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**Fred Dacimo**  
Vice President, Operations

May 1, 2003

Re: Indian Point Unit Nos. 1 and 2  
Docket Nos. 50-3 and 50-247  
NL-03-068

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

Subject: Annual Effluent and Waste Disposal Report

Dear Sir:

Attached is the 2002 Annual Effluent and Waste Disposal Report for Entergy Nuclear Operation, Inc.'s (ENO's) Indian Point Unit Nos. 1 and 2.

No new regulatory commitments are being made by ENO in this correspondence.

Should you have any questions regarding this matter, please contact Mr. John McCann, Licensing Manager at (914) 734-5074.

Sincerely,

A handwritten signature in black ink, appearing to read "Fred R. Dacimo".

Fred R. Dacimo  
Vice President, Operations  
Indian Point Energy Center

Attachments

JE48

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, Senior 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

Senior Resident Inspector  
U.S. Nuclear Regulatory Commission  
P.O. Box 38  
Buchanan, NY 10511

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

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

NL-03-068  
May, 2003  
Re: Indian Point Unit Nos. 1 & 2  
Docket Nos. 50-03 & 50-247

ANNUAL  
EFFLUENT AND WASTE DISPOSAL REPORT  
2002

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

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  $2 \times 10^{-4}$  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 ( $\bar{E}$ )\* of the radionuclide mixture in releases of fission and activation gases for the four quarters in 2002 are provided below:

	<u>1st</u> <u>Quarter</u>	<u>2nd</u> <u>Quarter</u>	<u>3rd</u> <u>Quarter</u>	<u>4th</u> <u>Quarter</u>
Beta	0.054	0.050	0.081	0.157
Gamma	0.000	0.000	0.011	0.034

\* 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:

		1st	2nd	3 <sup>rd</sup>	4th	
		<u>Qtr.</u>	<u>Qtr.</u>	<u>Qtr.</u>	<u>Qtr.</u>	
a.	Liquid					
	Number of Batch Releases	20	37	26	53	
	Total Time Period of Batch Releases (Minutes)	5,090	7,360	6,310	16,600	
	Maximum Time Period of Batch Release (Minutes)	580	695	575	1,390	
	Average Time Period of Batch Release (Minutes)	255	199	243	314	
	Minimum Time Period of Batch Release (Minutes)	78	20	80	48	
	Average Stream Flow (cfs)					
		2000	5,433	1,942	1,972	3,402
		2001	6,886	7,062	8,475	7,651
		2002	5,944	7,710	7,592	4,785
b.	Gaseous					
	Number of Batch Releases	143	123	118	77	
	Total Time Period of Batch Releases (Minutes)	148,000	148,000	149,000	40,000	
	Maximum Time Period of Batch Release (Minutes)	130,000	131,000	132,000	32,200	
	Average Time Period of Batch Release (Minutes)	1,040	1,200	1,260	520	
	Minimum Time Period of Batch Release (Minutes)	3	8	2	1	

6. Abnormal Releases

a. Liquid - None

b. Gaseous - None



NL-03-068  
May, 2003  
Re: Indian Point Unit Nos. 1 & 2  
Docket Nos. 50-03 & 50-247

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 : QUARTER : EST. TOTAL:
:       : 1       : 2       : ERROR, % :
-----

```

A. FISSION AND ACTIVATION GASES

```

-----
: 1. TOTAL RELEASE      : Ci      : 9.25E+00 : 3.33E+00 : 1.50E+01 :
-----
: 2. AVERAGE RELEASE   : uCi/SEC: 1.19E+00 : 4.23E-01 :           :
:   RATE FOR PERIOD    :         :           :           :           :
-----
: 3. PERCENT OF TECHNICAL: %       : 1.71E-03 : 4.71E-04 :           :
:   SPECIFICATION LIMIT :         :           :           :           :
-----

```

B. IODINES

```

-----
: 1. TOTAL IODINE-131   : Ci      : 2.51E-04 : 2.55E-04 : 1.50E+01 :
-----
: 2. AVERAGE RELEASE   : uCi/SEC: 3.23E-05 : 3.24E-05 :           :
:   RATE FOR PERIOD    :         :           :           :           :
-----
: 3. PERCENT OF TECHNICAL: %       : 1.59E-04 : 1.59E-04 :           :
:   SPECIFICATION LIMIT :         :           :           :           :
-----

```

C. PARTICULATES

```

-----
: 1. PARTICULATES WITH  : Ci      : 1.46E-03 : 7.18E-04 : 1.50E+01 :
:   HALF-LIVES >8 DAYS :         :           :           :           :
-----
: 2. AVERAGE RELEASE   : uCi/SEC: 1.87E-04 : 9.13E-05 :           :
:   RATE FOR PERIOD    :         :           :           :           :
-----
: 3. PERCENT OF TECHNICAL: %       : 1.45E-06 : 2.19E-06 :           :
:   SPECIFICATION LIMIT :         :           :           :           :
-----
: 4. GROSS ALPHA        : Ci      : 2.10E-07 : 2.64E-07 :           :
:   RADIOACTIVITY      :         :           :           :           :
-----

```

D. TRITIUM

```

-----
: 1. TOTAL RELEASE      : Ci      : 2.50E+02 : 2.54E+02 : 1.50E+01 :
-----
: 2. AVERAGE RELEASE   : uCi/SEC: 3.22E+01 : 3.23E+01 :           :
:   RATE FOR PERIOD    :         :           :           :           :
-----
: 3. PERCENT OF TECHNICAL: %       : 7.90E-02 : 7.92E-02 :           :
:   SPECIFICATION LIMIT :         :           :           :           :
-----

```

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

CONTINUOUS MODE				BATCH MODE			
NUCLIDES	UNITS	QUARTER	QUARTER	QUARTER	QUARTER	QUARTER	QUARTER
RELEASED	:	1	2	1	2	1	2

1. FISSION AND ACTIVATION GASES

H3	Ci	2.50E+02	2.54E+02	0.00E+00	0.00E+00		
C14	Ci	2.00E+00	2.00E+00	0.00E+00	0.00E+00		
AR41	Ci	1.07E-08	6.00E-05	2.89E-02	3.45E-02		
KR85M	Ci	1.07E-08	5.18E-05	1.58E-03	6.43E-04		
KR85	Ci	0.00E+00	0.00E+00	5.74E+00	3.20E-03		
KR87	Ci	0.00E+00	2.86E-05	5.17E-04	1.79E-04		
KR88	Ci	0.00E+00	6.19E-05	1.80E-03	6.94E-04		
XE131M	Ci	0.00E+00	0.00E+00	5.48E-05	0.00E+00		
XE133M	Ci	0.00E+00	0.00E+00	6.28E-03	4.47E-04		
XE133	Ci	1.84E-03	4.55E-03	1.45E+00	1.27E+00		
XE135M	Ci	0.00E+00	1.30E-05	2.50E-04	1.02E-04		
XE135	Ci	8.93E-04	1.60E-03	1.98E-02	9.14E-03		
XE138	Ci	0.00E+00	0.00E+00	7.46E-05	4.85E-05		
TOTAL FOR PERIOD (ABOVE)	Ci	2.52E+02	2.56E+02	7.25E+00	1.32E+00		

CONTINUOUS MODE				BATCH MODE			
NUCLIDES	UNITS	QUARTER	QUARTER	QUARTER	QUARTER	QUARTER	QUARTER
RELEASED	:	1	2	1	2	1	2

2. IODINES

I131	Ci	2.51E-04	2.55E-04	0.00E+00	0.00E+00		
TOTAL FOR PERIOD (ABOVE)	Ci	2.51E-04	2.55E-04	0.00E+00	0.00E+00		

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

CONTINUOUS MODE				BATCH MODE			
: NUCLIDES	: UNITS	: QUARTER	: QUARTER	: QUARTER	: QUARTER	: QUARTER	: QUARTER
: RELEASED	:	: 1	: 2	: 1	: 2	: 1	: 2

3. PARTICULATES

: CO60	: Ci	: 1.78E-06	: 3.65E-07	: 0.00E+00	: 0.00E+00	: 0.00E+00	: 0.00E+00
: SR89	: Ci	: 0.00E+00	: 4.13E-07	: 0.00E+00	: 0.00E+00	: 0.00E+00	: 0.00E+00
: CS134	: Ci	: 4.05E-06	: 0.00E+00	: 0.00E+00	: 0.00E+00	: 0.00E+00	: 0.00E+00
: CS137	: Ci	: 3.47E-06	: 1.63E-05	: 0.00E+00	: 0.00E+00	: 0.00E+00	: 0.00E+00
:* NI63	: Ci	: 7.96E-08	: 3.60E-07	: 0.00E+00	: 0.00E+00	: 0.00E+00	: 0.00E+00
:* NB95	: Ci	: 3.69E-06	: 0.00E+00	: 0.00E+00	: 0.00E+00	: 0.00E+00	: 0.00E+00
:* RB88	: Ci	: 0.00E+00	: 0.00E+00	: 1.44E-03	: 7.01E-04	: 1.44E-03	: 7.01E-04
:* BA133	: Ci	: 1.25E-06	: 0.00E+00	: 0.00E+00	: 0.00E+00	: 0.00E+00	: 0.00E+00
: TOTAL FOR	:	:	:	:	:	:	:
: PERIOD	: Ci	: 1.43E-05	: 1.74E-05	: 1.44E-03	: 7.01E-04	: 1.44E-03	: 7.01E-04
: (ABOVE)	:	:	:	:	:	:	:

\* DENOTES SUPPLEMENTAL ISOTOPES

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

```
-----
: UNITS : QUARTER : QUARTER : EST. TOTAL :
:       : 3       : 4       : ERROR, %   :
-----
```

A. FISSION AND ACTIVATION GASES

```
-----
: 1. TOTAL RELEASE      : Ci      : 1.07E+02 : 1.61E+03 : 1.50E+01 :
-----
: 2. AVERAGE RELEASE   : uCi/SEC: 1.34E+01 : 2.02E+02 :           :
:   RATE FOR PERIOD    :         :           :           :           :
-----
: 3. PERCENT OF TECHNICAL: %       : 2.31E-02 : 3.32E-01 :           :
:   SPECIFICATION LIMIT :         :           :           :           :
-----
```

B. IODINES

```
-----
: 1. TOTAL IODINE-131   : Ci      : 2.62E-04 : 2.88E-04 : 1.50E+01 :
-----
: 2. AVERAGE RELEASE   : uCi/SEC: 3.29E-05 : 3.63E-05 :           :
:   RATE FOR PERIOD    :         :           :           :           :
-----
: 3. PERCENT OF TECHNICAL: %       : 1.62E-04 : 1.78E-04 :           :
:   SPECIFICATION LIMIT :         :           :           :           :
-----
```

C. PARTICULATES

```
-----
: 1. PARTICULATES WITH  : Ci      : 6.30E-04 : 8.46E-02 : 1.50E+01 :
:   HALF-LIVES >8 DAYS :         :           :           :           :
-----
: 2. AVERAGE RELEASE   : uCi/SEC: 7.93E-05 : 1.06E-02 :           :
:   RATE FOR PERIOD    :         :           :           :           :
-----
: 3. PERCENT OF TECHNICAL: %       : 5.40E-06 : 2.39E-06 :           :
:   SPECIFICATION LIMIT :         :           :           :           :
-----
: 4. GROSS ALPHA        : Ci      : 2.41E-07 : 1.45E-07 :           :
:   RADIOACTIVITY      :         :           :           :           :
-----
```

D. TRITIUM

```
-----
: 1. TOTAL RELEASE      : Ci      : 2.70E+02 : 1.05E+02 : 1.50E+01 :
-----
: 2. AVERAGE RELEASE   : uCi/SEC: 3.40E+01 : 1.33E+01 :           :
:   RATE FOR PERIOD    :         :           :           :           :
-----
: 3. PERCENT OF TECHNICAL: %       : 8.35E-02 : 3.25E-02 :           :
:   SPECIFICATION LIMIT :         :           :           :           :
-----
```

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

CONTINUOUS MODE				BATCH MODE			
NUCLIDES	UNITS	QUARTER	QUARTER	QUARTER	QUARTER	QUARTER	QUARTER
RELEASED	:	3	4	3	4	3	4
1. FISSION AND ACTIVATION GASES							
H3	Ci	2.70E+02	1.05E+02	0.00E+00	0.00E+00		
C14	Ci	2.00E+00	2.00E+00	0.00E+00	0.00E+00		
AR41	Ci	1.79E-04	3.70E-05	6.81E-02	1.63E-02		
KR85M	Ci	6.54E-05	3.44E-06	1.64E-01	3.12E-02		
KR85	Ci	0.00E+00	3.50E+02	2.24E+01	4.50E+01		
KR87	Ci	1.32E-05	1.78E-09	5.99E-03	2.71E-06		
KR88	Ci	3.99E-05	1.28E-08	1.40E-01	8.44E-06		
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	7.22E-05	1.44E-06		
XE135	Ci	1.68E-03	4.54E-01	1.96E+00	4.80E+00		
TOTAL FOR							
PERIOD	Ci	2.72E+02	1.53E+03	1.05E+02	1.79E+02		
(ABOVE)							

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

CONTINUOUS MODE				BATCH MODE			
NUCLIDES	UNITS	QUARTER	QUARTER	QUARTER	QUARTER	QUARTER	QUARTER
RELEASED		3	4	3	4	3	4

## 2. IODINES

I131	Ci	2.62E-04	2.88E-04	0.00E+00	0.00E+00		
TOTAL FOR							
PERIOD	Ci	2.62E-04	2.88E-04	0.00E+00	0.00E+00		
(ABOVE)							

CONTINUOUS MODE				BATCH MODE			
NUCLIDES	UNITS	QUARTER	QUARTER	QUARTER	QUARTER	QUARTER	QUARTER
RELEASED		3	4	3	4	3	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		
* RB88	Ci	0.00E+00	2.67E-02	5.87E-04	5.78E-02		
TOTAL FOR							
PERIOD	Ci	4.28E-05	2.67E-02	5.87E-04	5.78E-02		
(ABOVE)							

\* DENOTES SUPPLEMENTAL ISOTOPES

NL-03-068  
May, 2003  
Re: Indian Point Unit Nos. 1 & 2  
Docket Nos. 50-03 & 50-247

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 : QUARTER : EST. TOTAL:
:       : 1       : 2       : ERROR, % :
-----

```

A. FISSION AND ACTIVATION PRODUCTS

```

-----
: 1. TOTAL RELEASE (EXCL.: Ci : 1.81E-01 : 6.98E-02 : 1.50E+01 :
: TRIT., GASES, ALPHA): : : : :
-----
: 2. AVERAGE DILUTED :uCi/ML : 5.45E-10 : 1.89E-10 :
: CONC. DURING PERIOD : : : :
-----
: 3. PERCENT OF : % : 7.54E-04 : 5.30E-04 :
: APPLICABLE LIMIT : : : :
-----

```

B. TRITIUM

```

-----
: 1. TOTAL RELEASE : Ci : 1.54E+02 : 1.43E+02 : 1.50E+01 :
-----
: 2. AVERAGE DILUTED :uCi/ml : 4.62E-07 : 3.86E-07 :
: CONC. DURING PERIOD : : : :
-----
: 3. PERCENT OF : % : 5.08E-03 : 6.28E-03 :
: APPLICABLE LIMIT : : : :
-----

```

C. DISSOLVED AND ENTRAINED GASES

```

-----
: 1. TOTAL RELEASE : Ci : 1.67E-02 : 0.00E+00 : 1.50E+01 :
-----
: 2. AVERAGE DILUTED :uCi/ml : 5.01E-11 : 0.00E+00 :
: CONC. DURING PERIOD : : : :
-----
: 3. PERCENT OF : % : 2.50E-05 : 0.00E+00 :
: APPLICABLE LIMIT : : : :
-----

```

D. GROSS ALPHA RADIOACTIVITY

```

-----
: 1. TOTAL RELEASE : Ci : 8.58E-05 : 5.85E-05 : 5.00E+01 :
-----

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-----
E. VOLUME WASTE RELEASED :LITERS : 6.27E+07 : 5.08E+07 : 1.00E+01 :
: (PRIOR TO DILUTION) : : : :
-----

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-----
F. VOLUME DILUTION WATER :LITERS : 3.33E+11 : 3.70E+11 : 1.00E+01 :
: USED DURING PERIOD : : : :
-----

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## EFFLUENT AND WASTE DISPOSAL 2002 ANNUAL REPORT

## LIQUID EFFLUENTS -- SUMMATION OF ALL RELEASES

CONTINUOUS MODE				BATCH MODE			
NUCLIDES	UNITS	QUARTER	QUARTER	QUARTER	QUARTER	QUARTER	QUARTER
RELEASED		1	2	1	2	1	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	UNITS	QUARTER	QUARTER	QUARTER	QUARTER	QUARTER	QUARTER
RELEASED		1	2	1	2	1	2

LIQUID EFFLUENTS (CONTD)

TOTAL FOR							
PERIOD	Ci	2.70E-01	2.02E-01	1.54E+02	1.43E+02		
(ABOVE)							

CONTINUOUS MODE				BATCH MODE			
NUCLIDES	UNITS	QUARTER	QUARTER	QUARTER	QUARTER	QUARTER	QUARTER
RELEASED		1	2	1	2	1	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 : QUARTER : EST. TOTAL :
:       : 3       : 4       : ERROR, %   :
-----

```

A. FISSION AND ACTIVATION PRODUCTS

```

-----
: 1. TOTAL RELEASE (EXCL.: Ci : 4.26E-02 : 1.48E-01 : 1.50E+01 :
: TRIT., GASES, ALPHA): : : : :
-----
: 2. AVERAGE DILUTED :uCi/ml : 1.02E-10 : 5.69E-10 :
: CONC. DURING PERIOD : : : :
-----
: 3. PERCENT OF : % : 4.42E-04 : 3.32E-03 :
: APPLICABLE LIMIT : : : :
-----

```

B. TRITIUM

```

-----
: 1. TOTAL RELEASE : Ci : 1.74E+02 : 5.94E+02 : 1.50E+01 :
-----
: 2. AVERAGE DILUTED :uCi/ml : 4.14E-07 : 2.28E-06 :
: CONC. DURING PERIOD : : : :
-----
: 3. PERCENT OF : % : 6.85E-03 : 3.61E-02 :
: APPLICABLE LIMIT : : : :
-----

```

C. DISSOLVED AND ENTRAINED GASES

```

-----
: 1. TOTAL RELEASE : Ci : 2.91E-02 : 6.70E-02 : 1.50E+01 :
-----
: 2. AVERAGE DILUTED :uCi/ml : 6.94E-11 : 2.57E-10 :
: CONC. DURING PERIOD : : : :
-----
: 3. PERCENT OF : % : 3.47E-05 : 1.29E-04 :
: APPLICABLE LIMIT : : : :
-----

```

D. GROSS ALPHA RADIOACTIVITY

```

-----
: 1. TOTAL RELEASE : Ci : 1.63E-03 : 5.46E-04 : 5.00E+01 :
-----

```

```

-----
E. VOLUME WASTE RELEASED :LITERS : 5.25E+07 : 5.33E+07 : 1.00E+01 :
: (PRIOR TO DILUTION) : : : :
-----

```

```

-----
F. VOLUME DILUTION WATER :LITERS : 4.20E+11 : 2.60E+11 : 1.00E+01 :
: USED DURING PERIOD : : : :
-----

```

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

		CONTINUOUS MODE		BATCH MODE	
NUCLIDES	UNITS	QUARTER	QUARTER	QUARTER	QUARTER
RELEASED		3	4	3	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	UNITS	QUARTER	QUARTER	QUARTER	QUARTER	QUARTER	QUARTER
RELEASED		3	4	3	4	3	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	Ci	8.55E-02	2.06E-02	1.74E+02	5.94E+02		
(ABOVE)							

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

CONTINUOUS MODE				BATCH MODE			
NUCLIDES	UNITS	QUARTER	QUARTER	QUARTER	QUARTER	QUARTER	QUARTER
RELEASED		3	4	3	4	3	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

NL-03-068

May, 2003

Re: Indian Point Unit Nos. 1 & 2

Docket Nos. 50-03 & 50-247

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, sludges, etc.	m <sup>3</sup>	0	0	0	+/- 25
		Ci	0	0	0	+/- 25
b.	DAW	m <sup>3</sup>	1200	38.6	0	+/- 25
		Ci	6.75	14.7	0	+/- 25
c.	Irradiated components control rods, etc.	m <sup>3</sup>	0	0	3.4	+/- 25
		Ci	0	0	26.4	+/- 25

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.

NL-03-068  
May, 2003  
Re: Indian Point Unit Nos. 1 & 2  
Docket Nos. 50-03 & 50-247

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 the models presented in 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.\*

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.

\* Population data was based on the 1990 census.

2002

## INDIAN POINT UNITS 1 AND 2

## RADIOLOGICAL IMPACT ON MAN\*

(Reference Regulatory Guide 1.21, Page 12)

A. Maximum Individual Doses

(1) <u>Pathways</u> (Gaseous)	<u>Total Body</u> millirem	<u>Skin</u> millirem	<u>Thyroid</u> millirem	<u>Bone</u> millirem
a) Nobel Gas Immersion	3.96E-2	1.93E-1	N/A	N/A
b) Inhalation	5.95E-1	N/A	6.04E-1	1.73E-1
c) Ground Deposition	1.67E-3	1.96E-3	1.67E-3	1.67E-3
d) Milk Ingestion	1.25E-1	N/A	1.43E-1	4.27E-1
e) Meat Ingestion	1.73E-2	N/A	1.74E-2	7.00E-2
f) Vegetable Ingestion	4.16E-1	N/A	4.20E-1	1.33E+0

(2) Pathways (Liquid)

Maximum Dose to Individuals 2002 millirem:

	BONE	LIVER	TOTAL BODY	THYROID	KIDNEY	LUNG	GI	SKIN
<b>Shore Exposure</b>								
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
<b>Fresh Water Sport Fish</b>								
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
<b>Fresh Water Invertebrate</b>								
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
<b>Total All Pathways</b>								
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)

	<u>Total Body</u> (Man-rem)	<u>Thyroid*</u> (Man-rem)
a) Nobel Gas Immersion	1.1E+01	1.1E+01
b) Inhalation	3.0E+01	3.0E+01
c) Ground Deposition	2.0E-02	2.0E-02
d) Totals	4.1E+01	4.1E+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 2.58E-6 millirem

b) Gaseous-Total Body 2.65E-3 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 FROM	WIND SPEED (MPH)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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 &amp; 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)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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 FROM	WIND SPEED (MPH)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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 &amp; 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 FROM	WIND SPEED (MPH)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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 &amp; 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)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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 &amp; 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)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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 &amp; 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)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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 FROM	WIND SPEED (MPH)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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 FROM	WIND SPEED (MPH)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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 FROM	WIND SPEED (MPH)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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 &amp; 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 FROM	WIND SPEED (MPH)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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 FROM	WIND SPEED (MPH)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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 &amp; 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 FROM	WIND SPEED (MPH)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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 &amp; 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 FROM	WIND SPEED (MPH)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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 &amp; 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 FROM	WIND SPEED (MPH)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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 &amp; 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 FROM	WIND SPEED (MPH)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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 FROM	WIND SPEED (MPH)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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 &amp; 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 FROM	WIND SPEED (MPH)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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 &amp; 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 FROM	WIND SPEED (MPH)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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 &amp; 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)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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 FROM	WIND SPEED (MPH)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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 &amp; 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 FROM	WIND SPEED (MPH)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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 FROM	WIND SPEED (MPH)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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 FROM	WIND SPEED (MPH)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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 FROM	WIND SPEED (MPH)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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 &amp; 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 FROM	WIND SPEED (MPH)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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 &amp; 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 FROM	WIND SPEED (MPH)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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 FROM	WIND SPEED (MPH)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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 &amp; 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 FROM	WIND SPEED (MPH)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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 &amp; 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)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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 &amp; 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)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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 FROM	WIND SPEED (MPH)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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 FROM	WIND SPEED (MPH)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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 FROM	WIND SPEED (MPH)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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 FROM	WIND SPEED (MPH)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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 &amp; 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 FROM	WIND SPEED (MPH)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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 &amp; 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)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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 FROM	WIND SPEED (MPH)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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 FROM	WIND SPEED (MPH)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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 &amp; 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 FROM	WIND SPEED (MPH)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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 FROM	WIND SPEED (MPH)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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 &amp; 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 FROM	WIND SPEED (MPH)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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 &amp; 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 FROM	WIND SPEED (MPH)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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 FROM	WIND SPEED (MPH)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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 FROM	WIND SPEED (MPH)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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 FROM	WIND SPEED (MPH)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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 &amp; 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)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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 &amp; 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 FROM	WIND SPEED (MPH)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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 &amp; 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)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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 &amp; 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)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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 &amp; 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 FROM	WIND SPEED (MPH)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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 &amp; 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 FROM	WIND SPEED (MPH)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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 &amp; 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)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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 &amp; 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)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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 &amp; 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)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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 &amp; 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 FROM	WIND SPEED (MPH)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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 FROM	WIND SPEED (MPH)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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 FROM	WIND SPEED (MPH)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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 &amp; 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)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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 &amp; 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 FROM	WIND SPEED (MPH)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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 &amp; 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 FROM	WIND SPEED (MPH)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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 FROM	WIND SPEED (MPH)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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 &amp; 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)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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 FROM	WIND SPEED (MPH)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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)							TOTAL
	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	
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

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



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 there were no changes to the PCP.

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.

SECTION G

Reportable Items

A. Radioactive Liquid Effluent Monitoring Instrumentation

None

B. Radioactive Gaseous Effluent Monitoring Instrumentation

None

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 while draining the Reactor Coolant System (RCS) to the Refueling Water Storage Tank (RWST) approximately 42,200 gallons of water was placed into the RWST. As a result, the quantity of radioactive material contained in the RWST exceeded the Technical Specification 3.9.A.5.a. permissible limit of 10 curies. At the time, radiochemistry sampling of the RWST indicated an activity of .262 uCi/cc resulting in 42.33 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. The cause for this condition was attributed to inadequate radiochemistry sampling of the RCS during the draindown.