

**ESTIMATED DOSE REPORT FOR 2005
MAINE YANKEE ATOMIC POWER STATION**

Docket No. 50-309
License No. DPR-36

Maine Yankee Atomic Power Company

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**MAINE YANKEE ATOMIC
POWER STATION
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1.0 INTRODUCTION

As of mid-year, 2005, the Maine Yankee "plant" had been fully demolished, and the decommissioning of the non-Independent Spent Fuel Storage Facility (ISFSI) lands passed a final status survey for unrestricted use. Consequently, the Offsite Dose Calculation Manual (ODCM) was amended (Change 31, Reference 4) at the end of the site decommissioning activities to reflect that only the direct radiation from the Independent Spent Fuel Storage Installation remains as a potential source of radiation in the environment. In early October, 2005, the NRC notified Maine Yankee that they had accepted that the former power plant site had been successfully decommissioned in accordance with NRC procedures. As a result, the NRC amended Maine Yankee's license reducing the land under license from approximately 179 acres (former plant proper) to the 12 acre Independent Spent Fuel Storage Installation. The Independent Spent Fuel Storage Installation, and the design of the Vertical Concrete Casks (VCC's) which store the stations spent nuclear fuel, is approved by the Nuclear Regulatory Commission and considered to be leak tight as defined in ANSI N14.5-1997.

This report summarizes the radiological dose commitments resulting from all radioactive effluent discharges during the first half 2005 prior to completion of decommissioning. The off-site doses presented by calendar quarter in Table 1 were determined from primary effluent data sets, which are summarized and reported to the NRC in the Annual Radioactive Effluent Release Report for 2005.

For the purposes of demonstrating compliance with 40CFR190, "Environmental Radiation Protection Standards for Nuclear Power Operations," radiation dose estimates must include direct radiation contributions from significant plant sources. Data from available thermoluminescent dosimeters (TLDs) in the on-site area around the Independent Spent Fuel Storage Installation were evaluated for potential direct / scatter dose contributions to members of the public off-site to determine compliance with the 40CFR190 dose limits.

Dose commitments from the discharge of radioactive liquid (no recorded gaseous effluents for the report period) were estimated in accordance with the "Maine Yankee Atomic Power Station Off-Site Dose Calculation Manual" (ODCM), and are reported herein as required by ODCM Appendix C.3 (Reference 1). These dose estimates were developed using a "Method II" analysis as described in the ODCM. The Method II analysis incorporates the methodology of Regulatory Guide 1.109 (Reference 2).

All calculated pathway doses for this reporting period are well below the dose criteria of 10CFR50, Appendix I, and the dose limits for effluent releases stated in the Maine Yankee ODCM. In addition, the total dose to the most limiting member of the public due to the combined exposure to plant-related direct radiation and site effluents was below the dose standards of 40CFR190.

2.0 METEOROLOGICAL DATA

With the permanent shutdown of the plant in 1997 and subsequent decommissioning process of Maine Yankee, the generation of gaseous fission and activation products and operation of the batch gas process system ended prior to this reporting period. The site's meteorological tower was taken out of service in 2000. The tower instrumentation had been designed to meet the requirements of Regulatory Guide 1.23 (Reference 3) for meteorological monitoring.

In accordance with A.3 of the Maine Yankee Offsite Dose Calculation Manual (ODCM), historical meteorological data collected from the site's former 200-foot meteorological tower are provided in Tables A through H. This historical data is presented in the form of cumulative joint frequency distributions for wind speed, direction, and stability class for the calendar years 1986 -1990. Wind rose patterns for all stability classes for the same period are illustrated on Figures 1 and 2.

There were no recorded site gaseous or airborne effluents for the report period requiring application of airborne dispersion and deposition estimates.

3.0 DOSE ASSESSMENT

3.1 Doses from Liquid Effluents

ODCM Section 2.1.4 limits total body and organ doses from liquid effluents to members of the public in unrestricted areas to those values specified in 10CFR Part 50, Appendix I. The limit for total body dose is 1.5 mrem per calendar quarter, and 3 mrem per calendar year. The limit for organ doses is 5 mrem per calendar quarter and 10 mrem per calendar year. By implementing the requirements of 10CFR Part 50, Appendix I, ODCM Section 2.1.4 assures that the release of radioactive material in liquid effluents will be kept "as low as is reasonably achievable."

Potential exposure pathways associated with liquid effluents from Maine Yankee are ingestion of fish/shellfish and direct exposure from shoreline sedimentation. The drinking water and irrigation pathways do not exist due to the saltwater nature of the receiving water estuary.

The calculated doses from liquid effluents incorporate near-field mixing in an area of the estuary (approximately 13 acres) originally credited to the plant's effluent releases for doses due to ingestion of fish, shellfish, and shoreline exposures. Table 3 lists the usage factors by age group and pathway that were applied to liquid effluent.

The whole body and organ doses resulting from liquid effluent discharges are the summations of dose contributions via all active exposure pathways for each release during the reporting period. Table 1 presents the maximum whole body and organ doses from liquid effluents to a member of the public. The estimated quarterly and annual doses resulting from liquid effluent discharges are well below the 10CFR50, Appendix I dose criteria.

3.2 Doses from Noble Gases

During the time of effluent releases prior to this reporting period (2005), the ODCM limited the gamma air dose and beta air dose from noble gases released in gaseous effluents from the site to areas at and beyond the site boundary to those values specified in 10CFR50, Appendix I. The limit for gamma air doses was 5 mrad per calendar quarter and 10 mrad per year. The limit for beta air doses was 10 mrad per calendar quarter and 20 mrad per year. By implementing the requirements of 10CFR50, Appendix I, the releases of radioactive noble gases in gaseous effluents had been kept "as low as is reasonably achievable."

During the first half of 2005 the plant site was in the final stages of decommissioning. All sources of noble gas effluents had been eliminated prior to the start of 2005. Therefore, there were no noble gases released from the site to the environment in this reporting period and as a result, no calculated dose impact.

3.3 Doses from Tritium and Radionuclides in Particulate Form

During the time of effluent releases prior to this reporting period (2005), the ODCM implemented the limits on organ doses established in 10CFR50 Appendix I, which assured that the releases of iodines, tritium and particulates in gaseous effluent had been kept "as low as is reasonably achievable." Organ doses to individuals located at or beyond the site boundary as a result of tritium and particulate-form radionuclides (with half-lives greater than 8 days) in gaseous effluent were limited to 7.5 mrem per quarter and 15 mrem per year doses.

As with noble gases, all measurable sources of airborne tritium and particulate radioactivity had been eliminated prior to the start of the reporting period. Therefore, there were no recorded airborne tritium and particulate radioactivity released from the site to the environment in 2005 up to the time of completion of the decommissioning process, and as a result, no calculated dose impact.

3.4 Total Dose (Liquid, Gaseous and Direct External Radiation)

The annual (calendar year) total dose or dose commitment to any member of the public due to releases of radioactivity and direct radiation from fixed sources are limited to the EPA's radiation protection standards for the uranium fuel cycle (40CFR190). The dose limits are set to less than or equal to 25 mrem per year to the total body or any organ, except the thyroid, which is limited to less than or equal to 75 mrem per year.

Direct external dose from fixed sources of radioactive materials on-site were estimated from Maine Yankee's 2005 environmental TLD data. In prior years when there were fixed radiation sources associated with the plant, TLD data around the site indicated that members of the public on mud flats in Bailey's Cove could receive a small dose that needed to be accounted for. With the plant site in the final stages of remediation and decommissioning in 2005, all significant sources of fixed radiation on the plant proper had been removed, thereby eliminating direct dose impacts on the mudflats.

For the ISFSI, a series of TLDs have been located on-site in each of the sixteen compass sectors within 340 meters of the center of the facility. An assessment of the ISFSI quarterly TLD data trends from before any radioactive materials were placed into storage, through the fourteen month transfer period of materials onto the ISFSI, and following completion of all transfers, including the first half of 2005, was performed. Most of the TLD locations indicate little or no significant change in exposure rate from the pre-operational period to the current period in 2005. However, three on-site locations do appear to reflect some increase from the pre-operational conditions. Two of these locations are bordered by a water boundary (Back River) to the ISFSI site area. The third location is well within the site property and is the closest environmental TLD to the storage pad in any of the sixteen sectors. All three locations are at about half the distance or less to the ISFSI as the nearest property line bordered by land. None of the three locations are near a site property line which could be occupied by members of the public on a continuous basis. The closest site boundary bordered by land to the ISFSI is about 1100 feet from the center of the facility in the NE and ENE sectors, with the nearest real resident approximately twice this distance. The TLD history for the closest land site boundaries did not show any significant change in exposure rate from the pre-operational period through the full ISFSI configuration into 2005. With no changes in the configuration of the full ISFSI until such time that materials are shipped from the site, it is not anticipated that any change in the current trends of TLD response will be observed. Therefore, it is concluded that there is no measurable or significant direct dose to any offsite member of the public from the ISFSI in 2005.

Table 2 lists the dose contribution from each component (direct, liquid and gas) to the total body, maximum organ, and thyroid for the hypothetical limiting member of the public located on the nearest site boundary to the ISFSI pad.

4.0 REFERENCES

1. "Off-Site Dose Calculation Manual," Maine Yankee Atomic Power Company, Change No. 29, Approved 07/21/04.
2. Regulatory Guide 1.109, "Calculation of Annual Doses to Man from Routine Release of Reactor Effluents for the Purpose of Evaluating Compliance With 10CFR50, Appendix I," U.S. Nuclear Regulatory Commission, Office of Standards Development, Revision 1, October 1977.
3. Regulatory Guide 1.23, "On-Site Meteorological Programs (Safety Guide 23)," U.S. Nuclear Regulatory Commission, Office of Standards Development, February 1972.
4. "Off-Site Dose Calculation Manual," Maine Yankee Atomic Power Company, Change No. 31, Approved 08/31/05.

TABLE 1

**Maine Yankee Atomic Power Station
Maximum Off-Site Doses/Dose Commitments to Members of the Public
from Liquid and Gaseous Effluents for 2005
(10CFR50, Appendix I)**

Source	Dose (mrem)				
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Year ^(b)
Liquid Effluents					
Total Body Dose ^(a)	2.2E-04	2.1E-05	ND	ND	2.4E-04
Footnotes	(1)	(1)			
Organ Dose ^(a)	4.8E-04	4.0E-05	ND	ND	5.2E-04
Footnotes	(2)	(2)			
Airborne Effluents					
Organ Dose ^(a) (Tritium + Part.)	ND	ND	ND	ND	ND
Footnotes					
Noble Gases					
Beta Air ^(a) (mrad)	ND	ND	ND	ND	ND
Footnotes					
Gamma Air ^(a) (mrad)	ND	ND	ND	ND	ND
Footnotes					

ND: No dose determined based on no recorded effluents. With the completion of decommissioning of the former plant site in June, 2005, the ODCM was amended (Change 31, Reference 4) to eliminate the liquid effluent pathways from the need for consideration. Consideration of gaseous effluent pathways had been removed from the ODCM per Change 29 (Reference 1).

(a) The numbered footnotes indicate the age group, organ, and location of the dose receptor, where appropriate.

- (1) Adult
- (2) Adult/GI-LLI

(b) "Maximum" dose for the year is the sum of the maximum doses for each quarter. This results in a conservative yearly dose estimate, but still well within the limits of 10CFR 50, Appendix 1.

TABLE 2

**Maine Yankee Atomic Power Station
Maximum Annual Dose Commitments from Direct External Radiation,
Plus Liquid and Gaseous Effluents for 2005^(a)
(40CFR190)**

Pathway	Total Body (mrem)	Maximum Organ (mrem)	Thyroid (mrem)
Direct External	0	0	0
Liquids	2.4E-04	5.2E-04	1.7E-04
Gases	0	0	0
Annual Total ^(b)	2.4E-04	5.2E-04	1.7E-04

- (a) The maximum individual doses from site effluents and direct radiation from fixed is controlled by liquid effluents recorded for the reporting period.
- (b) For any member of the public, EPA radiation protection standards (40CFR190) established annual dose limits of 25 mrem to the total body and any organ (except the thyroid, which has a dose limit of 75 mrem).

TABLE 3

Usage Factors for Various Liquid Pathways at Maine Yankee
(From Regulatory Guide 1.109, Table E-5, except as noted.
Zero where no pathway exists.)

Age	Veg. (kg/y)	Leafy Veg. (kg/y)	Milk (l/y)	Meat (kg/y)	Fish (kg/y)	Invert. (kg/y)	Potable Water (l/y)	Shoreline (hr/y)
Adult	0.00	0.00	0.00	0.00	21.00	5.00	0.00	325.00 ^(a)
Teen	0.00	0.00	0.00	0.00	16.00	3.80	0.00	67.00
Child	0.00	0.00	0.00	0.00	6.90	1.70	0.00	14.00
Infant	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

- (a) Regional shoreline use associated with mud flats - Maine Yankee Atomic Power Station Environmental Report, Supplement Number One, Volume 1, Section 5.2.2, Maine Yankee Atomic Power Company.

TABLE A

MAINE YANKEE JAN86-DEC90 METEOROLOGICAL DATA JOINT FREQUENCY DISTRIBUTION

35.0 FT WIND DATA STABILITY CLASS A CLASS FREQUENCY (PERCENT) = 3.40

SPEED MPH	WIND DIRECTION FROM																	TOTAL	
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	VRBL		
CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
C-3	6	6	16	26	19	8	11	13	10	3	10	1	2	0	2	1	0	134	
(1)	.44	.44	1.18	1.92	1.40	.59	.81	.96	.74	.22	.74	.07	.15	.00	.15	.07	.00	9.88	
(2)	.02	.02	.04	.07	.05	.02	.03	.03	.03	.01	.03	.00	.01	.00	.01	.00	.00	.34	
4-7	31	32	64	36	13	2	11	37	125	70	16	21	20	10	18	17	0	523	
(1)	2.29	2.36	4.72	2.65	.96	.15	.81	2.73	9.22	5.16	1.18	1.55	1.47	.74	1.33	1.25	.00	38.57	
(2)	.08	.08	.16	.09	.03	.01	.03	.09	.31	.18	.04	.05	.05	.03	.05	.04	.00	1.31	
8-12	33	15	23	2	1	0	0	9	41	96	18	12	26	29	56	63	0	424	
(1)	2.43	1.11	1.70	.15	.07	.00	.00	.66	3.02	7.08	1.33	.88	1.92	2.14	4.13	4.65	.00	31.27	
(2)	.08	.04	.06	.01	.00	.00	.00	.02	.10	.24	.05	.03	.07	.07	.14	.16	.00	1.06	
13-18	16	6	3	0	1	0	0	0	3	13	1	6	3	25	98	56	0	231	
(1)	1.18	.44	.22	.00	.07	.00	.00	.00	.22	.96	.07	.44	.22	1.84	7.23	4.13	.00	17.04	
(2)	.04	.02	.01	.00	.00	.00	.00	.00	.01	.03	.00	.02	.01	.06	.25	.14	.00	.58	
19-24	4	0	0	0	0	0	0	0	0	0	0	0	0	2	28	9	0	43	
(1)	.29	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.15	2.06	.66	.00	3.17	
(2)	.01	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01	.07	.02	.00	.11	
GT 24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.07	.00	.00	.07	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
ALL SPEEDS	90	59	106	64	34	10	22	59	179	182	45	40	51	66	203	146	0	1356	
(1)	6.64	4.35	7.82	4.72	2.51	.74	1.62	4.35	13.20	13.42	3.32	2.95	3.76	4.87	14.97	10.77	.00	100.00	
(2)	.23	.15	.27	.16	.09	.03	.06	.15	.45	.46	.11	.10	.13	.17	.51	.37	.00	3.40	

(1)=PERCENT OF ALL GOOD OBSERVATIONS FOR THIS PAGE
 (2)=PERCENT OF ALL GOOD OBSERVATIONS FOR THIS PERIOD
 C= CALM (WIND SPEED LESS THAN OR EQUAL TO .95 MPH)

TABLE B

MAINE YANKEE JAN86-DEC90 METEOROLOGICAL DATA JOINT FREQUENCY DISTRIBUTION

35.0 FT WIND DATA STABILITY CLASS B CLASS FREQUENCY (PERCENT) = 1.44

SPEED MPH	WIND DIRECTION FROM																TOTAL		
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NRW		VRBL	
CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
C-3	1	2	2	6	5	1	3	5	4	1	1	2	0	2	1	2	0	38	
(1)	.17	.35	.35	1.05	.87	.17	.52	.87	.70	.17	.17	.35	.00	.35	.17	.35	.00	6.63	
(2)	.00	.01	.01	.02	.01	.00	.01	.01	.01	.00	.00	.01	.00	.01	.00	.01	.00	.10	
4-7	6	14	20	15	6	5	5	19	48	27	8	5	7	8	7	10	0	210	
(1)	1.05	2.44	3.49	2.62	1.05	.87	.87	3.32	8.38	4.71	1.40	.87	1.22	1.40	1.22	1.75	.00	36.65	
(2)	.02	.04	.05	.04	.02	.01	.01	.05	.12	.07	.02	.01	.02	.02	.02	.03	.00	.53	
8-12	10	8	10	2	1	0	0	7	18	36	10	5	13	18	25	30	0	193	
(1)	1.75	1.40	1.75	.35	.17	.00	.00	1.22	3.14	6.28	1.75	.87	2.27	3.14	4.36	5.24	.00	33.68	
(2)	.03	.02	.03	.01	.00	.00	.00	.02	.05	.09	.03	.01	.03	.05	.06	.08	.00	.48	
13-18	4	2	5	1	0	0	0	0	4	7	2	4	7	14	36	18	0	104	
(1)	.70	.35	.87	.17	.00	.00	.00	.00	.70	1.22	.35	.70	1.22	2.44	6.28	3.14	.00	18.15	
(2)	.01	.01	.01	.00	.00	.00	.00	.00	.01	.02	.01	.01	.02	.04	.09	.05	.00	.26	
19-24	5	0	0	0	0	0	0	1	0	0	0	0	1	3	10	5	0	25	
(1)	.87	.00	.00	.00	.00	.00	.00	.17	.00	.00	.00	.00	.17	.52	1.75	.87	.00	4.36	
(2)	.01	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01	.03	.01	.00	.06	
GT 24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.52	.00	.52	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01	.00	.01	
ALL SPEEDS	26	26	37	24	12	6	8	32	74	71	21	16	28	45	79	68	0	573	
(1)	4.54	4.54	6.46	4.19	2.09	1.05	1.40	5.58	12.91	12.39	3.66	2.79	4.89	7.85	13.79	11.87	.00	100.00	
(2)	.07	.07	.09	.06	.03	.02	.02	.08	.19	.18	.05	.04	.07	.11	.20	.17	.00	1.44	

(1)=PERCENT OF ALL GOOD OBSERVATIONS FOR THIS PAGE
(2)=PERCENT OF ALL GOOD OBSERVATIONS FOR THIS PERIOD
C= CALM (WIND SPEED LESS THAN OR EQUAL TO .95 MPH)

TABLE C

MAINE YANKEE JAN86-DEC90 METEOROLOGICAL DATA JOINT FREQUENCY DISTRIBUTION

35.0 FT WIND DATA STABILITY CLASS C CLASS FREQUENCY (PERCENT) = 4.24

SPEED MPH	WIND DIRECTION FROM																	TOTAL
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	VRBL	
CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
C-3	5	9	11	11	11	6	10	11	13	8	5	3	2	1	4	0	0	
(1)	.30	.53	.65	.65	.65	.35	.59	.65	.77	.47	.30	.18	.18	.12	.06	.24	.00	
(2)	.01	.02	.03	.03	.03	.02	.03	.03	.03	.02	.01	.01	.01	.01	.00	.01	.00	
4-7	34	42	54	29	12	8	21	41	128	72	28	20	22	18	27	45	0	
(1)	2.01	2.48	3.19	1.71	.71	.47	1.24	2.42	7.56	4.25	1.65	1.18	1.30	1.06	1.59	2.66	.00	
(2)	.09	.11	.14	.07	.03	.02	.05	.10	.32	.18	.07	.05	.06	.05	.07	.11	.00	
8-12	47	41	26	6	4	3	4	16	47	85	28	15	28	61	91	75	0	
(1)	2.78	2.42	1.54	.35	.24	.18	.24	.95	2.78	5.02	1.65	.89	1.65	3.60	5.38	4.43	.00	
(2)	.12	.10	.07	.02	.01	.01	.01	.04	.12	.21	.07	.04	.07	.15	.23	.19	.00	
13-18	25	10	3	0	0	0	0	2	5	12	1	5	16	43	119	56	0	
(1)	1.48	.59	.18	.00	.00	.00	.00	.12	.30	.71	.06	.30	.95	2.54	7.03	3.31	.00	
(2)	.06	.03	.01	.00	.00	.00	.00	.01	.01	.03	.00	.01	.04	.11	.30	.14	.00	
19-24	2	2	0	0	0	0	0	0	0	1	0	0	0	10	60	17	0	
(1)	.12	.12	.00	.00	.00	.00	.00	.00	.00	.06	.00	.00	.00	.59	3.54	1.00	.00	
(2)	.01	.01	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.03	.15	.04	.00	
GT 24	0	0	0	0	0	0	0	0	0	0	0	0	0	4	8	1	0	
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.24	.47	.06	.00	
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01	.02	.00	.00	
ALL SPEEDS	113	104	94	46	27	17	35	70	193	178	62	43	69	138	306	198	0	
(1)	6.67	6.14	5.55	2.72	1.59	1.00	2.07	4.13	11.40	10.51	3.66	2.54	4.08	8.15	18.07	11.70	.00	
(2)	.28	.26	.24	.12	.07	.04	.09	.18	.48	.45	.16	.11	.17	.35	.77	.50	.00	

(1)=PERCENT OF ALL GOOD OBSERVATIONS FOR THIS PAGE
 (2)=PERCENT OF ALL GOOD OBSERVATIONS FOR THIS PERIOD
 C= CALM (WIND SPEED LESS THAN OR EQUAL TO .95 MPH)

TABLE D

MAINE YANKEE JAN86-DEC90 METEOROLOGICAL DATA JOINT FREQUENCY DISTRIBUTION

SPEED MPH	35.0 FT WIND DATA																STABILITY CLASS D	CLASS FREQUENCY (PERCENT) = 44.72
	WIND DIRECTION FROM																	
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	VRBL	TOTAL
CALM	0	0	0	1	1	1	0	0	2	0	0	1	2	2	4	0	0	14
(1)	.00	.00	.00	.01	.01	.01	.00	.00	.01	.00	.00	.01	.01	.01	.02	.00	.00	.08
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.01	.00	.00	.00	.01	.01	.01	.00	.00	.04
C-3	119	97	148	179	218	200	211	266	219	108	113	97	105	92	102	109	0	2383
(1)	.67	.54	.83	1.00	1.22	1.12	1.18	1.49	1.23	.61	.63	.54	.59	.52	.57	.61	.00	13.35
(2)	.30	.24	.37	.45	.55	.50	.53	.67	.55	.27	.28	.24	.26	.23	.26	.27	.00	5.97
4-7	524	497	481	351	234	279	356	739	968	642	469	305	240	228	267	391	0	6971
(1)	2.94	2.79	2.70	1.97	1.31	1.56	2.00	4.14	5.42	3.60	2.63	1.71	1.34	1.28	1.50	2.19	.00	39.07
(2)	1.31	1.25	1.21	.88	.59	.70	.89	1.85	2.43	1.61	1.18	.76	.60	.57	.67	.98	.00	17.47
8-12	542	445	255	110	122	129	163	400	653	618	325	150	164	429	705	530	0	5740
(1)	3.04	2.49	1.43	.62	.68	.72	.91	2.24	3.66	3.46	1.82	.84	.92	2.40	3.95	2.97	.00	32.17
(2)	1.36	1.12	.64	.28	.31	.32	.41	1.00	1.64	1.55	.81	.38	.41	1.08	1.77	1.33	.00	14.38
13-18	179	87	33	19	36	33	25	106	244	104	57	23	33	245	726	318	0	2268
(1)	1.00	.49	.18	.11	.20	.18	.14	.59	1.37	.58	.32	.13	.18	1.37	4.07	1.78	.00	12.71
(2)	.45	.22	.08	.05	.09	.08	.06	.27	.61	.26	.14	.06	.08	.61	1.82	.80	.00	5.68
19-24	18	3	1	1	5	3	2	11	32	6	1	2	2	52	225	64	0	428
(1)	.10	.02	.01	.01	.03	.02	.01	.06	.18	.03	.01	.01	.01	.29	1.26	.36	.00	2.40
(2)	.05	.01	.00	.00	.01	.01	.01	.03	.08	.02	.00	.01	.01	.13	.56	.16	.00	1.07
GT 24	0	0	0	0	2	0	0	1	2	0	0	0	0	3	25	7	0	40
(1)	.00	.00	.00	.00	.01	.00	.00	.01	.01	.00	.00	.00	.00	.02	.14	.04	.00	.22
(2)	.00	.00	.00	.00	.01	.00	.00	.00	.01	.00	.00	.00	.00	.01	.06	.02	.00	.10
ALL SPEEDS	1382	1129	918	661	618	645	757	1523	2120	1478	965	578	546	1051	2054	1419	0	17844
(1)	7.74	6.33	5.14	3.70	3.46	3.61	4.24	8.54	11.88	8.28	5.41	3.24	3.06	5.89	11.51	7.95	.00	100.00
(2)	3.46	2.83	2.30	1.66	1.55	1.62	1.90	3.82	5.31	3.70	2.42	1.45	1.37	2.63	5.15	3.56	.00	44.72

(1)=PERCENT OF ALL GOOD OBSERVATIONS FOR THIS PAGE
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 C= CALM (WIND SPEED LESS THAN OR EQUAL TO .95 MPH)

TABLE E

MAINE YANKEE JAN86-DEC90 METEOROLOGICAL DATA JOINT FREQUENCY DISTRIBUTION
 35.0 FT WIND DATA STABILITY CLASS E CLASS FREQUENCY (PERCENT) = 28.88

SPEED MPH	WIND DIRECTION FROM																TOTAL	
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW		VRBL
CALM	7	8	1	2	4	3	4	2	2	2	3	5	7	3	5	7	0	65
(1)	.06	.07	.01	.02	.03	.03	.03	.02	.02	.02	.03	.04	.06	.03	.04	.06	.00	.56
(2)	.02	.02	.00	.01	.01	.01	.01	.01	.01	.01	.01	.01	.02	.01	.01	.02	.00	.16
C-3	246	215	204	146	162	153	331	497	402	295	258	273	230	234	264	311	0	4221
(1)	2.13	1.87	1.77	1.27	1.41	1.33	2.87	4.31	3.49	2.56	2.24	2.37	2.00	2.03	2.29	2.70	.00	36.62
(2)	.62	.54	.51	.37	.41	.38	.83	1.25	1.01	.74	.65	.68	.58	.59	.66	.78	.00	10.58
4-7	465	281	152	52	28	66	147	463	648	618	309	283	236	342	453	484	0	5027
(1)	4.03	2.44	1.32	.45	.24	.57	1.28	4.02	5.62	5.36	2.68	2.46	2.05	2.97	3.93	4.20	.00	43.61
(2)	1.17	.70	.38	.13	.07	.17	.37	1.16	1.62	1.55	.77	.71	.59	.86	1.14	1.21	.00	12.60
8-12	110	66	22	7	4	13	30	117	230	271	75	30	42	140	313	167	0	1637
(1)	.95	.57	.19	.06	.03	.11	.26	1.02	2.00	2.35	.65	.26	.36	1.21	2.72	1.45	.00	14.20
(2)	.28	.17	.06	.02	.01	.03	.08	.29	.58	.68	.19	.08	.11	.35	.78	.42	.00	4.10
13-18	26	15	0	0	5	14	19	54	96	41	7	1	6	39	92	19	0	434
(1)	.23	.13	.00	.00	.04	.12	.16	.47	.83	.36	.06	.01	.05	.34	.80	.16	.00	3.77
(2)	.07	.04	.00	.00	.01	.04	.05	.14	.24	.10	.02	.00	.02	.10	.23	.05	.00	1.09
19-24	2	1	0	0	1	6	15	24	28	4	0	0	1	6	26	0	0	114
(1)	.02	.01	.00	.00	.01	.05	.13	.21	.24	.03	.00	.00	.01	.05	.23	.00	.00	.99
(2)	.01	.00	.00	.00	.00	.02	.04	.06	.07	.01	.00	.00	.00	.02	.07	.00	.00	.29
GT 24	0	0	0	0	0	0	7	14	6	0	0	0	0	0	1	0	0	28
(1)	.00	.00	.00	.00	.00	.00	.06	.12	.05	.00	.00	.00	.00	.00	.01	.00	.00	.24
(2)	.00	.00	.00	.00	.00	.00	.02	.04	.02	.00	.00	.00	.00	.00	.00	.00	.00	.07
ALL SPEEDS	856	586	379	207	204	255	553	1171	1412	1231	652	592	522	764	1154	988	0	11526
(1)	7.43	5.08	3.29	1.80	1.77	2.21	4.80	10.16	12.25	10.68	5.66	5.14	4.53	6.63	10.01	8.57	.00	100.00
(2)	2.15	1.47	.95	.52	.51	.64	1.39	2.93	3.54	3.08	1.63	1.48	1.31	1.91	2.89	2.48	.00	28.88

(1)=PERCENT OF ALL GOOD OBSERVATIONS FOR THIS PAGE
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 C= CALM (WIND SPEED LESS THAN OR EQUAL TO .95 MPH)

TABLE F

MAINE YANKEE JAN86-DEC90 METEOROLOGICAL DATA JOINT FREQUENCY DISTRIBUTION

35.0 FT WIND DATA STABILITY CLASS F CLASS FREQUENCY (PERCENT) = 9.10

SPEED MPH	WIND DIRECTION FROM																TOTAL	
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW		VRBL
CALM	6	8	9	5	5	3	1	6	3	6	6	7	11	13	8	7	0	104
(1)	.17	.22	.25	.14	.14	.08	.03	.17	.08	.17	.17	.19	.30	.36	.22	.19	.00	2.86
(2)	.02	.02	.02	.01	.01	.01	.00	.02	.01	.02	.02	.02	.03	.03	.02	.02	.00	.26
C-3	188	151	158	135	89	78	127	184	166	161	113	127	182	194	305	289	0	2647
(1)	5.18	4.16	4.35	3.72	2.45	2.15	3.50	5.07	4.57	4.43	3.11	3.50	5.01	5.34	8.40	7.96	.00	72.90
(2)	.47	.38	.40	.34	.22	.20	.32	.46	.42	.40	.28	.32	.46	.49	.76	.72	.00	6.63
4-7	111	45	20	4	0	1	5	22	53	43	22	50	49	72	134	197	0	828
(1)	3.06	1.24	.55	.11	.00	.03	.14	.61	1.46	1.18	.61	1.38	1.35	1.98	3.69	5.43	.00	22.80
(2)	.28	.11	.05	.01	.00	.00	.01	.06	.13	.11	.06	.13	.12	.18	.34	.49	.00	2.07
8-12	3	0	1	0	0	1	1	8	3	4	3	2	3	4	15	3	0	51
(1)	.08	.00	.03	.00	.00	.03	.03	.22	.08	.11	.08	.06	.08	.11	.41	.08	.00	1.40
(2)	.01	.00	.00	.00	.00	.00	.00	.02	.01	.01	.01	.01	.01	.01	.04	.01	.00	.13
13-18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19-24	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.03	.00	.00	.00	.03
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
GT 24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
ALL SPEEDS	308	204	188	144	94	83	134	220	225	214	144	186	245	284	462	496	0	3631
(1)	8.48	5.62	5.18	3.97	2.59	2.29	3.69	6.06	6.20	5.89	3.97	5.12	6.75	7.82	12.72	13.66	.00	100.00
(2)	.77	.51	.47	.36	.24	.21	.34	.55	.56	.54	.36	.47	.61	.71	1.16	1.24	.00	9.10

(1)=PERCENT OF ALL GOOD OBSERVATIONS FOR THIS PAGE
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TABLE G

MAINE YANKEE JAN86-DEC90 METEOROLOGICAL DATA JOINT FREQUENCY DISTRIBUTION

35.0 FT WIND DATA STABILITY CLASS G CLASS FREQUENCY (PERCENT) = 8.22

WIND DIRECTION FROM

SPEED MPH	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	VRBL	TOTAL
CALM	17	13	15	12	7	3	6	2	5	8	5	7	11	11	12	9	0	143
(1)	.52	.40	.46	.37	.21	.09	.18	.06	.15	.24	.15	.21	.34	.34	.37	.27	.00	4.36
(2)	.04	.03	.04	.03	.02	.01	.02	.01	.01	.02	.01	.02	.03	.03	.03	.02	.00	.36
C-3	295	257	245	151	65	37	39	45	62	54	60	69	104	158	467	543	0	2651
(1)	8.99	7.83	7.46	4.60	1.98	1.13	1.19	1.37	1.89	1.65	1.83	2.10	3.17	4.81	14.23	16.54	.00	80.77
(2)	.74	.64	.61	.38	.16	.09	.10	.11	.16	.14	.15	.17	.26	.40	1.17	1.36	.00	6.64
4-7	26	13	21	7	2	2	0	2	6	8	5	7	14	30	167	175	0	485
(1)	.79	.40	.64	.21	.06	.06	.00	.06	.18	.24	.15	.21	.43	.91	5.09	5.33	.00	14.78
(2)	.07	.03	.05	.02	.01	.01	.00	.01	.02	.02	.01	.02	.04	.08	.42	.44	.00	1.22
8-12	1	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	3
(1)	.03	.00	.00	.00	.00	.00	.03	.00	.00	.00	.00	.00	.00	.00	.03	.00	.00	.09
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01
13-18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19-24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
GT 24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(1)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
(2)	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
ALL SPEEDS	339	283	281	170	74	42	46	49	73	70	70	83	129	199	647	727	0	3282
(1)	10.33	8.62	8.56	5.18	2.25	1.28	1.40	1.49	2.22	2.13	2.13	2.53	3.93	6.06	19.71	22.15	.00	100.00
(2)	.85	.71	.70	.43	.19	.11	.12	.12	.18	.18	.18	.21	.32	.50	1.62	1.82	.00	8.22

(1)=PERCENT OF ALL GOOD OBSERVATIONS FOR THIS PAGE
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C= CALM (WIND SPEED LESS THAN OR EQUAL TO .95 MPH)

TABLE H

MAINE YANKEE JAN86-DEC90 METEOROLOGICAL DATA JOINT FREQUENCY DISTRIBUTION

35.0 FT WIND DATA

STABILITY CLASS ALL

CLASS FREQUENCY (PERCENT) = 100.00

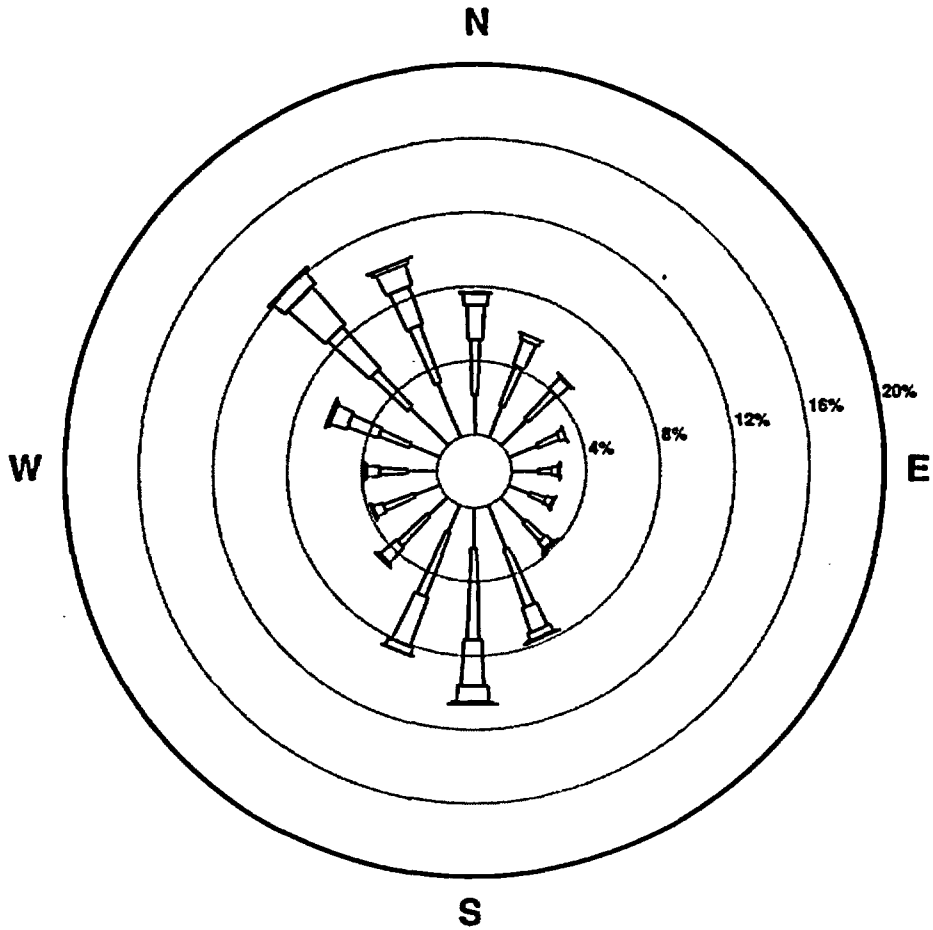
SPEED MPH	WIND DIRECTION FROM																	TOTAL
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	VRBL	
CALM	30	29	25	20	17	10	11	10	12	16	14	20	31	29	29	23	0	326
(1)	.08	.07	.06	.05	.04	.03	.03	.03	.03	.04	.04	.05	.08	.07	.07	.06	.00	.82
(2)	.08	.07	.06	.05	.04	.03	.03	.03	.03	.04	.04	.05	.08	.07	.07	.06	.00	.82
C-3	860	737	784	654	569	483	732	1021	876	630	560	572	626	682	1142	1259	0	12187
(1)	2.16	1.85	1.96	1.64	1.43	1.21	1.83	2.56	2.20	1.58	1.40	1.43	1.57	1.71	2.86	3.15	.00	30.54
(2)	2.16	1.85	1.96	1.64	1.43	1.21	1.83	2.56	2.20	1.58	1.40	1.43	1.57	1.71	2.86	3.15	.00	30.54
4-7	1197	924	812	494	295	363	545	1323	1976	1480	857	691	588	708	1073	1319	0	14645
(1)	3.00	2.32	2.03	1.24	.74	.91	1.37	3.32	4.95	3.71	2.15	1.73	1.47	1.77	2.69	3.31	.00	36.70
(2)	3.00	2.32	2.03	1.24	.74	.91	1.37	3.32	4.95	3.71	2.15	1.73	1.47	1.77	2.69	3.31	.00	36.70
8-12	746	575	337	127	132	146	199	557	992	1110	459	214	276	681	1206	868	0	8625
(1)	1.87	1.44	.84	.32	.33	.37	.50	1.40	2.49	2.78	1.15	.54	.69	1.71	3.02	2.18	.00	21.61
(2)	1.87	1.44	.84	.32	.33	.37	.50	1.40	2.49	2.78	1.15	.54	.69	1.71	3.02	2.18	.00	21.61
13-18	250	120	44	20	42	47	44	162	352	177	68	39	65	366	1071	467	0	3334
(1)	.63	.30	.11	.05	.11	.12	.11	.41	.88	.44	.17	.10	.16	.92	2.68	1.17	.00	8.35
(2)	.63	.30	.11	.05	.11	.12	.11	.41	.88	.44	.17	.10	.16	.92	2.68	1.17	.00	8.35
19-24	31	6	1	1	6	9	17	36	60	11	1	2	4	74	349	95	0	703
(1)	.08	.02	.00	.00	.02	.02	.04	.09	.15	.03	.00	.01	.01	.19	.87	.24	.00	1.76
(2)	.08	.02	.00	.00	.02	.02	.04	.09	.15	.03	.00	.01	.01	.19	.87	.24	.00	1.76
GT 24	0	0	0	0	2	0	7	15	8	0	0	0	0	7	35	11	0	85
(1)	.00	.00	.00	.00	.01	.00	.02	.04	.02	.00	.00	.00	.00	.02	.09	.03	.00	.21
(2)	.00	.00	.00	.00	.01	.00	.02	.04	.02	.00	.00	.00	.00	.02	.09	.03	.00	.21
ALL SPEEDS	3114	2391	2003	1316	1063	1058	1555	3124	4276	3424	1959	1538	1590	2547	4905	4042	0	39905
(1)	7.80	5.99	5.02	3.30	2.66	2.65	3.90	7.83	10.72	8.58	4.91	3.85	3.98	6.38	12.29	10.13	.00	100.00
(2)	7.80	5.99	5.02	3.30	2.66	2.65	3.90	7.83	10.72	8.58	4.91	3.85	3.98	6.38	12.29	10.13	.00	100.00

(1)=PERCENT OF ALL GOOD OBSERVATIONS FOR THIS PAGE
 (2)=PERCENT OF ALL GOOD OBSERVATIONS FOR THIS PERIOD
 C= CALM (WIND SPEED LESS THAN OR EQUAL TO .95 MPH)

FIGURE 1

MAINE YANKEE JAN 1986-DEC 1990

35-FOOT WIND DATA



STABILITY CLASS ALL
CALM WINDS 0.82%

WIND SPEED (MPH)

NOTE: Frequencies indicate direction from which the wind is blowing.

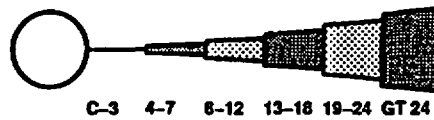
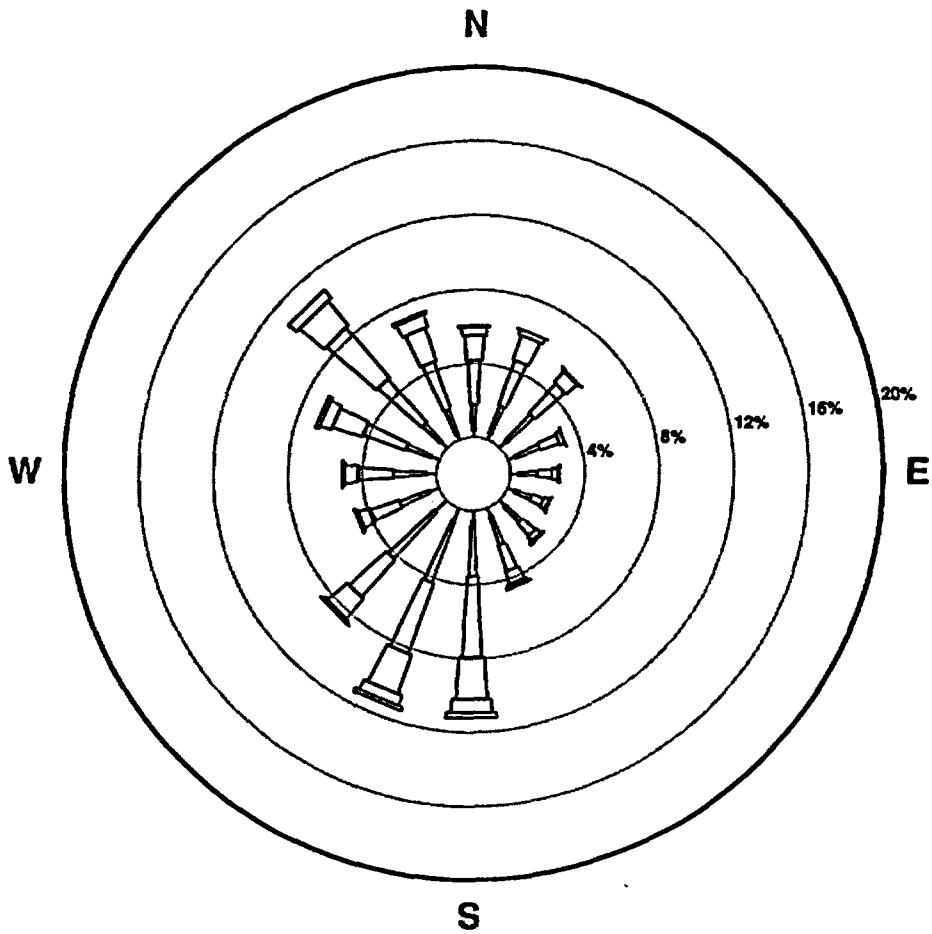


FIGURE 2

MAINE YANKEE JAN 1986-DEC 1990

197-FOOT WIND DATA



STABILITY CLASS ALL
CALM WINDS 0.13%

WIND SPEED (MPH)

NOTE: Frequencies indicate
direction from which
the wind is blowing.

