Entergy

Entergy Nuclear Northeast
Indian Point Energy Center
450 Broadway, GSB
P.O. Box 249
Buchanan, NY 10511-0249
Tel 914 734 6700

Fred Dacimo
Site Vice President
Administration

April 28, 2004

Indian Point Units 1, 2 and 3
Docket Nos. 50-3, 50-247, and 50-286
NL-04-043

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Mail Stop O-P1-17
Washington, D.C. 20555-0001

Subject: 2003 Annual Effluent and Waste Disposal Report

Reference: 1. Entergy Letter (NL-03-068) to NRC, " Annual Effluent and Waste Disposal Report," dated May 1, 2003

Dear Sir:

The Annual Report of Radioactivity in Solid Wastes and Releases of Radioactive Material in Liquid and Gaseous Effluents for Indian Point Units Nos.1, and 2 is provided in Enclosure 1, and the report for Indian Point Unit No. 3 is provided in Enclosure 2. Entergy Nuclear Operation, Inc. (Entergy) is submitting these reports as required by Technical Specifications Section 5.6.3 covering the period January 1, 2003, through December 31, 2003. The pathway for processing wastes from Indian Point 3 at Indian Point 2 was not utilized during this period.

Also included in Enclosure 3 is Revision 1 to the 2002 Annual Effluent and Waste Disposal Report for Indian Point Unit Nos. 1 and 2. Entergy updated the report, submitted in Reference 1, to correct airborne curies and associated dose data and is re-submitting the report in its entirety to include several other modifications made to the report. These modifications include a split of C-14 data from the tables, a modification to the Hudson River flows to reflect Army Corps of Engineers data, a discussion of 40 CFR 190, the Process Control Program change evaluation, and clarification of the RWST excessive curie event in November 2002.

Entergy is making no new commitments in this letter. Should you have any questions regarding this matter, please contact Mr. Patric W. Conroy, Licensing Manager at (914) 734-6668.

IE48

Sincerely,

Fred R. Dacimo
Senior Vice President
Indian Point Energy Center

Enclosure 1: 2003 Annual Effluent and Waste Disposal Report, Indian Point 1 and 2
Enclosure 2: 2003 Annual Effluent and Waste Disposal Report, Indian Point 3
Enclosure 3: Revision 1 to 2002 Annual Effluent and Waste Disposal Report, Indian Point 1 and 2

cc: Mr. Hubert J. Miller
Regional Administrator - Region I
U.S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19406

Mr. Patrick D. Milano, Sr. Project Manager
Project Directorate I-1
Division of Licensing Project Management
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Mail Stop O-8-C2
Washington, D.C. 20555-0001

Resident Inspector's Office
U.S. Nuclear Regulatory Commission
Indian Point 2
P.O. Box 38
Buchanan, NY 10511-0038

Resident Inspector's Office
U.S. Nuclear Regulatory Commission
Indian Point 3
P.O. Box 337
Buchanan, NY 10511-0337

Attn. Chief, Compliance Section
New York State DEC
Division of Water
50 Wolf Road
Albany, NY 12233

Mr. Michael K Webb, Project Manager
Project Directorate IV
Division of Licensing Project Management
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Mail Stop O-7-D1
Washington, D.C. 20555-0001

Attn. Regional Water Engineer
New York State DEC
200 White Plains Road
White Plains, NY 10601

ENCLOSURE 1

2003 Annual Effluent and Waste Disposal Report

Indian Point 1 and 2

Entergy Nuclear Operations, Inc.
Docket Nos. 50-03 & 50-247
NL-04-043
Indian Point

Radioactive Effluent Release Report: 2003

Facility Indian Point Units 1 and 2

Licensee Entergy Nuclear Operations, Inc. (Entergy)

This information is provided pursuant to 10 CFR 50.36a(a)(2) and employs certain guidance as set forth in Regulatory Guide 1.21, Revision 1. The numbered sections of this part of the report reference corresponding sections of the subject Regulatory Guide, pages 1.21-10 through 1.21-12. This Annual Effluent and Waste Disposal Report for Indian Point Units 1 and 2 covers discharges for 2003. Indian Point Unit 3, also owned by Entergy, will issue a separate report.

A. Supplemental Information and Definition

1. Regulatory Limits

Indian Point Units 1 and 2 are presently subject to radioactive waste release specifications that are set forth in the Offsite Dose Calculation Manual (ODCM). The percentages of the ODCM limits in Tables 1A and 2A are determined from the proximity to the ODCM quarterly dose limits, as represented in Section E of this report.

2. Maximum Permissible Concentrations (MPC)

Gaseous Effluents

Concentrations of gaseous discharges in unrestricted areas are computed by producing release rate (Q) and the annual average dispersion factor (X/Q) at the most restrictive site boundary location. The mixture percent of MPC* is obtained by adding the effects of each nuclide; the effect of each nuclide is, in turn, the quotient of its computed concentration and its MPC.

Liquid Effluents

All liquid discharges from Indian Point 1 and 2 are made through a common discharge canal with a minimum of 100,000 gpm dilution water. The isotopic content, excluding tritium and dissolved noble gas, of continuous and batch mode discharges of liquid effluent for each calendar quarter has been added and a weighted average fraction of MPC* has been calculated for this isotopic mixture. The tritium limit has been established in the same manner as the limits for other isotopes in liquid effluents. A derived MPC of 2×10^{-4} uCi/ml for dissolved noble gases has been conservatively adopted for liquid effluents.

- 10 CFR 20 Appendix B Table 2 Col 2 (Pre-1994).

3. Average Energy

The average energies ($\bar{E}$) of the radionuclide mixtures in releases of fission and activation gases were as follows:

1st Quarter	$\bar{E}_\beta$ =	3.36E-01 Mev/dis	$\bar{E}_\gamma$ =	8.00E-01 Mev/dis
2nd Quarter	$\bar{E}_\beta$ =	2.18E-01 Mev/dis	$\bar{E}_\gamma$ =	2.30E-01 Mev/dis
3rd Quarter	$\bar{E}_\beta$ =	1.62E-01 Mev/dis	$\bar{E}_\gamma$ =	6.39E-02 Mev/dis
4th Quarter	$\bar{E}_\beta$ =	1.90E-01 Mev/dis	$\bar{E}_\gamma$ =	2.25E-01 Mev/dis

4. Measurements and Approximations of Total Radioactivity

a. Fission and Activation Gases

Analysis of effluent gases was performed in compliance with the ODCM. In the case of isolated tanks (batch releases), the total activity discharged was based on an isotopic analysis and volume of gas in each batch.

Vapor Containment ventilation discharges (Pressure Reliefs) are treated as batch releases. At least one complete isotopic concentration analysis of containment air is performed weekly. This analysis is applied with Radiation Monitor readings prior to release to determine actual isotopic concentrations for each discharge. This data is combined with the volume of air in each discharge to calculate the curies of noble gas released.

Continuous discharges are based on the isotopic content determined from periodic (normally weekly) samples of ventilation air. This data is combined with total air volume discharged to determine the released curies of noble gas. Batch and continuous releases are combined to determine the total noble gas discharges.

b.&.c Iodines and Particulates

Iodine-131 and particulate releases are quantified by collecting a continuous sample of ventilation air on a TEDA impregnated activated charcoal cartridge and a glass-fiber filter paper. These samples are obtained as required by ODCM requirements. The concentration of isotopes found by analysis of these samples was combined with the volume of air discharged during the sampling period to calculate the amount of activity discharged.

For other iodine isotopes, the ratio of each isotope to iodine-131 was determined from a monthly 24 hour sample, with resulting activities applied to I-133 and I-135 as applicable. This ensures the proper identification of the short-lived I-133 and I-135 isotopes.

When no Gross Alpha or Iodine-131 is identified for an entire quarter, a "less than" value is reported (in curies) on Table 1A. This value is derived from established minimum detectable concentrations and the total volume of air released from all continuous release points in the quarter.

d. Liquid Effluents

A sample of each batch discharge was taken and an isotopic analysis was performed in compliance with ODCM requirements. This isotopic concentration data was combined with information of volume discharged to determine the amount of each isotope discharged in the period.

Samples of continuous discharges are taken and analyzed in compliance with ODCM requirements (generally daily or weekly). This concentration data is combined with the volume discharged to calculate the amount of each isotope discharged. Releases are combined with actual dilution flow to calculate the fraction of maximum permissible concentration.

e. Error Estimates

The total error estimate is the geometric sum of counting uncertainty and sampling uncertainty, expressed as a percent. Sampling uncertainties are considered independent of activity level and largely fixed in value. However, counting uncertainties are activity level dependent. The percent counting uncertainty is the quotient of the 1 sigma (Poisson) uncertainty and the activity measured. This percent uncertainty is maximized at low activity levels, specifically at the lower limit of detection (LLD). It can be shown that the percent uncertainty at LLD is no more than 35%. But as most positive samples are detected at several multiples of LLD, at least, the percent uncertainty is more likely to be in the 8% to 12% range. Adding a consideration of fixed uncertainty of sampling, the total uncertainty is estimated to be 15%.

5. Batch Releases

a) **Liquid Releases**		Qtr 1	Qtr 2	Qtr 3	Qtr 4	2003
Number of Batch Releases		45	37	35	55	172
Total Time Period	(min)	1.35E+4	1.22E+4	1.08E+4	1.54E+4	5.19E+4
Maximum Time Period	(min)	604	584	570	582	604
Average Time Period	(min)	301	329	308	279	304
Minimum Time Period	(min)	18.0	90.0	44.0	93.0	18.0

Average Stream Flow :

Hudson River flow information is obtained from the Department of the Interior, United States Geological Survey (USGS). These data are received after review from the USGS, approximately 18 months after initial data collection. This information is included in the effluents report as the data become available.

Estimated Average Stream Flows of the Hudson River at Indian Point:

Year	Quarter	Flow(cfs)
2001	Fourth	6447
2002	First	14920
2002	Second	27200
2002	Third	5223

b) **Airborne Releases**		Qtr 1	Qtr 2	Qtr 3	Qtr 4	2003
Number of Batch Releases		22	24	30	26	86
Total Time Period	(min)	1.69E+3	1.77E+3	1.77E+3	1.55E+3	6.78E+3
Maximum Time Period	(min)	132	154	145	132	154
Average Time Period	(min)	77.0	73.6	59.0	59.7	67.3
Minimum Time Period	(min)	31.0	2.00	2.00	3.00	2.00

6. Abnormal Releases

a) Liquid
None

b) Gaseous
None

7. ODCM Reporting Requirements

The ODCM requires reporting of prolonged outages of effluent monitoring equipment. Also required in this report is notification of any changes in the land use census, the Radiological Environmental Monitoring Program (REMP), or exceeding the total curie content limitations in outdoor tanks.

During this reporting period, The following Effluent Monitoring equipment was out of service (OOS) for periods greater than 30 consecutive days:

Instrument	OOS interval in 2003	Remarks
Unit 1 Liquid Effluent Line Flow Rate Meter (Distillate Tanks)	Oct 22 – Dec 12	Delay due to parts procurement and retesting after identifying discrepancy between two independent indicators.
Unit 1 Stack Vent Noble Gas Monitor (R-60)	Aug 6 – Sep 15	The refueling test for this monitor identified the need for new parts which required extra time to procure and retest.

During this reporting period, no tank curie limits in outdoor tanks were exceeded.

The Offsite Dose Calculation Manual was updated to Revision 7 as part of the Improved Technical Specification project, effective December 17, 2003 and is discussed in Section G of this report.

The Process Control Program was not updated during this reporting period.

Indian Point 1 and 2

RADIOACTIVE EFFLUENT RELEASE REPORT

B. GASEOUS EFFLUENTS

2003

TABLE 1A

RADIOACTIVE EFFLUENT REPORT (Jan - Dec 2003)

GASEOUS EFFLUENTS - SUMMATION OF ALL RELEASES

A. Fission & Activation Gases	Units	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Year 2003	Est. Total % Error
1. Total Release	Ci	1.29E-02	3.02E-01	3.74E-01	8.52E-02	7.74E-01	± 15
2. Average release rate	uCi/sec	1.66E-03	3.84E-02	4.71E-02	1.07E-02	2.45E-02	
3. Percent of ODCM limit (Noble Gases only)	%	2.40E-05	3.88E-04	3.61E-04	9.42E-05	5.59E-04	

B. Iodines

1. Total Iodine-131	Ci	<3.00E-6	<3.00E-6	<3.00E-6	< 3.00E-6	< 1.20E-5	± 15
2. Average release rate	uCi/sec	<3.858E-7	<3.816E-7	<3.77E-7	< 3.77E-7	< 3.81E-7	

C. Particulates

1. Total Release, with half-life > 8 days	Ci	5.31E-06	9.92E-06	7.98E-07	3.21E-06	1.92E-05	± 15
2. Average release rate	uCi/sec	6.83E-07	1.26E-06	1.00E-07	4.03E-07	6.08E-07	
3. Gross Alpha	Ci	<6.20E-06	<6.27E-06	<6.34E-06	<6.34E-06	<2.51E-05	± 15

D. Tritium

1. Total release	Ci	1.06E+00	2.81E-01	5.55E-01	5.26E-01	2.42E+00	± 15
2. Average release rate	uCi/sec	1.36E-01	3.57E-02	6.98E-02	6.62E-02	7.66E-02	

E. Percent ODCM limit, I&P with half-life > 8 days, H-3	%	2.35E-03	8.21E-04	1.06E-03	1.02E-03	2.63E-03	± 15

TABLE 1C

RADIOACTIVE EFFLUENT REPORT (Jan - Dec 2003)

CONTINUOUS GASEOUS EFFLUENTS - GROUND RELEASES (Mixed Mode)

Nuclides Released

1) Fission Gases	Units	Qtr 1	Qtr 2	Qtr 3	Qtr 4	2003
Kr-85m	Ci					
Kr-85	Ci					
Kr-87	Ci					
Kr-88	Ci					
Xe-131m	Ci					
Xe-133m	Ci					
Xe-133	Ci				2.59E-03	2.59E-03
Xe-135m	Ci					
Xe-135	Ci	6.19E-06	9.28E-07	1.57E-05	2.74E-04	2.97E-04
Xe-138	Ci					
Ar-41	Ci	2.01E-05	2.77E-05	2.26E-05		7.04E-05
Total for Period	Ci	2.63E-05	2.86E-05	3.83E-05	2.86E-03	2.96E-03

2) Iodines						
I-131	Ci	<3.00E-6	<3.00E-6	<3.00E-6	< 3.00E-06	< 1.20E-5
I-133	Ci	N/D	N/D	N/D	N/D	N/D
I-135	Ci	N/D	N/D	N/D	N/D	N/D
Total for Period	Ci	<3.00E-6	<3.00E-6	<3.00E-6	< 3.00E-06	< 1.20E-5

3) Particulates						
Co-58	Ci	1.63E-06				1.63E-06
Co-60	Ci	8.10E-07				8.10E-07
Cs-137	Ci	2.78E-06	2.68E-06			5.46E-06
Ni-63	Ci	9.63E-08	2.29E-06	7.98E-07	3.21E-06	6.39E-06
Fe-55	Ci		4.95E-06			4.95E-06
Total for Period	Ci	5.32E-06	9.92E-06	7.98E-07	3.21E-06	1.92E-05

N/D = None Detected

TABLE 1C

RADIOACTIVE EFFLUENT REPORT (Jan - Dec 2003)

BATCH GASEOUS EFFLUENTS - GROUND RELEASES (Mixed Mode)

Nuclides Released

1) Fission Gases	Units	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Year 2003
Ar-41	Ci	7.86E-03	3.41E-02	7.45E-03	1.19E-02	6.13E-02
Kr-85	Ci		4.01E-02	6.28E-02	3.74E-03	1.07E-01
Kr-85m	Ci		4.26E-03	4.89E-05	1.30E-04	4.44E-03
Kr-87	Ci		4.39E-06	2.87E-05	5.27E-05	0.00E+00
Kr-88	Ci		3.13E-03	7.03E-05	1.67E-04	3.37E-03
Xe-131m	Ci		1.43E-04	1.77E-03		1.91E-03
Xe-133	Ci	5.04E-03	1.76E-01	2.99E-01	6.52E-02	5.45E-01
Xe-133m	Ci		2.30E-04	2.71E-03	6.44E-05	3.00E-03
Xe-135	Ci		4.48E-02	4.75E-04	1.03E-03	4.63E-02
Xe-135m	Ci		6.93E-06	3.77E-05	4.56E-05	9.02E-05
Xe-138	Ci		2.02E-06	1.10E-05	2.01E-05	3.31E-05
Total for Period	Ci	1.29E-02	3.03E-01	3.74E-01	8.23E-02	7.72E-01

2) Iodines						
I-131	Ci	N/A	N/A	N/A	N/A	N/A
I-133	Ci	N/A	N/A	N/A	N/A	N/A
I-135	Ci	N/A	N/A	N/A	N/A	N/A
Total for Period	Ci	N/A	N/A	N/A	N/A	N/A

3) Particulates						
Total for Period	Ci	N/A	N/A	N/A	N/A	N/A

N/A= Not Applicable to Batch Releases

Indian Point 1 and 2

RADIOACTIVE EFFLUENT REPORT

C. LIQUID EFFLUENTS

2003

TABLE 2A

RADIOACTIVE EFFLUENT REPORT (Jan - Dec 2003)

LIQUID EFFLUENTS - SUMMATION OF ALL RELEASES

A. Fission & Activation Products	Units	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Year 2003	Est. Total % Error
1. Total Release (not including Tritium, Gr Alpha, & Gases)	Ci	6.88E-02	4.35E-02	3.67E-02	4.17E-02	1.91E-01	± 15
2. Average Diluted Conc	uCi/ml	2.43E-10	1.33E-10	8.80E-11	8.89E-11	1.27E-10	

B. Tritium

1. Total Release	Ci	1.66E+01	2.57E+01	3.74E+01	7.12E+01	1.51E+02	± 15
2. Average Diluted Conc	uCi/ml	5.87E-08	7.84E-08	8.97E-08	1.52E-07	1.01E-07	

C. Dissolved & Entrained Gases

1. Total Release	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	± 15
2. AverageDiluted Conc	uCi/ml	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	

D. Gross Alpha

1. Total Release	Ci	<2.48E-03	9.20E-05	2.53E-05	8.74E-05	2.05E-04	± 15

E. Volume of Waste Released	liters	5.51E+07	4.73E+07	5.39E+07	4.66E+07	2.03E+08	± 10

F. Volume of Dilution Water	liters	2.83E+11	3.28E+11	4.17E+11	4.69E+11	1.50E+12	± 10

E. Percent of the ODCM Liquid Effluent limit	%	1.46E-01	4.31E-02	3.25E-02	8.08E-02	1.22E-01	± 15

RADIOACTIVE EFFLUENT REPORT (Jan - Dec 2003)

CONTINUOUS LIQUID RADIOACTIVE EFFLUENT REPORT (Jan - Dec 2003)

TABLE 2B

Nuclides Released	Units	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Year 2003
Fe-55	Ci		7.71E-03	5.18E-05		7.76E-03
Ni-63	Ci	5.37E-04	1.10E-03	7.42E-07	4.45E-03	6.09E-03
Sr-89	Ci	7.06E-05		1.69E-04		2.40E-04
Sr-90	Ci	1.59E-04	2.47E-04	1.86E-04	3.22E-04	9.14E-04
Total for Period	Ci	7.67E-04	9.06E-03	4.08E-04	4.77E-03	1.50E-02

Entrained Noble Gas Totals	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

BATCH LIQUID RADIOACTIVE EFFLUENT REPORT (Jan - Dec 2003)

TABLE 2B

Nuclides Released	Units	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Year 2003
Cr-51	Ci	3.90E-05	2.28E-04			2.67E-04
Mn-54	Ci	6.65E-03	4.17E-03	2.49E-03	6.43E-03	1.97E-02
Fe-55	Ci			9.51E-03	1.13E-02	2.08E-02
Co-57	Ci	9.16E-05	1.44E-04	1.29E-04	1.64E-04	5.29E-04
Co-58	Ci	1.48E-02	5.49E-03	2.68E-03	2.33E-03	2.53E-02
Co-60	Ci	1.29E-03	9.88E-04	5.13E-03	4.45E-03	1.19E-02
Ni-63	Ci	8.53E-03	1.21E-02	1.17E-02	8.98E-03	4.13E-02
Sr-89	Ci	4.63E-04	2.18E-04	7.08E-05	5.88E-04	1.34E-03
Sr-90	Ci	5.51E-04	4.39E-04	2.31E-04	5.17E-03	6.39E-03
Nb-95	Ci	4.58E-06				4.58E-06
Ag-110m	Ci			7.76E-06	7.71E-04	7.79E-04
Sb-124	Ci	3.34E-03	1.69E-03			5.03E-03
Sb-125	Ci	5.66E-03	8.46E-03	3.01E-03	4.83E-03	2.20E-02
Te-123m	Ci	3.61E-05	1.79E-03			1.83E-03
I-131	Ci	3.09E-05		3.24E-06		3.41E-05
Cs-134	Ci	5.34E-06	2.03E-05	2.22E-04		2.48E-04
Cs-137	Ci	2.65E-02	3.91E-04	1.08E-03	1.56E-03	2.95E-02
Total for Period	Ci	6.80E-02	3.61E-02	3.63E-02	4.66E-02	1.87E-01

Entrained Noble Gas Totals	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Indian Point 1 and 2

RADIOACTIVE EFFLUENT REPORT

D. SOLID WASTE

2003

Solid Waste Shipped Offsite for Disposal and Estimates of Major Nuclides by Waste Class and Stream for the Period 01/01/2003 to 12/31/2003

Percent Cutoff: 0 (all identified isotopes are included)

Waste Stream : Resins, Filters, and Evap Bottoms
LWS Resin Plant Resin 8-120 RCS Filters

Waste Class	Volume ft^3	Volume m^3	Curies Shipped	% Error (CI)
A	4.12E+02	1.17E+01	3.53E+00	+/- 25%
B	2.06E+02	5.83E+00	1.10E+01	+/- 25%
C	5.67E+02	1.60E+01	1.56E+03	+/- 25%
All	1.18E+03	3.35E+01	1.58E+03	+/- 25%

Waste Stream : Dry Active Waste
DAW / Dirt; B-25 Box DAW 20' Sea Land Scrap Metal 20' Sea Land
DAW 40' Sea Land

Waste Class	Volume ft^3	Volume m^3	Curies Shipped	% Error (CI)
A	1.50E+04	4.26E+02	2.02E+00	+/-25%
B	0.00E+00	0.00E+00	0.00E+00	+/-25%
C	0.00E+00	0.00E+00	0.00E+00	+/-25%
All	1.50E+04	4.26E+02	2.02E+00	+/-25%

Waste Stream : Irradiated Components

Waste Class	Volume ft^3	Volume m^3	Curies Shipped	% Error (CI)
A	0.00E+00	0.00E+00	0.00E+00	+/-25%
B	0.00E+00	0.00E+00	0.00E+00	+/-25%
C	0.00E+00	0.00E+00	0.00E+00	+/-25%
All	0.00E+00	0.00E+00	0.00E+00	+/-25%

Waste Stream : Other Waste
Combined Packages

Waste Class	Volume ft^3	Volume m^3	Curies Shipped	% Error (CI)
A	5.12E+03	1.45E+02	2.41E+00	+/-25%
B	0.00E+00	0.00E+00	0.00E+00	+/-25%
C	0.00E+00	0.00E+00	0.00E+00	+/-25%
All	5.12E+03	1.45E+02	2.41E+00	+/-25%

Waste Stream : Sum of All 4 Categories
Combined Packages Plant Resin 8-120
DAW 20' Sea Land Scrap Metal 20' Sea Land RCS Filters
LWS Resin DAW 40' Sea Land DAW / Dirt; B-25 Box

Waste Class	Volume ft^3	Volume m^3	Curies Shipped	% Error (CI)
A	2.06E+04	5.83E+02	7.95E+00	+/-25%
B	2.06E+02	5.83E+00	1.10E+01	+/-25%
C	5.67E+02	1.60E+01	1.56E+03	+/-25%
All	2.13E+04	6.04E+02	1.58E+03	+/-25%

Solid Waste Shipped Offsite for Disposal and Estimates of Major Nuclides by Waste Class and Stream for the Period 01/01/2003 to 12/31/2003

Percent Cutoff: 0

	Number of Shipments	Mode of Transportation		Destination
	7	Hittman Transport		Duratek, Inc. - GIC
	1	Hittman Transport		Chem-Nuclear Consolidation Facility
	6	Hittman Transport		GTS Duratek
	6	Hittman Transport		Studsvik Processing Facility

Resins, Filters, and Evap Bottoms

Waste Class A

Nuclide Name	Percent Abundance	Curies
H-3	1.913%	6.75E-02
Mn-54	0.413%	1.46E-02
Fe-55	6.150%	2.17E-01
Co-57	0.244%	8.63E-03
Co-58	6.530%	2.30E-01
Co-60	8.179%	2.89E-01
Ni-63	20.244%	7.14E-01
Sr-90	2.755%	9.72E-02
Ag-110m	0.019%	6.80E-04
Sb-124	0.047%	1.65E-03
Sb-125	2.079%	7.33E-02
Cs-134	16.128%	5.69E-01
Cs-137	23.992%	8.46E-01
Ce-144	9.074%	3.20E-01
Pu-238	0.051%	1.80E-03
Pu-239	0.020%	7.08E-04
Pu-241	2.162%	7.63E-02

Solid Waste Shipped Offsite for Disposal and Estimates of Major Nuclides by Waste Class and Stream for the Period 01/01/2003 to 12/31/2003

Percent Cutoff: 0

Resins, Filters, and Evap Bottoms Waste Class B		
Nuclide Name	Percent Abundance	Curies
H-3	2.219%	2.44E-01
Mn-54	0.274%	3.01E-02
Fe-55	3.941%	4.33E-01
Co-57	0.044%	4.86E-03
Co-58	1.703%	1.87E-01
Co-60	4.880%	5.36E-01
Ni-63	11.272%	1.24E+00
Sr-90	3.196%	3.51E-01
Ag-110m	0.019%	2.07E-03
Sb-124	0.222%	2.44E-02
Sb-125	2.513%	2.76E-01
Cs-134	20.144%	2.21E+00
Cs-137	27.832%	3.06E+00
Ce-144	19.151%	2.10E+00
Pu-238	0.059%	6.51E-03
Pu-239	0.023%	2.56E-03
Pu-241	2.508%	2.75E-01

Resins, Filters, and Evap Bottoms Waste Class C		
Nuclide Name	Percent Abundance	Curies
H-3	0.050%	7.84E-01
C-14	0.008%	1.19E-01
Mn-54	0.893%	1.40E+01
Fe-55	6.615%	1.03E+02
Co-57	0.205%	3.20E+00
Co-58	15.463%	2.42E+02
Co-60	5.773%	9.02E+01
Ni-59	0.044%	6.88E-01
Ni-63	16.858%	2.63E+02
Sr-90	0.098%	1.53E+00
Tc-99	0.003%	4.99E-02
Ag-110m	0.000%	2.00E-04
Sb-124	0.000%	5.58E-04
Sb-125	0.075%	1.17E+00
Cs-134	23.866%	3.73E+02
Cs-137	29.035%	4.53E+02
Ce-144	0.950%	1.48E+01
Pu-238	0.001%	2.31E-02
Pu-239	0.001%	8.84E-03
Pu-241	0.060%	9.43E-01
Am-241	0.000%	1.51E-03
Cm-242	0.001%	1.05E-02
Cm-243	0.000%	3.61E-03

Solid Waste Shipped Offsite for Disposal and Estimates of Major Nuclides by Waste Class and Stream for the Period 01/01/2003 to 12/31/2003

Percent Cutoff: 0

Resins, Filters, and Evap Bottoms		
Waste Class All		
Nuclide Name	Percent Abundance	Curies
H-3	0.069%	1.09E+00
C-14	0.008%	1.19E-01
Mn-54	0.888%	1.40E+01
Fe-55	6.595%	1.04E+02
Co-57	0.204%	3.22E+00
Co-58	15.347%	2.42E+02
Co-60	5.772%	9.10E+01
Ni-59	0.044%	6.88E-01
Ni-63	16.826%	2.65E+02
Sr-90	0.126%	1.98E+00
Tc-99	0.003%	4.99E-02
Ag-110m	0.000%	2.95E-03
Sb-124	0.002%	2.66E-02
Sb-125	0.096%	1.52E+00
Cs-134	23.823%	3.76E+02
Cs-137	29.016%	4.57E+02
Ce-144	1.095%	1.73E+01
Pu-238	0.002%	3.14E-02
Pu-239	0.001%	1.21E-02
Pu-241	0.082%	1.29E+00
Am-241	0.000%	1.51E-03
Cm-242	0.001%	1.05E-02
Cm-243	0.000%	3.61E-03

Solid Waste Shipped Offsite for Disposal and Estimates of Major Nuclides by Waste Class and Stream for the Period 01/01/2003 to 12/31/2003

Percent Cutoff: 0

Dry Active Waste Waste Class A Nuclide Name	Percent Abundance	Curies
H-3	0.321%	6.49E-03
C-14	0.411%	8.30E-03
Mn-54	0.649%	1.31E-02
Fe-55	31.141%	6.30E-01
Co-58	0.341%	6.90E-03
Co-60	41.863%	8.46E-01
Ni-63	15.576%	3.15E-01
Sr-90	0.108%	2.19E-03
Sb-125	1.992%	4.03E-02
Cs-134	0.603%	1.22E-02
Cs-137	4.177%	8.45E-02
Ce-144	2.289%	4.63E-02
Pu-238	0.011%	2.29E-04
Pu-239	0.006%	1.18E-04
Pu-241	0.473%	9.57E-03
Am-241	0.021%	4.32E-04
Cm-242	0.002%	4.23E-05
Cm-243	0.015%	3.10E-04

Dry Active Waste Waste Class All Nuclide Name	Percent Abundance	Curies
H-3	0.321%	6.49E-03
C-14	0.411%	8.30E-03
Mn-54	0.649%	1.31E-02
Fe-55	31.141%	6.30E-01
Co-58	0.341%	6.90E-03
Co-60	41.863%	8.46E-01
Ni-63	15.576%	3.15E-01
Sr-90	0.108%	2.19E-03
Sb-125	1.992%	4.03E-02
Cs-134	0.603%	1.22E-02
Cs-137	4.177%	8.45E-02
Ce-144	2.289%	4.63E-02
Pu-238	0.011%	2.29E-04
Pu-239	0.006%	1.18E-04
Pu-241	0.473%	9.57E-03
Am-241	0.021%	4.32E-04
Cm-242	0.002%	4.23E-05
Cm-243	0.015%	3.10E-04

Solid Waste Shipped Offsite for Disposal and Estimates of Major Nuclides by Waste Class and Stream for the Period 01/01/2003 to 12/31/2003

Percent Cutoff: 0

Other Waste		
Waste Class A		
Nuclide Name	Percent Abundance	Curies
H-3	0.168%	4.04E-03
C-14	0.156%	3.76E-03
Na-22	0.000%	1.10E-05
Cl-36	0.001%	1.35E-05
Mn-54	0.251%	6.04E-03
Fe-55	17.637%	4.25E-01
Co-57	0.000%	9.97E-06
Co-58	1.201%	2.89E-02
Co-60	37.404%	9.00E-01
Ni-63	20.437%	4.92E-01
Sr-90	0.166%	3.99E-03
Y-88	0.000%	9.97E-06
Tc-99	0.010%	2.41E-04
Sb-125	0.762%	1.83E-02
Cs-134	0.346%	8.32E-03
Cs-137	20.253%	4.87E-01
Ba-133	0.001%	1.57E-05
Ce-144	0.997%	2.40E-02
Hg-203	0.001%	1.99E-05
Tl-204	0.000%	9.97E-07
Pb-210	0.000%	9.97E-06
Po-210	0.000%	1.99E-07
Ra-226	0.001%	1.99E-05
Th-230	0.000%	5.52E-09
Pu-238	0.004%	1.04E-04
Pu-239	0.002%	5.36E-05
Pu-241	0.180%	4.34E-03
Am-241	0.015%	3.60E-04
Cm-242	0.001%	1.96E-05
Cm-243	0.006%	1.43E-04

Solid Waste Shipped Offsite for Disposal and Estimates of Major Nuclides by Waste Class and Stream for the Period 01/01/2003 to 12/31/2003

Percent Cutoff: 0

Other Waste		
Waste Class All		
Nuclide Name	Percent Abundance	Curies
H-3	0.168%	4.04E-03
C-14	0.156%	3.76E-03
Na-22	0.000%	1.10E-05
Cl-36	0.001%	1.35E-05
Mn-54	0.251%	6.04E-03
Fe-55	17.637%	4.25E-01
Co-57	0.000%	9.97E-06
Co-58	1.201%	2.89E-02
Co-60	37.404%	9.00E-01
Ni-63	20.437%	4.92E-01
Sr-90	0.166%	3.99E-03
Y-88	0.000%	9.97E-06
Tc-99	0.010%	2.41E-04
Sb-125	0.762%	1.83E-02
Cs-134	0.346%	8.32E-03
Cs-137	20.253%	4.87E-01
Ba-133	0.001%	1.57E-05
Ce-144	0.997%	2.40E-02
Hg-203	0.001%	1.99E-05
Tl-204	0.000%	9.97E-07
Pb-210	0.000%	9.97E-06
Po-210	0.000%	1.99E-07
Ra-226	0.001%	1.99E-05
Th-230	0.000%	5.52E-09
Pu-238	0.004%	1.04E-04
Pu-239	0.002%	5.36E-05
Pu-241	0.180%	4.34E-03
Am-241	0.015%	3.60E-04
Cm-242	0.001%	1.96E-05
Cm-243	0.006%	1.43E-04

Solid Waste Shipped Offsite for Disposal and Estimates of Major Nuclides by Waste Class and Stream for the Period 01/01/2003 to 12/31/2003

Percent Cutoff: 0

Sum of All 4 Categories Waste Class A		
Nuclide Name	Percent Abundance	Curies
H-3	0.980%	7.80E-02
C-14	0.152%	1.21E-02
Na-22	0.000%	1.10E-05
Cl-36	0.000%	1.35E-05
Mn-54	0.424%	3.37E-02
Fe-55	15.949%	1.27E+00
Co-57	0.109%	8.64E-03
Co-58	3.348%	2.66E-01
Co-60	25.652%	2.04E+00
Ni-63	19.096%	1.52E+00
Sr-90	1.295%	1.03E-01
Y-88	0.000%	9.97E-06
Tc-99	0.003%	2.41E-04
Ag-110m	0.009%	6.80E-04
Sb-124	0.021%	1.65E-03
Sb-125	1.659%	1.32E-01
Cs-134	7.415%	5.90E-01
Cs-137	17.795%	1.42E+00
Ba-133	0.000%	1.57E-05
Ce-144	4.903%	3.90E-01
Hg-203	0.000%	1.99E-05
Tl-204	0.000%	9.97E-07
Pb-210	0.000%	9.97E-06
Po-210	0.000%	1.99E-07
Ra-226	0.000%	1.99E-05
Th-230	0.000%	5.52E-09
Pu-238	0.027%	2.13E-03
Pu-239	0.011%	8.80E-04
Pu-241	1.134%	9.02E-02
Am-241	0.010%	7.93E-04
Cm-242	0.001%	6.24E-05
Cm-243	0.006%	4.53E-04

Solid Waste Shipped Offsite for Disposal and Estimates of Major Nuclides by Waste Class and Stream for the Period 01/01/2003 to 12/31/2003

Percent Cutoff: 0

Sum of All 4 Categories

Waste Class B

Nuclide Name	Percent Abundance	Curies
H-3	2.219%	2.44E-01
Mn-54	0.274%	3.01E-02
Fe-55	3.941%	4.33E-01
Co-57	0.044%	4.86E-03
Co-58	1.703%	1.87E-01
Co-60	4.880%	5.36E-01
Ni-63	11.272%	1.24E+00
Sr-90	3.196%	3.51E-01
Ag-110m	0.019%	2.07E-03
Sb-124	0.222%	2.44E-02
Sb-125	2.513%	2.76E-01
Cs-134	20.144%	2.21E+00
Cs-137	27.832%	3.06E+00
Ce-144	19.151%	2.10E+00
Pu-238	0.059%	6.51E-03
Pu-239	0.023%	2.56E-03
Pu-241	2.508%	2.75E-01

Solid Waste Shipped Offsite for Disposal and Estimates of Major Nuclides by Waste Class and Stream for the Period 01/01/2003 to 12/31/2003

Percent Cutoff: 0

Sum of All 4 Categories		
Waste Class C		
Nuclide Name	Percent Abundance	Curies
H-3	0.050%	7.84E-01
C-14	0.008%	1.19E-01
Mn-54	0.893%	1.40E+01
Fe-55	6.615%	1.03E+02
Co-57	0.205%	3.20E+00
Co-58	15.463%	2.42E+02
Co-60	5.773%	9.02E+01
Ni-59	0.044%	6.88E-01
Ni-63	16.858%	2.63E+02
Sr-90	0.098%	1.53E+00
Tc-99	0.003%	4.99E-02
Ag-110m	0.000%	2.00E-04
Sb-124	0.000%	5.58E-04
Sb-125	0.075%	1.17E+00
Cs-134	23.866%	3.73E+02
Cs-137	29.035%	4.53E+02
Ce-144	0.950%	1.48E+01
Pu-238	0.001%	2.31E-02
Pu-239	0.001%	8.84E-03
Pu-241	0.060%	9.43E-01
Am-241	0.000%	1.51E-03
Cm-242	0.001%	1.05E-02
Cm-243	0.000%	3.61E-03

Solid Waste Shipped Offsite for Disposal and Estimates of Major Nuclides by Waste Class and Stream for the Period 01/01/2003 to 12/31/2003

Percent Cutoff: 0

Sum of All 4 Categories Waste Class All		
Nuclide Name	Percent Abundance	Curies
H-3	0.070%	1.11E+00
C-14	0.008%	1.31E-01
Na-22	0.000%	1.10E-05
Cl-36	0.000%	1.35E-05
Mn-54	0.885%	1.40E+01
Fe-55	6.641%	1.05E+02
Co-57	0.204%	3.22E+00
Co-58	15.305%	2.42E+02
Co-60	5.862%	9.27E+01
Ni-59	0.044%	6.88E-01
Ni-63	16.822%	2.66E+02
Sr-90	0.126%	1.99E+00
Y-88	0.000%	9.97E-06
Tc-99	0.003%	5.02E-02
Ag-110m	0.000%	2.95E-03
Sb-124	0.002%	2.66E-02
Sb-125	0.100%	1.58E+00
Cs-134	23.781%	3.76E+02
Cs-137	28.967%	4.58E+02
Ba-133	0.000%	1.57E-05
Ce-144	1.094%	1.73E+01
Hg-203	0.000%	1.99E-05
Tl-204	0.000%	9.97E-07
Pb-210	0.000%	9.97E-06
Po-210	0.000%	1.99E-07
Ra-226	0.000%	1.99E-05
Th-230	0.000%	5.52E-09
Pu-238	0.002%	3.17E-02
Pu-239	0.001%	1.23E-02
Pu-241	0.083%	1.31E+00
Am-241	0.000%	2.31E-03
Cm-242	0.001%	1.06E-02
Cm-243	0.000%	4.06E-03

Indian Point 1 and 2

RADIOACTIVE EFFLUENT REPORT

E. RADIOLOGICAL IMPACT ON MAN

Jan 1, 2003 - Dec 31, 2003

RADIOLOGICAL IMPACT ON MAN

The radiological impact on man is determined by conservatively calculating doses to a hypothetical maximally exposed individual offsite based on plant effluents. These calculations are divided into 3 categories: Noble Gases, Particulates and Iodine, and Liquid Releases (fish and invertebrate consumption).

An annual average dispersion factor is used in the calculations, the details of which are presented in the Offsite Dose Calculation Manual (ODCM).

The computer code used to perform gaseous dose calculations incorporates the models and parameters presented in the Indian Point 2 ODCM, which utilizes the assumptions in Regulatory Guide 1.109 and NUREG 0133.

These doses were calculated using radioactive releases from the Indian Point #1 and #2 Nuclear Power Plant. Although Indian Point is a multi-unit site owned and operated by Entergy Nuclear Operations Incorporated, doses resulting from releases from Indian Point Unit 3 are independently reported in Unit 3's report.

Doses to individuals from liquid pathways for the fish and invertebrate consumption pathways are computed using the methodology and parameters in the Indian Point Unit 1 and 2 ODCM, which incorporates the calculational models that are present in Regulatory Guide 1.109 and NUREG 0133.

Carbon 14 release concentration and resulting dose have been estimated using data generated at IP3 from August 1980 to June 1982 after a study conducted by the NY State Department of Health. These estimates are consistent with NUREG 0017, Rev. 1. The maximum expected annual dose from Carbon 14 releases at IP1 and 2 has been calculated using the maximum dependable gross electrical capacity of Indian Point 2, which is 1000 MW(e) maintained for the entire year. The resultant worst case doses are based upon site specific assumptions of source term released for an entire year at 1000 MW(e) output, as outlined in the ODCM.

The annual dose to the maximally exposed individual (child) from gaseous releases of Carbon-14 is 0.254 mRem to the critical organ (bone) and 0.0508 mRem to the total body. The annual dose to the maximally exposed individual (child) from liquid releases of Carbon-14 is 0.00583 mRem to the critical organ (bone) and 0.00117 mRem to the total body.

Doses to members of the public on site from airborne and liquid releases are minimal due to the relatively insignificant total duration of these individuals on site. Their doses can be calculated from standard ODCM methodology, with typical occupancy factors employed. These factors are determined by comparing the expected hours on site to 8760 hours (the number of hours in a year, used in calculations in the ODCM).

example 1: Several students visit the site for an 8-hour guided tour. Their occupancy factor is: 8 / 8760 or **.0009.**

example 2: A man drives his wife to work and drops her off at the security gate each morning, with a total stay-time on site for 2 minutes per day. His occupancy factor is calculated as follows:

2 min/60 min per hour =.0333 hr ; 0.0333 / 8760 = **3.8E-6**

These factors, when multiplied by doses calculated per the ODCM, demonstrate that dose to MEMBERS OF THE PUBLIC within the site boundary is negligible, despite a potential reduction in the atmospheric dispersion.

In compliance with 40CFR190, the following table indicates the measured direct shine dose component for Indian Point 1 & 2 property in 2003:

	Whole Body (mrem)	Max Organ (mrem)
40 CFR 190 limit	25	75
Airborne Effluents	.000395	.000395
Liquid Effluents	.00367	.0118
Direct Shine from Radwaste Storage, etc	*	*
Indian Point 1 and 2 Total	**< 5.0**	**< 5.0**

* Indistinguishable from background. Five mrem is conservatively used from a one mrem siting criteria established for each area.

INDIAN POINT 1 and 2 NUCLEAR POWER PLANT
RADIOLOGICAL IMPACT ON MAN
JANUARY - DECEMBER 2003

Maximum exposed individual doses in mrem or mrad

A. LIQUID DOSES

		Qtr 1	Qtr 2	Qtr 3	Qtr 4	ANNUAL
Organ Dose	(mrem)	4.55E-03	2.16E-03	1.63E-03	3.53E-03	1.18E-02
Applicable Limit	(mrem)	5	5	5	5	10
Percent of Limit	(%)	9.10E-02	4.32E-02	3.26E-02	7.06E-02	1.18E-01
Age Group		Child	Child	Child	Child	Child
Critical Organ		Bone	Bone	Bone	Bone	Bone

Adult Total Body	(mrem)	2.20E-03	2.81E-04	2.50E-04	9.43E-04	3.67E-03
Applicable Limit	(mrem)	1.5	1.5	1.5	1.5	3
Percent of Limit	(%)	1.47E-01	1.87E-02	1.67E-02	6.29E-02	1.22E-01

B. AIRBORNE NOBLE GAS DOSES

		Qtr 1	Qtr 2	Qtr 3	Qtr 4	ANNUAL
Gamma Air	(mrad)	4.14E-06	3.10E-05	1.24E-05	8.28E-06	5.58E-05
Applicable Limit	(mrad)	5	5	5	5	10
Percent of Limit	(%)	8.28E-05	6.20E-04	2.48E-04	1.66E-04	5.58E-04

Beta Air	(mrad)	2.40E-06	3.88E-05	3.61E-05	9.42E-06	8.67E-05
Applicable Limit	(mrad)	10	10	10	10	20
Percent of Limit	(%)	2.40E-05	3.88E-04	3.61E-04	9.42E-05	4.34E-04

C. AIRBORNE IODINE and PARTICULATE DOSES

		Qtr 1	Qtr 2	Qtr 3	Qtr 4	ANNUAL
Iodine/Part	(mrem)	1.76E-04	6.16E-05	7.98E-05	7.68E-05	3.95E-04
Applicable Limit	(mrem)	7.5	7.5	7.5	7.5	15
Percent of Limit	(%)	2.35E-03	8.21E-04	1.06E-03	1.02E-03	2.63E-03

Age Group		Child	Child	Child	Child	Child
Critical Organ		Liver	Liver	Liver	Liver	Liver

Indian Point 1 and 2

RADIOLOGICAL EFFLUENT REPORT

F. METEOROLOGICAL DATA

Jan 1, 2003 - Dec 31, 2003

This data is stored onsite and is available in printed or electronic form.

Indian Point 1 and 2

RADIOACTIVE EFFLUENT REPORT

G. OFFSITE DOSE CALCULATION MANUAL,
PROCESS CONTROL PROGRAM, OR LAND USE CENSUS LOCATION CHANGES

2003

The Unit 1 and 2 ODCM was upgraded to Revision 7 in December, 2003 per the Improved Technical Specification amendment. Effluent regulations were moved to the ODCM from the old Technical Specifications (Sections 3.9 and 4.10) per Generic Letter 89-01 and incorporated using NUREG 1431 into ODCM, part I. See associated SER and for Technical Specification Amendment 220 (NRC letter dated November 3, 2003). A complete electronic copy of ODCM Rev 7 is available upon request (it was submitted with the ITS amendment).

There were no changes in the Land Use Census and/or Environmental Monitoring in year 2003.

There were no changes in the REMP locations for dose calculations in year 2003.

The PCP was not upgraded in this period and remains at Revision 9.

ENCLOSURE 2

2003 Annual Effluent and Waste Disposal Report

Indian Point 3

Entergy Nuclear Operations, Inc.
Docket Nos. 50-286
NL-04-043

Radioactive Effluent Release Report: 2003

Facility Indian Point 3

Licensee Entergy Nuclear Operations, Inc (Entergy)

This information is provided in accordance with the requirements of Regulatory Guide 1.21. The numbered sections of this report reference corresponding sections of the subject Regulatory Guide, pages 10 to 12. Indian Point Units 1 and 2, also owned by Entergy, will issue a separate report for 2003.

A. Supplemental Information

1. Regulatory Limits

Indian Point 3 is presently subject to limits on radioactive waste releases that are set forth in the Offsite Dose Calculation Manual, Parts I and II, per the Technical Specifications. ODCM Part I, also known as the Radiological Effluent Controls (or RECS) is prescribed by Technical Specification Section 5.5.1, while the ODCM Part II is defined in Section 5.5.4. The percentages of the Technical Specification limits reported in Tables 1A and 2A are the percent of the ODCM quarterly limits. If more than one limit applies to the release, the most restrictive limit is reported.

2. Maximum Permissible Concentration

a) Airborne Releases

Maximum concentrations and compliance with 10CFR20 release rate limits are controlled by the application of Radiation Monitor setpoints, preliminary grab sampling, and conservative procedural guidance for batch and continuous releases. These measures, in conjunction with plant design, preclude approaching release rate limits, per the ODCM.

b) Liquid Effluents

Proximity to the 10 CFR 20 release rate limits is controlled for each release by the application of a calculated Allowed Diluted Concentration (ADC) and Radiation Monitor setpoints. The ADC is calculated as a function of the "10 times EC" limit, and includes limitations from Beta emitters. These measures, along with an administrative activity limit for effluent waste tanks, preclude approaching release rate limits, per the ODCM.

3. Average Energy

The average energies ($\bar{E}$) of the radionuclide mixtures in releases of fission and activation gases were as follows:

1st Quarter	$\bar{E}_\beta$ =	1.79E-01 Mev/dis	$\bar{E}_\gamma$ =	6.91E-02 Mev/dis
2nd Quarter	$\bar{E}_\beta$ =	1.49E-01 Mev/dis	$\bar{E}_\gamma$ =	4.29E-02 Mev/dis
3rd Quarter	$\bar{E}_\beta$ =	1.94E-01 Mev/dis	$\bar{E}_\gamma$ =	2.67E-01 Mev/dis
4th Quarter	$\bar{E}_\beta$ =	2.69E-01 Mev/dis	$\bar{E}_\gamma$ =	5.52E-01 Mev/dis

4. Measurements and Approximations of Total Radioactivity

a) Fission and Activation Gases

Analyses of effluent gases have been performed in compliance with the requirements of Table 3.4.1-1 of the RECS (ODCM Part I). In the case of isolated tanks (batch releases), the total activity discharged is based on an isotopic analysis of each batch with the volume of gas in the batch corrected to standard temperature and pressure.

Vapor containment purge and pressure relief (vent) discharges routinely total less than 150 hours/quarter in duration have been treated as batch releases. However, both types of releases from the Vapor Containment are performed randomly with regard to time of day and duration (release periods were not dependant solely on time of day or atmospheric condition). Therefore, determination of doses due to Vapor Containment releases includes the use of annual average dispersion data, as defined in NUREG 0133, Section 3.3.

At least one complete isotopic concentration analysis of containment air is performed monthly. This analysis is used in conjunction with a process monitor to obtain the isotopic mixture and quantification of each pressure relief. Isotopic analyses for each vapor containment purge are taken prior to and during the purge. This information is combined with the volume of air in each discharge to calculate the quantity of activity released from these discharges.

The continuous building discharges are based on weekly samples of ventilation air analyzed for isotopic content. This information is combined with total air volume discharged and the process radiation monitor readings to determine the quantity of activity from continuous discharges.

When no noble gas activity is identified for an entire quarter, a "less than" value is reported. This value is determined from the established Xe-133 minimum detectable concentration and the total volume of air released from all continuous release points.

b/c) Iodines and Particulates

Iodine-131 and particulate releases are quantified by collecting a continuous sample of ventilation air on a TEDA impregnated, activated charcoal cartridge and a glass-fiber filter paper. These samples are changed weekly as required in Table 3.4.1-1 of the RECS. The concentration of isotopes found by analysis of these samples is combined with the volume of air discharged during the sampling period to calculate the quantity of activity discharged.

For other iodine isotopes, concentrations are determined monthly on a 24-hour sample. The concentration of each isotope is analytically determined by ratioing the activities with weekly media for I-131. This activity is combined with the volume of air discharged during the sampling period to calculate the quantity of activity discharged.

A compositing method of analyzing for gross alpha is used to improve efficiency. When no Gross Alpha or Iodine-131 is identified for an entire quarter, a "less than" value is reported (in curies) on Table 1A. This value is derived from established minimum detectable concentrations and the total volume of air released from all continuous release points. This method generates a more accurate Minimum Detectable total curie level than summing MDCs and occasional false positives at the critical level. The values demonstrate 1) these emissions are statistically indistinguishable from background, and 2) the ODCM required LLDs are not challenged.

d) Liquid Effluents

A sample of each batch discharge is taken and an isotopic analysis is performed in compliance with requirements specified in Table 3.3.1-1 of the RECS. Proportional composite samples of continuous discharges are taken and analyzed in compliance with this table as well. Isotopic concentration data are combined with the information on volume discharged to determine the amount of each isotope discharged.

5. Batch Releases

a) **Liquid Releases**		Qtr 1	Qtr 2	Qtr 3	Qtr 4	2003
Number of Batch Releases		52	36	30	16	134
Total Time Period	(min)	6.02E+3	4.17E+3	3.50E+3	1.83E+3	1.55E+4
Maximum Time Period	(min)	1.33E+2	1.45E+2	1.67E+2	1.22E+2	1.67E+2
Average Time Period	(min)	1.16E+2	1.16E+2	1.17E+2	1.14E+2	1.16E+2
Minimum Time Period	(min)	8.30E+1	1.05E+2	1.05E+2	1.08E+2	8.30E+1

Average Stream Flow :

Hudson River flow information is obtained from the Department of the Interior, United States Geological Survey (USGS). These data are received after review from the USGS, approximately 18 months after initial data collection. This information is included in the effluents report as the data become available.

Estimated Average Stream Flows of the Hudson River at Indian Point:

Year	Quarter	Flow(cfs)
2001	Fourth	6447
2002	First	14920
2002	Second	27200
2002	Third	5223

b) **Airborne Releases**		Qtr 1	Qtr 2	Qtr 3	Qtr 4	2003
Number of Batch Releases		25	32	18	19	94
Total Time Period	(min)	4.92E+03	5.38E+03	3.68E+03	4.26E+03	1.82E+04
Maximum Time Period	(min)	3.70E+02	4.12E+02	6.00E+02	5.12E+02	6.00E+02
Average Time Period	(min)	1.97E+02	1.68E+02	2.05E+02	2.24E+02	1.94E+02
Minimum Time Period	(min)	1.00E+00	1.00E+01	4.00E+00	2.00E+00	1.00E+00

6. Abnormal Releases

a) Liquid
None

b) Gaseous
None

7. ODCM Reporting Requirements

The ODCM (RECS) Sections 2.1.B and 2.2.B require reporting of prolonged outages of effluent monitoring equipment. Also required in this report is notification of any changes in the land use census, the Radiological Environmental Monitoring Program (REMP), or exceeding the total curie content limitations in outdoor tanks (RECS 2.10 and 2.11).

During this reporting period, no required ODCM or Technical Specification Effluent Monitoring equipment was out of service for periods greater than 30 consecutive days.

During this reporting period, no tank curie limits in outdoor tanks were exceeded.

Neither the Offsite Dose Calculation Manual, nor the Process Control Program were updated during this reporting period.

Indian Point 3

RADIOACTIVE EFFLUENT RELEASE REPORT

B. GASEOUS EFFLUENTS

2003

TABLE 1A

INDIAN POINT 3 RADIOACTIVE EFFLUENT REPORT (Jan - Dec 2003)

GASEOUS EFFLUENTS - SUMMATION OF ALL RELEASES

A. Fission & Activation Gases	Units	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Year 2003	Est. Total % Error
1. Total Release	Ci	8.37E+00	1.64E+01	2.03E-01	5.52E-02	2.50E+01	± 25
2. Average release rate	uCi/sec	1.08E+00	2.09E+00	2.55E-02	6.94E-03	7.91E-01	
3. Percent of ODCM limit (Noble Gases only)	%	1.79E-02	2.93E-02	4.51E-04	1.66E-04	2.39E-02	

B. Iodines

1. Total Iodine-131	Ci	6.82E-06	1.68E-04	<3.00E-6	< 3.00E-6	1.75E-04	± 25
2. Average release rate	uCi/sec	8.77E-07	2.14E-05	<3.77E-7	< 3.77E-7	5.53E-06	

C. Particulates

1. Total Release, with half-life > 8 days	Ci	N/D	N/D	N/D	N/D	N/D	± 25
2. Average release rate	uCi/sec	N/D	N/D	N/D	N/D	N/D	
3. Gross Alpha	Ci	<4.03E-07	<5.57E-07	<2.02E-06	<2.70E-06	<5.68E-06	± 25

D. Tritium

1. Total release	Ci	4.95E-01	8.28E-01	9.51E-01	8.30E-01	3.10E+00	± 25
2. Average release rate	uCi/sec	6.37E-02	1.05E-01	1.20E-01	1.04E-01	9.82E-02	

E. Percent ODCM limit, I&P with half-life > 8 days, H-3	%	1.86E-03	2.34E-02	1.85E-03	1.61E-03	1.43E-02	± 25

N/D = None Detected

TABLE 1C
CONTINUOUS GASEOUS EFFLUENTS - GROUND RELEASES
RADIOACTIVE EFFLUENT REPORT (Jan - Dec 2003)

Nuclides Released

1) Fission Gases	Units	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Year 2003
Kr-85m	Ci					0.00E+00
Kr-85	Ci					
Kr-87	Ci					
Kr-88	Ci					
Xe-131m	Ci					
Xe-133m	Ci					
Xe-133	Ci	1.98E-01	1.27E+01			1.29E+01
Xe-135m	Ci					
Xe-135	Ci					
Xe-138	Ci					
Ar-41	Ci					
Total for Period	Ci	1.98E-01	1.27E+01	0.00E+00	0.00E+00	1.29E+01

2) Iodines						
I-131	Ci	6.82E-06	1.68E-04	<3.00E-6	< 3.00E-06	1.75E-04
I-133	Ci	4.25E-06	N/D	N/D	N/D	N/D
I-135	Ci	N/D	N/D	N/D	N/D	N/D
Total for Period	Ci	1.11E-05	1.68E-04	<3.00E-6	< 3.00E-06	1.75E-04

3) Particulates						
Total for Period	Ci	N/D	N/D	N/D	N/D	N/D

N/D= None Detected

TABLE 1C
INDIAN POINT 3 RADIOACTIVE EFFLUENT REPORT (Jan - Dec 2003)
BATCH GASEOUS EFFLUENTS - GROUND RELEASES

Nuclides Released

1) Fission Gases	Units	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Year 2003
Ar-41	Ci	3.12E-02	2.41E-02	3.61E-02	2.26E-02	1.14E-01
Kr-85	Ci	1.45E+00	1.90E+00			3.35E+00
Kr-85m	Ci	3.18E-02				3.18E-02
Kr-87	Ci					0.00E+00
Kr-88	Ci					0.00E+00
Xe-131m	Ci	1.50E-02	3.03E-02			4.53E-02
Xe-133	Ci	5.58E+00	1.82E+00	1.66E-01	3.27E-02	7.60E+00
Xe-133m	Ci	1.72E-02	1.54E-03			1.87E-02
Xe-135	Ci	1.04E+00	1.66E-02			1.06E+00
Xe-135m	Ci	1.28E-02				1.28E-02
Total for Period	Ci	8.18E+00	3.79E+00	2.02E-01	5.53E-02	1.22E+01

2) Iodines						
I-131	Ci	N/A	N/A	N/A	N/A	N/A
I-133	Ci	N/A	N/A	N/A	N/A	N/A
I-135	Ci	N/A	N/A	N/A	N/A	N/A
Total for Period	Ci	N/A	N/A	N/A	N/A	N/A

3) Particulates						
Total for Period	Ci	N/A	N/A	N/A	N/A	N/A

N/A = Not Applicable for Batch Releases

Indian Point 3

RADIOACTIVE EFFLUENT REPORT

C. LIQUID EFFLUENTS

2003

TABLE 2A

INDIAN POINT 3 RADIOACTIVE EFFLUENT REPORT (Jan - Dec 2003)

LIQUID EFFLUENTS - SUMMATION OF ALL RELEASES

A. Fission & Activation Products	Units	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Year 2003	Est. Total % Error
1. Total Release (not including Tritium, Gr Alpha, & Gases)	Ci	3.92E-02	2.73E-02	7.52E-03	6.34E-03	8.04E-02	± 25
2. Average Diluted Conc	uCi/ml	1.55E-10	8.64E-11	1.78E-11	1.81E-11	5.99E-11	

B. Tritium							
1. Total Release	Ci	6.67E+02	6.18E+01	1.87E+02	3.85E+01	9.54E+02	± 25
2. Average Diluted Conc	uCi/ml	2.64E-06	1.96E-07	4.43E-07	1.10E-07	7.11E-07	

C. Dissolved & Entrained Gases							
1. Total Release	Ci	1.40E-01	8.26E-03	1.60E-03	0.00E+00	1.50E-01	± 25
2. AverageDiluted Conc	uCi/ml	5.53E-10	2.61E-11	3.79E-12	0.00E+00	1.12E-10	

D. Gross Alpha							
1. Total Release	Ci	<7.93E-05	<2.98E-05	<4.71E-05	2.85E-05	2.85E-05	± 25

E. Volume of Waste Released	liters	1.36E+06	9.50E+05	7.89E+05	4.19E+05	3.52E+06	± 25

F. Volume of Dilution Water	liters	2.53E+11	3.16E+11	4.22E+11	3.51E+11	1.34E+12	± 10

E. Percent of the ODCM Liquid Effluent limit	%	9.78E-02	3.90E-02	8.38E-03	3.07E-03	5.50E-02	± 25

TABLE 2B

INDIAN POINT 3 LIQUID RADIOACTIVE EFFLUENT REPORT (Jan - Dec 2003)

BATCH RADIOACTIVE EFFLUENT

Nuclides Released	Units	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Year 2003
Cr-51	Ci	5.47E-04	6.25E-03	3.55E-04		7.15E-03
Mn-54	Ci	3.79E-04	6.34E-05	6.31E-05		5.06E-04
Fe-55	Ci	3.11E-03	6.70E-04			3.78E-03
Fe-59	Ci		2.87E-05			2.87E-05
Co-58	Ci	4.20E-03	8.90E-03	2.32E-03	5.69E-04	1.60E-02
Co-60	Ci	8.67E-03	1.46E-03	8.62E-04	1.81E-04	1.12E-02
Ni-63	Ci	4.15E-03	1.41E-03	7.05E-04	5.46E-04	6.81E-03
Zr-95	Ci	4.34E-04	1.41E-04	1.47E-04		7.22E-04
Nb-95	Ci	8.32E-04	3.79E-04	4.25E-04	1.19E-05	1.65E-03
Ag-110m	Ci	1.69E-03	6.97E-03	1.58E-03	6.97E-05	1.03E-02
Sb-124	Ci	4.33E-05	5.63E-05		4.36E-04	5.36E-04
Sb-125	Ci	5.76E-03		3.56E-04	4.16E-03	1.03E-02
Te-123m	Ci		8.03E-04	6.24E-04		1.43E-03
I-131	Ci		4.03E-05			4.03E-05
Cs-134	Ci	5.08E-03	7.84E-05	2.50E-05	1.69E-04	5.35E-03
Cs-137	Ci	4.31E-03	4.69E-05	5.06E-05	2.00E-04	4.61E-03
Total for Period	Ci	3.92E-02	2.73E-02	7.51E-03	6.34E-03	8.04E-02
Ar-41	Ci		9.04E-06			9.04E-06
Xe-131m	CI	1.28E-04				1.28E-04
Xe-133	Ci	4.48E-02	5.79E-03	1.60E-03		5.22E-02
Kr-85	Ci	9.55E-02	2.46E-03			9.80E-02
Kr-85m	Ci					0.00E+00
Total for Period	Ci	1.40E-01	8.26E-03	1.60E-03	0.00E+00	1.50E-01

Indian Point 3

RADIOACTIVE EFFLUENT REPORT

D. SOLID WASTE

2003

Solid Waste Shipped Offsite for Disposal and Estimates of Major Nuclides by Waste Class and Stream 01/01/2003 to 12/31/2003

Percent Cutoff: 0 (all identified isotopes are included)

Waste Stream : Resins, Filters, and Evap Bottoms

Waste Class	Volume ft^3	Volume m^3	Curies Shipped	% Error (CI)
A	0.00E+00	0.00E+00	0.00E+00	+/- 25%
B	0.00E+00	0.00E+00	0.00E+00	+/- 25%
C	0.00E+00	0.00E+00	0.00E+00	+/- 25%
All	0.00E+00	0.00E+00	0.00E+00	+/- 25%

Waste Stream : Dry Active Waste

DAW/B-25 BOX DAW 20' SEALAND

Waste Class	Volume ft^3	Volume m^3	Curies Shipped	% Error (CI)
A	7.17E+03	2.03E+02	6.78E-01	+/-25%
B	0.00E+00	0.00E+00	0.00E+00	+/-25%
C	0.00E+00	0.00E+00	0.00E+00	+/-25%
All	7.17E+03	2.03E+02	6.78E-01	+/-25%

Waste Stream : Irradiated Components

Waste Class	Volume ft^3	Volume m^3	Curies Shipped	% Error (CI)
A	0.00E+00	0.00E+00	0.00E+00	+/-25%
B	0.00E+00	0.00E+00	0.00E+00	+/-25%
C	0.00E+00	0.00E+00	0.00E+00	+/-25%
All	0.00E+00	0.00E+00	0.00E+00	+/-25%

Waste Stream : Other Waste

Waste Class	Volume ft^3	Volume m^3	Curies Shipped	% Error (CI)
A	0.00E+00	0.00E+00	0.00E+00	+/-25%
B	0.00E+00	0.00E+00	0.00E+00	+/-25%
C	0.00E+00	0.00E+00	0.00E+00	+/-25%
All	0.00E+00	0.00E+00	0.00E+00	+/-25%

Waste Stream : Sum of All 4 Categories

DAW/B-25 BOX DAW 20' SEALAND

Waste Class	Volume ft^3	Volume m^3	Curies Shipped	% Error (CI)
A	7.17E+03	2.03E+02	6.78E-01	+/-25%
B	0.00E+00	0.00E+00	0.00E+00	+/-25%
C	0.00E+00	0.00E+00	0.00E+00	+/-25%
All	7.17E+03	2.03E+02	6.78E-01	+/-25%

Solid Waste Shipped Offsite for Disposal and Estimates of Major Nuclides by Waste Class and Stream 01/01/2003 to 12/31/2003

Percent Cutoff: 0

Number of Shipments	Mode of Transportation	Destination
1	HITTMAN	GTS-DURATEK (GIC)
3	HITTMAN	GTS-DURATEK

Dry Active Waste		
Waste Class A		
Nuclide Name	Percent Abundance	Curies
H-3	14.786%	1.00E-01
Be-7	1.336%	9.06E-03
Cr-51	6.556%	4.45E-02
Mn-54	0.658%	4.47E-03
Fe-55	4.496%	3.05E-02
Co-58	3.533%	2.40E-02
Co-60	17.191%	1.17E-01
Ni-63	23.894%	1.62E-01
Sr-90	0.152%	1.03E-03
Zr-95	7.985%	5.42E-02
Nb-95	12.549%	8.51E-02
Ag-110m	0.226%	1.53E-03
Sb-125	1.112%	7.54E-03
Cs-134	0.415%	2.82E-03
Cs-137	4.533%	3.08E-02
Ce-144	0.232%	1.58E-03
Pu-239	0.002%	1.29E-05
Pu-241	0.337%	2.29E-03
Cm-242	0.007%	4.76E-05

Solid Waste Shipped Offsite for Disposal and Estimates of Major Nuclides by Waste Class and Stream 01/01/2003 to 12/31/2003

Percent Cutoff: 0

Dry Active Waste		
Waste Class All		
Nuclide Name	Percent Abundance	Curies
H-3	14.786%	1.00E-01
Be-7	1.336%	9.06E-03
Cr-51	6.556%	4.45E-02
Mn-54	0.658%	4.47E-03
Fe-55	4.496%	3.05E-02
Co-58	3.533%	2.40E-02
Co-60	17.191%	1.17E-01
Ni-63	23.894%	1.62E-01
Sr-90	0.152%	1.03E-03
Zr-95	7.985%	5.42E-02
Nb-95	12.549%	8.51E-02
Ag-110m	0.226%	1.53E-03
Sb-125	1.112%	7.54E-03
Cs-134	0.415%	2.82E-03
Cs-137	4.533%	3.08E-02
Ce-144	0.232%	1.58E-03
Pu-239	0.002%	1.29E-05
Pu-241	0.337%	2.29E-03
Cm-242	0.007%	4.76E-05

Solid Waste Shipped Offsite for Disposal and Estimates of Major Nuclides by Waste Class and Stream 01/01/2003 to 12/31/2003

Percent Cutoff: 0

Sum of All 4 Categories
Waste Class A

Nuclide Name	Percent Abundance	Curies
H-3	14.786%	1.00E-01
Be-7	1.336%	9.06E-03
Cr-51	6.556%	4.45E-02
Mn-54	0.658%	4.47E-03
Fe-55	4.496%	3.05E-02
Co-58	3.533%	2.40E-02
Co-60	17.191%	1.17E-01
Ni-63	23.894%	1.62E-01
Sr-90	0.152%	1.03E-03
Zr-95	7.985%	5.42E-02
Nb-95	12.549%	8.51E-02
Ag-110m	0.226%	1.53E-03
Sb-125	1.112%	7.54E-03
Cs-134	0.415%	2.82E-03
Cs-137	4.533%	3.08E-02
Ce-144	0.232%	1.58E-03
Pu-239	0.002%	1.29E-05
Pu-241	0.337%	2.29E-03
Cm-242	0.007%	4.76E-05

Sum of All 4 Categories
Waste Class All

Nuclide Name	Percent Abundance	Curies
H-3	14.786%	1.00E-01
Be-7	1.336%	9.06E-03
Cr-51	6.556%	4.45E-02
Mn-54	0.658%	4.47E-03
Fe-55	4.496%	3.05E-02
Co-58	3.533%	2.40E-02
Co-60	17.191%	1.17E-01
Ni-63	23.894%	1.62E-01
Sr-90	0.152%	1.03E-03
Zr-95	7.985%	5.42E-02
Nb-95	12.549%	8.51E-02
Ag-110m	0.226%	1.53E-03
Sb-125	1.112%	7.54E-03
Cs-134	0.415%	2.82E-03
Cs-137	4.533%	3.08E-02
Ce-144	0.232%	1.58E-03
Pu-239	0.002%	1.29E-05
Pu-241	0.337%	2.29E-03
Cm-242	0.007%	4.76E-05

Indian Point 3

RADIOACTIVE EFFLUENT REPORT

E. RADIOLOGICAL IMPACT ON MAN

Jan 1, 2003 - Dec 31, 2003

RADIOLOGICAL IMPACT ON MAN

The radiological impact on man is determined by conservatively calculating doses to a hypothetical maximally exposed individual offsite based on plant effluents. These calculations are divided into 3 categories: Noble Gases, Particulates and Iodine, and Liquid Releases (fish and invertebrate consumption).

An annual average dispersion factor is used in the calculations, the details of which are presented in the Offsite Dose Calculation Manual (ODCM).

The computer code used to perform gaseous dose calculations incorporates the models and parameters presented in the Indian Point 3 ODCM, which utilizes the assumptions in Regulatory Guide 1.109 and NUREG 0133.

These doses were calculated using radioactive releases from the Indian Point #3 Nuclear Power Plant. Although Indian Point is a multi-unit site owned and operated by Entergy Nuclear Operations, Incorporated, doses resulting from releases from Indian Point Units 1 and 2 are independently reported.

Doses to individuals from liquid pathways for the fish and invertebrate consumption pathways are computed using the methodology and parameters in the Indian Point 3 ODCM, which incorporates the calculational models that are present in Regulatory Guide 1.109 and NUREG 0133.

Carbon 14 release concentration and resulting dose have been estimated using data generated at IP3 from August 1980 to June 1982 after a study conducted by the NY State Department of Health. These estimates are consistent with NUREG 0017, Rev. 1. The maximum expected annual dose from Carbon 14 releases at IP3 has been calculated using the maximum dependable gross electrical capacity of Indian Point 3, which is 1000 MW(e) maintained for the entire year. The resultant worst case doses are based upon site specific assumptions of source term released for an entire year at 1000 MW(e) output, as outlined in the ODCM.

The annual dose to the maximally exposed individual (child) from gaseous releases of Carbon-14 is 0.254 mRem to the critical organ (bone) and 0.0508 mRem to the total body. The annual dose to the maximally exposed individual (child) from liquid releases of Carbon-14 is 0.00583 mRem to the critical organ (bone) and 0.00117 mRem to the total body.

Doses to members of the public from airborne and liquid releases are minimal due to the relatively insignificant total duration of these individuals on site. Their doses can be calculated from standard ODCM methodology, with typical occupancy factors employed. These factors are determined by comparing the expected hours on site to 8760 hours (the number of hours in a year, used in calculations in the ODCM).

example 1: Several students visit the site for an 8-hour guided tour. Their occupancy factor is: 8 / 8760 or **.0009.**

example 2: A man drives his wife to work and drops her off at the security gate each morning, with a total stay-time on site for 2 minutes per day. His occupancy factor is calculated as follows:

2 min/60 min per hour =.0333 hr ; 0.0333 / 8760 = **3.8E-6**

These factors, when multiplied by doses calculated per the ODCM, demonstrate that dose to MEMBERS OF THE PUBLIC within the site boundary is negligible, despite a potential reduction in the atmospheric dispersion.

In compliance with 40CFR190, the following table indicates the measured direct shine dose component for Indian Point 3 property in 2002:

	Whole Body (mrem)	Max Organ (mrem)
40 CFR 190 limit	25	75
Airborne Effluents	.00215	.00215
Liquid Effluents	.00165	.00392
Radwaste Storage	*	*
Indian Point 3 Total	**< 4.0**	**< 4.0**

* Indistinguishable from background. Four mrem is conservatively used from a one mrem siting criteria established for each area.

INDIAN POINT 3 NUCLEAR POWER PLANT
RADIOLOGICAL IMPACT ON MAN
JANUARY - DECEMBER 2003

Maximum exposed individual doses in mrem or mrad

A. LIQUID DOSES

		Qtr 1	Qtr 2	Qtr 3	Qtr 4	ANNUAL
Organ Dose	(mrem)	1.88E-03	1.95E-03	4.19E-04	7.88E-05	3.92E-03
Applicable Limit	(mrem)	5	5	5	5	10
Percent of Limit	(%)	3.76E-02	3.90E-02	8.38E-03	1.58E-03	3.92E-02
Age Group		Adult	Adult	Adult	Child	Adult
Critical Organ		Liver	GILLI	GILLI	Bone	GILLI

Adult Total Body	(mrem)	1.47E-03	7.00E-05	6.80E-05	4.60E-05	1.65E-03
Applicable Limit	(mrem)	1.5	1.5	1.5	1.5	3
Percent of Limit	(%)	9.78E-02	4.67E-03	4.53E-03	3.07E-03	5.50E-02

B. AIRBORNE NOBLE GAS DOSES

		Qtr 1	Qtr 2	Qtr 3	Qtr 4	ANNUAL
Gamma Air	(mrad)	4.63E-04	6.20E-04	2.95E-05	1.54E-05	1.13E-03
Applicable Limit	(mrad)	5	5	5	5	10
Percent of Limit	(%)	9.26E-03	1.24E-02	5.90E-04	3.08E-04	1.13E-02

Beta Air	(mrad)	1.79E-03	2.93E-03	4.51E-05	1.66E-05	4.78E-03
Applicable Limit	(mrad)	10	10	10	10	20
Percent of Limit	(%)	1.79E-02	2.93E-02	4.51E-04	1.66E-04	2.39E-02

C. AIRBORNE IODINE and PARTICULATE DOSES

		Qtr 1	Qtr 2	Qtr 3	Qtr 4	ANNUAL
Iodine/Part	(mrem)	1.39E-04	1.75E-03	1.39E-04	1.21E-04	2.15E-03
Applicable Limit	(mrem)	7.5	7.5	7.5	7.5	15
Percent of Limit	(%)	1.85E-03	2.33E-02	1.85E-03	1.61E-03	1.43E-02

Age Group		Child	Child	Child	Child	Child
Critical Organ		Thyroid	Thyroid	Liver	Liver	Thyroid

Indian Point 3

RADIOLOGICAL EFFLUENT REPORT

F. METEOROLOGICAL DATA

Jan 1, 2003 - Dec 31, 2003

This data is stored onsite and is available in printed or electronic form.

Indian Point 3

RADIOACTIVE EFFLUENT REPORT

G. OFFSITE DOSE CALCULATION MANUAL,
PROCESS CONTROL PROGRAM, OR LAND USE CENSUS LOCATION CHANGES

2003

The ODCM was not upgraded in year 2003.

There were no changes in the REMP locations for dose calculations and/or environmental monitoring in year 2003.

There were no changes to the Land Use Census in year 2003.

The PCP was not upgraded in this period and remains at Revision 7.

ENCLOSURE 3

Revision 1 to 2002 Annual Effluent and Waste Disposal Report

Indian Point 1 and 2

A –ANNUAL EFFLUENT AND WASTE DISPOSAL REPORT 2002

B - GASEOUS EFFLUENTS 2002

C - LIQUID EFFLUENTS 2002

D - SOLID WASTE 2002

Entergy Nuclear Operations, Inc.
Docket Nos. 50-03 & 50-247
NL-04-043

ANNUAL

EFFLUENT AND WASTE DISPOSAL REPORT

2002

ENTERGY NUCLEAR OPERATIONS, INC.
INDIAN POINT UNIT NOS. 1 & 2
DOCKET NOS. 50-03 & 50-247

ANNUAL

EFFLUENT AND WASTE DISPOSAL REPORT

2002

FACILITY: Indian Point Station (Units 1 and 2)

LICENSEE: Entergy Nuclear Operations, Inc.

This information is provided pursuant to 10 CFR 50.36a(a)(2) and employs certain guidance as set forth in Regulatory Guide 1.21, Revision 1. The numbered sections of this part of the report reference corresponding sections of the subject Regulatory Guide, pages 1.21-10 through 1.21-12. This Annual Effluent and Waste Disposal Report for Indian Point Units 1 and 2 covers discharges for 2002. Entergy Nuclear Operations, Inc., the licensee for Indian Point Unit 3, will also issue a report for the Indian Point Unit No. 3 facility, separately.

A. Supplemental Information and Definition

1. Regulatory Limits

Indian Point Units 1 and 2 are presently subject to radioactive waste release specifications that are set forth in Appendix A to Facility Operating Licenses DPR-5 and DPR-26, entitled "Technical Specifications and Bases" (Indian Point Unit No. 2 Technical Specification Section 3.9 "Radioactive Effluents").

2. Maximum Permissible Concentrations (MPC)

Gaseous Effluents

Concentrations of gaseous discharges in unrestricted areas are computed by producing release rate (Q) and the annual average dispersion factor (X/Q) at the most restrictive site boundary location. The mixture percent of MPC* is obtained by adding the effects of each nuclide; the effect of each nuclide is, in turn, the quotient of its computed concentration and its MPC.

* 10 CFR 20 Appendix B Table 2 Col 1 (Pre-1994).

Liquid Effluents

All liquid discharges from Indian Point are made through a common discharge canal with a minimum of 100,000 gpm dilution water. The isotopic content, excluding tritium and dissolved noble gas, of continuous and batch mode discharges of liquid effluent for each calendar quarter has been added and a weighted average fraction of MPC* has been calculated for this isotopic mixture. The percent of the applicable limit reported in Section C of this document is the percent of MPC concentration of the time-average diluted concentration for each quarter.

The tritium limit has been established in the same manner as the limits for other isotopes in liquid effluents. A derived MPC of 2×10^{-4} uCi/ml for dissolved noble gases has been conservatively adopted for liquid effluents due to the swimming pathway.

* 10 CFR 20 Appendix B Table 2 Col 2 (Pre-1994).

3. Average Energy

The average energy (E-bar)* of the radionuclide mixture in releases of fission and activation gases for the four quarters in 2002 are provided below:

	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
Beta	0.228	0.146	0.164	0.164
Gamma	0.0173	0.0810	0.0438	0.0358

* Values in MeV/Dis.

4. Measurements and Approximations of Total Radioactivity

a. Fission and Activation Gases

Analysis of effluent gases was performed in compliance with the requirements of Table 4.10-3 of the Technical Specifications. In the case of isolated tanks (batch releases), the total activity discharged was based on an isotopic analysis of each batch and the volume of gas in that batch.

Vapor Containment ventilation discharges have generally been treated as batch releases. At least one complete isotopic concentration analysis of containment air was performed per week. This was applied to gross analysis of the ventilation air performed prior to each discharge. This information

was combined with the volume of air in each discharge to calculate the radionuclide composition of these discharges.

The continuous discharges were based on the isotopic content determined from weekly samples of ventilation air. This information was combined with total air volume discharged by this route. The accumulation of batch and containment ventilation releases was then used to determine total discharges.

b.&.c Iodines and Particulates

Iodine-131 and particulate releases are quantified by collecting a continuous sample of ventilation air on a potassium-iodide impregnated activated charcoal cartridge and a glass-fiber filter paper. These samples are obtained as required by Table 4.10-3 of the Technical Specifications. The concentration of isotopes found by analysis of these samples was combined with the volume of air discharged during the sampling period to calculate the amount of activity discharged.

For other iodine isotopes the ratio of each isotope to iodine-131 was determined by a monthly 24 hour composite sample. This ensures the proper identification of the short-lived I-133 and I-135 isotopes.

d. Liquid Effluents

A sample of each batch discharge was taken and an isotopic analysis was performed in compliance with the requirements specified in Table 4.10-1 of the Technical Specifications. This isotopic concentration data was combined with information of volume discharged to determine the amount of each isotope discharged in the period.

Samples of continuous discharges have been taken and analyzed in compliance with Table 4.10-1 of the Technical Specifications. This concentration data was combined with the volume discharged to calculate the amount of each isotope discharged.

The above concentrations were used in conjunction with the actual dilution flow to calculate the fraction of maximum permissible concentration.

e. Error Estimates

The total error estimate is the geometric sum of counting uncertainty and sampling uncertainty, expressed as a percent. Sampling uncertainties are considered independent of activity level and largely fixed in value. However, counting uncertainties are activity level dependent. The percent counting uncertainty is the quotient of the 1 sigma (Poisson) uncertainty and the activity measured. This percent uncertainty is maximized at low activity levels, specifically at the lower limit of detection (LLD). It can be shown that the percent uncertainty at LLD is no more than 35%. But as most positive samples are detected at several multiples of LLD, at least, the percent uncertainty is more likely to be in the 8% to 12% range. Adding a consideration of fixed uncertainty of sampling, the total uncertainty is estimated to be 15%.

5. Batch Releases:

a. Liquid	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.
Number of Batch Releases	20	37	26	53
Total Time Period of Batch Releases (min)	5,090	7,360	6,310	16,600
Maximum Time Period of Batch Release (min)	580	695	575	1,390
Average Time Period of Batch Release (min)	255	199	243	314
Minimum Time Period of Batch Release (min)	78	20	80	48
Average Stream Flow (cfs)				

Hudson River flow information is obtained from the Department of the Interior, United States Geological Survey (USGS). These data are received after review from the USGS, approximately 18 months after initial data collection. This information is included in the effluents report as the data become available.

Estimated Average Stream Flows of the Hudson River at Indian Point:

Year	Quarter	Flow(cfs)
2000	Fourth	16600
2001	First	18900
2001	Second	31300
2001	Third	5510

b. Gaseous	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.
Number of Batch Releases	142	122	117	77
Total Time Period of Batch Releases (Minutes)	17,500	16,900	16,600	7,780
Maximum Time Period of Batch Release(Minutes)	838	271	459	241
Average Time Period of Batch Release (Minutes)	123	139	142	101
Minimum Time Period of Batch Release (Minutes)	3	8	2	1

6. Abnormal Releases

a. Liquid - None

b. Gaseous - None

ANNUAL

EFFLUENT AND WASTE DISPOSAL REPORT

B - GASEOUS EFFLUENTS

2002

ENTERGY NUCLEAR OPERATIONS, INC.
INDIAN POINT UNIT NOS. 1 & 2
DOCKET NOS. 50-03 & 50-247
MAY 2003

2002 EFFLUENT AND WASTE DISPOSAL
GASEOUS EFFLUENTS -- SUMMATION OF ALL RELEASES

	UNITS	QUARTER 1	QUARTER 2	EST. TOTAL: ERROR, %
A. FISSION AND ACTIVATION GASES				
1. TOTAL RELEASE	Ci	7.22E+00	1.33E+00	1.50E+01
2. AVERAGE RELEASE RATE FOR PERIOD	uCi/sec	9.29E-01	1.69E-01	
3. PERCENT OF TECHNICAL SPECIFICATION LIMIT	%	1.58E-03	3.46E-04	
B. IODINES				
1. TOTAL IODINE-131	Ci	0.00E+00	5.56E-07	1.50E+01
2. AVERAGE RELEASE RATE FOR PERIOD	uCi/sec	0.00E+00	7.07E-08	
3. PERCENT OF TECHNICAL SPECIFICATION LIMIT	%	0.00E+00	3.47E-07	
C. PARTICULATES				
1. PARTICULATES WITH HALF-LIVES >8 DAYS	Ci	1.42E-05	1.74E-05	1.50E+01
2. AVERAGE RELEASE RATE FOR PERIOD	uCi/sec	1.82E-06	2.21E-06	
3. PERCENT OF TECHNICAL SPECIFICATION LIMIT	%	1.42E-06	2.19E-06	
4. GROSS ALPHA RADIOACTIVITY	Ci	1.87E-07	2.64E-07	
D. TRITIUM				
1. TOTAL RELEASE	Ci	7.26E-01	9.87E-01	1.50E+01
2. AVERAGE RELEASE RATE FOR PERIOD	uCi/sec	9.34E-02	1.25E-01	
3. PERCENT OF TECHNICAL SPECIFICATION LIMIT	%	2.29E-04	3.08E-04	

EFFLUENT AND WASTE DISPOSAL 2002 ANNUAL REPORT
GASEOUS EFFLUENTS -- SUMMATION OF ALL RELEASES

			CONTINUOUS MODE		BATCH MODE	
NUCLIDES RELEASED	UNITS	QUARTER 1	QUARTER 2	QUARTER 1	QUARTER 2
1. FISSION AND ACTIVATION GASES						
AR41	Ci	1.07E-08	6.00E-05	2.89E-02	3.45E-02
KR85M	Ci	1.07E-08	5.18E-05	1.55E-03	6.12E-04
KR85	Ci	0.00E+00	0.00E+00	5.74E+00	3.10E-03
KR87	Ci	0.00E+00	2.86E-05	5.09E-04	1.70E-04
KR88	Ci	0.00E+00	6.19E-05	1.77E-03	6.60E-04
XE131M	Ci	0.00E+00	0.00E+00	5.48E-05	0.00E+00
XE133M	Ci	0.00E+00	0.00E+00	6.25E-03	4.17E-04
XE133	Ci	1.82E-03	4.52E-03	1.42E+00	1.27E+00
XE135M	Ci	0.00E+00	1.30E-05	2.48E-04	9.98E-05
XE135	Ci	8.40E-04	1.43E-03	1.96E-02	8.90E-03
XE138	Ci	0.00E+00	0.00E+00	7.46E-05	4.85E-05
TOTAL FOR PERIOD (ABOVE)	Ci	2.66E-03	6.17E-03	7.22E+00	1.32E+00

			CONTINUOUS MODE		BATCH MODE	
NUCLIDES RELEASED	UNITS	QUARTER 1	QUARTER 2	QUARTER 1	QUARTER 2
2. IODINES						
I131	Ci	0.00E+00	5.56E-07	0.00E+00	0.00E+00
TOTAL FOR PERIOD (ABOVE)	Ci	0.00E+00	5.56E-07	0.00E+00	0.00E+00

EFFLUENT AND WASTE DISPOSAL 2002 ANNUAL REPORT
GASEOUS EFFLUENTS -- SUMMATION OF ALL RELEASES

		CONTINUOUS MODE		BATCH MODE	
NUCLIDES RELEASED	UNITS	QUARTER 1	QUARTER 2	QUARTER 1	QUARTER 2
3. PARTICULATES					
CO60	Ci	1.65E-06	3.64E-07	0.00E+00	0.00E+00
SR89	Ci	0.00E+00	4.13E-07	0.00E+00	0.00E+00
CS134	Ci	4.05E-06	0.00E+00	0.00E+00	0.00E+00
CS137	Ci	3.47E-06	1.63E-05	0.00E+00	0.00E+00
* NI63	Ci	7.96E-08	3.60E-07	0.00E+00	0.00E+00
* NB95	Ci	3.69E-06	0.00E+00	0.00E+00	0.00E+00
* BA133	Ci	1.25E-06	0.00E+00	0.00E+00	0.00E+00
TOTAL FOR PERIOD (ABOVE)	Ci	1.42E-05	1.74E-05	0.00E+00	0.00E+00

* DENOTES SUPPLEMENTAL ISOTOPES

EFFLUENT AND WASTE DISPOSAL 2002 ANNUAL REPORT
GASEOUS EFFLUENTS -- SUMMATION OF ALL RELEASES

	UNITS	QUARTER 3	QUARTER 4	EST. TOTAL ERROR, %
A. FISSION AND ACTIVATION GASES				
1. TOTAL RELEASE	Ci	1.05E+02	1.60E+03	1.50E+01
2. AVERAGE RELEASE RATE FOR PERIOD	uCi/sec	1.32E+01	2.02E+02	
3. PERCENT OF TECHNICAL SPECIFICATION LIMIT	%	2.30E-02	3.32E-01	
B. IODINES				
1. TOTAL IODINE-131	Ci	4.54E-06	2.09E-04	1.50E+01
2. AVERAGE RELEASE RATE FOR PERIOD	uCi/sec	5.71E-07	2.63E-05	
3. PERCENT OF TECHNICAL SPECIFICATION LIMIT	%	2.80E-06	1.29E-04	
C. PARTICULATES				
1. PARTICULATES WITH HALF-LIVES >8 DAYS	Ci	4.28E-05	4.35E-05	1.50E+01
2. AVERAGE RELEASE RATE FOR PERIOD	uCi/sec	5.38E-06	5.47E-06	
3. PERCENT OF TECHNICAL SPECIFICATION LIMIT	%	5.40E-06	2.39E-06	
4. GROSS ALPHA RADIOACTIVITY	Ci	2.41E-07	1.45E-07	
D. TRITIUM				
1. TOTAL RELEASE	Ci	1.11E+00	1.04E+00	1.50E+01
2. AVERAGE RELEASE RATE FOR PERIOD	uCi/sec	1.40E-01	1.31E-01	
3. PERCENT OF TECHNICAL SPECIFICATION LIMIT	%	3.43E-04	3.22E-04	

EFFLUENT AND WASTE DISPOSAL 2002 ANNUAL REPORT
GASEOUS EFFLUENTS -- SUMMATION OF ALL RELEASES

		CONTINUOUS MODE		BATCH MODE	
NUCLIDES RELEASED	UNITS	QUARTER 3	QUARTER 4	QUARTER 3	QUARTER 4
1. FISSION AND ACTIVATION GASES					
AR41	Ci	1.79E-04	3.70E-05	6.81E-02	1.64E-02
KR85M	Ci	6.54E-05	3.44E-06	1.64E-01	3.13E-02
KR85	Ci	0.00E+00	3.50E+02	2.24E+01	4.50E+01
KR87	Ci	1.32E-05	1.78E-09	5.98E-03	3.13E-05
KR88	Ci	3.99E-05	1.28E-08	1.40E-01	1.29E-04
XE131M	Ci	0.00E+00	0.00E+00	4.65E-01	1.13E+00
XE133M	Ci	0.00E+00	1.16E+01	1.16E+00	2.01E+00
XE133	Ci	1.16E-02	1.06E+03	7.85E+01	1.26E+02
XE135M	Ci	3.64E-05	7.53E-06	6.94E-05	1.08E-05
XE135	Ci	1.68E-03	4.54E-01	1.96E+00	4.80E+00
TOTAL FOR PERIOD (ABOVE)	Ci	1.36E-02	1.42E+03	1.05E+02	1.79E+02

EFFLUENT AND WASTE DISPOSAL 2002 ANNUAL REPORT
GASEOUS EFFLUENTS -- SUMMATION OF ALL RELEASES

		CONTINUOUS MODE		BATCH MODE	
NUCLIDES RELEASED	UNITS	QUARTER 3	QUARTER 4	QUARTER 3	QUARTER 4
2. IODINES					
I131	Ci	4.54E-06	2.09E-04	0.00E+00	0.00E+00
TOTAL FOR PERIOD (ABOVE)	Ci	4.64E-06	2.09E-04	0.00E+00	0.00E+00

		CONTINUOUS MODE		BATCH MODE	
NUCLIDES RELEASED	UNITS	QUARTER 3	QUARTER 4	QUARTER 3	QUARTER 4
3. PARTICULATES					
CO58	Ci	0.00E+00	1.85E-05	0.00E+00	0.00E+00
CO60	Ci	2.37E-06	3.39E-06	0.00E+00	0.00E+00
CS137	Ci	3.98E-05	9.06E-06	0.00E+00	0.00E+00
* NI63	Ci	6.42E-07	1.26E-05	0.00E+00	0.00E+00
TOTAL FOR PERIOD (ABOVE)	Ci	4.28E-05	4.35E-05	0.00E+00	0.00E+00

* DENOTES SUPPLEMENTAL ISOTOPES

ANNUAL

EFFLUENT AND WASTE DISPOSAL REPORT

C - LIQUID EFFLUENTS

2002

ENTERGY NUCLEAR OPERATIONS, INC.
INDIAN POINT UNIT NOS. 1 & 2
DOCKET NOS. 50-03 & 50-247
MAY 2003

EFFLUENT AND WASTE DISPOSAL 2002 ANNUAL REPORT
LIQUID EFFLUENTS -- SUMMATION OF ALL RELEASES

	UNITS	QUARTER 1	QUARTER 2	EST. TOTAL ERROR, %
A. FISSION AND ACTIVATION PRODUCTS				
1. TOTAL RELEASE (EXCL. TRIT., GASES, ALPHA)	Ci	1.81E-01	6.98E-02	1.50E+01
2. AVERAGE DILUTED CONC. DURING PERIOD	uCi/ml	5.45E-10	1.89E-10	
3. PERCENT OF APPLICABLE LIMIT	%	7.54E-04	5.30E-04	
B. TRITIUM				
1. TOTAL RELEASE	Ci	1.54E+02	1.43E+02	1.50E+01
2. AVERAGE DILUTED CONC. DURING PERIOD	uCi/ml	4.62E-07	3.86E-07	
3. PERCENT OF APPLICABLE LIMIT	%	5.08E-03	6.28E-03	
C. DISSOLVED AND ENTRAINED GASES				
1. TOTAL RELEASE	Ci	1.67E-02	0.00E+00	1.50E+01
2. AVERAGE DILUTED CONC. DURING PERIOD	uCi/ml	5.01E-11	0.00E+00	
3. PERCENT OF APPLICABLE LIMIT	%	2.50E-05	0.00E+00	
D. GROSS ALPHA RADIOACTIVITY				
1. TOTAL RELEASE	Ci	8.58E-05	5.85E-05	5.00E+01
E. VOLUME WASTE RELEASED (PRIOR TO DILUTION)	LITERS	6.27E+07	5.08E+07	1.00E+01
F. VOLUME DILUTION WATER USED DURING PERIOD	LITERS	3.33E+11	3.70E+11	1.00E+01

EFFLUENT AND WASTE DISPOSAL 2002 ANNUAL REPORT
LIQUID EFFLUENTS -- SUMMATION OF ALL RELEASES

		CONTINUOUS MODE		BATCH MODE	
NUCLIDES RELEASED	UNITS	QUARTER 1	QUARTER 2	QUARTER 1	QUARTER 2
H3	Ci	1.31E-01	1.95E-01	1.54E+02	1.43E+02
MN54	Ci	0.00E+00	0.00E+00	2.11E-04	4.73E-04
FE55	Ci	0.00E+00	0.00E+00	1.38E-03	1.14E-02
CO58	Ci	1.35E-02	0.00E+00	1.54E-02	1.50E-02
CO60	Ci	0.00E+00	0.00E+00	7.51E-04	1.65E-03
NI63	Ci	1.25E-01	0.00E+00	6.74E-03	7.33E-03
SR89	Ci	0.00E+00	0.00E+00	0.00E+00	2.93E-05
SR90	Ci	4.59E-04	3.44E-04	1.91E-04	3.20E-04
NB95	Ci	0.00E+00	0.00E+00	0.00E+00	1.06E-05
AG110M	Ci	0.00E+00	0.00E+00	0.00E+00	4.29E-05
CS134	Ci	0.00E+00	0.00E+00	0.00E+00	1.13E-04
CS137	Ci	2.71E-04	5.64E-04	1.37E-02	2.56E-02
* SB124	Ci	0.00E+00	0.00E+00	3.74E-04	1.82E-04
* SB125	Ci	0.00E+00	0.00E+00	3.14E-03	1.33E-03
* CO57	Ci	0.00E+00	0.00E+00	4.46E-05	5.61E-05
* CD109	Ci	0.00E+00	5.41E-03	0.00E+00	0.00E+00

EFFLUENT AND WASTE DISPOSAL 2002 ANNUAL REPORT
LIQUID EFFLUENTS -- SUMMATION OF ALL RELEASES

		CONTINUOUS MODE		BATCH MODE	
NUCLIDES RELEASED	UNITS	QUARTER 1	QUARTER 2	QUARTER 1	QUARTER 2
LIQUID EFFLUENTS (CONTD)					
TOTAL FOR PERIOD (ABOVE)	Ci	2.70E-01	2.02E-01	1.54E+02	1.43E+02

		CONTINUOUS MODE		BATCH MODE	
NUCLIDES RELEASED	UNITS	QUARTER 1	QUARTER 2	QUARTER 1	QUARTER 2
* XE133	Ci	0.00E+00	0.00E+00	1.67E-02	0.00E+00

* DENOTES SUPPLEMENTAL ISOTOPES

EFFLUENT AND WASTE DISPOSAL 2002 ANNUAL REPORT
LIQUID EFFLUENTS -- SUMMATION OF ALL RELEASES

	UNITS	QUARTER 3	QUARTER 4	EST. TOTAL ERROR, %
A. FISSION AND ACTIVATION PRODUCTS				
1. TOTAL RELEASE (EXCL. TRIT., GASES, ALPHA)	Ci	4.26E-02	1.48E-01	1.50E+01
2. AVERAGE DILUTED CONC. DURING PERIOD	uCi/ml	1.02E-10	5.69E-10	
3. PERCENT OF APPLICABLE LIMIT	%	4.42E-04	3.32E-03	
B. TRITIUM				
1. TOTAL RELEASE	Ci	1.74E+02	5.94E+02	1.50E+01
2. AVERAGE DILUTED CONC. DURING PERIOD	uCi/ml	4.14E-07	2.28E-06	
3. PERCENT OF APPLICABLE LIMIT	%	6.85E-03	3.61E-02	
C. DISSOLVED AND ENTRAINED GASES				
1. TOTAL RELEASE	Ci	2.91E-02	6.70E-02	1.50E+01
2. AVERAGE DILUTED CONC. DURING PERIOD	uCi/ml	6.94E-11	2.57E-10	
3. PERCENT OF APPLICABLE LIMIT	%	3.47E-05	1.29E-04	
D. GROSS ALPHA RADIOACTIVITY				
1. TOTAL RELEASE	Ci	1.63E-03	5.46E-04	5.00E+01
E. VOLUME WASTE RELEASED (PRIOR TO DILUTION)	LITERS	5.25E+07	5.33E+07	1.00E+01
F. VOLUME DILUTION WATER USED DURING PERIOD	LITERS	4.20E+11	2.60E+11	1.00E+01

EFFLUENT AND WASTE DISPOSAL 2002 ANNUAL REPORT

LIQUID EFFLUENTS -- SUMMATION OF ALL RELEASES

		CONTINUOUS MODE		BATCH MODE	
NUCLIDES RELEASED	UNITS	QUARTER 3	QUARTER 4	QUARTER 3	QUARTER 4
H3	Ci	8.42E-02	1.77E-02	1.73E+02	5.94E+02
NA24	Ci	0.00E+00	0.00E+00	0.00E+00	1.28E-04
CR51	Ci	0.00E+00	0.00E+00	0.00E+00	2.11E-03
MN54	Ci	0.00E+00	0.00E+00	8.77E-05	2.08E-04
FE55	Ci	0.00E+00	0.00E+00	0.00E+00	1.90E-02
FE59	Ci	0.00E+00	0.00E+00	0.00E+00	1.48E-05
CO58	Ci	0.00E+00	0.00E+00	6.41E-03	2.54E-02
CO60	Ci	0.00E+00	0.00E+00	1.49E-03	5.58E-03
NI63	Ci	0.00E+00	5.37E-04	1.14E-02	1.72E-02
SR89	Ci	3.43E-04	2.21E-04	1.67E-04	1.88E-04
SR90	Ci	3.85E-04	3.24E-04	2.18E-04	2.88E-04
NB95	Ci	0.00E+00	0.00E+00	0.00E+00	1.88E-05
AG110M	Ci	0.00E+00	0.00E+00	0.00E+00	1.27E-04
TE132	Ci	0.00E+00	0.00E+00	0.00E+00	3.90E-05
I131	Ci	0.00E+00	0.00E+00	0.00E+00	3.90E-03
I132	Ci	0.00E+00	0.00E+00	0.00E+00	5.56E-05
CS134	Ci	0.00E+00	0.00E+00	1.30E-04	6.56E-04

EFFLUENT AND WASTE DISPOSAL 2002 ANNUAL REPORT
LIQUID EFFLUENTS -- SUMMATION OF ALL RELEASES

		CONTINUOUS MODE		BATCH MODE	
NUCLIDES RELEASED	UNITS	QUARTER 3	QUARTER 4	QUARTER 3	QUARTER 4
LIQUID EFFLUENTS (CONTD)					
CS137	Ci	5.29E-04	2.83E-07	2.01E-02	3.67E-02
CS138	Ci	0.00E+00	0.00E+00	0.00E+00	9.36E-03
LA140	Ci	0.00E+00	0.00E+00	0.00E+00	1.66E-04
* SB124	Ci	0.00E+00	0.00E+00	1.18E-05	7.38E-03
* SB125	Ci	0.00E+00	0.00E+00	1.14E-03	1.65E-02
* TE123M	Ci	0.00E+00	0.00E+00	0.00E+00	2.49E-04
* CO57	Ci	0.00E+00	0.00E+00	7.60E-05	1.92E-04
* SB122	Ci	0.00E+00	0.00E+00	6.25E-06	0.00E+00
* CD109	Ci	0.00E+00	1.74E-03	0.00E+00	0.00E+00
* CO59	Ci	0.00E+00	0.00E+00	2.52E-05	0.00E+00
TOTAL FOR PERIOD (ABOVE)	Ci	8.55E-02	2.06E-02	1.74E+02	5.94E+02

EFFLUENT AND WASTE DISPOSAL 2002 ANNUAL REPORT
LIQUID EFFLUENTS -- SUMMATION OF ALL RELEASES

		CONTINUOUS MODE		BATCH MODE	
NUCLIDES RELEASED	UNITS	QUARTER 3	QUARTER 4	QUARTER 3	QUARTER 4
* XE133	Ci	0.00E+00	0.00E+00	8.23E-03	4.22E-02
* XE131M	Ci	0.00E+00	0.00E+00	0.00E+00	1.54E-03
* KR85	Ci	0.00E+00	0.00E+00	2.09E-02	2.33E-02

* DENOTES SUPPLEMENTAL ISOTOPES

ANNUAL

EFFLUENT AND WASTE DISPOSAL REPORT

D - SOLID WASTE

2002

ENTERGY NUCLEAR OPERATIONS, INC.
INDIAN POINT UNIT NOS. 1 & 2
DOCKET NOS. 50-03 & 50-247
MAY 2003

Solid Radwaste Disposal Report 2002. Solid Radwaste Shipped Offsite for Burial, Reprocessing, or Disposal (No irradiated fuel).

12 MONTH PERIOD

1. Type of Waste	Units	Class A	Class B	Class C	Error, %
a. Spent Resins,	m^3	0	0	0	+/- 25
sludges, etc.	Ci	0	0	0	+/- 25
b. DAW	m^3	1200	38.6	0	+/- 25
	Ci	6.75	14.7	0	+/- 25
c. Irradiated	m^3	0	0	3.4	+/- 25
components	Ci	0	0	26.4	+/- 25
control rods, etc.					

2. Measurement of major nuclide composition in percent (by type of waste)

DAW

Waste Class A

Nuclide	mCi	Percent
H-3	3.46E+00	0.051%
Mn-54	4.56E+00	0.068%
Fe-55	9.77E+02	14.483%
Co-57	3.56E-01	0.005%
Co-58	1.62E+02	2.402%
Co-60	2.68E+03	39.729%
Ni-59	2.16E+01	0.320%
Ni-63	1.37E+03	20.309%
Sr-90	9.01E+00	0.134%
Zr-95	2.17E-01	0.003%
Nb-95	9.01E-02	0.001%
Tc-99	2.27E+00	0.034%
Ag-110m	2.53E-02	0.000%
Sb-124	4.94E-01	0.007%
Sb-125	5.63E+00	0.083%
Cs-134	9.35E+00	0.139%
Cs-137	1.49E+03	22.088%
Ce-144	9.20E+00	0.136%
Pu-238	1.02E-02	0.000%

Pu-239	3.77E-03	0.000%
Pu-241	4.07E-01	0.006%
Am-241	4.02E-02	0.001%
Cm-242	4.68E-02	0.001%
Cm-243	7.16E-03	0.000%
Total	6.75E+03	

DAW
Waste Class B

Nuclide	mCi	Percent
H-3	3.72E+01	0.254%
Fe-55	9.43E+00	0.064%
Co-58	9.80E-01	0.007%
Co-60	4.08E+03	27.808%
Ni-63	6.61E+02	4.505%
Sr-90	3.09E+00	0.021%
Tc-99	8.13E+00	0.055%
Cs-134	9.21E-01	0.006%
Cs-137	9.87E+03	67.270%
Ce-144	1.44E+00	0.010%
Pu-238	4.89E-03	0.000%
Pu-239	3.72E-03	0.000%
Am-241	1.70E-02	0.000%
Cm-242	4.14E-03	0.000%
Cm-243	6.51E-02	0.000%
Total	1.47E+04	

Irradiated Components
Waste Class C

Nuclide	mCi	Percent
H-3	7.26E+00	0.03%
C-14	1.45E+00	0.01%
Mn-54	4.56E+01	0.17%
Fe-55	8.96E+03	33.95%
Fe-59	3.36E-02	0.00%
Co-58	7.05E+00	0.03%
Co-60	1.61E+04	61.01%
Ni-59	1.18E+01	0.04%
Ni-63	1.23E+03	4.66%
Sr-90	7.11E-03	0.00%
Nb-94	1.93E-01	0.00%
Tc-99	2.65E-01	0.00%

Sb-125	2.51E+00	0.01%
I-120	2.48E-05	0.00%
Cs-134	4.79E-01	0.00%
Cs-137	2.25E+01	0.09%
Ce-144	5.07E-01	0.00%
Pu-238	9.39E-06	0.00%
Pu-239	3.70E-06	0.00%
Pu-241	2.30E-04	0.00%
Am-241	4.17E-03	0.00%
Cm-242	1.00E-02	0.00%
Cm-244	4.27E-06	0.00%
Total	2.64E+04	

3. Solid Waste Disposition

Number Of Shipments	Mode of Transport	Destination
6	Hittman Transport	GTS Duratek Galaher Road
1	Hittman Transport	Barnwell Waste Management Facility
26	Hittman Transport	GTS Duratek Bear Creek
1	TAG Transport	GTS Duratek Bear Creek

4. Solid Waste Containers

a. 8-120 High Integrity Container - 120.3 cubic feet
b. 20' Sea Land - 1280 cubic feet
c. B-25 Steel Box - 96 cubic feet
d. 55 Gallon Drum - 7.5 cubic feet

During 2002 one (1) Type B container was used for the shipment of an 8-120 liner in an 8-120 B shipping cask. All other shipments were LSA.

No solidification agents or absorbents were used

Note: Waste characterization and classification is determined using the RADMAN software program.

ANNUAL

EFFLUENT AND WASTE DISPOSAL REPORT

E - RADIOLOGICAL IMPACT ON MAN

2002

ENTERGY NUCLEAR OPERATIONS, INC.
INDIAN POINT UNIT NOS. 1 & 2
DOCKET NOS. 50-03 & 50-247
MAY 2003

RADIOLOGICAL IMPACT EVALUATION

Doses from gaseous immersion, inhalation, ground deposition, and vegetation ingestion were evaluated for the nearest residence likely to be occupied in the critical sector for each pathway and were combined to provide a conservative determination of the maximum individual offsite radiation dose from these pathways. Calculations were performed for members of the public on site for this reporting period. To this end, it is assumed that members of the public on-site are exposed 2 hours per year. Based on an assumed on-site location most likely to be occupied, a gaseous effluent dispersion factor is obtained. The dose is then computed with consideration for the total effluents released, the on-site dispersion factor and the exposure time. Doses to such individuals were found to be significantly less than one percent of the maximum individual offsite dose. Doses were also evaluated for all sectors assuming an individual ingesting milk and meat from a cow located at 5.0 mile distance. In all cases these evaluations were performed using models from Regulatory Guide 1.109.

All releases were evaluated using actual meteorological conditions existing during the release period.

Integrated dose from the population within 50 miles of Indian Point from gaseous effluents were computed based on the most current population data (from the 1990 census).

Dose calculations for liquid pathways to individuals and populations are computed for a year. The MIDAS computer program that is utilized for these calculations incorporated the calculation model and parameters that are presented in Regulatory Guide 1.109.

The fish, invertebrate, algae, drinking, shoreline, swimming and boating pathways are calculated for the adult, teenager, child and infant. These calculations are performed for reasons such as estimating the population water consumption dose, the population recreation dose, and cost-benefit analysis.

NUREG-0017, "Calculation of Release of Radioactive Materials in Gaseous and Liquid Effluents from Pressurized Water Reactors", assumes an annual release of 8.0 Ci/yr of carbon-14. Therefore, to be consistent with NUREG-0017, a release of 7.3 curies of carbon-14 was assumed for the year, (adjusted for actual power operating capacity) in addition to the radioactive materials measured in Indian Point's gaseous effluents.

This impact evaluation demonstrates that the dose commitment to man from the operation of Indian Point Unit Nos. 1 and 2 is negligible, and is well below the levels set forth in 10 CFR 20, 10 CFR 50, and the Indian Point Unit Nos. 1 and 2 Technical Specifications.

Carbon 14 release concentration and resulting dose have been estimated using data generated at IP3 from August 1980 to June 1982 after a study conducted by the NY State Department of Health. These estimates are consistent with NUREG 0017, Rev. 1.

The maximum expected annual dose from Carbon 14 releases from IP1/2 has been calculated using the maximum dependable gross electrical capacity of Indian Point 2, which is 1000 MW(e) maintained for the entire year. The resultant worst case doses are based upon site specific assumptions of source term released for an entire year at 1000 MW(e) output, as outlined in the unit 3 ODCM.

The annual dose to the maximally exposed individual (child) from gaseous releases of Carbon-14 is 0.254 mRem to the critical organ (bone) and 0.0508 mRem to the total body. The annual dose to the maximally exposed individual (child) from liquid releases of Carbon-14 is 0.00583 mRem to the critical organ (bone) and 0.00117 mRem to the total body.

Doses to members of the public from airborne and liquid releases are minimal due to the relatively insignificant total duration of these individuals on site. Their doses can be calculated from standard ODCM methodology, with typical occupancy factors employed. These factors are determined by comparing the expected hours on site to 8760 hours (the number of hours in a year, used in calculations in the ODCM).

example 1: Several students visit the site for an 8-hour guided tour. Their occupancy factor is: 8 / 8760 or **.0009.**

example 2: A man drives his wife to work and drops her off at the security gate each morning, with a total stay-time on site for 2 minutes per day. His occupancy factor is calculated as follows: 2 min/60 min per hour =.0333 hr ; 0.0333 / 8760 = **3.8E-6**

These factors, when multiplied by doses calculated per the ODCM, demonstrate that dose to MEMBERS OF THE PUBLIC within the site boundary is negligible, despite a potential reduction in the atmospheric dispersion.

In compliance with 40CFR190, the following table indicates the measured direct shine dose component for Indian Point 2 property in 2002:

	Whole Body (mrem)	Max Organ (mrem)
40 CFR 190 limit	25	75
Airborne Effluents	.00455	.00455
Liquid Effluents	.0111	.0290
Radwaste Storage	< 4	< 4
Total for Indian Point Units 1 and 2	< 4.0	< 4.0

2002

INDIAN POINT UNITS 1 AND 2

RADIOLOGICAL IMPACT ON MAN*

(Reference Regulatory Guide 1.21, Page 12)

A. Maximum Individual Doses

(1) Pathways (Gaseous)	Total Body millirem	Skin millirem	Thyroid millirem	Bone millirem
a) Noble Gas Immersion	3.96E-2	1.93E-1	N/A	N/A
b) Inhalation	2.38E-3	N/A	5.17E-3	2.78E-5
c) Ground Deposition	1.65E-3	1.93E-3	1.65E-3	1.65E-3
d) Milk Ingestion	1.14E-4	N/A	5.88E-4	8.97E-5
e) Meat Ingestion	1.59E-5	N/A	1.66E-5	3.70E-6
f) Vegetable Ingestion	3.30E-4	N/A	7.19E-4	5.36E-4

g) Noble Gas Air Doses:

Beta 3.74E-01 mrad

Gamma 8.05E-02 mrad

(2) Pathways (Liquid)

Maximum Dose to Individuals 2002 millirem:

	BONE	LIVER	TOTAL BODY	THYROID	KIDNEY	LUNG	GI-LLI	SKIN
Shore Exposure								
ADULT	3.40E-04	3.40E-04	3.40E-04	3.40E-04	3.40E-04	3.40E-04	3.40E-04	4.00E-04
TEEN	4.70E-04	4.70E-04	4.70E-04	4.70E-04	4.70E-04	4.70E-04	4.70E-04	5.40E-04
CHILD	9.60E-05	9.60E-05	9.60E-05	9.60E-05	9.60E-05	9.60E-05	9.60E-05	1.13E-04
Fresh Water Sport Fish								
ADULT	1.75E-02	1.17E-02	8.30E-03	1.03E-03	4.10E-03	1.78E-03	1.34E-03	0.00E+00
TEEN	1.80E-02	1.21E-02	5.00E-03	8.78E-04	4.20E-03	1.84E-03	1.00E-03	0.00E+00
CHILD	2.30E-02	1.10E-02	2.58E-03	8.24E-04	3.60E-03	1.54E-03	5.60E-04	0.00E+00
Fresh Water Invertebrate								
ADULT	5.70E-03	3.40E-03	2.44E-03	1.64E-04	1.09E-03	5.60E-04	1.78E-03	0.00E+00
TEEN	5.60E-03	3.50E-03	1.57E-03	1.28E-04	1.09E-03	6.20E-04	1.23E-03	0.00E+00
CHILD	7.00E-03	3.20E-03	1.05E-03	1.26E-04	9.70E-04	5.30E-04	4.80E-04	0.00E+00
Total All Pathways								
ADULT	2.40E-02	1.51E-02	1.11E-02	1.53E-02	5.60E-03	2.63E-03	3.40E-03	4.00E-04
TEEN	2.40E-02	1.63E-02	7.10E-03	1.43E-03	5.80E-03	2.70E-03	2.70E-03	5.40E-04
CHILD	2.90E-02	1.44E-02	3.70E-03	1.04E-03	4.60E-03	1.14E-03	1.14E-03	1.13E-04

N/A = Not Applicable

* See analogous Entergy Effluent report for Indian Point Unit No. 3 to calculate a combined dose to the public.

2002

B. Population

(1) Pathways (Gaseous)

	Total Body (Man-rem)	Thyroid* (Man-rem)
a) Noble Gas Immersion	1.1E+01	1.1E+01
b) Inhalation	1.0E-01	2.0E-01
c) Ground Deposition	2.0E-02	2.0E-02
d) Totals	1.1E+01	1.1E+01

* The thyroid values consist of a sum of total body and thyroid.

(2) Pathways (Liquid) Liquid Population Dose 2002 Person-rem:

	Shore Exposure	Fresh Water Sport Fish Ingestion	Commercial Fish Ingestion	Fresh Water Invertebrate Ingestion
Bone	0.08	6.70E-02	1.10E-01	1.10E-02
Liver	0.08	4.20E-02	7.20E-02	6.20E-03
Total Body	0.08	2.50E-02	4.30E-02	3.80E-03
Thyroid	0.08	2.80E-03	4.70E-03	2.50E-04
Kidney	0.08	1.50E-02	2.50E-02	1.90E-03
Lung	0.08	6.20E-03	1.10E-02	1.00E-03
GI	0.08	4.10E-03	7.00E-03	2.70E-03
Skin	0.10	0	0	0

C. Average Dose to Individuals

(1) Pathways

a) Liquid-Total Body 9.68E-6 millirem

b) Gaseous-Total Body 7.10E-4 millirem

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JAN/FEB/MAR 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/ 1/ 1/ 0] TO [2002/ 3/31/23]

PASQUILL STABILITY: A

	WIND SPEED (MPH)							
WIND FROM	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	3.0	7.0	8.0	2.0	.0	.0	20.0
NNE	.0	6.0	11.0	3.0	.0	.0	.0	20.0
NE	.0	4.0	1.0	.0	.0	.0	.0	5.0
ENE	.0	1.0	.0	.0	.0	.0	.0	1.0
E	.0	1.0	.0	.0	.0	.0	.0	1.0
ESE	.0	.0	.0	.0	.0	.0	.0	.0
SE	.0	.0	.0	.0	.0	.0	.0	.0
SSE	.0	4.0	21.0	8.0	.0	.0	.0	33.0
S	.0	6.0	8.0	6.0	.0	.0	.0	20.0
SSW	.0	2.0	1.0	2.0	.0	.0	.0	5.0
SW	.0	3.0	2.0	5.0	.0	.0	.0	10.0
WSW	.0	1.0	4.0	3.0	.0	.0	.0	8.0
W	.0	1.0	12.0	2.0	.0	.0	.0	15.0
WNW	.0	1.0	22.0	8.0	.0	.0	.0	31.0
NW	.0	2.0	26.0	16.0	.0	.0	.0	44.0
NNW	.0	3.0	6.0	1.0	.0	.0	.0	10.0
TOTAL	.0	38.0	121.0	62.0	2.0	.0	.0	223.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 10.00
TEMPERATURE SENSOR SEPARATION (METERS) 50.90

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 10
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2150

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JAN/FEB/MAR 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/ 1/ 1/ 0] TO [2002/ 3/31/23]

PASQUILL STABILITY: B

WIND FROM	WIND SPEED (MPH) CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	.0	6.0	4.0	1.0	.0	.0	11.0
NNE	.0	.0	3.0	3.0	.0	.0	.0	6.0
NE	.0	1.0	.0	.0	.0	.0	.0	1.0
ENE	.0	.0	.0	.0	.0	.0	.0	.0
E	.0	.0	.0	.0	.0	.0	.0	.0
ESE	.0	2.0	.0	.0	.0	.0	.0	2.0
SE	.0	.0	.0	.0	.0	.0	.0	.0
SSE	.0	.0	7.0	3.0	.0	.0	.0	10.0
S	.0	2.0	8.0	8.0	.0	.0	.0	18.0
SSW	.0	10.0	2.0	3.0	.0	.0	.0	15.0
SW	.0	2.0	5.0	.0	.0	.0	.0	7.0
WSW	.0	.0	4.0	.0	.0	.0	.0	4.0
W	.0	.0	5.0	1.0	.0	.0	.0	6.0
WNW	.0	.0	7.0	.0	.0	.0	.0	7.0
NW	.0	2.0	8.0	7.0	.0	.0	.0	17.0
NNW	.0	.0	10.0	3.0	.0	.0	.0	13.0
TOTAL	.0	19.0	65.0	32.0	1.0	.0	.0	117.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE)	10.00
TEMPERATURE SENSOR SEPARATION (METERS)	50.90
MISSING OBS. DURING THIS PERIOD (ALL STABILITIES)	10
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES)	2150

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JAN/FEB/MAR 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/ 1/ 1/ 0] TO [2002/ 3/31/23]

PASQUILL STABILITY: C

	WIND SPEED (MPH)							
WIND FROM	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	1.0	11.0	2.0	.0	.0	.0	14.0
NNE	.0	.0	6.0	1.0	.0	.0	.0	7.0
NE	.0	.0	3.0	.0	.0	.0	.0	3.0
ENE	.0	.0	1.0	.0	.0	.0	.0	1.0
E	.0	.0	.0	.0	.0	.0	.0	.0
ESE	.0	.0	.0	.0	.0	.0	.0	.0
SE	.0	1.0	.0	.0	.0	.0	.0	1.0
SSE	.0	2.0	5.0	2.0	.0	.0	.0	9.0
S	.0	2.0	6.0	12.0	1.0	.0	.0	21.0
SSW	.0	1.0	6.0	1.0	.0	.0	.0	8.0
SW	.0	1.0	4.0	1.0	.0	.0	.0	6.0
WSW	.0	.0	3.0	.0	.0	.0	.0	3.0
W	.0	.0	9.0	2.0	.0	.0	.0	11.0
WNW	.0	.0	6.0	7.0	.0	.0	.0	13.0
NW	.0	1.0	8.0	3.0	.0	.0	.0	12.0
NNW	.0	1.0	7.0	1.0	.0	.0	.0	9.0
TOTAL	.0	10.0	75.0	32.0	1.0	.0	.0	118.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE)	10.00
TEMPERATURE SENSOR SEPARATION (METERS)	50.90
MISSING OBS. DURING THIS PERIOD (ALL STABILITIES)	10
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES)	2150

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JAN/FEB/MAR 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/ 1/ 1/ 0] TO [2002/ 3/31/23]

PASQUILL STABILITY: D

WIND FROM	WIND SPEED (MPH) CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	14.0	59.0	36.0	4.0	.0	.0	113.0
NNE	.0	11.0	51.0	23.0	.0	.0	.0	85.0
NE	.0	13.0	7.0	1.0	.0	.0	.0	21.0
ENE	.0	6.0	2.0	.0	.0	.0	.0	8.0
E	.0	10.0	2.0	.0	.0	.0	.0	12.0
ESE	.0	6.0	4.0	.0	.0	.0	.0	10.0
SE	.0	16.0	3.0	.0	.0	.0	.0	19.0
SSE	.0	20.0	32.0	12.0	.0	.0	.0	64.0
S	.0	28.0	57.0	21.0	2.0	.0	.0	108.0
SSW	.0	15.0	25.0	2.0	.0	.0	.0	42.0
SW	.0	11.0	16.0	2.0	.0	.0	.0	29.0
WSW	.0	10.0	18.0	3.0	.0	.0	.0	31.0
W	.0	5.0	51.0	11.0	.0	.0	.0	67.0
WNW	.0	6.0	64.0	35.0	2.0	.0	.0	107.0
NW	.0	5.0	82.0	43.0	1.0	.0	.0	131.0
NNW	.0	12.0	50.0	18.0	.0	.0	.0	80.0
TOTAL	.0	188.0	523.0	207.0	9.0	.0	.0	927.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 10.00
TEMPERATURE SENSOR SEPARATION (METERS) 50.90

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 10
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2150

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JAN/FEB/MAR 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/ 1/ 1/ 0] TO [2002/ 3/31/23]

PASQUILL STABILITY: E

	WIND SPEED (MPH)							
WIND FROM	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	18.0	9.0	.0	.0	.0	.0	27.0
NNE	.0	36.0	18.0	3.0	.0	.0	.0	57.0
NE	.0	16.0	15.0	.0	.0	.0	.0	31.0
ENE	.0	11.0	4.0	.0	.0	.0	.0	15.0
E	.0	13.0	1.0	.0	.0	.0	.0	14.0
ESE	.0	15.0	.0	.0	.0	.0	.0	15.0
SE	.0	19.0	.0	.0	.0	.0	.0	19.0
SSE	.0	21.0	6.0	1.0	.0	.0	.0	28.0
S	.0	46.0	71.0	9.0	1.0	.0	.0	127.0
SSW	.0	45.0	18.0	2.0	.0	.0	.0	65.0
SW	.0	30.0	10.0	.0	.0	.0	.0	40.0
WSW	.0	19.0	4.0	.0	.0	.0	.0	23.0
W	.0	22.0	11.0	.0	.0	.0	.0	33.0
WNW	.0	12.0	8.0	.0	2.0	.0	.0	22.0
NW	.0	15.0	13.0	.0	.0	.0	.0	28.0
NNW	.0	11.0	1.0	.0	.0	.0	.0	12.0
TOTAL	.0	349.0	189.0	15.0	3.0	.0	.0	556.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 10.00
TEMPERATURE SENSOR SEPARATION (METERS) 50.90

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 10
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2150

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JAN/FEB/MAR 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/ 1/ 1/ 0] TO [2002/ 3/31/23]

PASQUILL STABILITY: F

WIND FROM	WIND SPEED (MPH) CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	18.0	1.0	.0	.0	.0	.0	19.0
NNE	.0	28.0	10.0	.0	.0	.0	.0	38.0
NE	.0	11.0	11.0	.0	.0	.0	.0	22.0
ENE	.0	3.0	.0	.0	.0	.0	.0	3.0
E	.0	4.0	.0	.0	.0	.0	.0	4.0
ESE	.0	4.0	.0	.0	.0	.0	.0	4.0
SE	.0	4.0	.0	.0	.0	.0	.0	4.0
SSE	.0	4.0	1.0	.0	.0	.0	.0	5.0
S	.0	10.0	2.0	.0	.0	.0	.0	12.0
SSW	.0	18.0	.0	.0	.0	.0	.0	18.0
SW	.0	5.0	.0	.0	.0	.0	.0	5.0
WSW	.0	4.0	.0	.0	.0	.0	.0	4.0
W	.0	4.0	.0	.0	.0	.0	.0	4.0
WNW	.0	5.0	.0	.0	.0	.0	.0	5.0
NW	.0	2.0	.0	.0	.0	.0	.0	2.0
NNW	.0	10.0	.0	.0	.0	.0	.0	10.0
TOTAL	.0	134.0	25.0	.0	.0	.0	.0	159.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 10.00
TEMPERATURE SENSOR SEPARATION (METERS) 50.90

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 10
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2150

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JAN/FEB/MAR 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/ 1/ 1/ 0] TO [2002/ 3/31/23]

PASQUILL STABILITY: G

WIND FROM	WIND SPEED (MPH) CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	14.0	.0	.0	.0	.0	.0	14.0
NNE	.0	7.0	1.0	.0	.0	.0	.0	8.0
NE	.0	3.0	10.0	1.0	.0	.0	.0	14.0
ENE	.0	2.0	.0	.0	.0	.0	.0	2.0
E	.0	1.0	.0	.0	.0	.0	.0	1.0
ESE	.0	.0	.0	.0	.0	.0	.0	.0
SE	.0	.0	.0	.0	.0	.0	.0	.0
SSE	.0	1.0	.0	.0	.0	.0	.0	1.0
S	.0	2.0	.0	.0	.0	.0	.0	2.0
SSW	.0	.0	.0	.0	.0	.0	.0	.0
SW	.0	.0	.0	.0	.0	.0	.0	.0
WSW	.0	.0	.0	.0	.0	.0	.0	.0
W	.0	1.0	.0	.0	.0	.0	.0	1.0
WNW	.0	2.0	.0	.0	.0	.0	.0	2.0
NW	.0	2.0	.0	.0	.0	.0	.0	2.0
NNW	.0	3.0	.0	.0	.0	.0	.0	3.0
TOTAL	.0	38.0	11.0	1.0	.0	.0	.0	50.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 10.00
TEMPERATURE SENSOR SEPARATION (METERS) 50.90

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 10
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2150

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JAN/FEB/MAR 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/ 1/ 1/ 0] TO [2002/ 3/31/23]

PASQUILL STABILITY: ALL

WIND FROM	WIND SPEED (MPH) CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	68.0	93.0	50.0	7.0	.0	.0	218.0
NNE	.0	88.0	100.0	33.0	.0	.0	.0	221.0
NE	.0	48.0	47.0	2.0	.0	.0	.0	97.0
ENE	.0	23.0	7.0	.0	.0	.0	.0	30.0
E	.0	29.0	3.0	.0	.0	.0	.0	32.0
ESE	.0	27.0	4.0	.0	.0	.0	.0	31.0
SE	.0	40.0	3.0	.0	.0	.0	.0	43.0
SSE	.0	52.0	72.0	26.0	.0	.0	.0	150.0
S	.0	96.0	152.0	56.0	4.0	.0	.0	308.0
SSW	.0	91.0	52.0	10.0	.0	.0	.0	153.0
SW	.0	52.0	37.0	8.0	.0	.0	.0	97.0
WSW	.0	34.0	33.0	6.0	.0	.0	.0	73.0
W	.0	33.0	88.0	16.0	.0	.0	.0	137.0
WNW	.0	26.0	107.0	50.0	4.0	.0	.0	187.0
NW	.0	29.0	137.0	69.0	1.0	.0	.0	236.0
NNW	.0	40.0	74.0	23.0	.0	.0	.0	137.0
TOTAL	.0	776.0	1009.0	349.0	16.0	.0	.0	2150.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE)	10.00
TEMPERATURE SENSOR SEPARATION (METERS)	50.90
MISSING OBS. DURING THIS PERIOD (ALL STABILITIES)	10
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES)	2150

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JAN/FEB/MAR 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/ 1/ 1/ 0] TO [2002/ 3/31/23]

PASQUILL STABILITY: A

	WIND SPEED (MPH)							
WIND FROM	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	3.0	1.0	10.0	9.0	.0	5.0	28.0
NNE	.0	1.0	3.0	2.0	.0	.0	.0	6.0
NE	.0	.0	7.0	.0	.0	.0	.0	7.0
ENE	.0	1.0	5.0	.0	.0	.0	.0	6.0
E	.0	3.0	1.0	.0	.0	.0	.0	4.0
ESE	.0	.0	1.0	.0	.0	.0	.0	1.0
SE	.0	2.0	.0	.0	.0	.0	.0	2.0
SSE	.0	1.0	9.0	19.0	8.0	.0	.0	37.0
S	.0	.0	5.0	7.0	1.0	.0	.0	13.0
SSW	.0	2.0	1.0	.0	3.0	.0	.0	6.0
SW	.0	2.0	.0	1.0	.0	4.0	2.0	9.0
WSW	.0	2.0	.0	2.0	6.0	.0	.0	10.0
W	.0	1.0	1.0	7.0	1.0	1.0	.0	11.0
WNW	.0	.0	.0	9.0	17.0	3.0	1.0	30.0
NW	.0	1.0	1.0	5.0	26.0	13.0	1.0	47.0
NNW	.0	.0	.0	4.0	.0	1.0	1.0	6.0
TOTAL	.0	19.0	35.0	66.0	71.0	22.0	10.0	223.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 60.00
TEMPERATURE SENSOR SEPARATION (METERS) 50.90

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 10
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2150

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JAN/FEB/MAR 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/ 1/ 1/ 0] TO [2002/ 3/31/23]

PASQUILL STABILITY: B

	WIND SPEED (MPH)							
WIND FROM	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	.0	3.0	6.0	3.0	3.0	1.0	16.0
NNE	.0	.0	2.0	1.0	1.0	.0	.0	4.0
NE	.0	.0	.0	.0	.0	.0	.0	.0
ENE	.0	1.0	.0	.0	.0	.0	.0	1.0
E	.0	.0	.0	.0	.0	.0	.0	.0
ESE	.0	.0	.0	.0	.0	.0	.0	.0
SE	.0	.0	1.0	.0	.0	.0	.0	1.0
SSE	.0	2.0	5.0	6.0	3.0	.0	.0	16.0
S	.0	.0	7.0	4.0	.0	1.0	.0	12.0
SSW	.0	.0	5.0	3.0	7.0	.0	.0	15.0
SW	.0	.0	3.0	1.0	2.0	.0	.0	6.0
WSW	.0	1.0	3.0	2.0	.0	.0	.0	6.0
W	.0	.0	.0	4.0	1.0	.0	1.0	6.0
WNW	.0	.0	1.0	2.0	5.0	.0	.0	8.0
NW	.0	.0	1.0	.0	9.0	4.0	1.0	15.0
NNW	.0	1.0	2.0	3.0	4.0	1.0	.0	11.0
TOTAL	.0	5.0	33.0	32.0	35.0	9.0	3.0	117.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE)	60.00
TEMPERATURE SENSOR SEPARATION (METERS)	50.90
MISSING OBS. DURING THIS PERIOD (ALL STABILITIES)	10
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES)	2150

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JAN/FEB/MAR 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/ 1/ 1/ 0] TO [2002/ 3/31/23]

PASQUILL STABILITY: C

WIND FROM	WIND SPEED (MPH) CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	.0	7.0	6.0	5.0	.0	.0	18.0
NNE	.0	.0	1.0	3.0	.0	.0	.0	4.0
NE	.0	.0	2.0	.0	.0	.0	.0	2.0
ENE	.0	.0	1.0	.0	.0	.0	.0	1.0
E	.0	.0	1.0	.0	.0	.0	.0	1.0
ESE	.0	.0	.0	.0	.0	.0	.0	.0
SE	.0	.0	.0	.0	.0	.0	.0	.0
SSE	.0	.0	5.0	1.0	2.0	.0	.0	8.0
S	.0	2.0	5.0	5.0	6.0	2.0	.0	20.0
SSW	.0	.0	3.0	1.0	3.0	1.0	1.0	9.0
SW	.0	1.0	5.0	2.0	.0	.0	1.0	9.0
WSW	.0	.0	.0	1.0	1.0	.0	.0	2.0
W	.0	.0	2.0	3.0	3.0	.0	1.0	9.0
WNW	.0	.0	1.0	6.0	4.0	1.0	3.0	15.0
NW	.0	.0	.0	3.0	7.0	2.0	.0	12.0
NNW	.0	1.0	3.0	2.0	1.0	1.0	.0	8.0
TOTAL	.0	4.0	36.0	33.0	32.0	7.0	6.0	118.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 60.00
TEMPERATURE SENSOR SEPARATION (METERS) 50.90

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 10
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2150

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JAN/FEB/MAR 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/ 1/ 1/ 0] TO [2002/ 3/31/23]

PASQUILL STABILITY: D

	WIND SPEED (MPH)							
WIND FROM	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	2.0	18.0	35.0	39.0	20.0	10.0	124.0
NNE	.0	5.0	27.0	26.0	5.0	1.0	.0	64.0
NE	.0	3.0	11.0	2.0	.0	.0	.0	16.0
ENE	.0	5.0	7.0	.0	.0	.0	.0	12.0
E	.0	3.0	6.0	1.0	.0	.0	.0	10.0
ESE	.0	2.0	10.0	5.0	.0	.0	.0	17.0
SE	.0	5.0	13.0	9.0	.0	.0	.0	27.0
SSE	.0	4.0	18.0	27.0	14.0	4.0	.0	67.0
S	.0	8.0	35.0	28.0	6.0	3.0	.0	80.0
SSW	.0	5.0	21.0	12.0	16.0	3.0	.0	57.0
SW	.0	5.0	10.0	9.0	3.0	1.0	.0	28.0
WSW	.0	6.0	5.0	16.0	7.0	4.0	.0	38.0
W	.0	1.0	6.0	33.0	23.0	1.0	2.0	66.0
WNW	.0	1.0	6.0	22.0	47.0	17.0	6.0	99.0
NW	.0	1.0	9.0	43.0	61.0	21.0	14.0	149.0
NNW	.0	.0	13.0	29.0	14.0	10.0	7.0	73.0
TOTAL	.0	56.0	215.0	297.0	235.0	85.0	39.0	927.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 60.00
TEMPERATURE SENSOR SEPARATION (METERS) 50.90

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 10
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2150

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JAN/FEB/MAR 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/ 1/ 1/ 0] TO [2002/ 3/31/23]

PASQUILL STABILITY: E

WIND FROM	WIND SPEED (MPH) CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	5.0	8.0	14.0	2.0	.0	.0	29.0
NNE	.0	6.0	28.0	10.0	2.0	.0	.0	46.0
NE	.0	5.0	9.0	1.0	.0	.0	.0	15.0
ENE	.0	2.0	2.0	.0	.0	.0	.0	4.0
E	.0	2.0	5.0	.0	.0	.0	.0	7.0
ESE	.0	3.0	5.0	.0	.0	.0	.0	8.0
SE	.0	4.0	5.0	1.0	.0	.0	.0	10.0
SSE	.0	7.0	25.0	5.0	2.0	.0	.0	39.0
S	.0	8.0	35.0	31.0	7.0	1.0	1.0	83.0
SSW	.0	8.0	51.0	45.0	5.0	.0	.0	109.0
SW	.0	15.0	23.0	23.0	3.0	1.0	.0	65.0
WSW	.0	12.0	12.0	17.0	1.0	.0	.0	42.0
W	.0	11.0	12.0	7.0	1.0	.0	.0	31.0
WNW	.0	4.0	15.0	12.0	3.0	.0	2.0	36.0
NW	.0	1.0	6.0	11.0	5.0	2.0	.0	25.0
NNW	.0	1.0	2.0	4.0	.0	.0	.0	7.0
TOTAL	.0	94.0	243.0	181.0	31.0	4.0	3.0	556.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 60.00
TEMPERATURE SENSOR SEPARATION (METERS) 50.90

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 10
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2150

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JAN/FEB/MAR 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/ 1/ 1/ 0] TO [2002/ 3/31/23]

PASQUILL STABILITY: F

	WIND SPEED (MPH)							
WIND FROM	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	6.0	5.0	2.0	.0	.0	.0	13.0
NNE	.0	3.0	17.0	3.0	.0	.0	.0	23.0
NE	.0	2.0	5.0	.0	.0	.0	.0	7.0
ENE	.0	.0	1.0	.0	.0	.0	.0	1.0
E	.0	1.0	.0	.0	.0	.0	.0	1.0
ESE	.0	1.0	.0	.0	.0	.0	.0	1.0
SE	.0	2.0	.0	.0	.0	.0	.0	2.0
SSE	.0	5.0	3.0	.0	.0	.0	.0	8.0
S	.0	11.0	19.0	12.0	1.0	.0	.0	43.0
SSW	.0	6.0	9.0	3.0	1.0	.0	.0	19.0
SW	.0	6.0	5.0	1.0	.0	.0	.0	12.0
WSW	.0	3.0	3.0	2.0	1.0	.0	.0	9.0
W	.0	3.0	3.0	3.0	.0	.0	.0	9.0
WNW	.0	5.0	.0	.0	.0	.0	.0	5.0
NW	.0	2.0	1.0	.0	.0	.0	.0	3.0
NNW	.0	2.0	1.0	.0	.0	.0	.0	3.0
TOTAL	.0	58.0	72.0	26.0	3.0	.0	.0	159.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE)	60.00
TEMPERATURE SENSOR SEPARATION (METERS)	50.90
MISSING OBS. DURING THIS PERIOD (ALL STABILITIES)	10
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES)	2150

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JAN/FEB/MAR 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/ 1/ 1/ 0] TO [2002/ 3/31/23]

PASQUILL STABILITY: G

	WIND SPEED (MPH)							
WIND FROM	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	.0	.0	.0	.0	.0	.0	.0
NNE	.0	1.0	8.0	1.0	.0	.0	.0	10.0
NE	.0	4.0	2.0	.0	.0	.0	.0	6.0
ENE	.0	2.0	.0	.0	.0	.0	.0	2.0
E	.0	.0	.0	.0	.0	.0	.0	.0
ESE	.0	.0	.0	.0	.0	.0	.0	.0
SE	.0	1.0	.0	.0	.0	.0	.0	1.0
SSE	.0	2.0	1.0	.0	.0	.0	.0	3.0
S	.0	4.0	9.0	.0	.0	.0	.0	13.0
SSW	.0	2.0	4.0	.0	.0	.0	.0	6.0
SW	.0	2.0	.0	.0	.0	.0	.0	2.0
WSW	.0	2.0	2.0	.0	.0	.0	.0	4.0
W	.0	.0	.0	.0	.0	.0	.0	.0
WNW	.0	.0	1.0	1.0	.0	.0	.0	2.0
NW	.0	.0	1.0	.0	.0	.0	.0	1.0
NNW	.0	.0	.0	.0	.0	.0	.0	.0
TOTAL	.0	20.0	28.0	2.0	.0	.0	.0	50.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 60.00
TEMPERATURE SENSOR SEPARATION (METERS) 50.90

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 10
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2150

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JAN/FEB/MAR 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/ 1/ 1/ 0] TO [2002/ 3/31/23]

PASQUILL STABILITY: ALL

	WIND SPEED (MPH)							
WIND FROM	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	16.0	42.0	73.0	58.0	23.0	16.0	228.0
NNE	.0	16.0	86.0	46.0	8.0	1.0	.0	157.0
NE	.0	14.0	36.0	3.0	.0	.0	.0	53.0
ENE	.0	11.0	16.0	.0	.0	.0	.0	27.0
E	.0	9.0	13.0	1.0	.0	.0	.0	23.0
ESE	.0	6.0	16.0	5.0	.0	.0	.0	27.0
SE	.0	14.0	19.0	10.0	.0	.0	.0	43.0
SSE	.0	21.0	66.0	58.0	29.0	4.0	.0	178.0
S	.0	33.0	115.0	87.0	21.0	7.0	1.0	264.0
SSW	.0	23.0	94.0	64.0	35.0	4.0	1.0	221.0
SW	.0	31.0	46.0	37.0	8.0	6.0	3.0	131.0
WSW	.0	26.0	25.0	40.0	16.0	4.0	.0	111.0
W	.0	16.0	24.0	57.0	29.0	2.0	4.0	132.0
WNW	.0	10.0	24.0	52.0	76.0	21.0	12.0	195.0
NW	.0	5.0	19.0	62.0	108.0	42.0	16.0	252.0
NNW	.0	5.0	21.0	42.0	19.0	13.0	8.0	108.0
TOTAL	.0	256.0	662.0	637.0	407.0	127.0	61.0	2150.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 60.00
TEMPERATURE SENSOR SEPARATION (METERS) 50.90

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 10
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2150

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JAN/FEB/MAR 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/ 1/ 1/ 0] TO [2002/ 3/31/23]

PASQUILL STABILITY: A

	WIND SPEED (MPH)							
WIND FROM	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	.0	.0	.0	.0	.0	.0	.0
NNE	.0	.0	.0	.0	.0	.0	.0	.0
NE	.0	.0	.0	.0	.0	.0	.0	.0
ENE	.0	.0	.0	.0	.0	.0	.0	.0
E	.0	.0	.0	.0	.0	.0	.0	.0
ESE	.0	.0	.0	.0	.0	.0	.0	.0
SE	.0	.0	1.0	.0	5.0	.0	.0	6.0
SSE	.0	.0	.0	.0	.0	.0	.0	.0
S	.0	.0	.0	.0	.0	.0	.0	.0
SSW	.0	.0	.0	.0	.0	.0	1.0	1.0
SW	.0	.0	.0	.0	1.0	.0	.0	1.0
WSW	.0	.0	.0	.0	.0	.0	.0	.0
W	.0	.0	.0	.0	2.0	1.0	1.0	4.0
WNW	.0	.0	.0	.0	.0	1.0	.0	1.0
NW	.0	.0	.0	.0	.0	.0	1.0	1.0
NNW	.0	.0	.0	.0	.0	4.0	1.0	5.0
TOTAL	.0	.0	1.0	.0	8.0	6.0	4.0	19.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE)	122.00
TEMPERATURE SENSOR SEPARATION (METERS)	112.00
MISSING OBS. DURING THIS PERIOD (ALL STABILITIES)	10
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES)	2150

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JAN/FEB/MAR 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/ 1/ 1/ 0] TO [2002/ 3/31/23]

PASQUILL STABILITY: B

WIND FROM	WIND SPEED (MPH) CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	.0	.0	.0	.0	.0	.0	.0
NNE	.0	.0	.0	.0	.0	.0	.0	.0
NE	.0	.0	.0	.0	.0	.0	.0	.0
ENE	.0	.0	.0	.0	.0	.0	.0	.0
E	.0	.0	.0	.0	.0	.0	.0	.0
ESE	.0	.0	.0	.0	.0	.0	.0	.0
SE	.0	.0	2.0	3.0	3.0	1.0	.0	9.0
SSE	.0	.0	.0	1.0	.0	.0	.0	1.0
S	.0	.0	.0	.0	.0	.0	.0	.0
SSW	.0	.0	.0	.0	.0	2.0	2.0	4.0
SW	.0	.0	.0	.0	2.0	1.0	.0	3.0
WSW	.0	.0	.0	1.0	1.0	.0	.0	2.0
W	.0	.0	.0	1.0	8.0	4.0	.0	13.0
WNW	.0	.0	.0	.0	6.0	3.0	4.0	13.0
NW	.0	.0	.0	1.0	.0	1.0	1.0	3.0
NNW	.0	.0	.0	1.0	1.0	2.0	.0	4.0
TOTAL	.0	.0	2.0	8.0	21.0	14.0	7.0	52.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE)	122.00
TEMPERATURE SENSOR SEPARATION (METERS)	112.00
MISSING OBS. DURING THIS PERIOD (ALL STABILITIES)	10
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES)	2150

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JAN/FEB/MAR 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/ 1/ 1/ 0] TO [2002/ 3/31/23]

PASQUILL STABILITY: C

	WIND SPEED (MPH)							
WIND FROM	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	.0	.0	.0	.0	.0	.0	.0
NNE	.0	.0	.0	.0	.0	.0	.0	.0
NE	.0	.0	.0	.0	.0	.0	.0	.0
ENE	.0	.0	.0	.0	.0	.0	.0	.0
E	.0	.0	.0	.0	.0	.0	.0	.0
ESE	.0	.0	.0	.0	.0	.0	.0	.0
SE	.0	.0	5.0	5.0	3.0	.0	.0	13.0
SSE	.0	.0	.0	3.0	1.0	.0	.0	4.0
S	.0	.0	.0	1.0	6.0	2.0	.0	9.0
SSW	.0	.0	.0	1.0	1.0	.0	1.0	3.0
SW	.0	.0	.0	2.0	3.0	.0	.0	5.0
WSW	.0	.0	1.0	9.0	2.0	.0	1.0	13.0
W	.0	.0	.0	4.0	15.0	3.0	1.0	23.0
WNW	.0	.0	1.0	3.0	13.0	6.0	3.0	26.0
NW	.0	.0	.0	1.0	1.0	2.0	.0	4.0
NNW	.0	.0	1.0	5.0	2.0	3.0	1.0	12.0
TOTAL	.0	.0	8.0	34.0	47.0	16.0	7.0	112.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 122.00
TEMPERATURE SENSOR SEPARATION (METERS) 112.00

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 10
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2150

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JAN/FEB/MAR 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/ 1/ 1/ 0] TO [2002/ 3/31/23]

PASQUILL STABILITY: D

	WIND SPEED (MPH)							
WIND FROM	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	3.0	22.0	37.0	15.0	5.0	.0	82.0
NNE	.0	7.0	23.0	2.0	.0	.0	.0	32.0
NE	.0	4.0	14.0	3.0	.0	.0	.0	21.0
ENE	.0	3.0	8.0	6.0	1.0	.0	.0	18.0
E	.0	7.0	10.0	10.0	2.0	.0	.0	29.0
ESE	.0	7.0	11.0	14.0	3.0	.0	.0	35.0
SE	.0	5.0	26.0	28.0	23.0	3.0	.0	85.0
SSE	.0	4.0	36.0	36.0	16.0	7.0	.0	99.0
S	.0	4.0	15.0	20.0	30.0	10.0	2.0	81.0
SSW	.0	6.0	9.0	27.0	7.0	3.0	1.0	53.0
SW	.0	.0	13.0	23.0	13.0	2.0	2.0	53.0
WSW	.0	1.0	7.0	32.0	36.0	9.0	5.0	90.0
W	.0	1.0	6.0	30.0	62.0	44.0	15.0	158.0
WNW	.0	.0	12.0	40.0	82.0	32.0	28.0	194.0
NW	.0	3.0	24.0	23.0	26.0	5.0	6.0	87.0
NNW	.0	.0	15.0	37.0	49.0	17.0	22.0	140.0
TOTAL	.0	55.0	251.0	368.0	365.0	137.0	81.0	1257.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 122.00
TEMPERATURE SENSOR SEPARATION (METERS) 112.00

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 10
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2150

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JAN/FEB/MAR 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/ 1/ 1/ 0] TO [2002/ 3/31/23]

PASQUILL STABILITY: E

	WIND SPEED (MPH)							
WIND FROM	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	1.0	15.0	3.0	.0	.0	.0	19.0
NNE	.0	3.0	4.0	.0	.0	.0	.0	7.0
NE	.0	2.0	2.0	.0	.0	.0	.0	4.0
ENE	.0	1.0	2.0	3.0	.0	.0	.0	6.0
E	.0	2.0	4.0	.0	.0	.0	.0	6.0
ESE	.0	4.0	6.0	3.0	.0	.0	.0	13.0
SE	.0	8.0	41.0	20.0	6.0	3.0	2.0	80.0
SSE	.0	8.0	63.0	59.0	14.0	8.0	3.0	155.0
S	.0	6.0	31.0	38.0	15.0	.0	1.0	91.0
SSW	.0	8.0	18.0	23.0	8.0	.0	.0	57.0
SW	.0	7.0	12.0	17.0	9.0	1.0	.0	46.0
WSW	.0	2.0	7.0	5.0	3.0	.0	.0	17.0
W	.0	.0	11.0	11.0	4.0	.0	1.0	27.0
WNW	.0	1.0	4.0	3.0	.0	.0	.0	8.0
NW	.0	2.0	3.0	5.0	1.0	.0	.0	11.0
NNW	.0	1.0	10.0	16.0	7.0	.0	.0	34.0
TOTAL	.0	56.0	233.0	206.0	67.0	12.0	7.0	581.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 122.00
TEMPERATURE SENSOR SEPARATION (METERS) 112.00

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 10
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2150

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JAN/FEB/MAR 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/ 1/ 1/ 0] TO [2002/ 3/31/23]

PASQUILL STABILITY: F

WIND FROM	WIND SPEED (MPH) CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	1.0	4.0	1.0	.0	.0	.0	6.0
NNE	.0	4.0	4.0	.0	.0	.0	.0	8.0
NE	.0	4.0	3.0	1.0	.0	.0	.0	8.0
ENE	.0	3.0	.0	.0	.0	.0	.0	3.0
E	.0	2.0	.0	.0	.0	.0	.0	2.0
ESE	.0	3.0	.0	.0	.0	.0	.0	3.0
SE	.0	5.0	9.0	1.0	.0	.0	.0	15.0
SSE	.0	2.0	11.0	8.0	.0	.0	.0	21.0
S	.0	3.0	10.0	8.0	.0	.0	.0	21.0
SSW	.0	2.0	6.0	2.0	.0	.0	.0	10.0
SW	.0	3.0	3.0	.0	1.0	.0	.0	7.0
WSW	.0	4.0	2.0	.0	.0	.0	.0	6.0
W	.0	1.0	2.0	.0	1.0	.0	.0	4.0
WNW	.0	.0	3.0	3.0	.0	.0	.0	6.0
NW	.0	.0	.0	.0	1.0	.0	.0	1.0
NNW	.0	.0	2.0	2.0	.0	.0	.0	4.0
TOTAL	.0	37.0	59.0	26.0	3.0	.0	.0	125.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 122.00
TEMPERATURE SENSOR SEPARATION (METERS) 112.00

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 10
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2150

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JAN/FEB/MAR 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/ 1/ 1/ 0] TO [2002/ 3/31/23]

PASQUILL STABILITY: G

WIND FROM	WIND SPEED (MPH) CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	.0	.0	.0	.0	.0	.0	.0
NNE	.0	.0	.0	.0	.0	.0	.0	.0
NE	.0	.0	.0	.0	.0	.0	.0	.0
ENE	.0	.0	.0	.0	.0	.0	.0	.0
E	.0	.0	.0	.0	.0	.0	.0	.0
ESE	.0	1.0	.0	.0	.0	.0	.0	1.0
SE	.0	.0	.0	.0	.0	.0	.0	.0
SSE	.0	1.0	.0	.0	.0	.0	.0	1.0
S	.0	1.0	.0	.0	.0	.0	.0	1.0
SSW	.0	.0	.0	.0	.0	.0	.0	.0
SW	.0	.0	.0	.0	.0	.0	.0	.0
WSW	.0	1.0	.0	.0	.0	.0	.0	1.0
W	.0	.0	.0	.0	.0	.0	.0	.0
WNW	.0	.0	.0	.0	.0	.0	.0	.0
NW	.0	.0	.0	.0	.0	.0	.0	.0
NNW	.0	.0	.0	.0	.0	.0	.0	.0
TOTAL	.0	4.0	.0	.0	.0	.0	.0	4.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 122.00
TEMPERATURE SENSOR SEPARATION (METERS) 112.00

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 10
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2150

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JAN/FEB/MAR 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/ 1/ 1/ 0] TO [2002/ 3/31/23]

PASQUILL STABILITY: ALL

	WIND SPEED (MPH)							
WIND FROM	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	5.0	41.0	41.0	15.0	5.0	.0	107.0
NNE	.0	14.0	31.0	2.0	.0	.0	.0	47.0
NE	.0	10.0	19.0	4.0	.0	.0	.0	33.0
ENE	.0	7.0	10.0	9.0	1.0	.0	.0	27.0
E	.0	11.0	14.0	10.0	2.0	.0	.0	37.0
ESE	.0	15.0	17.0	17.0	3.0	.0	.0	52.0
SE	.0	18.0	84.0	57.0	40.0	7.0	2.0	208.0
SSE	.0	15.0	110.0	107.0	31.0	15.0	3.0	281.0
S	.0	14.0	56.0	67.0	51.0	12.0	3.0	203.0
SSW	.0	16.0	33.0	53.0	16.0	5.0	5.0	128.0
SW	.0	10.0	28.0	42.0	29.0	4.0	2.0	115.0
WSW	.0	8.0	17.0	47.0	42.0	9.0	6.0	129.0
W	.0	2.0	19.0	46.0	92.0	52.0	18.0	229.0
WNW	.0	1.0	20.0	49.0	101.0	42.0	35.0	248.0
NW	.0	5.0	27.0	30.0	29.0	8.0	8.0	107.0
NNW	.0	1.0	28.0	61.0	59.0	26.0	24.0	199.0
TOTAL	.0	152.0	554.0	642.0	511.0	185.0	106.0	2150.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 122.00
TEMPERATURE SENSOR SEPARATION (METERS) 112.00

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 10
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2150

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - APR/MAY/JUN 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/ 4/ 1/ 0] TO [2002/ 6/30/23]

PASQUILL STABILITY: A

WIND FROM	WIND SPEED (MPH) CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.5	3.0	28.0	4.0	.0	.0	.0	35.5
NNE	.2	1.0	5.0	4.0	.0	.0	.0	10.2
NE	.3	2.0	1.0	.0	.0	.0	.0	3.3
ENE	.2	1.0	.0	.0	.0	.0	.0	1.2
E	.0	.0	.0	.0	.0	.0	.0	.0
ESE	.0	.0	1.0	.0	.0	.0	.0	1.0
SE	.0	.0	1.0	.0	.0	.0	.0	1.0
SSE	.5	3.0	33.0	3.0	.0	.0	.0	39.5
S	.6	4.0	64.0	12.0	.0	.0	.0	80.6
SSW	.3	2.0	10.0	5.0	.0	.0	.0	17.3
SW	.2	1.0	9.0	4.0	.0	.0	.0	14.2
WSW	.0	.0	6.0	2.0	.0	.0	.0	8.0
W	.0	.0	8.0	1.0	.0	.0	.0	9.0
WNW	.2	1.0	17.0	18.0	.0	.0	.0	36.2
NW	.8	5.0	23.0	16.0	.0	.0	.0	44.8
NNW	.3	2.0	16.0	3.0	.0	.0	.0	21.3
TOTAL	4.0	25.0	222.0	72.0	.0	.0	.0	323.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 10.00
TEMPERATURE SENSOR SEPARATION (METERS) 50.90

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 131
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2053

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - APR/MAY/JUN 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/ 4/ 1/ 0] TO [2002/ 6/30/23]

PASQUILL STABILITY: B

	WIND SPEED (MPH)							
WIND FROM	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	1.0	9.0	3.0	.0	.0	.0	13.0
NNE	.0	.0	12.0	2.0	.0	.0	.0	14.0
NE	.0	.0	.0	.0	.0	.0	.0	.0
ENE	.0	.0	.0	.0	.0	.0	.0	.0
E	.0	1.0	.0	.0	.0	.0	.0	1.0
ESE	.0	.0	.0	.0	.0	.0	.0	.0
SE	.0	.0	.0	.0	.0	.0	.0	.0
SSE	.0	1.0	3.0	1.0	.0	.0	.0	5.0
S	.0	4.0	28.0	2.0	.0	.0	.0	34.0
SSW	.0	4.0	14.0	1.0	.0	.0	.0	19.0
SW	.0	1.0	5.0	3.0	.0	.0	.0	9.0
WSW	.0	.0	2.0	.0	.0	.0	.0	2.0
W	.0	.0	4.0	2.0	.0	.0	.0	6.0
WNW	.0	1.0	5.0	5.0	.0	.0	.0	11.0
NW	.0	.0	6.0	2.0	.0	.0	.0	8.0
NNW	.0	2.0	7.0	.0	.0	.0	.0	9.0
TOTAL	.0	15.0	95.0	21.0	.0	.0	.0	131.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 10.00
TEMPERATURE SENSOR SEPARATION (METERS) 50.90

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 131
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2053

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - APR/MAY/JUN 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/ 4/ 1/ 0] TO [2002/ 6/30/23]

PASQUILL STABILITY: C

WIND FROM	WIND SPEED (MPH) CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	2.0	13.0	2.0	.0	.0	.0	17.0
NNE	.0	1.0	11.0	3.0	.0	.0	.0	15.0
NE	.0	2.0	4.0	.0	.0	.0	.0	6.0
ENE	.0	1.0	.0	.0	.0	.0	.0	1.0
E	.0	1.0	.0	.0	.0	.0	.0	1.0
ESE	.0	.0	.0	.0	.0	.0	.0	.0
SE	.0	.0	.0	.0	.0	.0	.0	.0
SSE	.0	2.0	9.0	.0	.0	.0	.0	11.0
S	.0	6.0	24.0	.0	.0	.0	.0	30.0
SSW	.0	1.0	10.0	1.0	.0	.0	.0	12.0
SW	.0	1.0	3.0	1.0	.0	.0	.0	5.0
WSW	.0	2.0	3.0	1.0	.0	.0	.0	6.0
W	.0	1.0	3.0	2.0	.0	.0	.0	6.0
WNW	.0	1.0	3.0	1.0	.0	.0	.0	5.0
NW	.0	1.0	5.0	4.0	.0	.0	.0	10.0
NNW	.0	1.0	5.0	.0	.0	.0	.0	6.0
TOTAL	.0	23.0	93.0	15.0	.0	.0	.0	131.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 10.00
TEMPERATURE SENSOR SEPARATION (METERS) 50.90

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 131
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2053

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - APR/MAY/JUN 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/ 4/ 1/ 0] TO [2002/ 6/30/23]

PASQUILL STABILITY: D

WIND FROM	WIND SPEED (MPH) CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	10.0	57.0	6.0	1.0	.0	.0	74.0
NNE	.0	24.0	70.0	31.0	1.0	.0	.0	126.0
NE	.0	21.0	15.0	.0	.0	.0	.0	36.0
ENE	.0	23.0	6.0	.0	.0	.0	.0	29.0
E	.0	27.0	1.0	.0	.0	.0	.0	28.0
ESE	.0	20.0	.0	.0	.0	.0	.0	20.0
SE	.0	17.0	2.0	.0	.0	.0	.0	19.0
SSE	.0	33.0	38.0	5.0	.0	.0	.0	76.0
S	.0	16.0	75.0	10.0	.0	.0	.0	101.0
SSW	.0	20.0	17.0	13.0	.0	.0	.0	50.0
SW	.0	13.0	12.0	1.0	.0	.0	.0	26.0
WSW	.0	6.0	8.0	.0	.0	.0	.0	14.0
W	.0	4.0	15.0	1.0	.0	.0	.0	20.0
WNW	.0	3.0	21.0	2.0	.0	.0	.0	26.0
NW	.0	4.0	41.0	6.0	.0	.0	.0	51.0
NNW	.0	10.0	56.0	14.0	.0	.0	.0	80.0
TOTAL	.0	251.0	434.0	89.0	2.0	.0	.0	776.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 10.00
TEMPERATURE SENSOR SEPARATION (METERS) 50.90

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 131
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2053

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - APR/MAY/JUN 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/ 4/ 1/ 0] TO [2002/ 6/30/23]

PASQUILL STABILITY: E

	WIND SPEED (MPH)							
WIND FROM	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.1	20.0	7.0	.0	.0	.0	.0	27.1
NNE	.1	29.0	40.0	.0	.0	.0	.0	69.1
NE	.1	21.0	19.0	.0	.0	.0	.0	40.1
ENE	.1	17.0	3.0	.0	.0	.0	.0	20.1
E	.0	11.0	3.0	.0	.0	.0	.0	14.0
ESE	.0	15.0	.0	.0	.0	.0	.0	15.0
SE	.1	17.0	.0	.0	.0	.0	.0	17.1
SSE	.1	44.0	21.0	1.0	.0	.0	.0	66.1
S	.2	55.0	47.0	2.0	.0	.0	.0	104.2
SSW	.1	25.0	20.0	1.0	.0	.0	.0	46.1
SW	.1	16.0	1.0	.0	.0	.0	.0	17.1
WSW	.1	18.0	6.0	.0	.0	.0	.0	24.1
W	.0	5.0	11.0	.0	.0	.0	.0	16.0
WNW	.0	6.0	6.0	.0	.0	.0	.0	12.0
NW	.0	9.0	5.0	.0	.0	.0	.0	14.0
NNW	.0	10.0	4.0	.0	.0	.0	.0	14.0
TOTAL	1.0	318.0	193.0	4.0	.0	.0	.0	516.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 10.00
TEMPERATURE SENSOR SEPARATION (METERS) 50.90

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 131
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2053

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - APR/MAY/JUN 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/ 4/ 1/ 0] TO [2002/ 6/30/23]

PASQUILL STABILITY: F

WIND FROM	WIND SPEED (MPH) CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	24.0	.0	.0	.0	.0	.0	24.0
NNE	.0	10.0	12.0	.0	.0	.0	.0	22.0
NE	.0	10.0	9.0	.0	.0	.0	.0	19.0
ENE	.0	6.0	2.0	.0	.0	.0	.0	8.0
E	.0	7.0	.0	.0	.0	.0	.0	7.0
ESE	.0	1.0	.0	.0	.0	.0	.0	1.0
SE	.0	4.0	.0	.0	.0	.0	.0	4.0
SSE	.0	11.0	.0	.0	.0	.0	.0	11.0
S	.0	7.0	2.0	.0	.0	.0	.0	9.0
SSW	.0	10.0	1.0	.0	.0	.0	.0	11.0
SW	.0	4.0	.0	.0	.0	.0	.0	4.0
WSW	.0	9.0	.0	.0	.0	.0	.0	9.0
W	.0	1.0	.0	.0	.0	.0	.0	1.0
WNW	.0	2.0	.0	.0	.0	.0	.0	2.0
NW	.0	2.0	.0	.0	.0	.0	.0	2.0
NNW	.0	6.0	1.0	.0	.0	.0	.0	7.0
TOTAL	.0	114.0	27.0	.0	.0	.0	.0	141.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE)	10.00
TEMPERATURE SENSOR SEPARATION (METERS)	50.90
MISSING OBS. DURING THIS PERIOD (ALL STABILITIES)	131
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES)	2053

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - APR/MAY/JUN 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/ 4/ 1/ 0] TO [2002/ 6/30/23]

PASQUILL STABILITY: G

	WIND SPEED (MPH)							
WIND FROM	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	8.0	2.0	.0	.0	.0	.0	10.0
NNE	.0	7.0	.0	.0	.0	.0	.0	7.0
NE	.0	3.0	.0	.0	.0	.0	.0	3.0
ENE	.0	4.0	.0	.0	.0	.0	.0	4.0
E	.0	2.0	.0	.0	.0	.0	.0	2.0
ESE	.0	1.0	.0	.0	.0	.0	.0	1.0
SE	.0	2.0	.0	.0	.0	.0	.0	2.0
SSE	.0	.0	.0	.0	.0	.0	.0	.0
S	.0	.0	.0	.0	.0	.0	.0	.0
SSW	.0	.0	.0	.0	.0	.0	.0	.0
SW	.0	1.0	.0	.0	.0	.0	.0	1.0
WSW	.0	.0	.0	.0	.0	.0	.0	.0
W	.0	.0	.0	.0	.0	.0	.0	.0
WNW	.0	.0	.0	.0	.0	.0	.0	.0
NW	.0	2.0	.0	.0	.0	.0	.0	2.0
NNW	.0	3.0	.0	.0	.0	.0	.0	3.0
TOTAL	.0	33.0	2.0	.0	.0	.0	.0	35.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 10.00
TEMPERATURE SENSOR SEPARATION (METERS) 50.90

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 131
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2053

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - APR/MAY/JUN 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/ 4/ 1/ 0] TO [2002/ 6/30/23]

PASQUILL STABILITY: ALL

	WIND SPEED (MPH)							
WIND FROM	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.5	68.0	116.0	15.0	1.0	.0	.0	200.5
NNE	.3	72.0	150.0	40.0	1.0	.0	.0	263.3
NE	.4	59.0	48.0	.0	.0	.0	.0	107.4
ENE	.2	52.0	11.0	.0	.0	.0	.0	63.2
E	.0	49.0	4.0	.0	.0	.0	.0	53.0
ESE	.0	37.0	1.0	.0	.0	.0	.0	38.0
SE	.1	40.0	3.0	.0	.0	.0	.0	43.1
SSE	.6	94.0	104.0	10.0	.0	.0	.0	208.6
S	.8	92.0	240.0	26.0	.0	.0	.0	358.8
SSW	.4	62.0	72.0	21.0	.0	.0	.0	155.4
SW	.2	37.0	30.0	9.0	.0	.0	.0	76.2
WSW	.1	35.0	25.0	3.0	.0	.0	.0	63.1
W	.0	11.0	41.0	6.0	.0	.0	.0	58.0
WNW	.2	14.0	52.0	26.0	.0	.0	.0	92.2
NW	.8	23.0	80.0	28.0	.0	.0	.0	131.8
NNW	.4	34.0	89.0	17.0	.0	.0	.0	140.4
TOTAL	5.0	779.0	1066.0	201.0	2.0	.0	.0	2053.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 10.00
TEMPERATURE SENSOR SEPARATION (METERS) 50.90

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 131
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2053

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - APR/MAY/JUN 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/ 4/ 1/ 0] TO [2002/ 6/30/23]

PASQUILL STABILITY: A

	WIND SPEED (MPH)							
WIND FROM	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	1.0	3.0	14.0	14.0	1.0	.0	33.0
NNE	.0	1.0	1.0	1.0	1.0	.0	.0	4.0
NE	.0	2.0	1.0	1.0	.0	.0	.0	4.0
ENE	.0	.0	.0	.0	.0	.0	.0	.0
E	.0	.0	.0	.0	.0	.0	.0	.0
ESE	.0	.0	.0	1.0	.0	.0	.0	1.0
SE	.0	.0	.0	2.0	.0	.0	.0	2.0
SSE	.0	1.0	34.0	53.0	4.0	.0	.0	92.0
S	.0	.0	16.0	13.0	7.0	.0	.0	36.0
SSW	.0	.0	3.0	2.0	2.0	2.0	.0	9.0
SW	.0	.0	3.0	2.0	3.0	5.0	1.0	14.0
WSW	.0	.0	3.0	5.0	2.0	1.0	.0	11.0
W	.0	.0	.0	9.0	4.0	.0	.0	13.0
WNW	.0	.0	.0	11.0	11.0	4.0	7.0	33.0
NW	.0	1.0	1.0	13.0	24.0	14.0	9.0	62.0
NNW	.0	1.0	2.0	12.0	10.0	1.0	.0	26.0
TOTAL	.0	7.0	67.0	139.0	82.0	28.0	17.0	340.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 60.00
TEMPERATURE SENSOR SEPARATION (METERS) 50.90

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 9
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2175

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - APR/MAY/JUN 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/ 4/ 1/ 0] TO [2002/ 6/30/23]

PASQUILL STABILITY: B

	WIND SPEED (MPH)							
WIND FROM	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	.0	4.0	8.0	4.0	.0	1.0	17.0
NNE	.0	.0	3.0	6.0	.0	.0	.0	9.0
NE	.0	.0	.0	1.0	.0	.0	.0	1.0
ENE	.0	.0	.0	.0	.0	.0	.0	.0
E	.0	.0	.0	.0	.0	.0	.0	.0
ESE	.0	.0	.0	.0	.0	.0	.0	.0
SE	.0	.0	.0	.0	.0	.0	.0	.0
SSE	.0	2.0	13.0	5.0	2.0	.0	.0	22.0
S	.0	1.0	25.0	2.0	.0	.0	.0	28.0
SSW	.0	.0	10.0	1.0	3.0	2.0	.0	16.0
SW	.0	.0	3.0	2.0	1.0	.0	1.0	7.0
WSW	.0	.0	2.0	.0	1.0	1.0	.0	4.0
W	.0	.0	1.0	1.0	2.0	1.0	.0	5.0
WNW	.0	.0	3.0	1.0	1.0	4.0	1.0	10.0
NW	.0	.0	2.0	3.0	6.0	2.0	2.0	15.0
NNW	.0	1.0	2.0	4.0	1.0	.0	.0	8.0
TOTAL	.0	4.0	68.0	34.0	21.0	10.0	5.0	142.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 60.00
TEMPERATURE SENSOR SEPARATION (METERS) 50.90

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 9
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2175

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - APR/MAY/JUN 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/ 4/ 1/ 0] TO [2002/ 6/30/23]

PASQUILL STABILITY: C

	WIND SPEED (MPH)							
WIND FROM	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	.0	5.0	7.0	3.0	.0	1.0	16.0
NNE	.0	1.0	4.0	10.0	.0	.0	.0	15.0
NE	.0	.0	3.0	1.0	.0	.0	.0	4.0
ENE	.0	.0	1.0	.0	.0	.0	.0	1.0
E	.0	.0	.0	.0	.0	.0	.0	.0
ESE	.0	.0	1.0	.0	.0	.0	.0	1.0
SE	.0	.0	.0	.0	.0	.0	.0	.0
SSE	.0	1.0	10.0	9.0	3.0	.0	.0	23.0
S	.0	3.0	20.0	7.0	.0	.0	.0	30.0
SSW	.0	.0	5.0	1.0	1.0	1.0	.0	8.0
SW	.0	.0	1.0	1.0	.0	1.0	.0	3.0
WSW	.0	.0	3.0	2.0	.0	1.0	.0	6.0
W	.0	.0	2.0	4.0	1.0	1.0	.0	8.0
WNW	.0	1.0	3.0	1.0	1.0	2.0	.0	8.0
NW	.0	.0	1.0	3.0	4.0	3.0	.0	11.0
NNW	.0	.0	4.0	4.0	1.0	.0	.0	9.0
TOTAL	.0	6.0	63.0	50.0	14.0	9.0	1.0	143.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 60.00
TEMPERATURE SENSOR SEPARATION (METERS) 50.90

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 9
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2175

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - APR/MAY/JUN 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/ 4/ 1/ 0] TO [2002/ 6/30/23]

PASQUILL STABILITY: D

WIND FROM	WIND SPEED (MPH) CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	3.0	14.0	31.0	34.0	2.0	3.0	87.0
NNE	.0	3.0	34.0	22.0	7.0	1.0	.0	67.0
NE	.0	5.0	24.0	6.0	.0	.0	.0	35.0
ENE	.0	5.0	23.0	6.0	.0	.0	.0	34.0
E	.0	6.0	19.0	6.0	.0	.0	.0	31.0
ESE	.0	5.0	17.0	.0	.0	.0	.0	22.0
SE	.0	6.0	26.0	.0	.0	.0	.0	32.0
SSE	.0	9.0	32.0	58.0	26.0	.0	.0	125.0
S	.0	11.0	39.0	22.0	8.0	1.0	.0	81.0
SSW	.0	6.0	9.0	7.0	10.0	1.0	.0	33.0
SW	.0	4.0	5.0	6.0	10.0	2.0	.0	27.0
WSW	.0	1.0	2.0	3.0	7.0	.0	.0	13.0
W	.0	1.0	3.0	7.0	8.0	2.0	.0	21.0
WNW	.0	.0	2.0	3.0	17.0	5.0	.0	27.0
NW	.0	.0	3.0	14.0	52.0	7.0	2.0	78.0
NNW	.0	4.0	6.0	32.0	43.0	16.0	1.0	102.0
TOTAL	.0	69.0	258.0	223.0	222.0	37.0	6.0	815.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 60.00
TEMPERATURE SENSOR SEPARATION (METERS) 50.90

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 9
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2175

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - APR/MAY/JUN 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/ 4/ 1/ 0] TO [2002/ 6/30/23]

PASQUILL STABILITY: E

	WIND SPEED (MPH)							
WIND FROM	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	4.0	15.0	8.0	.0	.0	.0	27.0
NNE	.0	11.0	47.0	27.0	.0	.0	.0	85.0
NE	.0	4.0	12.0	1.0	.0	.0	.0	17.0
ENE	.0	3.0	8.0	1.0	.0	.0	.0	12.0
E	.0	6.0	4.0	.0	.0	.0	.0	10.0
ESE	.0	5.0	4.0	.0	.0	.0	.0	9.0
SE	.0	6.0	10.0	1.0	.0	.0	.0	17.0
SSE	.0	10.0	37.0	49.0	2.0	.0	.0	98.0
S	.0	9.0	41.0	29.0	5.0	1.0	.0	85.0
SSW	.0	11.0	27.0	18.0	3.0	.0	.0	59.0
SW	.0	5.0	7.0	11.0	4.0	.0	.0	27.0
WSW	.0	5.0	2.0	3.0	.0	1.0	.0	11.0
W	.0	4.0	3.0	10.0	3.0	.0	.0	20.0
WNW	.0	2.0	5.0	14.0	6.0	.0	.0	27.0
NW	.0	2.0	5.0	10.0	11.0	.0	1.0	29.0
NNW	.0	3.0	5.0	2.0	2.0	.0	.0	12.0
TOTAL	.0	90.0	232.0	184.0	36.0	2.0	1.0	545.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 60.00
TEMPERATURE SENSOR SEPARATION (METERS) 50.90

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 9
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2175

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - APR/MAY/JUN 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/ 4/ 1/ 0] TO [2002/ 6/30/23]

PASQUILL STABILITY: F

	WIND SPEED (MPH)							
WIND FROM	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	7.0	12.0	5.0	1.0	.0	.0	25.0
NNE	.0	6.0	16.0	6.0	.0	.0	.0	28.0
NE	.0	4.0	3.0	.0	.0	.0	.0	7.0
ENE	.0	.0	1.0	.0	.0	.0	.0	1.0
E	.0	1.0	.0	.0	.0	.0	.0	1.0
ESE	.0	1.0	1.0	.0	.0	.0	.0	2.0
SE	.0	2.0	1.0	.0	.0	.0	.0	3.0
SSE	.0	1.0	6.0	1.0	.0	.0	.0	8.0
S	.0	3.0	8.0	4.0	.0	.0	.0	15.0
SSW	.0	1.0	8.0	3.0	.0	.0	.0	12.0
SW	.0	4.0	5.0	5.0	.0	.0	.0	14.0
WSW	.0	2.0	2.0	1.0	.0	.0	.0	5.0
W	.0	4.0	1.0	2.0	1.0	.0	.0	8.0
WNW	.0	6.0	1.0	7.0	.0	.0	.0	14.0
NW	.0	.0	1.0	2.0	.0	.0	.0	3.0
NNW	.0	3.0	.0	.0	.0	.0	.0	3.0
TOTAL	.0	45.0	66.0	36.0	2.0	.0	.0	149.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 60.00
TEMPERATURE SENSOR SEPARATION (METERS) 50.90

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 9
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2175

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - APR/MAY/JUN 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/ 4/ 1/ 0] TO [2002/ 6/30/23]

PASQUILL STABILITY: G

WIND FROM	WIND SPEED (MPH) CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	2.0	3.0	.0	.0	.0	.0	5.0
NNE	.0	2.0	4.0	.0	.0	.0	.0	6.0
NE	.0	2.0	.0	.0	.0	.0	.0	2.0
ENE	.0	1.0	.0	.0	.0	.0	.0	1.0
E	.0	.0	.0	.0	.0	.0	.0	.0
ESE	.0	1.0	.0	.0	.0	.0	.0	1.0
SE	.0	3.0	.0	.0	.0	.0	.0	3.0
SSE	.0	4.0	2.0	.0	.0	.0	.0	6.0
S	.0	.0	1.0	.0	.0	.0	.0	1.0
SSW	.0	2.0	.0	.0	.0	.0	.0	2.0
SW	.0	3.0	.0	1.0	.0	.0	.0	4.0
WSW	.0	2.0	.0	.0	.0	.0	.0	2.0
W	.0	.0	2.0	.0	.0	.0	.0	2.0
WNW	.0	.0	.0	.0	.0	.0	.0	.0
NW	.0	2.0	.0	1.0	.0	.0	.0	3.0
NNW	.0	2.0	.0	1.0	.0	.0	.0	3.0
TOTAL	.0	26.0	12.0	3.0	.0	.0	.0	41.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 60.00
TEMPERATURE SENSOR SEPARATION (METERS) 50.90

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 9
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2175

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - APR/MAY/JUN 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/ 4/ 1/ 0] TO [2002/ 6/30/23]

PASQUILL STABILITY: ALL

WIND FROM	WIND SPEED (MPH) CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	17.0	56.0	73.0	56.0	3.0	5.0	210.0
NNE	.0	24.0	109.0	72.0	8.0	1.0	.0	214.0
NE	.0	17.0	43.0	10.0	.0	.0	.0	70.0
ENE	.0	9.0	33.0	7.0	.0	.0	.0	49.0
E	.0	13.0	23.0	6.0	.0	.0	.0	42.0
ESE	.0	12.0	23.0	1.0	.0	.0	.0	36.0
SE	.0	17.0	37.0	3.0	.0	.0	.0	57.0
SSE	.0	28.0	134.0	175.0	37.0	.0	.0	374.0
S	.0	27.0	150.0	77.0	20.0	2.0	.0	276.0
SSW	.0	20.0	62.0	32.0	19.0	6.0	.0	139.0
SW	.0	16.0	24.0	28.0	18.0	8.0	2.0	96.0
WSW	.0	10.0	14.0	14.0	10.0	4.0	.0	52.0
W	.0	9.0	12.0	33.0	19.0	4.0	.0	77.0
WNW	.0	9.0	14.0	37.0	36.0	15.0	8.0	119.0
NW	.0	5.0	13.0	46.0	97.0	26.0	14.0	201.0
NNW	.0	14.0	19.0	55.0	57.0	17.0	1.0	163.0
TOTAL	.0	247.0	766.0	669.0	377.0	86.0	30.0	2175.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 60.00
TEMPERATURE SENSOR SEPARATION (METERS) 50.90

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 9
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2175

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - APR/MAY/JUN 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/ 4/ 1/ 0] TO [2002/ 6/30/23]

PASQUILL STABILITY: A

	WIND SPEED (MPH)							
WIND FROM	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	.0	.0	.0	.0	.0	.0	.0
NNE	.0	.0	.0	.0	.0	.0	.0	.0
NE	.0	.0	.0	.0	.0	.0	.0	.0
ENE	.0	.0	.0	.0	.0	.0	.0	.0
E	.0	.0	.0	.0	.0	.0	.0	.0
ESE	.0	.0	.0	2.0	1.0	.0	.0	3.0
SE	.0	.0	.0	4.0	3.0	.0	.0	7.0
SSE	.0	.0	.0	.0	.0	.0	.0	.0
S	.0	.0	1.0	.0	.0	.0	.0	1.0
SSW	.0	.0	.0	.0	.0	.0	.0	.0
SW	.0	.0	.0	.0	.0	.0	.0	.0
WSW	.0	.0	.0	1.0	1.0	.0	.0	2.0
W	.0	.0	.0	1.0	6.0	3.0	.0	10.0
WNW	.0	.0	.0	1.0	3.0	1.0	.0	5.0
NW	.0	.0	.0	1.0	.0	.0	.0	1.0
NNW	.0	.0	.0	.0	.0	.0	.0	.0
TOTAL	.0	.0	1.0	10.0	14.0	4.0	.0	29.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 122.00
TEMPERATURE SENSOR SEPARATION (METERS) 112.00

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 9
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2175

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - APR/MAY/JUN 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/ 4/ 1/ 0] TO [2002/ 6/30/23]

PASQUILL STABILITY: B

WIND FROM	WIND SPEED (MPH) CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	.0	.0	1.0	2.0	.0	.0	3.0
NNE	.0	.0	.0	.0	.0	.0	.0	.0
NE	.0	.0	.0	.0	.0	.0	.0	.0
ENE	.0	.0	.0	.0	.0	.0	.0	.0
E	.0	.0	.0	.0	.0	.0	.0	.0
ESE	.0	.0	.0	.0	.0	.0	.0	.0
SE	.0	.0	7.0	20.0	4.0	1.0	.0	32.0
SSE	.0	.0	1.0	2.0	3.0	1.0	.0	7.0
S	.0	.0	1.0	.0	.0	2.0	.0	3.0
SSW	.0	.0	.0	.0	.0	.0	.0	.0
SW	.0	.0	.0	1.0	2.0	1.0	.0	4.0
WSW	.0	.0	.0	1.0	4.0	.0	.0	5.0
W	.0	.0	.0	2.0	5.0	4.0	9.0	20.0
WNW	.0	.0	.0	4.0	7.0	4.0	8.0	23.0
NW	.0	.0	.0	5.0	5.0	.0	.0	10.0
NNW	.0	.0	.0	2.0	7.0	.0	.0	9.0
TOTAL	.0	.0	9.0	38.0	39.0	13.0	17.0	116.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 122.00
TEMPERATURE SENSOR SEPARATION (METERS) 112.00

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 9
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2175

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - APR/MAY/JUN 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/ 4/ 1/ 0] TO [2002/ 6/30/23]

PASQUILL STABILITY: C

WIND FROM	WIND SPEED (MPH) CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	.0	.0	10.0	1.0	.0	.0	11.0
NNE	.0	.0	.0	1.0	1.0	.0	.0	2.0
NE	.0	1.0	.0	.0	.0	.0	.0	1.0
ENE	.0	.0	.0	.0	.0	.0	.0	.0
E	.0	.0	1.0	1.0	.0	.0	.0	2.0
ESE	.0	.0	.0	.0	.0	.0	.0	.0
SE	.0	.0	18.0	15.0	5.0	1.0	.0	39.0
SSE	.0	.0	6.0	1.0	3.0	.0	.0	10.0
S	.0	.0	2.0	1.0	3.0	2.0	.0	8.0
SSW	.0	.0	.0	2.0	3.0	4.0	3.0	12.0
SW	.0	.0	3.0	2.0	3.0	.0	.0	8.0
WSW	.0	.0	.0	4.0	2.0	2.0	.0	8.0
W	.0	.0	1.0	3.0	3.0	4.0	4.0	15.0
WNW	.0	.0	1.0	4.0	11.0	8.0	4.0	28.0
NW	.0	.0	1.0	4.0	10.0	2.0	.0	17.0
NNW	.0	.0	2.0	12.0	11.0	1.0	2.0	28.0
TOTAL	.0	1.0	35.0	60.0	56.0	24.0	13.0	189.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 122.00
TEMPERATURE SENSOR SEPARATION (METERS) 112.00

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 9
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2175

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - APR/MAY/JUN 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/ 4/ 1/ 0] TO [2002/ 6/30/23]

PASQUILL STABILITY: D

WIND FROM	WIND SPEED (MPH) CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	6.0	22.0	39.0	12.0	3.0	.0	82.0
NNE	.0	6.0	24.0	8.0	2.0	.0	.0	40.0
NE	.0	4.0	17.0	12.0	1.0	.0	.0	34.0
ENE	.0	4.0	12.0	18.0	.0	.0	.0	34.0
E	.0	3.0	12.0	15.0	.0	.0	.0	30.0
ESE	.0	4.0	21.0	8.0	.0	.0	.0	33.0
SE	.0	11.0	82.0	64.0	61.0	3.0	1.0	222.0
SSE	.0	10.0	64.0	40.0	19.0	1.0	.0	134.0
S	.0	2.0	17.0	8.0	8.0	11.0	1.0	47.0
SSW	.0	1.0	7.0	5.0	16.0	7.0	1.0	37.0
SW	.0	3.0	10.0	7.0	11.0	5.0	.0	36.0
WSW	.0	2.0	6.0	9.0	10.0	12.0	3.0	42.0
W	.0	.0	3.0	12.0	23.0	10.0	9.0	57.0
WNW	.0	.0	10.0	24.0	65.0	31.0	9.0	139.0
NW	.0	3.0	9.0	23.0	44.0	13.0	4.0	96.0
NNW	.0	1.0	19.0	41.0	34.0	15.0	5.0	115.0
TOTAL	.0	60.0	335.0	333.0	306.0	111.0	33.0	1178.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 122.00
TEMPERATURE SENSOR SEPARATION (METERS) 112.00

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 9
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2175

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - APR/MAY/JUN 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/ 4/ 1/ 0] TO [2002/ 6/30/23]

PASQUILL STABILITY: E

	WIND SPEED (MPH)							
WIND FROM	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	5.0	15.0	18.0	2.0	.0	.0	40.0
NNE	.0	2.0	6.0	.0	.0	.0	.0	8.0
NE	.0	5.0	2.0	.0	.0	.0	.0	7.0
ENE	.0	2.0	4.0	.0	.0	.0	.0	6.0
E	.0	7.0	6.0	1.0	.0	.0	.0	14.0
ESE	.0	5.0	6.0	3.0	.0	.0	.0	14.0
SE	.0	12.0	32.0	41.0	18.0	1.0	.0	104.0
SSE	.0	16.0	37.0	56.0	3.0	3.0	.0	115.0
S	.0	9.0	26.0	22.0	6.0	1.0	.0	64.0
SSW	.0	6.0	9.0	11.0	10.0	.0	.0	36.0
SW	.0	5.0	7.0	10.0	.0	.0	.0	22.0
WSW	.0	3.0	4.0	8.0	7.0	2.0	.0	24.0
W	.0	2.0	6.0	15.0	10.0	1.0	.0	34.0
WNW	.0	4.0	2.0	2.0	4.0	.0	.0	12.0
NW	.0	2.0	6.0	3.0	1.0	1.0	.0	13.0
NNW	.0	2.0	12.0	17.0	4.0	.0	.0	35.0
TOTAL	.0	87.0	180.0	207.0	65.0	9.0	.0	548.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 122.00
TEMPERATURE SENSOR SEPARATION (METERS) 112.00

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 9
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2175

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - APR/MAY/JUN 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/ 4/ 1/ 0] TO [2002/ 6/30/23]

PASQUILL STABILITY: F

	WIND SPEED (MPH)							
WIND FROM	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	1.0	8.0	.0	.0	.0	.0	9.0
NNE	.0	1.0	1.0	.0	.0	.0	.0	2.0
NE	.0	.0	1.0	.0	.0	.0	.0	1.0
ENE	.0	.0	.0	.0	.0	.0	.0	.0
E	.0	.0	.0	.0	.0	.0	.0	.0
ESE	.0	3.0	.0	.0	.0	.0	.0	3.0
SE	.0	7.0	11.0	.0	.0	.0	.0	18.0
SSE	.0	3.0	6.0	.0	.0	.0	.0	9.0
S	.0	3.0	4.0	3.0	.0	.0	.0	10.0
SSW	.0	2.0	3.0	2.0	.0	.0	.0	7.0
SW	.0	.0	2.0	1.0	.0	.0	.0	3.0
WSW	.0	.0	1.0	3.0	.0	.0	.0	4.0
W	.0	1.0	3.0	.0	4.0	.0	.0	8.0
WNW	.0	.0	3.0	2.0	1.0	.0	.0	6.0
NW	.0	1.0	4.0	12.0	.0	.0	.0	17.0
NNW	.0	1.0	6.0	2.0	1.0	.0	.0	10.0
TOTAL	.0	23.0	53.0	25.0	6.0	.0	.0	107.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 122.00
TEMPERATURE SENSOR SEPARATION (METERS) 112.00

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 9
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2175

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - APR/MAY/JUN 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/ 4/ 1/ 0] TO [2002/ 6/30/23]

PASQUILL STABILITY: G

	WIND SPEED (MPH)							
WIND FROM	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	.0	.0	.0	.0	.0	.0	.0
NNE	.0	.0	.0	.0	.0	.0	.0	.0
NE	.0	.0	.0	.0	.0	.0	.0	.0
ENE	.0	.0	.0	.0	.0	.0	.0	.0
E	.0	.0	.0	.0	.0	.0	.0	.0
ESE	.0	.0	.0	.0	.0	.0	.0	.0
SE	.0	.0	.0	.0	.0	.0	.0	.0
SSE	.0	.0	.0	.0	.0	.0	.0	.0
S	.0	.0	1.0	.0	.0	.0	.0	1.0
SSW	.0	.0	2.0	.0	.0	.0	.0	2.0
SW	.0	.0	.0	.0	.0	.0	.0	.0
WSW	.0	1.0	1.0	1.0	.0	.0	.0	3.0
W	.0	.0	.0	.0	.0	.0	.0	.0
WNW	.0	.0	1.0	.0	1.0	.0	.0	2.0
NW	.0	.0	.0	.0	.0	.0	.0	.0
NNW	.0	.0	.0	.0	.0	.0	.0	.0
TOTAL	.0	1.0	5.0	1.0	1.0	.0	.0	8.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE)	122.00
TEMPERATURE SENSOR SEPARATION (METERS)	112.00
MISSING OBS. DURING THIS PERIOD (ALL STABILITIES)	9
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES)	2175

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - APR/MAY/JUN 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/ 4/ 1/ 0] TO [2002/ 6/30/23]

PASQUILL STABILITY: ALL

	WIND SPEED (MPH)							
WIND FROM	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	12.0	45.0	68.0	17.0	3.0	.0	145.0
NNE	.0	9.0	31.0	9.0	3.0	.0	.0	52.0
NE	.0	10.0	20.0	12.0	1.0	.0	.0	43.0
ENE	.0	6.0	16.0	18.0	.0	.0	.0	40.0
E	.0	10.0	19.0	17.0	.0	.0	.0	46.0
ESE	.0	12.0	27.0	13.0	1.0	.0	.0	53.0
SE	.0	30.0	150.0	144.0	91.0	6.0	1.0	422.0
SSE	.0	29.0	114.0	99.0	28.0	5.0	.0	275.0
S	.0	14.0	52.0	34.0	17.0	16.0	1.0	134.0
SSW	.0	9.0	21.0	20.0	29.0	11.0	4.0	94.0
SW	.0	8.0	22.0	21.0	16.0	6.0	.0	73.0
WSW	.0	6.0	12.0	27.0	24.0	16.0	3.0	88.0
W	.0	3.0	13.0	33.0	51.0	22.0	22.0	144.0
WNW	.0	4.0	17.0	37.0	92.0	44.0	21.0	215.0
NW	.0	6.0	20.0	48.0	60.0	16.0	4.0	154.0
NNW	.0	4.0	39.0	74.0	57.0	16.0	7.0	197.0
TOTAL	.0	172.0	618.0	674.0	487.0	161.0	63.0	2175.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 122.00
TEMPERATURE SENSOR SEPARATION (METERS) 112.00

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 9
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2175

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JUL/AUG/SEP 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/ 7/ 1/ 0] TO [2002/ 9/30/23]

PASQUILL STABILITY: A

WIND FROM	WIND SPEED (MPH) CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	.0	54.0	29.0	.0	.0	.0	83.0
NNE	.0	.0	7.0	14.0	.0	.0	.0	21.0
NE	.0	.0	.0	.0	.0	.0	.0	.0
ENE	.0	.0	.0	.0	.0	.0	.0	.0
E	.0	.0	.0	.0	.0	.0	.0	.0
ESE	.0	.0	1.0	.0	.0	.0	.0	1.0
SE	.0	.0	3.0	.0	.0	.0	.0	3.0
SSE	.0	4.0	25.0	.0	.0	.0	.0	29.0
S	.0	4.0	92.0	4.0	.0	.0	.0	100.0
SSW	.0	.0	7.0	3.0	.0	.0	.0	10.0
SW	.0	1.0	6.0	.0	.0	.0	.0	7.0
WSW	.0	1.0	22.0	.0	.0	.0	.0	23.0
W	.0	1.0	10.0	.0	.0	.0	.0	11.0
WNW	.0	1.0	2.0	.0	.0	.0	.0	3.0
NW	.0	.0	2.0	.0	.0	.0	.0	2.0
NNW	.0	.0	13.0	5.0	.0	.0	.0	18.0
TOTAL	.0	12.0	244.0	55.0	.0	.0	.0	311.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE)	10.00
TEMPERATURE SENSOR SEPARATION (METERS)	50.90
MISSING OBS. DURING THIS PERIOD (ALL STABILITIES)	0
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES)	2208

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JUL/AUG/SEP 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/ 7/ 1/ 0] TO [2002/ 9/30/23]

PASQUILL STABILITY: B

WIND FROM	WIND SPEED (MPH) CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	2.0	33.0	8.0	.0	.0	.0	43.0
NNE	.0	.0	11.0	5.0	.0	.0	.0	16.0
NE	.0	.0	1.0	.0	.0	.0	.0	1.0
ENE	.0	.0	.0	.0	.0	.0	.0	.0
E	.0	.0	2.0	.0	.0	.0	.0	2.0
ESE	.0	.0	1.0	.0	.0	.0	.0	1.0
SE	.0	.0	.0	.0	.0	.0	.0	.0
SSE	.0	.0	3.0	.0	.0	.0	.0	3.0
S	.0	12.0	25.0	1.0	.0	.0	.0	38.0
SSW	.0	3.0	11.0	1.0	.0	.0	.0	15.0
SW	.0	1.0	1.0	.0	.0	.0	.0	2.0
WSW	.0	2.0	7.0	.0	.0	.0	.0	9.0
W	.0	.0	2.0	.0	.0	.0	.0	2.0
WNW	.0	1.0	1.0	.0	.0	.0	.0	2.0
NW	.0	1.0	1.0	.0	.0	.0	.0	2.0
NNW	.0	.0	1.0	.0	.0	.0	.0	1.0
TOTAL	.0	22.0	100.0	15.0	.0	.0	.0	137.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 10.00
TEMPERATURE SENSOR SEPARATION (METERS) 50.90

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 0
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2208

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JUL/AUG/SEP 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/ 7/ 1/ 0] TO [2002/ 9/30/23]

PASQUILL STABILITY: C

	WIND SPEED (MPH)							
WIND FROM	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	3.0	20.0	5.0	.0	.0	.0	28.0
NNE	.0	5.0	18.0	7.0	.0	.0	.0	30.0
NE	.0	.0	10.0	.0	.0	.0	.0	10.0
ENE	.0	1.0	3.0	.0	.0	.0	.0	4.0
E	.0	.0	.0	.0	.0	.0	.0	.0
ESE	.0	.0	.0	.0	.0	.0	.0	.0
SE	.0	1.0	.0	.0	.0	.0	.0	1.0
SSE	.0	6.0	.0	.0	.0	.0	.0	6.0
S	.0	13.0	14.0	1.0	.0	.0	.0	28.0
SSW	.0	3.0	6.0	2.0	.0	.0	.0	11.0
SW	.0	1.0	2.0	.0	.0	.0	.0	3.0
WSW	.0	2.0	3.0	.0	.0	.0	.0	5.0
W	.0	2.0	.0	.0	.0	.0	.0	2.0
WNW	.0	1.0	.0	.0	.0	.0	.0	1.0
NW	.0	.0	1.0	.0	.0	.0	.0	1.0
NNW	.0	.0	2.0	1.0	.0	.0	.0	3.0
TOTAL	.0	38.0	79.0	16.0	.0	.0	.0	133.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE)	10.00
TEMPERATURE SENSOR SEPARATION (METERS)	50.90
MISSING OBS. DURING THIS PERIOD (ALL STABILITIES)	0
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES)	2208

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JUL/AUG/SEP 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/ 7/ 1/ 0] TO [2002/ 9/30/23]

PASQUILL STABILITY: D

WIND FROM	WIND SPEED (MPH) CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	11.0	84.0	19.0	.0	.0	.0	114.0
NNE	.0	20.0	159.0	59.0	.0	.0	.0	238.0
NE	.0	15.0	35.0	.0	.0	.0	.0	50.0
ENE	.0	20.0	10.0	.0	.0	.0	.0	30.0
E	.0	17.0	.0	.0	.0	.0	.0	17.0
ESE	.0	10.0	.0	1.0	.0	.0	.0	11.0
SE	.0	8.0	.0	.0	.0	.0	.0	8.0
SSE	.0	20.0	3.0	.0	.0	.0	.0	23.0
S	.0	32.0	94.0	4.0	.0	.0	.0	130.0
SSW	.0	15.0	28.0	5.0	.0	.0	.0	48.0
SW	.0	7.0	10.0	.0	.0	.0	.0	17.0
WSW	.0	6.0	8.0	.0	.0	.0	.0	14.0
W	.0	1.0	4.0	.0	.0	.0	.0	5.0
WNW	.0	4.0	1.0	.0	.0	.0	.0	5.0
NW	.0	3.0	4.0	.0	.0	.0	.0	7.0
NNW	.0	3.0	8.0	2.0	.0	.0	.0	13.0
TOTAL	.0	192.0	448.0	90.0	.0	.0	.0	730.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 10.00
TEMPERATURE SENSOR SEPARATION (METERS) 50.90

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 0
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2208

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JUL/AUG/SEP 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/ 7/ 1/ 0] TO [2002/ 9/30/23]

PASQUILL STABILITY: E

WIND FROM	WIND SPEED (MPH) CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	20.0	9.0	.0	.0	.0	.0	29.0
NNE	.0	62.0	89.0	2.0	.0	.0	.0	153.0
NE	.0	42.0	39.0	.0	.0	.0	.0	81.0
ENE	.0	21.0	3.0	.0	.0	.0	.0	24.0
E	.0	25.0	2.0	.0	.0	.0	.0	27.0
ESE	.0	20.0	.0	.0	.0	.0	.0	20.0
SE	.0	21.0	.0	.0	.0	.0	.0	21.0
SSE	.0	28.0	5.0	.0	.0	.0	.0	33.0
S	.0	70.0	55.0	4.0	.0	.0	.0	129.0
SSW	.0	36.0	26.0	2.0	.0	.0	.0	64.0
SW	.0	24.0	3.0	.0	.0	.0	.0	27.0
WSW	.0	16.0	2.0	.0	.0	.0	.0	18.0
W	.0	10.0	1.0	.0	.0	.0	.0	11.0
WNW	.0	9.0	2.0	.0	.0	.0	.0	11.0
NW	.0	9.0	1.0	.0	.0	.0	.0	10.0
NNW	.0	13.0	.0	.0	.0	.0	.0	13.0
TOTAL	.0	426.0	237.0	8.0	.0	.0	.0	671.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 10.00
TEMPERATURE SENSOR SEPARATION (METERS) 50.90

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 0
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2208

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JUL/AUG/SEP 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/ 7/ 1/ 0] TO [2002/ 9/30/23]

PASQUILL STABILITY: F

	WIND SPEED (MPH)							
WIND FROM	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	19.0	.0	1.0	.0	.0	.0	20.0
NNE	.0	60.0	36.0	1.0	.0	.0	.0	97.0
NE	.0	15.0	14.0	.0	.0	.0	.0	29.0
ENE	.0	7.0	1.0	.0	.0	.0	.0	8.0
E	.0	8.0	.0	.0	.0	.0	.0	8.0
ESE	.0	7.0	.0	.0	.0	.0	.0	7.0
SE	.0	4.0	.0	.0	.0	.0	.0	4.0
SSE	.0	3.0	.0	.0	.0	.0	.0	3.0
S	.0	10.0	.0	.0	.0	.0	.0	10.0
SSW	.0	8.0	.0	.0	.0	.0	.0	8.0
SW	.0	5.0	.0	.0	.0	.0	.0	5.0
WSW	.0	2.0	.0	.0	.0	.0	.0	2.0
W	.0	2.0	.0	.0	.0	.0	.0	2.0
WNW	.0	4.0	.0	.0	.0	.0	.0	4.0
NW	.0	3.0	.0	.0	.0	.0	.0	3.0
NNW	.0	8.0	.0	.0	.0	.0	.0	8.0
TOTAL	.0	165.0	51.0	2.0	.0	.0	.0	218.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 10.00
TEMPERATURE SENSOR SEPARATION (METERS) 50.90

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 0
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2208

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JUL/AUG/SEP 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/ 7/ 1/ 0] TO [2002/ 9/30/23]

PASQUILL STABILITY: G

	WIND SPEED (MPH)							
WIND FROM	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	3.0	.0	.0	.0	.0	.0	3.0
NNE	.0	1.0	.0	.0	.0	.0	.0	1.0
NE	.0	1.0	.0	.0	.0	.0	.0	1.0
ENE	.0	.0	.0	.0	.0	.0	.0	.0
E	.0	.0	.0	.0	.0	.0	.0	.0
ESE	.0	.0	.0	.0	.0	.0	.0	.0
SE	.0	.0	.0	.0	.0	.0	.0	.0
SSE	.0	2.0	.0	.0	.0	.0	.0	2.0
S	.0	.0	.0	.0	.0	.0	.0	.0
SSW	.0	.0	.0	.0	.0	.0	.0	.0
SW	.0	.0	.0	.0	.0	.0	.0	.0
WSW	.0	.0	.0	.0	.0	.0	.0	.0
W	.0	.0	.0	.0	.0	.0	.0	.0
WNW	.0	.0	.0	.0	.0	.0	.0	.0
NW	.0	.0	.0	.0	.0	.0	.0	.0
NNW	.0	1.0	.0	.0	.0	.0	.0	1.0
TOTAL	.0	8.0	.0	.0	.0	.0	.0	8.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE)	10.00
TEMPERATURE SENSOR SEPARATION (METERS)	50.90
MISSING OBS. DURING THIS PERIOD (ALL STABILITIES)	0
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES)	2208

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JUL/AUG/SEP 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/ 7/ 1/ 0] TO [2002/ 9/30/23]

PASQUILL STABILITY: ALL

WIND FROM	WIND SPEED (MPH) CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	58.0	200.0	62.0	.0	.0	.0	320.0
NNE	.0	148.0	320.0	88.0	.0	.0	.0	556.0
NE	.0	73.0	99.0	.0	.0	.0	.0	172.0
ENE	.0	49.0	17.0	.0	.0	.0	.0	66.0
E	.0	50.0	4.0	.0	.0	.0	.0	54.0
ESE	.0	37.0	2.0	1.0	.0	.0	.0	40.0
SE	.0	34.0	3.0	.0	.0	.0	.0	37.0
SSE	.0	63.0	36.0	.0	.0	.0	.0	99.0
S	.0	141.0	280.0	14.0	.0	.0	.0	435.0
SSW	.0	65.0	78.0	13.0	.0	.0	.0	156.0
SW	.0	39.0	22.0	.0	.0	.0	.0	61.0
WSW	.0	29.0	42.0	.0	.0	.0	.0	71.0
W	.0	16.0	17.0	.0	.0	.0	.0	33.0
WNW	.0	20.0	6.0	.0	.0	.0	.0	26.0
NW	.0	16.0	9.0	.0	.0	.0	.0	25.0
NNW	.0	25.0	24.0	8.0	.0	.0	.0	57.0
TOTAL	.0	863.0	1159.0	186.0	.0	.0	.0	2208.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE)	10.00
TEMPERATURE SENSOR SEPARATION (METERS)	50.90
MISSING OBS. DURING THIS PERIOD (ALL STABILITIES)	0
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES)	2208

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JUL/AUG/SEP 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/ 7/ 1/ 0] TO [2002/ 9/30/23]

PASQUILL STABILITY: A

	WIND SPEED (MPH)							
WIND FROM	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	.0	4.0	33.0	31.0	6.0	.0	74.0
NNE	.0	.0	.0	3.0	.0	.0	.0	3.0
NE	.0	.0	.0	.0	.0	.0	.0	.0
ENE	.0	1.0	.0	.0	.0	.0	.0	1.0
E	.0	.0	.0	.0	.0	.0	.0	.0
ESE	.0	.0	.0	1.0	.0	.0	.0	1.0
SE	.0	.0	1.0	4.0	.0	.0	.0	5.0
SSE	.0	.0	58.0	39.0	7.0	.0	.0	104.0
S	.0	.0	14.0	7.0	3.0	.0	.0	24.0
SSW	.0	.0	3.0	1.0	4.0	.0	.0	8.0
SW	.0	.0	.0	1.0	.0	.0	.0	1.0
WSW	.0	.0	3.0	2.0	2.0	1.0	.0	8.0
W	.0	.0	1.0	9.0	2.0	.0	.0	12.0
WNW	.0	.0	3.0	19.0	1.0	.0	.0	23.0
NW	.0	.0	.0	3.0	7.0	1.0	2.0	13.0
NNW	.0	.0	3.0	15.0	10.0	2.0	4.0	34.0
TOTAL	.0	1.0	90.0	137.0	67.0	10.0	6.0	311.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 60.00
TEMPERATURE SENSOR SEPARATION (METERS) 50.90

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 0
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2208

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JUL/AUG/SEP 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/ 7/ 1/ 0] TO [2002/ 9/30/23]

PASQUILL STABILITY: B

	WIND SPEED (MPH)							
WIND FROM	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	.0	8.0	20.0	12.0	1.0	1.0	42.0
NNE	.0	.0	2.0	2.0	.0	.0	.0	4.0
NE	.0	.0	1.0	.0	.0	.0	.0	1.0
ENE	.0	.0	.0	.0	.0	.0	.0	.0
E	.0	.0	2.0	.0	.0	.0	.0	2.0
ESE	.0	.0	1.0	.0	.0	.0	.0	1.0
SE	.0	.0	.0	.0	.0	.0	.0	.0
SSE	.0	3.0	9.0	9.0	1.0	.0	.0	22.0
S	.0	1.0	20.0	3.0	.0	.0	.0	24.0
SSW	.0	.0	4.0	.0	2.0	.0	.0	6.0
SW	.0	1.0	3.0	1.0	1.0	.0	.0	6.0
WSW	.0	.0	1.0	.0	.0	.0	.0	1.0
W	.0	1.0	1.0	2.0	.0	.0	.0	4.0
WNW	.0	.0	.0	3.0	3.0	.0	.0	6.0
NW	.0	.0	.0	2.0	4.0	.0	.0	6.0
NNW	.0	1.0	2.0	2.0	4.0	1.0	2.0	12.0
TOTAL	.0	7.0	54.0	44.0	27.0	2.0	3.0	137.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE)	60.00
TEMPERATURE SENSOR SEPARATION (METERS)	50.90
MISSING OBS. DURING THIS PERIOD (ALL STABILITIES)	0
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES)	2208

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JUL/AUG/SEP 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/ 7/ 1/ 0] TO [2002/ 9/30/23]

PASQUILL STABILITY: C

	WIND SPEED (MPH)							
WIND FROM	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	2.0	14.0	14.0	8.0	2.0	.0	40.0
NNE	.0	.0	4.0	7.0	2.0	.0	.0	13.0
NE	.0	1.0	6.0	2.0	.0	.0	.0	9.0
ENE	.0	.0	2.0	1.0	.0	.0	.0	3.0
E	.0	.0	2.0	2.0	.0	.0	.0	4.0
ESE	.0	.0	.0	.0	.0	.0	.0	.0
SE	.0	.0	2.0	.0	.0	.0	.0	2.0
SSE	.0	.0	12.0	3.0	.0	.0	.0	15.0
S	.0	5.0	16.0	2.0	.0	.0	.0	23.0
SSW	.0	.0	2.0	1.0	3.0	.0	.0	6.0
SW	.0	1.0	1.0	1.0	.0	.0	.0	3.0
WSW	.0	.0	1.0	1.0	.0	.0	.0	2.0
W	.0	.0	.0	1.0	2.0	.0	.0	3.0
WNW	.0	1.0	2.0	.0	1.0	.0	.0	4.0
NW	.0	.0	.0	1.0	2.0	.0	.0	3.0
NNW	.0	.0	2.0	.0	.0	.0	1.0	3.0
TOTAL	.0	10.0	66.0	36.0	18.0	2.0	1.0	133.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE)	60.00
TEMPERATURE SENSOR SEPARATION (METERS)	50.90
MISSING OBS. DURING THIS PERIOD (ALL STABILITIES)	0
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES)	2208

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JUL/AUG/SEP 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/ 7/ 1/ 0] TO [2002/ 9/30/23]

PASQUILL STABILITY: D

WIND FROM	WIND SPEED (MPH) CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	3.0	16.0	59.0	62.0	4.0	.0	144.0
NNE	.0	4.0	42.0	72.0	13.0	.0	.0	131.0
NE	.0	13.0	22.0	21.0	.0	.0	.0	56.0
ENE	.0	6.0	20.0	5.0	.0	.0	.0	31.0
E	.0	5.0	10.0	4.0	1.0	.0	.0	20.0
ESE	.0	3.0	9.0	2.0	.0	1.0	.0	15.0
SE	.0	5.0	4.0	1.0	.0	.0	.0	10.0
SSE	.0	7.0	18.0	32.0	5.0	.0	.0	62.0
S	.0	15.0	27.0	27.0	9.0	.0	.0	78.0
SSW	.0	7.0	14.0	17.0	8.0	.0	.0	46.0
SW	.0	3.0	11.0	5.0	1.0	.0	.0	20.0
WSW	.0	1.0	.0	7.0	1.0	.0	.0	9.0
W	.0	.0	1.0	10.0	.0	.0	.0	11.0
WNW	.0	1.0	2.0	2.0	6.0	2.0	.0	13.0
NW	.0	.0	4.0	5.0	19.0	4.0	4.0	36.0
NNW	.0	1.0	6.0	15.0	20.0	2.0	4.0	48.0
TOTAL	.0	74.0	206.0	284.0	145.0	13.0	8.0	730.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 60.00
TEMPERATURE SENSOR SEPARATION (METERS) 50.90

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 0
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2208

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JUL/AUG/SEP 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/ 7/ 1/ 0] TO [2002/ 9/30/23]

PASQUILL STABILITY: E

	WIND SPEED (MPH)							
WIND FROM	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	9.0	17.0	25.0	.0	.0	.0	51.0
NNE	.0	12.0	83.0	58.0	1.0	.0	.0	154.0
NE	.0	4.0	14.0	4.0	1.0	.0	.0	23.0
ENE	.0	2.0	9.0	1.0	.0	.0	.0	12.0
E	.0	4.0	9.0	1.0	.0	.0	.0	14.0
ESE	.0	6.0	11.0	1.0	.0	.0	.0	18.0
SE	.0	4.0	9.0	2.0	.0	.0	.0	15.0
SSE	.0	7.0	36.0	26.0	.0	.0	.0	69.0
S	.0	7.0	30.0	40.0	5.0	1.0	.0	83.0
SSW	.0	6.0	38.0	27.0	5.0	.0	.0	76.0
SW	.0	6.0	16.0	8.0	.0	.0	.0	30.0
WSW	.0	8.0	6.0	3.0	.0	.0	.0	17.0
W	.0	10.0	4.0	7.0	1.0	.0	.0	22.0
WNW	.0	8.0	6.0	9.0	7.0	1.0	.0	31.0
NW	.0	12.0	5.0	11.0	5.0	.0	.0	33.0
NNW	.0	5.0	4.0	13.0	.0	1.0	.0	23.0
TOTAL	.0	110.0	297.0	236.0	25.0	3.0	.0	671.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 60.00
TEMPERATURE SENSOR SEPARATION (METERS) 50.90

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 0
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2208

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JUL/AUG/SEP 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/ 7/ 1/ 0] TO [2002/ 9/30/23]

PASQUILL STABILITY: F

	WIND SPEED (MPH)							
WIND FROM	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	15.0	15.0	2.0	.0	.0	.0	32.0
NNE	.0	14.0	48.0	18.0	.0	.0	.0	80.0
NE	.0	10.0	3.0	.0	.0	.0	.0	13.0
ENE	.0	3.0	1.0	.0	.0	.0	.0	4.0
E	.0	3.0	1.0	.0	.0	.0	.0	4.0
ESE	.0	5.0	.0	.0	.0	.0	.0	5.0
SE	.0	2.0	.0	1.0	.0	.0	.0	3.0
SSE	.0	1.0	2.0	1.0	.0	.0	.0	4.0
S	.0	2.0	8.0	.0	.0	.0	.0	10.0
SSW	.0	6.0	15.0	2.0	.0	.0	.0	23.0
SW	.0	4.0	3.0	.0	1.0	.0	.0	8.0
WSW	.0	4.0	1.0	1.0	.0	.0	.0	6.0
W	.0	4.0	3.0	1.0	.0	.0	.0	8.0
WNW	.0	.0	2.0	1.0	1.0	.0	.0	4.0
NW	.0	7.0	2.0	1.0	.0	.0	.0	10.0
NNW	.0	2.0	.0	2.0	.0	.0	.0	4.0
TOTAL	.0	82.0	104.0	30.0	2.0	.0	.0	218.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 60.00
TEMPERATURE SENSOR SEPARATION (METERS) 50.90

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 0
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2208

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JUL/AUG/SEP 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/ 7/ 1/ 0] TO [2002/ 9/30/23]

PASQUILL STABILITY: G

WIND FROM	WIND SPEED (MPH) CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	.0	1.0	.0	.0	.0	.0	1.0
NNE	.0	.0	.0	.0	.0	.0	.0	.0
NE	.0	1.0	.0	.0	.0	.0	.0	1.0
ENE	.0	.0	.0	.0	.0	.0	.0	.0
E	.0	.0	.0	.0	.0	.0	.0	.0
ESE	.0	.0	.0	.0	.0	.0	.0	.0
SE	.0	.0	.0	.0	.0	.0	.0	.0
SSE	.0	.0	.0	.0	.0	.0	.0	.0
S	.0	.0	.0	.0	.0	.0	.0	.0
SSW	.0	.0	.0	.0	.0	.0	.0	.0
SW	.0	2.0	.0	.0	.0	.0	.0	2.0
WSW	.0	1.0	.0	.0	.0	.0	.0	1.0
W	.0	.0	.0	.0	.0	.0	.0	.0
WNW	.0	.0	3.0	.0	.0	.0	.0	3.0
NW	.0	.0	.0	.0	.0	.0	.0	.0
NNW	.0	.0	.0	.0	.0	.0	.0	.0
TOTAL	.0	4.0	4.0	.0	.0	.0	.0	8.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE)	60.00
TEMPERATURE SENSOR SEPARATION (METERS)	50.90
MISSING OBS. DURING THIS PERIOD (ALL STABILITIES)	0
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES)	2208

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JUL/AUG/SEP 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/ 7/ 1/ 0] TO [2002/ 9/30/23]

PASQUILL STABILITY: ALL

	WIND SPEED (MPH)							
WIND FROM	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	29.0	75.0	153.0	113.0	13.0	1.0	384.0
NNE	.0	30.0	179.0	160.0	16.0	.0	.0	385.0
NE	.0	29.0	46.0	27.0	1.0	.0	.0	103.0
ENE	.0	12.0	32.0	7.0	.0	.0	.0	51.0
E	.0	12.0	24.0	7.0	1.0	.0	.0	44.0
ESE	.0	14.0	21.0	4.0	.0	1.0	.0	40.0
SE	.0	11.0	16.0	8.0	.0	.0	.0	35.0
SSE	.0	18.0	135.0	110.0	13.0	.0	.0	276.0
S	.0	30.0	115.0	79.0	17.0	1.0	.0	242.0
SSW	.0	19.0	76.0	48.0	22.0	.0	.0	165.0
SW	.0	17.0	34.0	16.0	3.0	.0	.0	70.0
WSW	.0	14.0	12.0	14.0	3.0	1.0	.0	44.0
W	.0	15.0	10.0	30.0	5.0	.0	.0	60.0
WNW	.0	10.0	18.0	34.0	19.0	3.0	.0	84.0
NW	.0	19.0	11.0	23.0	37.0	5.0	6.0	101.0
NNW	.0	9.0	17.0	47.0	34.0	6.0	11.0	124.0
TOTAL	.0	288.0	821.0	767.0	284.0	30.0	18.0	2208.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE)	60.00
TEMPERATURE SENSOR SEPARATION (METERS)	50.90
MISSING OBS. DURING THIS PERIOD (ALL STABILITIES)	0
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES)	2208

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JUL/AUG/SEP 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/ 7/ 1/ 0] TO [2002/ 9/30/23]

PASQUILL STABILITY: A

	WIND SPEED (MPH)							
WIND FROM	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	.0	.0	.0	1.0	.0	.0	1.0
NNE	.0	.0	.0	.0	.0	.0	.0	.0
NE	.0	.0	.0	.0	.0	.0	.0	.0
ENE	.0	.0	.0	.0	.0	.0	.0	.0
E	.0	.0	.0	.0	.0	.0	.0	.0
ESE	.0	.0	.0	.0	.0	.0	.0	.0
SE	.0	.0	1.0	5.0	1.0	.0	.0	7.0
SSE	.0	.0	.0	.0	.0	.0	.0	.0
S	.0	.0	.0	.0	.0	.0	.0	.0
SSW	.0	.0	.0	.0	.0	.0	.0	.0
SW	.0	.0	.0	.0	.0	.0	.0	.0
WSW	.0	.0	.0	.0	.0	.0	.0	.0
W	.0	.0	.0	1.0	.0	.0	.0	1.0
WNW	.0	.0	.0	.0	.0	.0	.0	.0
NW	.0	.0	.0	.0	.0	1.0	.0	1.0
NNW	.0	.0	.0	.0	1.0	.0	.0	1.0
TOTAL	.0	.0	1.0	6.0	3.0	1.0	.0	11.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE)	122.00
TEMPERATURE SENSOR SEPARATION (METERS)	112.00
MISSING OBS. DURING THIS PERIOD (ALL STABILITIES)	0
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES)	2208

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JUL/AUG/SEP 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/ 7/ 1/ 0] TO [2002/ 9/30/23]

PASQUILL STABILITY: B

WIND FROM	WIND SPEED (MPH) CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	.0	.0	1.0	1.0	.0	.0	2.0
NNE	.0	.0	.0	.0	.0	.0	.0	.0
NE	.0	.0	.0	.0	.0	.0	.0	.0
ENE	.0	.0	.0	.0	.0	.0	.0	.0
E	.0	.0	.0	1.0	.0	.0	.0	1.0
ESE	.0	.0	1.0	3.0	.0	.0	.0	4.0
SE	.0	.0	16.0	19.0	3.0	.0	.0	38.0
SSE	.0	.0	1.0	1.0	.0	.0	.0	2.0
S	.0	.0	.0	.0	.0	1.0	.0	1.0
SSW	.0	.0	.0	.0	.0	.0	.0	.0
SW	.0	.0	.0	1.0	1.0	.0	.0	2.0
WSW	.0	.0	.0	4.0	1.0	.0	.0	5.0
W	.0	.0	1.0	5.0	3.0	.0	.0	9.0
WNW	.0	.0	.0	4.0	4.0	.0	2.0	10.0
NW	.0	.0	.0	4.0	8.0	1.0	1.0	14.0
NNW	.0	.0	.0	6.0	21.0	7.0	1.0	35.0
TOTAL	.0	.0	19.0	49.0	42.0	9.0	4.0	123.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 122.00
TEMPERATURE SENSOR SEPARATION (METERS) 112.00

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 0
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2208

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JUL/AUG/SEP 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/ 7/ 1/ 0] TO [2002/ 9/30/23]

PASQUILL STABILITY: C

WIND FROM	WIND SPEED (MPH) CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	.0	1.0	3.0	1.0	1.0	.0	6.0
NNE	.0	.0	.0	.0	.0	.0	.0	.0
NE	.0	1.0	1.0	.0	.0	.0	.0	2.0
ENE	.0	.0	.0	.0	.0	.0	.0	.0
E	.0	.0	2.0	1.0	.0	.0	.0	3.0
ESE	.0	.0	.0	1.0	.0	.0	.0	1.0
SE	.0	.0	32.0	9.0	4.0	1.0	.0	46.0
SSE	.0	.0	13.0	4.0	3.0	.0	.0	20.0
S	.0	.0	2.0	.0	3.0	3.0	.0	8.0
SSW	.0	.0	1.0	1.0	.0	.0	.0	2.0
SW	.0	.0	1.0	2.0	1.0	1.0	.0	5.0
WSW	.0	.0	1.0	2.0	6.0	1.0	.0	10.0
W	.0	.0	2.0	6.0	4.0	.0	.0	12.0
WNW	.0	.0	.0	1.0	5.0	1.0	2.0	9.0
NW	.0	.0	2.0	5.0	2.0	2.0	2.0	13.0
NNW	.0	.0	4.0	30.0	28.0	10.0	1.0	73.0
TOTAL	.0	1.0	62.0	65.0	57.0	20.0	5.0	210.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE)	122.00
TEMPERATURE SENSOR SEPARATION (METERS)	112.00
MISSING OBS. DURING THIS PERIOD (ALL STABILITIES)	0
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES)	2208

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JUL/AUG/SEP 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/ 7/ 1/ 0] TO [2002/ 9/30/23]

PASQUILL STABILITY: D

	WIND SPEED (MPH)							
WIND FROM	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	4.0	38.0	54.0	38.0	.0	.0	134.0
NNE	.0	4.0	21.0	28.0	3.0	.0	.0	56.0
NE	.0	4.0	16.0	16.0	2.0	.0	.0	38.0
ENE	.0	6.0	19.0	12.0	.0	.0	.0	37.0
E	.0	.0	9.0	5.0	.0	.0	1.0	15.0
ESE	.0	5.0	8.0	5.0	.0	.0	.0	18.0
SE	.0	8.0	41.0	46.0	30.0	3.0	.0	128.0
SSE	.0	20.0	35.0	52.0	32.0	1.0	1.0	141.0
S	.0	8.0	19.0	21.0	18.0	6.0	.0	72.0
SSW	.0	6.0	12.0	11.0	4.0	.0	.0	33.0
SW	.0	2.0	1.0	8.0	4.0	.0	.0	15.0
WSW	.0	2.0	4.0	13.0	8.0	.0	.0	27.0
W	.0	.0	2.0	6.0	10.0	2.0	2.0	22.0
WNW	.0	.0	6.0	11.0	29.0	9.0	9.0	64.0
NW	.0	3.0	7.0	19.0	24.0	6.0	6.0	65.0
NNW	.0	4.0	34.0	74.0	84.0	21.0	3.0	220.0
TOTAL	.0	76.0	272.0	381.0	286.0	48.0	22.0	1085.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 122.00
TEMPERATURE SENSOR SEPARATION (METERS) 112.00

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 0
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2208

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JUL/AUG/SEP 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/ 7/ 1/ 0] TO [2002/ 9/30/23]

PASQUILL STABILITY: E

WIND FROM	WIND SPEED (MPH) CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	7.0	10.0	5.0	4.0	.0	.0	26.0
NNE	.0	6.0	4.0	1.0	3.0	.0	.0	14.0
NE	.0	6.0	5.0	1.0	.0	.0	.0	12.0
ENE	.0	5.0	3.0	4.0	.0	.0	.0	12.0
E	.0	3.0	5.0	3.0	.0	.0	.0	11.0
ESE	.0	8.0	3.0	6.0	1.0	.0	.0	18.0
SE	.0	8.0	17.0	26.0	6.0	.0	.0	57.0
SSE	.0	13.0	48.0	57.0	8.0	.0	.0	126.0
S	.0	23.0	44.0	30.0	1.0	2.0	.0	100.0
SSW	.0	27.0	16.0	9.0	1.0	.0	.0	53.0
SW	.0	8.0	6.0	5.0	.0	.0	.0	19.0
WSW	.0	3.0	3.0	6.0	7.0	.0	.0	19.0
W	.0	2.0	2.0	6.0	9.0	2.0	.0	21.0
WNW	.0	2.0	6.0	7.0	9.0	.0	1.0	25.0
NW	.0	7.0	14.0	21.0	4.0	.0	.0	46.0
NNW	.0	2.0	17.0	47.0	17.0	.0	.0	83.0
TOTAL	.0	130.0	203.0	234.0	70.0	4.0	1.0	642.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 122.00
TEMPERATURE SENSOR SEPARATION (METERS) 112.00

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 0
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2208

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JUL/AUG/SEP 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/ 7/ 1/ 0] TO [2002/ 9/30/23]

PASQUILL STABILITY: F

WIND FROM	WIND SPEED (MPH) CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	1.0	6.0	.0	1.0	.0	.0	8.0
NNE	.0	5.0	3.0	.0	.0	.0	.0	8.0
NE	.0	.0	.0	.0	.0	.0	.0	.0
ENE	.0	1.0	.0	.0	.0	.0	.0	1.0
E	.0	3.0	.0	.0	.0	.0	.0	3.0
ESE	.0	2.0	.0	.0	.0	.0	.0	2.0
SE	.0	8.0	3.0	.0	.0	.0	.0	11.0
SSE	.0	3.0	3.0	1.0	.0	.0	.0	7.0
S	.0	7.0	2.0	.0	.0	.0	.0	9.0
SSW	.0	8.0	7.0	.0	.0	.0	.0	15.0
SW	.0	4.0	.0	1.0	.0	.0	.0	5.0
WSW	.0	.0	2.0	3.0	2.0	.0	.0	7.0
W	.0	3.0	3.0	.0	2.0	.0	.0	8.0
WNW	.0	2.0	4.0	.0	.0	.0	.0	6.0
NW	.0	3.0	10.0	.0	.0	.0	.0	13.0
NNW	.0	.0	14.0	15.0	2.0	.0	.0	31.0
TOTAL	.0	50.0	57.0	20.0	7.0	.0	.0	134.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 122.00
TEMPERATURE SENSOR SEPARATION (METERS) 112.00

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 0
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2208

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JUL/AUG/SEP 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/ 7/ 1/ 0] TO [2002/ 9/30/23]

PASQUILL STABILITY: G

WIND FROM	WIND SPEED (MPH) CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	.0	.0	.0	.0	.0	.0	.0
NNE	.0	.0	.0	.0	.0	.0	.0	.0
NE	.0	.0	.0	.0	.0	.0	.0	.0
ENE	.0	.0	.0	.0	.0	.0	.0	.0
E	.0	.0	.0	.0	.0	.0	.0	.0
ESE	.0	.0	.0	.0	.0	.0	.0	.0
SE	.0	.0	.0	.0	.0	.0	.0	.0
SSE	.0	.0	.0	.0	.0	.0	.0	.0
S	.0	.0	.0	.0	.0	.0	.0	.0
SSW	.0	.0	.0	.0	.0	.0	.0	.0
SW	.0	.0	.0	.0	.0	.0	.0	.0
WSW	.0	.0	.0	1.0	.0	.0	.0	1.0
W	.0	.0	.0	1.0	1.0	.0	.0	2.0
WNW	.0	.0	.0	.0	.0	.0	.0	.0
NW	.0	.0	.0	.0	.0	.0	.0	.0
NNW	.0	.0	.0	.0	.0	.0	.0	.0
TOTAL	.0	.0	.0	2.0	1.0	.0	.0	3.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE)	122.00
TEMPERATURE SENSOR SEPARATION (METERS)	112.00
MISSING OBS. DURING THIS PERIOD (ALL STABILITIES)	0
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES)	2208

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JUL/AUG/SEP 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/ 7/ 1/ 0] TO [2002/ 9/30/23]

PASQUILL STABILITY: ALL

	WIND SPEED (MPH)							
WIND FROM	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	12.0	55.0	63.0	46.0	1.0	.0	177.0
NNE	.0	15.0	28.0	29.0	6.0	.0	.0	78.0
NE	.0	11.0	22.0	17.0	2.0	.0	.0	52.0
ENE	.0	12.0	22.0	16.0	.0	.0	.0	50.0
E	.0	6.0	16.0	10.0	.0	.0	1.0	33.0
ESE	.0	15.0	12.0	15.0	1.0	.0	.0	43.0
SE	.0	24.0	110.0	105.0	44.0	4.0	.0	287.0
SSE	.0	36.0	100.0	115.0	43.0	1.0	1.0	296.0
S	.0	38.0	67.0	51.0	22.0	12.0	.0	190.0
SSW	.0	41.0	36.0	21.0	5.0	.0	.0	103.0
SW	.0	14.0	8.0	17.0	6.0	1.0	.0	46.0
WSW	.0	5.0	10.0	29.0	24.0	1.0	.0	69.0
W	.0	5.0	10.0	25.0	29.0	4.0	2.0	75.0
WNW	.0	4.0	16.0	23.0	47.0	10.0	14.0	114.0
NW	.0	13.0	33.0	49.0	38.0	10.0	9.0	152.0
NNW	.0	6.0	69.0	172.0	153.0	38.0	5.0	443.0
TOTAL	.0	257.0	614.0	757.0	466.0	82.0	32.0	2208.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE)	122.00
TEMPERATURE SENSOR SEPARATION (METERS)	112.00
MISSING OBS. DURING THIS PERIOD (ALL STABILITIES)	0
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES)	2208

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - OCT/NOV/DEC 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/10/ 1/ 0] TO [2002/12/31/23]

PASQUILL STABILITY: A

	WIND SPEED (MPH)							
WIND FROM	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	.0	10.0	10.0	.0	.0	.0	20.0
NNE	.0	.0	.0	.0	.0	.0	.0	.0
NE	.0	.0	.0	.0	.0	.0	.0	.0
ENE	.0	.0	.0	.0	.0	.0	.0	.0
E	.0	.0	1.0	.0	.0	.0	.0	1.0
ESE	.0	.0	.0	.0	.0	.0	.0	.0
SE	.0	.0	.0	.0	.0	.0	.0	.0
SSE	.0	.0	3.0	.0	.0	.0	.0	3.0
S	.0	1.0	7.0	6.0	.0	.0	.0	14.0
SSW	.0	.0	1.0	.0	.0	.0	.0	1.0
SW	.0	.0	.0	.0	.0	.0	.0	.0
WSW	.0	.0	.0	.0	.0	.0	.0	.0
W	.0	.0	2.0	.0	.0	.0	.0	2.0
WNW	.0	.0	3.0	.0	.0	.0	.0	3.0
NW	.0	1.0	10.0	6.0	.0	.0	.0	17.0
NNW	.0	.0	5.0	2.0	.0	.0	.0	7.0
TOTAL	.0	2.0	42.0	24.0	.0	.0	.0	68.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE)	10.00
TEMPERATURE SENSOR SEPARATION (METERS)	50.90
MISSING OBS. DURING THIS PERIOD (ALL STABILITIES)	9
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES)	2199

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - OCT/NOV/DEC 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/10/ 1/ 0] TO [2002/12/31/23]

PASQUILL STABILITY: B

WIND FROM	WIND SPEED (MPH) CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	.0	13.0	10.0	.0	.0	.0	23.0
NNE	.0	.0	1.0	.0	.0	.0	.0	1.0
NE	.0	.0	.0	.0	.0	.0	.0	.0
ENE	.0	.0	1.0	.0	.0	.0	.0	1.0
E	.0	.0	.0	.0	.0	.0	.0	.0
ESE	.0	.0	.0	.0	.0	.0	.0	.0
SE	.0	.0	.0	.0	.0	.0	.0	.0
SSE	.0	.0	3.0	.0	.0	.0	.0	3.0
S	.0	.0	8.0	3.0	.0	.0	.0	11.0
SSW	.0	.0	3.0	.0	.0	.0	.0	3.0
SW	.0	.0	.0	.0	.0	.0	.0	.0
WSW	.0	.0	.0	.0	.0	.0	.0	.0
W	.0	.0	3.0	.0	.0	.0	.0	3.0
WNW	.0	1.0	3.0	.0	.0	.0	.0	4.0
NW	.0	1.0	4.0	5.0	.0	.0	.0	10.0
NNW	.0	1.0	2.0	1.0	.0	.0	.0	4.0
TOTAL	.0	3.0	41.0	19.0	.0	.0	.0	63.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 10.00
TEMPERATURE SENSOR SEPARATION (METERS) 50.90

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 9
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2199

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - OCT/NOV/DEC 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/10/ 1/ 0] TO [2002/12/31/23]

PASQUILL STABILITY: C

WIND FROM	WIND SPEED (MPH) CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	.0	16.0	5.0	.0	.0	.0	21.0
NNE	.0	.0	5.0	1.0	.0	.0	.0	6.0
NE	.0	.0	.0	.0	.0	.0	.0	.0
ENE	.0	.0	.0	.0	.0	.0	.0	.0
E	.0	.0	.0	.0	.0	.0	.0	.0
ESE	.0	.0	.0	.0	.0	.0	.0	.0
SE	.0	.0	.0	.0	.0	.0	.0	.0
SSE	.0	1.0	2.0	.0	.0	.0	.0	3.0
S	.0	3.0	11.0	1.0	.0	.0	.0	15.0
SSW	.0	.0	3.0	.0	.0	.0	.0	3.0
SW	.0	.0	2.0	.0	.0	.0	.0	2.0
WSW	.0	.0	2.0	.0	.0	.0	.0	2.0
W	.0	1.0	8.0	1.0	.0	.0	.0	10.0
WNW	.0	1.0	4.0	3.0	.0	.0	.0	8.0
NW	.0	.0	10.0	8.0	1.0	.0	.0	19.0
NNW	.0	.0	3.0	.0	.0	.0	.0	3.0
TOTAL	.0	6.0	66.0	19.0	1.0	.0	.0	92.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 10.00
TEMPERATURE SENSOR SEPARATION (METERS) 50.90

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 9
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2199

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - OCT/NOV/DEC 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/10/ 1/ 0] TO [2002/12/31/23]

PASQUILL STABILITY: D

WIND FROM	WIND SPEED (MPH) CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	17.0	116.0	57.0	.0	.0	.0	190.0
NNE	.0	28.0	181.0	90.0	1.0	.0	.0	300.0
NE	.0	17.0	11.0	.0	.0	.0	.0	28.0
ENE	.0	8.0	1.0	.0	.0	.0	.0	9.0
E	.0	4.0	.0	.0	.0	.0	.0	4.0
ESE	.0	4.0	.0	.0	.0	.0	.0	4.0
SE	.0	7.0	2.0	.0	.0	.0	.0	9.0
SSE	.0	14.0	22.0	2.0	.0	.0	.0	38.0
S	.0	26.0	47.0	20.0	.0	.0	.0	93.0
SSW	.0	20.0	21.0	4.0	.0	.0	.0	45.0
SW	.0	15.0	11.0	.0	.0	.0	.0	26.0
WSW	.0	10.0	20.0	4.0	.0	.0	.0	34.0
W	.0	11.0	35.0	1.0	.0	.0	.0	47.0
WNW	.0	6.0	47.0	18.0	.0	.0	.0	71.0
NW	.0	12.0	59.0	29.0	2.0	.0	.0	102.0
NNW	.0	4.0	57.0	7.0	.0	.0	.0	68.0
TOTAL	.0	203.0	630.0	232.0	3.0	.0	.0	1068.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 10.00
TEMPERATURE SENSOR SEPARATION (METERS) 50.90

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 9
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2199

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - OCT/NOV/DEC 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/10/ 1/ 0] TO [2002/12/31/23]

PASQUILL STABILITY: E

WIND FROM	WIND SPEED (MPH) CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	18.0	21.0	1.0	.0	.0	.0	40.0
NNE	.0	58.0	75.0	4.0	.0	.0	.0	137.0
NE	.0	51.0	24.0	.0	.0	.0	.0	75.0
ENE	.0	23.0	2.0	.0	.0	.0	.0	25.0
E	.0	12.0	.0	.0	.0	.0	.0	12.0
ESE	.0	18.0	.0	.0	.0	.0	.0	18.0
SE	.0	15.0	.0	.0	.0	.0	.0	15.0
SSE	.0	38.0	11.0	.0	.0	.0	.0	49.0
S	.0	47.0	60.0	11.0	.0	.0	.0	118.0
SSW	.0	31.0	24.0	.0	.0	.0	.0	55.0
SW	.0	25.0	8.0	.0	.0	.0	.0	33.0
WSW	.0	21.0	5.0	.0	.0	.0	.0	26.0
W	.0	22.0	9.0	.0	.0	.0	.0	31.0
WNW	.0	13.0	26.0	2.0	.0	.0	.0	41.0
NW	.0	14.0	14.0	3.0	.0	.0	.0	31.0
NNW	.0	9.0	6.0	.0	.0	.0	.0	15.0
TOTAL	.0	415.0	285.0	21.0	.0	.0	.0	721.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 10.00
TEMPERATURE SENSOR SEPARATION (METERS) 50.90

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 9
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2199

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - OCT/NOV/DEC 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/10/ 1/ 0] TO [2002/12/31/23]

PASQUILL STABILITY: F

WIND FROM	WIND SPEED (MPH) CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	22.0	.0	.0	.0	.0	.0	22.0
NNE	.0	37.0	10.0	.0	.0	.0	.0	47.0
NE	.0	21.0	16.0	1.0	.0	.0	.0	38.0
ENE	.0	9.0	2.0	.0	.0	.0	.0	11.0
E	.0	7.0	.0	.0	.0	.0	.0	7.0
ESE	.0	2.0	.0	.0	.0	.0	.0	2.0
SE	.0	4.0	.0	.0	.0	.0	.0	4.0
SSE	.0	8.0	.0	.0	.0	.0	.0	8.0
S	.0	13.0	.0	.0	.0	.0	.0	13.0
SSW	.0	3.0	.0	.0	.0	.0	.0	3.0
SW	.0	1.0	.0	.0	.0	.0	.0	1.0
WSW	.0	3.0	.0	.0	.0	.0	.0	3.0
W	.0	4.0	.0	.0	.0	.0	.0	4.0
WNW	.0	2.0	.0	.0	.0	.0	.0	2.0
NW	.0	2.0	.0	.0	.0	.0	.0	2.0
NNW	.0	3.0	.0	.0	.0	.0	.0	3.0
TOTAL	.0	141.0	28.0	1.0	.0	.0	.0	170.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 10.00
TEMPERATURE SENSOR SEPARATION (METERS) 50.90

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 9
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2199

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - OCT/NOV/DEC 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/10/ 1/ 0] TO [2002/12/31/23]

PASQUILL STABILITY: G

WIND FROM	WIND SPEED (MPH) CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	4.0	.0	.0	.0	.0	.0	4.0
NNE	.0	9.0	.0	.0	.0	.0	.0	9.0
NE	.0	1.0	.0	.0	.0	.0	.0	1.0
ENE	.0	1.0	.0	.0	.0	.0	.0	1.0
E	.0	.0	.0	.0	.0	.0	.0	.0
ESE	.0	.0	.0	.0	.0	.0	.0	.0
SE	.0	1.0	.0	.0	.0	.0	.0	1.0
SSE	.0	.0	.0	.0	.0	.0	.0	.0
S	.0	.0	.0	.0	.0	.0	.0	.0
SSW	.0	.0	.0	.0	.0	.0	.0	.0
SW	.0	.0	.0	.0	.0	.0	.0	.0
WSW	.0	.0	.0	.0	.0	.0	.0	.0
W	.0	.0	.0	.0	.0	.0	.0	.0
WNW	.0	.0	.0	.0	.0	.0	.0	.0
NW	.0	1.0	.0	.0	.0	.0	.0	1.0
NNW	.0	.0	.0	.0	.0	.0	.0	.0
TOTAL	.0	17.0	.0	.0	.0	.0	.0	17.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 10.00
TEMPERATURE SENSOR SEPARATION (METERS) 50.90

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 9
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2199

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - OCT/NOV/DEC 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/10/ 1/ 0] TO [2002/12/31/23]

PASQUILL STABILITY: ALL

WIND FROM	WIND SPEED (MPH) CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	61.0	176.0	83.0	.0	.0	.0	320.0
NNE	.0	132.0	272.0	95.0	1.0	.0	.0	500.0
NE	.0	90.0	51.0	1.0	.0	.0	.0	142.0
ENE	.0	41.0	6.0	.0	.0	.0	.0	47.0
E	.0	23.0	1.0	.0	.0	.0	.0	24.0
ESE	.0	24.0	.0	.0	.0	.0	.0	24.0
SE	.0	27.0	2.0	.0	.0	.0	.0	29.0
SSE	.0	61.0	41.0	2.0	.0	.0	.0	104.0
S	.0	90.0	133.0	41.0	.0	.0	.0	264.0
SSW	.0	54.0	52.0	4.0	.0	.0	.0	110.0
SW	.0	41.0	21.0	.0	.0	.0	.0	62.0
WSW	.0	34.0	27.0	4.0	.0	.0	.0	65.0
W	.0	38.0	57.0	2.0	.0	.0	.0	97.0
WNW	.0	23.0	83.0	23.0	.0	.0	.0	129.0
NW	.0	31.0	97.0	51.0	3.0	.0	.0	182.0
NNW	.0	17.0	73.0	10.0	.0	.0	.0	100.0
TOTAL	.0	787.0	1092.0	316.0	4.0	.0	.0	2199.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 10.00
TEMPERATURE SENSOR SEPARATION (METERS) 50.90

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 9
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2199

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - OCT/NOV/DEC 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/10/ 1/ 0] TO [2002/12/31/23]

PASQUILL STABILITY: A

	WIND SPEED (MPH)							
WIND FROM	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	.0	.0	4.0	9.0	1.0	1.0	15.0
NNE	.0	.0	.0	.0	.0	.0	.0	.0
NE	.0	.0	.0	.0	.0	.0	.0	.0
ENE	.0	.0	.0	.0	.0	.0	.0	.0
E	.0	.0	.0	.0	.0	.0	.0	.0
ESE	.0	.0	1.0	.0	.0	.0	.0	1.0
SE	.0	.0	.0	.0	.0	.0	.0	.0
SSE	.0	.0	2.0	4.0	.0	.0	.0	6.0
S	.0	.0	3.0	4.0	.0	.0	.0	7.0
SSW	.0	.0	.0	1.0	4.0	.0	.0	5.0
SW	.0	.0	.0	.0	.0	.0	.0	.0
WSW	.0	.0	.0	.0	.0	.0	.0	.0
W	.0	.0	.0	.0	1.0	.0	.0	1.0
WNW	.0	.0	.0	3.0	2.0	.0	.0	5.0
NW	.0	.0	1.0	3.0	8.0	8.0	1.0	21.0
NNW	.0	.0	.0	4.0	3.0	.0	.0	7.0
TOTAL	.0	.0	7.0	23.0	27.0	9.0	2.0	68.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 60.00
TEMPERATURE SENSOR SEPARATION (METERS) 50.90

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 68
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2140

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - OCT/NOV/DEC 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/10/ 1/ 0] TO [2002/12/31/23]

PASQUILL STABILITY: B

	WIND SPEED (MPH)							
WIND FROM	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	.0	.0	9.0	6.0	2.0	1.0	18.0
NNE	.0	.0	.0	.0	.0	.0	.0	.0
NE	.0	.0	.0	.0	.0	.0	.0	.0
ENE	.0	.0	.0	1.0	.0	.0	.0	1.0
E	.0	.0	.0	.0	.0	.0	.0	.0
ESE	.0	.0	.0	.0	.0	.0	.0	.0
SE	.0	.0	.0	.0	.0	.0	.0	.0
SSE	.0	.0	4.0	2.0	.0	.0	.0	6.0
S	.0	.0	3.0	1.0	1.0	.0	.0	5.0
SSW	.0	.0	1.0	.0	2.0	.0	.0	3.0
SW	.0	.0	.0	1.0	.0	.0	.0	1.0
WSW	.0	.0	.0	.0	.0	.0	.0	.0
W	.0	.0	.0	.0	1.0	.0	.0	1.0
WNW	.0	.0	.0	5.0	1.0	1.0	.0	7.0
NW	.0	.0	2.0	3.0	5.0	1.0	2.0	13.0
NNW	.0	.0	.0	3.0	3.0	.0	.0	6.0
TOTAL	.0	.0	10.0	25.0	19.0	4.0	3.0	61.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE)	60.00
TEMPERATURE SENSOR SEPARATION (METERS)	50.90
MISSING OBS. DURING THIS PERIOD (ALL STABILITIES)	68
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES)	2140

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - OCT/NOV/DEC 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/10/ 1/ 0] TO [2002/12/31/23]

PASQUILL STABILITY: C

WIND FROM	WIND SPEED (MPH) CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	.0	3.0	11.0	7.0	.0	.0	21.0
NNE	.0	.0	.0	1.0	.0	.0	.0	1.0
NE	.0	.0	.0	.0	.0	.0	.0	.0
ENE	.0	.0	.0	.0	.0	.0	.0	.0
E	.0	.0	.0	.0	.0	.0	.0	.0
ESE	.0	.0	.0	.0	.0	.0	.0	.0
SE	.0	.0	.0	.0	.0	.0	.0	.0
SSE	.0	.0	4.0	2.0	1.0	.0	.0	7.0
S	.0	.0	8.0	3.0	.0	.0	.0	11.0
SSW	.0	.0	1.0	2.0	.0	.0	.0	3.0
SW	.0	.0	.0	.0	.0	.0	.0	.0
WSW	.0	.0	.0	1.0	1.0	.0	.0	2.0
W	.0	.0	.0	5.0	3.0	.0	.0	8.0
WNW	.0	.0	1.0	3.0	5.0	4.0	.0	13.0
NW	.0	.0	3.0	6.0	3.0	4.0	4.0	20.0
NNW	.0	.0	2.0	1.0	.0	.0	.0	3.0
TOTAL	.0	.0	22.0	35.0	20.0	8.0	4.0	89.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 60.00
TEMPERATURE SENSOR SEPARATION (METERS) 50.90

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 68
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2140

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - OCT/NOV/DEC 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/10/ 1/ 0] TO [2002/12/31/23]

PASQUILL STABILITY: D

WIND FROM	WIND SPEED (MPH) CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	1.0	23.0	83.0	95.0	24.0	2.0	228.0
NNE	.0	7.0	44.0	94.0	15.0	2.0	.0	162.0
NE	.0	5.0	23.0	10.0	5.0	.0	.0	43.0
ENE	.0	5.0	10.0	1.0	.0	.0	.0	16.0
E	.0	1.0	6.0	.0	.0	.0	.0	7.0
ESE	.0	.0	3.0	.0	.0	.0	.0	3.0
SE	.0	5.0	6.0	13.0	.0	.0	.0	24.0
SSE	.0	7.0	11.0	12.0	7.0	.0	.0	37.0
S	.0	10.0	29.0	27.0	11.0	2.0	.0	79.0
SSW	.0	3.0	13.0	13.0	13.0	.0	.0	42.0
SW	.0	1.0	8.0	11.0	1.0	.0	.0	21.0
WSW	.0	4.0	8.0	12.0	12.0	2.0	.0	38.0
W	.0	3.0	9.0	19.0	13.0	1.0	.0	45.0
WNW	.0	.0	8.0	26.0	29.0	14.0	3.0	80.0
NW	.0	3.0	8.0	25.0	52.0	33.0	6.0	127.0
NNW	.0	.0	8.0	22.0	49.0	7.0	.0	86.0
TOTAL	.0	55.0	217.0	368.0	302.0	85.0	11.0	1038.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 60.00
TEMPERATURE SENSOR SEPARATION (METERS) 50.90

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 68
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2140

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - OCT/NOV/DEC 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/10/ 1/ 0] TO [2002/12/31/23]

PASQUILL STABILITY: E

	WIND SPEED (MPH)							
WIND FROM	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	6.0	32.0	22.0	2.0	.0	.0	62.0
NNE	.0	12.0	75.0	32.0	3.0	.0	.0	122.0
NE	.0	11.0	14.0	2.0	.0	.0	.0	27.0
ENE	.0	2.0	4.0	.0	.0	.0	.0	6.0
E	.0	5.0	3.0	.0	.0	.0	.0	8.0
ESE	.0	3.0	11.0	2.0	.0	.0	.0	16.0
SE	.0	3.0	13.0	6.0	.0	.0	.0	22.0
SSE	.0	6.0	26.0	14.0	1.0	.0	.0	47.0
S	.0	7.0	29.0	31.0	10.0	4.0	.0	81.0
SSW	.0	5.0	24.0	44.0	7.0	.0	.0	80.0
SW	.0	10.0	16.0	18.0	4.0	.0	.0	48.0
WSW	.0	10.0	11.0	10.0	.0	.0	.0	31.0
W	.0	3.0	14.0	10.0	.0	.0	.0	27.0
WNW	.0	4.0	11.0	27.0	19.0	2.0	1.0	64.0
NW	.0	1.0	10.0	15.0	8.0	5.0	.0	39.0
NNW	.0	3.0	5.0	8.0	9.0	.0	.0	25.0
TOTAL	.0	91.0	298.0	241.0	63.0	11.0	1.0	705.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 60.00
TEMPERATURE SENSOR SEPARATION (METERS) 50.90

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 68
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2140

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - OCT/NOV/DEC 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/10/ 1/ 0] TO [2002/12/31/23]

PASQUILL STABILITY: F

WIND FROM	WIND SPEED (MPH) CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	7.0	16.0	3.0	.0	.0	.0	26.0
NNE	.0	9.0	24.0	4.0	1.0	.0	.0	38.0
NE	.0	2.0	.0	.0	.0	.0	.0	2.0
ENE	.0	2.0	.0	.0	.0	.0	.0	2.0
E	.0	3.0	.0	.0	.0	.0	.0	3.0
ESE	.0	3.0	.0	.0	.0	.0	.0	3.0
SE	.0	3.0	.0	.0	.0	.0	.0	3.0
SSE	.0	4.0	1.0	.0	.0	.0	.0	5.0
S	.0	7.0	10.0	6.0	.0	.0	.0	23.0
SSW	.0	2.0	9.0	2.0	.0	.0	.0	13.0
SW	.0	3.0	7.0	1.0	.0	.0	.0	11.0
WSW	.0	7.0	5.0	.0	.0	.0	.0	12.0
W	.0	3.0	2.0	1.0	.0	.0	.0	6.0
WNW	.0	4.0	.0	.0	.0	.0	.0	4.0
NW	.0	3.0	1.0	.0	.0	.0	.0	4.0
NNW	.0	5.0	2.0	.0	.0	.0	.0	7.0
TOTAL	.0	67.0	77.0	17.0	1.0	.0	.0	162.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 60.00
TEMPERATURE SENSOR SEPARATION (METERS) 50.90

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 68
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2140

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - OCT/NOV/DEC 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/10/ 1/ 0] TO [2002/12/31/23]

PASQUILL STABILITY: G

WIND FROM	WIND SPEED (MPH) CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	1.0	.0	.0	.0	.0	.0	1.0
NNE	.0	2.0	3.0	.0	.0	.0	.0	5.0
NE	.0	2.0	.0	.0	.0	.0	.0	2.0
ENE	.0	.0	.0	.0	.0	.0	.0	.0
E	.0	1.0	.0	.0	.0	.0	.0	1.0
ESE	.0	.0	.0	.0	.0	.0	.0	.0
SE	.0	.0	.0	.0	.0	.0	.0	.0
SSE	.0	1.0	.0	.0	.0	.0	.0	1.0
S	.0	1.0	.0	.0	.0	.0	.0	1.0
SSW	.0	2.0	.0	.0	.0	.0	.0	2.0
SW	.0	2.0	.0	.0	.0	.0	.0	2.0
WSW	.0	1.0	.0	.0	.0	.0	.0	1.0
W	.0	.0	.0	.0	.0	.0	.0	.0
WNW	.0	.0	.0	.0	.0	.0	.0	.0
NW	.0	.0	.0	.0	.0	.0	.0	.0
NNW	.0	.0	1.0	.0	.0	.0	.0	1.0
TOTAL	.0	13.0	4.0	.0	.0	.0	.0	17.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 60.00
TEMPERATURE SENSOR SEPARATION (METERS) 50.90

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 68
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2140

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - OCT/NOV/DEC 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/10/ 1/ 0] TO [2002/12/31/23]

PASQUILL STABILITY: ALL

WIND FROM	WIND SPEED (MPH) CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	15.0	74.0	132.0	119.0	27.0	4.0	371.0
NNE	.0	30.0	146.0	131.0	19.0	2.0	.0	328.0
NE	.0	20.0	37.0	12.0	5.0	.0	.0	74.0
ENE	.0	9.0	14.0	2.0	.0	.0	.0	25.0
E	.0	10.0	9.0	.0	.0	.0	.0	19.0
ESE	.0	6.0	15.0	2.0	.0	.0	.0	23.0
SE	.0	11.0	19.0	19.0	.0	.0	.0	49.0
SSE	.0	18.0	48.0	34.0	9.0	.0	.0	109.0
S	.0	25.0	82.0	72.0	22.0	6.0	.0	207.0
SSW	.0	12.0	48.0	62.0	26.0	.0	.0	148.0
SW	.0	16.0	31.0	31.0	5.0	.0	.0	83.0
WSW	.0	22.0	24.0	23.0	13.0	2.0	.0	84.0
W	.0	9.0	25.0	35.0	18.0	1.0	.0	88.0
WNW	.0	8.0	20.0	64.0	56.0	21.0	4.0	173.0
NW	.0	7.0	25.0	52.0	76.0	51.0	13.0	224.0
NNW	.0	8.0	18.0	38.0	64.0	7.0	.0	135.0
TOTAL	.0	226.0	635.0	709.0	432.0	117.0	21.0	2140.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 60.00
TEMPERATURE SENSOR SEPARATION (METERS) 50.90

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 68
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2140

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - OCT/NOV/DEC 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/10/ 1/ 0] TO [2002/12/31/23]

PASQUILL STABILITY: A

	WIND SPEED (MPH)							
WIND FROM	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	.0	.0	.0	.0	.0	.0	.0
NNE	.0	.0	.0	.0	.0	.0	.0	.0
NE	.0	.0	.0	.0	.0	.0	.0	.0
ENE	.0	.0	.0	.0	.0	.0	.0	.0
E	.0	.0	.0	.0	.0	.0	.0	.0
ESE	.0	.0	.0	.0	.0	.0	.0	.0
SE	.0	.0	.0	.0	.0	.0	.0	.0
SSE	.0	.0	.0	.0	.0	.0	.0	.0
S	.0	.0	.0	.0	.0	.0	.0	.0
SSW	.0	.0	.0	.0	.0	.0	.0	.0
SW	.0	.0	.0	.0	.0	.0	.0	.0
WSW	.0	.0	.0	.0	.0	.0	.0	.0
W	.0	.0	.0	.0	.0	.0	.0	.0
WNW	.0	.0	.0	.0	.0	2.0	1.0	3.0
NW	.0	.0	.0	.0	.0	.0	.0	.0
NNW	.0	.0	.0	.0	.0	.0	.0	.0
TOTAL	.0	.0	.0	.0	.0	2.0	1.0	3.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 122.00
TEMPERATURE SENSOR SEPARATION (METERS) 112.00

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 9
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2199

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - OCT/NOV/DEC 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/10/ 1/ 0] TO [2002/12/31/23]

PASQUILL STABILITY: B

WIND FROM	WIND SPEED (MPH) CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	.0	.0	.0	.0	.0	.0	.0
NNE	.0	.0	.0	.0	.0	.0	.0	.0
NE	.0	.0	.0	.0	.0	.0	.0	.0
ENE	.0	.0	.0	.0	.0	.0	.0	.0
E	.0	.0	.0	.0	.0	.0	.0	.0
ESE	.0	.0	.0	.0	.0	.0	.0	.0
SE	.0	.0	.0	1.0	.0	.0	.0	1.0
SSE	.0	.0	.0	3.0	.0	.0	.0	3.0
S	.0	.0	.0	.0	.0	.0	.0	.0
SSW	.0	.0	.0	.0	.0	.0	.0	.0
SW	.0	.0	.0	.0	.0	.0	.0	.0
WSW	.0	.0	.0	.0	.0	.0	.0	.0
W	.0	.0	.0	1.0	.0	.0	.0	1.0
WNW	.0	.0	.0	1.0	.0	3.0	2.0	6.0
NW	.0	.0	.0	.0	.0	.0	.0	.0
NNW	.0	.0	.0	.0	.0	.0	.0	.0
TOTAL	.0	.0	.0	6.0	.0	3.0	2.0	11.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 122.00
TEMPERATURE SENSOR SEPARATION (METERS) 112.00

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 9
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2199

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - OCT/NOV/DEC 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/10/ 1/ 0] TO [2002/12/31/23]

PASQUILL STABILITY: C

	WIND SPEED (MPH)							
WIND FROM	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	.0	.0	.0	.0	.0	.0	.0
NNE	.0	.0	.0	.0	.0	.0	.0	.0
NE	.0	.0	.0	.0	.0	.0	.0	.0
ENE	.0	.0	.0	.0	.0	.0	.0	.0
E	.0	.0	.0	1.0	.0	.0	.0	1.0
ESE	.0	.0	.0	.0	.0	.0	.0	.0
SE	.0	.0	1.0	1.0	.0	.0	.0	2.0
SSE	.0	.0	.0	1.0	.0	.0	.0	1.0
S	.0	.0	.0	1.0	2.0	4.0	.0	7.0
SSW	.0	.0	.0	.0	.0	.0	.0	.0
SW	.0	.0	.0	.0	.0	.0	.0	.0
WSW	.0	.0	.0	.0	1.0	.0	.0	1.0
W	.0	.0	.0	3.0	2.0	.0	.0	5.0
WNW	.0	.0	1.0	1.0	6.0	2.0	3.0	13.0
NW	.0	.0	.0	5.0	1.0	1.0	.0	7.0
NNW	.0	.0	.0	3.0	8.0	2.0	.0	13.0
TOTAL	.0	.0	2.0	16.0	20.0	9.0	3.0	50.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 122.00
TEMPERATURE SENSOR SEPARATION (METERS) 112.00

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 9
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2199

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - OCT/NOV/DEC 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/10/ 1/ 0] TO [2002/12/31/23]

PASQUILL STABILITY: D

	WIND SPEED (MPH)							
WIND FROM	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	4.0	29.0	72.0	59.0	10.0	2.0	176.0
NNE	.0	2.0	14.0	20.0	13.0	.0	.0	49.0
NE	.0	3.0	9.0	4.0	.0	.0	.0	16.0
ENE	.0	2.0	14.0	5.0	.0	.0	.0	21.0
E	.0	3.0	2.0	4.0	1.0	.0	.0	10.0
ESE	.0	4.0	7.0	12.0	5.0	.0	.0	28.0
SE	.0	4.0	22.0	17.0	2.0	1.0	.0	46.0
SSE	.0	8.0	27.0	24.0	20.0	3.0	3.0	85.0
S	.0	4.0	14.0	24.0	26.0	8.0	.0	76.0
SSW	.0	2.0	4.0	13.0	7.0	.0	.0	26.0
SW	.0	.0	11.0	24.0	14.0	5.0	.0	54.0
WSW	.0	4.0	9.0	19.0	23.0	5.0	3.0	63.0
W	.0	1.0	10.0	47.0	62.0	26.0	17.0	163.0
WNW	.0	.0	13.0	36.0	70.0	51.0	23.0	193.0
NW	.0	1.0	10.0	18.0	56.0	13.0	5.0	103.0
NNW	.0	1.0	20.0	68.0	132.0	45.0	13.0	279.0
TOTAL	.0	43.0	215.0	407.0	490.0	167.0	66.0	1388.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE)	122.00
TEMPERATURE SENSOR SEPARATION (METERS)	112.00
MISSING OBS. DURING THIS PERIOD (ALL STABILITIES)	9
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES)	2199

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - OCT/NOV/DEC 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/10/ 1/ 0] TO [2002/12/31/23]

PASQUILL STABILITY: E

WIND FROM	WIND SPEED (MPH) CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	8.0	17.0	23.0	1.0	.0	.0	49.0
NNE	.0	14.0	9.0	3.0	.0	.0	.0	26.0
NE	.0	5.0	6.0	4.0	.0	.0	.0	15.0
ENE	.0	5.0	5.0	1.0	.0	.0	.0	11.0
E	.0	1.0	1.0	3.0	.0	.0	.0	5.0
ESE	.0	7.0	10.0	15.0	.0	.0	.0	32.0
SE	.0	5.0	24.0	21.0	11.0	3.0	.0	64.0
SSE	.0	3.0	32.0	43.0	13.0	.0	.0	91.0
S	.0	13.0	21.0	37.0	18.0	2.0	.0	91.0
SSW	.0	10.0	22.0	19.0	4.0	.0	.0	55.0
SW	.0	6.0	8.0	10.0	6.0	.0	.0	30.0
WSW	.0	7.0	5.0	15.0	.0	.0	.0	27.0
W	.0	2.0	8.0	15.0	6.0	4.0	.0	35.0
WNW	.0	4.0	1.0	10.0	1.0	1.0	1.0	18.0
NW	.0	2.0	8.0	11.0	3.0	1.0	.0	25.0
NNW	.0	5.0	28.0	41.0	10.0	1.0	.0	85.0
TOTAL	.0	97.0	205.0	271.0	73.0	12.0	1.0	659.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 122.00
TEMPERATURE SENSOR SEPARATION (METERS) 112.00

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 9
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2199

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - OCT/NOV/DEC 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/10/ 1/ 0] TO [2002/12/31/23]

PASQUILL STABILITY: F

WIND FROM	WIND SPEED (MPH) CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	2.0	6.0	1.0	.0	.0	.0	9.0
NNE	.0	1.0	6.0	.0	.0	.0	.0	7.0
NE	.0	.0	.0	.0	.0	.0	.0	.0
ENE	.0	.0	.0	.0	.0	.0	.0	.0
E	.0	1.0	.0	.0	.0	.0	.0	1.0
ESE	.0	2.0	1.0	.0	.0	.0	.0	3.0
SE	.0	3.0	2.0	.0	.0	.0	.0	5.0
SSE	.0	4.0	10.0	.0	.0	.0	.0	14.0
S	.0	5.0	6.0	.0	.0	.0	.0	11.0
SSW	.0	3.0	2.0	2.0	.0	.0	.0	7.0
SW	.0	3.0	3.0	1.0	.0	.0	.0	7.0
WSW	.0	.0	2.0	.0	.0	.0	.0	2.0
W	.0	1.0	1.0	.0	.0	.0	.0	2.0
WNW	.0	2.0	2.0	.0	.0	.0	.0	4.0
NW	.0	1.0	2.0	.0	.0	.0	.0	3.0
NNW	.0	.0	2.0	9.0	2.0	.0	.0	13.0
TOTAL	.0	28.0	45.0	13.0	2.0	.0	.0	88.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 122.00
TEMPERATURE SENSOR SEPARATION (METERS) 112.00

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 9
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2199

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - OCT/NOV/DEC 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/10/ 1/ 0] TO [2002/12/31/23]

PASQUILL STABILITY: G

	WIND SPEED (MPH)							
WIND FROM	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	.0	.0	.0	.0	.0	.0	.0
NNE	.0	.0	.0	.0	.0	.0	.0	.0
NE	.0	.0	.0	.0	.0	.0	.0	.0
ENE	.0	.0	.0	.0	.0	.0	.0	.0
E	.0	.0	.0	.0	.0	.0	.0	.0
ESE	.0	.0	.0	.0	.0	.0	.0	.0
SE	.0	.0	.0	.0	.0	.0	.0	.0
SSE	.0	.0	.0	.0	.0	.0	.0	.0
S	.0	.0	.0	.0	.0	.0	.0	.0
SSW	.0	.0	.0	.0	.0	.0	.0	.0
SW	.0	.0	.0	.0	.0	.0	.0	.0
WSW	.0	.0	.0	.0	.0	.0	.0	.0
W	.0	.0	.0	.0	.0	.0	.0	.0
WNW	.0	.0	.0	.0	.0	.0	.0	.0
NW	.0	.0	.0	.0	.0	.0	.0	.0
NNW	.0	.0	.0	.0	.0	.0	.0	.0
TOTAL	.0	.0	.0	.0	.0	.0	.0	.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 122.00
TEMPERATURE SENSOR SEPARATION (METERS) 112.00

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 9
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2199

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - OCT/NOV/DEC 2002

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M)
FOR PERIOD [Year/Month/Day/Hour]
[2002/10/ 1/ 0] TO [2002/12/31/23]

PASQUILL STABILITY: ALL

WIND FROM	WIND SPEED (MPH) CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	14.0	52.0	96.0	60.0	10.0	2.0	234.0
NNE	.0	17.0	29.0	23.0	13.0	.0	.0	82.0
NE	.0	8.0	15.0	8.0	.0	.0	.0	31.0
ENE	.0	7.0	19.0	6.0	.0	.0	.0	32.0
E	.0	5.0	3.0	8.0	1.0	.0	.0	17.0
ESE	.0	13.0	18.0	27.0	5.0	.0	.0	63.0
SE	.0	12.0	49.0	40.0	13.0	4.0	.0	118.0
SSE	.0	15.0	69.0	71.0	33.0	3.0	3.0	194.0
S	.0	22.0	41.0	62.0	46.0	14.0	.0	185.0
SSW	.0	15.0	28.0	34.0	11.0	.0	.0	88.0
SW	.0	9.0	22.0	35.0	20.0	5.0	.0	91.0
WSW	.0	11.0	16.0	34.0	24.0	5.0	3.0	93.0
W	.0	4.0	19.0	66.0	70.0	30.0	17.0	206.0
WNW	.0	6.0	17.0	48.0	77.0	59.0	30.0	237.0
NW	.0	4.0	20.0	34.0	60.0	15.0	5.0	138.0
NNW	.0	6.0	50.0	121.0	152.0	48.0	13.0	390.0
TOTAL	.0	168.0	467.0	713.0	585.0	193.0	73.0	2199.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE)	122.00
TEMPERATURE SENSOR SEPARATION (METERS)	112.00
MISSING OBS. DURING THIS PERIOD (ALL STABILITIES)	9
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES)	2199

NOTE: CALMS WERE DISTRIBUTED IN PROPORTION TO THE FREQUENCY OF WINDS IN THE LOWEST WIND SPEED GROUP WITH NON-ZERO ENTRIES IN EACH STABILITY.

ANNUAL

EFFLUENT AND WASTE DISPOSAL REPORT

F - REPORTABLE CHANGES

TO THE PROCESS CONTROL PROGRAM (PCP)

OFFSITE DOSE CALCULATION MANUAL (ODCM)

AND RADIOACTIVE WASTE SYSTEMS

G - REPORTABLE ITEMS

THE RADIOACTIVE LIQUID EFFLUENT MONITORING

INSTRUMENTATION

RADIOACTIVE GASEOUS EFFLUENT MONITORING

INSTRUMENTATION

H - UNPLANNED RELEASES

2002

ENTERGY NUCLEAR OPERATIONS, INC.
INDIAN POINT UNIT NOS. 1 & 2
DOCKET NOS. 50-03 & 50-247

SECTION F

Reportable Changes

A. Process Control Program (PCP)

Section 6.14.1 of the Indian Point Unit No. 2 Technical Specifications requires that the licensee initiated changes to the PCP be reported to the Commission in the Annual Radioactive Effluent Release Report. During the 2002 reporting period, the PCP at units 1/2 was updated as identified on page 2 of Section F (following page).

B. Offsite Dose Calculation Manual (ODCM)

Section 6.15.2 of the Indian Point Unit No. 2 Technical Specifications requires that changes to the ODCM be reported to the Commission in the Annual Radioactive Effluent Release Report. During the 2002 reporting period there were no changes to the ODCM.

C. Radioactive Waste Systems (RWS)

Section 6.16.1 of the Indian Point Unit No. 2 Technical Specifications requires that major changes to the RWS be reported to the Commission in the Annual Radioactive Effluent Release Report. During the 2002 reporting period there were no major changes made to the RWS.

PCP Rev 9 Justification Package

This report summarizes the changes incorporated into Revision 9 of the Process Control Program (PCP) at Indian Point units 1/2. This revision was a result of a Condition Report issued in 2001, which identified a lack of clarity of Technical Specification requirements in the PCP. The PCP was revised in August 2002, to incorporate the Technical Specification requirements into the PCP, and reflect changes as a result of the purchase of Indian Point by Entergy.

1. a. Description
Section 2.3 of Revision 8 was removed as being redundant to Section 2.4

b. Justification
Indian Point does not normally solidify waste on site. If solidification services are required they will be obtained from a vendor with an approved PCP.

c. Impact
None.

2. a. Description
Incorporated document titles in sections which referred to reference documents:

b. Justification
This information was added to further clarify documents referenced by the PCP.

c. Impact
None.

3. a. Description
Added sub sections to section 3.8 to incorporate Technical Specification requirements.

b. Justification
This information was moved from technical specifications and provides no new requirements, but clearly states current requirements.

c. Impact
None.

4. a. Description
Changed "On Site Review Committee" to "Station Nuclear Safety Committee". Also references to "Con Edison" were changed to "Entergy".

b. Justification
This information was revised to reflect the change in ownership of the plant.

c. Impact
None.

5. a. Description
Changed reference 7.5 to reflect the change from the Con Edison Quality Assurance program to the Entergy Quality Assurance Program.

b. Justification
This information was revised to reflect the change in ownership of the plant.

c. Impact
None.

ANNUAL

EFFLUENT AND WASTE DISPOSAL REPORT

G - REPORTABLE ITEMS

THE RADIOACTIVE LIQUID EFFLUENT MONITORING

INSTRUMENTATION

RADIOACTIVE GASEOUS EFFLUENT MONITORING

INSTRUMENTATION

H - UNPLANNED RELEASES

2002

ENTERGY NUCLEAR OPERATIONS, INC.
INDIAN POINT UNIT NOS. 1 & 2
DOCKET NOS. 50-03 & 50-247

SECTION G

Reportable Items

A. Radioactive Liquid Effluent Monitoring Instrumentation

None

B. Radioactive Gaseous Effluent Monitoring Instrumentation

None

ANNUAL

EFFLUENT AND WASTE DISPOSAL REPORT

H - UNPLANNED RELEASES

2002

ENTERGY NUCLEAR OPERATIONS, INC.
INDIAN POINT UNIT NOS. 1 & 2
DOCKET NOS. 50-03 & 50-247

SECTION H

Unplanned Releases

A. Unplanned Liquid Releases

None

B. Unplanned Gaseous Releases

None

C. Excessive Activity In Liquid Holdup Tanks

On November 7, 2002 after transferring approximately 42,200 gallons of water from the Reactor Coolant System (RCS) to the Refueling Water Storage Tank (RWST) a sample of the RWST indicated that the Technical Specification 3.9.A.5.a. permissible limit of 10 curies in the RWST had been exceeded (42.3 curies). In accordance with Technical Specification 3.9.A.5.b, the addition of radioactive liquid to the RWST was immediately suspended, and actions were taken to reduce the curie content below the limit. These actions were completed well within the allowed time (48 hours). The cause for this condition was attributed to use of a single RCS sample prior to pumping to the RWST, while RCS activity was changing during the evolution (due to loosened crud). RCS activity was significantly higher at the completion of the transfer of this water than measured prior to commencing. This event was captured in the corrective action program.