0.22	3.03	2.21	0.47	0.00	0.00	0.00	5.94	
NNW	0.00	0.35	3.61	3.01	0.86	0.13	0.00	0.00	7.97	
TOTAL	0.04	3.61	38.91	43.10	13.05	1.26	0.02	0.00		

THIS STABILITY CLASS ACCOUNTS FOR 13.89 PERCENT OF THE TOTAL 32503

## WSES-FSAR-UNIT-3

TABLE 2.3-127

Revision 11 (05/01)

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3 7/72-6/75 &amp; 2/77-2/78

ANNUAL, TOTAL FOR PERIOD

STABILITY CLASS B

PERCENTAGE FREQUENCY DISTRIBUTION

NUMBER OF OBSERVATIONS = 847

		+----- WIND SPEED (MPH) -----+							
WIND DIRECTION	CALM	0.8 3.0	3.1 7.0	7.1 12.0	12.1 18.0	18.1 24.0	24.1 32.0	ABOVE 32.0	TOTAL
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
CALM	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
N	0.00	0.47	2.13	0.71	0.71	0.00	0.00	0.00	4.01
NNE	0.00	0.59	3.19	2.36	0.83	0.47	0.00	0.00	7.44
NE	0.00	0.59	6.02	3.78	1.53	0.00	0.00	0.00	11.92
ENE	0.00	0.24	2.83	3.90	1.65	0.12	0.00	0.00	8.74
E	0.00	0.12	0.83	1.77	1.42	0.00	0.00	0.00	4.13
ESE	0.00	0.00	1.53	2.60	1.53	0.00	0.00	0.00	5.67
SE	0.00	0.35	0.94	2.24	1.89	0.24	0.00	0.00	5.67
SSE	0.00	.12	2.01	4.72	2.24	0.59	0.00	0.00	9.68
S	0.00	0.00	1.18	2.83	1.42	0.12	0.00	0.00	5.55
SSW	0.00	0.35	1.06	2.60	1.77	0.24	0.00	0.00	6.02
SW	0.00	0.00	2.36	2.95	1.77	0.00	0.00	0.00	7.08
WSW	0.00	0.00	1.30	1.06	0.71	0.24	0.00	0.00	3.31
W	0.00	0.24	1.53	1.42	1.30	0.00	0.00	0.00	4.49
WNW	0.00	0.47	1.30	1.65	0.59	0.00	0.00	0.00	4.01
NW	0.00	0.12	2.83	1.77	0.59	0.12	0.00	0.00	5.43
NNW	0.00	0.24	2.60	2.60	1.30	0.00	0.00	0.00	6.73
→ (DRN 01-282)									
TOTAL	0.12	3.90	33.65	38.96	21.25	2.13	0.00	0.00	
← (DRN 01-282)									

THIS STABILITY CLASS ACCOUNTS FOR 2.61 PERCENT OF THE TOTAL 32503

## WSES-FSAR-UNIT-3

TABLE 2.3-128

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3 7/72-6/75 &amp; 2/77-2/78

ANNUAL, TOTAL FOR PERIOD

STABILITY CLASS C

PERCENTAGE FREQUENCY DISTRIBUTION

NUMBER OF OBSERVATIONS = 898

		+----- WIND SPEED (MPH) -----+							
WIND DIRECTION	CALM	0.8 3.0	3.1 7.0	7.1 12.0	12.1 18.0	18.1 24.0	24.1 32.0	ABOVE 32.0	TOTAL
CALM	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
N	0.00	0.56	1.89	1.00	1.56	0.11	0.00	0.00	5.12
NNE	0.00	0.67	1.89	1.67	0.67	0.33	0.00	0.00	5.23
NE	0.00	0.11	4.57	4.12	1.22	0.11	0.00	0.00	10.13
ENE	0.00	0.78	3.12	3.56	1.22	0.11	0.00	0.00	8.80
E	0.00	0.11	0.67	0.67	0.33	0.00	0.00	0.00	1.78
ESE	0.00	0.11	1.00	3.45	1.67	0.00	0.00	0.00	6.24
SE	0.00	0.33	1.22	3.34	2.23	0.22	0.00	0.00	7.35
SSE	0.00	0.11	2.23	3.01	2.56	0.89	0.00	0.00	8.80
S	0.00	0.11	1.78	2.12	0.89	0.45	0.00	0.00	5.35
SSW	0.00	0.22	1.67	2.56	1.34	0.11	0.00	0.00	5.90
SW	0.00	0.00	2.00	2.45	1.22	0.00	0.00	0.00	5.68
WSW	0.00	0.45	2.45	1.78	1.34	0.00	0.00	0.00	6.01
W	0.00	0.45	0.56	1.56	1.67	0.00	0.00	0.00	4.23
WNW	0.00	0.11	0.78	1.22	1.22	0.00	0.00	0.00	3.34
NW	0.00	0.33	2.34	2.34	0.78	0.00	0.00	0.00	5.79
NNW	0.00	0.67	3.01	4.68	1.78	0.00	0.00	0.00	10.13
TOTAL	0.11	5.12	31.18	39.53	21.71	2.34	0.00	0.00	

THIS STABILITY CLASS ACCOUNTS FOR 2.76 PERCENT OF THE TOTAL 32503

WSES-FSAR-UNIT-3

TABLE 2.3-129

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3 7/72-6/75 & 2/77-2/78

ANNUAL, TOTAL FOR PERIOD

STABILITY CLASS D

PERCENTAGE FREQUENCY DISTRIBUTION

NUMBER OF OBSERVATIONS = 8167

		+----- WIND SPEED (MPH) -----+							
WIND DIRECTION	CALM	0.8 3.0	3.1 7.0	7.1 12.0	12.1 18.0	18.1 24.0	24.1 32.0	ABOVE 32.0	TOTAL
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
CALM	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28
N	0.00	0.53	1.70	2.34	0.94	0.06	0.00	0.00	5.57
NNE	0.00	0.73	2.39	3.23	0.82	0.05	0.00	0.00	7.22
NE	0.00	0.62	3.60	3.75	1.11	0.02	0.00	0.00	9.11
ENE	0.00	0.59	2.36	2.55	1.16	0.04	0.00	0.00	6.70
E	0.00	0.23	0.99	1.76	0.54	0.06	0.00	0.00	3.59
ESE	0.00	0.45	2.14	4.08	1.38	0.10	0.00	0.00	8.15
SE	0.00	0.51	2.41	3.86	2.23	0.34	0.01	0.00	9.37
SSE	0.00	0.34	2.27	3.64	2.33	0.50	0.06	0.00	9.13
S	0.00	0.36	1.95	2.69	1.54	0.23	0.01	0.00	6.78
SSW	0.00	0.31	1.71	2.11	1.05	0.12	0.01	0.00	5.31
SW	0.00	0.24	1.78	1.79	0.64	0.02	0.00	0.00	4.47
WSW	0.00	0.28	1.44	1.04	0.36	0.06	0.00	0.00	3.18
W	0.00	0.22	1.15	1.13	0.48	0.00	0.02	0.00	3.00
WNW	0.00	0.45	1.22	1.41	0.80	0.02	0.01	0.00	3.92
NW	0.00	0.54	2.29	1.56	1.46	0.09	0.00	0.00	5.93
NNW	0.00	0.48	2.61	3.44	1.62	0.13	0.00	0.00	8.28
TOTAL	0.28	6.89	32.02	40.36	18.45	1.86	0.13	0.00	

THIS STABILITY CLASS ACCOUNTS FOR 25.13 PERCENT OF THE TOTAL 32503

WSES-FSAR-UNIT-3

TABLE 2.3-130

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3 7/72-6/75 & 2/77-2/78

ANNUAL, TOTAL FOR PERIOD

STABILITY CLASS E

PERCENTAGE FREQUENCY DISTRIBUTION

NUMBER OF OBSERVATIONS = 9862

+----- WIND SPEED (MPH) -----+									
WIND DIRECTION	CALM	0.8 3.0	3.1 7.0	7.1 12.0	12.1 18.0	18.1 24.0	24.1 32.0	ABOVE 32.0	TOTAL
CALM	1.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.01
N	0.00	0.63	2.11	2.39	0.43	0.01	0.00	0.00	5.57
NNE	0.00	0.69	2.86	2.06	0.31	0.02	0.00	0.00	5.94
NE	0.00	0.85	3.65	3.05	0.58	0.00	0.00	0.00	8.13
ENE	0.00	0.65	3.71	2.65	0.48	0.00	0.00	0.00	7.48
E	0.00	0.42	2.35	2.20	0.23	0.00	0.00	0.00	5.20
ESE	0.00	0.89	5.35	2.97	0.52	0.01	0.00	0.00	9.74
SE	0.00	0.84	5.26	3.76	1.02	0.12	0.01	0.00	11.02
SSE	0.00	1.17	4.39	2.99	0.76	0.08	0.06	0.00	9.45
S	0.00	0.88	3.33	1.91	0.59	0.12	0.02	0.00	6.84
SSW	0.00	1.01	2.55	1.27	0.17	0.07	0.02	0.00	5.09
SW	0.00	0.66	1.79	0.74	0.11	0.03	0.00	0.00	3.34
WSW	0.00	0.76	1.62	0.43	0.09	0.02	0.00	0.00	2.92
W	0.00	0.51	1.44	0.62	0.10	0.01	0.00	0.00	2.68
WNW	0.00	0.63	1.97	0.77	0.20	0.00	0.00	0.00	3.57
NW	0.00	0.89	2.26	1.26	0.41	0.01	0.00	0.00	4.83
NNW	0.00	0.73	3.04	2.89	0.49	0.03	0.00	0.00	7.18
TOTAL	1.01	12.21	47.69	31.95	6.49	0.54	0.11	0.00	

THIS STABILITY CLASS ACCOUNTS FOR 30.34 PERCENT OF THE TOTAL 32503

WSES-FSAR-UNIT-3

TABLE 2.3-131

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3 7/72-6/75 & 2/77-2/78

ANNUAL, TOTAL FOR PERIOD

STABILITY CLASS F

PERCENTAGE FREQUENCY DISTRIBUTION

NUMBER OF OBSERVATIONS = 4724

+----- WIND SPEED (MPH) -----+									
WIND DIRECTION	CALM	0.8 3.0	3.1 7.0	7.1 12.0	12.1 18.0	18.1 24.0	24.1 32.0	ABOVE 32.0	TOTAL
CALM	4.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.04
N	0.00	1.31	1.84	0.30	0.00	0.00	0.00	0.00	3.45
NNE	0.00	1.40	3.07	0.17	0.00	0.00	0.00	0.00	4.64
NE	0.00	1.80	3.58	0.64	0.06	0.00	0.00	0.00	6.08
ENE	0.00	2.35	4.19	0.49	0.06	0.00	0.00	0.00	7.09
E	0.00	1.44	2.10	0.61	0.00	0.00	0.00	0.00	4.15
ESE	0.00	2.39	5.40	0.19	0.06	0.02	0.00	0.00	8.07
SE	0.00	3.11	5.27	0.30	0.13	0.00	0.02	0.00	8.83
SSE	0.00	3.15	6.18	0.25	0.06	0.00	0.02	0.00	9.67
S	0.00	3.56	5.02	0.17	0.04	0.00	0.00	0.00	8.78
SSW	0.00	3.13	4.04	0.13	0.02	0.00	0.00	0.00	7.32
SW	0.00	2.56	2.46	0.42	0.02	0.00	0.00	0.00	5.46
WSW	0.00	2.82	2.96	0.11	0.04	0.00	0.00	0.00	5.93
W	0.00	1.84	2.46	0.11	0.00	0.00	0.00	0.00	4.40
WNW	0.00	1.65	1.46	0.06	0.04	0.00	0.00	0.00	3.22
NW	0.00	1.69	2.52	0.25	0.02	0.00	0.00	0.00	4.49
NNW	0.00	1.67	2.20	0.49	0.02	0.00	0.00	0.00	4.38
TOTAL	4.04	35.88	54.74	4.68	0.59	0.02	0.04	0.00	

THIS STABILITY CLASS ACCOUNTS FOR 14.53 PERCENT OF THE TOTAL 32503

## WSES-FSAR-UNIT-3

TABLE 2.3-132

Revision 11 (05/01)

WIND DISTRIBUTION BY STABILITY CLASS AT WATERFORD 3 7/72-6/75 &amp; 2/77-2/78

ANNUAL, TOTAL FOR PERIOD

STABILITY CLASS G

PERCENTAGE FREQUENCY DISTRIBUTION NUMBER OF OBSERVATIONS = 3490

		+----- WIND SPEED (MPH) -----+							
WIND DIRECTION	CALM	0.8 3.0	3.1 7.0	7.1 12.0	12.1 18.0	18.1 24.0	24.1 32.0	ABOVE 32.0	TOTAL
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
CALM	12.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.38
N	0.00	1.17	0.89	0.00	0.00	0.00	0.00	0.00	2.06
NNE	0.00	1.52	0.86	0.03	0.00	0.00	0.00	0.00	2.41
NE	0.00	2.26	1.20	0.00	0.00	0.00	0.00	0.00	3.47
ENE	0.00	2.49	1.38	0.00	0.00	0.00	0.00	0.00	3.87
E	0.00	1.32	0.40	0.14	0.00	0.00	0.00	0.00	1.86
ESE	0.00	2.12	1.29	0.37	0.11	0.00	0.00	0.00	3.90
SE	0.00	4.50	2.92	0.17	0.00	0.00	0.03	0.00	7.62
SSE	0.00	7.19	4.24	0.14	0.00	0.00	0.00	0.00	11.58
S	0.00	5.70	3.09	0.03	0.00	0.00	0.00	0.00	8.83
SSW	0.00	5.47	2.35	0.00	0.00	0.00	0.00	0.00	7.82
SW	0.00	5.79	1.78	0.00	0.00	0.00	0.00	0.00	7.56
WSW	0.00	6.45	1.40	0.03	0.00	0.00	0.00	0.00	7.88
W	0.00	4.96	1.26	0.00	0.00	0.00	0.00	0.00	6.22
→ (DRN 01-282)									
WNW	0.00	4.38	0.83	0.03	0.00	0.00	0.00	0.00	5.24
← (DRN 01-282)									
NW	0.00	3.01	1.03	0.00	0.03	0.00	0.00	0.00	4.07
NNW	0.00	2.49	0.69	0.06	0.00	0.00	0.00	0.00	3.24
TOTAL	12.38	60.83	25.62	1.00	0.14	0.00	0.03	0.00	

THIS STABILITY CLASS ACCOUNTS FOR 10.74 PERCENT OF THE TOTAL 32503

## WSES-FSAR-UNIT-3

TABLE 2.3-133

AVERAGE MONTHLY DATA RECOVERY  
WATERFORD ON-SITE METEOROLOGICAL  
MONITORING PROGRAM  
(JULY 1972-JUNE 1975 and FEBRUARY 1977-FEBRUARY 1978)

<u>Month</u>	<u>Number of Observations</u>	<u>Number of Possible Observations</u>	<u>Data Recovery (Percent)</u>
January	2,734	2,976	91.2
February	2,585	2,688	96.2
March	2,679	2,976	90.0
April	2,733	2,880	94.9
May	2,765	2,976	92.9
June	2,713	2,880	94.2
July	2,882	2,976	96.8
August	2,580	2,976	86.7
September	2,616	2,880	90.8
October	2,647	2,976	88.9
November	2,731	2,880	94.8
December	2,838	2,976	95.4
Period	32,503	35,040	92.8

## WSES-FSAR-UNIT-3

TABLE 2.3-134

Revision 11-A (02/02)

→(DRN 01-464)

WATERFORD SES - UNIT-3  
ANNUAL AVERAGE DILUTION FACTORS (SEC/M<sup>3</sup>)  
JULY 1972 - JUNE 1975 AND FEBRUARY 1977 - FEBRUARY 1978

←(DRN 01-464)

Sector Affected	Distance (miles)										
	<u>0.5</u>	<u>1.0</u>	<u>2.0</u>	<u>3.0</u>	<u>4.0</u>	<u>5.0</u>	<u>10.0</u>	<u>20.0</u>	<u>30.0</u>	<u>40.0</u>	<u>50.0</u>
S	9.31E-06	2.46E-06	5.45E-07	2.49E-07	1.48E-07	1.00E-07	3.52E-08	1.44E-08	8.54E-09	5.93E-09	4.48E-09
SSW	1.15E-05	3.01E-06	6.67E-07	3.05E-07	1.81E-07	1.23E-07	4.32E-08	1.77E-08	1.05E-08	7.31E-09	5.52E-09
SW	1.53E-05	3.97E-06	8.81E-07	4.04E-07	2.40E-07	1.64E-07	5.79E-08	2.38E-08	1.42E-08	9.92E-09	7.51E-09
WSW	1.55E-05	3.99E-06	8.90E-07	4.11E-07	2.45E-07	1.68E-07	5.99E-08	2.48E-08	1.49E-08	1.04E-08	7.88E-09
W	8.63E-06	2.26E-06	5.07E-07	2.34E-07	1.39E-07	9.52E-08	3.39E-08	1.40E-08	8.35E-07	5.82E-09	4.40E-09
WNW	1.63E-05	4.30E-06	9.64E-07	4.43E-07	2.64E-07	1.80E-07	6.35E-08	2.60E-08	1.55E-08	1.08E-08	8.16E-09
NW	2.27E-05	5.81E-06	1.30E-06	6.03E-07	3.62E-07	2.48E-07	8.97E-08	3.75E-08	2.26E-08	1.59E-08	1.21E-08
NNW	2.85E-05	7.11E-06	1.58E-06	7.42E-07	4.49E-07	3.10E-07	1.14E-07	4.82E-08	2.93E-08	2.07E-08	1.58E-08
N	2.36E-05	5.90E-06	1.32E-06	6.19E-07	3.74E-07	2.58E-07	9.47E-07	4.01E-08	2.44E-08	1.72E-08	1.31E-08
NNE	2.14E-05	5.33E-06	1.19E-06	5.59E-07	3.39E-07	2.34E-07	8.59E-08	3.65E-08	2.22E-08	1.56E-08	1.19E-08
NE	1.94E-05	4.75E-06	1.05E-06	4.98E-07	3.03E-07	2.10E-07	7.78E-08	3.33E-08	2.04E-08	1.44E-08	1.10E-08
ENE	2.07E-05	5.06E-06	1.12E-06	5.34E-07	3.25E-07	2.25E-07	8.38E-08	3.60E-08	2.20E-08	1.56E-08	1.20E-08
E	1.58E-05	3.85E-06	8.51E-07	4.05E-07	2.46E-07	1.71E-07	6.36E-08	2.73E-08	1.67E-08	1.19E-08	9.08E-09
ESE	1.48E-05	3.66E-06	8.06E-07	3.80E-07	2.31E-07	1.59E-07	5.87E-08	2.50E-08	1.53E-08	1.08E-08	8.24E-09
SE	1.40E-05	3.56E-06	7.89E-07	3.66E-07	2.20E-07	1.51E-07	5.43E-08	2.27E-08	1.37E-08	9.61E-09	7.30E-09
SSE	1.38E-05	3.56E-06	7.86E-07	3.62E-07	2.16E-07	1.47E-07	5.24E-08	2.16E-08	1.30E-08	9.06E-09	6.87E-09

→(DRN 01-464)

←(DRN 01-464)

WSES-FSAR-UNIT-3

TABLE 2.3-135

Revision 11-A (02/02)

WATERFORD SES - UNIT 3  
ANNUAL AVERAGE DILUTION FACTORS AT THE  
MINIMUM SITE BOUNDARY (914m)  
(JULY 1972-JUNE 1975 AND FEBRUARY 1977-FEBRUARY 1978)

→(DRN 01-464)

←(DRN 01-464)

<u>Direction From Site</u>	<u>Dilution Factor (Sec/m<sup>3</sup>)</u>
N	1.95 x 10 <sup>-5</sup>
NNE	1.77 x 10 <sup>-5</sup>
NE	1.60 x 10 <sup>-5</sup>
ENE	1.72 x 10 <sup>-5</sup>
E	1.31 x 10 <sup>-5</sup>
ESE	1.22 x 10 <sup>-5</sup>
SE	1.15 x 10 <sup>-5</sup>
SSE	1.13 x 10 <sup>-5</sup>
S	7.65 x 10 <sup>-6</sup>
SSW	9.43 x 10 <sup>-6</sup>
SW	1.26 x 10 <sup>-5</sup>
WSW	1.27 x 10 <sup>-5</sup>
W	7.10 x 10 <sup>-6</sup>
WNW	1.34 x 10 <sup>-5</sup>
NW	1.88 x 10 <sup>-5</sup>
NNW	2.35 x 10 <sup>-5</sup>

WSES-FSAR-UNIT-3

TABLE 2.3-136 (Sheet 1 of 2) Revision 14 (12/05)

SHORT-TERM (ACCIDENT) DILUTION FACTORS (Sec/m<sup>3</sup>) (1977-2001)

→ (DRN 03-2055, R14)

**Exclusion Area Boundary (EAB)  $\chi/Q$**

Wind Frequency Distribution Reactor Building		
Time Period	0.5% Max $\chi/Q$ , Sector	5% Site Limit
0-2 Hrs	4.31E-04, E	3.19E-04
Notes: (1) Units for relative concentration, $\chi/Q$ , values are in seconds per cubic meter (sec/m <sup>3</sup> ). (2) 0.5% $\chi/Q$ values represent the maximum selected from among all sector-dependent values (as indicated).		

**Low Population Zone (LPZ)  $\chi/Q$**

Wind Frequency Distribution Reactor Building		
Time Period	0.5% Max $\chi/Q$ , Sector	5% Site Limit
0-8 Hrs	6.58E-05, E	5.03E-05
8-24 Hrs	4.45E-05, E	3.53E-05
1-4 Days	1.91E-05, E	1.64E-05
4-30 Days	5.88E-06, ENE	5.44E-06
Notes: (1) Units for relative concentration, $\chi/Q$ , values are in seconds per cubic meter (sec/m <sup>3</sup> ). (2) 0.5% $\chi/Q$ values represent the maximum selected from among all sector-dependent values (as indicated).		

← (DRN 03-2055, R14)

WSES-FSAR-UNIT-3

TABLE 2.3-136 (Sheet 2 of 2)

Revision 14 (12/05)

SHORT-TERM (ACCIDENT) DILUTION FACTORS (Sec/m<sup>3</sup>) (1977-2001)

→ (DRN 03-2055, R14)

**Control Room**  
**5% PROBABILITY – LEVEL  $\chi/Q$  VALUES (SEC/M<sup>3</sup>)**

	East MSSV		West MSSV		East ADV	
Time Period	East CR Air Intake	West CR Air Intake	East CR Air Intake	West CR Air Intake	East CR Air Intake	West CR Air Intake
0 to 2 hours	4.36E-02	1.37E-03	1.52E-03	7.40E-03	1.06E-01	1.23E-03
2 to 8 hours	3.08E-02	9.34E-04	9.44E-04	5.44E-03	7.45E-02	8.31E-04
8 to 24 hours	1.33E-02	4.48E-04	4.00E-04	2.46E-03	3.30E-02	4.00E-04
1 to 4 days	9.01E-03	2.99E-04	2.81E-04	1.92E-03	2.31E-02	2.63E-04
4 to 30 days	6.57E-03	2.10E-04	2.07E-04	1.50E-03	1.62E-02	1.85E-04

	West ADV		East MSL		West MSL	
Time Period	East CR Air Intake	West CR Air Intake	East CR Air Intake	West CR Air Intake	East CR Air Intake	West CR Air Intake
0 to 2 hours	1.36E-03	7.50E-03	5.09E-02	1.44E-03	1.54E-03	9.28E-03
2 to 8 hours	8.29E-04	5.62E-03	3.26E-02	9.78E-04	9.62E-04	6.84E-03
8 to 24 hours	3.55E-04	2.57E-03	1.39E-02	4.68E-04	4.11E-04	3.11E-03
1 to 4 days	2.48E-04	2.04E-03	8.81E-03	3.05E-04	2.89E-04	2.37E-03
4 to 30 days	1.85E-04	1.57E-03	6.87E-03	2.18E-04	2.15E-04	1.85E-03

	Plant Stack		FHB Truck Bay		FHB Personnel Door	
Time Period	East CR Air Intake	West CR Air Intake	East CR Air Intake	West CR Air Intake	East CR Air Intake	West CR Air Intake
0 to 2 hours	2.77E-03	2.06E-03	7.50E-04	7.63E-04	9.75E-04	1.05E-03
2 to 8 hours	1.78E-03	1.56E-03	6.15E-04	6.32E-04	7.74E-04	8.72E-04
8 to 24 hours	7.22E-04	7.16E-04	2.62E-04	2.95E-04	3.33E-04	4.02E-04
1 to 4 days	5.27E-04	5.49E-04	1.82E-04	2.27E-04	2.22E-04	3.08E-04
4 to 30 days	4.05E-04	4.32E-04	1.25E-04	1.70E-04	1.55E-04	2.29E-04

	Containment Hatch		Containment Purge	
Time Period	East CR Air Intake	West CR Air Intake	East CR Air Intake	West CR Air Intake
0 to 2 hours	1.22E-03	1.93E-03	1.55E-02	1.68E-03
2 to 8 hours	8.54E-04	1.60E-03	1.01E-02	1.20E-03
8 to 24 hours	3.64E-04	7.42E-04	4.18E-03	5.75E-04
1 to 4 days	2.43E-04	5.61E-04	2.72E-03	3.90E-04
4 to 30 days	1.86E-04	4.24E-04	2.13E-03	2.67E-04

← (DRN 03-2055, R14)

WSES-FSAR-UNIT-3

TABLE 2.3-137

STORMS IN EXCESS OF 50 MPH SINCE 1963

<u>Storm</u>	<u>Date</u>	<u>Maximum Recorded Wind Speed (mph)</u>	
		<u>In Louisiana</u>	<u>at New Orleans</u>
Hilda	10/3-10/4/64	135	40/G-54
Betsy	9/9/65	136/G-145	125
Camille	8/17/69	87/G-109	42/G-59
Edith	9/16/71	69/G-96	32/G-51
Carmen	9/8/74	85	33

REFERENCE

- 1) North Atlanta Tropical Cyclones (1964, 1965, 1969, 1971 and 1974 issues),  
U.S. Department of Commerce, NOAA, Environmental Data Service Washington, DC.

NOTES:

- 1) 40/g - 54 means: 40 mph sustained winds, gusts to 54 mph.

WSES-FSAR-UNIT-3

TABLE 2.3-138

WATERFORD ONSITE METEOROLOGICAL MONITORING SYSTEM

OVERALL SYSTEM ACCURACIES OF ONE HOUR AVERAGES

<u>Sensor</u>	<u>Digital Data Acquisition</u>		<u>Analog Data Acquisition</u>	
	<u>PRE 1977</u>	<u>1977-1978</u>	<u>PRE 1977*</u>	<u>1977-1978**</u>
W103 Wind Speed	0.03 mph	0.04 mph	0.35	0.16 mph
W104 Wind Direction	0.21 degrees	0.28 mph	2.94 degrees	1.32 degrees
Gill Bivane Wind Speed	0.03 mph	N/A	N/A	N/A
Gill Bivane Wind Direction	0.47 degrees	0.47 degrees	N/A	N/A
Gill Bivane Elevation Angle	0.13 degrees	0.13 degrees	N/A	N/A
W101-P Wind Speed	1.0 mph	N/A	1.42 mph	N/A
W101-P Wind Direction	0.80 degrees	N/A	3.69 degrees	N/A
Ambient Temperature	0.05 F	0.03 F	0.27 F	0.13 F
Delta Temperature	0.03 F	0.03 F	0.13 F	0.09 F
P501 Rain Gage	N/A	0.002 in./hr	N/A	0.02 in./hr

NOTE:

N/A = Not Applicable

\* Since the method used to define each average depended on the specific parameter and the structure of the chart trace, the overall system accuracy presented here conservatively assumes one sample reading defines the one hour average.

\*\* Since the method used to define each average utilized six to ten sample readings, the overall system accuracy presented here conservatively assumes six sample readings defines each one hour average.

WSES-FSAR-UNIT-3

TABLE 2.3-139

SUMMARY OF METEOROLOGICAL MONITORING  
PROGRAM PARAMETERS MEASURED AT PRIMARY  
AND BACKUP SYSTEMS\*

<u>Parameter</u>	<u>Tower System</u>	<u>Level Above Ground (Feet)</u>
Wind Direction	Primary	33
	Primary	199
	Backup	33
Wind Speed	Primary	33
	Primary	199
	Backup	33
Ambient Temperature	Primary	33
Delta Temperature	Primary (2 independent sets)	33-199
	Backup	33-199
Precipitation	Primary	Ground Level

-----  
\*Sigma theta values are derived from the wind direction measurements at the 33 ft and 199 ft levels at the Primary Tower Systems and the 33 ft level at the Backup Tower System.

WSES-FSAR-UNIT-3

→ (DRN 01-156)

TABLE 2.3-140  
HAS BEEN INTENTIONALLY DELETED

← (DRN 01-156)

WSES-FSAR-UNIT-3

TABLE 2.3-141

Revision 11-A (02/02)

WATERFORD OPERATIONAL METEOROLOGICAL  
MONITORING SYSTEM ACCURACIES

→(DRN 01-156)

		NRC-Regulatory Guide 1.23 (a)(b)
Wind Direction		±5 Az
Threshold		1 mph
Damping Ratio		0.4 to 0.6
Delay Distance		6.6 ft
Wind Speed		±0.5 mph at ≤25 mph
Threshold		1 mph
		±2.0% wind speed at >25 mph
Ambient Temperature		±0.9F
0.15CT Temperature Difference		±0.27F/50 m
Precipitation	(Resolution)	0.01 inch
	(Accuracy)	±10% of the accumulated catch
Dew Point		± 2.7 °F

(a) Pursuant to USNRC Regulatory Guide 1.23 Proposed Revision 1, September 1980, all equipment must have accuracies less than or equal to the stated value.

(b) The accuracies specified above are equal to or more restrictive than those specified in US NRC Regulatory Guide 1.97, Rev. 3. MET tower accuracies, therefore meet those specified in RG 1.97.

←(DRN 01-156)