

NINE MILE POINT NUCLEAR STATION - UNIT 2

SEMI-ANNUAL RADIOACTIVE EFFLUENT

RELEASE REPORT

JANUARY - JUNE 1987

DOCKET NO.: 50-410

LICENSE NO.: NPF-69

NIAGARA MOHAWK POWER CORPORATION

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NINE MILE POINT NUCLEAR STATION - UNIT 2
SEMI-ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT

JANUARY - JUNE 1987

Facility: Nine Mile Point Unit #2

Licensee: Niagara Mohawk Power Corporation

1. Technical Specification Limits:

A) Fission and activation gases:

1. The dose rate limit of noble gases from the site to areas at and beyond the site boundary shall be less than or equal to 500 mrem/year to the whole body and less than or equal to 3000 mrem/year to the skin.
2. The air dose from noble gases released in gaseous effluents from the Nine Mile Point 2 Station to areas at and beyond the site boundary shall be limited during any calendar quarter to less than or equal to 5 mrad for gamma radiation and less than or equal to 10 mrad for beta radiation and, during any calendar year to less than or equal to 10 mrad for gamma radiation and less than or equal to 20 mrad for beta radiation.

B&C) Tritium, Iodines and Particulates, half lives > 8 days:

1. The dose rate limit of Iodine-131, Iodine-133, Tritium and all radionuclides in particulate form with half-lives greater than eight days, released gaseous effluents from the site to areas at or beyond the site boundary, shall be less than or equal to 1500 mrem/year to any organ.
2. The dose to a member of the public from Iodine-131, Iodine-133, Tritium and all radionuclides in particulate form with half lives greater than 8 days as part of gaseous effluents released from the Nine Mile Point 2 Station to areas at and beyond the site boundary shall be limited during any calendar quarter to less than or equal to 7.5 mrem to any organ and, during any calendar year to less than or equal to 15 mrem to any organ.

D) Liquid Effluents

1. The concentration of radioactive material released in liquid effluents to unrestricted areas shall be limited to the concentrations specified in 10 CFR Part 20, Appendix B, Table II, Column 2 for radionuclides other than dissolved or entrained noble gases. For dissolved or entrained noble gas, the concentration shall be limited to 2E-04 microcuries/ml total activity.



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D. Liquid Effluents (Cont'd)

2. The dose or dose commitment to a member of the public from radioactive materials in liquid effluents released from Nine Mile Point Unit 2 to unrestricted areas shall be limited during any calendar quarter to less than or equal to 1.5 mrem to the whole body and to less than or equal to 5 mrem to any organ, and during any calendar year to less than or equal to 3 mrem to the whole body and to less than or equal to 10 mrem to any organ.

2. Maximum Permissible Concentrations

A) Fission and activation gases:

None specified

B&C) Iodines and particulates, half lives \geq 8 days:

None specified

D) Liquid Effluents:

10CFR 20, Appendix B, Table II, Column 2.

Avg MPC (Jan. - March) = zero

Avg MPC (April - June) = 6.96E-5

3. Average Energy (Fission and Activation gases - Mev)

Jan. - March: $\bar{E}_\gamma = 0$; $\bar{E}_\beta = 0$

Apr. - June: $\bar{E}_\gamma = 0.996$; $\bar{E}_\beta = 0.608$

4. Measurements and Approximations of Total Radioactivity

Described below are the methods used to measure or approximate the total radioactivity and radionuclide composition in effluents.

- A) Fission and Activation Gases: Noble gas effluent activity is determined by on-line gamma spectroscopic monitoring (intrinsic germanium crystal) of an isokinetic sample stream.
- B) Iodines: Iodine effluent activity is determined by gamma spectroscopic analysis (at least weekly) of charcoal cartridges manually or automatically sampled from an isokinetic sample stream.
- C) Particulates: Activity released is determined by gamma spectroscopic analysis (at least weekly) of particulate filters manually or automatically sampled from an isokinetic sample stream.



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4. (Cont'd)

- D) Tritium: Tritium effluent activity is estimated by liquid scintillation or gas proportional counting of monthly samples taken with an air sparging/water trap apparatus.
- E) Liquid Effluents: Isotopic Analysis of a representative sample of each batch.
- F) Solid Effluents: Isotopic contents of waste shipments are determined by gamma spectroscopy, gross alpha and water content analyses of a representative sample of each batch. Scaling factors established from primary composite sample analyses conducted off-site are applied, where appropriate, to find estimated concentration of non-gamma emitters. For low activity trash shipments, curie content is estimated by dose rate measurement and application of appropriate scaling factors.

5. Batch Releases

The following information relates to batch releases of radioactive materials in liquid and gaseous effluents.

A) Liquid - 2nd Quarter only as plant was not critical until then.

- 1. Number of batch releases: 96 (17 with detectable activity)
- 2. Total time period for batch releases: 330 hours 12 min.
- 3. Maximum time period for a batch release: 3 hours 28 min.
- 4. Average time period for a batch release: 3 hours 26 min.
- 5. Minimum time period for a batch release: 3 hours 16 min.
- 6. Average stream flow during period of release of effluent into a flowing stream: Not Applicable
- 7. Total volume of water used to dilute the liquid effluent during release periods : 2.35 E9 liters
- 8. Total volume of water available to dilute the liquid effluent during reporting period : 1.39 E10 liters

B) Gaseous (Primary Containment Purge)

- 1. Number of batch releases: 1
- 2. Total time period for batch releases: 77.8 hours
- 3. Maximum time period for a batch release: 77.8 hours
- 4. Average time period ofr a batch release: 77.8 hours
- 5. Minimum time period for a batch release: 77.8 hours

6. Abnormal Releases

- A. Liquids - none
- B. Gaseous - none

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TABLE 1A

SEMI-ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT (1987)
 NINE MILE POINT NUCLEAR STATION #2
 GASEOUS EFFLUENTS-SUMMATION OF ALL RELEASES
 ELEVATED AND GROUND LEVEL

JANUARY - JUNE 1987

	<u>UNIT</u>	<u>1st</u> <u>QUARTER</u>	<u>2nd</u> <u>QUARTER</u>	<u>EST. TOTAL</u> <u>ERROR, %</u>
A. <u>Fission & Activation gases</u>				
1. Total release	Ci	-----	1.37E+00	5.0E+01
2. Average release rate for period	µCi/sec	-----	1.74E-01	
3. Percent of Technical Specification Limit	%	-----	*	
B. <u>Iodines</u>				
1. Total iodine-131	Ci	-----	-----	-----
2. Average release rate for period	µCi/sec	-----	-----	
3. Percent of Technical Specification Limit	%	-----	*	
C. <u>Particulates</u>				
1. Particulates with half- lives >8 days	Ci	-----	-----	-----
2. Average release rate for period	µCi/sec	-----	-----	
3. Percent of Technical Specification Limit	%	-----	*	
4. Gross alpha radio- activity	Ci	-----	4.18E-5	-----
D. <u>Tritium</u>				
1. Total release	Ci	-----	-----	-----
2. Average release rate for period	µCi/sec	-----	-----	
3. Percent of Technical Specification Limit	%	-----	*	



TABLE 1A
(Continued)

SEMI-ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT (1987)
NINE MILE POINT NUCLEAR STATION #2
GASEOUS EFFLUENTS-SUMMATION OF ALL RELEASES
ELEVATED AND GROUND LEVEL

JANUARY - JUNE

	<u>UNIT</u>	<u>1st</u> <u>QUARTER</u>	<u>2nd</u> <u>QUARTER</u>
<u>E.* Percent of Technical Specification Limits (NMP-2 Elevated Release)</u>			
<u>Fission and Activation Gases:</u>			
1.	Percent of Quarterly Gamma Air Dose Limit	%	----- 1.25E-02
2.	Percent of Quarterly Beta Air Dose Limit	%	----- 4.51E-05
3.	Percent of Annual Gamma Air Dose Limit to Date	%	----- 6.23E-03
4.	Percent of Annual Beta Air Dose Limit to Date	%	----- 9.01E-05
5.	Percent of Whole Body Dose Rate Limit	%	----- 4.86E-04
6.	Percent of Skin Dose Rate Limit	%	----- 9.37E-05
<u>Tritium, Iodines and Particulates (with half-lives greater than 8 days):</u>			
1.	Percent of Quarterly Dose Limit	%	----- -----
2.	Percent of Annual Dose Limit to Date	%	----- -----
3.	Percent of Organ Dose Rate Limit	%	----- -----



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TABLE 1B

SEMI-ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT (1987)
 NINE MILE POINT NUCLEAR STATION #2
 GASEOUS EFFLUENTS-ELEVATED (STACK)

JANUARY - JUNE

Nuclides Released	Unit	CONTINUOUS MODE		BATCH MODE	
		1st Quarter	2nd Quarter	1st Quarter	2nd Quarter
1. <u>Fission Gases</u>					
Argon-41	Ci	-----	3.98E-01	-----	-----
Krypton-85m	Ci	-----	-----	-----	-----
Krypton-87	Ci	-----	-----	-----	-----
Krypton-88	Ci	-----	-----	-----	-----
Xenon-133	Ci	-----	-----	-----	-----
Xenon-135	Ci	-----	-----	-----	-----
Xenon-135m	Ci	-----	-----	-----	-----
Xenon-137	Ci	-----	4.84E-02	-----	-----
Xenon-138	Ci	-----	9.26E-01	-----	-----
2. <u>Iodines</u>					
Iodine-131	Ci	-----	-----	-----	-----
Iodine-133	Ci	-----	-----	-----	-----
Iodine-135	Ci	-----	-----	-----	-----
3. <u>Particulates</u>					
Strontium-89	Ci	-----	#	-----	-----
Strontium-90	Ci	-----	#	-----	-----
Cesium-134	Ci	-----	-----	-----	-----
Cesium-137	Ci	-----	-----	-----	-----
Cobalt-60	Ci	-----	-----	-----	-----
Cobalt-58	Ci	-----	-----	-----	-----
Manganese-54	Ci	-----	-----	-----	-----
Barium-Lanthanum-140	Ci	-----	-----	-----	-----
Antimony-125	Ci	-----	-----	-----	-----
Niobium-95	Ci	-----	-----	-----	-----
Cerium-141	Ci	-----	-----	-----	-----
Cerium-144	Ci	-----	-----	-----	-----
Iron-59	Ci	-----	-----	-----	-----
Cesium-136	Ci	-----	-----	-----	-----
Chromium-51	Ci	-----	-----	-----	-----
Zinc-65	Ci	-----	-----	-----	-----
Iron-55	Ci	-----	#	-----	-----
4. <u>Tritium</u>					
	Ci	-----	-----	-----	-----

Sr89, 90 and Fe-55 analysis results have not been received yet.



TABLE 1C

SEMI-ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT (1987)
 NINE MILE POINT NUCLEAR STATION #2
 GASEOUS EFFLUENTS-COMBINED GROUND LEVEL-ELEVATED (REACTOR BUILDING VENT)

JANUARY - JUNE

Nuclides Released	Unit	CONTINUOUS MODE		BATCH MODE	
		<u>1st Quarter</u>	<u>2nd Quarter</u>	<u>1st Quarter</u>	<u>2nd Quarter</u>
1. <u>Fission Gases</u>					
Argon-41	Ci	-----	-----	-----	-----
Krypton-85m	Ci	-----	-----	-----	-----
Krypton-87	Ci	-----	-----	-----	-----
Krypton-88	Ci	-----	-----	-----	-----
Xenon-133	Ci	-----	-----	-----	-----
Xenon-135	Ci	-----	-----	-----	-----
Xenon-135m	Ci	-----	-----	-----	-----
Xenon-137	Ci	-----	-----	-----	-----
Xenon-138	Ci	-----	-----	-----	-----
2. <u>Iodines</u>					
Iodine-131	Ci	-----	-----	-----	-----
Iodine-133	Ci	-----	-----	-----	-----
Iodine-135	Ci	-----	-----	-----	-----
3. <u>Particulates</u>					
Strontium-89	Ci	-----	#	-----	-----
Strontium-90	Ci	-----	#	-----	-----
Cesium-134	Ci	-----	-----	-----	-----
Cesium-137	Ci	-----	-----	-----	-----
Cobalt-60	Ci	-----	-----	-----	-----
Cobalt-58	Ci	-----	-----	-----	-----
Manganese-54	Ci	-----	-----	-----	-----
Barium-Lanthanum-140	Ci	-----	-----	-----	-----
Antimony-125	Ci	-----	-----	-----	-----
Niobium-95	Ci	-----	-----	-----	-----
Cerium-141	Ci	-----	-----	-----	-----
Cerium-144	Ci	-----	-----	-----	-----
Iron-59	Ci	-----	-----	-----	-----
Cesium-136	Ci	-----	-----	-----	-----
Chromium-51	Ci	-----	-----	-----	-----
Zinc-65	Ci	-----	-----	-----	-----
Iron-55	Ci	-----	#	-----	-----
4. <u>Tritium</u>					
	Ci	-----	-----	-----	-----

Sr89, 90 and Fe-55 results have not been received yet.



TABLE 2A

SEMI-ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT (1987)
 NINE MILE POINT NUCLEAR STATION #2
 LIQUID EFFLUENTS-SUMMATION OF ALL RELEASES

JANUARY - JUNE

	<u>Unit</u>	<u>1st</u> <u>Quarter</u>	<u>2nd</u> <u>Quarter</u>	<u>Est. Total</u> <u>Error, %</u>
A. <u>Fission and activation products</u>				
1. Total release (not including tritium, gases, alpha)	Ci	-----	2.64E-3	5.00E+1
2. Average diluted concentration during reporting period	µCi/ml	-----	1.12E-9	
3. Percent of applicable limit	%	-----	7.68E-4	
B. <u>Tritium</u>				
1. Total release	Ci	-----	-----	-----
2. Average diluted concentration during reporting period	µCi/ml	-----	-----	
3. Percent of applicable limit	%	-----	-----	
C. <u>Dissolved and entrained gases</u>				
1. Total release	Ci	-----	-----	-----
2. Average diluted concentration during reporting period	µCi/ml	-----	-----	
3. Percent of applicable limit	%	-----	-----	
D. <u>Gross alpha radioactivity</u>				
1. Total release	Ci	-----	-----	-----
E. <u>Volumes</u>				
1. Prior to dilution	liters	-----	1.59E+6	5.00E+1
2. Volume of dilution water used during release period	liters	-----	2.35E+9	5.00E+1
3. Volume of dilution water used during reporting period	liters	-----	1.57E+10	5.00E+1



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TABLE 2A
(Continued)

SEMI-ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT (1987)
NINE MILE POINT NUCLEAR STATION #2
LIQUID EFFLUENTS-SUMMATION OF ALL RELEASES

JANUARY - JUNE

	<u>Unit</u>	<u>1st</u> <u>Quarter</u>	<u>2nd</u> <u>Quarter</u>
F. <u>Percent of Technical Specification Limits</u>			
1. Percent of Quarterly Whole Body Dose Limit	%	-----	5.91E-4
2. Percent of Quarterly Organ Dose Limit (GI-LLI)	%	-----	2.80E-3
3. Percent of Annual Whole Body Dose Limit to Date	%	-----	2.96E-4
4. Percent of Annual Organ Dose Limit to Date (GI-LLI)	%	-----	1.40E-3
5. Percent of 10CFR20 Concentration Limit	%	-----	7.68E-4
6. Percent of Dissolved or Entrained Noble Gas Limit	%	-----	-----



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TABLE 2B

RADIOACTIVE EFFLUENT RELEASE SEMI-ANNUAL REPORT (1987)
 NINE MILE POINT NUCLEAR STATION #2
 LIQUID EFFLUENTS RELEASED
 JANUARY - JUNE

Nuclides Released	Unit	CONTINUOUS MODE		BATCH MODE	
		1st Quarter	2nd Quarter	1st Quarter	2nd Quarter
Strontium-89	Ci	-----	-----	-----	-----
Strontium-90	Ci	-----	-----	-----	-----
Cesium-134	Ci	-----	-----	-----	-----
Cesium-137	Ci	-----	-----	-----	-----
Iodine-131	Ci	-----	-----	-----	-----
Cobalt-58	Ci	-----	-----	-----	8.59E-4
Cobalt-60	Ci	-----	-----	-----	-----
Manganese-54	Ci	-----	-----	-----	-----
Chromium-51	Ci	-----	-----	-----	1.15E-3
Zirconium-niobium-95Ci		-----	-----	-----	-----
Barium-lanthanum-140Ci		-----	-----	-----	-----
Tungsten-187	Ci	-----	-----	-----	-----
Arsenic-76	Ci	-----	-----	-----	-----
Iodine-133	Ci	-----	-----	-----	-----
Iron-59	Ci	-----	-----	-----	-----
Iron-55	Ci	-----	-----	-----	-----
Neptunium-239	Ci	-----	-----	-----	-----
Praseodymium-144	Ci	-----	-----	-----	-----
Iodine-135	Ci	-----	-----	-----	-----
Σ Dissolved or Entrained Gases	Ci	-----	-----	-----	-----
Manganese-56	Ci	-----	-----	-----	5.94E-4
Sodium-24	Ci	-----	-----	-----	3.61E-5
Technetium-99m	Ci	-----	-----	-----	2.68E-6
Molybdenum-99	Ci	-----	-----	-----	3.04E-6



TABLE 3A

SEMI-ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT (1987)
 NINE MILE POINT NUCLEAR STATION #2
 SOLID WASTE AND IRRADIATED FUEL SHIPMENTS

A. Solid Waste Shipped Off-Site for Burial or Disposal (Not irradiated fuel)

1. <u>Class of Waste</u>	JANUARY - JUNE	Est. Total Error, %
a. <u>Class A</u>		
None		
b. <u>Class B</u>		
None		
c. <u>Class C</u>		
None		



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TABLE 3A
(Continued)

SEMI-ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT (1987)
NINE MILE POINT NUCLEAR STATION #2
SOLID WASTE AND IRRADIATED FUEL SHIPMENTS

2. Estimate of Major Nuclide Composition (by Type of Waste)

a. Evaporator Bottoms - Resins - Filter Media

Cobalt-60	-----
Cesium-137	-----
Manganese-54	-----
Iron-55	-----
Cobalt-58	-----
Lanthanum-140	-----
Barium-140	-----
Cr-51	-----
Cesium-134	-----
Other	-----

b. Dry Compressible Waste, Contaminated Components

<u>Nuclide</u>	<u>Percent</u>
Cobalt-60	-----
Cesium-137	-----
Iron-55	-----
Manganese-54	-----
Nickel-63	-----
Cesium-134	-----
Other	-----

c. Contaminated Oil

<u>Nuclide</u>	<u>Percent</u>
Tritium	-----
Cesium-137	-----
Cobalt-60	-----
Other	-----

3. Solid Waste Disposition

<u>Number of Shipments</u>	<u>Mode</u>	<u>Destination</u>
None		



TABLE 3A
(Last Page)

SEMI-ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT (1987)
NINE MILE POINT NUCLEAR STATION #2
SOLID WASTE AND IRRADIATED FUEL SHIPMENTS

4. Irradiated Reactor Components Disposition

a.	<u>Number of Shipments</u>	<u>Mode</u>	<u>Destination</u>
	None	-	-

5. Irradiated Fuel Shipments Disposition

	<u>Number of Shipments</u>	<u>Mode</u>	<u>Destination</u>
	None	-	-



TABLE 4

SEMI-ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT (1987)
NINE MILE POINT NUCLEAR STATION # 2
HOURS AT EACH WIND SPEED AND DIRECTION

JANUARY - JUNE

- See attached pages -



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NIAGARA MOHAWK POWER CORPORATION

WIND SPEED, WIND DIRECTION AND ATMOSPHERIC STABILITY JOINT FREQUENCY DISTRIBUTION

SITE: NINE MILE POINT MAIN TOWER

PARAMETERS: WSPL, WDRL AND TDFU

JANUARY 1, 1987 TO

MARCH 31, 1987

STABILITY CLASS - ALL

% FREQUENCY (NO. OF OCCURENCES) OF WIND DIRECTION WITHIN WIND SPEED CATEGORY

DIRECTION	SPEED (MPH)							TOTAL
	00-03 MPH	04-07	08-12	13-18 MPH	19-23	>24		
N	0.3 (5)	1.3 (26)	3.2 (64)	2.1 (42)	0.2 (3)	0.1 (2)	7.1 (142)	
NNE	0.5 (10)	2.7 (54)	4.1 (82)	1.7 (34)	0.1 (2)	0.0 (0)	9.2 (182)	
NE	0.5 (9)	4.0 (79)	2.2 (44)	0.4 (8)	0.0 (0)	0.0 (0)	7.0 (140)	
ENE	1.0 (20)	1.6 (31)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	2.6 (51)	
E	0.9 (18)	1.4 (28)	0.1 (1)	0.0 (0)	0.0 (0)	0.0 (0)	2.4 (47)	
ESE	0.9 (18)	4.0 (79)	1.7 (34)	0.5 (10)	0.0 (0)	0.0 (0)	7.1 (141)	
SE	1.1 (21)	3.9 (78)	2.4 (47)	0.5 (9)	0.0 (0)	0.0 (0)	7.8 (155)	
SSE	0.8 (16)	3.4 (68)	1.8 (35)	0.6 (11)	0.0 (0)	0.0 (0)	6.5 (130)	
S	0.6 (12)	3.2 (63)	1.3 (25)	0.2 (3)	0.0 (0)	0.0 (0)	5.2 (103)	
SSW	0.7 (14)	1.9 (38)	1.1 (21)	0.3 (6)	0.0 (0)	0.0 (0)	4.0 (79)	
SW	0.5 (9)	2.1 (42)	1.7 (34)	1.2 (24)	0.1 (1)	0.0 (0)	5.5 (110)	
WSW	0.2 (4)	0.8 (15)	2.6 (51)	1.3 (25)	0.2 (4)	0.7 (13)	5.6 (112)	
W	0.2 (4)	1.2 (24)	0.6 (12)	1.6 (31)	1.1 (21)	1.8 (35)	6.4 (127)	
WNW	0.2 (4)	0.4 (8)	1.8 (35)	2.0 (40)	1.7 (33)	1.0 (19)	7.0 (139)	
NW	0.2 (3)	0.9 (17)	2.7 (53)	2.9 (57)	2.2 (43)	0.5 (10)	9.2 (183)	
NNW	0.3 (6)	0.8 (15)	2.6 (51)	2.8 (55)	0.6 (12)	0.4 (8)	7.4 (147)	
TOTAL	8.7 (173)	33.5 (665)	29.6 (589)	17.9 (355)	6.0 (119)	4.4 (87)	99.9 (1988)	

FOR STABILITY CLASS - ALL

NUMBER OF POSSIBLE HOURLY OBSERVATIONS: 1988

NUMBER OF MISSING WIND OBSERVATIONS: 0

NUMBER OF CALM HOURS: 1



NIAGARA MOHAWK POWER CORPORATION

WIND SPEED, WIND DIRECTION AND ATMOSPHERIC STABILITY JOINT FREQUENCY DISTRIBUTION

SITE: NINE MILE POINT MAIN TOWER

PARAMETERS: WSPL, WDRL AND TDFU

JANUARY 1, 1987 TO

MARCH 31, 1987

STABILITY CLASS - A

% FREQUENCY (NO. OF OCCURENCES) OF WIND DIRECTION WITHIN WIND SPEED CATEGORY

DIRECTION	00-03 MPH		04-07		08-12		SPEED (MPH) 13-18 MPH		19-23		>24		TOTAL	
N	0.0	(0)	0.0	(0)	0.4	(8)	0.1	(1)	0.0	(0)	0.1	(1)	0.5	(10)
NNE	0.0	(0)	0.1	(1)	0.6	(12)	0.5	(10)	0.1	(1)	0.0	(0)	1.2	(24)
NE	0.0	(0)	0.1	(2)	0.1	(2)	0.0	(0)	0.0	(0)	0.0	(0)	0.2	(4)
ENE	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)
E	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)
ESE	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)
SE	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)
SSE	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)
S	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)
SSW	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)
SW	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)
WSW	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.3	(6)	0.3	(6)
W	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.3	(6)	0.3	(6)
WNW	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.1	(1)	0.0	(0)	0.1	(1)
NW	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.2	(3)	0.1	(2)	0.3	(5)
NNW	0.0	(0)	0.0	(0)	0.2	(3)	0.1	(1)	0.2	(4)	0.2	(3)	0.6	(11)
TOTAL	0.0	(0)	0.2	(3)	1.3	(25)	0.6	(12)	0.5	(9)	0.9	(18)	3.4	(67)

FOR STABILITY CLASS - A

NUMBER OF POSSIBLE HOURLY OBSERVATIONS: 67

NUMBER OF MISSING WIND OBSERVATIONS: 0

NUMBER OF CALM HOURS: 1



NIAGARA MOHAWK POWER CORPORATION

WIND SPEED, WIND DIRECTION AND ATMOSPHERIC STABILITY JOINT FREQUENCY DISTRIBUTION

SITE: NINE MILE POINT MAIN TOWER

PARAMETERS: WSPL, WDRL AND TDFU

JANUARY 1, 1987 TO

MARCH 31, 1987

STABILITY CLASS - B

% FREQUENCY (NO. OF OCCURENCES) OF WIND DIRECTION WITHIN WIND SPEED CATEGORY

DIRECTION	00-03 MPH		04-07		08-12		SPEED (MPH) 13-18 MPH		19-23		>24		TOTAL	
N	0.0	(0)	0.1	(2)	0.4	(8)	0.2	(3)	0.0	(0)	0.0	(0)	0.7	(13)
NNE	0.0	(0)	0.1	(1)	0.4	(8)	0.4	(8)	0.0	(0)	0.0	(0)	0.9	(17)
NE	0.0	(0)	0.0	(0)	0.1	(1)	0.0	(0)	0.0	(0)	0.0	(0)	0.1	(1)
ENE	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)
E	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)
ESE	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)
SE	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)
SSE	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)
S	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)
SSW	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)
SW	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)
WSW	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.1	(1)	0.1	(1)
W	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.1	(1)	0.1	(1)	0.1	(2)
WNW	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.1	(1)	0.1	(2)	0.2	(3)
NW	0.0	(0)	0.0	(0)	0.1	(1)	0.1	(1)	0.1	(1)	0.0	(0)	0.2	(3)
NNW	0.0	(0)	0.1	(1)	0.1	(2)	0.2	(4)	0.0	(0)	0.1	(1)	0.4	(8)
TOTAL	0.0	(0)	0.2	(4)	1.0	(20)	0.8	(16)	0.2	(3)	0.3	(5)	2.4	(48)

FOR STABILITY CLASS - B

NUMBER OF POSSIBLE HOURLY OBSERVATIONS: 48

NUMBER OF MISSING WIND OBSERVATIONS: 0

NUMBER OF CALM HOURS: 1



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NIAGARA MOHAWK POWER CORPORATION

WIND SPEED, WIND DIRECTION AND ATMOSPHERIC STABILITY JOINT FREQUENCY DISTRIBUTION

SITE: NINE MILE POINT MAIN TOWER

PARAMETERS: WSPL, WDRL AND TDFU

JANUARY 1, 1987 TO

MARCH 31, 1987

STABILITY CLASS - C

% FREQUENCY (NO. OF OCCURENCES) OF WIND DIRECTION WITHIN WIND SPEED CATEGORY

DIRECTION	00-03 MPH	04-07	08-12	SPEED (MPH) 13-18 MPH	19-23	>24	TOTAL
N	0.0 (0)	0.0 (0)	0.2 (4)	0.2 (4)	0.0 (0)	0.0 (0)	0.4 (8)
NNE	0.0 (0)	0.1 (1)	0.3 (5)	0.3 (6)	0.1 (1)	0.0 (0)	0.7 (13)
NE	0.0 (0)	0.3 (5)	0.2 (3)	0.0 (0)	0.0 (0)	0.0 (0)	0.4 (8)
ENE	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)
E	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)
ESE	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)
SE	0.0 (0)	0.0 (0)	0.1 (1)	0.0 (0)	0.0 (0)	0.0 (0)	0.1 (1)
SSE	0.0 (0)	0.0 (0)	0.1 (1)	0.0 (0)	0.0 (0)	0.0 (0)	0.1 (1)
S	0.0 (0)	0.1 (1)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.1 (1)
SSW	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)
SW	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)
WSW	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.1 (1)	0.1 (1)
W	0.0 (0)	0.0 (0)	0.1 (1)	0.0 (0)	0.0 (0)	0.1 (1)	0.1 (2)
WNW	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)
NW	0.0 (0)	0.0 (0)	0.1 (1)	0.2 (3)	0.1 (1)	0.0 (0)	0.3 (5)
NNW	0.0 (0)	0.0 (0)	0.3 (6)	0.3 (6)	0.1 (2)	0.1 (1)	0.8 (15)
TOTAL	0.0 (0)	0.4 (7)	1.1 (22)	1.0 (19)	0.2 (4)	0.2 (3)	2.8 (55)

FOR STABILITY CLASS - C

NUMBER OF POSSIBLE HOURLY OBSERVATIONS: 55

NUMBER OF MISSING WIND OBSERVATIONS: 0

NUMBER OF CALM HOURS: 1

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NIAGARA MOHAWK POWER CORPORATION

WIND SPEED, WIND DIRECTION AND ATMOSPHERIC STABILITY JOINT FREQUENCY DISTRIBUTION

SITE: NINE MILE POINT MAIN TOWER

PARAMETERS: WSPL, WDRL AND TDFU

JANUARY 1, 1987 TO

MARCH 31, 1987

STABILITY CLASS - D

% FREQUENCY (NO. OF OCCURENCES) OF WIND DIRECTION WITHIN WIND SPEED CATEGORY

DIRECTION	00-03 MPH		04-07		08-12		SPEED (MPH) 13-18 MPH		19-23		>24		TOTAL	
N	0.1	(1)	0.9	(18)	1.9	(37)	1.5	(30)	0.2	(3)	0.1	(1)	4.5	(90)
NNE	0.1	(2)	2.1	(42)	2.8	(55)	0.5	(10)	0.0	(0)	0.0	(0)	5.5	(109)
NE	0.2	(3)	2.3	(46)	1.8	(36)	0.4	(8)	0.0	(0)	0.0	(0)	4.7	(93)
ENE	0.2	(3)	0.9	(18)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	1.1	(21)
E	0.1	(2)	0.3	(6)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.4	(8)
ESE	0.0	(0)	1.0	(20)	1.3	(26)	0.4	(8)	0.0	(0)	0.0	(0)	2.7	(54)
SE	0.1	(2)	1.5	(30)	1.6	(32)	0.4	(8)	0.0	(0)	0.0	(0)	3.6	(72)
SSE	0.1	(1)	0.5	(9)	0.4	(8)	0.5	(9)	0.0	(0)	0.0	(0)	1.4	(27)
S	0.0	(0)	0.5	(10)	0.8	(16)	0.2	(3)	0.0	(0)	0.0	(0)	1.5	(29)
SSW	0.0	(0)	0.7	(14)	0.9	(17)	0.3	(6)	0.0	(0)	0.0	(0)	1.9	(37)
SW	0.0	(0)	1.4	(28)	1.1	(21)	1.0	(20)	0.1	(1)	0.0	(0)	3.5	(70)
WSW	0.0	(0)	0.3	(5)	0.8	(16)	0.5	(10)	0.2	(3)	0.3	(5)	2.0	(39)
W	0.1	(1)	0.3	(5)	0.3	(6)	0.9	(18)	0.8	(15)	1.1	(22)	3.4	(67)
WNW	0.0	(0)	0.1	(2)	1.6	(32)	1.8	(35)	1.2	(23)	0.8	(16)	5.4	(108)
NW	0.0	(0)	0.6	(12)	2.3	(45)	2.5	(50)	1.9	(38)	0.4	(8)	7.7	(153)
NNW	0.2	(4)	0.5	(10)	1.6	(32)	2.2	(43)	0.2	(4)	0.2	(3)	4.8	(96)
TOTAL	1.0	(19)	13.8	(275)	19.1	(379)	13.0	(258)	4.4	(87)	2.8	(55)	53.9	(1073)

FOR STABILITY CLASS - D

NUMBER OF POSSIBLE HOURLY OBSERVATIONS: 1073

NUMBER OF MISSING WIND OBSERVATIONS: 0

NUMBER OF CALM HOURS: 1



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NIAGARA MOHAWK POWER CORPORATION

WIND SPEED, WIND DIRECTION AND ATMOSPHERIC STABILITY JOINT FREQUENCY DISTRIBUTION

SITE: NINE MILE POINT MAIN TOWER

PARAMETERS: WSPL, WDRL AND TDFU

JANUARY 1, 1987 TO

MARCH 31, 1987

STABILITY CLASS - E

% FREQUENCY (NO. OF OCCURENCES) OF WIND DIRECTION WITHIN WIND SPEED CATEGORY

DIRECTION	00-03 MPH		04-07		08-12		SPEED (MPH) 13-18 MPH		19-23		>24		TOTAL	
N	0.1	(1)	0.2	(3)	0.2	(3)	0.1	(1)	0.0	(0)	0.0	(0)	0.4	(8)
NNE	0.1	(2)	0.4	(8)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.5	(10)
NE	0.1	(2)	0.8	(16)	0.1	(2)	0.0	(0)	0.0	(0)	0.0	(0)	1.0	(20)
ENE	0.5	(9)	0.7	(13)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	1.1	(22)
E	0.4	(7)	0.8	(15)	0.1	(1)	0.0	(0)	0.0	(0)	0.0	(0)	1.2	(23)
ESE	0.2	(4)	1.7	(34)	0.4	(8)	0.1	(2)	0.0	(0)	0.0	(0)	2.4	(48)
SE	0.2	(3)	1.7	(33)	0.7	(14)	0.1	(1)	0.0	(0)	0.0	(0)	2.6	(51)
SSE	0.2	(3)	1.6	(32)	1.2	(24)	0.1	(2)	0.0	(0)	0.0	(0)	3.1	(61)
S	0.1	(2)	1.7	(33)	0.5	(9)	0.0	(0)	0.0	(0)	0.0	(0)	2.2	(44)
SSW	0.1	(2)	0.8	(16)	0.2	(4)	0.0	(0)	0.0	(0)	0.0	(0)	1.1	(22)
SW	0.2	(3)	0.5	(10)	0.7	(13)	0.2	(4)	0.0	(0)	0.0	(0)	1.5	(30)
WSW	0.1	(2)	0.5	(9)	1.6	(31)	0.4	(8)	0.1	(1)	0.0	(0)	2.6	(51)
W	0.1	(2)	0.5	(10)	0.3	(5)	0.7	(13)	0.3	(5)	0.3	(5)	2.0	(40)
WNW	0.1	(1)	0.2	(4)	0.2	(3)	0.3	(5)	0.4	(8)	0.1	(1)	1.1	(22)
NW	0.2	(3)	0.2	(3)	0.2	(3)	0.2	(3)	0.0	(0)	0.0	(0)	0.6	(12)
NNW	0.1	(1)	0.1	(1)	0.2	(3)	0.1	(1)	0.1	(2)	0.0	(0)	0.4	(8)
TOTAL	2.4	(47)	12.1	(240)	6.2	(123)	2.0	(40)	0.8	(16)	0.3	(6)	23.7	(472)

FOR STABILITY CLASS - E

NUMBER OF POSSIBLE HOURLY OBSERVATIONS: 472

NUMBER OF MISSING WIND OBSERVATIONS: 0

NUMBER OF CALM HOURS: 1



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NIAGARA MOHAWK POWER CORPORATION

WIND SPEED, WIND DIRECTION AND ATMOSPHERIC STABILITY JOINT FREQUENCY DISTRIBUTION

SITE: NINE MILE POINT MAIN TOWER

PARAMETERS: WSPL, WDRL AND TDFU

JANUARY 1, 1987 TO

MARCH 31, 1987

STABILITY CLASS - F

% FREQUENCY (NO. OF OCCURENCES) OF WIND DIRECTION WITHIN WIND SPEED CATEGORY

DIRECTION	00-03 MPH		04-07		08-12		SPEED (MPH) 13-18 MPH		19-23		>24		TOTAL	
N	0.1	(2)	0.1	(1)	0.1	(2)	0.2	(3)	0.0	(0)	0.0	(0)	0.4	(8)
NNE	0.1	(2)	0.0	(0)	0.1	(2)	0.0	(0)	0.0	(0)	0.0	(0)	0.2	(4)
NE	0.2	(3)	0.3	(5)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.4	(8)
ENE	0.3	(6)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.3	(6)
E	0.3	(6)	0.2	(3)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.5	(9)
ESE	0.1	(2)	0.8	(16)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.9	(18)
SE	0.2	(3)	0.5	(10)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.7	(13)
SSE	0.2	(4)	0.4	(7)	0.1	(2)	0.0	(0)	0.0	(0)	0.0	(0)	0.7	(13)
S	0.2	(4)	0.5	(10)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.7	(14)
SSW	0.4	(7)	0.4	(7)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.7	(14)
SW	0.2	(3)	0.2	(4)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.4	(7)
WSW	0.1	(1)	0.1	(1)	0.2	(3)	0.1	(2)	0.0	(0)	0.0	(0)	0.4	(7)
W	0.0	(0)	0.3	(5)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.3	(5)
WNW	0.1	(1)	0.1	(2)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.2	(3)
NW	0.0	(0)	0.1	(1)	0.2	(3)	0.0	(0)	0.0	(0)	0.0	(0)	0.2	(4)
NNW	0.1	(1)	0.1	(2)	0.2	(3)	0.0	(0)	0.0	(0)	0.0	(0)	0.3	(6)
TOTAL	2.3	(45)	3.7	(74)	0.8	(15)	0.3	(5)	0.0	(0)	0.0	(0)	7.0	(139)

FOR STABILITY CLASS - F

NUMBER OF POSSIBLE HOURLY OBSERVATIONS: 139

NUMBER OF MISSING WIND OBSERVATIONS: 0

NUMBER OF CALM HOURS: 1

10

11

12

13

14

15

NIAGARA MOHAWK POWER CORPORATION

WIND SPEED, WIND DIRECTION AND ATMOSPHERIC STABILITY JOINT FREQUENCY DISTRIBUTION

SITE: NINE MILE POINT MAIN TOWER

PARAMETERS: WSPL, WDRL AND TDFU

JANUARY 1, 1987 TO

MARCH 31, 1987

STABILITY CLASS - G

% FREQUENCY (NO. OF OCCURENCES) OF WIND DIRECTION WITHIN WIND SPEED CATEGORY

DIRECTION	SPEED (MPH)							TOTAL
	00-03 MPH	04-07	08-12	13-18 MPH	19-23	>24		
N	0.1 (1)	0.1 (2)	0.1 (2)	0.0 (0)	0.0 (0)	0.0 (0)	0.3 (5)	
NNE	0.2 (4)	0.1 (1)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.3 (5)	
NE	0.1 (1)	0.3 (5)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.3 (6)	
ENE	0.1 (2)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.1 (2)	
E	0.2 (3)	0.2 (4)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.4 (7)	
ESE	0.6 (12)	0.5 (9)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	1.1 (21)	
SE	0.7 (13)	0.3 (5)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.9 (18)	
SSE	0.4 (8)	1.0 (20)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	1.4 (28)	
S	0.3 (6)	0.5 (9)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.8 (15)	
SSW	0.3 (5)	0.1 (1)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.3 (6)	
SW	0.2 (3)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.2 (3)	
WSW	0.1 (1)	0.0 (0)	0.1 (1)	0.3 (5)	0.0 (0)	0.0 (0)	0.4 (7)	
W	0.1 (1)	0.2 (4)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.3 (5)	
WNW	0.1 (2)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.1 (2)	
NW	0.0 (0)	0.1 (1)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.1 (1)	
NNW	0.0 (0)	0.1 (1)	0.1 (2)	0.0 (0)	0.0 (0)	0.0 (0)	0.2 (3)	
TOTAL	3.1 (62)	3.1 (62)	0.3 (5)	0.3 (5)	0.0 (0)	0.0 (0)	6.7 (134)	

FOR STABILITY CLASS - G

NUMBER OF POSSIBLE HOURLY OBSERVATIONS: 134

NUMBER OF MISSING WIND OBSERVATIONS: 0

NUMBER OF CALM HOURS: 1



1
2
3
4
5

NIAGARA MOHAWK POWER CORPORATION

WIND SPEED, WIND DIRECTION AND ATMOSPHERIC STABILITY JOINT FREQUENCY DISTRIBUTION

SITE: NINE MILE POINT MAIN TOWER

PARAMETERS: WSPL AND WDRL

JANUARY 1, 1987 TO

MARCH 31, 1987

% FREQUENCY (NO. OF OCCURENCES) OF WIND DIRECTION WITHIN WIND SPEED CATEGORY

DIRECTION	SPEED (MPH)						TOTAL
	00-03 MPH	04-07	08-12	13-18 MPH	19-23	>24	
N	0.2 (5)	1.2 (26)	3.0 (64)	2.0 (42)	0.2 (5)	0.1 (2)	6.7 (144)
NNE	0.5 (10)	2.5 (54)	3.8 (82)	1.7 (37)	0.1 (2)	0.0 (0)	8.6 (185)
NE	0.5 (10)	3.7 (79)	2.5 (53)	0.6 (12)	0.0 (0)	0.0 (0)	7.2 (154)
ENE	1.1 (23)	1.4 (31)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	2.5 (54)
E	0.9 (19)	1.3 (28)	0.0 (1)	0.0 (0)	0.0 (0)	0.0 (0)	2.2 (48)
ESE	0.9 (20)	3.9 (83)	1.6 (35)	0.5 (10)	0.0 (0)	0.0 (0)	6.9 (148)
SE	1.5 (32)	4.5 (96)	2.5 (53)	0.4 (9)	0.0 (0)	0.0 (0)	8.9 (190)
SSE	1.0 (21)	4.1 (87)	1.8 (38)	0.5 (11)	0.0 (0)	0.0 (0)	7.3 (157)
S	0.6 (13)	3.0 (65)	1.4 (30)	0.1 (3)	0.0 (0)	0.0 (0)	5.2 (111)
SSW	0.7 (15)	1.8 (38)	1.1 (23)	0.3 (6)	0.0 (0)	0.0 (0)	3.8 (82)
SW	0.5 (10)	2.0 (42)	1.7 (36)	1.1 (24)	0.0 (1)	0.0 (0)	5.3 (113)
WSW	0.2 (5)	0.7 (15)	2.4 (51)	1.2 (25)	0.2 (5)	0.6 (13)	5.3 (114)
W	0.2 (5)	1.2 (26)	0.6 (12)	1.4 (31)	1.0 (22)	1.7 (36)	6.2 (132)
WNW	0.2 (4)	0.4 (8)	1.6 (35)	1.9 (40)	1.5 (33)	1.0 (22)	6.6 (142)
NW	0.1 (3)	0.8 (17)	2.7 (59)	3.1 (67)	2.3 (49)	0.7 (16)	9.8 (211)
NNW	0.3 (6)	0.7 (15)	2.5 (54)	2.9 (62)	0.7 (16)	0.4 (8)	7.5 (161)
TOTAL	9.4 (201)	33.1 (710)	29.2 (626)	17.7 (379)	6.2 (133)	4.5 (97)	100.0 (2146)

FOR ALL WIND CATEGORIES

NUMBER OF POSSIBLE HOURLY OBSERVATIONS: 2160

NUMBER OF MISSING WIND OBSERVATIONS: 14

NUMBER OF CALM HOURS: 1



NIAGARA MOHAWK POWER CORPORATION

WIND SPEED, WIND DIRECTION AND ATMOSPHERIC STABILITY JOINT FREQUENCY DISTRIBUTION

SITE: NINE MILE POINT MAIN TOWER

PARAMETERS: WSPU, WDRU AND TDFU

JANUARY 1, 1987 TO

MARCH 31, 1987

STABILITY CLASS - A

% FREQUENCY (NO. OF OCCURENCES) OF WIND DIRECTION WITHIN WIND SPEED CATEGORY

DIRECTION	SPEED (MPH)							TOTAL
	00-03 MPH	04-07	08-12	13-18 MPH	19-23	>24		
N	0.0 (0)	0.0 (0)	0.1 (2)	0.3 (6)	0.0 (0)	0.1 (2)	0.5 (10)	
NNE	0.0 (0)	0.0 (0)	0.1 (2)	0.5 (10)	0.1 (2)	0.5 (9)	1.2 (23)	
NE	0.0 (0)	0.0 (0)	0.1 (2)	0.0 (0)	0.0 (0)	0.0 (0)	0.1 (2)	
ENE	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	
E	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	
ESE	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	
SE	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	
SSE	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	
S	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	
SSW	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	
SW	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	
WSW	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.4 (7)	0.4 (7)	
W	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.1 (1)	0.3 (5)	0.3 (6)	
WNW	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	
NW	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.1 (1)	0.3 (6)	0.4 (7)	
NNW	0.0 (0)	0.0 (0)	0.3 (5)	0.1 (1)	0.1 (1)	0.3 (5)	0.6 (12)	
TOTAL	0.0 (0)	0.0 (0)	0.6 (11)	0.9 (17)	0.3 (5)	1.7 (34)	3.4 (67)	

FOR STABILITY CLASS - A

NUMBER OF POSSIBLE HOURLY OBSERVATIONS: 67

NUMBER OF MISSING WIND OBSERVATIONS: 0

NUMBER OF CALM HOURS: 0



2021

2022

2023

2024

2025

1

NIAGARA MOHAWK POWER CORPORATION

WIND SPEED, WIND DIRECTION AND ATMOSPHERIC STABILITY JOINT FREQUENCY DISTRIBUTION

SITE: NINE MILE POINT MAIN TOWER

PARAMETERS: WSPU, WDRU AND TDFU

JANUARY 1, 1987 TO

MARCH 31, 1987

STABILITY CLASS - B

% FREQUENCY (NO. OF OCCURENCES) OF WIND DIRECTION WITHIN WIND SPEED CATEGORY

DIRECTION	00-03 MPH	04-07	08-12	SPEED (MPH) 13-18 MPH	19-23	>24	TOTAL
N	0.0 (0)	0.0 (0)	0.2 (3)	0.5 (9)	0.1 (2)	0.2 (3)	0.9 (17)
NNE	0.0 (0)	0.0 (0)	0.1 (2)	0.1 (2)	0.2 (4)	0.2 (4)	0.6 (12)
NE	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)
ENE	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)
E	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)
ESE	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)
SE	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)
SSE	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)
S	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)
SSW	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)
SW	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)
WSW	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.1 (1)	0.1 (1)
W	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.2 (4)	0.2 (4)
WNW	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.1 (1)	0.1 (1)
NW	0.0 (0)	0.1 (1)	0.1 (1)	0.0 (0)	0.1 (1)	0.1 (1)	0.2 (4)
NNW	0.0 (0)	0.0 (0)	0.1 (2)	0.2 (3)	0.2 (3)	0.1 (1)	0.5 (9)
TOTAL	0.0 (0)	0.1 (1)	0.4 (8)	0.7 (14)	0.5 (10)	0.8 (15)	2.4 (48)

FOR STABILITY CLASS - B

NUMBER OF POSSIBLE HOURLY OBSERVATIONS: 48

NUMBER OF MISSING WIND OBSERVATIONS: 0

NUMBER OF CALM HOURS: 0



100

101

102

103

104

105



NIAGARA MOHAWK POWER CORPORATION

WIND SPEED, WIND DIRECTION AND ATMOSPHERIC STABILITY JOINT FREQUENCY DISTRIBUTION

SITE: NINE MILE POINT MAIN TOWER

PARAMETERS: WSPU, WDRU AND TDFU

JANUARY 1, 1987 TO

MARCH 31, 1987

STABILITY CLASS - C

% FREQUENCY (NO. OF OCCURENCES) OF WIND DIRECTION WITHIN WIND SPEED CATEGORY

DIRECTION	00-03 MPH		04-07		08-12		SPEED (MPH) 13-18 MPH		19-23		>24		TOTAL	
N	0.0	(0)	0.0	(0)	0.1	(2)	0.1	(2)	0.1	(2)	0.1	(2)	0.4	(8)
NNE	0.0	(0)	0.2	(3)	0.1	(1)	0.2	(4)	0.1	(2)	0.3	(5)	0.8	(15)
NE	0.0	(0)	0.0	(0)	0.1	(2)	0.0	(0)	0.0	(0)	0.0	(0)	0.1	(2)
ENE	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)
E	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)
ESE	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)
SE	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.1	(1)	0.0	(0)	0.1	(1)
SSE	0.0	(0)	0.0	(0)	0.0	(0)	0.1	(1)	0.0	(0)	0.0	(0)	0.1	(1)
S	0.0	(0)	0.0	(0)	0.1	(1)	0.0	(0)	0.0	(0)	0.0	(0)	0.1	(1)
SSW	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)
SW	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)
WSW	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.1	(1)	0.1	(1)
W	0.0	(0)	0.0	(0)	0.1	(1)	0.0	(0)	0.0	(0)	0.1	(1)	0.1	(2)
WNW	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)
NW	0.0	(0)	0.0	(0)	0.0	(0)	0.2	(4)	0.1	(2)	0.1	(2)	0.4	(8)
NNW	0.0	(0)	0.0	(0)	0.4	(7)	0.2	(4)	0.2	(3)	0.1	(2)	0.8	(16)
TOTAL	0.0	(0)	0.2	(3)	0.7	(14)	0.8	(15)	0.5	(10)	0.7	(13)	2.8	(55)

FOR STABILITY CLASS - C

NUMBER OF POSSIBLE HOURLY OBSERVATIONS: 55

NUMBER OF MISSING WIND OBSERVATIONS: 0

NUMBER OF CALM HOURS: 0



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NIAGARA MOHAWK POWER CORPORATION

WIND SPEED, WIND DIRECTION AND ATMOSPHERIC STABILITY JOINT FREQUENCY DISTRIBUTION

SITE: NINE MILE POINT MAIN TOWER PARAMETERS: WSPU, WDRU AND TDFU JANUARY 1, 1987 TO MARCH 31, 1987

STABILITY CLASS - D

% FREQUENCY (NO. OF OCCURENCES) OF WIND DIRECTION WITHIN WIND SPEED CATEGORY

DIRECTION	00-03 MPH		04-07		08-12		SPEED (MPH) 13-18 MPH		19-23		>24		TOTAL	
N	0.1	(1)	0.4	(7)	1.1	(21)	1.8	(35)	1.3	(26)	0.2	(3)	4.7	(93)
NNE	0.1	(1)	0.8	(15)	1.3	(26)	2.3	(46)	1.3	(25)	1.2	(23)	6.8	(136)
NE	0.1	(1)	0.7	(13)	1.1	(21)	0.6	(12)	0.2	(3)	0.1	(1)	2.6	(51)
ENE	0.1	(1)	0.2	(3)	0.3	(5)	0.0	(0)	0.0	(0)	0.0	(0)	0.5	(9)
E	0.0	(0)	0.3	(5)	0.0	(0)	0.1	(1)	0.0	(0)	0.0	(0)	0.3	(6)
ESE	0.0	(0)	0.1	(2)	0.3	(5)	0.9	(18)	0.3	(6)	0.4	(8)	2.0	(39)
SE	0.0	(0)	0.7	(13)	1.4	(27)	1.4	(27)	0.8	(15)	0.4	(7)	4.5	(89)
SSE	0.0	(0)	0.2	(4)	0.5	(9)	0.3	(6)	0.1	(2)	0.6	(12)	1.7	(33)
S	0.0	(0)	0.0	(0)	0.6	(11)	0.7	(14)	0.0	(0)	0.0	(0)	1.3	(25)
SSW	0.0	(0)	0.2	(3)	0.4	(8)	0.6	(11)	0.5	(9)	0.0	(0)	1.6	(31)
SW	0.0	(0)	0.2	(3)	1.4	(28)	0.8	(15)	1.2	(23)	0.4	(8)	3.9	(77)
WSW	0.0	(0)	0.1	(1)	0.4	(8)	0.8	(15)	0.3	(6)	0.6	(12)	2.1	(42)
W	0.0	(0)	0.2	(3)	0.6	(12)	1.1	(21)	0.6	(11)	1.8	(35)	4.1	(82)
WNW	0.0	(0)	0.1	(1)	1.5	(30)	1.5	(29)	1.4	(27)	1.5	(29)	5.8	(116)
NW	0.1	(1)	0.4	(7)	1.6	(31)	1.5	(30)	1.8	(35)	1.8	(35)	7.0	(139)
NNW	0.1	(1)	0.3	(6)	1.1	(22)	2.1	(41)	1.4	(28)	0.4	(7)	5.3	(105)
TOTAL	0.3	(6)	4.3	(86)	13.3	(264)	16.1	(321)	10.9	(216)	9.0	(180)	53.9	(1073)

FOR STABILITY CLASS - D

NUMBER OF POSSIBLE HOURLY OBSERVATIONS: 1073

NUMBER OF MISSING WIND OBSERVATIONS: 0

NUMBER OF CALM HOURS: 0



11 4 12 6 2

NIAGARA MOHAWK POWER CORPORATION

WIND SPEED, WIND DIRECTION AND ATMOSPHERIC STABILITY JOINT FREQUENCY DISTRIBUTION

SITE: NINE MILE POINT MAIN TOWER

PARAMETERS: WSPU, WDRU AND TDFU

JANUARY 1, 1987 TO

MARCH 31, 1987

STABILITY CLASS - E

% FREQUENCY (NO. OF OCCURENCES) OF WIND DIRECTION WITHIN WIND SPEED CATEGORY

DIRECTION	00-03 MPH		04-07		08-12		SPEED (MPH) 13-18 MPH		19-23		>24		TOTAL	
N	0.0	(0)	0.1	(1)	0.1	(2)	0.2	(3)	0.1	(1)	0.0	(0)	0.4	(7)
NNE	0.0	(0)	0.2	(4)	0.6	(12)	0.5	(9)	0.1	(2)	0.1	(1)	1.4	(28)
NE	0.1	(1)	0.5	(10)	0.5	(9)	0.1	(1)	0.0	(0)	0.0	(0)	1.1	(21)
ENE	0.0	(0)	0.2	(3)	0.6	(11)	0.0	(0)	0.0	(0)	0.0	(0)	0.7	(14)
E	0.1	(1)	0.2	(3)	0.3	(5)	0.2	(3)	0.0	(0)	0.0	(0)	0.6	(12)
ESE	0.0	(0)	0.3	(5)	0.8	(15)	0.7	(13)	0.1	(2)	0.1	(2)	1.9	(37)
SE	0.0	(0)	0.2	(4)	0.8	(16)	1.1	(22)	0.6	(11)	0.1	(1)	2.7	(54)
SSE	0.0	(0)	0.1	(2)	0.4	(8)	1.2	(23)	0.8	(16)	0.1	(2)	2.6	(51)
S	0.0	(0)	0.1	(2)	0.8	(16)	1.2	(24)	0.0	(0)	0.0	(0)	2.1	(42)
SSW	0.0	(0)	0.2	(3)	0.8	(15)	0.7	(14)	0.0	(0)	0.0	(0)	1.6	(32)
SW	0.0	(0)	0.2	(3)	0.5	(9)	0.8	(16)	0.3	(6)	0.1	(2)	1.8	(36)
WSW	0.0	(0)	0.2	(3)	0.3	(5)	0.9	(18)	0.8	(15)	0.1	(2)	2.2	(43)
W	0.1	(1)	0.2	(4)	0.3	(6)	0.4	(7)	0.6	(11)	0.8	(15)	2.2	(44)
WNW	0.0	(0)	0.2	(4)	0.3	(6)	0.2	(4)	0.2	(4)	0.4	(8)	1.3	(26)
NW	0.0	(0)	0.1	(2)	0.3	(5)	0.2	(3)	0.0	(0)	0.1	(2)	0.6	(12)
NHW	0.1	(1)	0.3	(5)	0.1	(2)	0.2	(3)	0.1	(2)	0.1	(1)	0.7	(14)
TOTAL	0.2	(4)	2.9	(58)	7.1	(142)	8.2	(163)	3.5	(70)	1.8	(36)	23.8	(473)

FOR STABILITY CLASS - E

NUMBER OF POSSIBLE HOURLY OBSERVATIONS: 473

NUMBER OF MISSING WIND OBSERVATIONS: 0

NUMBER OF CALM HOURS: 0



700
5
0
7
A
20



NIAGARA MOHAWK POWER CORPORATION

WIND SPEED, WIND DIRECTION AND ATMOSPHERIC STABILITY JOINT FREQUENCY DISTRIBUTION

SITE: NINE MILE POINT MAIN TOWER

PARAMETERS: WSPU, WDRU AND TDFU

JANUARY 1, 1987 TO

MARCH 31, 1987

STABILITY CLASS - F

% FREQUENCY (NO. OF OCCURENCES) OF WIND DIRECTION WITHIN WIND SPEED CATEGORY

DIRECTION	00-03 MPH		04-07		08-12		SPEED (MPH) 13-18 MPH		19-23		>24		TOTAL	
N	0.1	(1)	0.0	(0)	0.1	(2)	0.2	(3)	0.1	(2)	0.2	(4)	0.6	(12)
NNE	0.2	(3)	0.0	(0)	0.5	(9)	0.0	(0)	0.0	(0)	0.1	(1)	0.7	(13)
NE	0.0	(0)	0.3	(5)	0.2	(3)	0.0	(0)	0.0	(0)	0.0	(0)	0.4	(8)
ENE	0.0	(0)	0.0	(0)	0.2	(3)	0.0	(0)	0.0	(0)	0.0	(0)	0.2	(3)
E	0.0	(0)	0.1	(1)	0.4	(7)	0.0	(0)	0.0	(0)	0.0	(0)	0.4	(8)
ESE	0.0	(0)	0.1	(1)	0.2	(4)	0.2	(3)	0.0	(0)	0.0	(0)	0.4	(8)
SE	0.0	(0)	0.1	(2)	0.2	(3)	0.2	(4)	0.0	(0)	0.0	(0)	0.5	(9)
SSE	0.0	(0)	0.1	(1)	0.2	(3)	0.2	(4)	0.0	(0)	0.0	(0)	0.4	(8)
S	0.1	(1)	0.0	(0)	0.1	(1)	0.4	(8)	0.1	(1)	0.0	(0)	0.6	(11)
SSW	0.0	(0)	0.1	(2)	0.1	(1)	0.2	(3)	0.0	(0)	0.0	(0)	0.3	(6)
SW	0.0	(0)	0.1	(1)	0.2	(3)	0.2	(3)	0.0	(0)	0.0	(0)	0.4	(7)
WSW	0.0	(0)	0.3	(5)	0.4	(7)	0.1	(1)	0.0	(0)	0.1	(2)	0.8	(15)
W	0.1	(2)	0.2	(4)	0.3	(5)	0.0	(0)	0.1	(1)	0.0	(0)	0.6	(12)
WNW	0.0	(0)	0.1	(2)	0.1	(2)	0.0	(0)	0.0	(0)	0.0	(0)	0.2	(4)
NW	0.1	(1)	0.2	(4)	0.1	(2)	0.0	(0)	0.0	(0)	0.0	(0)	0.4	(7)
NNW	0.0	(0)	0.1	(2)	0.0	(0)	0.1	(2)	0.2	(3)	0.1	(1)	0.4	(8)
TOTAL	0.4	(8)	1.5	(30)	2.8	(55)	1.6	(31)	0.4	(7)	0.4	(8)	7.0	(139)

FOR STABILITY CLASS - F

NUMBER OF POSSIBLE HOURLY OBSERVATIONS: 139
 NUMBER OF MISSING WIND OBSERVATIONS: 0
 NUMBER OF CALM HOURS: 0



0-9

1

2

3

4



NIAGARA MOHAWK POWER CORPORATION

WIND SPEED, WIND DIRECTION AND ATMOSPHERIC STABILITY JOINT FREQUENCY DISTRIBUTION

SITE: NINE MILE POINT MAIN TOWER

PARAMETERS: WSPU, WDRU AND TDFU

JANUARY 1, 1987 TO

MARCH 31, 1987

STABILITY CLASS - G

% FREQUENCY (NO. OF OCCURENCES) OF WIND DIRECTION WITHIN WIND SPEED CATEGORY

DIRECTION	00-03 MPH	04-07	08-12	SPEED (MPH) 13-18 MPH	19-23	>24	TOTAL
N	0.1 (2)	0.1 (2)	0.0 (0)	0.1 (1)	0.1 (2)	0.1 (1)	0.4 (8)
NNE	0.1 (1)	0.2 (4)	0.2 (3)	0.2 (3)	0.0 (0)	0.0 (0)	0.6 (11)
NE	0.1 (1)	0.3 (5)	0.1 (1)	0.0 (0)	0.0 (0)	0.0 (0)	0.4 (7)
ENE	0.0 (0)	0.1 (2)	0.2 (4)	0.0 (0)	0.0 (0)	0.0 (0)	0.3 (6)
E	0.1 (2)	0.3 (5)	0.3 (6)	0.1 (1)	0.0 (0)	0.0 (0)	0.7 (14)
ESE	0.0 (0)	0.1 (2)	0.1 (2)	0.1 (1)	0.0 (0)	0.0 (0)	0.3 (5)
SE	0.1 (1)	0.1 (2)	0.3 (5)	0.0 (0)	0.0 (0)	0.0 (0)	0.4 (8)
SSE	0.2 (3)	0.3 (6)	0.3 (6)	0.1 (2)	0.0 (0)	0.0 (0)	0.9 (17)
S	0.0 (0)	0.2 (3)	0.0 (0)	0.1 (1)	0.0 (0)	0.0 (0)	0.2 (4)
SSW	0.1 (1)	0.3 (5)	0.2 (3)	0.1 (2)	0.0 (0)	0.0 (0)	0.6 (11)
SW	0.2 (4)	0.2 (3)	0.2 (3)	0.2 (3)	0.1 (1)	0.0 (0)	0.7 (14)
WSW	0.1 (1)	0.0 (0)	0.2 (3)	0.2 (3)	0.0 (0)	0.2 (4)	0.6 (11)
W	0.0 (0)	0.1 (1)	0.1 (2)	0.0 (0)	0.0 (0)	0.0 (0)	0.2 (3)
WNW	0.0 (0)	0.1 (2)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.1 (2)
NW	0.1 (1)	0.1 (2)	0.1 (1)	0.0 (0)	0.0 (0)	0.0 (0)	0.2 (4)
NNW	0.2 (3)	0.2 (3)	0.1 (1)	0.0 (0)	0.0 (0)	0.1 (2)	0.5 (9)
TOTAL	.1.0 (20)	2.4 (47)	2.0 (40)	0.9 (17)	0.2 (3)	0.4 (7)	6.7 (134)

FOR STABILITY CLASS - G

NUMBER OF POSSIBLE HOURLY OBSERVATIONS: 134

NUMBER OF MISSING WIND OBSERVATIONS: 0

NUMBER OF CALM HOURS: 0

100-100000-100000

NIAGARA MOHAWK POWER CORPORATION

WIND SPEED, WIND DIRECTION AND ATMOSPHERIC STABILITY JOINT FREQUENCY DISTRIBUTION

SITE: NINE MILE POINT MAIN TOWER PARAMETERS: WSPU, WDRU AND TDFU JANUARY 1, 1987 TO MARCH 31, 1987

STABILITY CLASS - ALL

% FREQUENCY (NO. OF OCCURENCES) OF WIND DIRECTION WITHIN WIND SPEED CATEGORY

DIRECTION	00-03 MPH		04-07		08-12		SPEED (MPH) 13-18 MPH		19-23		>24		TOTAL	
N	0.2	(4)	0.5	(10)	1.6	(32)	3.0	(59)	1.8	(35)	0.8	(15)	7.8	(155)
NNE	0.3	(5)	1.3	(26)	2.8	(55)	3.7	(74)	1.8	(35)	2.2	(43)	12.0	(238)
NE	0.2	(3)	1.7	(33)	1.9	(38)	0.7	(13)	0.2	(3)	0.1	(1)	4.6	(91)
ENE	0.1	(1)	0.4	(8)	1.2	(23)	0.0	(0)	0.0	(0)	0.0	(0)	1.6	(32)
E	0.2	(3)	0.7	(14)	0.9	(18)	0.3	(5)	0.0	(0)	0.0	(0)	2.0	(40)
ESE	0.0	(0)	0.5	(10)	1.3	(26)	1.8	(35)	0.4	(8)	0.5	(10)	4.5	(89)
SE	0.1	(1)	1.1	(21)	2.6	(51)	2.7	(53)	1.4	(27)	0.4	(8)	8.1	(161)
SSE	0.2	(3)	0.7	(13)	1.3	(26)	1.8	(36)	0.9	(18)	0.7	(14)	5.5	(110)
S	0.1	(1)	0.3	(5)	1.5	(29)	2.4	(47)	0.1	(1)	0.0	(0)	4.2	(83)
SSW	0.1	(1)	0.7	(13)	1.4	(27)	1.5	(30)	0.5	(9)	0.0	(0)	4.0	(80)
SW	0.2	(4)	0.5	(10)	2.2	(43)	1.9	(37)	1.5	(30)	0.5	(10)	6.7	(134)
WSW	0.1	(1)	0.5	(9)	1.2	(23)	1.9	(37)	1.1	(21)	1.5	(29)	6.0	(120)
W	0.2	(3)	0.6	(12)	1.3	(26)	1.4	(28)	1.2	(24)	3.0	(60)	7.7	(153)
WNW	0.0	(0)	0.5	(9)	1.9	(38)	1.7	(33)	1.6	(31)	1.9	(38)	7.5	(149)
NW	0.2	(3)	0.8	(16)	2.0	(40)	1.9	(37)	2.0	(39)	2.3	(46)	9.1	(181)
NNW	0.3	(5)	0.8	(16)	2.0	(39)	2.7	(54)	2.0	(40)	1.0	(19)	8.7	(173)
TOTAL	1.9	(38)	11.3	(225)	26.8	(534)	29.1	(578)	16.1	(321)	14.7	(293)	100.0	(1989)

FOR STABILITY CLASS - ALL

NUMBER OF POSSIBLE HOURLY OBSERVATIONS: 1989
 NUMBER OF MISSING WIND OBSERVATIONS: 0
 NUMBER OF CALM HOURS: 0



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NIAGARA MOHAWK POWER CORPORATION

WIND SPEED, WIND DIRECTION AND ATMOSPHERIC STABILITY JOINT FREQUENCY DISTRIBUTION

SITE: NINE MILE POINT MAIN TOWER

PARAMETERS: WSPU AND WDRU

JANUARY 1, 1987 TO

MARCH 31, 1987

% FREQUENCY (NO. OF OCCURENCES) OF WIND DIRECTION WITHIN WIND SPEED CATEGORY

DIRECTION	00-03 MPH	04-07	08-12	SPEED (MPH) 13-18 MPH	19-23	>24	TOTAL
N	0.2 (4)	0.5 (10)	1.5 (32)	2.7 (59)	1.6 (35)	0.8 (17)	7.3 (157)
NNE	0.2 (5)	1.2 (26)	2.6 (55)	3.4 (74)	1.7 (37)	2.6 (55)	11.7 (252)
NE	0.3 (6)	1.6 (35)	1.8 (38)	0.6 (13)	0.2 (5)	0.0 (1)	4.6 (98)
ENE	0.0 (1)	0.5 (10)	1.1 (23)	0.0 (0)	0.0 (0)	0.0 (0)	1.6 (34)
E	0.2 (4)	0.8 (17)	0.9 (20)	0.2 (5)	0.0 (0)	0.0 (0)	2.1 (46)
ESE	0.0 (1)	0.7 (15)	1.4 (29)	1.6 (35)	0.4 (8)	0.5 (10)	4.6 (98)
SE	0.1 (2)	1.1 (23)	2.7 (57)	3.1 (66)	1.3 (27)	0.4 (8)	8.5 (183)
SSE	0.2 (4)	0.7 (16)	1.4 (30)	1.9 (41)	0.9 (19)	0.7 (14)	5.8 (124)
S	0.3 (6)	0.3 (6)	1.4 (29)	2.2 (48)	0.2 (4)	0.0 (0)	4.3 (93)
SSW	0.0 (1)	0.7 (14)	1.3 (28)	1.5 (32)	0.4 (9)	0.0 (0)	3.9 (84)
SW	0.2 (5)	0.6 (13)	2.0 (44)	1.9 (40)	1.4 (30)	0.5 (10)	6.6 (142)
WSW	0.1 (2)	0.5 (11)	1.1 (23)	1.7 (37)	1.0 (21)	1.4 (30)	5.8 (124)
W	0.1 (3)	0.7 (15)	1.2 (26)	1.3 (28)	1.1 (24)	2.9 (63)	7.4 (159)
WNW	0.0 (1)	0.5 (11)	1.8 (38)	1.7 (36)	1.4 (31)	1.9 (41)	7.4 (158)
NW	0.2 (5)	0.7 (16)	2.0 (43)	2.2 (48)	2.1 (46)	2.7 (58)	10.1 (216)
NNW	0.2 (5)	0.7 (16)	1.9 (40)	2.6 (56)	1.9 (41)	1.0 (21)	8.3 (179)
TOTAL	2.6 (55)	11.8 (254)	25.9 (555)	28.8 (618)	15.7 (337)	15.3 (328)	100.0 (2147)

FOR ALL WIND CATEGORIES

NUMBER OF POSSIBLE HOURLY OBSERVATIONS: 2160

NUMBER OF MISSING WIND OBSERVATIONS: 13

NUMBER OF CALM HOURS: 0



NIAGARA MOHAWK POWER CORPORATION

WIND SPEED, WIND DIRECTION AND ATMOSPHERIC STABILITY JOINT FREQUENCY DISTRIBUTION

SITE: NINE MILE POINT MAIN TOWER

PARAMETERS: WSPL, WDRL AND TDFU

APRIL 1, 1987 TO

JUNE 30, 1987

STABILITY CLASS - B

% FREQUENCY (NO. OF OCCURENCES) OF WIND DIRECTION WITHIN WIND SPEED CATEGORY

DIRECTION	SPEED (MPH)						TOTAL
	00-03	04-07	08-12	13-18	19-23	>24	
N	0.0 (0)	0.2 (4)	0.0 (1)	0.1 (2)	0.0 (0)	0.0 (1)	0.4 (8)
NNE	0.0 (0)	0.2 (5)	0.1 (3)	0.0 (0)	0.0 (0)	0.0 (0)	0.4 (8)
NE	0.0 (0)	0.1 (2)	0.1 (2)	0.0 (0)	0.0 (0)	0.0 (0)	0.2 (4)
ENE	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)
E	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)
ESE	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)
SE	0.0 (0)	0.0 (0)	0.1 (3)	0.0 (1)	0.0 (0)	0.0 (0)	0.2 (4)
SSE	0.0 (0)	0.0 (0)	0.3 (6)	0.0 (0)	0.0 (0)	0.0 (0)	0.3 (6)
S	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)
SSW	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)
SW	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)
WSW	0.0 (0)	0.0 (0)	0.0 (1)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (1)
W	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)
WNW	0.1 (2)	0.0 (0)	0.0 (1)	0.0 (1)	0.0 (0)	0.0 (0)	0.2 (4)
NW	0.0 (0)	0.3 (6)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.3 (6)
NNW	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)
TOTAL	0.1 (2)	0.8 (17)	0.8 (17)	0.2 (4)	0.0 (0)	0.0 (1)	2.0 (41)

FOR STABILITY CLASS - B

NUMBER OF POSSIBLE HOURLY OBSERVATIONS: 41

NUMBER OF MISSING WIND OBSERVATIONS: 0

NUMBER OF CALM HOURS: 0



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4

NIAGARA MOHAWK POWER CORPORATION

WIND SPEED, WIND DIRECTION AND ATMOSPHERIC STABILITY JOINT FREQUENCY DISTRIBUTION

SITE: NINE MILE POINT MAIN TOWER

PARAMETERS: WSPL, WDRL AND TDFU

APRIL 1, 1987 TO

JUNE 30, 1987

STABILITY CLASS - C

% FREQUENCY (NO. OF OCCURENCES) OF WIND DIRECTION WITHIN WIND SPEED CATEGORY

DIRECTION	SPEED (MPH)						TOTAL
	00-03	04-07	08-12	13-18	19-23	>24	
N	0.0 (0)	0.3 (6)	0.1 (2)	0.0 (1)	0.0 (0)	0.0 (0)	0.4 (9)
NNE	0.0 (0)	0.1 (2)	0.1 (2)	0.0 (0)	0.0 (0)	0.0 (0)	0.2 (4)
NE	0.0 (0)	0.0 (1)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (1)
ENE	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)
E	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)
ESE	0.0 (0)	0.0 (0)	0.2 (5)	0.0 (0)	0.0 (0)	0.0 (0)	0.2 (5)
SE	0.0 (0)	0.0 (1)	0.2 (4)	0.0 (0)	0.0 (0)	0.0 (0)	0.2 (5)
SSE	0.0 (0)	0.0 (0)	0.3 (7)	0.0 (1)	0.0 (0)	0.0 (0)	0.4 (8)
S	0.0 (0)	0.0 (0)	0.2 (4)	0.0 (0)	0.0 (0)	0.0 (0)	0.2 (4)
SSW	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)
SW	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)
WSW	0.0 (0)	0.0 (0)	0.0 (1)	0.2 (5)	0.1 (2)	0.0 (0)	0.4 (8)
W	0.0 (0)	0.0 (1)	0.0 (1)	0.0 (0)	0.2 (5)	0.0 (0)	0.3 (7)
WNW	0.0 (0)	0.1 (3)	0.0 (0)	0.0 (0)	0.0 (1)	0.0 (0)	0.2 (4)
NW	0.0 (0)	0.0 (1)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (1)
NNW	0.0 (0)	0.1 (3)	0.0 (1)	0.0 (0)	0.0 (0)	0.0 (0)	0.2 (4)
TOTAL	0.0 (0)	0.9 (18)	1.3 (27)	0.3 (7)	0.4 (8)	0.0 (0)	2.9 (60)

FOR STABILITY CLASS - C

NUMBER OF POSSIBLE HOURLY OBSERVATIONS: 60

NUMBER OF MISSING WIND OBSERVATIONS: 0

NUMBER OF CALM HOURS: 0



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NIAGARA MOHAWK POWER CORPORATION

WIND SPEED, WIND DIRECTION AND ATMOSPHERIC STABILITY JOINT FREQUENCY DISTRIBUTION

SITE: NINE MILE POINT MAIN TOWER

PARAMETERS: WSPL, WDRL AND TDFU

APRIL 1, 1987 TO

JUNE 30, 1987

STABILITY CLASS - D

% FREQUENCY (NO. OF OCCURENCES) OF WIND DIRECTION WITHIN WIND SPEED CATEGORY

DIRECTION	SPEED (MPH)						TOTAL
	00-03	04-07	08-12	13-18	19-23	>24	
N	0.1 (3)	0.6 (13)	0.3 (6)	0.1 (3)	0.0 (0)	0.0 (1)	1.2 (26)
NNE	0.1 (3)	1.2 (25)	0.8 (16)	0.0 (0)	0.0 (0)	0.0 (0)	2.1 (44)
NE	0.4 (8)	2.3 (48)	0.8 (17)	0.1 (3)	0.0 (0)	0.0 (0)	3.7 (76)
ENE	0.1 (3)	0.7 (14)	0.1 (2)	0.0 (0)	0.0 (0)	0.0 (0)	0.9 (19)
E	0.0 (1)	0.2 (4)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.2 (5)
ESE	0.1 (2)	0.7 (14)	1.4 (29)	0.0 (0)	0.0 (0)	0.0 (0)	2.2 (45)
SE	0.1 (3)	2.1 (43)	2.4 (49)	0.1 (3)	0.0 (0)	0.0 (0)	4.7 (98)
SSE	0.0 (1)	0.9 (18)	2.0 (42)	0.3 (6)	0.0 (0)	0.0 (0)	3.2 (67)
S	0.1 (2)	0.4 (9)	1.5 (31)	0.3 (6)	0.0 (0)	0.0 (0)	2.3 (48)
SSW	0.0 (0)	0.3 (6)	0.2 (5)	0.0 (1)	0.0 (0)	0.0 (0)	0.6 (12)
SW	0.0 (1)	0.4 (9)	0.5 (11)	0.1 (2)	0.0 (0)	0.0 (0)	1.1 (23)
WSW	0.0 (1)	1.2 (24)	3.8 (80)	1.1 (23)	0.2 (5)	0.0 (0)	6.4 (133)
W	0.0 (1)	1.1 (23)	1.2 (25)	1.2 (26)	0.7 (14)	0.6 (12)	4.9 (101)
WNW	0.1 (2)	0.3 (6)	0.3 (7)	0.4 (8)	0.0 (1)	0.2 (4)	1.3 (28)
NW	0.1 (2)	0.3 (6)	0.1 (3)	0.0 (1)	0.0 (0)	0.0 (0)	0.6 (12)
NNW	0.0 (1)	0.3 (6)	0.1 (3)	0.0 (1)	0.0 (0)	0.0 (0)	0.5 (11)
TOTAL	1.6 (34)	12.9 (268)	15.7 (326)	4.0 (83)	1.0 (20)	0.8 (17)	35.9 (748)

FOR STABILITY CLASS - D

NUMBER OF POSSIBLE HOURLY OBSERVATIONS: 748

NUMBER OF MISSING WIND OBSERVATIONS: 0

NUMBER OF CALM HOURS: 0

20
10
10
10
10

NIAGARA MOHAWK POWER CORPORATION

WIND SPEED, WIND DIRECTION AND ATMOSPHERIC STABILITY JOINT FREQUENCY DISTRIBUTION

SITE: NINE MILE POINT MAIN TOWER

PARAMETERS: WSPL, WDRL AND TDFU

APRIL 1, 1987 TO

JUNE 30, 1987

STABILITY CLASS - E

% FREQUENCY (NO. OF OCCURENCES) OF WIND DIRECTION WITHIN WIND SPEED CATEGORY

DIRECTION	SPEED (MPH)							TOTAL
	00-03	04-07	08-12	13-18	19-23	>24		
N	0.1 (2)	0.7 (15)	0.6 (13)	0.1 (3)	0.0 (0)	0.0 (0)	1.6 (33)	
NNE	0.1 (3)	1.2 (25)	0.2 (5)	0.0 (0)	0.0 (0)	0.0 (0)	1.6 (33)	
NE	0.4 (9)	2.4 (49)	0.4 (8)	0.0 (1)	0.0 (0)	0.0 (0)	3.2 (67)	
ENE	0.5 (10)	0.6 (13)	0.2 (4)	0.0 (0)	0.0 (0)	0.0 (0)	1.3 (27)	
E	0.3 (6)	0.4 (8)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.7 (14)	
ESE	0.4 (9)	0.8 (17)	0.1 (2)	0.0 (0)	0.0 (0)	0.0 (0)	1.3 (26)	
SE	0.5 (11)	1.7 (36)	1.2 (25)	0.0 (0)	0.0 (0)	0.0 (0)	3.5 (72)	
SSE	0.2 (5)	0.8 (16)	0.7 (15)	0.0 (0)	0.0 (0)	0.0 (0)	1.7 (36)	
S	0.2 (4)	1.2 (26)	1.3 (28)	0.0 (0)	0.0 (0)	0.0 (0)	2.8 (58)	
SSW	0.1 (2)	1.1 (23)	0.4 (9)	0.0 (0)	0.0 (0)	0.0 (0)	1.6 (34)	
SW	0.2 (5)	1.1 (23)	1.6 (34)	0.5 (10)	0.0 (0)	0.0 (0)	3.5 (72)	
WSW	0.1 (2)	2.0 (41)	3.4 (70)	1.2 (26)	0.0 (0)	0.0 (0)	6.7 (139)	
W	0.1 (3)	0.9 (18)	0.7 (14)	0.2 (5)	0.0 (1)	0.0 (0)	2.0 (41)	
WNW	0.0 (1)	0.3 (6)	0.2 (5)	0.0 (0)	0.0 (0)	0.0 (0)	0.6 (12)	
NW	0.0 (1)	0.1 (3)	0.3 (6)	0.0 (0)	0.0 (0)	0.0 (0)	0.5 (10)	
NNW	0.1 (3)	0.2 (5)	0.4 (9)	0.0 (1)	0.0 (0)	0.0 (0)	0.9 (18)	
TOTAL	3.7 (76)	15.6 (324)	11.9 (247)	2.2 (46)	0.0 (1)	0.0 (0)	33.3 (694)	

FOR STABILITY CLASS - E

NUMBER OF POSSIBLE HOURLY OBSERVATIONS: 694

NUMBER OF MISSING WIND OBSERVATIONS: 0

NUMBER OF CALM HOURS: 0



12
14
16
18
20
22

NIAGARA MOHAWK POWER CORPORATION

WIND SPEED, WIND DIRECTION AND ATMOSPHERIC STABILITY JOINT FREQUENCY DISTRIBUTION

SITE: NINE MILE POINT MAIN TOWER

PARAMETERS: WSPL, WDRL AND TDFU

APRIL 1, 1987 TO

JUNE 30, 1987

STABILITY CLASS - F

% FREQUENCY (NO. OF OCCURENCES) OF WIND DIRECTION WITHIN WIND SPEED CATEGORY

DIRECTION	00-03		04-07		08-12		SPEED (MPH) 13-18		19-23		>24		TOTAL	
N	0.0	(1)	0.2	(5)	0.3	(6)	0.0	(1)	0.0	(0)	0.0	(0)	0.6	(13)
NNE	0.0	(1)	0.5	(11)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.6	(12)
NE	0.2	(4)	0.4	(8)	0.1	(2)	0.0	(0)	0.0	(0)	0.0	(0)	0.7	(14)
ENE	0.2	(4)	0.2	(4)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.4	(8)
E	0.3	(7)	0.4	(8)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.7	(15)
ESE	0.3	(7)	0.2	(4)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.5	(11)
SE	0.2	(4)	0.5	(11)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.7	(15)
SSE	0.1	(3)	0.6	(13)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.8	(16)
S	0.3	(6)	1.2	(25)	0.0	(1)	0.0	(0)	0.0	(0)	0.0	(0)	1.5	(32)
SSW	0.2	(4)	1.1	(23)	0.1	(2)	0.0	(0)	0.0	(0)	0.0	(0)	1.4	(29)
SW	0.0	(1)	0.7	(15)	0.1	(2)	0.0	(1)	0.0	(0)	0.0	(0)	0.9	(19)
WSW	0.0	(1)	0.7	(15)	1.0	(20)	0.3	(6)	0.0	(0)	0.0	(0)	2.0	(42)
W	0.1	(3)	0.5	(10)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.6	(13)
WNW	0.2	(4)	0.1	(3)	0.0	(1)	0.0	(0)	0.0	(0)	0.0	(0)	0.4	(8)
NW	0.1	(3)	0.1	(2)	0.0	(1)	0.0	(0)	0.0	(0)	0.0	(0)	0.3	(6)
NNW	0.1	(3)	0.2	(4)	0.4	(9)	0.0	(1)	0.0	(0)	0.0	(0)	0.8	(17)
TOTAL	2.7	(56)	7.7	(161)	2.1	(44)	0.4	(9)	0.0	(0)	0.0	(0)	13.0	(270)

FOR STABILITY CLASS - F

NUMBER OF POSSIBLE HOURLY OBSERVATIONS: 270

NUMBER OF MISSING WIND OBSERVATIONS: 0

NUMBER OF CALM HOURS: 0



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NIAGARA MOHAWK POWER CORPORATION

WIND SPEED, WIND DIRECTION AND ATMOSPHERIC STABILITY JOINT FREQUENCY DISTRIBUTION

SITE: NINE MILE POINT MAIN TOWER

PARAMETERS: WSPL, WDRL AND TDFU

APRIL 1, 1987 TO

JUNE 30, 1987

STABILITY CLASS - G

% FREQUENCY (NO. OF OCCURENCES) OF WIND DIRECTION WITHIN WIND SPEED CATEGORY

DIRECTION	SPEED (MPH)						TOTAL
	00-03	04-07	08-12	13-18	19-23	>24	
N	0.1 (2)	0.3 (6)	0.1 (3)	0.1 (3)	0.0 (0)	0.0 (0)	0.7 (14)
NNE	0.0 (0)	0.1 (2)	0.0 (1)	0.0 (0)	0.0 (0)	0.0 (0)	0.1 (3)
NE	0.1 (2)	0.4 (9)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.5 (11)
ENE	0.2 (4)	0.0 (1)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.2 (5)
E	0.6 (13)	0.1 (2)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.7 (15)
ESE	0.5 (10)	0.3 (7)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.8 (17)
SE	0.9 (19)	1.0 (20)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	1.9 (39)
SSE	0.5 (11)	0.8 (16)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	1.3 (27)
S	0.5 (10)	0.5 (11)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	1.0 (21)
SSW	0.1 (2)	0.1 (3)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.2 (5)
SW	0.2 (5)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.2 (5)
WSW	0.0 (1)	0.4 (8)	0.2 (4)	0.1 (3)	0.0 (0)	0.0 (0)	0.8 (16)
W	0.2 (5)	0.4 (9)	0.1 (2)	0.0 (0)	0.0 (0)	0.0 (0)	0.8 (16)
WNW	0.0 (1)	0.0 (0)	0.0 (1)	0.0 (0)	0.0 (0)	0.0 (0)	0.1 (2)
NW	0.1 (3)	0.0 (1)	0.0 (1)	0.0 (0)	0.0 (0)	0.0 (0)	0.2 (5)
NNW	0.1 (2)	0.1 (3)	0.1 (3)	0.0 (0)	0.0 (0)	0.0 (0)	0.4 (8)
TOTAL	4.3 (90)	4.7 (98)	0.7 (15)	0.3 (6)	0.0 (0)	0.0 (0)	10.0 (209)

FOR STABILITY CLASS - G

NUMBER OF POSSIBLE HOURLY OBSERVATIONS: 209
 NUMBER OF MISSING WIND OBSERVATIONS: 0
 NUMBER OF CALM HOURS: 0



NIAGARA MOHAWK POWER CORPORATION

WIND SPEED, WIND DIRECTION AND ATMOSPHERIC STABILITY JOINT FREQUENCY DISTRIBUTION

SITE: NINE MILE POINT MAIN TOWER

PARAMETERS: WSPL, WDRL AND TDFU

APRIL 1, 1987 TO

JUNE 30, 1987

STABILITY CLASS - ALL

% FREQUENCY (NO. OF OCCURENCES) OF WIND DIRECTION WITHIN WIND SPEED CATEGORY

DIRECTION	SPEED (MPH)						TOTAL
	00-03	04-07	08-12	13-18	19-23	>24	
N	0.4 (8)	2.5 (51)	1.7 (35)	0.6 (13)	0.0 (0)	0.1 (2)	5.2 (109)
NNE	0.3 (7)	3.6 (75)	1.4 (30)	0.0 (1)	0.0 (0)	0.0 (0)	5.4 (113)
NE	1.1 (23)	5.7 (118)	1.5 (31)	0.2 (4)	0.0 (0)	0.0 (0)	8.5 (176)
ENE	1.0 (21)	1.5 (32)	0.3 (6)	0.0 (0)	0.0 (0)	0.0 (0)	2.8 (59)
E	1.3 (27)	1.1 (22)	0.0 (1)	0.0 (0)	0.0 (0)	0.0 (0)	2.4 (50)
ESE	1.3 (28)	2.0 (42)	1.9 (39)	0.0 (1)	0.0 (0)	0.0 (0)	5.3 (110)
SE	1.8 (37)	5.3 (111)	4.1 (85)	0.2 (5)	0.0 (0)	0.0 (0)	11.4 (238)
SSE	1.0 (20)	3.0 (63)	3.5 (73)	0.4 (8)	0.0 (0)	0.0 (0)	7.9 (164)
S	1.1 (22)	3.4 (71)	3.1 (64)	0.3 (6)	0.0 (0)	0.0 (0)	7.8 (163)
SSW	0.4 (8)	2.6 (55)	0.8 (16)	0.0 (1)	0.0 (0)	0.0 (0)	3.8 (80)
SN	0.6 (12)	2.3 (47)	2.3 (47)	0.6 (13)	0.0 (0)	0.0 (0)	5.7 (119)
WSW	0.2 (5)	4.2 (88)	8.5 (177)	3.1 (65)	0.3 (7)	0.0 (0)	16.4 (342)
W	0.6 (12)	2.9 (61)	2.0 (42)	1.5 (31)	1.0 (20)	0.6 (12)	8.6 (178)
WNW	0.5 (11)	0.9 (18)	0.7 (15)	0.5 (10)	0.2 (4)	0.2 (4)	3.0 (62)
NW	0.4 (9)	1.1 (23)	0.6 (12)	0.3 (7)	0.0 (0)	0.0 (0)	2.5 (51)
NNW	0.4 (9)	1.4 (29)	1.2 (25)	0.2 (4)	0.0 (0)	0.0 (0)	3.2 (67)
TOTAL	12.4 (259)	43.5 (906)	33.5 (698)	8.1 (169)	1.5 (31)	0.9 (18)	100.0 (2081)

FOR STABILITY CLASS - ALL

NUMBER OF POSSIBLE HOURLY OBSERVATIONS: 2081

NUMBER OF MISSING WIND OBSERVATIONS: 0

NUMBER OF CALM HOURS: 0

NIAGARA MOHAWK POWER CORPORATION

WIND SPEED, WIND DIRECTION AND ATMOSPHERIC STABILITY JOINT FREQUENCY DISTRIBUTION

SITE: NINE MILE POINT MAIN TOWER

PARAMETERS: WSPL AND WDRL

APRIL 1, 1987 TO

JUNE 30, 1987

% FREQUENCY (NO. OF OCCURENCES) OF WIND DIRECTION WITHIN WIND SPEED CATEGORY

DIRECTION	SPEED (MPH)						TOTAL
	00-03	04-07	08-12	13-18	19-23	>24	
N	0.4 (8)	2.4 (50)	1.4 (30)	0.6 (13)	0.0 (0)	0.0 (0)	4.9 (101)
NNE	0.3 (7)	3.6 (75)	1.4 (30)	0.0 (1)	0.0 (0)	0.0 (0)	5.4 (113)
NE	1.1 (23)	5.7 (118)	1.5 (31)	0.2 (4)	0.0 (0)	0.0 (0)	8.5 (176)
ENE	1.0 (21)	1.5 (32)	0.3 (6)	0.0 (0)	0.0 (0)	0.0 (0)	2.8 (59)
E	1.3 (27)	1.1 (22)	0.0 (1)	0.0 (0)	0.0 (0)	0.0 (0)	2.4 (50)
ESE	1.3 (28)	2.0 (42)	1.9 (39)	0.0 (1)	0.0 (0)	0.0 (0)	5.3 (110)
SE	1.8 (37)	5.3 (111)	4.1 (85)	0.2 (5)	0.0 (0)	0.0 (0)	11.4 (238)
SSE	1.0 (20)	3.0 (63)	3.5 (73)	0.4 (8)	0.0 (0)	0.0 (0)	7.9 (164)
S	1.1 (22)	3.4 (71)	3.1 (64)	0.3 (6)	0.0 (0)	0.0 (0)	7.8 (163)
SSW	0.4 (8)	2.6 (55)	0.8 (16)	0.0 (1)	0.0 (0)	0.0 (0)	3.8 (80)
SW	0.6 (12)	2.3 (47)	2.3 (47)	0.6 (13)	0.0 (0)	0.0 (0)	5.7 (119)
WSW	0.2 (5)	4.2 (88)	8.5 (177)	3.1 (65)	0.3 (7)	0.0 (0)	16.5 (342)
W	0.6 (12)	2.9 (61)	2.0 (42)	1.5 (31)	1.0 (20)	0.6 (12)	8.6 (178)
WNW	0.5 (11)	0.9 (19)	0.7 (15)	0.5 (10)	0.2 (4)	0.2 (4)	3.0 (63)
NW	0.4 (9)	1.2 (24)	0.6 (13)	0.3 (7)	0.0 (0)	0.0 (0)	2.5 (53)
NNW	0.4 (9)	1.5 (31)	1.3 (26)	0.2 (4)	0.0 (0)	0.0 (0)	3.4 (70)
TOTAL	12.5 (259)	43.7 (909)	33.4 (695)	8.1 (169)	1.5 (31)	0.8 (16)	100.0 (2079)

FOR ALL WIND CATEGORIES

NUMBER OF POSSIBLE HOURLY OBSERVATIONS: 2184

NUMBER OF MISSING WIND OBSERVATIONS: 105

NUMBER OF CALM HOURS: 0



NIAGARA MOHAWK POWER CORPORATION

WIND SPEED, WIND DIRECTION AND ATMOSPHERIC STABILITY JOINT FREQUENCY DISTRIBUTION

SITE: NINE MILE POINT MAIN TOWER

PARAMETERS: WSPU, WDRU AND TDFU

APRIL 1, 1987 TO

JUNE 30, 1987

STABILITY CLASS - A

% FREQUENCY (NO. OF OCCURENCES) OF WIND DIRECTION WITHIN WIND SPEED CATEGORY

DIRECTION	00-03		04-07		08-12		SPEED (MPH) 13-18		19-23		>24		TOTAL	
	%	(NO.)	%	(NO.)	%	(NO.)	%	(NO.)	%	(NO.)	%	(NO.)	%	(NO.)
N	0.0	(0)	0.0	(0)	0.1	(2)	0.2	(5)	0.0	(0)	0.1	(2)	0.4	(9)
NNE	0.0	(0)	0.0	(0)	0.0	(1)	0.2	(5)	0.1	(3)	0.0	(1)	0.5	(10)
NE	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)
ENE	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)
E	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)
ESE	0.0	(0)	0.0	(0)	0.0	(0)	0.1	(3)	0.1	(2)	0.0	(0)	0.2	(5)
SE	0.0	(0)	0.0	(0)	0.0	(0)	0.2	(5)	0.0	(1)	0.0	(0)	0.3	(6)
SSE	0.0	(0)	0.0	(0)	0.0	(0)	0.1	(2)	0.0	(0)	0.0	(0)	0.1	(2)
S	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)
SSW	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)
SW	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(1)	0.0	(0)	0.0	(1)
WSW	0.0	(0)	0.0	(0)	0.0	(0)	0.1	(2)	0.0	(0)	0.0	(0)	0.1	(2)
W	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(1)	0.0	(0)	0.0	(1)
WNN	0.0	(0)	0.0	(1)	0.0	(0)	0.0	(0)	0.1	(2)	0.0	(0)	0.1	(3)
NW	0.0	(0)	0.0	(1)	0.1	(3)	0.1	(3)	0.1	(3)	0.0	(1)	0.5	(11)
NNW	0.0	(0)	0.2	(5)	0.1	(3)	0.0	(0)	0.0	(1)	0.0	(0)	0.4	(9)
TOTAL	0.0	(0)	0.3	(7)	0.4	(9)	1.2	(25)	0.7	(14)	0.2	(4)	2.8	(59)

FOR STABILITY CLASS - A

NUMBER OF POSSIBLE HOURLY OBSERVATIONS: 59

NUMBER OF MISSING WIND OBSERVATIONS: 0

NUMBER OF CALM HOURS: 0



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NIAGARA MOHAWK POWER CORPORATION

WIND SPEED, WIND DIRECTION AND ATMOSPHERIC STABILITY JOINT FREQUENCY DISTRIBUTION

SITE: NINE MILE POINT MAIN TOWER

PARAMETERS: WSPU, WDRU AND TDFU

APRIL 1, 1987 TO

JUNE 30, 1987

STABILITY CLASS - B

% FREQUENCY (NO. OF OCCURENCES) OF WIND DIRECTION WITHIN WIND SPEED CATEGORY

DIRECTION	00-03		04-07		08-12		SPEED (MPH) 13-18		19-23		>24		TOTAL	
	%	(NO.)	%	(NO.)	%	(NO.)	%	(NO.)	%	(NO.)	%	(NO.)	%	(NO.)
N	0.0	(0)	0.1	(2)	0.0	(0)	0.1	(2)	0.1	(3)	0.0	(0)	0.3	(7)
NNE	0.0	(0)	0.0	(1)	0.1	(2)	0.0	(1)	0.1	(3)	0.1	(3)	0.5	(10)
NE	0.0	(0)	0.0	(0)	0.0	(1)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(1)
ENE	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)
E	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)
ESE	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)
SE	0.0	(0)	0.0	(0)	0.0	(0)	0.1	(2)	0.1	(2)	0.0	(1)	0.2	(5)
SSE	0.0	(0)	0.0	(0)	0.0	(0)	0.2	(4)	0.0	(1)	0.0	(0)	0.2	(5)
S	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)
SSW	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)
SW	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)
WSW	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(1)	0.0	(0)	0.0	(0)	0.0	(1)
W	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(1)	0.0	(0)	0.0	(1)
WNW	0.0	(0)	0.2	(4)	0.0	(1)	0.0	(0)	0.0	(0)	0.0	(0)	0.2	(5)
NW	0.0	(1)	0.0	(1)	0.0	(1)	0.0	(0)	0.0	(0)	0.0	(0)	0.1	(3)
NNW	0.0	(0)	0.1	(3)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.1	(3)
TOTAL	0.0	(1)	0.5	(11)	0.2	(5)	0.5	(10)	0.5	(10)	0.2	(4)	2.0	(41)

FOR STABILITY CLASS - B

NUMBER OF POSSIBLE HOURLY OBSERVATIONS: 41

NUMBER OF MISSING WIND OBSERVATIONS: 0

NUMBER OF CALM HOURS: 0



NIAGARA MOHAWK POWER CORPORATION

WIND SPEED, WIND DIRECTION AND ATMOSPHERIC STABILITY JOINT FREQUENCY DISTRIBUTION

SITE: NINE MILE POINT MAIN TOWER

PARAMETERS: WSPU, WDRU AND TDFU

APRIL 1, 1987 TO

JUNE 30, 1987

STABILITY CLASS - C

% FREQUENCY (NO. OF OCCURENCES) OF WIND DIRECTION WITHIN WIND SPEED CATEGORY

DIRECTION	00-03		04-07		08-12		SPEED (MPH) 13-18		19-23		>24		TOTAL	
	%	(NO.)	%	(NO.)	%	(NO.)	%	(NO.)	%	(NO.)	%	(NO.)	%	(NO.)
N	0.0	(0)	0.1	(3)	0.1	(2)	0.0	(1)	0.0	(0)	0.0	(1)	0.3	(7)
NNE	0.0	(0)	0.0	(1)	0.1	(2)	0.0	(0)	0.0	(0)	0.0	(1)	0.2	(4)
NE	0.0	(0)	0.0	(0)	0.0	(1)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(1)
ENE	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)
E	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)
ESE	0.0	(0)	0.0	(0)	0.0	(0)	0.1	(3)	0.0	(1)	0.0	(0)	0.2	(4)
SE	0.0	(0)	0.0	(0)	0.1	(2)	0.2	(4)	0.0	(1)	0.0	(0)	0.3	(7)
SSE	0.0	(0)	0.0	(0)	0.0	(1)	0.2	(5)	0.0	(1)	0.0	(0)	0.3	(7)
S	0.0	(0)	0.0	(0)	0.0	(1)	0.1	(3)	0.0	(0)	0.0	(0)	0.2	(4)
SSW	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)
SW	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)
WSW	0.0	(0)	0.0	(0)	0.0	(1)	0.4	(8)	0.0	(1)	0.0	(1)	0.5	(11)
W	0.0	(0)	0.0	(1)	0.0	(0)	0.0	(0)	0.2	(5)	0.0	(0)	0.3	(6)
WNW	0.0	(0)	0.1	(2)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(1)	0.1	(3)
NW	0.0	(0)	0.1	(2)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.1	(2)
NNW	0.0	(0)	0.0	(0)	0.1	(3)	0.0	(1)	0.0	(0)	0.0	(0)	0.2	(4)
TOTAL	0.0	(0)	0.4	(9)	0.6	(13)	1.2	(25)	0.4	(9)	0.2	(4)	2.9	(60)

FOR STABILITY CLASS - C

NUMBER OF POSSIBLE HOURLY OBSERVATIONS: 60

NUMBER OF MISSING WIND OBSERVATIONS: 0

NUMBER OF CALM HOURS: 0



12
8
3

NIAGARA MOHAWK POWER CORPORATION

WIND SPEED, WIND DIRECTION AND ATMOSPHERIC STABILITY JOINT FREQUENCY DISTRIBUTION

SITE: NINE MILE POINT MAIN TOWER

PARAMETERS: WSPU, WDRU AND TDFU

APRIL 1, 1987 TO

JUNE 30, 1987

STABILITY CLASS - D

% FREQUENCY (NO. OF OCCURENCES) OF WIND DIRECTION WITHIN WIND SPEED CATEGORY

DIRECTION	SPEED (MPH)						TOTAL
	00-03	04-07	08-12	13-18	19-23	>24	
N	0.0 (0)	0.4 (9)	0.2 (4)	0.2 (4)	0.3 (6)	0.2 (5)	1.3 (28)
NNE	0.0 (1)	0.8 (16)	0.2 (4)	1.2 (26)	1.0 (21)	1.0 (21)	4.3 (89)
NE	0.0 (0)	0.6 (13)	0.3 (7)	0.5 (11)	0.1 (2)	0.0 (0)	1.6 (33)
ENE	0.0 (1)	0.2 (5)	0.1 (3)	0.1 (2)	0.0 (0)	0.0 (0)	0.5 (11)
E	0.0 (0)	0.0 (0)	0.1 (3)	0.0 (1)	0.0 (0)	0.0 (0)	0.2 (4)
ESE	0.0 (1)	0.0 (1)	0.1 (3)	1.0 (21)	0.1 (3)	0.0 (0)	1.4 (29)
SE	0.1 (2)	0.4 (8)	1.3 (27)	2.7 (56)	1.0 (21)	0.1 (3)	5.6 (117)
SSE	0.0 (0)	0.1 (2)	0.8 (16)	1.9 (40)	0.5 (10)	0.3 (6)	3.6 (74)
S	0.0 (0)	0.0 (1)	0.5 (11)	0.7 (14)	0.4 (9)	0.0 (1)	1.7 (36)
SSW	0.0 (0)	0.2 (5)	0.1 (3)	0.3 (6)	0.0 (0)	0.0 (1)	0.7 (15)
SW	0.0 (0)	0.2 (4)	0.4 (8)	0.5 (10)	0.1 (2)	0.0 (0)	1.2 (24)
WSW	0.0 (1)	0.2 (5)	2.1 (43)	3.5 (73)	0.9 (19)	0.6 (13)	7.4 (154)
W	0.1 (2)	0.4 (9)	1.2 (25)	0.7 (14)	0.4 (9)	1.0 (21)	3.8 (80)
WNW	0.0 (1)	0.2 (5)	0.2 (5)	0.5 (10)	0.1 (2)	0.2 (4)	1.3 (27)
NW	0.0 (1)	0.3 (6)	0.2 (5)	0.1 (3)	0.0 (0)	0.0 (0)	0.7 (15)
NHW	0.0 (0)	0.2 (5)	0.1 (3)	0.2 (4)	0.0 (0)	0.0 (0)	0.6 (12)
TOTAL	0.5 (10)	4.5 (94)	8.2 (170)	14.2 (295)	5.0 (104)	3.6 (75)	35.9 (748)

FOR STABILITY CLASS - D

NUMBER OF POSSIBLE HOURLY OBSERVATIONS: 748

NUMBER OF MISSING WIND OBSERVATIONS: 0

NUMBER OF CALM HOURS: 0

1000 5 1 1 1 1

NIAGARA MOHAWK POWER CORPORATION

WIND SPEED, WIND DIRECTION AND ATMOSPHERIC STABILITY JOINT FREQUENCY DISTRIBUTION

SITE: NINE MILE POINT MAIN TOWER

PARAMETERS: WSPU, WDRU AND TDFU

APRIL 1, 1987 TO

JUNE 30, 1987

STABILITY CLASS - E

% FREQUENCY (NO. OF OCCURENCES) OF WIND DIRECTION WITHIN WIND SPEED CATEGORY

DIRECTION	SPEED (MPH)							TOTAL
	00-03	04-07	08-12	13-18	19-23	>24		
N	0.0 (1)	0.1 (3)	0.1 (2)	0.7 (15)	0.7 (15)	0.3 (6)	2.0 (42)	
NNE	0.0 (0)	0.0 (0)	0.5 (11)	0.8 (17)	1.2 (25)	1.2 (26)	3.8 (79)	
NE	0.0 (1)	0.4 (9)	0.4 (9)	0.3 (7)	0.0 (0)	0.0 (0)	1.2 (26)	
ENE	0.0 (1)	0.4 (9)	0.2 (4)	0.1 (3)	0.2 (5)	0.0 (0)	1.1 (22)	
E	0.0 (1)	0.1 (3)	0.1 (2)	0.0 (1)	0.0 (0)	0.0 (0)	0.3 (7)	
ESE	0.0 (1)	0.0 (1)	0.3 (6)	0.2 (4)	0.0 (0)	0.0 (0)	0.6 (12)	
SE	0.0 (1)	0.2 (5)	0.6 (13)	1.8 (37)	0.9 (19)	0.0 (1)	3.7 (76)	
SSE	0.0 (0)	0.1 (3)	0.3 (7)	0.9 (18)	0.4 (8)	0.0 (0)	1.7 (36)	
S	0.0 (0)	0.3 (6)	0.4 (9)	1.2 (25)	0.4 (8)	0.0 (0)	2.3 (48)	
SSW	0.0 (0)	0.3 (6)	0.4 (8)	1.2 (26)	0.1 (2)	0.0 (0)	2.0 (42)	
SW	0.1 (2)	0.1 (3)	0.8 (17)	1.6 (34)	0.5 (10)	0.6 (12)	3.7 (78)	
WSW	0.0 (0)	0.4 (8)	1.7 (35)	2.5 (52)	1.4 (30)	0.6 (13)	6.6 (138)	
W	0.0 (1)	0.3 (7)	0.7 (15)	0.6 (12)	0.1 (3)	0.2 (4)	2.0 (42)	
WNW	0.0 (0)	0.2 (5)	0.5 (10)	0.0 (1)	0.0 (1)	0.0 (1)	0.9 (18)	
NW	0.0 (0)	0.0 (1)	0.2 (4)	0.1 (3)	0.1 (3)	0.0 (0)	0.5 (11)	
NNW	0.1 (2)	0.1 (2)	0.1 (2)	0.2 (4)	0.2 (5)	0.1 (2)	0.8 (17)	
TOTAL	0.5 (11)	3.4 (71)	7.4 (154)	12.4 (259)	6.4 (134)	3.1 (65)	33.3 (694)	

FOR STABILITY CLASS - E

NUMBER OF POSSIBLE HOURLY OBSERVATIONS: 694

NUMBER OF MISSING WIND OBSERVATIONS: 0

NUMBER OF CALM HOURS: 0



NIAGARA MOHAWK POWER CORPORATION

WIND SPEED, WIND DIRECTION AND ATMOSPHERIC STABILITY JOINT FREQUENCY DISTRIBUTION

SITE: NINE MILE POINT MAIN TOWER

PARAMETERS: WSPU, WDRU AND TDFU

APRIL 1, 1987 TO

JUNE 30, 1987

STABILITY CLASS - F

% FREQUENCY (NO. OF OCCURENCES) OF WIND DIRECTION WITHIN WIND SPEED CATEGORY

DIRECTION	SPEED (MPH)							TOTAL
	00-03	04-07	08-12	13-18	19-23	>24		
N	0.1 (3)	0.4 (8)	0.2 (4)	0.4 (8)	0.4 (8)	0.2 (4)	1.7 (35)	
NNE	0.0 (0)	0.3 (6)	0.2 (4)	0.1 (2)	0.1 (2)	0.1 (3)	0.8 (17)	
NE	0.0 (0)	0.1 (3)	0.1 (3)	0.2 (4)	0.0 (0)	0.0 (0)	0.5 (10)	
ENE	0.0 (0)	0.1 (3)	0.2 (5)	0.0 (0)	0.0 (0)	0.0 (0)	0.4 (8)	
E	0.0 (0)	0.2 (4)	0.3 (6)	0.0 (1)	0.0 (0)	0.0 (0)	0.5 (11)	
ESE	0.0 (0)	0.0 (0)	0.0 (0)	0.1 (3)	0.0 (0)	0.0 (0)	0.1 (3)	
SE	0.0 (1)	0.0 (1)	0.1 (2)	0.1 (2)	0.0 (1)	0.0 (0)	0.3 (7)	
SSE	0.0 (1)	0.1 (3)	0.2 (5)	0.3 (6)	0.0 (0)	0.0 (0)	0.7 (15)	
S	0.0 (0)	0.1 (2)	0.3 (7)	0.3 (7)	0.0 (0)	0.0 (0)	0.8 (16)	
SSW	0.0 (0)	0.1 (2)	0.4 (8)	0.3 (7)	0.0 (1)	0.0 (0)	0.9 (18)	
SW	0.0 (0)	0.1 (2)	0.7 (14)	1.0 (20)	0.0 (0)	0.0 (1)	1.8 (37)	
WSW	0.0 (0)	0.1 (3)	1.5 (32)	0.5 (11)	0.3 (6)	0.2 (5)	2.7 (57)	
W	0.0 (0)	0.1 (3)	0.4 (8)	0.1 (2)	0.0 (0)	0.0 (1)	0.7 (14)	
WNW	0.0 (0)	0.2 (5)	0.1 (2)	0.0 (0)	0.0 (0)	0.0 (0)	0.3 (7)	
NW	0.0 (0)	0.0 (0)	0.0 (1)	0.0 (0)	0.0 (1)	0.0 (0)	0.1 (2)	
NNW	0.0 (1)	0.1 (2)	0.1 (3)	0.1 (2)	0.1 (3)	0.1 (2)	0.6 (13)	
TOTAL	0.3 (6)	2.3 (47)	5.0 (104)	3.6 (75)	1.1 (22)	0.8 (16)	13.0 (270)	

FOR STABILITY CLASS - F

NUMBER OF POSSIBLE HOURLY OBSERVATIONS: 270

NUMBER OF MISSING WIND OBSERVATIONS: 0

NUMBER OF CALM HOURS: 0



1
2
3
4
5

NIAGARA MOHAWK POWER CORPORATION

WIND SPEED, WIND DIRECTION AND ATMOSPHERIC STABILITY JOINT FREQUENCY DISTRIBUTION

SITE: NINE MILE POINT MAIN TOWER

PARAMETERS: WSPU, WDRU AND TDFU

APRIL 1, 1987 TO

JUNE 30, 1987

STABILITY CLASS - G

% FREQUENCY (NO. OF OCCURENCES) OF WIND DIRECTION WITHIN WIND SPEED CATEGORY

DIRECTION	SPEED (MPH)							TOTAL
	00-03	04-07	08-12	13-18	19-23	>24		
N	0.1 (3)	0.1 (3)	0.0 (1)	0.1 (2)	0.3 (7)	0.2 (5)	1.0 (21)	
NNE	0.0 (1)	0.2 (5)	0.0 (0)	0.2 (5)	0.1 (3)	0.0 (1)	0.7 (15)	
NE	0.0 (1)	0.1 (2)	0.1 (2)	0.0 (0)	0.0 (0)	0.0 (0)	0.2 (5)	
ENE	0.1 (2)	0.1 (3)	0.2 (4)	0.0 (0)	0.0 (0)	0.0 (0)	0.4 (9)	
E	0.1 (2)	0.1 (3)	0.3 (6)	0.1 (2)	0.0 (0)	0.0 (0)	0.6 (13)	
ESE	0.1 (3)	0.1 (2)	0.2 (4)	0.1 (2)	0.0 (0)	0.0 (0)	0.5 (11)	
SE	0.0 (0)	0.3 (7)	0.1 (2)	0.2 (5)	0.0 (0)	0.0 (0)	0.7 (14)	
SSE	0.1 (2)	0.3 (6)	0.4 (8)	0.0 (1)	0.0 (0)	0.0 (0)	0.8 (17)	
S	0.0 (1)	0.1 (3)	0.4 (8)	0.2 (5)	0.0 (0)	0.0 (0)	0.8 (17)	
SSW	0.1 (2)	0.1 (3)	0.2 (5)	0.1 (3)	0.0 (0)	0.0 (0)	0.6 (13)	
SW	0.1 (3)	0.2 (4)	0.5 (10)	0.2 (5)	0.0 (0)	0.0 (0)	1.1 (22)	
WSW	0.1 (3)	0.1 (3)	0.3 (7)	0.3 (6)	0.0 (0)	0.0 (1)	1.0 (20)	
W	0.1 (2)	0.2 (4)	0.1 (3)	0.0 (0)	0.0 (0)	0.1 (3)	0.6 (12)	
WNW	0.0 (1)	0.1 (2)	0.0 (1)	0.0 (0)	0.0 (1)	0.0 (0)	0.2 (5)	
NW	0.0 (0)	0.0 (1)	0.1 (2)	0.0 (0)	0.0 (1)	0.0 (0)	0.2 (4)	
NNW	0.0 (1)	0.1 (3)	0.1 (3)	0.1 (3)	0.0 (0)	0.0 (1)	0.5 (11)	
TOTAL	1.3 (27)	2.6 (54)	3.2 (66)	1.9 (39)	0.6 (12)	0.5 (11)	10.0 (209)	

FOR STABILITY CLASS - G

NUMBER OF POSSIBLE HOURLY OBSERVATIONS: 209
 NUMBER OF MISSING WIND OBSERVATIONS: 0
 NUMBER OF CALM HOURS: 0



22

23

24

25

NIAGARA MOHAWK POWER CORPORATION

WIND SPEED, WIND DIRECTION AND ATMOSPHERIC STABILITY JOINT FREQUENCY DISTRIBUTION

SITE: NINE MILE POINT MAIN TOWER

PARAMETERS: WSPU, WDRU AND TDFU

APRIL 1, 1987 TO

JUNE 30, 1987

STABILITY CLASS - ALL

% FREQUENCY (NO. OF OCCURENCES) OF WIND DIRECTION WITHIN WIND SPEED CATEGORY

DIRECTION	SPEED (MPH)							TOTAL
	00-03	04-07	08-12	13-18	19-23	>24		
N	0.3 (7)	1.3 (28)	0.7 (15)	1.8 (37)	1.9 (39)	1.1 (23)	7.2 (149)	
NNE	0.1 (2)	1.4 (29)	1.2 (24)	2.7 (56)	2.7 (57)	2.7 (56)	10.8 (224)	
NE	0.1 (2)	1.3 (27)	1.1 (23)	1.1 (22)	0.1 (2)	0.0 (0)	3.7 (76)	
ENE	0.2 (4)	1.0 (20)	0.8 (16)	0.2 (5)	0.2 (5)	0.0 (0)	2.4 (50)	
E	0.1 (3)	0.5 (10)	0.8 (17)	0.2 (5)	0.0 (0)	0.0 (0)	1.7 (35)	
ESE	0.2 (5)	0.2 (4)	0.6 (13)	1.7 (36)	0.3 (6)	0.0 (0)	3.1 (64)	
SE	0.2 (4)	1.0 (21)	2.2 (46)	5.3 (111)	2.2 (45)	0.2 (5)	11.1 (232)	
SSE	0.1 (3)	0.7 (14)	1.8 (37)	3.7 (76)	1.0 (20)	0.3 (6)	7.5 (156)	
S	0.0 (1)	0.6 (12)	1.7 (36)	2.6 (54)	0.8 (17)	0.0 (1)	5.8 (121)	
SSW	0.1 (2)	0.8 (16)	1.2 (24)	2.0 (42)	0.1 (3)	0.0 (1)	4.2 (88)	
SW	0.2 (5)	0.6 (13)	2.4 (49)	3.3 (69)	0.6 (13)	0.6 (13)	7.8 (162)	
WSW	0.2 (4)	0.9 (19)	5.7 (118)	7.4 (153)	2.7 (56)	1.6 (33)	18.4 (383)	
W	0.2 (5)	1.2 (24)	2.5 (51)	1.3 (28)	0.9 (19)	1.4 (29)	7.5 (156)	
WNW	0.1 (2)	1.2 (24)	0.9 (19)	0.5 (11)	0.3 (6)	0.3 (6)	3.3 (68)	
NW	0.1 (2)	0.6 (12)	0.8 (16)	0.4 (9)	0.4 (8)	0.0 (1)	2.3 (48)	
NNW	0.2 (4)	1.0 (20)	0.8 (17)	0.7 (14)	0.4 (9)	0.2 (5)	3.3 (69)	
TOTAL	2.6 (55)	14.1 (293)	25.0 (521)	35.0 (728)	14.7 (305)	8.6 (179)	100.0 (2081)	

FOR STABILITY CLASS - ALL

NUMBER OF POSSIBLE HOURLY OBSERVATIONS: 2081
 NUMBER OF MISSING WIND OBSERVATIONS: 0
 NUMBER OF CALM HOURS: 0



NIAGARA MOHAWK POWER CORPORATION

WIND SPEED, WIND DIRECTION AND ATMOSPHERIC STABILITY JOINT FREQUENCY DISTRIBUTION

SITE: NINE MILE POINT MAIN TOWER

PARAMETERS: WSPU AND WDRU

APRIL 1, 1987 TO

JUNE 30, 1987

% FREQUENCY (NO. OF OCCURENCES) OF WIND DIRECTION WITHIN WIND SPEED CATEGORY

DIRECTION	SPEED (MPH)							TOTAL
	00-03	04-07	08-12	13-18	19-23	>24		
N	0.3 (7)	1.3 (28)	0.7 (15)	1.9 (39)	1.9 (39)	1.0 (21)	7.1 (149)	
NNE	0.1 (2)	1.4 (29)	1.2 (24)	2.7 (56)	2.7 (57)	2.7 (56)	10.7 (224)	
NE	0.1 (2)	1.3 (27)	1.1 (23)	1.1 (22)	0.1 (2)	0.0 (0)	3.6 (76)	
ENE	0.2 (4)	1.0 (20)	0.8 (16)	0.2 (5)	0.2 (5)	0.0 (0)	2.4 (50)	
E	0.1 (3)	0.5 (10)	0.8 (17)	0.2 (5)	0.0 (0)	0.0 (0)	1.7 (35)	
ESE	0.2 (5)	0.2 (4)	0.6 (13)	1.7 (36)	0.3 (6)	0.0 (0)	3.1 (64)	
SE	0.2 (4)	1.0 (21)	2.2 (46)	5.3 (111)	2.2 (45)	0.2 (5)	11.1 (232)	
SSE	0.1 (3)	0.7 (14)	1.8 (37)	3.6 (76)	1.0 (20)	0.3 (6)	7.5 (156)	
S	0.0 (1)	0.6 (12)	1.7 (36)	2.6 (54)	0.8 (17)	0.0 (1)	5.8 (121)	
SSW	0.1 (2)	0.8 (16)	1.2 (24)	2.0 (42)	0.1 (3)	0.0 (1)	4.2 (88)	
SW	0.2 (5)	0.6 (13)	2.3 (49)	3.3 (69)	0.6 (13)	0.6 (13)	7.8 (162)	
WSW	0.2 (4)	0.9 (19)	5.7 (118)	7.3 (153)	2.7 (56)	1.6 (33)	18.4 (383)	
W	0.2 (5)	1.2 (24)	2.4 (51)	1.3 (28)	0.9 (19)	1.4 (29)	7.5 (156)	
WNW	0.1 (2)	1.2 (24)	0.9 (19)	0.5 (11)	0.3 (6)	0.3 (6)	3.3 (68)	
NW	0.1 (2)	0.6 (13)	0.8 (16)	0.4 (9)	0.4 (8)	0.0 (1)	2.3 (49)	
NNW	0.2 (4)	1.0 (21)	0.9 (18)	0.7 (15)	0.4 (9)	0.3 (6)	3.5 (73)	
TOTAL	2.6 (55)	14.1 (295)	25.0 (522)	35.0 (731)	14.6 (305)	8.5 (178)	100.0 (2086)	

FOR ALL WIND CATEGORIES

NUMBER OF POSSIBLE HOURLY OBSERVATIONS: 2184

NUMBER OF MISSING WIND OBSERVATIONS: 98

NUMBER OF CALM HOURS: 0



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TABLE 5

SEMI-ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT (1987)
NINE MILE POINT NUCLEAR STATION #2
SUMMARY OF CHANGES TO THE OFF-SITE DOSE CALCULATION MANUAL

JANUARY - JUNE

In accordance with the Nine Mile Point 2 Technical Specifications, this Table (a) describes and provides justification for recent changes to the Off-Site Dose Calculation Manual and (b) explains why these changes will not adversely affect the accuracy or reliability of off-site dose calculations or monitor alarm setpoint determinations.

Attachment 2 to this document provides a copy of the Off-Site Dose Calculation Manual (which shows recent changes made). All revisions to the Off-Site Dose Calculation Manual were reviewed and accepted by authorized station personnel in accordance with applicable administrative procedures and of the Technical Specifications. Review and approval documentation is affixed to the front side of Attachment 2.



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TABLE 5
(Last Page)

SEMI-ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT (1987)
NINE MILE POINT NUCLEAR STATION #2
SUMMARY OF CHANGES TO THE OFF-SITE DOSE CALCULATION MANUAL

JANUARY - JUNE

CHG. NO.	ODCM SECTION CHANGED	DESCRIPTION OF CHANGE (JUSTIFICATION)	AFFECT ON ACCURACY/ RELIABILITY OF DOSE CALCULATIONS/ALARM SETPOINT DETERMINATIONS
1.	2.5	A factor, M, was added to the equation for calculation of the recirculation time necessary to thoroughly mix a radwaste tank prior to discharge. The factor is 4 for tank 2LWS-TK5A and B based on design data and in plant testing.	None
2.	3.4.4	An error in the test was discovered. The fraction of time that cows are on pasture is now correctly stated as 0.5.	None
3.	Table 2-2	Additional nuclides were added to the table. These were or may in the future be discharged in liquid waste.	None
4.	2.1.3.1	The alarm setpoint for the liquid radioactive discharge monitor will not be set to less than 355 cpm over background. This is the same as the service water and cooling tower blowdown monitors setpoint.	None



TABLE 6

SEMI-ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT (1987)
NINE MILE POINT NUCLEAR STATION #2
SUMMARY OF CHANGES TO THE PROCESS CONTROL PROGRAM

JANUARY - JUNE

Nine Mile Point Nuclear Station Site Administrative Procedure AP 3.7.1, which describes the Nine Mile Point Unit 2 Process Control Program (PCP) was implemented during the current reporting period. In accordance with the Nine Mile Point 2 Technical Specifications, this Table: (a) describes the rationale for changes in the PCP and (b) explains why these changes will not adversely affect the overall conformance of the solidified waste product to existing criteria for solid wastes.

Attachment 1 to this document provides a copy of Revision 0 to AP-3.7.1.



TABLE 6
(Last Page)

SEMI-ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT (1987)
NINE MILE POINT NUCLEAR STATION #2
SUMMARY OF CHANGES TO THE PROCESS CONTROL PROGRAM

JANUARY - JUNE

CHG. NO.	AP-3.7.1 SECTION CHANGED	RATIONALE FOR CHANGE	AFFECT ON CONFORMANCE OF WASTE PRODUCT TO EXISTING CRITERIA
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There were no changes to the Process Control Program.



TABLE 7

SEMI-ANNUAL RADIOACTIVE RELEASE REPORT (1987)
NINE MILE POINT NUCLEAR STATION #2

EXPLANATION OF INSTRUMENTATION INOPERABILITY

<u>INSTRUMENT</u>	<u>DATE OUT OF SERVICE</u>	<u>DATE RETURNED TO SERVICE</u>	<u>EXPLANATION</u>
Stack Noble Gas	1-21-87	2-17-87	Difficulty in diagnosing the problem and a lack of available spare parts. Work Request 109201.
Reactor - Radwaste Vent Noble Gas	1-5-87	2-16-87	Difficulty in diagnosing the problem and paperwork delays once problem was repaired.
Stack System Flow	1-87	-----	Lack of approved procedure.
Reactor - Radwaste Vent System Flow	2-87	-----	Lack of approved procedure.
Service Water A Radiation	1-1-87	5-21-87	Lack of spare parts.
Service Water B Radiation	2-19-87	5-21-87	Lack of spare parts.



ATTACHMENT 1

SEMI-ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT (1987)
NINE MILE POINT NUCLEAR STATION # 2

PROCESS CONTROL PROGRAM

Attached is a copy of the NMP Administrative Procedure (AP) 3.7.1 "Process Control Program" Revision 0. Description of changes made to the Process Control Program are provided in Table 6 of this report.



ATTACHMENT 2

SEMI-ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT (1987)
NINE MILE POINT NUCLEAR STATION # 2

OFFSITE DOSE CALCULATIONS MANUAL

Attached is a copy of the Offsite Dose Calculation Manual Revision 3 for Nine Mile Point Nuclear Station Unit 2. Description of changes made to the manual are provided in Table 5 of this report.

