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APPENDIX I ANALYSIS

CRYSTAL RIVER NUCLEAR UNIT

Prepared For

FLORIDA POWER CORPORATION

By

S. R. Albersheim

A. A. Katterhenry

R. L. Schlegel

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NUS CORPORATION
Environmental Safeguards Division
4 Research Place
Rockville, Maryland 20850

Approved: Richard W Englehart
for Terrold W. Conway
Manager
Radiological/Land Use
Programs

Approved: Joseph J. DiNunno
Vice President and
General Manager

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1.0 SUMMARY AND CONCLUSIONS

The Crystal River facility has been evaluated with respect to its ability to meet the requirements set forth in Section II of Appendix I to 10CFR50. Specifically, Section II of Appendix I[1] sets forth the following design objectives:

A. The calculated annual total quantity of all radioactive material above background to be released from each light-water-cooled nuclear power reactor to unrestricted areas will not result in an estimated annual dose or dose commitment from liquid effluents for any individual in an unrestricted area from all pathways of exposure in excess of 3 millirems to the total body or 10 millirems to any organ.

B.1. The calculated annual total quantity of all radioactive material above background to be released from each light-water-cooled nuclear power reactor to the atmosphere will not result in an estimated annual air dose from gaseous effluents at any location near ground level which could be occupied by individuals in unrestricted areas in excess of 10 millirads for gamma radiation or 20 millirads for beta radiation.

2. Notwithstanding the guidance of paragraph B.1:

(a) The Commission may specify, as guidance on design objectives, a lower quantity of radioactive material above background to be released to the atmosphere if it appears that the use of the design objectives in paragraph B.1 is likely to result in an estimated annual external dose from gaseous effluents to any individual in an unrestricted area in excess of 5 millirems to the total body; and

(b) Design objectives based upon a higher quantity of radioactive material above background to be released to the atmosphere than the quantity specified in paragraph B.1 will be deemed to meet the requirements for keeping levels of radioactive material in gaseous effluents as low as is reasonably achievable if the applicant provides reasonable assurance that the proposed higher quantity will not result in an estimated annual external dose from gaseous effluents to any individual in unrestricted areas in excess of 5 millirems to the total body or 15 millirems to the skin.

C. The calculated annual total quantity of all radioactive iodine and radioactive material in particulate form above background to be released from each light-water-cooled nuclear power reactor in effluents to the atmosphere will not result in an estimated annual dose or dose commitment from such radioactive iodine and radioactive

material in particulate form for any individual in an unrestricted area from all pathways of exposure in excess of 15 millirems to any organ.

The evaluation shows that potential doses meet these objectives. Maximum individual doses have been estimated under normal operating conditions and the typical meteorological characteristics. These maximum doses occur at the nearest residence, about 3 miles from the plant. The doses from liquid effluents are calculated to be:

- 0.0034 mrem whole body, and
- 0.039 mrem to the thyroid (maximum dose to an organ).

From airborne releases, the doses are calculated to be:

- 0.085 mrad/year gamma air dose at the site boundary,
- 0.26 mrad/year beta air dose at the site boundary,
- 0.027 mrem/year whole body to the maximum individual, and
- 0.082 mrem/year to the thyroid from radioactive iodine and radioactive material in particulate form.

Population doses (the total integrated dose to persons within 50 miles of the site) have also been calculated; these are:

- 0.5 person-rem/year, whole body, and
- 2.5 person-rem/year to the thyroid.

Detailed results are shown in Table 1 for maximum individual doses and in Table 2 for integrated population doses.

Radioactive source terms were calculated in a manner consistent with Draft Regulatory Guide 1.BB.[2] Specific data used are given in Appendix A. Also shown in Appendix A are flow diagrams of the primary waste processing

and the miscellaneous waste processing systems. Meteorology information used in the calculation of doses was consistent with Regulatory Guide 1.111.[3]

For liquid effluent discharge, no dilution of the liquid effluents beyond the condenser cooling water discharge canal was assumed. For calculating doses to the maximum individual, this procedure is considered realistic, inasmuch as seafood is taken directly from the discharge canal and the shallow area it traverses. For population doses, this procedure [illegible] conservative — doses resulting from liquid effluent release are overestimated.

Dose calculations were done in a manner consistent with Regulatory Guide 1.109[4] (formerly Draft Regulatory Guide 1.AA). The NRC LADTAP and GASPAR computer codes were used.

No effluent release data are available since the unit is not yet operational.

These results indicate that the maximum radiation dose as calculated for off-site individuals from all normal sources is well within the requirements of Appendix I to 10CFR50.[1] Similarly, the integrated dose from all normal sources as a result of normal operation of the nuclear plant will have a negligible effect on population radiation burden.

2.0 DOSES FROM LIQUID EFFLUENTS

Doses from liquid pathways have been calculated including both maximum individual doses and integrated population doses. Models given in Regulatory Guide 1.109 (March 1976) were used, and the doses were calculated using the LADTAP code. Source terms were calculated using the GALE[(2)] code. Source term data are shown in Table 3. Dose factors, bioaccumulation factors and shorewidth factors as given in Regulatory Guide 1.109 and in the LADTAP code were used, as were use factors for fish and seafood consumption.

Radioactive liquid wastes from the Crystal River facility are released to the Gulf of Mexico, a salt-water body. Hence, there are no liquid pathways through the consumption of potable water or through the ingestion of food crops irrigated by the effluents from this facility. Doses were calculated, therefore, for the pathways of aquatic foods and recreational uses (shoreline activities, boating and swimming).

The cooling water discharge from the two Crystal River fossil-fired generating units and the nuclear unit receives and dilutes the liquid waste discharges. The cooling water enters the Gulf of Mexico through a 1½-mile long discharge canal. Cooling water is withdrawn from the Gulf through an intake canal which extends into the Gulf about 3 miles but is dredged for an additional 3.5 miles. The intake and discharge canals are separated by a spoil bank which extends outward 6.5 miles.

All of the calculated doses for liquid effluents above have been based on the assumption that there is no dilution of liquid wastes beyond the canal; i.e., doses have been calculated assuming that individuals, fish and seafood are exposed to the concentrations of radioactivity existing in the discharge canal. Credit was taken for dilution by the fossil-fired units as well as the nuclear unit; however, an annual average flow rate of 85% of the design flow rate was assumed.

As discussed in the Environmental Report,[5] there is a large amount of sport fishing in the discharge canal and the relatively shallow area around it. This is particularly true in the winter months. Seafood (oysters, etc.) may also be taken in the discharge canal area. Considering these factors, it is clear that since the calculations of maximum dose were based on discharge canal concentrations, the assumption is realistic, at least some individuals can be expected to receive their intake of seafood from the discharge canal and its immediate area. Similarly, some could realistically be expected to receive other exposures (boating, etc.) on the basis of discharge canal concentrations.

The data for commercial fish and seafood catches within 50 miles were taken from government current fisheries statistics. These data are summarized in Table 4. There are no known data on sport fish or sport invertebrate catches. The value used for the sport fish was based on estimates by State of Florida officials that the total sport fish harvest could be conservatively estimated at three times the commercial harvest. There is a significant amount of sport fishing in the vicinity of the plant. This is discussed in the Crystal River Environmental Report, Supplement 1, response to Question 3.[5] This response contains an estimate of sport fishing activity (number of boats and average catch) in the plant discharge area during the peak winter months. Using this data, it may be estimated that the sport fish catch in the discharge area is of the order of 10% of the total sport fish catch within 50 miles.

There is little sport invertebrate harvesting done in the immediate vicinity of the plant site, as discussed on page III-34-37 of Reference 5. In the absence of any available data on sport invertebrate harvest, it was assumed that the value is 10% of the commercial invertebrate catch.

Recreational usage (boating, swimming, shoreline use) was based on data obtained from local authorities. These data indicate 264,150 uses per year within 50 miles of the plant. For dose calculations, the usage factors were swimming - 300,000 person-hours per year; shoreline use - 300,000 person-hours per year; and boating - 600,000 person-hours per year.

recreational

Q. dilutions (Concs) for swimming & boating?

The results, in terms of maximum individual doses from liquid effluent, are 3.4×10^{-3} mrem/year to the whole body, and 3.9×10^{-2} mrem/year to the thyroid. The thyroid would be the organ receiving the maximum dose. The GI and lower intestinal tract dose is calculated to be 1.7×10^{-2} mrem/year, and the doses to other organs would be less than 10^{-2} mrem/year.

In terms of integrated population dose from liquid effluents, the results are whole body - 0.27 person-rem/year, and thyroid - 1.8 person-thyroid-rem/year. The thyroid would be the organ receiving the maximum integrated dose.

The sport fish pathway is by far the largest contributor to the integrated population dose from liquid effluents. A significant portion of the sport fish catch is from the discharge canal or the surrounding area. Taking credit for dilution would not reduce the population dose from those fish by a large factor. Dilution credit would, however, result in a large reduction in doses from sport fish caught at distant locations and doses from other pathways. Overall, credit for dilution would be expected to reduce the total integrated population doses by about an order of magnitude.

3.0 DOSES FROM GASEOUS EFFLUENTS

Doses from gaseous effluent releases have been calculated, considering both the maximum dose received by an individual and the integrated population dose to persons within 50 miles of the site. Source terms were calculated using the GALE computer program and input data as presented in Appendix A. Radioisotopic source terms are shown in Table 5. The dose calculations were performed by the NRC GASPAR code, using the models of Regulatory Guide 1.109. Dose factors, annual air intake, intakes of food products, and parameters for calculating radionuclide concentrations in food products as given in Regulatory Guide 1.109 and in the GASPAR code were used.

Dose contributions from the following pathways were calculated:

1. immersion in the plume,
2. ground contamination,
3. inhalation, and
4. consumption of vegetables, meat and milk.

The maximum individual dose calculation included consideration of occupation of the nearest residences, which are located between 3 and 4 miles from the plant. Vegetable gardens exist at some nearby residences, and the total vegetable intake of the individual receiving maximum exposure was assumed to be from these gardens. There are no meat animals or milk-producing animals within 5 miles of the plant. Calves are raised at a nearby ranch. However, they are only pastured there for a few months and are then removed to another location for several additional months prior to being marketed for human consumption. Because of the long time lapse between the possible ingestion of contaminated feed and the time of human beef consumption, no dose contribution from this source has been considered.

For calculation of the integrated population doses, the 50-mile region was divided into 160 subregions (segments) formed by sectors centered on the 16 cardinal compass points and annuli of 0-1, 1-2, 2-3, 3-4, 4-5, 5-10, 10-20, 20-30, 30-40, and 40-50 miles. For each of these segments the estimated population for the year 2000 (plant midlife) was input, as shown in FSAR[10] Figure 2-6. Current data on meat, milk and vegetable production were also input. Grazing was assumed for the full year.

Appendix A details the meteorc cgical methodology and calculation. In summary, the data were based on a full year of field measurements, taken and reduced in accordance with Regulatory Guide 1.23.[6] Straight-line χ/Q's were used, with appropriate depletion and terrain correction factors, in accordance with Regulatory Guide 1.111.[3] Because of the location and characteristics of the release points, ground level releases were assumed. Table 6 lists and describes the release points.

Data on population, milk, meat and vegetable production in each subregion are shown in Table 7. The production data are based on county-by-county production information.

The results of the dose calculations indicate that the maximum individual whole body doses from airborne effluents would be 0.027 mrem/year. This dose would be accrued by a resident 3.1 miles east of the plant, and the thyroid dose would be 0.082 mrem/year. Maximum air doses at the site boundary are calculated to be 0.085 mrad/year gamma and 0.26 mrad/year beta.

These results are well within the guidelines of Appendix I to 10CFR50.[1]

The integrated population doses from airborne effluents would be:

- integrated whole body dose - 0.24 person-rem/year, and
- integrated thyroid dose - 0.69 person-rem/year.

TABLE 1

MAXIMUM INDIVIDUAL DOSES

From Liquid Effluents

Pathway	Whole Body Dose Mrem/yr	Thyroid Dose Mrem/yr
Fish	2.1×10^{-3}	1.8×10^{-2}
Invertebrate	8.3×10^{-4}	2.1×10^{-2}
Shoreline Use, Boating, Swimming	4.0×10^{-4}	4.0×10^{-4}

From Airborne Effluents

(Dose to Child Shown - Higher than Teen or Adult Dose)

Pathway	Whole Body Dose Mrem/yr	Thyroid Dose Mrem/yr
Plume	4.0×10^{-3}	4.0×10^{-3}
Ground	1.3×10^{-3}	1.3×10^{-3}
Vegetables	2.1×10^{-2}	7.4×10^{-2}
Inhalation	8.9×10^{-4}	2.9×10^{-3}

Note: No milk or meat doses because no production within 5 miles of plant.

TABLE 2

POPULATION DOSES

Pathway	Whole Body Dose Person Rem/yr	Thyroid Dose Person Rem/yr
Fish consumption	0.25	1.53
Invertebrate consumption	0.012	0.25
Shoreline Use, Boating, Swimming	0.0051	0.0051
Plume immersion	0.065	0.065
Ground contamination	0.0056	0.0056
Inhalation	0.030	0.065
Vegetable consumption	0.088	0.40
Milk consumption	0.014	0.10
Meat consumption	0.034	0.051

TABLE 3

RADIOISOTOPIC SOURCE DATA FOR LIQUID RELEASES

Nuclide	Curie/year
Cr 51	1.10E-04
Mn 54	1.00E-03
Fe 55	1.10E-04
Fe 59	6.00E-05
Co 58	5.00E-03
Co 60	8.80E-03
Np 239	5.00E-05
Br 83	3.00E-05
Sr 89	2.00E-05
Sr 91	1.00E-05
Mo 99	2.90E-02
Tc 99M	2.00E-02
Te 127M	2.00E-05
Te 127	3.00E-05
Te 129M	8.00E-05
Te 129	5.00E-05
I 130	6.00E-05
Te 131M	4.00E-05
I 131	1.00E-01
Te 132	8.90E-04
I 132	1.30E-03
I 133	1.60E-02
I 134	1.00E-05
Cs 134	1.60E-02
I 135	3.20E-03
Cs 136	1.20E-03
Cs 137	2.70E-02
Ba 140	1.00E-05
H 3	5.00E+02

TABLE 4

COMMERCIAL FISH AND SEAFOOD CATCHES WITHIN 50 MILES

	Fish lb/yr	Invertebrates lb/yr
1972 (Ref. 7)	3,780,000	4,203,000
1973 (Ref. 8)	3,916,000	3,364,000
1974 (Ref. 9)	4,293,000*	4,588,000*
Value Used in Dose Calculation	4,000,000	4,000,000

* Includes Taylor County, beyond 50-mile radius.

TABLE 5

RADIOISOTOPIC SOURCE DATA FOR AIRBORNE EFFLUENTS

Nuclide	Ci/yr
Kr 83M	0.
Kr 85M	4.00E+00
Kr 85	3.40E+02
Kr 87	1.00E+00
Kr 88	8.00E+00
Kr 89	0.
Xe 131M	5.10E+01
Xe 133M	3.90E+01
Xe 133	5.50E+03
Xe 135M	0.
Xe 135	2.00E+01
Xe 137	0.
Xe 138	0.
I 131	5.00E-02
I 133	5.10E-02
Mn 54	4.50E-04
Fe 59	1.50E-04
Co 58	1.50E-03
Co 60	6.80E-04
Sr 89	3.30E-05
Sr 90	6.00E-06
Cs 134	4.50E-04
Cs 137	7.60E-04
H 3	5.10E+02
C 14	8.00E+00

TABLE 6

RELEASE RATES AND RELEASE HEIGHTS OF GASEOUS EFFLUENTS

(A) Auxiliary and Fuel Handling Building Vent, Waste Disposal Vent and Reactor Building Purge Vent (FSAR, Figure 2-48, Release Point #1)

Location:	On the side of the containment @120°
Release Height:	181 ft above the 95 ft datum
Top of Containment:	190 ft, 6 in. above the 95 ft datum
Top of Units 1 & 2:	196 ft above the 95 ft datum

Waste Disposal Vent Pipe: Release Rate - 5 to 50 cfm (3/4 in. I.D. pipe) into Auxiliary & Fuel Handling Buildings Ventilation Exhaust System

Auxiliary & Fuel Handling Buildings Ventilation Exhaust System: Release Rate - 157,000 scfm (90 in. by 78 in.)

Reactor Building Purge Vent Pipe: Release Rate - 50,781 scfm (30 in. by 78 in.)

Temperature - Ambient

(B) Condenser Vacuum Pump Vent (FSAR, Figure 2-48, Release Point #2)

Location:	On the Turbine Building Roof
Release Height:	123 ft above the 95 ft datum
Release Rate:	1,000 scfm @15 in. Hg; 25 scfm @1 in. Hg
Vent Size:	15 in. I.D.

Temperature - Approximately 100°F

(C) Gland Steam Exhauster Vent (FSAR, Figure 2-48, Release Point #3)

Location:	On the Turbine Building Roof
Release Height:	123 ft above the 95 ft datum
Release Rate:	400 to 780 scfm
Vent Size:	7.5 in. I.D.

Temperature - Approximately 100°F

TABLE 6 (Continued)

RELEASE RATES AND RELEASE HEIGHTS OF GASEOUS EFFLUENTS

(D) Turbine Building Roof Vents (FSAR, Figure 2-48, Release Points #4A, 4B, 4C)

Location:	On the Turbine Building Roof
Release Height:	116 ft above the 95 ft datum (each)
Release Rate:	174,000 scfm (each)
Vent Size:	20 ft by 60 ft (each)

Temperature - Ambient

TABLE 7

AREA POPULATION, VEGETABLE PRODUCTION, MILK PRODUCTION, AND MEAT PRODUCTION

CRYSTAL RIVER 3

SITE POPULATION DATA *

DIR	0.0-1.	1.-2.	2.-3.	3.-4.	4.-5.	5.-10.	10.-20.	20.-30.	30.-40.	40.-50.	TOTAL
N	0.	0.	0.	0.	2.700E+02	3.020E+02	1.210E+03	2.001E+03	2.825E+03	1.564E+04	2.251E+04
NNE	0.	0.	0.	0.	5.400E+02	3.020E+02	1.210E+03	2.001E+03	5.695E+03	3.923E+04	4.904E+04
NE	0.	0.	0.	2.500E+01	0.	3.020E+02	3.334E+03	6.768E+03	1.346E+04	1.550E+04	3.947E+04
ENE	0.	0.	0.	1.090E+02	7.500E+01	2.675E+03	5.770E+03	9.816E+03	6.152E+04	1.731E+04	9.714E+04
E	0.	0.	0.	9.000E+01	9.300E+01	2.675E+03	1.069E+04	6.523E+03	1.139E+04	1.779E+04	4.950E+04
ESE	0.	0.	0.	0.	2.700E+02	2.675E+03	1.069E+04	1.773E+04	5.821E+03	1.069E+04	4.788E+04
SE	0.	0.	0.	0.	6.000E+01	9.304E+03	1.069E+04	1.783E+04	1.068E+04	2.871E+04	8.333E+04
SSE	0.	0.	0.	0.	3.000E+01	2.675E+03	1.069E+04	1.507E+04	2.816E+04	6.871E+04	1.253E+05
S	0.	0.	0.	0.	0.	1.338E+03	5.346E+03	6.970E+03	9.757E+03	7.316E+04	9.657E+04
SSW	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
SW	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
WSW	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
WNW	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
NW	0.	0.	0.	0.	0.	0.	0.	1.614E+03	1.356E+03	2.224E+03	5.194E+03
NNW	0.	0.	0.	0.	4.050E+02	3.020E+02	1.210E+03	2.001E+03	3.619E+03	2.894E+03	1.050E+04
TOTAL	0.	0.	0.	2.320E+02	1.743E+03	2.201E+04	6.086E+04	8.840E+04	1.605E+05	2.919E+05	6.203E+05

DENSITY(/M**2) = 3.13E-05

SITE VEGETATION PRODUCTION, KGM **

DIR	0.0-1.	1.-2.	2.-3.	3.-4.	4.-5.	5.-10.	10.-20.	20.-30.	30.-40.	40.-50.	TOTAL
N	0.	0.	0.	0.	3.520E+02	2.700E+05	1.080E+06	1.800E+06	2.520E+06	1.110E+07	1.677E+07
NNE	0.	0.	0.	0.	3.520E+02	2.700E+05	1.080E+06	1.800E+06	4.070E+06	1.120E+07	1.902E+07
NE	0.	0.	0.	3.520E+02	0.	3.450E+05	1.140E+06	1.950E+06	2.850E+06	6.100E+06	1.243E+07
ENE	0.	0.	0.	3.520E+02	3.520E+02	7.210E+05	1.710E+06	2.020E+06	2.850E+06	3.640E+06	1.092E+07
E	0.	0.	0.	3.520E+02	0.	7.210E+05	2.870E+06	5.480E+06	4.360E+06	4.330E+06	1.656E+07
ESE	0.	0.	0.	0.	3.520E+02	7.210E+05	2.870E+06	4.800E+06	5.970E+06	7.070E+06	2.243E+07
SE	0.	0.	0.	0.	3.520E+02	7.210E+05	2.870E+06	4.750E+06	6.560E+06	8.350E+06	2.365E+07
SSE	0.	0.	0.	0.	3.520E+02	2.400E+05	1.440E+06	4.590E+06	6.420E+06	7.580E+06	2.027E+07
S	0.	0.	0.	0.	0.	1.200E+05	4.790E+05	7.640E+05	2.050E+06	3.790E+06	7.203E+06
SSW	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
SW	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
WSW	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
WNW	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
NW	0.	0.	0.	0.	0.	0.	0.	1.200E+06	9.090E+05	1.320E+05	2.241E+06
NNW	0.	0.	0.	0.	3.520E+02	1.800E+05	7.190E+05	1.800E+06	2.140E+06	4.340E+06	9.179E+06
TOTAL	0.	0.	0.	1.056E+03	2.464E+03	4.309E+06	1.625E+07	2.893E+07	4.288E+07	6.769E+07	1.601E+08

DENSITY(/M**2) = 8.00E-03

* For the year 2000.

** Current figures.

TABLE 7 (Continued)

AREA POPULATION, VEGETABLE PRODUCTION, MILK PRODUCTION, AND MEAT PRODUCTION

CRYSTAL RIVER 3

SITE MILK PRODUCTION, LITERS **

DIR	0.0-1.	1.-2.	2.-3.	3.-4.	4.-5.	5.-10.	10.-20.	20.-30.	30.-40.	40.-50.	TOTAL
N	0.	0.	0.	0.	0.	0.	0.	0.	0.	3.240E+06	3.240E+06
NNE	0.	0.	0.	0.	0.	0.	0.	0.	4.320E+05	2.220E+06	2.652E+06
NE	0.	0.	0.	0.	0.	0.	2.550E+05	5.680E+05	1.190E+06	1.760E+06	3.773E+06
ENE	0.	0.	0.	0.	0.	0.	3.400E+05	8.520E+05	1.190E+06	1.533E+06	3.915E+06
E	0.	0.	0.	0.	0.	0.	0.	6.020E+05	1.080E+06	1.620E+06	3.302E+06
ESE	0.	0.	0.	0.	0.	0.	0.	0.	6.600E+05	1.490E+06	2.150E+06
SE	0.	0.	0.	0.	0.	0.	0.	2.030E+05	7.340E+05	3.990E+06	4.927E+06
SSE	0.	0.	0.	0.	0.	0.	0.	6.110E+05	8.550E+05	9.610E+06	1.108E+07
S	0.	0.	0.	0.	0.	0.	0.	1.020E+05	1.390E+06	4.810E+06	6.302E+06
SSW	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
SW	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
WSW	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
WNW	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
NW	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
NNW	0.	0.	0.	0.	0.	0.	0.	0.	0.	1.050E+06	1.050E+06
TOTAL	0.	0.	0.	0.	0.	5.950E+05	2.958E+06	7.511E+06	3.132E+07	4.237E+07	

DENSITY(/**2) = 2.12E-03

SITE ANNUAL MEAT PRODUCTION, KGR **

DIR	0.0-1.	1.-2.	2.-3.	3.-4.	4.-5.	5.-10.	10.-20.	20.-30.	30.-40.	40.-50.	TOTAL
N	0.	0.	0.	0.	0.	1.690E+05	6.760E+05	1.130E+06	1.580E+06	3.090E+06	6.845E+06
NNE	0.	0.	0.	0.	0.	1.690E+05	6.760E+05	1.130E+06	2.230E+06	5.380E+06	9.585E+06
NE	0.	0.	0.	0.	0.	1.510E+05	6.150E+05	9.930E+05	1.300E+06	2.910E+06	5.969E+06
ENE	0.	0.	0.	0.	0.	5.390E+04	4.410E+05	9.200E+05	1.300E+06	1.670E+06	4.391E+06
E	0.	0.	0.	0.	0.	5.390E+04	2.150E+05	1.040E+06	2.000E+06	1.840E+06	5.149E+06
ESE	0.	0.	0.	0.	0.	5.390E+04	2.150E+05	3.590E+05	1.960E+06	2.740E+06	5.328E+06
SE	0.	0.	0.	0.	0.	5.390E+04	2.150E+05	6.880E+05	2.350E+06	4.460E+06	7.967E+06
SSE	0.	0.	0.	0.	0.	1.890E+04	1.070E+05	1.950E+06	2.730E+06	6.400E+06	1.121E+07
S	0.	0.	0.	0.	0.	8.970E+03	5.580E+04	1.950E+06	1.280E+06	3.200E+06	6.475E+06
SSW	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
SW	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
WSW	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
WNW	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
NW	0.	0.	0.	0.	0.	0.	0.	7.520E+05	6.170E+05	1.740E+05	1.543E+06
NNW	0.	0.	0.	0.	0.	1.120E+05	4.510E+05	1.130E+06	1.360E+06	1.160E+06	4.213E+06
TOTAL	0.	0.	0.	0.	0.	8.445E+05	3.647E+06	1.225E+07	1.871E+07	3.302E+07	6.847E+07

DENSITY(/**2) = 3.42E-03

** Current figures.

REFERENCES

1. Title 10 Code of Federal Regulations Part 50, Appendix I, U.S. Nuclear Regulatory Commission (April 1976).

2. "Calculation of Releases of Radioactive Materials in Liquid and Gaseous Effluents from Pressurized Water Reactors (PWR's)," Draft Regulatory Guide 1.BB, U.S. Nuclear Regulatory Commission (Sept. 9, 1975).

3. "Methods for Estimating Atmospheric Transport and Dispersion of Gaseous Effluents in Routine Releases from Light-Water-Cooled Reactors," Regulatory Guide 1.111, U.S. Nuclear Regulatory Commission (March 1976).

4. "Calculation of Annual Doses to Man from Routine Releases of Reactor Effluents for the Purpose of Evaluating Compliance with 10CFR Part 50, Appendix I," Regulatory Guide 1.109, U.S. Nuclear Regulatory Commission (March 1976).

5. Florida Power Corporation, Crystal River Unit 3 Environmental Report (January 1972).

6. "Onsite Meteorological Programs (Safety Guide 23)," Regulatory Guide 1.23, U.S. Atomic Energy Commission (February 1972).

7. "Florida Landings - Annual Summary 1972," Current Fisheries Statistics No. 6120, U.S. Department of Commerce (Aug. 1, 1973).

8. "Florida Landings - Annual Summary 1973," Current Fisheries Statistics No. 6419, U.S. Department of Commerce (1974).

9. "Florida Landings - Annual Summary 1974," Current Fisheries Statistics No. 6719, U.S. Department of Commerce (Jan. 16, 1976).

10. Florida Power Corporation, Crystal River Unit 3 Nuclear Generating Plant: FSAR (through Amendment 48), Docket No. 50-302, U.S. Nuclear Regulatory Commission (Mar. 26, 1976).

APPENDIX A

RESPONSES TO REQUEST FOR INFORMATION

(Enclosure 2 of NRC Letter)

APPENDIX A

RESPONSES TO REQUEST FOR INFORMATION
(Enclosure 2 of NRC Letter)

Request 1

Provide the information requested in Appendix D of Draft Regulatory Guide 1.BB or 1.CC, as appropriate.

Response

This information is given in Tables A1 through A4 and in Table A8; also in Figures A1 and A2.

Request 2

Provide, in tabular form, the distances from the centerline of the first nuclear unit to the following for each of the 22½ degree radial sectors centered on the 16 cardinal compass directions.

a. Nearest milk cow (to a distance of 5 miles)
b. Nearest meat animal (to a distance of 5 miles)
c. Nearest milk goat (to a distance of 5 miles)
d. Nearest residence (to a distance of 5 miles)
e. Nearest vegetable garden greater than 500 ft^2 (to a distance of 5 miles)
f. Nearest site boundary.

For radioactive releases from stacks which qualify as elevated releases as defined in Draft Regulatory Guide 1.DD, identify the locations of all milk cows, milk goats, meat animals, residences, and vegetable gardens, in a similar manner, out to a distance of 3 miles for each radial sector.

Response

There are no milk animals within 5 miles. The only meat animals within 5 miles are calves and young cows which are removed from the area for several months for additional growth prior to slaughter and human consumption. These animals are not considered significant. No other meat animals are within 5 miles.

Direction and distance to residences within 5 miles are shown in Table A5. Some of these residences have vegetable gardens, and it is assumed that vegetable gardens may exist at all of these residences.

The nearest site boundary data are shown in Table A6.

There are no releases which qualify as elevated releases.

Request 3

> Based on considerations in Draft Regulatory Guide 1.DD, provide estimates of relative concentration (χ/Q) and deposition (D/Q) at locations specified in response to Item 2 above for each release point specified in response to Item 1 above.

Response

Estimates of relative concentration (χ/Q) and deposition (D/Q) for ground level releases for onshore flows for specified distances are presented in Table A5. These values were based on the straight-line method in accordance with Regulatory Guide 1.111 guidelines. Terrain correction factors based on open terrain were used for all onshore flow computations. Calculations of χ/Q and D/Q were not performed for winds from the ESE counterclockwise through NNE as these directions are offshore flow.

Request 4

> Provide a detailed description of the meteorological data, models and parameters used to determine the χ/Q and D/Q values. Include information concerning the validity and accuracy of the models and assumptions for your site and the representativeness of the meteorological data used.

Response

Annual average atmospheric dilution factors were determined for the Crystal River site based on onsite data for the period January 1, 1975, through

December 31, 1975. Equation (1), which is consistent with the guidance contained in Regulatory Guide 1.111,[A1] was used to obtain χ/Q values for ground level releases. Stability was based on $\Delta T_{175\ ft - 33\ ft}$ data. Calms were distributed based on the directional frequency of winds in the 0.6 to 1.5 mph range and were assigned a wind speed of 0.25 mph.

$$(\chi/Q)_j = \frac{2.032}{x} \sum_{i=1}^{n} \frac{f_{ij}}{S_{z_i}} \left(\overline{\frac{1}{u_{ij}}} \right) \qquad (1)$$

where:

$(\chi/Q)_j$ = relative ground level concentration χ normalized by source strength Q for sector j, seconds per cubic meter,

S_{z_i} = effective vertical dispersion parameter for stability class i, meters,

$\left(\overline{\frac{1}{u_{ij}}} \right)$ = average inverse wind speed for stability class i for sector j, seconds per meter,

f_{ij} = fraction of time (based on all observations) stability class i occurs within sector j,

x = downwind distance, meters,

n = number of stability categories, seven.

An effective sigma z parameter S_{z_i} is used to account for building wake effects as follows:[A1]

$$S_{z_i} = \left[\sigma_{z_i}^2 + \left(\frac{cH^2}{\pi} \right) \right]^{1/2} \qquad (2)$$

with the constraint that

$$S_{z_i} \leq \sqrt{3}\,\sigma_{z_i}$$

In equation (2),

σ_{z_i} = vertical stability parameter for stability class i, meters,

c = building shape factor (0.5), dimensionless,

H = the height of the containment, meters.

Figure 1 of Regulatory Guide 1.111 provided the values of σ_z. Calculated χ/Q values were adjusted accordingly for topography by multiplying the right side of equation (1) by the appropriate open level terrain correction factors. Open level terrain correction factors as shown in Figure 2 of the NRC Regulatory Guide 1.111 were considered appropriate, since the Crystal River plant is located on the west coast of Florida on level terrain approximately 4000 feet from the Gulf of Mexico. Examination of Figure 2-13a of the FSAR depicting topographic profiles out to 5 miles and Figure 2-2 showing the general topography for a 50-mile radius indicates there are no significant terrain effects that would affect onshore flow.(A2) The effects of onshore-offshore flow of air are discussed in Response 7.

Request 5

If an onsite program commensurate with the recommendations and intent of Regulatory Guide 1.23 exists:

a. Provide representative annual and monthly, if available, joint frequency distributions of wind speed and direction by atmospheric stability class covering at least the most recent one year period of record, preferably two or more years of record. Wind speed and direction should be measured at levels applicable to release point elevations and stability

should be determined from the vertical temperature gradient between measurement levels that represent conditions into which the effluent is released.

b. Describe the representativeness of the available data with respect to expected long-term conditions at the site.

Response

a. Monthly and annual joint frequency distribution of 33 ft wind direction vs. wind speed by stability class based on $\Delta T_{175-33\ ft}$ are presented in Appendix B for the period January 1, 1975 - December 31, 1975. These data are considered representative for ground level releases.

b. Monthly wind roses with associated average wind speeds for the 33 ft level derived from onsite measurements for the period January 1, 1975 - December 31, 1975 are presented in Figure A3. Monthly wind roses with associated average wind speeds based on concurrent NWS data for Tampa are presented in Figure A4. The annual wind roses with associated average wind speed for 33 ft onsite measurements and Tampa data are presented in Figure A5 for the period January 1, 1975 - December 31, 1975. Also presented in Figure A5 is the annual wind rose for Tampa for the ten-year period January 1, 1966 - December 31, 1975. The annual wind rose based on one-year onsite data compares favorably with the ten-year data period for Tampa.

The monthly mean wind speeds for 33 ft onsite data and Tampa data are presented in Table A7. The annual mean wind speed for 33 ft onsite data was 7.9 mph and 8.3 mph for Tampa for the period January 1, 1975 - December 31, 1975. The annual mean wind speed for the ten-year data period for Tampa was 8.7 mph. The frequency of calms based on 33 ft data is 0.1 percent and for Tampa it is 5.6 percent for the period January 1, 1975 - December 31, 1975. The NWS station wind speed sensor has a starting threshold of approximately 3.5 mph as compared to 0.6 mph for the Crystal River Climet wind speed sensor. The higher frequency of

calms at Tampa is attributed to the higher starting threshold of the NWS wind speed sensor. Onsite meteorological data for the period January 1, 1975 - December 31, 1975 is considered to be climatically representative of the area and of the dispersion of effluents.

Request 6

If recent onsite meteorological data are not available, or if the meteorological measurements program does not meet the recommendations and intent of Regulatory Guide 1.23...

Response

This item is not applicable to Crystal River.

Question 7

Describe airflow trajectory regimes of importance in transporting effluents to the locations for which these calculations are made.

Response

The Crystal River plant is located on the west coast of Florida approximately 7000 ft inland from the shoreline. Figure 2-3 of the FSAR shows the general terrain for a 5-mile radius.(A2) In general, the area is flat with no distinctive relief features that would cause an obstruction to the flow of air. Analysis of the annual wind roses indicates that 28.3 percent of the time the air flow is from water to land (south-southwest clockwise through west-northwest) for the period January 1, 1975 - December 31, 1975, which compares to 31.3 percent of the time for the period January 1, 1972 - December 31, 1972.(A2)

Along coastlines the primary topographic effect that would affect air flow trajectory regimes is the differential heating that occurs between land and water surfaces, resulting in a diurnal oscillation between onshore and

offshore flow only during weak pressure gradient winds. In the Florida region, the sea breezes are most pronounced in spring and summer.(A3) Studies of the sea breeze in Florida have shown that the sea breeze can penetrate 30 miles inland, but usually extends no more than 10 miles inland. The offshore flow that develops during the night under weak pressure gradient systems is not as vigorous and as well formed as the daytime onshore flow.

Investigation of coastal diffusion has indicated that significant changes occur in the diffusion rates of the atmosphere as the air passes from overwater to overland. Mechanical and thermal turbulence induced by the surface begins immediately at the shoreline and builds upward and inland. Studies have shown that stable air from the water changes to neutral or unstable conditions within a relatively short distance from the shoreline.(A4) At a distance of 4000 feet from the shoreline the entire tower (175 feet) would be included in the boundary layer of all onshore flows and therefore representative of dispersion conditions for low level releases of effluents. For cases of ground level releases, as in the Crystal River Nuclear Power Plant, downwind onshore flows can be characterized by overland diffusion rates. For annual χ/Q values, the straight-line air-flow model is considered conservative, particularly when terrain adjustment factors are included.

Request 8

> Provide a map showing the detailed topographical features (as modified by the plant) on a large scale, within a 10-mile radius of the plant and a plot of the maximum topographic elevation versus distance from the center of the plant in each of the sixteen 22½ degree cardinal compass point sectors (centered on true north), radiating from the center of the plant, to a distance of 10 miles.

Response

Topographical maps are included in Figures 2-2, 2-3, 2-14a, and 2-14b of the FSAR. Cross section profiles are also given in Figures 2-13a, b, c, and d. As discussed in FSAR Section 2.3.2.4, the topography in the area around the site is extremely flat and featureless.(A2)

Request 9

Provide the dates and times of radioactivity releases from intermittent sources by source location based on actual plant operation and, if available, appropriate hourly meteorological data (i.e., wind direction and speed, and atmospheric stability) during each period of release.

Response

There have been no releases, as the plant is not yet operational.

TABLE A1

DATA USED FOR RADIOACTIVE SOURCE TERM CALCULATION

	Request	Response
1.	**General**	
a.	The maximum core thermal power (Mw(t)) evaluated for safety considerations in the SAR	2544 Mw(t)
b. (1)	The total mass (lbs) of uranium and plutonium in an equilibrium core (metal weight)	93,100 kg UO_2, or 82,100 kg metal
(2)	The percent enrichment of uranium in reload fuel	2.86
(3)	The percent of fissile plutonium in reload fuel	Use of plutonium in reload fuel is not currently planned
c.	If methods and parameters used in estimating the source terms in the primary coolant are different from those given in Regulatory Guide 1.BB, describe in detail the methods and parameters used	No change from 1.BB
d.	The quantity of tritium released in liquid and gaseous effluents (Ci/yr/reactor)	Liquid - 500 Ci/yr; Gaseous - 510 Ci/yr
2.	**Primary System**	
a.	The total mass (lbs) of coolant in the primary system, excluding the pressurizer and primary coolant purification system, at full power	46,500 lbs
b.	The average primary system letdown rate (gpm) to the primary coolant purification system	45 gpm
c.	The average flow rate (gpm) through the primary coolant purification system cation demineralizers	0
d.	The average shim bleed flow (gpm)	1160 gal/day, or 0.806 gpm

TABLE A1 (Continued)

DATA USED FOR RADIOACTIVE SOURCE TERM CALCULATION

Request	Response
3. Secondary System	
a. The number and type of steam generators and the carryover factor used in your evaluation for iodine and nonvolatiles	2 - Once-through; Carryover fraction 1.0
b. The total steam flow (lbs/hr) in the secondary system	10.6×10^6 lbs/hr
c. The mass of steam in each steam generator (lbs) at full power	13,800 lbs
d. The mass of liquid in each steam generator (lbs) at full power	41,200 lbs
e. The total mass of coolant in the secondary system (lbs) at full power. For recirculating U-tube steam generators, do not include the coolant in the condenser hotwell	2.5×10^6 lbs
f. The primary to secondary system leakage rate (lbs/day) used in the evaluation	100 lbs/day
g. Description of the steam generator blowdown and blowdown purification systems. The average steam generator blowdown rate (lbs/hr) used in your evaluation	None
h. The fraction of the steam generator feedwater processed through the condensate demineralizers and the DF's used in your evaluation for the condensate demineralizer system	0.75; DF's per RG 1.BB
i. Condensate demineralizers	
(1) Average flow rate (lbs/hr)	5 in service - 1.6×10^6 lbs/hr each at 100% power; 1.28×10^6 lbs/hr average at 80% CF
(2) Demineralizer type (deep bed or powdered resin)	Deep bed

TABLE A1 (Continued)

DATA USED FOR RADIOACTIVE SOURCE TERM CALCULATION

Request		Response
(3)	Number and size (ft^3) of demineralizers	6, each 200 ft^3
(4)	Regeneration frequency	5 demineralizers on a 25-day cycle, or 1 demineralizer each 5 days
(5)	Indicate whether ultrasonic resin cleaning is used and the waste liquid volume associated with its use	None
(6)	Regenerant volume (gal/event) and activity	5000 gal acid and caustic, which may be sent to the liquid waste system if there is significant secondary system activity. Otherwise, it goes to an evaporation pond. Rinse and backwash water are also sent to the evaporation pond

4. Liquid Waste Processing Systems

a. For each liquid waste processing system (including the shim bleed, steam generator blowdown and detergent waste processing systems), provide in tabular form the following information:

(1)	Sources, flow rates (gpd) and expected activities (fraction of primary coolant activity, PCA) for all inputs to each system	See Table A2
(2)	Holdup times associated with collection, processing, and discharge of all liquid streams	See Tables A3 and A4
(3)	Capacities of all tanks (gal) and processing equipment (gpd) considered in calculating holdup times	See Tables A3 and A4

TABLE A1 (Continued)

DATA USED FOR RADIOACTIVE SOURCE TERM CALCULATION

Request	Response
(4) Decontamination factors for each processing step	See Tables A3 and A4
(5) Fraction of each processing stream expected to be discharged over the life of the plant	See Tables A3 and A4
(6) For demineralizer regeneration, provide: time between regenerations, regenerant volumes and activities, treatment of regenerants and fraction of regenerant discharged. Include parameters used in making these determinations	None
(7) Liquid source term by radionuclide in Ci/yr for normal operation including anticipated operational occurrences	From GALE
b. Provide piping and instrumentation diagrams (P&ID's) and process flow diagrams for the liquid radwaste systems along with all other systems influencing the source term calculations	Ref. FSAR, Figs. 11-1, 11-2, 11-3, 9-2
5. Gaseous Waste Processing System	
a. The volumes (ft^3/hr) of gases stripped from the primary coolant	140 ft^3/day
b. Description of the process used to hold up gases stripped from the primary system during normal operations and reactor shutdown.	Pressurized storage tanks;
If pressurized storage tanks are used, include a process flow diagram of the system indicating the capacities (ft^3), number, and design and operating storage pressures for the storage tanks	Ref. FSAR, Figs. 11-2, 11-2A, Table 11-5
c. Describe the normal operation of the system, e.g., number of tanks held in reserve for back-to-back shutdown, fill time for tanks. Indicate the minimum holdup time used in your evaluation and the basis for this number	Anticipated no tank held in reserve; 1 tank filling for 45 days, 2 tanks in holdup - 90 days each; Assumed 1 tank in reserve; 1 holding (48 days), 1 filling (48 days) - basis per RG 1.BB

TABLE A1 (Continued)

DATA USED FOR RADIOACTIVE SOURCE TERM CALCULATION

	Request	Response
d.	If HEPA filters are used downstream of the pressurized storage tanks, provide the decontamination factor used in your evaluation	100 per RG 1.BB
e.	If a charcoal delay system is used, describe this system	None
f.	Provide piping and instrumentation diagrams (P&ID's) and process flow diagrams for the gaseous radwaste systems along with other systems influencing the source term calculations	Ref. FSAR, Figs. 11-2, 11-2A
6.	Ventilation and Exhaust Systems	
	For each building housing systems that contain radioactive materials, the steam generator blowdown system vent exhaust, gaseous waste processing system vent, and the main condenser air removal system, provide the following:	
a.	Provisions incorporated to reduce radioactivity releases through the ventilation or exhaust systems	Buildings: Auxiliary Building - charcoal and HEPA; Containment (high-vol. purge) - charcoal and HEPA; No Steam Generator Blowdown - once-through SG's; Gaseous Waste Process Vent - charcoal and HEPA; Condenser Air Removal - no provisions
b.	Decontamination factors assumed and the bases (include charcoal adsorbers, HEPA filters, mechanical devices)	10 (charcoal); 100 (HEPA); per RG 1.BB
c.	Release rates for radioiodine, noble gases, and radioactive particulates (Ci/yr), and the bases	GALE

TABLE A1 (Continued)

DATA USED FOR RADIOACTIVE SOURCE TERM CALCULATION

	Request	Response
d.	Release point description including height above grade, height above and relative location to adjacent structures, relative temperature difference between gaseous effluent and ambient, flow rate, velocity, and size and shape of the flow orifice	See Table 6 of main report
e.	For the containment building, provide the building free volume (ft^3) and a thorough description of the internal recirculation system (if provided) including the recirculation rate, charcoal bed depth, operating time assumed, and mixing efficiency. Indicate the expected purge and venting frequencies and duration, and continuous purge rate (if used)	2.0×10^6 ft^3. No internal recirculation system for cleanup of airborne radioactive materials. The reactor building contains a main cooling and filter system and a reactor compartment cooling and filtering system. These systems, which cool and recirculate air in the containment, are not equipped with either HEPA or charcoal filters. Further information is given in FSAR, Section 9.7
7.	Solid Waste Processing Systems	
a.	Provide in tabular form the following information concerning all inputs to the solid waste processing system: source, volume (cu ft/yr/reactor), and activity (Ci/yr/reactor) of principal radionuclides, along with bases for values used	Reference FSAR Table 11-4. See Table A8
b.	Onsite storage provisions (location, capacity) and expected onsite storage times for all solid wastes prior to shipment	Reference FSAR Section 11.2.5.1 (page 11-9c)
c.	Provide piping and instrumentation diagrams (P&ID's) for the solid radwaste system	Reference FSAR Figures 11-3 and 11-3A

TABLE A2

RADIOACTIVE WASTE DATA FOR SOURCE TERM CALCULATION

System	Sources	Flow Rate (gal/day)	Activity[1]	Fraction Discharged
Primary Waste Processing	Shim Bleed	1161	1.0	0.85
	Equipment Drain	84	1.0	0.85
Miscellaneous Waste Processing	Containment Sump	40	1.0	1.0
	Auxiliary Building Floor Drain	200	0.1	1.0
	Sampling	35	1.0	1.0
	Lab Drains	400	0.002	1.0
	Miscellaneous Sources	700	0.01	1.0
	Condensate Demineralizer Regen. Wastes	1000	(2)	1.0
Unprocessed Sources	Laundry and Shower	450	(3)	1.0
	Turbine Building Floor Drains	7200	(2)	1.0

(1) Fraction of primary coolant activity.
(2) Calculated by computer.
(3) Per Reg Guide 1.BB.

TABLE A3

MISCELLANEOUS WASTE PROCESSING SYSTEM DATA FOR SOURCE TERM CALCULATION

	Capacity	Holdup Time	Decontamination Factors		
			I	Cs,Rb	Others
Miscellaneous Waste Storage Tank	1 @20,600 gal	3.5 days (collection)	1	1	1
Miscellaneous Waste Evaporator	12.5 gal/min	0.9 days (process)	10^3	10^4	10^4
Evaporator Condensate Demineralizer	-	-	10	10	10
Evaporator Condensate Storage Tank	1 @8,230 gal	0.2 days (discharge)	1	1	1

TABLE A4

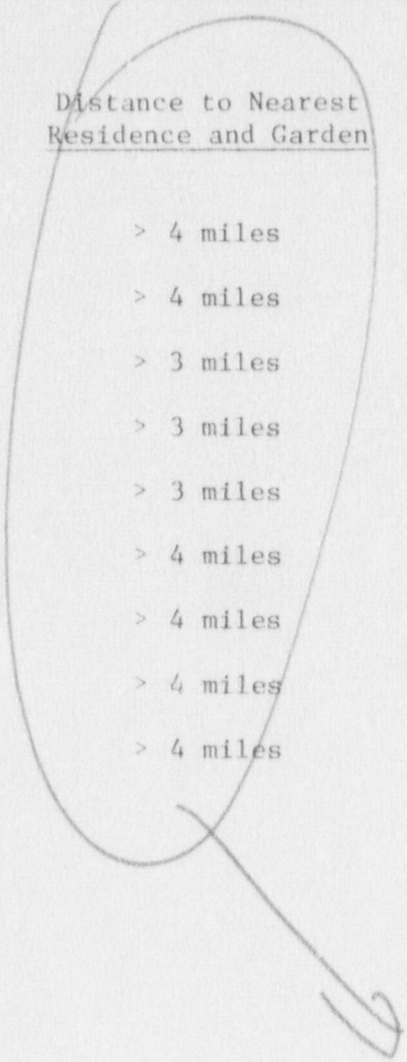
PRIMARY WASTE PROCESSING DATA FOR SOURCE TERM CALCULATION

	Capacity	Holdup Time	Decontamination Factors		
			I	Cs,Rb	Others
Reactor Coolant Bleed Tanks	3 @75,900 gal	49 days (collection)	1	1	1
Cation Demineralizer	-	-	1	10	10
Reactor Coolant Evaporator	12.5 gal/min	3.8 days (process)	10^2	10^3	10^3
Condensate Demineralizer	-	-	10	10	10
Evaporator Condensate Storage Tank	1 @8,230 gal	0.15 days (discharge)	1	1	1

TABLE A5

DIRECTIONS, DISTANCES AND METEOROLOGICAL PARAMETERS
FOR RESIDENCES WITHIN 5 MILES

Direction	Distance to Nearest Residence and Garden	X/Q ($sec \cdot M^{-3}$)	D/Q (M^{-2})
N	> 4 miles	5.2×10^{-8}	3.9×10^{-10}
NNE	> 4 miles	4.3×10^{-8}	4.3×10^{-10}
NE	> 3 miles	8.7×10^{-8}	9.3×10^{-10}
ENE	> 3 miles	7.7×10^{-8}	8.7×10^{-10}
E	> 3 miles	1.0×10^{-7}	1.5×10^{-9}
ESE	> 4 miles	4.2×10^{-8}	5.2×10^{-10}
SE	> 4 miles	4.4×10^{-8}	3.9×10^{-10}
SSE	> 4 miles	6.2×10^{-8}	2.7×10^{-10}
NNW	> 4 miles	5.1×10^{-8}	3.1×10^{-10}



how do we use these data?

TABLE A6

DISTANCES TO NEAREST SITE BOUNDARY, BY DIRECTION

Direction	Distance (feet)	Direction	Distance (feet)
N	4,397	S	9,049
NNE	4,515	SSW	7,812
NE	4,928	SW	7,349
ENE	4,465	WSW	7,451
E	7,090	W	8,225
ESE	6,936	WNW	8,120
SE	8,278	NW	5,341
SSE	9,823	NNW	4,567

TABLE A7

MONTHLY MEAN WIND SPEEDS AT THE 33-FT LEVEL
CRYSTAL RIVER AND TAMPA INTERNATIONAL AIRPORT, FLORIDA
(January 1, 1975 - December 31, 1975)

Month	Crystal River 33 ft (mph)	Tampa 22 ft (mph)
January	8.8	8.2
February	8.5	8.1
March	9.6	9.1
April	8.6	9.2
May	7.4	7.9
June	7.2	7.4
July	7.8	7.8
August	6.2	7.2
September	6.8	7.9
October	7.5	8.4
November	8.6	8.9
December	8.3	8.4

TABLE A8

EVAPORATOR CONCENTRATE WASTE ANALYSIS*

Radionuclide	Activity (Ci/yr)
Co 58	105.0
I 131	58.9
Cs 137	23.9
Cs 134	15.3
Co 60	7.3
Mn 54	6.0
Cs 136	4.9
Fe 59	<0.2
Nb 95	<0.2

NOTE: Resin shipments from the Oconee Nuclear Station contained 757 Ci of mostly Co-58 and Co-60. This is representative of B&W plants.

*This data is from the Oconee Nuclear Station for 1974 and is representative of B&W plants.

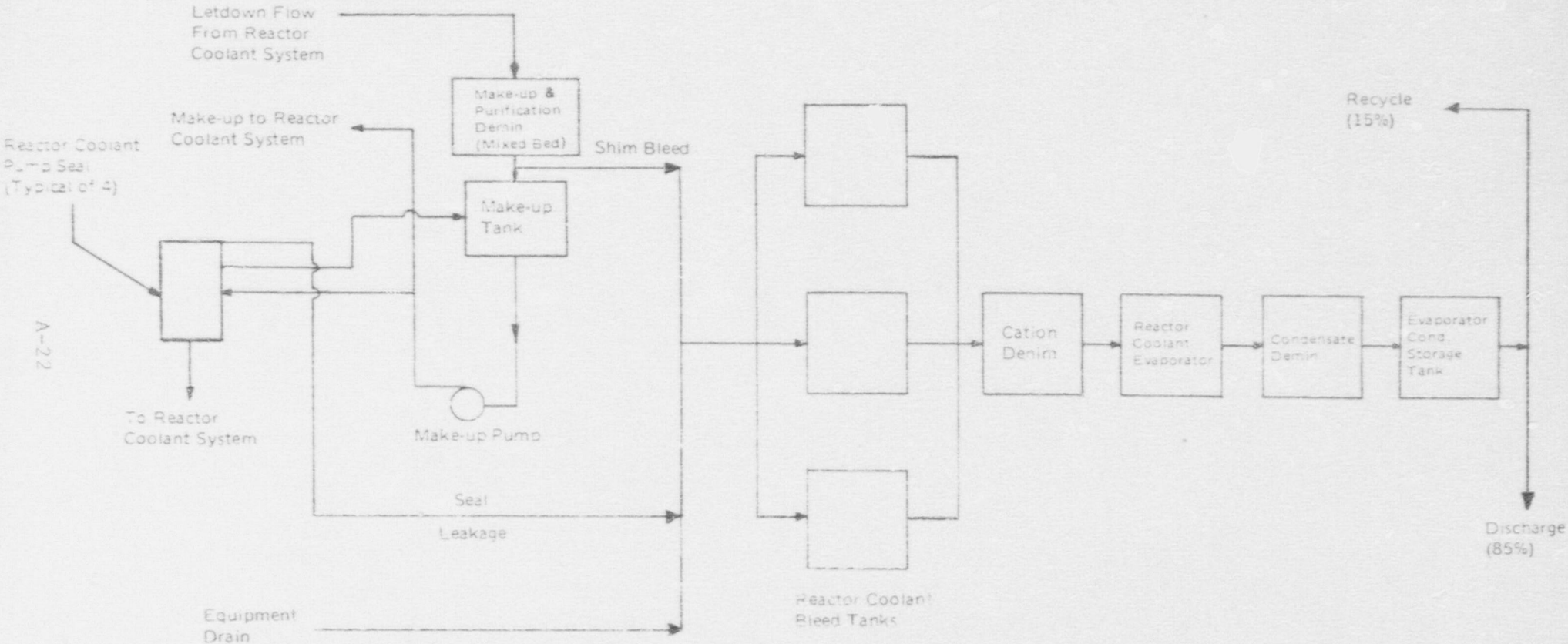


Figure A1. PRIMARY WASTE PROCESSING

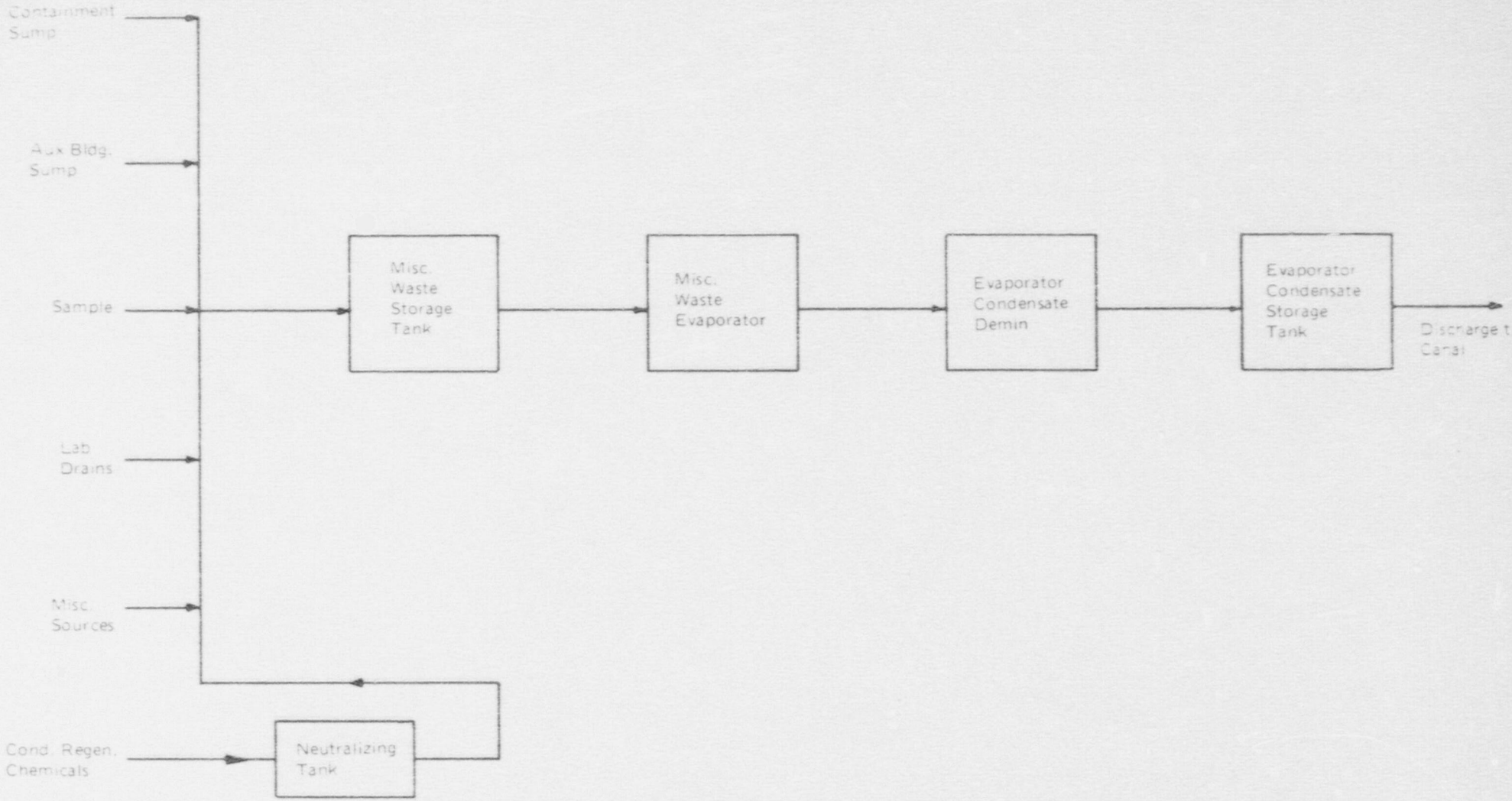


Figure A 2. MISCELLANEOUS WASTE PROCESSING

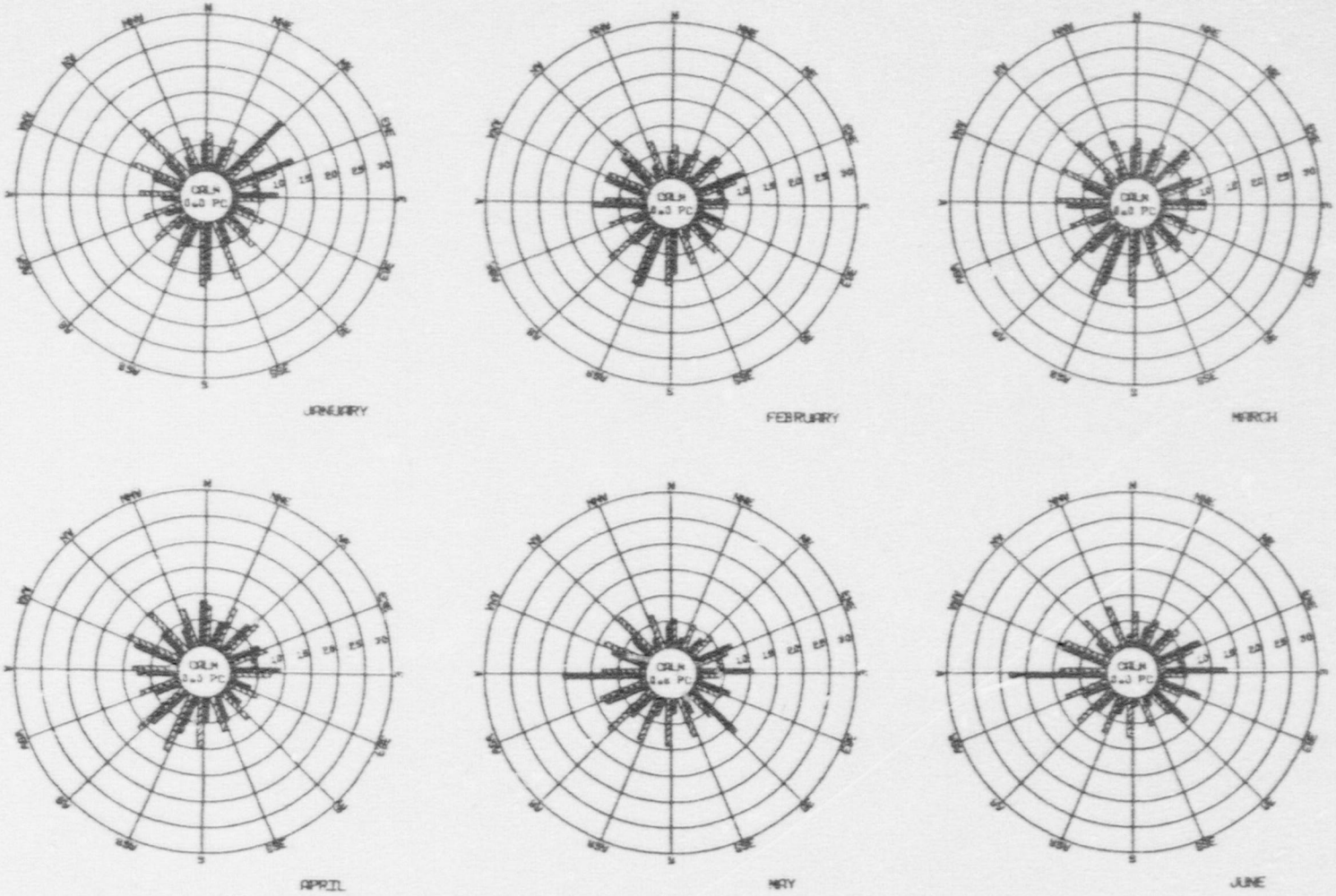
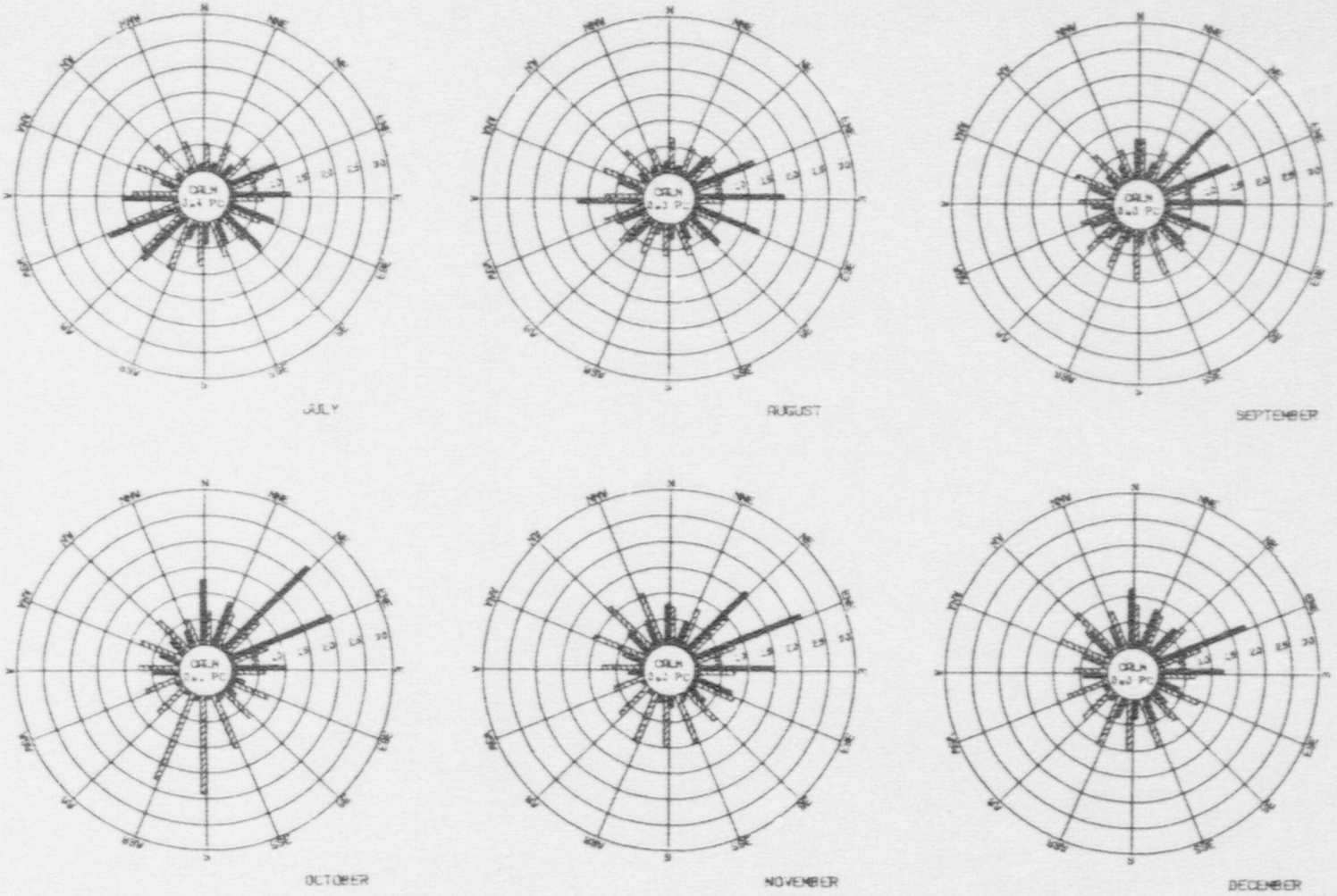


Figure A-3 Crystal River 33-Ft. Monthly Wind Roses with Associated Mean Wind Speeds (January 1, 1975-December 31, 1975)



gure A-3 (Cont.) Crystal River 33-Ft. Monthly Wind Roses with Associated Mean Wind Speeds (January 1, 1975-December 31, 1975)

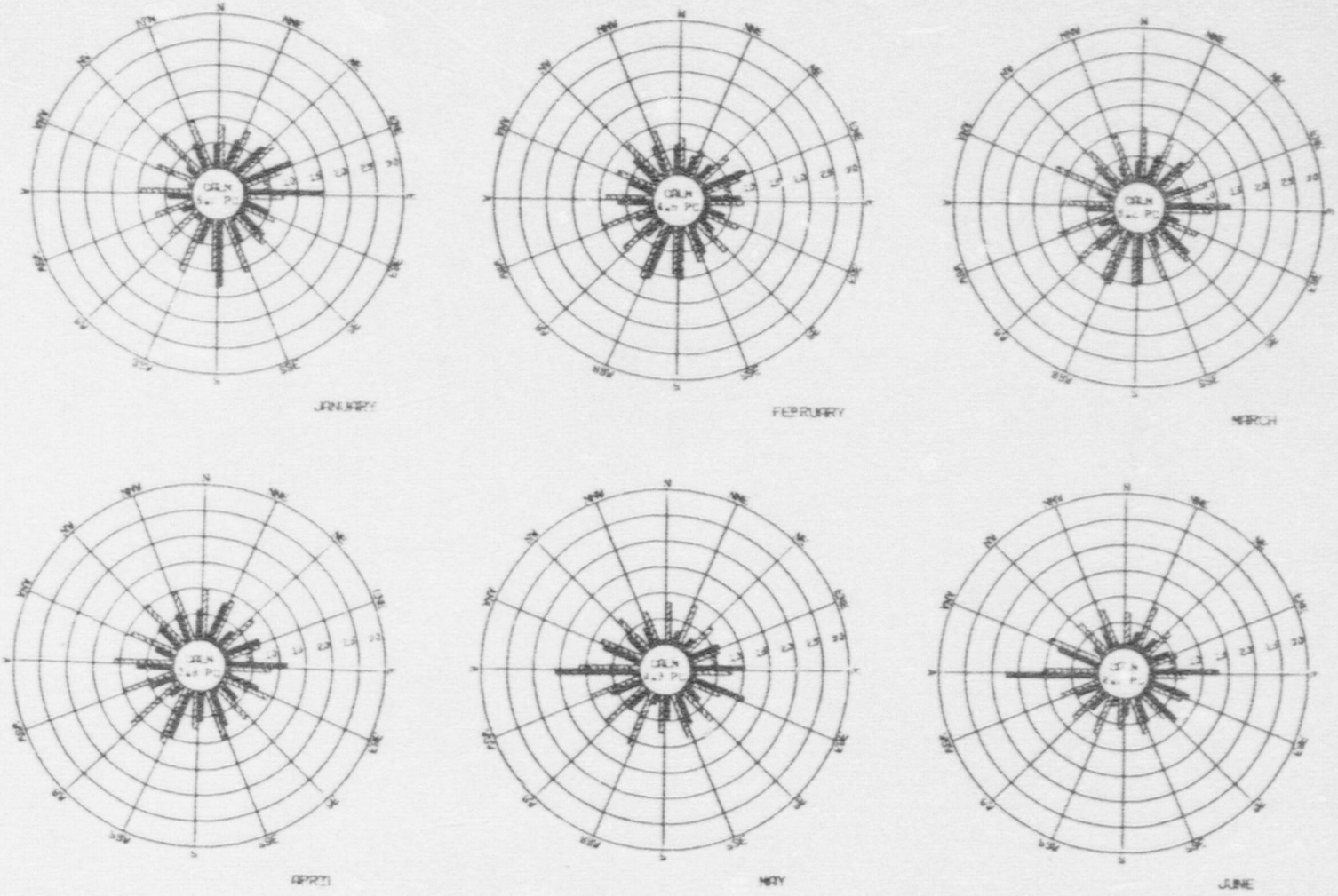


Figure A-4 Monthly Wind Roses with Associated Mean Wind Speeds for Tampa, Florida (January 1, 1975-December 31, 1975)

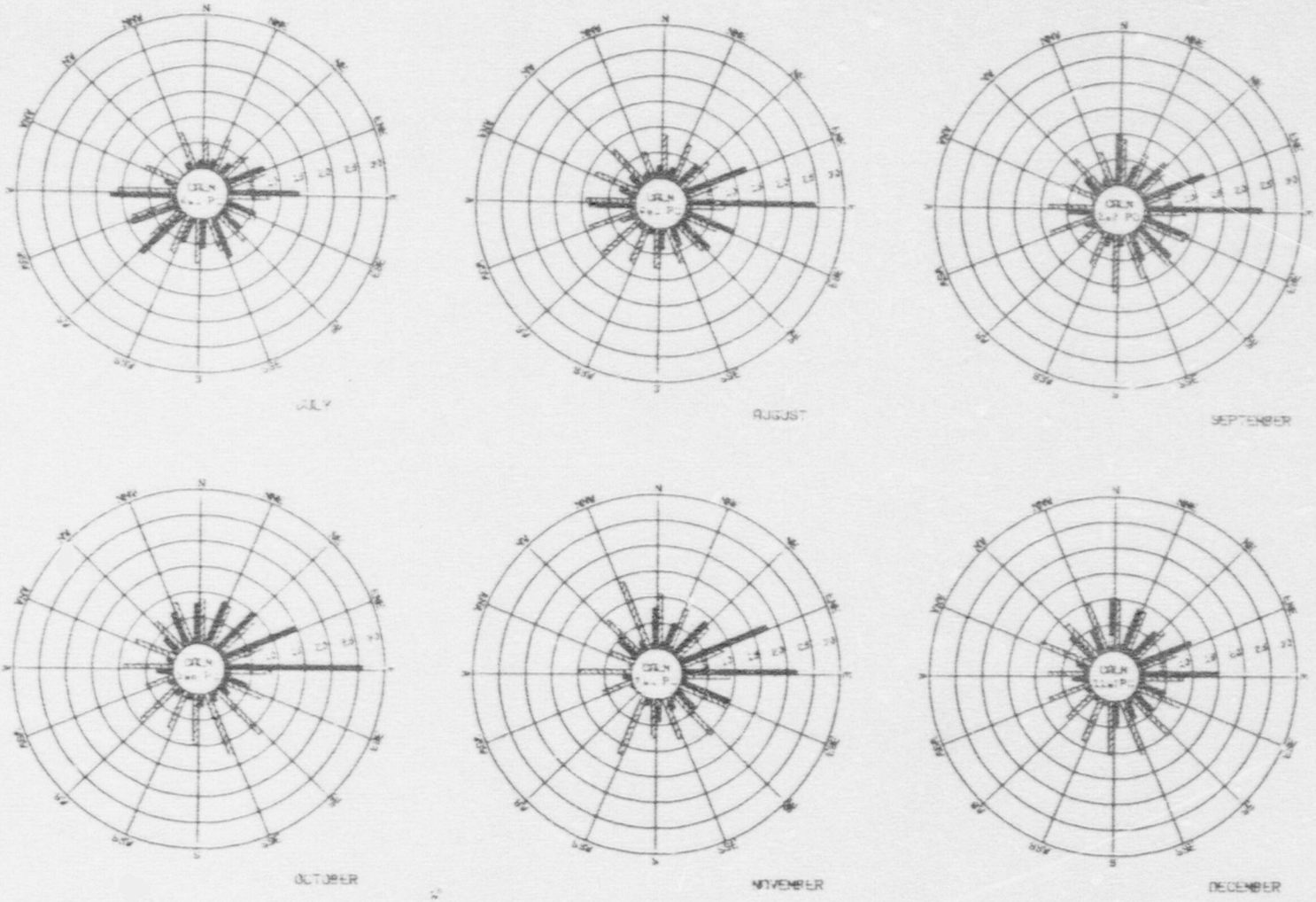
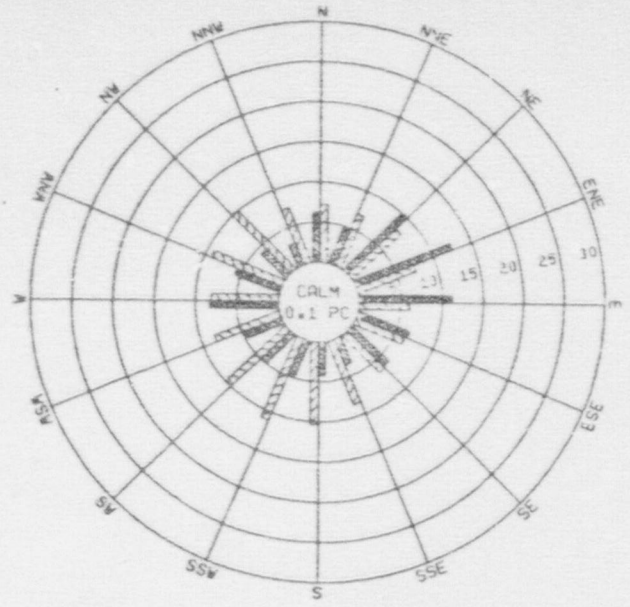
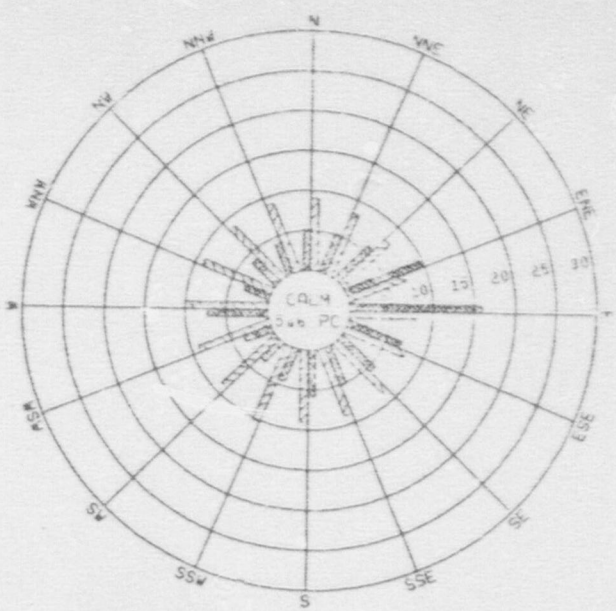


Figure A-4 (Cont.) Monthly Wind Roses with Associated Mean Wind Speeds for Tampa, Florida (January 1, 1975-December 31, 1975)



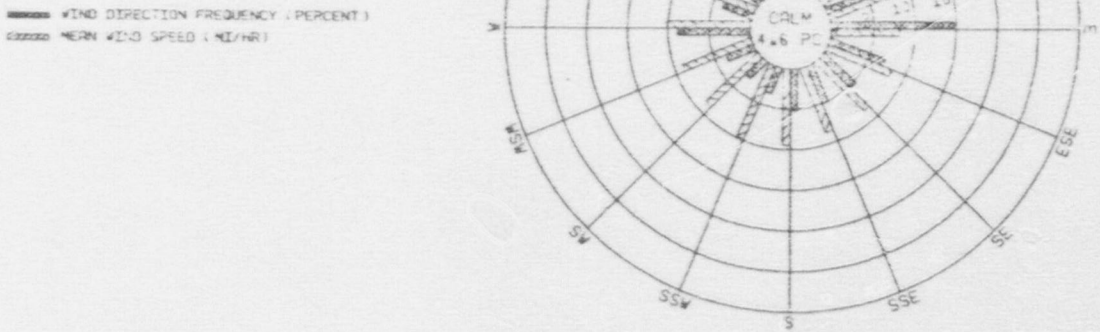
33-FT.

(January 1, 1975 - December 31, 1975)



TAMPA

(January 1, 1975 - December 31, 1975)



TAMPA

(January 1, 1966 - December 31, 1975)

Figure A-5 Annual Wind Roses with Associated Mean Wind Speeds for the 33-Ft. level at Crystal River and Tampa, Florida

REFERENCES

A1. "Methods for Estimating Atmospheric Transport and Dispersion of Gaseous Effluents in Routine Releases from Light-Water-Cooled Reactors," Regulatory Guide 1.111, U.S. Nuclear Regulatory Commission (March 1976).

A2. Florida Power Corporation, Crystal River Unit 3 Nuclear Generating Plant: FSAR (through Amendment 48), Docket No. 50-302, U.S. Nuclear Regulatory Commission (Mar. 26, 1976).

A3. Environmental Data Service, "Climate of the States, Florida," Climatography of the U.S., No. 60-8, U.S. Department of Commerce (August 1967).

A4. Van der Hoven, Isaac, "Atmospheric Transport and Diffusion at Coastal Sites," Nuclear Safety, Vol. 8 (5), pp. 490-499 (1967).

APPENDIX B

JOINT FREQUENCY DISTRIBUTIONS OF WIND SPEED AND STABILITY CLASS

SEASON INDEX 1 = MAR,APR,MAY
SEASON INDEX 2 = JUN,JUL,AUG
SEASON INDEX 3 = SEP,OCT,NOV
SEASON INDEX 4 = DEC,JAN,FEB

WIND SPEED GROUP DESCRIPTION

GROUP	WINDSPEED RANGE(MPH)
1	LESS THAN 0.5
2	0.50- 3.5
3	3.51- 7.5
4	7.51-12.5
5	12.51-18.5
6	18.51-24.0
7	>24.0

WIND SPEED GROUP EQUIVALENTS

(MPH)	CALM	1-3	4-7	8-12	13-18	18-24	GT 24
MPH	LT 0.5	0.5-3.5	3.6-7.5	7.6-12.5	12.6-18.5	18.6-?	GT 24.0
MPS	LT 0.2	0.2-1.5	1.6-3.3	3.4-5.6	5.7-8.3	8.4-	GT 11.0
KTS	LT 0.4	0.4-3.0	3.1-6.5	6.6-10.8	10.9-16.1	16.2-21..	GT 21.4

TEMPERATURE LAPSE RATE
STABILITY CLASSIFICATION

INDEX	RANGE	DESCRIPTION
1	LT-10.4	EXTREMELY UNSTABLE
2	>-10.4	UNSTABLE
3	> -9.3	SLIGHTLY UNSTABLE
4	≥ -8.2	NEUTRAL
5	≥ -2.7	SLIGHTLY STABLE
6	≤ 9.2	STABLE
7	> 22.0	EXTREMELY STABLE

24 HOUR SUMMARY OF WIND SPEED DISTRIBUTION

FPC - CRYSTAL RIVER 33 FT WINDS (DEL T) JAN 1975

TOTAL NUMBER OF READINGS 7.42000E+02

TOTAL NUMBER OF READINGS WITHOUT CALMS 7.42000E+02

****

WIND SPEED DISTRIBUTION, NO OF OBS.

LT .5	.50-3.5	3.51-7.5	7.51-12.5	12.51-18.5	18.51-24.0	GT 24.0
0	56	270	294	98	24	0

****

SUMMED OVER ALL DIRECTIONS

WIND SPEED DISTRIBUTION VERSUS TEMP. LAPSE RATE STABILITY CLASS (NO OF OBS.)

	A	B	C	D	E	F	G
1	0	0	0	0	0	0	0
2	0	0	0	5	18	15	18
3	23	1	15	69	70	51	41
4	55	4	15	120	79	14	7
5	24	0	3	37	34	0	0
6	6	1	1	16	0	0	0
7	0	0	0	0	0	0	0

FPC - CRYSTAL RIVER 33 FT WINDS (DEL T) JAN 1975

****

SUMMED OVER ALL TEMP. LAPSE RATE STABILITIES
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	1-3	WIND SPEED (MPH) AT 10 METER LEVEL 4-7	8-12	13-18	19-24	>24	TOTAL
NNE	7	10	21	0	0	0	38
NE	6	28	65	10	0	0	109
ENE	5	28	40	9	0	0	92
E	11	28	11	0	0	0	60
ESE	5	16	11	0	0	0	31
SE	3	17	16	4	0	0	40
SSE	0	6	11	16	1	0	34
S	1	14	27	33	7	0	82
SSW	2	13	17	5	2	0	39
SW	2	13	8	2	0	0	24
WSW	1	15	6	2	0	0	24
W	1	14	7	2	0	0	24
WNW	2	15	15	6	2	0	40
NW	0	10	20	6	10	0	46
NNW	4	11	10	1	0	0	26
N	6	19	26	2	0	0	43
TOTAL	56	270	234	98	24	0	742

PERIODS OF CALM (NO. OF HOURS) - 0

MISSING DATA (NO. OF HOURS) - 2

FPC - CRYSTAL RIVER 33 FT WINDS (DEL T) JAN 1975

TEMP. LAPSE RATE STABILITY CLASS A
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	0	0	4	0	0	0	4
NE	0	2	10	3	0	0	15
ENE	0	0	7	6	0	0	13
E	0	0	6	0	0	0	6
ESE	0	1	0	0	0	0	1
SE	0	0	0	0	0	0	0
SSE	0	1	2	3	0	0	6
S	0	1	3	7	2	0	13
SSW	0	0	2	1	1	0	4
SW	0	0	0	0	0	0	0
WSW	0	7	0	0	0	0	7
W	0	6	4	0	0	0	10
WNW	0	3	10	1	0	0	14
NW	0	1	3	3	3	0	10
NNW	0	1	1	0	0	0	2
N	0	0	3	0	0	0	3
TOTAL	0	23	55	24	6	0	108

PERIODS OF CALM (NO. OF HOURS) - 0

****

TEMP. LAPSE RATE STABILITY CLASS B
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0
ENE	0	0	1	0	0	0	1
E	0	0	1	0	0	0	1
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	1	1	0	0	0	2
S	0	0	0	0	0	0	0
SSW	0	0	0	0	1	0	1
SW	0	0	0	0	0	0	0
WSW	0	0	1	0	0	0	1
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0
TOTAL	0	1	4	0	1	0	6

PERIODS OF CALM (NO. OF HOURS) - 0

FPC - CRYSTAL RIVER 33 FT WINDS (DEL T) JAN 1975

TEMP. LAPSE RATE STABILITY CLASS C
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	0	0	0	0	0	0	0
NE	0	1	2	1	0	0	4
ENE	0	1	1	0	0	0	2
E	0	1	1	0	0	0	2
ESE	0	0	1	0	0	0	1
SE	0	1	0	0	0	0	1
SSE	0	2	2	1	0	0	5
S	0	0	0	1	0	0	1
SSW	0	1	3	0	0	0	4
SW	0	1	0	0	0	0	1
WSW	0	1	1	0	0	0	2
W	0	2	1	0	0	0	3
WNW	0	2	1	0	0	0	3
NW	0	1	1	0	1	0	3
NNW	0	0	0	0	0	0	0
N	0	1	1	0	0	0	2
TOTAL	0	15	15	3	1	0	34

PERIODS OF CALM (NO. OF HOURS) - 0

****

TEMP. LAPSE RATE STABILITY CLASS D
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	1	1	9	0	0	0	11
NE	0	6	35	5	0	0	47
ENE	0	6	20	3	0	0	29
E	0	6	0	0	0	0	6
ESE	1	4	1	0	0	0	6
SE	0	7	5	2	0	0	14
SSE	0	1	4	2	1	0	8
S	0	1	3	9	5	0	18
SSW	1	2	8	2	2	0	15
SW	2	11	5	0	0	0	18
WSW	0	7	4	0	0	0	11
W	0	3	2	2	0	0	7
WNW	0	3	4	5	2	0	14
NW	0	5	4	3	6	0	18
NNW	0	2	5	1	0	0	8
N	0	4	11	2	0	0	17
TOTAL	5	69	120	37	16	0	247

PERIODS OF CALM (NO. OF HOURS) - 0

FPC - CRYSTAL RIVER 33 FT WINDS (DEL T) JAN 1975

TEMP. LAPSE RATE STABILITY CLASS E
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	0	1	4	0	0	0	5
NE	2	4	11	0	0	0	17
ENE	1	6	6	6	0	0	13
E	5	8	2	0	0	0	15
ESE	1	4	8	0	0	0	13
SE	0	5	10	2	0	0	17
SSE	0	1	2	10	0	0	13
S	1	11	21	16	0	0	49
SSW	1	7	4	2	0	0	14
SW	0	1	2	2	0	0	5
WSW	1	0	0	2	0	0	3
W	1	3	0	0	0	0	4
WNW	2	7	0	0	0	0	9
NW	0	3	2	0	0	0	5
NNW	1	6	4	0	0	0	11
N	2	3	3	0	0	0	8
TOTAL	18	70	79	34	0	0	201

PERIODS OF CALM (NO. OF HOURS) - 0

****

TEMP. LAPSE RATE STABILITY CLASS F
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	2	6	1	0	0	0	9
NE	2	9	7	0	0	0	18
ENE	1	11	4	0	0	0	16
E	3	12	0	0	0	0	15
ESE	1	3	1	0	0	0	5
SE	1	3	0	0	0	0	4
SSE	0	0	0	0	0	0	0
S	0	1	0	0	0	0	1
SSW	1	0	0	0	0	0	1
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	1	2	0	0	0	0	3
N	3	4	1	0	0	0	8
TOTAL	15	51	14	0	0	0	80

PERIODS OF CALM (NO. OF HOURS) - 0

FPC - CRYSTAL RIVER 33 FT WINDS (DEL T) JAN 1975

TEMP. LAPSE RATE STABILITY CLASS 6
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	4	2	3	0	0	0	9
NE	2	6	0	0	0	0	8
ENE	3	14	1	0	0	0	18
E	3	11	1	0	0	0	15
ESE	1	4	0	0	0	0	5
SE	2	1	1	0	0	0	4
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	2	0	0	0	0	0	2
N	1	3	1	0	0	0	5
TOTAL	18	41	7	0	0	0	66

PERIODS OF CALM (NO. OF HOURS) - 0

24 HOUR SUMMARY OF WIND SPEED DISTRIBUTION

FPC - CRYSTAL RIVER 33 FT WINDS (DEL T) FEB 1975

TOTAL NUMBER OF READINGS 6.18000E+02

TOTAL NUMBER OF READINGS WITHOUT CALMS 6.18000E+02

****

WIND SPEED DISTRIBUTION, NO OF OBS.

LT .5	.50-3.5	3.51-7.5	7.51-12.5	12.51-18.5	18.51-24.0	GT 24.0
0	53	236	220	97	12	0

****

SUMMED OVER ALL DIRECTIONS

WIND SPEED DISTRIBUTION VERSUS TEMP. LAPSE RATE STABILITY CLASS (NO OF OBS.)

	A	B	C	D	E	F	G
1	0	0	0	0	0	0	0
2	0	1	1	7	6	21	17
3	24	7	16	52	59	46	32
4	62	2	8	73	64	7	4
5	30	3	4	45	15	0	0
6	1	0	1	8	2	0	0
7	0	0	0	0	0	0	0

****

SUMMED OVER ALL TEMP. LAPSE RATE STABILITIES
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	5	14	11	0	0	0	30
NE	8	14	21	2	0	0	45
ENE	5	25	21	7	0	0	58
E	10	19	5	0	0	0	34
ESE	2	16	8	1	0	0	27
SE	1	12	16	0	0	0	29
SSE	0	9	5	0	0	0	14
S	0	13	23	18	0	0	54
SSW	1	14	24	34	2	0	75
SW	3	6	11	14	0	0	34
WSW	1	12	4	2	0	0	19
W	1	33	20	2	1	0	57
WNW	2	16	28	4	0	0	50
NW	6	10	14	10	8	0	48
NNW	5	6	3	3	1	0	18
N	3	17	6	0	0	0	26
TOTAL	53	236	220	97	12	0	618

PERIODS OF CALM (NO. OF HOURS) - 0

MISSING DATA (NO. OF HOURS) - 54

FPC - CRYSTAL RIVER 33 FT WINDS (DEL T) FEB 1975

TEMP. LAPSE RATE STABILITY CLASS A
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	0	3	0	0	0	0	3
NE	0	3	3	0	0	0	6
ENE	0	1	2	0	0	0	3
E	0	1	4	0	0	0	5
ESE	0	0	3	1	0	0	4
SE	0	0	4	0	0	0	4
SSE	0	0	1	0	0	0	1
S	0	0	1	7	0	0	8
SSW	0	0	5	12	1	0	18
SW	0	0	1	7	0	0	8
WSW	0	1	1	1	0	0	3
W	0	13	14	0	0	0	27
WNW	0	2	16	2	0	0	20
NW	0	0	5	0	0	0	5
NNW	0	0	1	0	0	0	1
N	0	0	1	0	0	0	1
TOTAL	0	24	62	30	1	0	117

PERIODS OF CALM (NO. OF HOURS) - 0

****

TEMP. LAPSE RATE STABILITY CLASS B
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	0	0	0	0	0	0	0
NE	0	2	0	0	0	0	2
ENE	0	1	1	0	0	0	2
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	1	0	0	0	0	0	1
SSE	0	0	0	0	0	0	0
S	0	1	0	0	0	0	1
SSW	0	0	0	1	0	0	1
SW	0	0	0	1	0	0	1
WSW	0	1	1	0	0	0	2
W	0	1	0	0	0	0	1
WNW	0	0	0	0	0	0	0
NW	0	1	0	0	0	0	1
NNW	0	0	0	1	0	0	1
N	0	0	0	0	0	0	0
TOTAL	1	7	2	3	0	0	13

PERIODS OF CALM (NO. OF HOURS) - 0

FPC - CRYSTAL RIVER 33 FT WINDS (DEL T) FEB 1975

TEMP. LAPSE RATE STABILITY CLASS C
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	0	0	0	0	0	0	0
NE	0	0	1	0	0	0	1
ENE	1	1	0	1	0	0	3
E	0	1	0	0	0	0	1
ESE	0	1	0	0	0	0	1
SE	0	0	0	0	0	0	0
SSE	0	0	2	0	0	0	2
S	0	1	1	0	0	0	2
SSW	0	3	1	1	0	0	5
SW	0	0	1	0	0	0	1
WSW	0	4	0	0	0	0	4
W	0	3	0	0	0	0	3
WNW	0	0	1	0	0	0	1
NW	0	1	0	2	1	0	4
NNW	0	0	0	0	0	0	0
N	0	1	1	0	0	0	2
TOTAL	1	16	8	4	1	0	30

PERIODS OF CALM (NO. OF HOURS) - 0

****

TEMP. LAPSE RATE STABILITY CLASS D
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	0	2	0	0	0	0	2
NE	1	1	7	2	0	0	11
ENE	0	1	11	6	0	0	18
E	0	2	0	0	0	0	2
ESE	0	2	1	0	0	0	3
SE	0	0	2	0	0	0	2
SSE	0	2	2	0	0	0	4
S	0	5	10	4	0	0	19
SSW	0	8	12	14	1	0	35
SW	2	5	7	5	0	0	19
WSW	0	4	1	1	0	0	6
W	1	12	5	2	0	0	20
WNW	0	4	5	1	0	0	11
NW	3	1	5	8	6	0	23
NNW	0	1	2	2	1	0	6
N	0	2	2	0	0	0	4
TOTAL	7	52	73	45	8	0	185

PERIODS OF CALM (NO. OF HOURS) - 0

FPC - CRYSTAL RIVER 33 FT WINDS (DEL T) FEB 1975

TEMP. LAPSE RATE STABILITY CLASS E
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	0	0	6	0	0	0	6
NE	0	3	8	0	0	0	11
ENE	0	3	3	0	0	0	6
E	1	1	1	0	0	0	3
ESE	0	6	4	0	0	0	10
SE	0	6	10	0	0	0	16
SSE	0	5	0	0	0	0	5
S	0	6	11	7	0	0	24
SSW	0	3	6	6	0	0	15
SW	1	1	2	1	0	0	5
WSW	1	2	1	0	0	0	4
W	0	4	1	0	1	0	6
WNW	0	10	5	1	0	0	16
NW	1	5	4	0	1	0	11
NNW	2	2	0	0	0	0	4
N	0	2	2	0	0	0	4
TOTAL	6	59	64	15	2	0	146

PERIODS OF CALM (NO. OF HOURS) - 0

****

TEMP. LAPSE RATE STABILITY CLASS F
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	1	5	5	0	0	0	11
NE	3	2	0	0	0	0	5
ENE	1	8	2	0	0	0	11
E	6	7	0	0	0	0	13
ESE	0	5	0	0	0	0	5
SE	0	6	0	0	0	0	6
SSE	0	2	0	0	0	0	2
S	0	0	0	0	0	0	0
SSW	1	0	0	0	0	0	1
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	2	0	0	0	0	0	2
NW	1	2	0	0	0	0	3
NNW	3	3	0	0	0	0	6
N	3	6	0	0	0	0	9
TOTAL	21	46	7	0	0	0	74

PERIODS OF CALM (NO. OF HOURS) - 0

FPC - CRYSTAL RIVER 33 FT WINDS (DEL T) FEB 1975

TEMP. LAPSE RATE STABILITY CLASS G
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>25	TOTAL
NNE	4	4	0	0	0	0	8
NE	4	3	2	0	0	0	9
ENE	3	10	2	0	0	0	15
E	3	7	0	0	0	0	10
ESE	2	2	0	0	0	0	4
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	1	0	0	0	0	0	1
NNW	0	0	0	0	0	0	0
N	0	6	0	0	0	0	6
TOTAL	17	32	4	0	0	0	53

PERIODS OF CALM (NO. OF HOURS) - 0

24 HOUR SUMMARY OF WIND SPEED DISTRIBUTION

FPC - CRYSTAL RIVER 33 FT WINDS (DEL T) MARCH 1975

TOTAL NUMBER OF READINGS 5.92000E+02

TOTAL NUMBER OF READINGS WITHOUT CALMS 5.92000E+02

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WIND SPEED DISTRIBUTION, NO OF OBS.

LT .5	.50-3.5	3.51-7.5	7.51-12.5	12.51-18.5	18.51-24.0	GT 24.0
0	24	174	279	103	12	0

****

SUMMED OVER ALL DIRECTIONS

WIND SPEED DISTRIBUTION VERSUS TEMP. LAPSE RATE STABILITY CLASS (NO OF OBS.)

	A	B	C	D	E	F	G
1	0	0	0	0	0	0	0
2	0	1	2	1	3	5	12
3	18	4	4	38	59	32	19
4	80	10	16	74	89	7	3
5	37	4	7	45	10	0	0
6	4	0	1	5	2	0	0
7	0	0	0	0	0	0	0

FPC - CRYSTAL RIVER 33 FT WINGS (DEL T) MARCH 1975

****

SUMMED OVER ALL TEMP. LAPSE RATE STABILITIES
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND	WIND SPEED (MPH) AT 10 METER LEVEL						
DIRECTION	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	4	11	21	0	0	0	36
NE	4	12	35	3	0	0	54
ENE	5	7	25	2	0	0	39
E	8	18	30	2	0	0	50
ESE	2	15	14	0	0	0	31
SE	2	20	17	0	0	0	39
SSE	0	9	7	6	0	0	22
S	0	10	9	15	4	0	38
SSW	0	3	27	34	4	0	68
SW	0	6	25	13	1	0	45
WSW	2	7	14	2	0	0	25
W	1	13	21	12	0	0	47
WNW	1	10	12	8	1	0	32
NW	0	7	2	4	2	0	15
NNW	1	7	6	1	0	0	15
N	2	19	14	1	0	0	36
TOTAL	24	174	279	103	12	0	592

PERIODS OF CALM (NO. OF HOURS) - 0

MISSING DATA (NO. OF HOURS) - 152

FPC - CRYSTAL RIVER 33 FT WINDS (DEL T) MARCH 1975

TEMP. LAPSE RATE STABILITY CLASS A
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	0	2	4	0	0	0	6
NE	0	3	8	2	0	0	13
ENE	0	0	4	0	0	0	4
E	0	2	6	2	0	0	10
ESE	0	0	6	0	0	0	6
SE	0	0	3	0	0	0	3
SSE	0	0	3	3	0	0	6
S	0	0	2	5	1	0	8
SSW	0	0	7	11	1	0	19
SW	0	1	4	0	1	0	6
WSW	0	1	8	0	0	0	9
W	0	5	16	6	0	0	27
WNW	0	1	5	6	1	0	13
NW	0	0	0	1	0	0	1
NNW	0	0	1	0	0	0	1
N	0	3	3	1	0	0	7
TOTAL	0	18	80	37	4	0	139

PERIODS OF CALM (NO. OF HOURS) - 0

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TEMP. LAPSE RATE STABILITY CLASS B
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	0	0	1	0	0	0	1
NE	0	1	4	0	0	0	5
ENE	0	0	0	0	0	0	0
E	0	0	1	0	0	0	1
ESE	0	1	0	0	0	0	1
SE	0	0	0	0	0	0	0
SSE	0	0	1	1	0	0	2
S	0	0	1	0	0	0	1
SSW	0	0	1	1	0	0	2
SW	0	1	1	0	0	0	2
WSW	1	0	0	0	0	0	1
W	0	0	0	1	0	0	1
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	1	0	0	1
N	0	1	0	0	0	0	1
TOTAL	1	4	10	4	0	0	19

PERIODS OF CALM (NO. OF HOURS) - 0

FPC - CRYSTAL RIVER 33 FT WINDS (DEL T) MARCH 1975

TEMP. LAPSE RATE STABILITY CLASS C
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND	WIND SPEED (MPH) AT 10 METER LEVEL						
DIRECTION	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	0	0	2	0	0	0	2
NE	0	1	3	1	0	0	5
ENE	1	0	0	0	0	0	1
E	0	0	2	0	0	0	2
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	0	1	0	0	1
S	0	0	0	0	0	0	0
SSW	0	0	2	3	0	0	5
SW	0	0	1	1	0	0	2
WSW	1	2	2	0	0	0	5
W	0	1	1	0	0	0	2
WNW	0	0	0	0	0	0	0
NW	0	0	1	1	1	0	3
NNW	0	0	0	0	0	0	0
N	0	0	2	0	0	0	2
TOTAL	2	4	16	7	1	0	30

PERIODS OF CALM (NO. OF HOURS) - 0

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TEMP. LAPSE RATE STABILITY CLASS D
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND	WIND SPEED (MPH) AT 10 METER LEVEL						
DIRECTION	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	0	1	7	0	0	0	8
NE	0	2	14	0	0	0	16
ENE	0	0	3	2	0	0	5
E	0	4	5	0	0	0	9
ESE	0	2	0	0	0	0	2
SE	0	3	8	0	0	0	11
SSE	0	2	1	0	0	0	3
S	0	1	1	7	1	0	10
SSW	0	3	6	17	3	0	29
SW	0	1	16	11	0	0	28
WSW	0	1	4	0	0	0	5
W	0	3	0	5	0	0	8
WNW	0	5	5	2	0	0	12
NW	0	5	0	1	1	0	7
NNW	1	3	1	0	0	0	5
N	0	2	3	0	0	0	5
TOTAL	1	38	74	45	5	0	163

PERIODS OF CALM (NO. OF HOURS) - 0

FPC - CRYSTAL RIVER 33 FT WINDS (DEL T) MARCH 1975

TEMP. LAPSE RATE STABILITY CLASS E
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	2	4	3	0	0	0	9
NE	0	2	6	0	0	0	8
ENE	0	1	13	0	0	0	14
E	0	6	16	0	0	0	22
ESE	0	6	8	0	0	0	14
SE	0	5	5	0	0	0	10
SSE	0	3	2	1	0	0	6
S	0	7	5	3	2	0	17
SSW	0	0	11	2	0	0	13
SW	0	3	3	1	0	0	7
WSW	0	3	0	2	0	0	5
W	1	4	4	0	0	0	9
WNW	0	4	2	0	0	0	6
NW	0	1	1	1	0	0	3
NNW	0	3	4	0	0	0	7
N	0	7	6	0	0	0	13
TOTAL	3	59	99	10	2	0	163

PERIODS OF CALM (NO. OF HOURS) - 0

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TEMP. LAPSE RATE STABILITY CLASS F
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	0	3	2	0	0	0	5
NE	1	1	0	0	0	0	2
ENE	0	3	4	0	0	0	7
E	0	3	0	0	0	0	3
ESE	2	4	0	0	0	0	6
SE	0	9	1	0	0	0	10
SSE	0	4	0	0	0	0	4
S	0	1	0	0	0	0	1
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	1	0	0	0	0	0	1
NW	0	1	0	0	0	0	1
NNW	0	0	0	0	0	0	0
N	1	3	0	0	0	0	4
TOTAL	5	32	7	0	0	0	44

PERIODS OF CALM (NO. OF HOURS) - 0

FPC - CRYSTAL RIVER 33 FT WINDS (DEL T) MARCH 1975

TEMP. LAPSE RATE STABILITY CLASS 6
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL						
	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	2	1	2	0	0	0	5
NE	3	2	0	0	0	0	5
ENE	4	3	1	0	0	0	8
E	0	3	0	0	0	0	3
ESE	0	2	0	0	0	0	2
SE	2	3	0	0	0	0	5
SSE	0	0	0	0	0	0	0
S	0	1	0	0	0	0	1
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	1	0	0	0	0	1
N	1	3	0	0	0	0	4
TOTAL	12	19	3	0	0	0	34

PERIODS OF CALM (NO. OF HOURS) - 0

24 HOUR SUMMARY OF WIND SPEED DISTRIBUTION

FPC - CRYSTAL RIVER 33 FT WINDS (DEL T) APR 1975

TOTAL NUMBER OF READINGS 6.99000E+02

TOTAL NUMBER OF READINGS WITHOUT CALMS 6.99000E+02

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WIND SPEED DISTRIBUTION, NO OF OBS.

LT .5	.50-3.5	3.51-7.5	7.51-12.5	12.51-18.5	18.51-24.0	GT 24.0
0	45	242	321	81	8	2

****

SUMMED OVER ALL DIRECTIONS

WIND SPEED DISTRIBUTION VERSUS TEMP. LAPSE RATE STABILITY CLASS (NO OF OBS.)

	A	B	C	D	E	F	G
1	0	0	0	0	0	0	0
2	0	1	0	7	18	9	10
3	17	2	5	42	104	53	19
4	73	14	27	95	100	12	0
5	14	4	5	39	17	1	0
6	6	0	0	2	0	0	0
7	0	0	0	1	1	0	0

FPC - CRYSTAL RIVER 33 FT WINDS (DEL T) APR 1975

****

SUMMED OVER ALL TEMP. LAPSE RATE STABILITIES
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL						
	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	1	10	24	1	0	0	36
NE	6	8	34	1	0	0	49
ENE	4	22	16	1	0	0	43
E	5	36	15	7	0	0	63
ESE	5	16	5	0	0	0	28
SE	1	18	3	5	0	0	27
SSE	4	19	13	2	0	0	38
S	1	9	17	7	0	0	34
SSW	1	5	31	14	0	2	53
SW	2	10	27	21	1	0	61
WSW	2	13	18	[illegible]	0	0	33
W	3	18	27	3	0	0	51
WNW	1	14	33	6	6	0	60
NW	2	8	18	8	1	0	37
NNW	4	9	11	2	0	0	26
N	2	27	28	3	0	0	60
TOTAL	45	242	321	81	8	2	599

PERIODS OF CALM (NO. OF HOURS) - 0

MISSING DATA (NO. OF HOURS) - 21

FPC - CRYSTAL RIVER 33 FT WINDS (DEL T) APR 1975

TEMP. LAPSE RATE STABILITY CLASS A
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	0	0	6	0	0	0	6
NE	0	1	3	0	0	0	4
ENE	0	1	2	0	0	0	3
E	0	2	3	5	0	0	10
ESE	0	0	0	0	0	0	0
SE	0	0	0	2	0	0	2
SSE	0	0	1	0	0	0	1
S	0	1	4	0	0	0	5
SSW	0	0	8	2	0	0	10
SW	0	0	2	0	0	0	2
WSW	0	2	4	0	0	0	6
W	0	6	16	0	0	0	22
WNW	0	2	17	4	6	0	29
NW	0	0	2	0	0	0	2
NNW	0	0	0	0	0	0	0
N	0	2	5	1	0	0	8
TOTAL	0	17	73	14	6	0	110

PERIODS OF CALM (NO. OF HOURS) - 0

****

TEMP. LAPSE RATE STABILITY CLASS B
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	0	0	0	0	0	0	0
NE	1	0	0	0	0	0	1
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	0	0	1	0	0	1
SSE	0	0	3	0	0	0	3
S	0	0	0	0	0	0	0
SSW	0	0	5	2	0	0	7
SW	0	1	1	1	0	0	3
WSW	0	0	1	0	0	0	1
W	0	1	1	0	0	0	2
WNW	0	0	2	0	0	0	2
NW	0	0	1	0	0	0	1
NNW	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0
TOTAL	1	2	14	4	0	0	21

PERIODS OF CALM (NO. OF HOURS) - 8

FPC - CRYSTAL RIVER 33 FT WINDS (DEL T) APR 1975

TEMP. LAPSE RATE STABILITY CLASS C
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	0	0	1	0	0	0	1
NE	0	0	1	0	0	0	1
ENE	0	0	2	0	0	0	2
E	0	1	0	1	0	0	2
ESE	0	1	0	0	0	0	1
SE	0	0	0	1	0	0	1
SSE	0	1	0	0	0	0	1
S	0	0	2	1	0	0	3
SSW	0	0	3	2	0	0	5
SW	0	1	5	0	0	0	6
WSW	0	0	3	0	0	0	3
W	0	0	3	0	0	0	3
WNW	0	1	5	1	0	0	7
NW	0	0	1	0	0	0	1
NNW	0	0	1	0	0	0	1
N	0	0	0	0	0	0	0
TOTAL	0	5	27	6	0	0	38

PERIODS OF CALM (NO. OF HOURS) - 0

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TEMP. LAPSE RATE STABILITY CLASS D
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	0	0	9	1	0	0	10
NE	0	1	8	0	0	0	9
ENE	2	1	3	1	0	0	7
E	0	4	9	0	0	0	13
ESE	1	0	1	0	0	0	2
SE	0	0	2	1	0	0	3
SSE	0	5	5	1	0	0	11
S	0	5	5	4	0	0	14
SSW	1	5	12	5	0	1	24
SW	0	4	10	18	1	0	33
WSW	1	3	6	0	0	0	10
W	2	5	5	2	0	0	14
WNW	0	7	8	1	0	0	16
NW	0	1	6	4	1	0	12
NNW	0	0	1	0	0	0	1
N	0	1	5	1	0	0	7
TOTAL	7	42	95	39	2	1	186

PERIODS OF CALM (NO. OF HOURS) - 0

FPC - CRYSTAL RIVER 33 FT WINDS (DEL T) APR 1975

TEMP. LAPSE RATE STABILITY CLASS E
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	0	4	5	0	0	0	9
NE	1	3	21	0	0	0	25
ENE	1	8	7	0	0	0	16
E	0	13	3	1	0	0	17
ESE	3	7	5	0	0	0	15
SE	0	10	1	0	0	0	11
SSE	1	10	4	1	0	0	16
S	1	2	6	2	0	0	11
SSW	0	0	3	3	0	1	7
SW	2	4	9	2	0	0	17
WSW	1	8	4	0	0	0	13
W	1	6	2	1	0	0	10
WNW	1	4	1	0	0	0	6
NW	2	6	8	4	0	0	20
NNW	4	8	9	2	0	0	23
N	0	11	12	1	0	0	24
TOTAL	18	104	100	17	0	1	240

PERIODS OF CALM (NO. OF HOURS) - 0

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TEMP. LAPSE RATE STABILITY CLASS F
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	1	6	3	0	0	0	10
NE	0	1	1	1	0	0	3
ENE	1	10	2	0	0	0	13
E	3	9	0	0	0	0	12
ESE	1	7	0	0	0	0	8
SE	0	6	0	0	0	0	6
SSE	1	2	0	0	0	0	3
S	0	1	0	0	0	0	1
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	1	0	0	0	0	1
N	2	10	6	0	0	0	18
TOTAL	9	53	12	1	0	0	75

PERIODS OF CALM (NO. OF HOURS) - 0

FPC - CRYSTAL RIVER 33 FT WINDS (DEL T) APR 1975

TEMP. LAPSE RATE STABILITY CLASS G
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL						
	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	0	0	0	0	0	0	0
NE	4	2	0	0	0	0	6
ENE	0	2	0	0	0	0	2
E	2	7	0	0	0	0	9
ESE	1	1	0	0	0	0	2
SE	1	2	0	0	0	0	3
SSE	2	1	0	0	0	0	3
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	1	0	0	0	0	1
NNW	0	0	0	0	0	0	0
N	0	3	0	0	0	0	3
TOTAL	10	19	0	0	0	0	29

PERIODS OF CALM (NO. OF HOURS) - 0

24 HOUR SUMMARY OF WIND SPEED DISTRIBUTION

FPC - CRYSTAL RIVER 33 FT WINDS (DEL T) MAY 1975

TOTAL NUMBER OF READINGS 7.29000E+02

TOTAL NUMBER OF READINGS WITHOUT CALMS 7.25000E+02

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WIND SPEED DISTRIBUTION, NO OF OBS.

LT .5	.50-3.5	3.51-7.5	7.51-12.5	12.51-18.5	18.51-24.0	GT 24.0
+	70	319	300	35	1	0

****

SUMMED OVER ALL DIRECTIONS

WIND SPEED DISTRIBUTION VERSUS TEMP. LAPSE RATE STABILITY CLASS (NO OF OBS.)

	A	B	C	D	E	F	G
1	0	0	0	0	0	3	1
2	0	0	1	8	18	29	14
3	25	4	15	65	115	74	21
4	114	15	22	94	43	11	1
5	17	1	2	13	2	0	0
6	0	1	0	0	0	0	0
7	0	0	0	0	0	0	0

****

SUMMED OVER ALL TEMP. LAPSE RATE STABILITIES
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	5	8	2	0	0	0	15
NE	11	10	7	0	0	0	28
ENE	7	29	19	0	0	0	55
E	18	46	11	1	0	0	76
ESE	9	33	5	0	0	0	48
SE	4	61	18	1	0	0	84
SSE	1	10	14	1	0	0	26
S	0	7	11	3	0	0	21
SSW	2	8	14	3	0	0	27
SW	1	8	22	13	1	0	45
WSW	0	17	38	7	0	0	62
W	1	35	73	2	0	0	111
WNW	1	12	34	2	0	0	49
NW	1	7	21	2	0	0	31
NNW	1	10	5	0	0	0	16
N	8	18	5	0	0	0	31
TOTAL	70	319	300	35	1	0	725

PERIODS OF CALM (NO. OF HOURS) - 4

MISSING DATA (NO. OF HOURS) - 15

FPC - CRYSTAL RIVER 33 FT WINDS (DEL T) MAY 1975

TEMP. LAPSE RATE STABILITY CLASS A
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	0	1	0	0	0	0	1
NE	0	0	0	0	0	0	0
ENE	0	1	1	0	0	0	2
E	0	2	4	0	0	0	6
ESE	0	0	2	0	0	0	2
SE	0	0	0	0	0	0	0
SSE	0	0	2	0	0	0	2
S	0	1	4	3	0	0	8
SSW	0	0	10	3	0	0	13
SW	0	0	3	5	0	0	8
WSW	0	6	14	4	0	0	24
W	0	10	48	0	0	0	58
WNW	0	2	18	1	0	0	21
NW	0	1	8	1	0	0	10
NNW	0	0	0	0	0	0	0
N	0	1	0	0	0	0	1
TOTAL	0	25	114	17	0	0	156

PERIODS OF CALM (NO. OF HOURS) - 0

****

TEMP. LAPSE RATE STABILITY CLASS B
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	0	0	0	0	0	0	0
NE	0	0	1	0	0	0	1
ENE	0	0	1	0	0	0	1
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	0	1	0	0	0	1
SSE	0	0	1	0	0	0	1
S	0	0	1	0	0	0	1
SSW	0	1	1	0	0	0	2
SW	0	0	1	0	1	0	2
WSW	0	1	5	0	0	0	6
W	0	0	1	0	0	0	1
WNW	0	2	0	0	0	0	2
NW	0	0	1	1	0	0	2
NNW	0	0	1	0	0	0	1
N	0	0	0	0	0	0	0
TOTAL	0	4	15	1	1	0	21

PERIODS OF CALM (NO. OF HOURS) - 0

FPC - CRYSTAL RIVER 33 FT WINDS (DEL T) MAY 1975

TEMP. LAPSE RATE STABILITY CLASS C
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	1	0	0	0	0	0	1
NE	0	0	0	0	0	0	0
ENE	0	0	2	0	0	0	2
E	0	1	2	0	0	0	3
ESE	0	1	0	0	0	0	1
SE	0	0	0	0	0	0	0
SSE	0	0	1	0	0	0	1
S	0	0	3	0	0	0	3
SSW	0	0	2	0	0	0	2
SW	0	0	3	2	0	0	5
WSW	0	3	1	0	0	0	4
W	0	7	4	0	0	0	11
WNW	0	2	1	0	0	0	3
NW	0	0	3	0	0	0	3
NNW	0	1	0	0	0	0	1
N	0	0	0	0	0	0	0
TOTAL	1	15	22	2	0	0	40

PERIODS OF CALM (NO. OF HOURS) - 0

****

TEMP. LAPSE RATE STABILITY CLASS D
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	1	2	1	0	0	0	4
NE	0	0	3	0	0	0	3
ENE	0	1	3	0	0	0	4
E	1	5	1	1	0	0	8
ESE	0	2	2	0	0	0	4
SE	2	12	13	1	0	0	28
SSE	1	3	8	1	0	0	13
S	0	4	2	0	0	0	6
SSW	0	6	1	0	0	0	7
SW	1	7	14	6	0	0	28
WSW	0	3	15	2	0	0	20
W	3	6	12	1	0	0	19
WNW	1	3	8	1	0	0	13
NW	0	3	6	0	0	0	9
NNW	1	2	3	0	0	0	6
N	0	6	2	0	0	0	8
TOTAL	8	65	94	13	0	0	180

PERIODS OF CALM (NO. OF HOURS) - 0

FPC - CRYSTAL RIVER 33 FT WINDS (DEL T) MAY 1975

TEMP. LAPSE RATE STABILITY CLASS E
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND	WIND SPEED (MPH) AT 10 METER LEVEL						
DIRECTION	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	0	3	0	0	0	0	3
NE	4	5	3	0	0	0	12
ENE	2	5	5	0	0	0	12
E	3	12	2	0	0	0	17
ESE	2	17	1	0	0	0	20
SE	0	30	4	0	0	0	34
SSE	0	7	2	0	0	0	9
S	0	2	1	0	0	0	3
SSW	1	1	0	0	0	0	2
SW	0	0	1	0	0	0	1
WSW	0	4	3	1	0	0	8
W	1	12	8	1	0	0	22
WNW	0	3	7	0	0	0	10
NW	1	3	3	0	0	0	7
NNW	0	6	1	0	0	0	7
N	4	5	2	0	0	0	11
TOTAL	18	115	43	2	0	0	178

PERIODS OF CALM (NO. OF HOURS) - 0

****

TEMP. LAPSE RATE STABILITY CLASS F
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND	WIND SPEED (MPH) AT 10 METER LEVEL						
DIRECTION	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	3	2	1	0	0	0	6
NE	6	5	0	0	0	0	11
ENE	3	16	7	0	0	0	26
E	9	19	1	0	0	0	29
ESE	4	9	1	0	0	0	14
SE	1	15	0	0	0	0	16
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	1	0	0	0	0	0	1
SW	0	1	0	0	0	0	1
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	1	0	0	0	0	1
N	2	6	1	0	0	0	9
TOTAL	29	74	11	0	0	0	114

PERIODS OF CALM (NO. OF HOURS) - 3

FPC - CRYSTAL RIVER 33 FT WINDS (DEL T) MAY 1975

TEMP. LAPSE RATE STABILITY CLASS G
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	0	0	0	0	0	0	0
NE	1	0	0	0	0	0	1
ENE	2	6	0	0	0	0	8
E	5	7	1	0	0	0	13
ESE	3	4	0	0	0	0	7
SE	[illegible]	[illegible]	0	0	0	0	5
SSE	[illegible]	[illegible]	0	0	0	0	0
S	[illegible]	[illegible]	0	0	0	0	0
SSW	[illegible]	0	[illegible]	0	0	0	0
SW	0	[illegible]	0	0	0	0	0
WSW	0	[illegible]	0	[illegible]	0	0	0
W	0	[illegible]	0	0	0	0	0
WNW	0	0	0	0	0	0	0
[illegible]	0	0	[illegible]	0	0	0	0
[illegible]NW	[illegible]	0	[illegible]	0	0	0	1
N	[illegible]	0	0	0	0	0	2
TOTAL	14	21	1	0	0	0	56

PERIODS OF CALM (NO. OF HOURS) - 1

24 HOUR SUMMARY OF WIND SPEED DISTRIBUTION

FPC - CRYSTAL RIVER 33 FT WINDS (DEL T) JUNE 1975

TOTAL NUMBER OF READINGS 7.10000E+02

TOTAL NUMBER OF READINGS WITHOUT CALMS 7.10000E+02

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WIND SPEED DISTRIBUTION, NO OF OBS.

LT .5	.51-3.5	3.51-7.5	7.51-12.5	12.51-18.5	18.51-24.0	GT 24.0
0	67	327	295	21	1	0

****

SUMMED OVER ALL DIRECTIONS

WIND SPEED DISTRIBUTION VERSUS TEMP. LAPSE RATE STABILITY CLASS (NO OF OBS.)

	A	B	C	D	E	F	G
1	0	0	0	0	0	0	0
2	0	0	0	11	25	28	5
3	20	2	14	62	144	70	15
4	98	14	23	81	69	10	0
5	5	1	1	7	5	0	0
6	0	0	0	0	1	0	0
7	0	0	0	0	0	0	0

FPC - CRYSTAL RIVER 33 FT WINDS (DEL T) JUNE 1975

****

SUMMED OVER ALL TEMP. LAPSE RATE STABILITIES
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL						
	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	5	19	4	1	0	0	30
NE	5	18	17	1	0	0	41
ENE	5	32	25	1	0	0	63
E	16	63	11	1	0	0	91
ESE	12	32	10	0	0	0	50
SE	5	50	7	1	0	0	63
SSE	0	12	4	0	0	0	16
S	1	5	4	1	0	0	11
SSW	1	11	11	1	1	0	25
SW	0	9	21	1	0	0	31
WSW	1	14	21	0	0	0	36
W	2	28	92	5	0	0	127
WNW	1	15	50	1	0	0	67
NW	4	6	11	5	0	0	26
NNW	0	4	2	0	0	0	7
N	2	9	4	1	0	0	16
TOTAL	67	327	235	20	1	0	710

PERIODS OF CALM (NO. OF HOURS) - 0

MISSING DATA (NO. OF HOURS) - 10

FPC - CRYSTAL RIVER 33 FT WINDS (DEL T) JUNE 1975

TEMP. LAPSE RATE STABILITY CLASS A
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	0	1	0	0	0	0	1
NE	0	0	0	0	0	0	0
ENE	0	2	2	0	0	0	4
E	0	4	0	0	0	0	4
ESE	0	1	0	0	0	0	1
SE	0	0	1	0	0	0	1
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	2	0	0	0	2
SW	0	0	1	0	0	0	1
WSW	0	0	1	0	0	0	1
W	0	4	50	1	0	0	55
WNW	0	5	34	0	0	0	39
NW	0	2	6	4	0	0	12
NNW	0	0	0	0	0	0	0
N	0	1	1	0	0	0	2
TOTAL	0	20	99	5	0	0	123

PERIODS OF CALM (NO. OF HOURS) - 0

****

TEMP. LAPSE RATE STABILITY CLASS B
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0
ENE	0	0	2	0	0	0	2
E	0	0	3	0	0	0	3
ESE	0	0	1	0	0	0	1
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	2	0	0	0	2
SW	0	0	0	0	0	0	0
WSW	0	1	3	0	0	0	4
W	0	0	3	1	0	0	4
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
N	0	1	0	0	0	0	1
TOTAL	0	2	14	1	0	0	17

PERIODS OF CALM (NO. OF HOURS) - 0

FPC - CRYSTAL RIVER 33 FT WINDS (DEL T) JUNE 1975

TEMP. LAPSE RATE STABILITY CLASS C
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	0	1	0	0	0	0	1
NE	0	0	0	0	0	0	0
ENE	0	1	1	0	0	0	2
E	0	2	3	0	0	0	5
ESE	0	0	1	0	0	0	1
SE	0	0	1	0	0	0	1
SSE	0	1	0	0	0	0	1
S	0	0	0	0	0	0	0
SSW	0	0	2	1	0	0	3
SW	0	1	2	0	0	0	3
WSW	0	1	2	0	0	0	3
W	0	5	7	0	0	0	12
WNW	0	1	0	0	0	0	1
NW	0	0	3	0	0	0	3
NNW	0	1	1	0	0	0	2
N	0	0	0	0	0	0	0
TOTAL	0	14	23	1	0	0	38

PERIODS OF CALM (NO. OF HOURS) - 0

****

TEMP. LAPSE RATE STABILITY CLASS D
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	1	1	2	0	0	0	4
NE	0	5	7	1	0	0	13
ENE	1	3	9	1	0	0	14
E	1	5	4	0	0	0	11
ESE	2	2	5	0	0	0	10
SE	0	7	3	1	0	0	11
SSE	0	4	4	0	0	0	8
S	0	1	3	0	0	0	4
SSW	0	5	3	0	0	0	8
SW	0	6	14	1	0	0	21
WSW	1	6	8	0	0	0	15
W	2	6	11	2	0	0	21
WNW	0	2	4	0	0	0	6
NW	3	3	0	1	0	0	7
NNW	0	1	1	0	0	0	2
N	0	4	2	0	0	0	6
TOTAL	11	62	81	7	0	0	161

PERIODS OF CALM (NO. OF HOURS) - 0

FPC - CRYSTAL RIVER 33 FT WINDS (DEL T) JUNE 1975

TEMP. LAPSE RATE STABILITY CLASS E
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	2	12	2	1	0	0	17
NE	2	8	8	0	0	0	18
ENE	2	17	5	0	0	0	24
E	5	23	1	1	0	0	31
ESE	5	10	1	0	0	0	16
SE	2	25	2	0	0	0	29
SSE	0	5	0	0	0	0	6
S	1	4	1	1	0	0	7
SSW	1	6	2	0	1	0	10
SW	0	2	4	0	0	0	6
WSW	0	6	7	0	0	0	13
W	0	13	20	1	0	0	34
WNW	0	7	12	1	0	0	20
NW	1	1	2	0	0	0	4
NNW	0	2	1	0	0	0	3
N	1	2	1	1	0	0	5
TOTAL	23	144	53	6	1	0	243

PERIODS OF CALM (NO. OF HOURS) - 0

****

TEMP. LAPSE RATE STABILITY CLASS F
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	3	4	0	0	0	0	7
NE	3	5	2	0	0	0	10
ENE	1	7	6	0	0	0	14
E	7	21	0	0	0	0	28
ESE	10	16	1	0	0	0	27
SE	3	15	0	0	0	0	18
SSE	0	1	0	0	0	0	1
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	1	0	0	0	1
WNW	1	0	0	0	0	0	1
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
N	0	1	0	0	0	0	1
TOTAL	28	70	10	0	0	0	198

PERIODS OF CALM (NO. OF HOURS) - 0

FPC - CRYSTAL RIVER 33 FT WINDS (DEL T) JUNE 1975

TEMP. LAPSE RATE STABILITY CLASS G
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0
ENE	1	2	0	0	0	0	3
E	2	7	0	0	0	0	9
ESE	1	3	0	0	0	0	4
SE	0	3	0	0	0	0	3
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
N	1	0	0	0	0	0	1
TOTAL	5	15	0	0	0	0	20

PERIODS OF CALM (NO. OF HOURS) - 0

24 HOUR SUMMARY OF WIND SPEED DISTRIBUTION

FPC - CRYSTAL RIVER 33 FT WINDS (DEL T) JULY 1975

TOTAL NUMBER OF READINGS 6.04000E+02

TOTAL NUMBER OF READINGS WITHOUT CALMS 6.01000E+02

****

WIND SPEED DISTRIBUTION, NO OF OBS.

LT .5	.50-3.5	3.51-7.5	7.51-12.5	12.51-18.5	18.51-24.0	GT 24.0
3	35	243	280	38	2	0

****

SUMMED OVER ALL DIRECTIONS

WIND SPEED DISTRIBUTION VERSUS TEMP. LAPSE RATE STABILITY CLASS (NO OF OBS.)

	A	B	C	D	E	F	G
1	0	0	0	0	1	1	1
2	4	0	1	8	8	13	2
3	39	4	13	55	24	25	8
4	77	9	32	90	70	2	0
5	8	3	4	21	4	0	0
6	1	0	0	1	0	0	0
7	0	0	0	0	0	0	0

FPC - CRYSTAL RIVER 33 FT WINDS (DEL T) JULY 1975

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SUMMED OVER ALL TEMP. LAPSE RATE STABILITIES
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	1	7	3	0	0	0	11
NE	4	13	3	0	1	0	21
ENE	3	42	21	0	0	0	66
E	9	37	17	0	0	0	63
ESE	7	21	16	0	0	0	44
SE	2	39	3	1	0	0	45
SSE	2	12	14	0	0	0	28
S	0	10	15	0	0	0	25
SSW	2	2	12	5	1	0	22
SW	3	13	37	24	0	0	77
WSW	0	12	73	9	0	0	94
W	1	19	37	0	0	0	56
WNW	1	3	20	0	0	0	24
NW	0	4	5	1	0	0	10
NNW	1	3	3	0	0	0	7
N	0	7	1	0	0	0	8
TOTAL	36	243	280	40	2	0	601

PERIODS OF CALM (NO. OF HOURS) - 3

MISSING DATA (NO. OF HOURS) - 140

FPC - CRYSTAL RIVER 33 FT WINDS (DEL T) JULY 1975

TEMP. LAPSE RATE STABILITY CLASS A
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	0	2	2	0	0	0	4
NE	0	1	1	0	0	0	2
ENE	1	3	5	0	0	0	10
E	1	3	5	0	0	0	10
ESE	0	1	3	0	0	0	4
SE	0	3	1	0	0	0	4
SSE	0	0	2	0	0	0	2
S	0	1	3	0	0	0	4
SSW	1	1	6	1	1	0	9
SW	0	3	4	5	0	0	12
WSW	0	4	13	2	0	0	19
W	1	12	17	0	0	0	30
WNW	0	1	11	0	0	0	12
NW	0	1	2	0	0	0	3
NNW	0	1	0	0	0	0	1
N	0	2	1	0	0	0	3
TOTAL	*	39	77	8	1	0	129

PERIODS OF CALM (NO. OF HOURS) - 0

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TEMP. LAPSE RATE STABILITY CLASS B
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0
ENE	0	0	1	0	0	0	1
E	0	0	1	0	0	0	1
ESE	0	0	1	0	0	0	1
SE	0	0	0	1	0	0	1
SSE	0	1	0	0	0	0	1
S	0	0	2	0	0	0	2
SSW	0	0	0	1	0	0	1
SW	0	0	1	1	0	0	2
WSW	0	0	2	0	0	0	2
W	0	1	0	0	0	0	1
WNW	0	1	0	0	0	0	1
NW	0	1	1	0	0	0	2
NNW	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0
TOTAL	0	4	9	3	0	0	16

PERIODS OF CALM (NO. OF HOURS) - 0

FPC - CRYSTAL RIVER 33 FT WINDS (DEL T) JULY 1975

TEMP. LAPSE RATE STABILITY CLASS C
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	2	0	0	0	0	0	0
NE	0	2	0	0	0	0	2
ENE	0	3	5	0	0	0	8
E	0	1	3	0	0	0	4
ESE	0	4	6	0	0	0	10
SE	0	2	1	0	0	0	3
SSE	0	0	2	0	0	0	2
S	0	2	2	0	0	0	4
SSW	0	0	1	1	0	0	2
SW	0	2	2	2	0	0	6
WSW	0	1	3	1	0	0	5
W	0	1	3	0	0	0	4
WNW	0	0	2	0	0	0	2
NW	0	0	1	0	0	0	1
NNW	1	0	1	0	0	0	2
N	0	0	0	0	0	0	0
TOTAL	1	18	32	4	0	0	55

PERIODS OF CALM (NO. OF HOURS) - 0

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TEMP. LAPSE RATE STABILITY CLASS D
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	0	1	0	0	0	0	1
NE	1	2	0	0	1	0	4
ENE	0	4	1	0	0	0	5
E	1	3	5	0	0	0	9
ESE	0	7	2	0	0	0	9
SE	1	8	0	0	0	0	9
SSE	0	8	7	0	0	0	15
S	0	5	4	0	0	0	9
SSW	1	0	2	1	0	0	4
SW	3	4	21	16	0	0	44
WSW	0	5	38	4	0	0	48
W	0	3	8	0	0	0	11
WNW	1	1	1	0	0	0	3
NW	0	2	1	0	0	0	3
NNW	0	0	0	0	0	0	0
N	0	1	0	0	0	0	1
TOTAL	8	55	90	21	1	0	175

PERIODS OF CALM (NO. OF HOURS) - 0

FPC - CRYSTAL RIVER 33 FT WINDS (DEC 73 JULY 1975

TEMP. LAPSE RATE STABILITY CLASS E
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	1	1	0	0	0	0	2
NE	0	3	2	0	0	0	5
ENE	1	27	8	0	0	0	36
E	2	21	2	0	0	0	25
ESE	2	6	3	0	0	0	11
SE	1	20	1	0	0	0	22
SSE	1	3	3	0	0	0	7
S	0	1	4	0	0	0	5
SSW	0	1	4	1	0	0	6
SW	0	4	9	0	0	0	13
WSW	0	1	17	2	0	0	20
W	0	1	9	0	0	0	10
WNW	0	0	6	0	0	0	6
NW	0	0	0	1	0	0	1
NNW	0	2	2	0	0	0	4
N	0	3	0	0	0	0	3
TOTAL	8	94	70	4	0	0	176

PERIODS OF CALM (NO. OF HOURS) - 1

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TEMP. LAPSE RATE STABILITY CLASS F
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	0	1	1	0	0	0	2
NE	3	3	0	0	0	0	6
ENE	1	5	0	0	0	0	6
E	5	8	0	0	0	0	13
ESE	3	2	1	0	0	0	6
SE	0	4	0	0	0	0	4
SSE	1	0	0	0	0	0	1
S	0	1	0	0	0	0	1
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
N	0	1	0	0	0	0	1
TOTAL	13	25	2	0	0	0	40

PERIODS OF CALM (NO. OF HOURS) - 1

FPC - CRYSTAL RIVER 33 FT WINDS (DEL T) JULY 1975

TEMP. LAPSE RATE STABILITY CLASS G
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	0	2	0	0	0	0	2
NE	0	2	0	0	0	0	2
ENE	0	0	0	0	0	0	0
E	0	1	0	0	0	0	1
ESE	2	1	0	0	0	0	3
SE	0	2	0	0	0	0	2
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0
TOTAL	2	8	0	0	0	0	10

PERIODS OF CALM (NO. OF HOURS) - 1

24 HOUR SUMMARY OF WIND SPEED DISTRIBUTION

FPC - CRYSTAL RIVER 33 FT WINDS (DEL T) AUG 1975

TOTAL NUMBER OF READINGS 7.12000E+02

TOTAL NUMBER OF READINGS WITHOUT CALMS 7.12000E+02

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WIND SPEED DISTRIBUTION, NO OF OBS.

LT .5	.50-3.5	3.51-7.5	7.51-12.5	12.51-18.5	18.51-24.0	GT 24.0
0	104	422	180	5	1	0

****

SUMMED OVER ALL DIRECTIONS

WIND SPEED DISTRIBUTION VERSUS TEMP. LAPSE RATE STABILITY CLASS (NO OF OBS.)

	A	B	C	D	E	F	G
1	0	0	0	0	0	0	0
2	2	0	4	15	37	38	8
3	32	16	17	73	150	121	13
4	70	8	16	50	28	8	0
5	0	0	0	3	1	1	0
6	0	0	0	0	1	0	0
7	0	0	0	0	0	0	0

FPC - CRYSTAL RIVER 33 FT WINDS (DEL T) AUG 1975

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SUMMED OVER ALL TEMP. APSE RATE STABILITIES
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	2	7	3	0	0	0	12
NE	9	16	13	0	0	0	38
ENE	12	57	14	0	0	0	83
E	21	87	7	0	0	0	115
ESE	20	59	10	2	0	0	91
SE	10	40	5	0	0	0	55
SSE	4	16	6	1	0	0	27
S	5	11	4	1	0	0	21
SSW	1	9	5	0	0	0	16
SW	5	20	21	0	0	0	46
WSW	4	13	23	1	0	0	41
W	1	52	34	0	0	0	87
WNW	1	10	23	0	0	0	34
NW	2	6	9	0	0	0	17
NNW	4	8	1	0	0	0	13
N	3	11	1	0	1	0	16
TOTAL	104	422	180	5	1	0	712

PERIODS OF CALM (NO. OF HOURS) - 0

MISSING DATA (NO. OF HOURS) - 32

FPC - CRYSTAL RIVER 33 FT WINDS (DEL T) AUG 1975

TEMP. LAPSE RATE STABILITY CLASS A
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0
ENE	0	0	4	0	0	0	4
E	0	8	3	0	0	0	11
ESE	0	2	1	0	0	0	3
SE	0	0	0	0	0	0	0
SSE	0	0	3	0	0	0	3
S	0	0	0	0	0	0	0
SSW	0	1	0	0	0	0	1
SW	0	2	2	0	0	0	4
WSW	0	4	8	0	0	0	12
W	0	12	26	0	0	0	38
WNW	1	2	19	0	0	0	22
NW	1	0	4	0	0	0	5
NNW	0	0	0	0	0	0	0
N	0	1	0	0	0	0	1
TOTAL	2	32	70	0	0	0	104

PERIODS OF CALM (NO. OF HOURS) - 0

****

TEMP. LAPSE RATE STABILITY CLASS B
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	0	0	0	0	0	0	0
NE	0	0	1	0	0	0	1
ENE	0	0	0	0	0	0	0
E	0	2	0	0	0	0	2
ESE	0	0	1	0	0	0	1
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	3	0	0	0	0	3
SSW	0	0	2	0	0	0	2
SW	0	1	1	0	0	0	2
WSW	0	0	1	0	0	0	1
W	0	5	0	0	0	0	5
WNW	0	3	2	0	0	0	5
NW	0	2	0	0	0	0	2
NNW	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0
TOTAL	0	16	8	0	0	0	24

PERIODS OF CALM (NO. OF HOURS) - 0

FPC - CRYSTAL RIVER 33 FT WINDS (DEL T) AUG 1975

TEMP. LAPSE RATE STABILITY CLASS C
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	0	2	0	0	0	0	2
NE	1	0	0	0	0	0	1
ENE	2	0	0	0	0	0	2
E	0	2	0	0	0	0	2
ESE	0	1	0	0	0	0	1
SE	0	0	0	0	0	0	0
SSE	0	1	0	0	0	0	1
S	0	2	1	0	0	0	3
SSW	0	0	2	0	0	0	2
SW	1	2	3	0	0	0	6
WSW	0	1	4	0	0	0	5
W	0	2	3	0	0	0	5
WNW	0	3	1	0	0	0	4
NW	0	0	2	0	0	0	2
NNW	0	1	0	0	0	0	1
N	0	0	0	0	0	0	0
TOTAL	4	17	16	0	0	0	37

PERIODS OF CALM (NO. OF HOURS) - 0

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TEMP. LAPSE RATE STABILITY CLASS D
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	0	0	1	0	0	0	1
NE	0	2	2	0	0	0	4
ENE	2	3	1	0	0	0	6
E	1	7	2	0	0	0	10
ESE	2	7	4	2	0	0	15
SE	1	4	3	0	0	0	8
SSE	2	7	3	0	0	0	12
S	2	4	3	0	0	0	9
SSW	0	6	2	0	0	0	8
SW	1	15	15	0	0	0	31
WSW	2	2	8	1	0	0	13
W	0	6	2	0	0	0	8
WNW	0	0	0	0	0	0	0
NW	1	3	3	0	0	0	7
NNW	1	4	0	0	0	0	5
N	0	3	1	0	0	0	4
TOTAL	15	73	50	3	0	0	141

PERIODS OF CALM (NO. OF HOURS) - 0

FPC - CRYSTAL RIVER 33 FT WINDS (DEL T) AUG 1975

TEMP. LAPSE RATE STABILITY CLASS E
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	2	5	2	0	0	0	9
NE	3	12	8	0	0	0	23
ENE	3	19	5	0	0	0	28
E	5	22	1	0	0	0	28
ESE	8	19	3	0	0	0	30
SE	3	18	1	0	0	0	22
SSE	1	5	0	1	0	0	7
S	2	2	0	0	0	0	4
SSW	0	2	0	0	0	0	2
SW	3	0	0	0	0	0	3
WSW	2	6	2	0	0	0	10
W	1	27	3	0	0	0	31
WNW	0	2	1	0	0	0	3
NW	0	1	0	0	0	0	1
NNW	2	3	1	0	0	0	6
N	2	7	0	0	1	0	10
TOTAL	37	150	28	1	1	0	217

PERIODS OF CALM (NO. OF HOURS) - 0

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TEMP. LAPSE RATE STABILITY CLASS F
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	0	0	0	0	0	0	0
NE	5	2	2	0	0	0	9
ENE	4	35	3	0	0	0	42
E	13	40	1	0	0	0	54
ESE	7	24	1	0	0	0	32
SE	4	17	1	0	0	0	22
SSE	1	3	0	0	0	0	4
S	1	0	0	1	0	0	2
SSW	1	0	0	0	0	0	1
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	1	0	0	0	0	0	1
N	1	0	0	0	0	0	1
TOTAL	38	121	9	1	0	0	168

PERIODS OF CALM (NO. OF HOURS) - 0

FPC - CRYSTAL RIVER 33 FT WINDS (DEL T) AUG 1975

TEMP. LAPSE RATE STABILITY CLASS G
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0
ENE	1	0	0	0	0	0	1
E	2	5	1	0	0	0	8
ESE	3	6	0	0	0	0	9
SE	2	1	0	0	0	0	3
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0
TOTAL	8	13	0	0	0	0	21

PERIODS OF CALM (NO. OF HOURS) - 0

24 HOUR SUMMARY OF WIND SPEED DISTRIBUTION

FPC - CRYSTAL RIVER #3 FT WINDS (DEL T) SEPT 1975

TOTAL NUMBER OF READINGS 7.19000E+02

TOTAL NUMBER OF READINGS WITHOUT CALMS 7.17000E+02

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WIND SPEED DISTRIBUTION, NO OF OBS.

LT .5	.50-3.5	3.51-7.5	7.51-12.5	12.51-18.5	18.51-24.0	GT 24.0
0	80	375	232	20	5	1

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SUMMED OVER ALL DIRECTIONS

WIND SPEED DISTRIBUTION VERSUS TEMP. LAPSE RATE STABILITY CLASS (NO OF OBS.)

	A	B	C	D	E	F	G
1	0	0	0	0	0	0	0
2	1	1	5	16	23	29	11
3	46	10	16	86	158	50	10
4	73	11	24	77	46	1	0
5	1	2	1	10	6	0	0
6	0	0	0	3	2	0	0
7	0	0	0	0	1	0	0

FPC - CRYSTAL RIVER 33 FT WINDS (DEL T) SEPT 1975

****

SUMMED OVER ALL TEMP. LAPSE RATE STABILITIES
WIND-SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL						
	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	2	15	9	0	0	0	26
NE	6	38	56	5	0	0	105
ENE	11	64	21	0	0	0	96
E	28	63	11	0	0	0	102
ESE	13	36	14	1	0	0	64
SE	2	28	12	4	0	0	46
SSE	2	8	4	3	2	0	19
S	2	10	3	2	2	1	20
SSW	2	6	10	0	1	0	19
SW	2	11	13	2	0	0	28
WSW	4	20	9	1	0	0	34
W	0	23	5	0	0	0	28
WNW	5	6	20	1	0	0	32
NW	2	8	12	0	0	0	22
NNW	3	15	6	0	0	0	24
N	2	24	27	1	0	0	54
TOTAL	86	375	232	20	5	1	719

PERIODS OF CALM (NO. OF HOURS) - 0

MISSING DATA (NO. OF HOURS) - 1

FPC - CRYSTAL RIVER 33 FT WINDS (DEL T) SEPT 1975

TEMP. LAPSE RATE STABILITY CLASS A
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	0	1	3	0	0	0	4
NE	0	3	9	1	0	0	13
ENE	0	6	10	0	0	0	16
E	0	7	5	0	0	0	12
ESE	0	1	7	0	0	0	8
SE	0	1	1	0	0	0	2
SSE	0	0	2	0	0	0	2
S	0	0	1	0	0	0	1
SSW	0	1	1	0	0	0	2
SW	0	0	0	0	0	0	0
WSW	1	6	4	0	0	0	11
W	0	15	2	0	0	0	17
WNW	0	3	17	0	0	0	20
NW	0	0	5	0	0	0	5
NNW	0	0	3	0	0	0	3
N	0	1	3	0	0	0	4
TOTAL	1	45	73	1	0	0	120

PERIODS OF CALM (NO. OF HOURS) - 0

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TEMP. LAPSE RATE STABILITY CLASS B
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	0	0	0	0	0	0	0
NE	0	0	2	2	0	0	4
ENE	0	1	2	0	0	0	3
E	1	3	2	0	0	0	6
ESE	0	0	2	0	0	0	2
SE	0	0	1	0	0	0	1
SSE	0	0	0	0	0	0	0
S	0	2	0	0	0	0	2
SSW	0	1	1	0	0	0	2
SW	0	0	0	0	0	0	0
WSW	0	1	0	0	0	0	1
W	0	2	1	0	0	0	3
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0
TOTAL	1	10	11	2	0	0	24

PERIODS OF CALM (NO. OF HOURS) - 0

FPC - CRYSTAL RIVER 33 FT WINDS (DEL T) SEPT 1975

TEMP. LAPSE RATE STABILITY CLASS C
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	1	0	1	0	0	0	2
NE	0	1	4	1	0	0	6
ENE	0	1	2	0	0	0	3
E	0	1	0	0	0	0	1
ESE	1	2	3	0	0	0	6
SE	1	1	1	0	0	0	3
SSE	0	2	0	0	0	0	2
S	0	2	0	0	0	0	2
SSW	0	0	0	0	0	0	0
SW	1	0	3	0	0	0	4
WSW	0	1	3	0	0	0	4
W	0	1	0	0	0	0	1
WNW	1	1	2	0	0	0	4
NW	0	1	1	0	0	0	2
NNW	0	0	0	0	0	0	0
N	0	2	4	0	0	0	6
TOTAL	5	16	24	1	0	0	46

PERIODS OF CALM (NO. OF HOURS) - 0

****

TEMP. LAPSE RATE STABILITY CLASS D
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	0	4	2	0	0	0	6
NE	1	11	25	0	0	0	37
ENE	1	5	4	0	0	0	10
E	2	6	2	0	0	0	10
ESE	1	10	0	1	0	0	12
SE	0	4	3	4	0	0	11
SSE	1	5	0	1	2	0	9
S	1	0	0	0	1	0	2
SSW	1	4	3	0	0	0	8
SW	1	9	10	2	0	0	22
WSW	2	8	0	0	0	0	10
W	0	2	0	0	0	0	2
WNW	4	1	1	1	0	0	7
NW	0	4	5	0	0	0	9
NNW	0	3	2	0	0	0	5
N	1	10	20	1	0	0	32
TOTAL	16	86	77	10	3	0	192

PERIODS OF CALM (NO. OF HOURS) - 0

FPC - CRYSTAL RIVER 33 FT WINDS (DEL T) SEPT 1975

TEMP. LAPSE RATE STABILITY CLASS E
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	1	8	3	0	0	0	12
NE	0	22	16	1	0	0	41
ENE	3	28	3	0	0	0	34
E	5	30	2	0	0	0	37
ESE	3	17	2	0	0	0	22
SE	1	16	6	0	0	0	23
SSE	1	1	1	2	0	0	5
S	1	5	2	2	1	1	12
SSW	0	0	5	0	1	0	6
SW	0	2	0	0	0	0	2
WSW	1	4	2	1	0	0	8
W	0	3	2	0	0	0	5
WNW	0	1	0	0	0	0	1
NW	1	3	1	0	0	0	5
NNW	3	11	1	0	0	0	15
N	1	7	0	0	0	0	8
TOTAL	23	158	46	6	2	1	236

PERIODS OF CALM (NO. OF HOURS) - 0

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TEMP. LAPSE RATE STABILITY CLASS F
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	0	2	0	0	0	0	2
NE	3	1	0	0	0	0	4
ENE	7	18	0	0	0	0	25
E	11	14	0	0	0	0	25
ESE	6	4	0	0	0	0	10
SE	0	5	0	0	0	0	5
SSE	0	0	1	0	0	0	1
S	0	1	0	0	0	0	1
SSW	1	0	0	0	0	0	1
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	1	0	0	0	0	0	1
NNW	0	1	0	0	0	0	1
N	0	4	0	0	0	0	4
TOTAL	29	50	1	0	0	0	80

PERIODS OF CALM (NO. OF HOURS) - 0

FPC - CRYSTAL RIVER 33 FT WINDS (DEL T) SEPT 1975

TEMP. LAPSE RATE STABILITY CLASS G
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0
ENE	0	5	0	0	0	0	5
E	9	2	0	0	0	0	11
ESE	2	2	0	0	0	0	4
SE	0	1	0	0	0	0	1
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0
TOTAL	11	10	0	0	0	0	21

PERIODS OF CALM (NO. OF HOURS) - 0

24 HOU MARY OF WIND SPEED DISTRIBUTION

FPC - CRYSTAL RIVER 33 FT WINDS (DEL T) OCT 1975

TOTAL NUMBER OF READIN S 7.40000E+02

TOTAL NUMBER OF READINGS WITHOUT CALMS 7.39000E+02

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WIND SPEED DISTRIBUTION, NO OF OBS.

LT .5	.50-3.5	3.51-7.5	7.51-12.5	12.51-18.5	18.51-24.0	GT 24.0
1	56	335	315	28	5	0

****

SUMMED OVER ALL DIRECTIONS

WIND SPEED DISTRIBUTION VERSUS TEMP. LAPSE RATE STABILITY CLASS (NO OF OBS.)

	A	B	C	D	E	F	G
1	0	0	0	0	1	0	0
2	4	1	3	5	20	22	1
3	54	3	9	51	109	85	24
4	141	8	22	68	60	10	6
5	11	0	4	7	5	0	0
6	2	0	0	3	0	0	0
7	0	0	0	0	0	0	0

FPC - CRYSTAL RIVER 33 FT WINDS (DEL T) OCT 1975

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SUMMED OVER ALL TEMP. LAPSE RATE STABILITIES
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL						
	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	5	30	29	1	0	0	66
NE	6	48	105	8	0	0	167
ENE	13	85	48	8	0	0	154
E	4	45	20	0	0	0	74
ESE	0	7	12	0	0	0	19
SE	3	3	12	0	0	0	18
SSE	1	0	6	3	0	0	10
S	0	0	0	2	2	0	4
SSW	0	0	1	4	3	0	8
SW	2	2	2	1	0	0	7
WSW	1	3	4	0	0	0	8
W	1	15	18	0	0	0	34
WNW	2	10	15	1	0	0	28
NW	0	13	13	0	0	0	26
NNW	5	15	4	0	0	0	25
N	6	59	26	0	0	0	91
TOTAL	56	335	315	28	5	0	739

PERIODS OF CALM (NO. OF HOURS) - 1

MISSING DATA (NO. OF HOURS) - 4

FPC - CRYSTAL RIVER 33 FT WINDS (DEL T) OCT 1975

TEMP. LAPSE RATE STABILITY CLASS A
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	1	5	9	1	0	0	16
NE	0	12	34	3	0	0	49
ENE	0	9	19	7	0	0	35
E	1	3	16	0	0	0	20
ESE	0	0	7	0	0	0	7
SE	0	0	3	0	0	0	3
SSE	0	0	2	0	0	0	2
S	0	0	0	0	2	0	2
SSW	0	0	0	0	0	0	0
SW	0	1	0	0	0	0	1
WSW	0	2	4	0	0	0	6
W	0	8	15	0	0	0	23
WNW	0	5	10	0	0	0	15
NW	0	1	8	0	0	0	9
NNW	2	1	1	0	0	0	4
N	0	7	13	0	0	0	20
TOTAL	4	54	141	11	2	0	212

PERIODS OF CALM (NO. OF HOURS) - 0

B-58

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TEMP. LAPSE RATE STABILITY CLASS B
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	0	0	0	0	0	0	0
NE	0	0	1	0	0	0	1
ENE	0	0	1	0	0	0	1
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	0	1	0	0	0	1
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	1	1	0	0	0	2
WNW	0	0	2	0	0	0	2
NW	0	0	1	0	0	0	1
NNW	1	0	0	0	0	0	1
N	0	2	1	0	0	0	3
TOTAL	1	3	8	0	0	0	12

PERIODS OF CALM (NO. OF HOURS) - 0

FPC - CRYSTAL RIVER 33 FT WINDS (DEL T) OCT 1975

TEMP. LAPSE RATE STABILITY CLASS C
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	0	0	0	0	0	0	0
NE	1	3	5	0	0	0	10
ENE	0	0	2	1	0	0	3
E	0	0	1	0	0	0	1
ESE	0	2	5	0	0	0	7
SE	0	0	3	0	0	0	3
SSE	0	0	1	1	0	0	2
S	0	0	0	2	0	0	2
SSW	0	0	1	0	0	0	1
SW	1	0	0	0	0	0	1
WSW	0	0	0	0	0	0	0
W	1	0	0	0	0	0	1
WNW	0	0	2	0	0	0	2
NW	0	1	0	0	0	0	1
NNW	0	1	0	0	0	0	1
N	0	2	1	0	0	0	3
TOTAL	3	9	22	4	0	0	38

PERIODS OF CALM (NO. OF HOURS) - 0

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TEMP. LAPSE RATE STABILITY CLASS D
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	0	2	6	0	0	0	8
NE	0	9	39	3	0	0	51
ENE	3	5	2	0	0	0	10
E	1	4	2	0	0	0	7
ESE	0	2	0	0	0	0	2
SE	0	0	2	0	0	0	2
SSE	1	0	2	2	0	0	5
S	0	0	0	0	0	0	0
SSW	0	0	0	2	3	0	5
SW	0	0	2	0	0	0	2
WSW	0	0	0	0	0	0	0
W	0	3	1	0	0	0	4
WNW	0	3	1	0	0	0	4
NW	0	7	3	0	0	0	10
NNW	0	2	3	0	0	0	5
N	0	14	5	0	0	0	19
TOTAL	5	51	68	7	3	0	134

PERIODS OF CALM (NO. OF HOURS) - 0

FPC - CRYSTAL RIVER 33 FT WINDS (DEL T) OCT 1975

TEMP. LAPSE RATE STABILITY CLASS E
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	2	9	11	0	0	0	22
NE	1	9	23	2	0	0	35
ENE	4	26	14	0	0	0	44
E	2	19	1	0	0	0	22
ESE	0	2	0	0	0	0	2
SE	2	2	3	0	0	0	7
SSE	0	0	1	0	0	0	1
S	0	0	0	0	0	0	0
SSW	0	0	0	2	0	0	2
SW	1	1	0	1	0	0	3
WSW	1	1	0	0	0	0	2
W	0	3	1	0	0	0	4
WNW	2	2	0	1	0	0	5
NW	0	3	1	0	0	0	4
NNW	2	10	0	0	0	0	12
N	3	22	5	0	0	0	30
TOTAL	20	109	60	6	0	0	195

PERIODS OF CALM (NO. OF HOURS) - 1

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TEMP. LAPSE RATE STABILITY CLASS F
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	2	8	1	0	0	0	11
NE	4	13	1	0	0	0	18
ENE	5	33	7	0	0	0	46
E	5	15	0	0	0	0	20
ESE	0	1	0	0	0	0	1
SE	1	1	0	0	0	0	2
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	1	0	0	0	0	1
NNW	1	1	0	0	0	0	2
N	3	12	1	0	0	0	16
TOTAL	22	85	10	0	0	0	117

PERIODS OF CALM (NO. OF HOURS) - 0

FPC - CRYSTAL RIVER 33 FT WINDS (DEL T) OCT 1975

TEMP. LAPSE RATE STABILITY CLASS G
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL						
	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	1	6	2	0	0	0	9
NE	0	2	1	0	0	0	3
ENE	0	12	3	0	0	0	15
E	0	4	0	0	0	0	4
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0
TOTAL	1	24	6	0	0	0	31

PERIODS OF CALM (NO. OF HOURS) - 0

24 HOUR SUMMARY OF WIND SPEED DISTRIBUTION

FPC - CRYSTAL RIVER 33 FT WINDS (DEL T) NOV 1975

TOTAL NUMBER OF READINGS 5.88000E+02

TOTAL NUMBER OF READINGS WITHOUT CALMS 5.88000E+02

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WIND SPEED DISTRIBUTION, NO OF OBS.

LT .5	.50-3.5	3.51-7.5	7.51-12.5	12.51-18.5	18.51-24.0	GT 24.0
0	29	253	352	45	6	2

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SUMMED OVER ALL DIRECTIONS

WIND SPEED DISTRIBUTION VERSUS TEMP. LAPSE RATE STABILITY CLASS (NO OF OBS.)

	A	B	C	D	E	F	G
1	0	0	0	0	0	0	0
2	0	0	1	11	4	8	5
3	35	4	8	34	94	43	35
4	117	5	17	52	94	47	20
5	22	0	5	9	8	2	0
6	1	1	1	2	1	0	0
7	2	0	0	0	0	0	0

FPC - CRYSTAL RIVER 33 FT WINDS (DEL T) NOV 1975

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SUMMED OVER ALL TEMP. LAPSE RATE STABILITIES
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL						
	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	3	8	18	0	0	0	29
NE	1	19	85	7	0	0	113
ENE	7	59	80	10	0	0	156
E	3	61	40	1	0	0	105
ESE	1	22	29	2	0	0	54
SE	1	13	13	1	0	0	28
SSE	0	2	7	2	0	0	11
S	0	3	11	1	0	0	15
SSW	0	1	8	1	0	0	10
SW	0	2	3	0	0	0	5
WSW	0	4	1	0	0	0	5
W	3	6	8	1	0	0	18
WNW	2	5	11	2	1	0	21
NW	2	10	12	4	5	2	35
NNW	2	12	5	14	0	0	34
N	4	26	19	0	0	0	49
TOTAL	29	293	352	46	6	2	688

PERIODS OF CALM (NO. OF HOURS) - 0

MISSING DATA (NO. OF HOURS) - 32

FPC - CRYSTAL RIVER 33 FT WINDS (DEL T) NOV 1975

TEMP. LAPSE RATE STABILITY CLASS A
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	0	1	0	0	0	0	1
NE	0	4	13	6	0	0	23
ENE	0	4	23	10	0	0	37
E		5	30	1	0	0	36
ESE		0	17	2	0	0	19
SE		2	5	1	0	0	9
SSE	0	0	6	1	0	0	7
S	0	0	5	1	0	0	6
SSW	0	0	4	0	0	0	4
SW	0	1	1	0	0	0	2
WSW	0	1	0	0	0	0	1
W	0	6	4	0	0	0	10
WNW	0	4	4	0	0	0	8
NW	0	6	4	0	1	2	13
NNW	0	1	0	0	0	0	1
N	0	0	0	0	0	0	0
TOTAL	0	35	117	22	1	2	177

PERIODS OF CALM (NO. OF HOURS) - 0

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TEMP. LAPSE RATE STABILITY CLASS B
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	0	0	0	0	0	0	0
NE	0	0	2	0	0	0	2
ENE	0	2	0	0	0	0	2
E	0	1	0	0	0	0	1
ESE	0	0	0	0	0	0	0
SE	0	0	1	0	0	0	1
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	1	1	0	0	0	2
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	0	1	0	0	0	1
NW	0	0	0	0	1	0	1
NNW	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0
TOTAL	0	4	5	0	1	0	10

PERIODS OF CALM (NO. OF HOURS) - 0

FPC - CRYSTAL RIVER 33 FT WINDS (DEL T) NOV 1975

TEMP. LAPSE RATE STABILITY CLASS C
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND	WIND SPEED (MPH) AT 10 METER LEVEL						
DIRECTION	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	0	0	0	0	0	0	0
NE	0	0	2	1	0	0	3
ENE	0	0	3	0	0	0	3
E	0	1	2	0	0	0	3
ESE	0	1	0	0	0	0	1
SE	0	1	0	0	0	0	1
SSE	0	0	1	1	0	0	2
S	0	0	2	0	0	0	2
SSW	0	0	3	1	0	0	4
SW	0	1	1	0	0	0	2
WSW	0	2	0	0	0	0	2
W	0	0	1	0	0	0	1
WNW	0	0	1	0	1	0	2
NW	0	1	1	2	0	0	4
NNW	0	1	0	0	0	0	1
N	1	0	0	0	0	0	1
TOTAL	1	8	17	5	1	0	32

PERIODS OF CALM (NO. OF HOURS) - 0

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TEMP. LAPSE RATE STABILITY CLASS D
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND	WIND SPEED (MPH) AT 10 METER LEVEL						
DIRECTION	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	1	0	3	0	0	0	4
NE	0	1	13	0	0	0	14
ENE	1	5	5	0	0	0	11
E	1	13	6	0	0	0	20
ESE	0	4	3	0	0	0	7
SE	0	1	4	0	0	0	5
SSE	0	2	0	0	0	0	2
S	0	2	4	0	0	0	6
SSW	0	0	0	0	0	0	0
SW	0	0	1	0	0	0	1
WSW	0	1	1	0	0	0	2
W	2	0	3	1	0	0	6
WNW	2	0	4	2	0	0	8
NW	0	1	4	2	2	0	9
NNW	1	0	1	4	0	0	6
N	3	4	0	0	0	0	7
TOTAL	11	34	52	9	2	0	108

PERIODS OF CALM (NO. OF HOURS) - 0

FPC - CRYSTAL RIVER 33 FT WINDS (DEL T) NOV 1975

TEMP. LAPSE RATE STABILITY CLASS E
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	0	3	7	0	0	0	10
NE	0	7	35	0	0	0	42
ENE	1	25	25	0	0	0	51
E	2	31	1	0	0	0	34
ESE	0	11	8	0	0	0	19
SE	0	5	2	0	0	0	7
SSE	0	0	0	0	0	0	0
S	0	1	0	0	0	0	1
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	1	0	0	0	0	0	1
WNW	0	1	1	0	0	0	2
NW	0	2	3	0	1	0	6
NNW	0	3	1	8	0	0	12
N	0	5	11	0	0	0	16
TOTAL	4	94	94	8	1	0	201

PERIODS OF CALM (NO. OF HOURS) - 0

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TEMP. LAPSE RATE STABILITY CLASS F
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	2	1	7	0	0	0	10
NE	0	2	18	0	0	0	20
ENE	2	18	13	0	0	0	33
E	0	5	1	0	0	0	6
ESE	0	1	1	0	0	0	2
SE	1	1	0	0	0	0	2
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	2	0	0	0	0	0	2
NNW	1	6	3	2	0	0	12
N	0	9	4	0	0	0	13
TOTAL	8	43	47	2	0	0	100

PERIODS OF CALM (NO. OF HOURS) - 0

FPC - CRYSTAL RIVER 33 FT WINDS (DEL T) NOV 1975

TEMP. LAPSE RATE STABILITY CLASS G
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	0	3	1	0	0	0	4
NE	1	5	3	0	0	0	9
ENE	3	5	11	0	0	0	19
E	0	5	0	0	0	0	5
ESE	1	5	0	0	0	0	6
SE	0	3	0	0	0	0	3
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	1	1	0	0	0	2
N	0	8	4	0	0	0	12
TOTAL	5	35	20	0	0	0	50

PERIODS OF CALM (NO. OF HOURS) - 0

24 HOUR SUMMARY OF WIND SPEED DISTRIBUTION

FPC - CRYSTAL RIVER 33 FT WINDS (DEL T) DEC 1975

TOTAL NUMBER OF READINGS 6.39000E+02

TOTAL NUMBER OF READINGS WITHOUT CALMS 6.39000E+02

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WIND SPEED DISTRIBUTION, NO OF OBS.

LT .5	.50-3.5	3.51-7.5	7.51-12.5	12.51-18.5	18.51-24.0	GT 24.0
0	56	239	262	78	4	0

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SUMMED OVER ALL DIRECTIONS

WIND SPEED DISTRIBUTION VERSUS TEMP. LAPSE RATE STABILITY CLASS (NO OF OBS.)

	A	B	C	D	E	F	G
1	0	0	0	0	0	0	0
2	5	0	0	5	8	14	23
3	29	2	7	34	60	63	44
4	51	8	14	48	97	30	14
5	18	5	7	31	15	2	0
6	1	0	0	1	2	0	0
7	0	0	0	0	0	0	0

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SUMMED OVER ALL TEMP. LAPSE RATE STABILITIES
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	7	26	18	3	0	0	54
NE	6	12	15	2	0	0	35
ENE	2	23	57	2	0	0	84
E	13	39	23	1	0	0	76
ESE	4	7	12	6	0	0	29
SE	1	15	5	2	0	0	23
SSE	0	14	13	8	1	0	36
S	1	11	9	5	2	0	28
SSW	0	9	12	9	0	0	30
SW	1	6	4	1	0	0	12
WSW	1	4	2	1	0	0	8
W	4	16	8	0	0	0	28
WNW	1	8	17	7	0	0	33
NW	2	10	16	19	1	0	48
NNW	4	13	12	5	0	0	34
N	9	26	39	7	0	0	81
TOTAL	56	239	252	78	4	0	639

PERIODS OF CALM (NO. OF HOURS) - 0

MISSING DATA (NO. OF HOURS) - 135

FPC - CRYSTAL RIVER 33 FT WINDS (DEL T) DEC 1975

TEMP. LAPSE RATE STABILITY CLASS A
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	0	1	1	0	0	0	2
NE	0	1	2	0	0	0	3
ENE	0	0	4	0	0	0	4
E	1	0	3	0	0	6	10
ESE	0	0	1	0	0	0	1
SE	0	0	0	1	0	0	1
SSE	0	3	0	0	1	0	4
S	0	2	4	1	0	0	7
SSW	0	1	3	4	0	0	8
SW	0	2	0	0	0	0	2
WSW	0	0	1	0	0	0	1
W	2	8	6	0	0	0	16
WNW	1	2	10	2	0	0	15
NW	1	1	3	7	0	0	12
NNW	0	3	5	0	0	0	8
N	1	5	2	3	0	0	11
TOTAL	6	29	51	18	1	0	105

PERIODS OF CALM (NO. OF HOURS) - 0

B-70

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TEMP. LAPSE RATE STABILITY CLASS B
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	0	0	1	0	0	0	1
NE	0	0	1	1	0	0	2
ENE	0	1	1	0	0	0	2
E	0	0	1	0	0	0	1
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	1	2	0	0	3
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	1	0	0	0	1
WNW	0	0	0	0	0	0	0
NW	0	0	0	2	0	0	2
NNW	0	0	1	0	0	0	1
N	0	1	1	0	0	0	2
TOTAL	0	2	8	5	0	0	15

PERIODS OF CALM (NO. OF HOURS) - 0

FPC - CRYSTAL RIVER 33 FT WINDS (DEL T) DEC 1975

TEMP. LAPSE RATE STABILITY CLASS C
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	0	1	0	0	0	0	1
NE	0	0	1	0	0	0	1
ENE	0	0	4	2	0	0	6
E	0	1	2	0	0	0	3
ESE	0	0	0	3	0	0	3
SE	0	2	0	0	0	0	2
SSE	0	2	0	0	0	0	2
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	1	0	0	0	1
W	0	1	0	0	0	0	1
WNW	0	0	0	0	0	0	0
NW	0	0	1	2	0	0	3
NNW	0	0	1	0	0	0	1
N	0	0	4	0	0	0	4
TOTAL	0	7	14	7	0	0	28

PERIODS OF CALM (NO. OF HOURS) - 0

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TEMP. LAPSE RATE STABILITY CLASS D
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	1	3	10	3	0	0	17
NE	0	1	0	0	0	0	1
ENE	0	2	2	0	0	0	4
E	1	1	2	1	0	0	5
ESE	1	0	2	2	0	0	5
SE	1	2	1	1	0	0	5
SSE	0	1	1	2	0	0	4
S	0	1	1	1	0	0	3
SSW	0	4	3	2	0	0	9
SW	0	2	2	1	0	0	5
WSW	0	3	0	1	0	0	4
W	0	1	0	0	0	0	1
WNW	0	1	5	5	0	0	11
NW	0	4	9	7	1	0	21
NNW	0	3	3	3	0	0	9
N	1	5	7	2	0	0	15
TOTAL	5	34	48	31	1	0	119

PERIODS OF CALM (NO. OF HOURS) - 0

FPC - CRYSTAL RIVER 33 FT WINDS (DEL T) DEC 1975

TEMP. LAPSE RATE STABILITY CLASS E
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	1	5	4	0	0	0	10
NE	1	3	9	0	0	0	12
ENE	0	3	22	0	0	0	25
E	0	9	7	0	0	0	16
ESE	0	1	2	1	0	0	4
SE	0	0	4	0	0	0	4
SSE	0	1	11	4	0	0	16
S	0	7	2	2	2	0	9
SSW	0	3	4	3	0	0	10
SW	0	2	2	0	0	0	4
WSW	1	1	0	0	0	0	2
W	2	6	1	0	0	0	9
WNW	0	5	2	0	0	0	7
NW	0	5	3	1	0	0	9
NNW	2	6	2	2	0	0	11
N	1	8	23	2	0	0	34
TOTAL	8	60	97	15	2	0	182

PERIODS OF CALM (NO. OF HOURS) - 0

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TEMP. LAPSE RATE STABILITY CLASS F
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	0	14	1	0	0	0	15
NE	2	2	3	1	0	0	8
ENE	1	8	11	0	0	0	20
E	2	16	2	0	0	0	20
ESE	1	2	7	0	0	0	10
SE	0	3	0	0	0	0	3
SSE	0	6	0	0	0	0	6
S	1	4	2	1	0	0	8
SSW	0	1	2	0	0	0	3
SW	1	0	0	0	0	0	1
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	1	0	0	0	0	0	1
NNW	2	2	0	0	0	0	4
N	3	5	2	0	0	0	10
TOTAL	14	63	30	2	0	0	109

PERIODS OF CALM (NO. OF HOURS) - 0

FPC - CRYSTAL RIVER 33 FT WINDS (DEL T) DEC 1975

TEMP. LAPSE RATE STABILITY CLASS G
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	5	2	1	0	0	0	8
NE	3	5	0	0	0	0	8
ENE	1	9	13	0	0	0	23
E	9	12	0	0	0	0	21
ESE	2	4	0	0	0	0	6
SE	0	8	0	0	0	0	8
SSE	0	1	0	0	0	0	1
S	0	1	0	0	0	0	1
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
N	3	2	0	0	0	0	5
TOTAL	23	44	14	0	0	0	81

PERIODS OF CALM (NO. OF HOURS) - 0

24 HOUR SUMMARY OF WIND SPEED DISTRIBUTION

FPC - CRYSTAL RIVER 33 FT WINDS DEL T 1/1/75-12/31/75

TOTAL NUMBER OF READINGS 8.19200E+03

TOTAL NUMBER OF READINGS WITHOUT CALMS 8.18400E+03

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WIND SPEED DISTRIBUTION, NO OF OBS.

LT .5	.50-3.5	3.51-7.5	7.51-12.5	12.51-18.5	18.51-24.0	GT 24.0
8	682	3435	3330	651	81	5

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SUMMED OVER ALL DIRECTIONS

WIND SPEED DISTRIBUTION VERSUS TEMP. LAPSE RATE STABILITY CLASS (NO OF OBS.)

	A	B	C	D	E	F	G
1	0	0	0	0	2	4	2
2	17	5	18	99	186	231	126
3	361	53	144	661	1216	713	281
4	1011	108	236	922	839	159	55
5	187	23	44	267	124	6	0
6	22	3	4	41	11	0	0
7	2	0	0	1	2	0	0

FPC - CRYSTAL RIVER 33 FT WINDS DEL T 1/1/75-12/31/75

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SUMMED OVER ALL TEMP. LAPSE RATE STABILITIES
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	49	165	153	6	0	0	383
NE	72	236	457	39	1	0	805
ENE	79	483	387	40	0	0	989
E	143	552	201	13	0	0	909
ESE	86	280	148	12	0	0	526
SE	35	316	127	19	0	0	497
SSE	14	117	104	42	4	0	281
S	11	103	133	88	17	1	353
SSW	13	78	173	110	16	2	392
SW	21	106	193	92	3	0	415
WSW	17	134	213	25	0	0	389
W	19	271	350	27	1	0	668
WNW	20	124	278	38	10	0	470
NW	21	99	143	59	27	2	351
NNW	35	113	70	26	1	0	245
N	47	258	190	15	1	0	511
TOTAL	582	3435	3330	651	81	5	8184

PERIODS OF CALM (NO. OF HOURS) - 8

MISSING DATA (NO. OF HOURS) - 568

TEMP. LAPSE RATE STABILITY CLASS A
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	1	17	29	1	0	0	48
NE	0	38	83	15	0	0	128
ENE	1	27	84	23	0	0	135
E	3	37	92	8	0	0	140
ESE	0	6	47	3	0	0	56
SE	0	6	19	4	0	0	29
SSE	0	4	24	7	1	0	36
S	0	6	27	24	5	0	62
SSW	1	4	47	34	4	0	90
SW	0	10	18	17	1	0	46
WSW	1	34	58	7	0	0	100
W	3	105	218	7	0	0	333
WNW	2	32	171	16	7	0	228
NW	2	13	50	16	4	2	87
NNW	2	7	12	0	0	0	21
N	1	23	32	5	0	0	61
TOTAL	17	361	1011	187	22	2	1600

PERIODS OF CALM (NO. OF HOURS) - 0

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TEMP. LAPSE RATE STABILITY CLASS B
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	0	0	2	0	0	0	2
NE	1	3	12	3	0	0	19
ENE	0	5	10	0	0	0	15
E	1	6	9	0	0	0	16
ESE	0	1	5	0	0	0	6
SE	1	0	4	2	0	0	7
SSE	0	2	7	3	0	0	12
S	0	6	4	0	0	0	10
SSW	0	3	13	5	1	0	22
SW	0	3	5	3	1	0	12
WSW	1	4	14	0	0	0	19
W	0	11	8	2	0	0	21
WNW	0	6	7	0	0	0	13
NW	0	4	4	3	1	0	12
NNW	1	0	2	2	0	0	5
N	0	5	2	0	0	0	7
TOTAL	5	59	109	23	3	0	198

PERIODS OF CALM (NO. OF HOURS) - 0

FPC - CRYSTAL RIVER 33 FT WINDS DEL T 1/1/75-12/31/75

TEMP. LAPSE RATE STABILITY CLASS C
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	2	4	4	0	0	0	10
NE	2	8	20	4	0	0	34
ENE	4	7	22	4	0	0	37
E	0	12	16	1	0	0	29
ESE	1	13	16	3	0	0	33
SE	1	7	6	1	0	0	15
SSE	0	9	9	4	0	0	22
S	0	7	11	4	0	0	22
SSW	0	4	20	9	0	0	33
SW	3	8	21	5	0	0	37
WSW	1	16	20	1	0	0	38
W	1	23	23	0	0	0	47
WNW	1	10	16	1	1	0	29
NW	0	5	15	7	3	0	30
NNW	1	5	4	0	0	0	10
N	1	6	13	0	0	0	20
TOTAL	18	144	236	44	4	0	446

PERIODS OF CALM (NO. OF HOURS) - 0

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TEMP. LAPSE RATE STABILITY CLASS D
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	5	17	50	4	0	0	76
NE	7	41	153	12	1	0	210
ENE	10	36	64	13	0	0	123
E	9	61	38	2	0	0	110
ESE	8	42	22	5	0	0	77
SE	5	48	46	10	0	0	109
SSE	5	40	37	9	3	0	94
S	3	29	36	25	7	0	100
SSW	4	43	52	43	9	1	152
SW	10	64	117	60	1	0	252
WSW	5	44	85	9	0	0	144
W	7	50	49	15	0	0	121
WNW	8	30	47	18	2	0	105
NW	7	39	46	26	17	0	135
NNW	4	21	22	10	1	0	58
N	5	26	58	6	0	0	125
TOTAL	99	561	922	257	41	1	1991

PERIODS OF CALM (NO. OF HOURS) - 0

FPC - CRYSTAL RIVER 33 FT WINDS DEL T 1/1/75-12/31/75

TEMP. LAPSE RATE STABILITY CLASS E
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	11	55	47	1	0	0	114
NE	15	81	149	3	0	0	249
ENE	18	158	117	0	0	0	303
E	31	195	39	2	0	0	267
ESE	24	106	45	1	0	0	176
SE	9	142	49	2	0	0	202
SSE	4	42	26	19	0	0	91
S	6	44	53	33	5	1	142
SSW	3	23	39	19	2	1	87
SW	7	20	32	7	0	0	66
WSW	8	36	36	8	0	0	88
W	8	82	51	3	1	0	145
WNW	5	46	37	3	0	0	91
NW	6	33	28	7	2	0	76
NNW	16	61	26	12	0	0	115
N	14	82	65	4	1	0	166
TOTAL	186	1216	839	124	11	2	2378

PERIODS OF CALM (NO. OF HOURS) - 2

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TEMP. LAPSE RATE STABILITY CLASS F
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	14	52	22	0	0	0	88
NE	32	46	34	2	0	0	114
ENE	28	172	59	0	0	0	259
E	64	169	5	0	0	0	238
ESE	35	78	13	0	0	0	126
SE	11	85	2	0	0	0	98
SSE	3	18	1	0	0	0	22
S	2	9	2	2	0	0	15
SSW	5	1	2	0	0	0	8
SW	1	1	0	0	0	0	2
WSW	0	0	0	0	0	0	0
W	0	0	1	0	0	0	1
WNW	4	0	0	0	0	0	4
NW	5	4	0	0	0	0	9
NNW	9	17	3	2	0	0	31
N	18	61	15	0	0	0	94
TOTAL	231	713	159	6	0	0	1109

PERIODS OF CALM (NO. OF HOURS) - 4

FPC - CRYSTAL RIVER 33 FT WINDS DEL T 1/1/75-12/31/75

TEMP. LAPSE RATE STABILITY CLASS G
WIND SPEED VERSUS DIRECTION (IN NUMBER OF OBS.)

WIND DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
NNE	16	20	9	0	0	0	45
NE	18	27	6	0	0	0	51
ENE	18	68	31	0	0	0	117
E	35	72	2	0	0	0	109
ESE	18	34	0	0	0	0	52
SE	8	28	1	0	0	0	37
SSE	2	2	0	0	0	0	4
S	0	2	0	0	0	0	2
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	1	1	0	0	0	0	2
NNW	2	2	1	0	0	0	5
N	8	25	5	0	0	0	38
TOTAL	126	281	55	0	0	0	462

PERIODS OF CALM (NO. OF HOURS) - 2