

May, 1999

Re: Indian Point Unit Nos. 1 & 2  
Docket Nos. 50-03 & 50-247

ANNUAL  
EFFLUENT AND WASTE DISPOSAL REPORT  
1998

FACILITY: Indian Point Station (Units 1 and 2)

LICENSEE: Consolidated Edison Company of New York, 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 1998. The New York Power Authority, licensee of Indian Point Unit 3, will issue separate reports for the Indian Point Unit No. 3 facility.

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

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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 1998 are provided below:

	1st <u>Quarter</u>	2nd <u>Quarter</u>	3rd <u>Quarter</u>	4th <u>Quarter</u>
Beta	0.021	0.019	0.146	0.208
Gamma	0.001	0.000	0.127	0.388

\* 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

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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.

With the exception of the Unit No. 1 North Curtain Drain (NCD) and Sphere Foundation Drain Sump (SFDS) release paths samples of continuous discharges have been taken and analyzed in compliance with Table 4.10-1 of the Technical Specifications. The continuous release path samples and analyses associated with the NCD and SFDS were the subject of a Licensee Event Report (LER) 98-18 submitted to report improper composite sampling and analysis. Corrective actions associated with LER 98-18 have been initiated to preclude recurrence of this event. 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%.

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5. Batch Releases:

a.		1st <u>Qtr.</u>	2nd <u>Qtr.</u>	3rd <u>Qtr.</u>	4th <u>Qtr.</u>
	Liquid				
	Number of Batch Releases	13	2	23	30
	Total Time Period of Batch Releases (Minutes)	1079	250	4518	2553
	Maximum Time Period of Batch Release (Minutes)	105	155	957	105
	Average Time Period of Batch Release (Minutes)	83	125	196	85
	Minimum Time Period of Batch Release (Minutes)	53	95	50	32
	Average Stream Flow (cfs)	1996	-	-	34167
		1997	26800	26253	6053
		1998	n/a(1)	n/a(1)	n/a(1)

(1) This information obtained from the US Department of the Interior, is not available at this time.

b.		1st <u>Qtr.</u>	2nd <u>Qtr.</u>	3rd <u>Qtr.</u>	4th <u>Qtr.</u>
	Gaseous				
	Number of Batch Releases	103	106	216	219
	Total Time Period of Batch Releases (Minutes)	20691	16854	13985	17391
	Maximum Time Period of Batch Release (Minutes)	3810	1590	1335	300
	Average Time Period of Batch Release (Minutes)	201	159	65	79
	Minimum Time Period of Batch Release (Minutes)	1	1	1	1

6. Abnormal Releases

a. Liquid - One (1.16E-4Ci)

b. Gaseous - None

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B - GASEOUS EFFLUENTS

1998

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.  
INDIAN POINT UNIT NOS. 1 & 2  
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Con Edison

Indian Point Station

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GASEOUS EFFLUENTS -- SUMMATION OF ALL RELEASES

	UNITS	QUARTER	QUARTER	EST. TOTAL
		1	2	ERROR, %

A. FISSION AND ACTIVATION GASES

1. TOTAL RELEASE	Ci	1.57E-03	0.00E+00	1.50E+01
2. AVERAGE RELEASE	µCi/Sec	2.01E-04	0.00E+00	
RATE FOR PERIOD				
3. PERCENT OF TECHNICAL	%	3.18E-07	0.00E+00	
SPECIFICATION LIMIT				

B. IODINES

1. TOTAL IODINE-131	Ci	0.00E+00	0.00E+00	1.50E+01
2. AVERAGE RELEASE	µCi/Sec	0.00E+00	0.00E+00	
RATE FOR PERIOD				
3. PERCENT OF TECHNICAL	%	0.00E+00	0.00E+00	
SPECIFICATION LIMIT				

C. PARTICULATES

1. PARTICULATES WITH	Ci	1.30E-04	1.12E-04	1.50E+01
HALF-LIVES >8 DAYS				
2. AVERAGE RELEASE	µCi/Sec	1.67E-05	1.43E-05	
RATE FOR PERIOD				
3. PERCENT OF TECHNICAL	%	2.12E-05	1.70E-05	
SPECIFICATION LIMIT				
4. GROSS ALPHA	Ci	3.17E-07	3.52E-07	
RADIOACTIVITY				

D. TRITIUM

1. TOTAL RELEASE	Ci	1.33E-01	1.20E-01	1.50E+01
2. AVERAGE RELEASE	µCi/Sec	1.71E-02	1.53E-02	
RATE FOR PERIOD				
3. PERCENT OF TECHNICAL	%	4.21E-05	3.75E-05	
SPECIFICATION LIMIT				

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GASEOUS EFFLUENTS FOR ALL RELEASE POINTS

CONTINUOUS MODE

BATCH MODE

NUCLIDES	UNITS	QUARTER	QUARTER	QUARTER	QUARTER
RELEASED		1	2	1	2

1. FISSION AND ACTIVATION GASES

H3	Ci	1.33E-01	1.20E-01	0.00E+00	-----
C14	Ci	8.10E-05	0.00E+00	0.00E+00	-----
Xe133	Ci	0.00E+00	0.00E+00	1.48E-03	-----
TOTAL FOR					
PERIOD	Ci	1.33E-01	1.20E-01	1.48E-03	-----
(ABOVE)					

CONTINUOUS MODE

BATCH MODE

NUCLIDES	UNITS	QUARTER	QUARTER	QUARTER	QUARTER
RELEASED		1	2	1	2

2. IODINES

TOTAL FOR					
PERIOD	Ci	0.00E+00	0.00E+00	0.00E+00	-----
(ABOVE)					

CONTINUOUS MODE

BATCH MODE

NUCLIDES	UNITS	QUARTER	QUARTER	QUARTER	QUARTER
RELEASED		1	2	1	2

3. PARTICULATES

Fe59	Ci	4.99E-06	0.00E+00	0.00E+00	-----
Co58	Ci	2.67E-06	0.00E+00	0.00E+00	-----
Co60	Ci	6.58E-05	3.63E-05	0.00E+00	-----
Cs137	Ci	5.64E-05	7.57E-05	0.00E+00	-----
Ni63	Ci	0.00E+00	4.44E-07	0.00E+00	-----
TOTAL FOR					
PERIOD	Ci	1.30E-04	1.12E-04	0.00E+00	-----
(ABOVE)					

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CON EDISON

INDIAN POINT STATION

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GASEOUS EFFLUENTS -- SUMMATION OF ALL RELEASES

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

A. FISSION AND ACTIVATION GASES

: 1. TOTAL RELEASE	: Ci	: 6.08E-01	: 4.59E+00	: 1.50E+01 :
: 2. AVERAGE RELEASE	: $\mu$ Ci/Sec:	: 7.65E-02	: 5.78E-01	:
: RATE FOR PERIOD	:	:	:	:
: 3. PERCENT OF TECHNICAL:	%	: 1.73E-04	: 2.90E-03	:
: SPECIFICATION LIMIT :	:	:	:	:

B. IODINES

: 1. TOTAL IODINE-131	: Ci	: 0.00E+00	: 0.00E+00	: 1.50E+01 :
: 2. AVERAGE RELEASE	: $\mu$ Ci/Sec:	: 0.00E+00	: 0.00E+00	:
: RATE FOR PERIOD	:	:	:	:
: 3. PERCENT OF TECHNICAL:	%	: 0.00E+00	: 0.00E+00	:
: SPECIFICATION LIMIT :	:	:	:	:

C. PARTICULATES

: 1. PARTICULATES WITH	: Ci	: 5.08E-05	: 6.97E-05	: 1.50E+01 :
: HALF-LIVES >8 DAYS	:	:	:	:
: 2. AVERAGE RELEASE	: $\mu$ Ci/Sec:	: 6.39E-06	: 8.77E-06	:
: RATE FOR PERIOD	:	:	:	:
: 3. PERCENT OF TECHNICAL:	%	: 7.62E-06	: 9.10E-06	:
: SPECIFICATION LIMIT :	:	:	:	:
: 4. GROSS ALPHA	: Ci	: 2.83E-07	: 1.95E-07	:
: RADIOACTIVITY	:	:	:	:

D. TRITIUM

: 1. TOTAL RELEASE	: Ci	: 4.41E-02	: 9.70E-02	: 1.50E+01 :
: 2. AVERAGE RELEASE	: $\mu$ Ci/Sec:	: 5.54E-03	: 1.22E-02	:
: RATE FOR PERIOD	:	:	:	:
: 3. PERCENT OF TECHNICAL:	%	: 1.36E-05	: 2.99E-05	:
: SPECIFICATION LIMIT :	:	:	:	:



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**Con Edison**

**Indian Point Station**

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT 1998

GASEOUS EFFLUENTS FOR ALL RELEASE POINTS

CONTINUOUS MODE				BATCH MODE			
: NUCLIDES	: UNITS	: QUARTER	: QUARTER	: QUARTER	: QUARTER	:	:
: RELEASED	:	3	4	3	4	:	:
-----							
1. FISSION AND ACTIVATION GASES							
-----							
: H3	: Ci	: 4.41E-02	: 9.70E-02	: 0.00E+00	: 0.00E+00	:	:
-----							
: C14	: Ci	: 2.60E-01	: 2.00E+00	: 0.00E+00	: 0.00E+00	:	:
-----							
: Ar41	: Ci	: 1.07E-04	: 8.03E-04	: 4.46E-02	: 1.05E+00	:	:
-----							
: Kr85m	: Ci	: 0.00E+00	: 0.00E+00	: 1.35E-03	: 5.45E-02	:	:
-----							
: Kr85	: Ci	: 0.00E+00	: 0.00E+00	: 2.57E-03	: 0.00E+00	:	:
-----							
: Kr87	: Ci	: 0.00E+00	: 0.00E+00	: 1.06E-03	: 3.74E-02	:	:
-----							
: Kr88	: Ci	: 0.00E+00	: 0.00E+00	: 2.45E-03	: 8.09E-02	:	:
-----							
: Xe133m	: Ci	: 0.00E+00	: 0.00E+00	: 6.25E-04	: 1.66E-02	:	:
-----							
: Xe133	: Ci	: 0.00E+00	: 0.00E+00	: 2.73E-01	: 5.68E-01	:	:
-----							
: Xe135m	: Ci	: 0.00E+00	: 6.21E-05	: 2.27E-03	: 7.48E-02	:	:
-----							
: Xe135	: Ci	: 6.67E-05	: 3.17E-04	: 2.00E-02	: 6.88E-01	:	:
-----							
: Xe138	: Ci	: 0.00E+00	: 3.71E-05	: 7.13E-04	: 1.83E-02	:	:
-----							
: TOTAL FOR	:	:	:	:	:	:	:
: PERIOD	: Ci	: 3.04E-01	: 2.10E+00	: 3.48E-01	: 2.59E+00	:	:
: (ABOVE)	:	:	:	:	:	:	:
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EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT 1998

GASEOUS EFFLUENTS FOR ALL RELEASE POINTS

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

2. IODINES

TOTAL FOR					
PERIOD	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
(ABOVE)					

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

3. PARTICULATES

Co60	Ci	1.63E-05	7.39E-06	0.00E+00	0.00E+00
Cs137	Ci	3.46E-05	6.14E-05	0.00E+00	0.00E+00
Ni63	Ci	0.00E+00	9.44E-07	0.00E+00	0.00E+00
TOTAL FOR					
PERIOD	Ci	5.08E-05	6.97E-05	0.00E+00	0.00E+00
(ABOVE)					

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C - LIQUID EFFLUENTS  
1998

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.  
INDIAN POINT UNIT NOS. 1 & 2  
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Con Edison  
Indian Point Station  
EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT 1998  
LIQUID EFFLUENTS -- SUMMATION OF ALL RELEASES

	UNITS	QUARTER	QUARTER	EST. TOTAL
		1	2	ERROR, %

A. FISSION AND ACTIVATION PRODUCTS

1. TOTAL RELEASE (EXCL. TRIT., GASES, ALPHA)	Ci	9.50E-02	6.17E-02	1.50E+01
2. AVERAGE DILUTED CONC. DURING PERIOD	µCi/ml	6.32E-10	2.81E-10	
3. PERCENT OF APPLICABLE LIMIT	%	3.12E-03	2.48E-03	

B. TRITIUM

1. TOTAL RELEASE	Ci	8.54E+01	1.07E-02	1.50E+01
2. AVERAGE DILUTED CONC. DURING PERIOD	µCi/ml	5.68E-07	4.86E-11	
3. PERCENT OF APPLICABLE LIMIT	%	1.68E-02	1.99E-06	

C. DISSOLVED AND ENTRAINED GASES

1. TOTAL RELEASE	Ci	0.00E+00	0.00E+00	1.50E+01
2. AVERAGE DILUTED CONC. DURING PERIOD	µCi/ml	0.00E+00	0.00E+00	
3. PERCENT OF APPLICABLE LIMIT	%	0.00E+00	0.00E+00	

D. GROSS ALPHA RADIOACTIVITY

1. TOTAL RELEASE	Ci	0.00E+00	0.00E+00	5.00E+01
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E. VOLUME WASTE RELEASED (PRIOR TO DILUTION)	LITERS	1.19E+07	1.15E+07	1.00E+01
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F. VOLUME DILUTION WATER USED DURING PERIOD	LITERS	1.50E+11	2.20E+11	1.00E+01
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LIQUID EFFLUENTS FOR ALL RELEASE POINTS

CONTINUOUS MODE				BATCH MODE			
: NUCLIDES	: UNITS	: QUARTER	: QUARTER	: QUARTER	: QUARTER	:	:
: RELEASED	:	: 1	: 2	: 1	: 2	:	:
<hr/>							
: H3	: Ci	: 1.14E-02	: 1.07E-02	: 8.53E+01	: 0.00E+00	:	:
<hr/>							
: Cr51	: Ci	: 0.00E+00	: 0.00E+00	: 1.10E-04	: 0.00E+00	:	:
<hr/>							
: Mn54	: Ci	: 0.00E+00	: 0.00E+00	: 4.60E-05	: 1.86E-06	:	:
<hr/>							
: Fe55	: Ci	: 0.00E+00	: 3.92E-03	: 1.55E-02	: 0.00E+00	:	:
<hr/>							
: Co58	: Ci	: 0.00E+00	: 0.00E+00	: 6.30E-03	: 3.08E-06	:	:
<hr/>							
: Co60	: Ci	: 0.00E+00	: 0.00E+00	: 3.38E-03	: 8.22E-05	:	:
<hr/>							
: Ni63	: Ci	: 3.62E-04	: 9.10E-08	: 8.38E-03	: 0.00E+00	:	:
<hr/>							
: Sr90	: Ci	: 7.00E-04	: 4.70E-04	: 0.00E+00	: 0.00E+00	:	:
<hr/>							
: Cs134	: Ci	: 0.00E+00	: 0.00E+00	: 0.00E+00	: 5.02E-06	:	:
<hr/>							
: Cs137	: Ci	: 4.87E-02	: 5.72E-02	: 3.02E-04	: 2.62E-05	:	:
<hr/>							
: Sb124	: Ci	: 0.00E+00	: 0.00E+00	: 3.55E-03	: 0.00E+00	:	:
<hr/>							
: Sb125	: Ci	: 0.00E+00	: 0.00E+00	: 7.63E-03	: 0.00E+00	:	:
<hr/>							
: Co57	: Ci	: 0.00E+00	: 0.00E+00	: 1.09E-05	: 0.00E+00	:	:
<hr/>							
: TOTAL FOR	:	:	:	:	:	:	:
: PERIOD	: Ci	: 6.11E-02	: 7.23E-02	: 8.54E+01	: 1.18E-04	:	:
: (ABOVE)	:	:	:	:	:	:	:

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Con Edison  
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EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT 1998  
LIQUID EFFLUENTS -- SUMMATION OF ALL RELEASES

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

A. FISSION AND ACTIVATION PRODUCTS

: 1. TOTAL RELEASE (EXCL.: Ci	: 6.36E-02	: 5.50E-02	: 1.50E+01	:
: TRIT., GASES, ALPHA):	:	:	:	:
: 2. AVERAGE DILUTED :pCi/ml	: 1.83E-10	: 1.50E-10	:	:
: CONC. DURING PERIOD :	:	:	:	:
: 3. PERCENT OF : %	: 5.36E-04	: 4.45E-04	:	:
: APPLICABLE LIMIT :	:	:	:	:

B. TRITIUM

: 1. TOTAL RELEASE : Ci	: 1.33E+01	: 6.26E+01	: 1.50E+01	:
: 2. AVERAGE DILUTED :pCi/ml	: 3.82E-08	: 1.71E-07	:	:
: CONC. DURING PERIOD :	:	:	:	:
: 3. PERCENT OF : %	: 6.17E-04	: 2.51E-03	:	:
: APPLICABLE LIMIT :	:	:	:	:

C. DISSOLVED AND ENTRAINED GASES

: 1. TOTAL RELEASE : Ci	: 2.13E-05	: 0.00E+00	: 1.50E+01	:
: 2. AVERAGE DILUTED :pCi/ml	: 6.13E-14	: 0.00E+00	:	:
: CONC. DURING PERIOD :	:	:	:	:
: 3. PERCENT OF : %	: 3.07E-08	: 0.00E+00	:	:
: APPLICABLE LIMIT :	:	:	:	:

D. GROSS ALPHA RADIOACTIVITY

: 1. TOTAL RELEASE : Ci	: 0.00E+00	: 0.00E+00	: 5.00E+01	:
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E. VOLUME WASTE RELEASED : LITERS	: 3.01E+07	: 4.30E+07	: 1.00E+01	:
: (PRIOR TO DILUTION) :	:	:	:	:

F. VOLUME DILUTION WATER : LITERS	: 3.47E+11	: 3.67E+11	: 1.00E+01	:
: USED DURING PERIOD :	:	:	:	:

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**Indian Point Station**  
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LIQUID EFFLUENTS FOR ALL RELEASE POINTS

CONTINUOUS MODE				BATCH MODE			
NUCLIDES	UNITS	QUARTER	QUARTER	QUARTER	QUARTER		
RELEASED		3	4	3	4		
H3	Ci	1.03E-02	6.86E-02	1.33E+01	6.25E+01		
Mn54	Ci	0.00E+00	0.00E+00	8.53E-04	3.99E-04		
Fe55	Ci	1.93E-03	1.30E-06	4.71E-03	6.78E-03		
Co58	Ci	5.30E-05	0.00E+00	1.87E-03	7.11E-04		
Co60	Ci	6.72E-04	1.73E-07	1.63E-02	1.10E-02		
Ni63	Ci	5.15E-04	2.03E-04	7.85E-03	1.46E-02		
Sr89	Ci	7.07E-05	0.00E+00	0.00E+00	0.00E+00		
Sr90	Ci	4.72E-04	5.35E-04	3.56E-05	1.14E-04		
Ag110m	Ci	0.00E+00	0.00E+00	3.11E-04	9.59E-05		
I131	Ci	0.00E+00	0.00E+00	0.00E+00	1.94E-05		
Cs134	Ci	6.38E-05	1.13E-08	4.35E-04	3.11E-04		
Cs137	Ci	2.21E-02	6.87E-03	1.47E-03	4.16E-03		
Sb124	Ci	0.00E+00	0.00E+00	0.00E+00	1.43E-03		
Sb125	Ci	0.00E+00	0.00E+00	3.83E-03	7.73E-03		
Co57	Ci	0.00E+00	0.00E+00	3.30E-05	0.00E+00		
TOTAL FOR							
PERIOD	Ci	3.62E-02	7.62E-02	1.33E+01	6.26E+01		
(ABOVE)							

CONTINUOUS MODE				BATCH MODE			
NUCLIDES	UNITS	QUARTER	QUARTER	QUARTER	QUARTER		
RELEASED		3	4	3	4		
Xe133	Ci	0.00E+00	0.00E+00	2.13E-05	0.00E+00		

May, 1999

Re: Indian Point Unit Nos. 1 & 2  
Docket Nos. 50-03 & 50-247

ANNUAL  
EFFLUENT AND WASTE DISPOSAL REPORT

D - SOLID WASTE

1998

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.  
INDIAN POINT UNIT NOS. 1 & 2  
DOCKET NOS. 50-03 & 50-247  
MAY, 1999



May, 1999

Re: Indian Point Unit Nos. 1 & 2  
Docket Nos. 50-03 & 50-247

Solid Radwaste Disposal Report 1998. Solid Radwaste Shipped Offsite for Burial, Reprocessing, or Disposal (No irradiated fuel).

12 MONTH PERIOD

1.	<u>Type of Waste</u>	<u>Units</u>	<u>Class A</u>	<u>Class B</u>	<u>Class C</u>	<u>Error, %</u>
	a. Spent Resins, sludges, etc.	m <sup>3</sup> Ci	5.82 6.09	0 0	12.64 163.67	N/A 100
	b. DAW	m <sup>3</sup> Ci	997.68 3.92	0 0	0 0	N/A 100
	c. Irradiated components control rods, etc.	m <sup>3</sup> Ci	0 0	2.46 76.50	10.49 2430	N/A 100
2.	Estimate of major nuclide composition in percent (by type of waste)					
a.	H-3 -	1	Ni-63 -		15	
	Cs-137 -	39	Co-58 -		3	
	Co-60 -	21	Other -		10	
	Fe-55 -	11				
b.	Co-60 -	27	Fe-55 -		1	
	Co-58 -	4	Cs-137 -		62	
	Ce-144 -	1	Ni-63 -		4	
			Cs-134 -		1	

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Re: Indian Point Unit Nos. 1 & 2  
Docket Nos. 50-03 & 50-247

3. Solid Waste Disposition

<u>Number of Shipments</u>	<u>Mode of Transportation</u>	<u>Destination</u>
8	Cask Truck	Barnwell, SC
30	Flat Bed Truck/Van	Oak Ridge, TN

4. Solid Waste Containers

A.	8	High Integrity Containers
B.	22	Cargo Container
C.	762	55 Gallon Metal Drums
D.	25	Metal Crates

5. Waste Class

<u>Container</u>	<u>Class A</u>	<u>Class B</u>	<u>Class C</u>
High Integrity Containers	1	1	6
Cargo Containers	22	0	0

Note: Item 4b is the number of containers shipped offsite for volume reduction not the total number of containers buried.

Note: Curies in item 1 are measured using the Radman Software Program.

Note: Item #4D is the number of containers shipped offsite for recycle.

May, 1999

Re: Indian Point Unit Nos. 1 & 2  
Docket Nos. 50-03 & 50-247

ANNUAL  
EFFLUENT AND WASTE DISPOSAL REPORT  
E - RADIOLOGICAL IMPACT ON MAN  
1998

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.  
INDIAN POINT UNIT NOS. 1 & 2  
DOCKET NOS. 50-03 & 50-247  
MAY, 1999

May, 1999

Re: Indian Point Unit Nos. 1 & 2  
Docket Nos. 50-03 & 50-247

### 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 LADTAP II 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 2.3 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.

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\* Population data was based on the 1990 census.

May, 1999

Re: Indian Point Unit Nos. 1 & 2  
Docket Nos. 50-03 & 50-247

1998

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) mRem	<u>Total Body</u> mRem	<u>Skin</u> mRem	<u>Thyroid</u> mRem	<u>Bone</u> Mrem
a)	Nobel Gas Immersion	4.76E-4	8.34E-4	N/A	N/A
b)	Inhalation	1.07E-3	N/A	1.07E-3	5.56E-3
c)	Ground Deposition	2.19E-3	2.57E-3	2.19E-3	2.19E-3
d)	Milk Ingestion	8.74E-3	N/A	8.71E-3	4.10E-2
e)	Meat Ingestion	1.34E-3	N/A	1.34E-3	6.69E-3
f)	Vegetable Ingestion	3.81E-2	N/A	3.79E-2	1.91E-1

(2) Pathways (Liquid)

a) All See Attached "LADTAP" Printout

N/A = Not Applicable

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

May, 1999

Re: Indian Point Unit Nos. 1 & 2  
Docket Nos. 50-03 & 50-247

1998

B. Population

(1)

Pathways (Gaseous)

	<u>Total Body</u> (Man-rem)	<u>Thyroid*</u> (Man-rem)
a) Nobel Gas Immersion	2.8E-3	2.8E-3
b) Inhalation	1.9E-1	1.9E-1
c) Ground Deposition	1.5E-1	1.5E-1
d) Totals	3.4E-1	3.4E-1

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

(2)

Pathways (Liquid)

a) All See the attached "LADTAP" printout.

Average Dose to Individuals

(1)

Pathways

a) Liquid-Total Body	1.63E-5 millirem
b) Gaseous-Total Body	2.19E-5 millirem

May, 1999

Re: Indian Point Unit Nos. 1 & 2  
Docket Nos. 50-03 & 50-247

Con Edison Indian Point Station

IP2 ANNUAL EFFLUENT REPORT 1998

- USNRC LADTAP II CODE

DISCHARGE=1.21E+03 CFS

SOURCE TERM MULTIPLIER=1.00E+00

50-MILE POPULATION=1.55E+07

FRACTION --- CATEGORY I=0.71

CATEGORY II=0.11

CATEGORY III=0.18

FRESHWATER SITE

SOURCE TERM FOLLOWS

GRIEF XE133 2.13E-05

NO INTERNAL RECONCENTRATION MODEL EMPLOYED

May, 1999

Re:Indian Point Unit Nos. 1 & 2  
Docket Nos. 50-03 & 50-247

\* \* \* CATEGORY I DOSE FACTORS \* \* \*

INGESTION DOSE FACTORS										SHORELINE		
(MREM/PCI INTAKE)										(MREM/HR) / (PCI/M**2)		
NUCLIDE	CURIE/YEAR	BONE	LIVER	TOTAL BODY	THYROID	KIDNEY	LUNG	GI-LLI	SKIN	TOTAL BODY	RECON	
1H	3	1.61E+02	0.00E+00	1.05E-07	1.05E-07	1.05E-07	1.05E-07	1.05E-07	0.00E+00	0.00E+00	1.00E+00	
24CR	51	1.10E-04	0.00E+00	0.00E+00	2.66E-09	1.59E-09	5.86E-10	3.53E-09	6.69E-07	2.60E-10	2.20E-10	1.00E+00
25MN	54	1.30E-03	0.00E+00	4.57E-06	8.72E-07	0.00E+00	1.36E-06	0.00E+00	1.40E-05	6.80E-09	5.80E-09	1.00E+00
26FE	55	3.28E-02	2.75E-06	1.90E-06	4.43E-07	0.00E+00	0.00E+00	1.06E-06	1.09E-06	0.00E+00	0.00E+00	1.00E+00
27CO	57	4.39E-05	0.00E+00	1.75E-07	2.91E-07	0.00E+00	0.00E+00	0.00E+00	4.44E-06	1.00E-09	9.10E-10	1.00E+00
27CO	58	8.94E-03	0.00E+00	7.45E-07	1.67E-06	0.00E+00	0.00E+00	0.00E+00	1.51E-05	8.20E-09	7.00E-09	1.00E+00
27CO	60	3.14E-02	0.00E+00	2.14E-06	4.72E-06	0.00E+00	0.00E+00	0.00E+00	4.02E-05	2.00E-08	1.70E-08	1.00E+00
28NI	63	3.19E-02	1.30E-04	9.01E-06	4.36E-06	0.00E+00	0.00E+00	0.00E+00	1.88E-06	0.00E+00	0.00E+00	1.00E+00
38SR	89	7.07E-05	3.08E-04	0.00E+00	8.84E-06	0.00E+00	0.00E+00	0.00E+00	4.94E-05	6.50E-13	5.60E-13	1.00E+00
38SR	90	2.33E-03	3.84E-03	0.00E+00	1.03E-03	0.00E+00	0.00E+00	0.00E+00	2.19E-04	0.00E+00	0.00E+00	1.00E+00
47AG	110M	4.07E-04	1.60E-07	1.48E-07	8.79E-08	0.00E+00	2.91E-07	0.00E+00	6.04E-05	2.10E-08	1.80E-08	1.00E+00
53I	131	1.94E-05	4.16E-06	5.95E-06	3.41E-06	1.95E-03	1.02E-05	0.00E+00	1.57E-06	3.40E-09	2.80E-09	1.00E+00
55CS	134	8.15E-04	6.22E-05	1.48E-04	1.21E-04	0.00E+00	4.79E-05	1.59E-05	2.59E-06	1.40E-08	1.20E-08	1.00E+00
55CS	137	1.41E-01	7.97E-05	1.09E-04	7.14E-05	0.00E+00	3.70E-05	1.23E-05	2.11E-06	4.90E-09	4.20E-09	1.00E+00
51SB	124	4.98E-03	2.80E-06	5.29E-08	1.11E-06	6.79E-09	0.00E+00	2.18E-06	7.95E-05	1.50E-08	1.30E-08	1.00E+00
51SB	125	1.92E-02	1.79E-06	2.00E-08	4.26E-07	1.82E-09	0.00E+00	1.38E-06	1.97E-05	3.50E-09	3.10E-09	1.00E+00

\* \* \* CATEGORY II DOSE FACTORS \* \* \*

INGESTION DOSE FACTORS										SHORELINE		
(MREM/PCI INTAKE)										(MREM/HR) / (PCI/M**2)		
NUCLIDE	CURIE/YEAR	BONE	LIVER	TOTAL BODY	THYROID	KIDNEY	LUNG	GI-LLI	SKIN	TOTAL BODY	RECON	
1H	3	1.61E+02	0.00E+00	1.06E-07	1.06E-07	1.06E-07	1.06E-07	1.06E-07	0.00E+00	0.00E+00	1.00E+00	
24CR	51	1.10E-04	0.00E+00	0.00E+00	3.60E-09	2.00E-09	7.89E-10	5.14E-09	6.05E-07	2.60E-10	2.20E-10	1.00E+00
25MN	54	1.30E-03	0.00E+00	5.90E-06	1.17E-06	0.00E+00	1.76E-06	0.00E+00	1.21E-05	6.80E-09	5.80E-09	1.00E+00
26FE	55	3.28E-02	3.78E-06	2.68E-06	6.25E-07	0.00E+00	0.00E+00	1.70E-06	1.16E-06	0.00E+00	0.00E+00	1.00E+00
27CO	57	4.39E-05	0.00E+00	2.38E-07	3.99E-07	0.00E+00	0.00E+00	0.00E+00	4.44E-06	1.00E-09	9.10E-10	1.00E+00
27CO	58	8.94E-03	0.00E+00	9.72E-07	2.24E-06	0.00E+00	0.00E+00	0.00E+00	1.51E-05	8.20E-09	7.00E-09	1.00E+00
27CO	60	3.14E-02	0.00E+00	2.81E-06	6.33E-06	0.00E+00	0.00E+00	0.00E+00	4.02E-05	2.00E-08	1.70E-08	1.00E+00
28NI	63	3.19E-02	1.77E-04	1.25E-05	6.00E-06	0.00E+00	0.00E+00	0.00E+00	1.99E-06	0.00E+00	0.00E+00	1.00E+00
38SR	89	7.07E-05	4.40E-04	0.00E+00	1.26E-05	0.00E+00	0.00E+00	0.00E+00	5.24E-05	6.50E-13	5.60E-13	1.00E+00
38SR	90	2.33E-03	4.48E-03	0.00E+00	1.20E-03	0.00E+00	0.00E+00	0.00E+00	2.33E-04	0.00E+00	0.00E+00	1.00E+00
47AG	110M	4.07E-04	2.05E-07	1.94E-07	1.18E-07	0.00E+00	3.70E-07	0.00E+00	5.45E-05	2.10E-08	1.80E-08	1.00E+00
53I	131	1.94E-05	5.85E-06	8.19E-06	4.40E-06	2.39E-03	1.41E-05	0.00E+00	1.62E-06	3.40E-09	2.80E-09	1.00E+00
55CS	134	8.15E-04	8.37E-05	1.97E-04	9.14E-05	0.00E+00	6.26E-05	2.39E-05	2.45E-06	1.40E-08	1.20E-08	1.00E+00
55CS	137	1.41E-01	1.12E-04	1.49E-04	5.19E-05	0.00E+00	5.07E-05	1.97E-05	2.12E-06	4.90E-09	4.20E-09	1.00E+00
51SB	124	4.98E-03	3.87E-06	7.13E-08	1.51E-06	8.78E-09	0.00E+00	3.38E-06	7.80E-05	1.50E-08	1.30E-08	1.00E+00
51SB	125	1.92E-02	2.48E-06	2.71E-08	5.80E-07	2.37E-09	0.00E+00	2.18E-06	1.93E-05	3.50E-09	3.10E-09	1.00E+00



May, 1999

Re:Indian Point Unit Nos. 1 & 2  
Docket Nos. 50-03 & 50-247

* * * CATEGORY III DOSE FACTORS * * *											SHORELINE		
INGESTION DOSE FACTORS											(MREM/HR) / (PCI/M**2)		
(MREM/PCI INTAKE)											SKIN	TOTAL BODY	RECON
NUCLIDE	CURIE/YEAR	BONE	LIVER	TOTAL BODY	THYROID	KIDNEY	LUNG	GI-LLI					
1H	3	1.61E+02	0.00E+00	2.03E-07	2.03E-07	2.03E-07	2.03E-07	2.03E-07					
24CR	51	1.10E-04	0.00E+00	0.00E+00	8.90E-09	4.94E-09	1.35E-09	9.02E-09					
25MN	54	1.30E-03	0.00E+00	1.07E-05	2.85E-06	0.00E+00	3.00E-06	0.00E+00					
26FE	55	3.28E-02	1.15E-05	6.10E-06	1.89E-06	0.00E+00	0.00E+00	3.45E-06					
27CO	57	4.39E-05	0.00E+00	4.93E-07	9.98E-07	0.00E+00	0.00E+00	0.00E+00					
27CO	58	8.94E-03	0.00E+00	1.80E-06	5.51E-06	0.00E+00	0.00E+00	0.00E+00					
27CO	60	3.14E-02	0.00E+00	5.29E-06	1.56E-05	0.00E+00	0.00E+00	0.00E+00					
28NI	63	3.19E-02	5.38E-04	2.88E-05	1.83E-05	0.00E+00	0.00E+00	0.00E+00					
38SR	89	7.07E-05	1.32E-03	0.00E+00	3.77E-05	0.00E+00	0.00E+00	0.00E+00					
38SR	90	2.33E-03	1.13E-02	0.00E+00	3.03E-03	0.00E+00	0.00E+00	0.00E+00					
47AG	110M	4.07E-04	5.39E-07	3.64E-07	2.91E-07	0.00E+00	6.78E-07	0.00E+00					
53I	131	1.94E-05	1.72E-05	1.73E-05	9.83E-06	5.72E-03	2.84E-05	0.00E+00					
55CS	134	8.15E-04	2.34E-04	3.84E-04	8.10E-05	0.00E+00	1.19E-04	4.27E-05					
55CS	137	1.41E-01	3.27E-04	3.13E-04	4.62E-05	0.00E+00	1.02E-04	3.67E-05					
51SB	124	4.98E-03	1.11E-05	1.44E-07	3.89E-06	2.45E-08	0.00E+00	6.16E-06					
51SB	125	1.92E-02	7.16E-06	5.52E-08	1.50E-06	6.63E-09	0.00E+00	3.99E-06					
* * * CATEGORY IV DOSE FACTORS * * *											SHORELINE		
INGESTION DOSE FACTORS											(MREM/HR) / (PCI/M**2)		
(MREM/PCI INTAKE)											SKIN	TOTAL BODY	RECON
NUCLIDE	CURIE/YEAR	BONE	LIVER	TOTAL BODY	THYROID	KIDNEY	LUNG	GI-LLI					
1H	3	1.61E+02	0.00E+00	3.08E-07	3.08E-07	3.08E-07	3.08E-07	3.08E-07					
24CR	51	1.10E-04	0.00E+00	0.00E+00	1.41E-08	9.20E-09	2.01E-09	1.79E-08					
25MN	54	1.30E-03	0.00E+00	1.99E-05	4.51E-06	0.00E+00	4.41E-06	0.00E+00					
26FE	55	3.28E-02	1.39E-05	8.98E-06	2.40E-06	0.00E+00	0.00E+00	4.39E-06					
27CO	57	4.39E-05	0.00E+00	1.15E-06	1.87E-06	0.00E+00	0.00E+00	0.00E+00					
27CO	58	8.94E-03	0.00E+00	3.60E-06	8.98E-06	0.00E+00	0.00E+00	0.00E+00					
27CO	60	3.14E-02	0.00E+00	1.08E-05	2.55E-05	0.00E+00	0.00E+00	0.00E+00					
28NI	63	3.19E-02	6.34E-04	3.92E-05	2.20E-05	0.00E+00	0.00E+00	0.00E+00					
38SR	89	7.07E-05	2.51E-03	0.00E+00	7.20E-05	0.00E+00	0.00E+00	0.00E+00					
38SR	90	2.33E-03	1.25E-02	0.00E+00	3.37E-03	0.00E+00	0.00E+00	0.00E+00					
47AG	110M	4.07E-04	9.96E-07	7.27E-07	4.81E-07	0.00E+00	1.04E-06	0.00E+00					
53I	131	1.94E-05	3.59E-05	4.23E-05	1.86E-05	1.39E-02	4.94E-05	0.00E+00					
55CS	134	8.15E-04	3.77E-04	7.03E-04	7.10E-05	0.00E+00	1.81E-04	7.42E-05					
55CS	137	1.41E-01	5.22E-04	6.11E-04	4.33E-05	0.00E+00	1.64E-04	6.64E-05					
51SB	124	4.98E-03	2.14E-05	3.15E-07	6.63E-06	5.68E-08	0.00E+00	1.34E-05					
51SB	125	1.92E-02	1.23E-05	1.19E-07	2.53E-06	1.54E-08	0.00E+00	7.12E-06					
TOTAL NUMBER IN SOURCE TERM IS 16											TOTAL RELEASE IS 1.6128E+02		

May, 1999

Re: Indian Point Unit Nos. 1 & 2  
Docket Nos. 50-03 & 50-247

\* \* \* AS LOW AS REASONABLY ACHIEVABLE \* \* \*

C A T E G O R Y I D O S E S

DOSE (MREM PER YEAR INTAKE)

PATHWAY	SKIN	BONE	LIVER	TOTAL BODY	THYROID	KIDNEY	LUNG	GI-LLI
FISH		1.25E-02	1.37E-02	9.29E-03	6.09E-05	4.64E-03	1.59E-03	7.18E-04
INVERTEBRATE		3.82E-03	3.94E-03	2.52E-03	1.42E-05	1.25E-03	4.79E-04	2.02E-03
ALGAE		1.94E-08	1.46E-08	1.18E-08	3.08E-11	4.91E-09	1.81E-09	3.84E-09
DRINKING		4.52E-13	6.05E-13	5.49E-13	3.12E-13	4.08E-13	3.45E-13	3.68E-13
SHORELINE	6.06E-04	5.19E-04	5.19E-04	5.19E-04	5.19E-04	5.19E-04	5.19E-04	5.19E-04
SWIMMING	0.00E+00	3.14E-06	3.14E-06	3.14E-06	3.14E-06	3.14E-06	3.14E-06	3.14E-06
BOATING	0.00E+00	3.14E-06	3.14E-06	3.14E-06	3.14E-06	3.14E-06	3.14E-06	3.14E-06
TOTAL	6.06E-04	1.69E-02	1.82E-02	1.23E-02	6.00E-04	6.42E-03	2.60E-03	3.27E-03

	USAGE (KG/YR,HR/YR)	DILUTION	TIME (HR)	SHOREWIDTH FACTOR=0.2
FISH	21.0	5.0	25.00	
INVERTEBRATE	5.0	5.0	25.00	
ALGAE	0.0	5.0	25.00	
DRINKING	0.0	500.0	112.00	
SHORELINE	50.0	5.0	1.00	
SWIMMING	50.0	5.0	1.00	
BOATING	100.0	5.0	1.00	

C A T E G O R Y I I D O S E S

DOSE (MREM PER YEAR INTAKE)

PATHWAY	SKIN	BONE	LIVER	TOTAL BODY	THYROID	KIDNEY	LUNG	GI-LLI
FISH		1.32E-02	1.43E-02	5.30E-03	4.72E-05	4.83E-03	1.92E-03	5.31E-04
INVERTEBRATE		3.91E-03	4.07E-03	1.56E-03	1.09E-05	1.29E-03	5.77E-04	1.37E-03
ALGAE		2.52E-08	1.99E-08	9.64E-09	3.17E-11	6.71E-09	2.87E-09	3.74E-09
DRINKING		5.93E-13	7.15E-13	5.10E-13	3.15E-13	4.47E-13	3.68E-13	3.69E-13
SHORELINE	8.12E-04	6.95E-04	6.95E-04	6.95E-04	6.95E-04	6.95E-04	6.95E-04	6.95E-04
SWIMMING	0.00E+00	6.28E-06	6.28E-06	6.28E-06	6.28E-06	6.28E-06	6.28E-06	6.28E-06
BOATING	0.00E+00	3.14E-06	3.14E-06	3.14E-06	3.14E-06	3.14E-06	3.14E-06	3.14E-06
TOTAL	8.12E-04	1.78E-02	1.90E-02	7.56E-03	7.62E-04	6.82E-03	3.20E-03	2.61E-03

	USAGE (KG/YR,HR/YR)	DILUTION	TIME (HR)	SHOREWIDTH FACTOR=0.2
FISH	16.0	5.0	25.00	
INVERTEBRATE	3.8	5.0	25.00	
ALGAE	0.0	5.0	25.00	
DRINKING	0.0	500.0	112.00	
SHORELINE	67.0	5.0	1.00	
SWIMMING	100.0	5.0	1.00	
BOATING	100.0	5.0	1.00	

May, 1999

Re:Indian Point Unit Nos. 1 & 2  
Docket Nos. 50-03 & 50-247

C A T E G O R Y I I I D O S E S

DOSE (MREM PER YEAR INTAKE)

PATHWAY	SKIN	BONE	LIVER	TOTAL BODY	THYROID	KIDNEY	LUNG	GI-LLI
FISH		1.65E-02	1.29E-02	2.31E-03	3.93E-05	4.18E-03	1.54E-03	2.21E-04
INVERTEBRATE		5.01E-03	3.78E-03	9.13E-04	9.38E-06	1.14E-03	4.90E-04	4.83E-04
ALGAE		6.98E-05	4.18E-05	1.32E-05	6.24E-08	1.35E-05	5.36E-06	3.33E-06
DRINKING		1.67E-09	1.45E-09	8.76E-10	6.03E-10	8.69E-10	7.02E-10	6.50E-10
SHORELINE	1.70E-04	1.45E-04	1.45E-04	1.45E-04	1.45E-04	1.45E-04	1.45E-04	1.45E-04
SWIMMING	0.00E+00	1.57E-06	1.57E-06	1.57E-06	1.57E-06	1.57E-06	1.57E-06	1.57E-06
BOATING	0.00E+00	3.14E-06	3.14E-06	3.14E-06	3.14E-06	3.14E-06	3.14E-06	3.14E-06
TOTAL	1.70E-04	2.17E-02	1.69E-02	3.38E-03	1.99E-04	5.49E-03	2.19E-03	8.58E-04

USAGE (KG/YR,HR/YR)

DILUTION

TIME(HR)

SHOREWIDTH FACTOR=0.2

FISH	6.9	5.0	25.00
INVERTEBRATE	1.7	5.0	25.00
ALGAE	0.0	5.0	25.00
DRINKING	0.0	500.0	112.00
SHORELINE	14.0	5.0	1.00
SWIMMING	25.0	5.0	1.00
BOATING	100.0	5.0	1.00

C A T E G O R Y I V D O S E S

DOSE (MREM PER YEAR INTAKE)

PATHWAY	SKIN	BONE	LIVER	TOTAL BODY	THYROID	KIDNEY	LUNG	GI-LLI
FISH		1.80E-03	1.82E-03	1.65E-04	4.45E-06	4.87E-04	2.01E-04	1.66E-05
INVERTEBRATE		4.25E-04	4.24E-04	5.98E-05	8.46E-07	1.07E-04	4.84E-05	2.46E-05
ALGAE		9.88E-08	8.13E-08	1.39E-08	1.02E-10	2.16E-08	9.59E-09	3.18E-09
DRINKING		2.29E-12	2.55E-12	1.20E-12	9.17E-13	1.34E-12	1.09E-12	9.59E-13
SHORELINE	3.64E-05	3.11E-05	3.11E-05	3.11E-05	3.11E-05	3.11E-05	3.11E-05	3.11E-05
SWIMMING	0.00E+00	6.28E-13	6.28E-13	6.28E-13	6.28E-13	6.28E-13	6.28E-13	6.28E-13
BOATING	0.00E+00	1.57E-08	1.57E-08	1.57E-08	1.57E-08	1.57E-08	1.57E-08	1.57E-08
TOTAL	3.64E-05	2.26E-03	2.28E-03	2.56E-04	3.64E-05	6.25E-04	2.80E-04	7.24E-05

USAGE (KG/YR,HR/YR)

DILUTION

TIME(HR)

SHOREWIDTH FACTOR=0.2

FISH	0.5	5.0	25.00
INVERTEBRATE	0.1	5.0	25.00
ALGAE	0.0	5.0	25.00
DRINKING	0.0	500.0	112.00
SHORELINE	3.0	5.0	1.00
SWIMMING	0.0	5.0	1.00
BOATING	0.5	5.0	1.00

May, 1999

Re:Indian Point Unit Nos. 1 & 2  
Docket Nos. 50-03 & 50-247

LOCATION IS DOWNSTREAM \* \* \* SELECTED LOCATION \* \* \*

C A T E G O R Y I D O S E S		DOSE (MREM PER YEAR INTAKE)						
PATHWAY	SKIN	BONE	LIVER	TOTAL BODY	THYROID	KIDNEY	LUNG	GI-LLI
FISH		8.94E-03	9.79E-03	6.63E-03	4.35E-05	3.31E-03	1.14E-03	5.13E-04
INVERTEBRATE		2.73E-03	2.82E-03	1.80E-03	1.01E-05	8.93E-04	3.42E-04	1.44E-03
ALGAE		1.38E-08	1.04E-08	8.41E-09	2.20E-11	3.50E-09	1.29E-09	2.74E-09
DRINKING		3.23E-11	4.32E-11	3.92E-11	2.23E-11	2.92E-11	2.47E-11	2.64E-11
SHORELINE	4.33E-04	3.70E-04	3.70E-04	3.70E-04	3.70E-04	3.70E-04	3.70E-04	3.70E-04
SWIMMING	0.00E+00	2.24E-06	2.24E-06	2.24E-06	2.24E-06	2.24E-06	2.24E-06	2.24E-06
BOATING	0.00E+00	2.24E-06	2.24E-06	2.24E-06	2.24E-06	2.24E-06	2.24E-06	2.24E-06
TOTAL	4.33E-04	1.20E-02	1.30E-02	8.81E-03	4.28E-04	4.58E-03	1.86E-03	2.33E-03

USAGE (KG/YR,HR/YR)	DILUTION	TIME(HR)	SHOREWIDTH FACTOR=0.2
FISH 21.0	7.0	31.00	
INVERTEBRATE 5.0	7.0	31.00	
ALGAE 0.0	7.0	31.00	
DRINKING 0.0	7.0	19.00	
SHORELINE 50.0	7.0	7.00	
SWIMMING 50.0	7.0	7.00	
BOATING 100.0	7.0	7.00	

LOCATION IS DOWNSTREAM

C A T E G O R Y I I D O S E S		DOSE (MREM PER YEAR INTAKE)						
PATHWAY	SKIN	BONE	LIVER	TOTAL BODY	THYROID	KIDNEY	LUNG	GI-LLI
FISH		9.40E-03	1.02E-02	3.78E-03	3.37E-05	3.45E-03	1.37E-03	3.79E-04
INVERTEBRATE		2.79E-03	2.91E-03	1.11E-03	7.79E-06	9.21E-04	4.12E-04	9.79E-04
ALGAE		1.80E-08	1.42E-08	6.88E-09	2.26E-11	4.79E-09	2.05E-09	2.67E-09
DRINKING		4.24E-11	5.11E-11	3.65E-11	2.25E-11	3.20E-11	2.63E-11	2.64E-11
SHORELINE	5.80E-04	4.96E-04	4.96E-04	4.96E-04	4.96E-04	4.96E-04	4.96E-04	4.96E-04
SWIMMING	0.00E+00	4.49E-06	4.49E-06	4.49E-06	4.49E-06	4.49E-06	4.49E-06	4.49E-06
BOATING	0.00E+00	2.24E-06	2.24E-06	2.24E-06	2.24E-06	2.24E-06	2.24E-06	2.24E-06
TOTAL	5.80E-04	1.27E-02	1.36E-02	5.40E-03	5.45E-04	4.87E-03	2.29E-03	1.86E-03

USAGE (KG/YR,HR/YR)	DILUTION	TIME(HR)	SHOREWIDTH FACTOR=0.2
FISH 16.0	7.0	31.00	
INVERTEBRATE 3.8	7.0	31.00	
ALGAE 0.0	7.0	31.00	
DRINKING 0.0	7.0	19.00	
SHORELINE 67.0	7.0	7.00	
SWIMMING 100.0	7.0	7.00	
BOATING 100.0	7.0	7.00	

LOCATION IS DOWNSTREAM

May, 1999

Re:Indian Point Unit Nos. 1 & 2  
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C A T E G O R Y I I I D O S E S

DOSE (MREM PER YEAR INTAKE)

PATHWAY	SKIN	BONE	LIVER	TOTAL BODY	THYROID	KIDNEY	LUNG	GI-LLI
FISH		1.18E-02	9.23E-03	1.65E-03	2.81E-05	2.99E-03	1.10E-03	1.58E-04
INVERTEBRATE		3.58E-03	2.70E-03	6.52E-04	6.70E-06	8.14E-04	3.50E-04	3.45E-04
ALGAE		4.99E-05	2.99E-05	9.43E-06	4.44E-08	9.62E-06	3.83E-06	2.37E-06
DRINKING		1.19E-07	1.03E-07	6.26E-08	4.32E-08	6.21E-08	5.02E-08	4.65E-08
SHORELINE	1.21E-04	1.04E-04	1.04E-04	1.04E-04	1.04E-04	1.04E-04	1.04E-04	1.04E-04
SWIMMING	0.00E+00	1.12E-06	1.12E-06	1.12E-06	1.12E-06	1.12E-06	1.12E-06	1.12E-06
BOATING	0.00E+00	2.24E-06	2.24E-06	2.24E-06	2.24E-06	2.24E-06	2.24E-06	2.24E-06
TOTAL	1.21E-04	1.55E-02	1.21E-02	2.42E-03	1.42E-04	3.92E-03	1.56E-03	6.13E-04

	USAGE (KG/YR,HR/YR)	DILUTION	TIME (HR)	SHOREWIDTH FACTOR=0.2
FISH	6.9	7.0	31.00	
INVERTEBRATE	1.7	7.0	31.00	
ALGAE	0.0	7.0	31.00	
DRINKING	0.0	7.0	19.00	
SHORELINE	14.0	7.0	7.00	
SWIMMING	25.0	7.0	7.00	
BOATING	100.0	7.0	7.00	

LOCATION IS DOWNSTREAM

C A T E G O R Y I V D O S E S

DOSE (MREM PER YEAR INTAKE)

PATHWAY	SKIN	BONE	LIVER	TOTAL BODY	THYROID	KIDNEY	LUNG	GI-LLI
FISH		1.29E-03	1.30E-03	1.18E-04	3.18E-06	3.48E-04	1.43E-04	1.19E-05
INVERTEBRATE		3.03E-04	3.03E-04	4.27E-05	6.04E-07	7.63E-05	3.46E-05	1.76E-05
ALGAE		7.06E-08	5.81E-08	9.91E-09	7.26E-11	1.55E-08	6.85E-09	2.27E-09
DRINKING		1.64E-10	1.82E-10	8.61E-11	6.56E-11	9.59E-11	7.82E-11	6.85E-11
SHORELINE	2.60E-05	2.22E-05	2.22E-05	2.22E-05	2.22E-05	2.22E-05	2.22E-05	2.22E-05
SWIMMING	0.00E+00	4.49E-13	4.49E-13	4.49E-13	4.49E-13	4.49E-13	4.49E-13	4.49E-13
BOATING	0.00E+00	1.12E-08	1.12E-08	1.12E-08	1.12E-08	1.12E-08	1.12E-08	1.12E-08
TOTAL	2.60E-05	1.61E-03	1.63E-03	1.83E-04	2.60E-05	4.46E-04	2.00E-04	5.17E-05

	USAGE (KG/YR,HR/YR)	DILUTION	TIME (HR)	SHOREWIDTH FACTOR=0.2
FISH	0.5	7.0	31.00	
INVERTEBRATE	0.1	7.0	31.00	
ALGAE	0.0	7.0	31.00	
DRINKING	0.0	7.0	19.00	
SHORELINE	3.0	7.0	7.00	
SWIMMING	0.0	7.0	7.00	
BOATING	0.5	7.0	7.00	

May, 1999

Re:Indian Point Unit Nos. 1 & 2  
Docket Nos. 50-03 & 50-247

\* \* \* FISH CONSUMPTION POPULATION DOSES \* \* \*  
MAN-REM

SPORT HARVEST

-----DOSE (MAN-REM)-----

PATHWAY	AGE GROUP	USAGE	BONE	LIVER	TOTAL BODY	THYROID	KIDNEY	LUNG	GI-LLI
FISH	CATEGORY I	7.60E+04	3.18E-02	3.48E-02	2.36E-02	1.53E-04	1.18E-02	4.05E-03	1.82E-03
FISH	CATEGORY II	8.87E+03	5.12E-03	5.55E-03	2.06E-03	1.81E-05	1.88E-03	7.47E-04	2.06E-04
FISH	CATEGORY III	6.14E+03	1.03E-02	8.07E-03	1.44E-03	2.41E-05	2.61E-03	9.64E-04	1.38E-04
FISH	TOTAL	9.10E+04	4.72E-02	4.84E-02	2.71E-02	1.95E-04	1.63E-02	5.76E-03	2.16E-03

LOCATION DILUTION CATCH TIME(HR)-INCLUDES FOOD PROCESSING TIME OF 1.68E+02 HR POPULATION=1.55E+04  
7.00E+00 9.10E+04 1.68E+02

AVERAGE INDIVIDUAL CONSUMPTION (KG/YR) CATEGORY I=6.90E+00 CATEGORY II=5.20E+00 CATEGORY IV=2.20E+00

\* \* \* FISH CONSUMPTION POPULATION DOSES \* \* \*  
MAN-REM

COMMERCIAL HARVEST

-----DOSE (MAN-REM)-----

PATHWAY	AGE GROUP	USAGE	BONE	LIVER	TOTAL BODY	THYROID	KIDNEY	LUNG	GI-LLI
FISH	CATEGORY I	7.59E+07	1.12E-01	1.23E-01	8.30E-02	5.34E-04	4.15E-02	1.43E-02	6.39E-03
FISH	CATEGORY II	8.87E+06	1.80E-02	1.95E-02	7.25E-03	6.32E-05	6.61E-03	2.63E-03	7.24E-04
FISH	CATEGORY III	6.14E+06	3.63E-02	2.84E-02	5.08E-03	8.42E-05	9.20E-03	3.39E-03	4.85E-04
FISH	TOTAL	9.09E+07	1.66E-01	1.70E-01	9.53E-02	6.82E-04	5.73E-02	2.03E-02	7.60E-03

LOCATION DILUTION CATCH TIME(HR)-INCLUDES FOOD PROCESSING TIME OF 2.40E+02 HR POPULATION=1.55E+07  
7.00E+00 1.55E+05 2.40E+02

AVERAGE INDIVIDUAL CONSUMPTION (KG/YR) CATEGORY I=6.90E+00 CATEGORY II=5.20E+00 CATEGORY IV=2.20E+00

NEPA DOSES

NOTE--TOTAL NEPA DOSE INCLUDES SPORT CATCH

-----DOSE (MAN-REM)-----

PATHWAY	AGE GROUP	USAGE	BONE	LIVER	TOTAL BODY	THYROID	KIDNEY	LUNG	GI-LLI
FISH	CATEGORY I	2.05E+05	8.59E-02	9.41E-02	6.37E-02	4.11E-04	3.19E-02	1.09E-02	4.91E-03
FISH	CATEGORY II	2.40E+04	1.38E-02	1.50E-02	5.57E-03	4.86E-05	5.08E-03	2.02E-03	5.56E-04
FISH	CATEGORY III	1.66E+04	2.78E-02	2.18E-02	3.90E-03	6.48E-05	7.06E-03	2.61E-03	3.72E-04
FISH	TOTAL	2.46E+05	1.28E-01	1.31E-01	7.32E-02	5.25E-04	4.40E-02	1.56E-02	5.84E-03

May, 1999

Re:Indian Point Unit Nos. 1 & 2  
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\* \* \* INVERTEBRATE CONSUMPTION POPULATION DOSES \* \* \*  
MAN-REM

SPORT HARVEST

-----DOSE (MAN-REM)-----

PATHWAY	AGE GROUP	USAGE	BONE	LIVER	TOTAL BODY	THYROID	KIDNEY	LUNG	GI-LLI
INVER	CATEGORY I	8.33E+03	4.46E-03	4.60E-03	2.95E-03	1.65E-05	1.46E-03	5.60E-04	2.34E-03
INVER	CATEGORY II	9.68E+02	6.99E-04	7.26E-04	2.78E-04	1.94E-06	2.30E-04	1.03E-04	2.43E-04
INVER	CATEGORY III	6.97E+02	1.44E-03	1.09E-03	2.62E-04	2.68E-06	3.28E-04	1.41E-04	1.38E-04
INVER	TOTAL	1.00E+04	6.60E-03	6.42E-03	3.49E-03	2.11E-05	2.02E-03	8.04E-04	2.72E-03

LOCATION DILUTION CATCH TIME(HR)-INCLUDES FOOD PROCESSING TIME OF 1.68E+02 HR POPULATION=1.17E+04  
7.00E+00 1.00E+04 1.68E+02

AVERAGE INDIVIDUAL CONSUMPTION (KG/YR) CATEGORY I=1.00E+00 CATEGORY II=7.50E-01 CATEGORY IV=3.30E-01

\* \* \* INVERTEBRATE CONSUMPTION POPULATION DOSES \* \* \*  
MAN-REM

COMMERCIAL HARVEST

-----DOSE (MAN-REM)-----

PATHWAY	AGE GROUP	USAGE	BONE	LIVER	TOTAL BODY	THYROID	KIDNEY	LUNG	GI-LLI
INVER	CATEGORY I	1.10E+07	2.56E-03	2.64E-03	1.69E-03	9.46E-06	8.38E-04	3.21E-04	1.34E-03
INVER	CATEGORY II	1.28E+06	4.01E-04	4.17E-04	1.60E-04	1.11E-06	1.32E-04	5.92E-05	1.38E-04
INVER	CATEGORY III	9.21E+05	8.27E-04	6.22E-04	1.50E-04	1.53E-06	1.88E-04	8.09E-05	7.86E-05
INVER	TOTAL	1.32E+07	3.79E-03	3.68E-03	2.00E-03	1.21E-05	1.16E-03	4.61E-04	1.55E-03

LOCATION DILUTION CATCH TIME(HR)-INCLUDES FOOD PROCESSING TIME OF 2.40E+02 HR POPULATION=1.55E+07  
7.00E+00 1.00E+03 2.40E+02

AVERAGE INDIVIDUAL CONSUMPTION (KG/YR) CATEGORY I=1.00E+00 CATEGORY II=7.50E-01 CATEGORY IV=3.30E-01

NEPA DOSES

NOTE--TOTAL NEPA DOSE INCLUDES SPORT CATCH

-----DOSE (MAN-REM)-----

PATHWAY	AGE GROUP	USAGE	BONE	LIVER	TOTAL BODY	THYROID	KIDNEY	LUNG	GI-LLI
INVER	CATEGORY I	9.17E+03	4.91E-03	5.06E-03	3.25E-03	1.82E-05	1.61E-03	6.16E-04	2.57E-03
INVER	CATEGORY II	1.07E+03	7.69E-04	7.99E-04	3.06E-04	2.13E-06	2.53E-04	1.13E-04	2.67E-04
INVER	CATEGORY III	7.67E+02	1.59E-03	1.19E-03	2.89E-04	2.95E-06	3.61E-04	1.55E-04	1.51E-04
INVER	TOTAL	1.10E+04	7.26E-03	7.06E-03	3.84E-03	2.32E-05	2.22E-03	8.85E-04	2.99E-03

May, 1999

Re: Indian Point Unit Nos. 1 & 2  
Docket Nos. 50-03 & 50-247

\* \* \* POPULATION WATER CONSUMPTION DOSES \* \* \*

SUPPLIER-

-----DOSE (MAN-REM)-----

PATHWAY	AGE GROUP	USAGE	BONE	LIVER	TOTAL BODY	THYROID	KIDNEY	LUNG	GI-LLI
DRINKING	CATEGORY I	2.63E+02	7.73E-09	3.07E-09	2.34E-09	6.75E-11	9.83E-10	3.72E-10	2.60E-10
DRINKING	CATEGORY II	2.86E+01	1.13E-09	4.55E-10	2.15E-10	7.42E-12	1.44E-10	6.05E-11	2.94E-11
DRINKING	CATEGORY III	4.68E+01	5.40E-09	1.58E-09	5.27E-10	2.32E-11	4.73E-10	1.85E-10	5.79E-11
DRINKING	TOTAL	3.38E+02	1.42E-08	5.10E-09	3.09E-09	9.81E-11	1.60E-09	6.17E-10	3.48E-10

POPULATION=1.00E+00      DILUTION=1.00E+02      TRANSIT TIME=1.00E+06 HR (INCLUDING 24 HR FOR TREATMENT FACILITY)

AVERAGE INDIVIDUAL CONSUMPTION (L/YR)    CATEGORY I =3.70E+02      CATEGORY II=2.60E+02      CATEGORY III=2.60E+02

-----CUMULATIVE TOTAL-----

PATHWAY	AGE GROUP	USAGE	BONE	LIVER	TOTAL BODY	THYROID	KIDNEY	LUNG	GI-LLI
DRINKING	CUMUL TOTAL	3.38E+02	1.42E-08	5.10E-09	3.09E-09	9.81E-11	1.60E-09	6.17E-10	3.48E-10

-----HYDROSPHERE TRITIUM DOSE-----

PATHWAY	AGE GROUP	USAGE	BONE	LIVER	TOTAL BODY	THYROID	KIDNEY	LUNG	GI-LLI
WATER	TOTAL	2.20E+00	1.32E-03	1.32E-03	1.32E-03	1.32E-03	1.32E-03	1.32E-03	1.32E-03



May, 1999

Re: Indian Point Unit Nos. 1 & 2  
Docket Nos. 50-03 & 50-247

\* \* \* RECREATION POPULATION DOSES \* \* \*

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LOCATION- DOWNSTREAM

DILUTION=0.70E+01

TRANSIT TIME=0.40E+01 HR

SWF=0.2

DOSE (MAN-REM)

PATHWAY	AGE GROUP	USAGE	SKIN	TOTAL BODY	THYROID
SHORELINE	TOTAL POPUL	1.66E+07	1.44E-01	1.23E-01	1.23E-01

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LOCATION- 0.2DO

DILUTION=0.70E+01

TRANSIT TIME=0.40E+01 HR

DOSE (MAN-REM)

PATHWAY	AGE GROUP	USAGE	SKIN	TOTAL BODY	THYROID
SWIMMING	TOTAL POPUL	1.66E+07	0.00E+00	7.45E-04	7.45E-04

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LOCATION- 0.2DO

DILUTION=0.70E+01

TRANSIT TIME=0.40E+01 HR

DOSE (MAN-REM)

PATHWAY	AGE GROUP	USAGE	SKIN	TOTAL BODY	THYROID
BOATING	TOTAL POPUL	1.66E+07	0.00E+00	3.72E-04	3.72E-04

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May, 1999

Re: Indian Point Unit Nos. 1 & 2  
Docket Nos. 50-03 & 50-247

\* \* \* DOSE TO BIOTA \* \* \*

MRADS PER YEAR

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	DILUTION= 7.00E+00	TRANSIT TIME= 4.00E+00 HR	
	INTERNAL	EXTERNAL	TOTAL
FISH	2.29E-02	3.25E-01	3.48E-01
INVERTEBRATE	4.32E-02	6.49E-01	6.93E-01
ALGAE	7.40E-02	3.93E-04	7.44E-02
MUSKRAT	1.44E+00	2.17E-01	1.66E+00
RACCOON	1.06E-01	1.62E-01	2.69E-01
HERON	7.15E-01	2.17E-01	9.31E-01
DUCK	1.35E+00	3.25E-01	1.67E+00

May, 1999

Re: Indian Point Unit Nos. 1 & 2  
Docket Nos. 50-03 & 50-247

\* \* \* COST-BENEFIT ANALYSIS \* \* \*

NUCLIDE		RELEASE CI/YR	MAN-REM DOSE		MAN-REM PER CURIE	
			TOTAL BODY	THYROID	TOTAL BODY	THYROID
1H	3	1.61E+02	8.94E-04	8.94E-04	5.55E-06	5.55E-06
24CR	51	1.10E-04	4.52E-08	4.35E-08	4.11E-04	3.95E-04
25MN	54	1.30E-03	3.77E-04	1.05E-04	2.90E-01	8.10E-02
26FE	55	3.28E-02	2.16E-04	4.59E-09	6.59E-03	1.40E-07
27CO	57	4.39E-05	5.32E-07	4.86E-07	1.21E-02	1.11E-02
27CO	58	8.94E-03	2.76E-04	2.26E-04	3.08E-02	2.52E-02
27CO	60	3.14E-02	3.88E-02	3.82E-02	1.24E+00	1.22E+00
28NI	63	3.19E-02	9.63E-04	0.00E+00	3.02E-02	0.00E+00
38SR	89	7.07E-05	1.25E-06	7.95E-10	1.77E-02	1.12E-05
38SR	90	2.33E-03	4.96E-03	2.75E-09	2.13E+00	1.18E-06
47AG	110M	4.07E-04	8.33E-05	8.32E-05	2.05E-01	2.05E-01
53I	131	1.94E-05	7.90E-08	1.59E-05	4.07E-03	8.22E-01
55CS	134	8.15E-04	1.48E-03	3.18E-04	1.81E+00	3.90E-01
55CS	137	1.41E-01	2.01E-01	8.20E-02	1.42E+00	5.81E-01
51SB	124	4.98E-03	2.07E-04	2.07E-04	4.16E-02	4.15E-02
51SB	125	1.92E-02	2.56E-03	2.56E-03	1.33E-01	1.33E-01
TOTAL			2.52E-01	1.25E-01		

NOTE ON AGE GROUP:

CATEGORY I (17 YEARS OLD OR OLDER)  
CATEGORY II (11 TO 17 YEARS OLD)  
CATEGORY III (1 TO 11 YEARS OLD)  
CATEGORY IV (0 TO 1 YEAR OLD)

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JAN/FEB/MAR 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M)  
FOR PERIOD [Year/Month/Day/Hour]  
[1998/ 1/ 1/ 0] TO [1998/ 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	5.0	5.0	.0	.0	.0	10.0
NNE	.0	.0	3.0	1.0	.0	.0	.0	4.0
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	18.0	3.0	.0	.0	.0	21.0
S	.0	.0	.0	1.0	.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	1.0	.0	.0	.0	2.0
W	.0	.0	4.0	1.0	.0	.0	.0	5.0
WNW	.0	.0	3.0	5.0	.0	.0	.0	8.0
NW	.0	.0	4.0	16.0	.0	.0	.0	20.0
NNW	.0	.0	14.0	1.0	.0	.0	.0	15.0
TOTAL	.0	1.0	51.0	34.0	.0	.0	.0	86.0

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

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 3  
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2157

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M)  
FOR PERIOD [Year/Month/Day/Hour]  
[1998/ 1/ 1/ 0] TO [1998/ 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	10.0	8.0	.0	.0	.0	18.0
NNE	.0	.0	7.0	.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	.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	.0	.0	.0	.0	7.0
S	.0	.0	6.0	6.0	2.0	.0	.0	14.0
SSW	.0	.0	2.0	1.0	.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	2.0	1.0	.0	.0	.0	3.0
WNW	.0	.0	3.0	.0	.0	.0	.0	3.0
NW	.0	.0	5.0	6.0	1.0	.0	.0	12.0
NNW	.0	.0	8.0	1.0	.0	.0	.0	9.0
TOTAL	.0	3.0	48.0	23.0	3.0	.0	.0	77.0

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

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 3  
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2157

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M)  
FOR PERIOD [Year/Month/Day/Hour]  
[1998/ 1/ 1/ 0] TO [1998/ 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	2.0	22.0	14.0	2.0	.0	.0	40.0
NNE	.0	2.0	4.0	4.0	2.0	.0	.0	12.0
NE	.0	1.0	1.0	.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	1.0	.0	.0	.0	.0	.0	1.0
SE	.0	.0	.0	.0	.0	.0	.0	.0
SSE	.0	2.0	8.0	5.0	.0	.0	.0	15.0
S	.0	3.0	13.0	2.0	.0	.0	.0	18.0
SSW	.0	2.0	4.0	1.0	.0	.0	.0	7.0
SW	.0	1.0	.0	.0	.0	.0	.0	1.0
WSW	.0	.0	2.0	.0	.0	.0	.0	2.0
W	.0	.0	4.0	1.0	.0	.0	.0	5.0
WNW	.0	1.0	2.0	5.0	.0	.0	.0	8.0
NW	.0	.0	5.0	10.0	.0	.0	.0	15.0
NNW	.0	.0	9.0	.0	.0	.0	.0	9.0
TOTAL	.0	16.0	74.0	42.0	4.0	.0	.0	136.0

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

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 3  
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2157

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M)  
FOR PERIOD [Year/Month/Day/Hour]  
[1998/ 1/ 1/ 0] TO [1998/ 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	.8	32.0	99.0	66.0	14.0	.0	.0	211.8
NNE	.7	29.0	141.0	109.0	14.0	.0	.0	293.7
NE	.6	26.0	33.0	11.0	.0	.0	.0	70.6
ENE	.3	13.0	17.0	.0	.0	.0	.0	30.3
E	.3	13.0	10.0	.0	.0	.0	.0	23.3
ESE	.2	9.0	5.0	.0	.0	.0	.0	14.2
SE	.3	13.0	.0	.0	.0	.0	.0	13.3
SSE	.5	22.0	41.0	7.0	2.0	.0	.0	72.5
S	.4	18.0	46.0	17.0	1.0	.0	.0	82.4
SSW	.2	10.0	13.0	2.0	.0	.0	.0	25.2
SW	.2	8.0	11.0	1.0	.0	.0	.0	20.2
WSW	.3	12.0	18.0	3.0	.0	.0	.0	33.3
W	.2	9.0	32.0	7.0	.0	.0	.0	48.2
WNW	.2	7.0	46.0	11.0	.0	.0	.0	64.2
NW	.3	11.0	55.0	45.0	2.0	.0	.0	113.3
NNW	.2	9.0	78.0	17.0	1.0	.0	.0	105.2
TOTAL	6.0	241.0	645.0	296.0	34.0	.0	.0	1222.0

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

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 3  
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2157

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M)  
FOR PERIOD [Year/Month/Day/Hour]  
[1998/ 1/ 1/ 0] TO [1998/ 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	13.0	14.0	3.0	.0	.0	.0	30.0
NNE	.0	21.0	46.0	1.0	.0	.0	.0	68.0
NE	.0	19.0	18.0	.0	.0	.0	.0	37.0
ENE	.0	12.0	.0	.0	.0	.0	.0	12.0
E	.0	5.0	2.0	.0	.0	.0	.0	7.0
ESE	.0	6.0	.0	.0	.0	.0	.0	6.0
SE	.0	12.0	1.0	.0	.0	.0	.0	13.0
SSE	.0	26.0	15.0	3.0	2.0	.0	.0	46.0
S	.0	18.0	42.0	4.0	.0	.0	.0	64.0
SSW	.0	19.0	9.0	.0	.0	.0	.0	28.0
SW	.0	10.0	5.0	.0	.0	.0	.0	15.0
WSW	.0	10.0	4.0	.0	.0	.0	.0	14.0
W	.0	9.0	5.0	2.0	.0	.0	.0	16.0
WNW	.0	6.0	3.0	1.0	.0	.0	.0	10.0
NW	.0	7.0	6.0	2.0	.0	.0	.0	15.0
NNW	.0	7.0	11.0	4.0	.0	.0	.0	22.0
TOTAL	.0	200.0	181.0	20.0	2.0	.0	.0	403.0

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

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 3  
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2157

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M)  
FOR PERIOD [Year/Month/Day/Hour]  
[1998/ 1/ 1/ 0] TO [1998/ 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	20.0	.0	.0	.0	.0	.0	20.0
NNE	.0	37.0	18.0	.0	.0	.0	.0	55.0
NE	.0	19.0	20.0	.0	.0	.0	.0	39.0
ENE	.0	5.0	1.0	.0	.0	.0	.0	6.0
E	.0	3.0	1.0	.0	.0	.0	.0	4.0
ESE	.0	7.0	.0	.0	.0	.0	.0	7.0
SE	.0	.0	.0	.0	.0	.0	.0	.0
SSE	.0	5.0	13.0	.0	.0	.0	.0	18.0
S	.0	4.0	6.0	.0	.0	.0	.0	10.0
SSW	.0	11.0	.0	.0	.0	.0	.0	11.0
SW	.0	5.0	.0	.0	.0	.0	.0	5.0
WSW	.0	2.0	.0	.0	.0	.0	.0	2.0
W	.0	6.0	.0	.0	.0	.0	.0	6.0
WNW	.0	3.0	.0	.0	.0	.0	.0	3.0
NW	.0	6.0	.0	.0	.0	.0	.0	6.0
NNW	.0	9.0	.0	.0	.0	.0	.0	9.0
TOTAL	.0	142.0	59.0	.0	.0	.0	.0	201.0

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

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 3  
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2157

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M)  
FOR PERIOD [Year/Month/Day/Hour]  
[1998/ 1/ 1/ 0] TO [1998/ 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	7.0	1.0	.0	.0	.0	.0	8.0
NE	.0	2.0	2.0	.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	.0	.0	.0	.0	.0
SE	.0	1.0	.0	.0	.0	.0	.0	1.0
SSE	.0	4.0	.0	.0	.0	.0	.0	4.0
S	.0	3.0	.0	.0	.0	.0	.0	3.0
SSW	.0	3.0	.0	.0	.0	.0	.0	3.0
SW	.0	1.0	.0	.0	.0	.0	.0	1.0
WSW	.0	1.0	.0	.0	.0	.0	.0	1.0
W	.0	2.0	.0	.0	.0	.0	.0	2.0
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	29.0	3.0	.0	.0	.0	.0	32.0

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

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 3  
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2157

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M)  
FOR PERIOD [Year/Month/Day/Hour]  
[1998/ 1/ 1/ 0] TO [1998/ 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	.8	67.0	150.0	96.0	16.0	.0	.0	329.8
NNE	.7	96.0	220.0	115.0	16.0	.0	.0	447.7
NE	.6	67.0	74.0	11.0	.0	.0	.0	152.6
ENE	.3	30.0	18.0	.0	.0	.0	.0	48.3
E	.3	22.0	13.0	.0	.0	.0	.0	35.3
ESE	.2	23.0	5.0	.0	.0	.0	.0	28.2
SE	.3	27.0	1.0	.0	.0	.0	.0	28.3
SSE	.5	61.0	100.0	18.0	4.0	.0	.0	183.5
S	.4	46.0	113.0	30.0	3.0	.0	.0	192.4
SSW	.2	45.0	28.0	4.0	.0	.0	.0	77.2
SW	.2	25.0	16.0	1.0	.0	.0	.0	42.2
WSW	.3	26.0	24.0	4.0	.0	.0	.0	54.3
W	.2	26.0	47.0	12.0	.0	.0	.0	85.2
WNW	.2	17.0	57.0	22.0	.0	.0	.0	96.2
NW	.3	26.0	75.0	79.0	3.0	.0	.0	183.3
NNW	.2	28.0	120.0	23.0	1.0	.0	.0	172.2
TOTAL	6.0	632.0	1061.0	415.0	43.0	.0	.0	2157.0

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

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 3  
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2157

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M)  
FOR PERIOD [Year/Month/Day/Hour]  
[1998/ 1/ 1/ 0] TO [1998/ 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	7.0	6.0	1.0	.0	14.0
NNE	.0	.0	3.0	.0	.0	.0	.0	3.0
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	4.0	13.0	2.0	.0	.0	19.0
S	.0	.0	.0	2.0	.0	.0	.0	2.0
SSW	.0	1.0	.0	.0	.0	.0	.0	1.0
SW	.0	.0	.0	.0	.0	.0	.0	.0
WSW	.0	.0	.0	.0	1.0	.0	.0	1.0
W	.0	.0	.0	4.0	2.0	.0	.0	6.0
WNW	.0	.0	1.0	1.0	2.0	4.0	.0	8.0
NW	.0	.0	.0	2.0	7.0	10.0	.0	19.0
NNW	.0	.0	.0	9.0	3.0	.0	.0	12.0
TOTAL	.0	1.0	8.0	39.0	23.0	15.0	.0	86.0

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

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 3  
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2157

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M)  
FOR PERIOD [Year/Month/Day/Hour]  
[1998/ 1/ 1/ 0] TO [1998/ 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	1.0	13.0	5.0	.0	.0	19.0
NNE	.0	.0	6.0	.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	1.0	.0	.0	.0	.0	.0	1.0
SE	.0	.0	1.0	.0	.0	.0	.0	1.0
SSE	.0	1.0	3.0	2.0	.0	.0	.0	6.0
S	.0	.0	6.0	3.0	.0	.0	.0	9.0
SSW	.0	.0	.0	.0	3.0	2.0	.0	5.0
SW	.0	.0	.0	3.0	.0	.0	.0	3.0
WSW	.0	.0	.0	.0	.0	.0	.0	.0
W	.0	.0	1.0	.0	2.0	.0	.0	3.0
WNW	.0	.0	1.0	.0	2.0	.0	.0	3.0
NW	.0	.0	.0	5.0	4.0	2.0	2.0	13.0
NNW	.0	.0	1.0	6.0	.0	1.0	.0	8.0
TOTAL	.0	2.0	20.0	32.0	16.0	5.0	2.0	77.0

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

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 3  
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2157

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M)  
FOR PERIOD [Year/Month/Day/Hour]  
[1998/ 1/ 1/ 0] TO [1998/ 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	8.0	14.0	12.0	4.0	2.0	40.0
NNE	.0	.0	6.0	5.0	.0	.0	.0	11.0
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	.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	2.0	10.0	1.0	4.0	.0	.0	17.0
S	.0	2.0	12.0	1.0	2.0	.0	.0	17.0
SSW	.0	.0	1.0	2.0	2.0	.0	.0	5.0
SW	.0	.0	2.0	.0	.0	.0	.0	2.0
WSW	.0	.0	2.0	.0	.0	.0	.0	2.0
W	.0	.0	.0	2.0	3.0	.0	.0	5.0
WNW	.0	1.0	.0	1.0	3.0	2.0	.0	7.0
NW	.0	.0	3.0	4.0	6.0	5.0	1.0	19.0
NNW	.0	.0	2.0	3.0	2.0	.0	.0	7.0
TOTAL	.0	5.0	50.0	33.0	34.0	11.0	3.0	136.0

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

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 3  
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2157

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M)  
FOR PERIOD [Year/Month/Day/Hour]  
[1998/ 1/ 1/ 0] TO [1998/ 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	12.0	31.0	73.0	91.0	42.0	13.0	262.0
NNE	.0	11.0	86.0	83.0	45.0	4.0	.0	229.0
NE	.0	7.0	29.0	20.0	3.0	.0	.0	59.0
ENE	.0	13.0	14.0	8.0	3.0	.0	.0	38.0
E	.0	4.0	13.0	13.0	2.0	.0	.0	32.0
ESE	.0	2.0	13.0	7.0	.0	.0	.0	22.0
SE	.0	3.0	9.0	1.0	.0	.0	.0	13.0
SSE	.0	12.0	36.0	26.0	6.0	1.0	.0	81.0
S	.0	12.0	27.0	16.0	10.0	1.0	.0	66.0
SSW	.0	10.0	13.0	5.0	9.0	2.0	.0	39.0
SW	.0	4.0	4.0	4.0	2.0	.0	.0	14.0
WSW	.0	2.0	9.0	5.0	11.0	.0	.0	27.0
W	.0	4.0	13.0	11.0	12.0	4.0	.0	44.0
WNW	.0	.0	12.0	39.0	18.0	.0	.0	69.0
NW	.0	2.0	12.0	43.0	55.0	22.0	3.0	137.0
NNW	.0	1.0	12.0	38.0	32.0	3.0	4.0	90.0
TOTAL	.0	99.0	333.0	392.0	299.0	79.0	20.0	1222.0

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

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 3  
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2157

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M)  
 FOR PERIOD [Year/Month/Day/Hour]  
 [1998/ 1/ 1/ 0] TO [1998/ 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	3.0	15.0	12.0	1.0	2.0	.0	33.0
NNE	.0	7.0	51.0	16.0	.0	.0	.0	74.0
NE	.0	5.0	6.0	3.0	.0	.0	.0	14.0
ENE	.0	1.0	.0	1.0	.0	.0	.0	2.0
E	.0	3.0	2.0	1.0	.0	.0	.0	6.0
ESE	.0	6.0	2.0	.0	.0	.0	.0	8.0
SE	.0	3.0	6.0	.0	.0	.0	.0	9.0
SSE	.0	11.0	29.0	16.0	2.0	1.0	.0	59.0
S	.0	9.0	20.0	21.0	6.0	.0	1.0	57.0
SSW	.0	12.0	6.0	16.0	4.0	.0	.0	38.0
SW	.0	3.0	6.0	1.0	3.0	.0	.0	13.0
WSW	.0	2.0	7.0	4.0	1.0	.0	.0	14.0
W	.0	4.0	5.0	3.0	3.0	.0	.0	15.0
WNW	.0	2.0	8.0	7.0	1.0	1.0	.0	19.0
NW	.0	2.0	5.0	5.0	3.0	.0	.0	15.0
NNW	.0	5.0	5.0	9.0	4.0	3.0	1.0	27.0
TOTAL	.0	78.0	173.0	115.0	28.0	7.0	2.0	403.0

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

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 3  
 VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2157

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M)  
FOR PERIOD [Year/Month/Day/Hour]  
[1998/ 1/ 1/ 0] TO [1998/ 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	10.0	13.0	.0	.0	.0	.0	23.0
NNE	.0	12.0	39.0	6.0	.0	.0	.0	57.0
NE	.0	3.0	3.0	.0	.0	.0	.0	6.0
ENE	.0	.0	3.0	.0	.0	.0	.0	3.0
E	.0	3.0	.0	.0	.0	.0	.0	3.0
ESE	.0	3.0	1.0	.0	.0	.0	.0	4.0
SE	.0	8.0	.0	.0	.0	.0	.0	8.0
SSE	.0	8.0	6.0	5.0	1.0	.0	.0	20.0
S	.0	11.0	12.0	10.0	4.0	.0	.0	37.0
SSW	.0	6.0	5.0	3.0	2.0	.0	.0	16.0
SW	.0	.0	3.0	3.0	.0	.0	.0	6.0
WSW	.0	.0	1.0	.0	.0	.0	.0	1.0
W	.0	2.0	.0	.0	.0	.0	.0	2.0
WNW	.0	1.0	1.0	.0	.0	.0	.0	2.0
NW	.0	3.0	1.0	3.0	.0	.0	.0	7.0
NNW	.0	5.0	1.0	.0	.0	.0	.0	6.0
TOTAL	.0	75.0	89.0	30.0	7.0	.0	.0	201.0

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

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 3  
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2157

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M)  
FOR PERIOD [Year/Month/Day/Hour]  
[1998/ 1/ 1/ 0] TO [1998/ 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	2.0	.0	.0	.0	.0	2.0
NNE	.0	2.0	3.0	.0	.0	.0	.0	5.0
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	.0	.0	.0	.0	.0	.0	.0
SE	.0	.0	.0	.0	.0	.0	.0	.0
SSE	.0	2.0	3.0	.0	.0	.0	.0	5.0
S	.0	.0	3.0	3.0	1.0	.0	.0	7.0
SSW	.0	.0	.0	5.0	.0	.0	.0	5.0
SW	.0	.0	.0	1.0	.0	.0	.0	1.0
WSW	.0	.0	2.0	.0	.0	.0	.0	2.0
W	.0	1.0	.0	.0	.0	.0	.0	1.0
WNW	.0	.0	.0	.0	.0	.0	.0	.0
NW	.0	1.0	.0	.0	.0	.0	.0	1.0
NNW	.0	2.0	.0	.0	.0	.0	.0	2.0
TOTAL	.0	8.0	14.0	9.0	1.0	.0	.0	32.0

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

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 3  
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2157

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M)  
FOR PERIOD [Year/Month/Day/Hour]  
[1998/ 1/ 1/ 0] TO [1998/ 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	25.0	70.0	119.0	115.0	49.0	15.0	393.0
NNE	.0	32.0	194.0	110.0	45.0	4.0	.0	385.0
NE	.0	15.0	41.0	23.0	3.0	.0	.0	82.0
ENE	.0	14.0	18.0	9.0	3.0	.0	.0	44.0
E	.0	10.0	15.0	14.0	2.0	.0	.0	41.0
ESE	.0	12.0	17.0	7.0	.0	.0	.0	36.0
SE	.0	14.0	16.0	2.0	.0	.0	.0	32.0
SSE	.0	36.0	91.0	63.0	15.0	2.0	.0	207.0
S	.0	34.0	80.0	56.0	23.0	1.0	1.0	195.0
SSW	.0	29.0	25.0	31.0	20.0	4.0	.0	109.0
SW	.0	7.0	15.0	12.0	5.0	.0	.0	39.0
WSW	.0	4.0	21.0	9.0	13.0	.0	.0	47.0
W	.0	11.0	19.0	20.0	22.0	4.0	.0	76.0
WNW	.0	4.0	23.0	48.0	26.0	7.0	.0	108.0
NW	.0	8.0	21.0	62.0	75.0	39.0	6.0	211.0
NNW	.0	13.0	21.0	65.0	41.0	7.0	5.0	152.0
TOTAL	.0	268.0	687.0	650.0	408.0	117.0	27.0	2157.0

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

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 3  
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2157

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M)  
FOR PERIOD [Year/Month/Day/Hour]  
[1998/ 1/ 1/ 0] TO [1998/ 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	.0	1.0	.0	.0	.0	1.0
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	.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	2.0	.0	.0	.0	2.0

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

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 3  
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2157

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M)  
FOR PERIOD [Year/Month/Day/Hour]  
[1998/ 1/ 1/ 0] TO [1998/ 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	3.0	1.0	.0	.0	4.0
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	1.0	7.0	1.0	.0	.0	9.0
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	1.0	1.0	2.0
NW	.0	.0	.0	.0	.0	2.0	3.0	5.0
NNW	.0	.0	.0	.0	.0	.0	.0	.0
TOTAL	.0	.0	1.0	11.0	2.0	3.0	4.0	21.0

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

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 3  
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2157

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M)  
FOR PERIOD [Year/Month/Day/Hour]  
[1998/ 1/ 1/ 0] TO [1998/ 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	7.0	3.0	1.0	.0	11.0
NNE	.0	.0	.0	.0	1.0	.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	1.0	5.0	.0	.0	.0	6.0
S	.0	.0	.0	1.0	2.0	.0	.0	3.0
SSW	.0	.0	.0	.0	1.0	.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	.0	3.0	.0	1.0	.0	4.0
WNW	.0	.0	.0	.0	4.0	1.0	3.0	8.0
NW	.0	.0	.0	3.0	2.0	5.0	3.0	13.0
NNW	.0	.0	.0	5.0	3.0	.0	.0	8.0
TOTAL	.0	.0	1.0	24.0	16.0	8.0	6.0	55.0

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

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 3  
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2157

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M)  
FOR PERIOD [Year/Month/Day/Hour]  
[1998/ 1/ 1/ 0] TO [1998/ 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	6.0	17.0	85.0	126.0	51.0	43.0	328.0
NNE	.0	3.0	51.0	63.0	36.0	22.0	1.0	176.0
NE	.0	6.0	25.0	27.0	13.0	2.0	.0	73.0
ENE	.0	6.0	12.0	8.0	6.0	1.0	.0	33.0
E	.0	3.0	13.0	19.0	6.0	.0	.0	41.0
ESE	.0	5.0	6.0	14.0	2.0	.0	.0	27.0
SE	.0	6.0	10.0	2.0	.0	.0	.0	18.0
SSE	.0	9.0	48.0	21.0	11.0	1.0	1.0	91.0
S	.0	11.0	24.0	22.0	21.0	2.0	.0	80.0
SSW	.0	1.0	7.0	4.0	9.0	11.0	3.0	35.0
SW	.0	2.0	4.0	4.0	4.0	1.0	.0	15.0
WSW	.0	2.0	5.0	6.0	13.0	4.0	.0	30.0
W	.0	2.0	9.0	22.0	17.0	10.0	3.0	63.0
WNW	.0	.0	8.0	43.0	35.0	15.0	4.0	105.0
NW	.0	4.0	12.0	49.0	60.0	56.0	13.0	194.0
NNW	.0	1.0	12.0	34.0	39.0	14.0	6.0	106.0
TOTAL	.0	67.0	263.0	423.0	398.0	190.0	74.0	1415.0

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

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 3  
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2157

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M)  
FOR PERIOD [Year/Month/Day/Hour]  
[1998/ 1/ 1/ 0] TO [1998/ 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	8.0	16.0	18.0	4.0	5.0	.0	51.0
NNE	.0	3.0	19.0	22.0	2.0	.0	.0	46.0
NE	.0	4.0	15.0	14.0	4.0	.0	.0	37.0
ENE	.0	2.0	6.0	4.0	.0	.0	.0	12.0
E	.0	3.0	4.0	3.0	2.0	.0	.0	12.0
ESE	.0	4.0	6.0	4.0	.0	.0	.0	14.0
SE	.0	2.0	11.0	3.0	1.0	.0	.0	17.0
SSE	.0	6.0	36.0	16.0	11.0	7.0	2.0	78.0
S	.0	8.0	21.0	14.0	15.0	5.0	1.0	64.0
SSW	.0	10.0	8.0	9.0	14.0	3.0	.0	44.0
SW	.0	2.0	6.0	5.0	6.0	1.0	.0	20.0
WSW	.0	1.0	3.0	9.0	2.0	.0	.0	15.0
W	.0	1.0	1.0	6.0	.0	1.0	.0	9.0
WNW	.0	2.0	7.0	1.0	1.0	.0	.0	11.0
NW	.0	3.0	2.0	4.0	2.0	.0	.0	11.0
NNW	.0	2.0	9.0	8.0	3.0	.0	.0	22.0
TOTAL	.0	61.0	170.0	140.0	67.0	22.0	3.0	463.0

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

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 3  
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2157

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M)  
 FOR PERIOD [Year/Month/Day/Hour]  
 [1998/ 1/ 1/ 0] TO [1998/ 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	4.0	4.0	1.0	.0	.0	.0	9.0
NNE	.0	5.0	5.0	.0	.0	.0	.0	10.0
NE	.0	7.0	6.0	.0	.0	.0	.0	13.0
ENE	.0	3.0	3.0	.0	.0	.0	.0	6.0
E	.0	2.0	.0	2.0	.0	.0	.0	4.0
ESE	.0	6.0	.0	.0	.0	.0	.0	6.0
SE	.0	3.0	.0	.0	.0	.0	.0	3.0
SSE	.0	5.0	14.0	5.0	5.0	.0	.0	29.0
S	.0	6.0	13.0	12.0	7.0	2.0	.0	40.0
SSW	.0	4.0	6.0	13.0	13.0	.0	.0	36.0
SW	.0	7.0	3.0	3.0	2.0	.0	.0	15.0
WSW	.0	2.0	2.0	1.0	.0	.0	.0	5.0
W	.0	4.0	.0	.0	.0	.0	.0	4.0
WNW	.0	1.0	.0	.0	.0	.0	.0	1.0
NW	.0	4.0	3.0	.0	.0	.0	.0	7.0
NNW	.0	3.0	4.0	.0	.0	.0	.0	7.0
TOTAL	.0	66.0	63.0	37.0	27.0	2.0	.0	195.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE)	122.00
TEMPERATURE SENSOR SEPARATION (METERS)	112.00
MISSING OBS. DURING THIS PERIOD (ALL STABILITIES)	3
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES)	2157

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M)  
 FOR PERIOD [Year/Month/Day/Hour]  
 [1998/ 1/ 1/ 0] TO [1998/ 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	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	.0	.0	.0	.0	.0	.0	.0
SE	.0	.0	.0	.0	.0	.0	.0	.0
SSE	.0	.0	1.0	.0	.0	.0	.0	1.0
S	.0	.0	1.0	1.0	1.0	.0	.0	3.0
SSW	.0	.0	.0	.0	1.0	.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	.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	3.0	1.0	2.0	.0	.0	6.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 122.00  
 TEMPERATURE SENSOR SEPARATION (METERS) 112.00  
 MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 3  
 VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2157

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M)  
FOR PERIOD [Year/Month/Day/Hour]  
[1998/ 1/ 1/ 0] TO [1998/ 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	18.0	37.0	114.0	134.0	57.0	43.0	403.0
NNE	.0	11.0	75.0	85.0	39.0	22.0	1.0	233.0
NE	.0	17.0	47.0	41.0	17.0	2.0	.0	124.0
ENE	.0	11.0	21.0	12.0	6.0	1.0	.0	51.0
E	.0	8.0	17.0	24.0	8.0	.0	.0	57.0
ESE	.0	15.0	12.0	18.0	2.0	.0	.0	47.0
SE	.0	11.0	21.0	6.0	1.0	.0	.0	39.0
SSE	.0	20.0	101.0	55.0	28.0	8.0	3.0	215.0
S	.0	25.0	59.0	50.0	46.0	9.0	1.0	190.0
SSW	.0	15.0	21.0	26.0	38.0	14.0	3.0	117.0
SW	.0	11.0	13.0	12.0	12.0	2.0	.0	50.0
WSW	.0	5.0	10.0	16.0	15.0	4.0	.0	50.0
W	.0	7.0	10.0	32.0	17.0	12.0	3.0	81.0
WNW	.0	3.0	15.0	44.0	40.0	17.0	8.0	127.0
NW	.0	11.0	17.0	56.0	64.0	63.0	19.0	230.0
NNW	.0	6.0	25.0	47.0	45.0	14.0	6.0	143.0
TOTAL	.0	194.0	501.0	638.0	512.0	225.0	87.0	2157.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE)	122.00
TEMPERATURE SENSOR SEPARATION (METERS)	112.00
MISSING OBS. DURING THIS PERIOD (ALL STABILITIES)	3
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES)	2157

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M)  
FOR PERIOD [Year/Month/Day/Hour]  
[1998/ 4/ 1/ 0] TO [1998/ 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	25.0	15.0	.0	.0	.0	40.0
NNE	.0	.0	.0	4.0	.0	.0	.0	4.0
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	.0	.0	.0	1.0
SSE	.0	1.0	8.0	4.0	.0	.0	.0	13.0
S	.0	.0	38.0	10.0	.0	.0	.0	48.0
SSW	.0	.0	2.0	.0	.0	.0	.0	2.0
SW	.0	1.0	4.0	.0	.0	.0	.0	5.0
WSW	.0	1.0	2.0	.0	.0	.0	.0	3.0
W	.0	.0	12.0	.0	.0	.0	.0	12.0
WNW	.0	.0	31.0	4.0	.0	.0	.0	35.0
NW	.0	1.0	29.0	13.0	.0	.0	.0	43.0
NNW	.0	.0	22.0	2.0	.0	.0	.0	24.0
TOTAL	.0	4.0	174.0	52.0	.0	.0	.0	230.0

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

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 3  
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2181

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M)  
FOR PERIOD [Year/Month/Day/Hour]  
[1998/ 4/ 1/ 0] TO [1998/ 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	26.0	10.0	.0	.0	.0	36.0
NNE	.0	.0	1.0	1.0	.0	.0	.0	2.0
NE	.0	1.0	.0	4.0	.0	.0	.0	5.0
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	1.0	.0	.0	.0	.0	.0	1.0
SSE	.0	.0	7.0	.0	.0	.0	.0	7.0
S	.0	.0	26.0	4.0	.0	.0	.0	30.0
SSW	.0	.0	7.0	.0	.0	.0	.0	7.0
SW	.0	3.0	4.0	.0	.0	.0	.0	7.0
WSW	.0	1.0	6.0	.0	.0	.0	.0	7.0
W	.0	.0	3.0	.0	.0	.0	.0	3.0
WNW	.0	.0	2.0	2.0	.0	.0	.0	4.0
NW	.0	.0	7.0	5.0	.0	.0	.0	12.0
NNW	.0	1.0	6.0	4.0	.0	.0	.0	11.0
TOTAL	.0	7.0	95.0	30.0	.0	.0	.0	132.0

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

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 3  
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2181

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M)  
FOR PERIOD [Year/Month/Day/Hour]  
[1998/ 4/ 1/ 0] TO [1998/ 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	3.0	24.0	5.0	1.0	.0	.0	33.0
NNE	.0	1.0	4.0	3.0	.0	.0	.0	8.0
NE	.0	.0	1.0	1.0	.0	.0	.0	2.0
ENE	.0	.0	.0	.0	.0	.0	.0	.0
E	.0	.0	1.0	.0	.0	.0	.0	1.0
ESE	.0	1.0	1.0	.0	.0	.0	.0	2.0
SE	.0	.0	1.0	.0	.0	.0	.0	1.0
SSE	.0	.0	12.0	.0	.0	.0	.0	12.0
S	.0	2.0	24.0	2.0	.0	.0	.0	28.0
SSW	.0	1.0	11.0	.0	.0	.0	.0	12.0
SW	.0	.0	5.0	.0	.0	.0	.0	5.0
WSW	.0	1.0	3.0	.0	.0	.0	.0	4.0
W	.0	.0	2.0	.0	.0	.0	.0	2.0
WNW	.0	.0	6.0	.0	.0	.0	.0	6.0
NW	.0	1.0	4.0	2.0	.0	.0	.0	7.0
NNW	.0	5.0	6.0	3.0	.0	.0	.0	14.0
TOTAL	.0	15.0	105.0	16.0	1.0	.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) 3  
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2181

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M)  
FOR PERIOD [Year/Month/Day/Hour]  
[1998/ 4/ 1/ 0] TO [1998/ 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	19.0	79.0	23.0	6.0	.0	.0	127.0
NNE	.0	25.0	92.0	76.0	4.0	.0	.0	197.0
NE	.0	20.0	24.0	6.0	1.0	.0	.0	51.0
ENE	.0	23.0	8.0	.0	.0	.0	.0	31.0
E	.0	20.0	8.0	.0	.0	.0	.0	28.0
ESE	.0	19.0	7.0	.0	.0	.0	.0	26.0
SE	.0	18.0	6.0	.0	.0	.0	.0	24.0
SSE	.0	41.0	41.0	.0	.0	.0	.0	82.0
S	.0	49.0	96.0	7.0	.0	.0	.0	152.0
SSW	.0	18.0	20.0	6.0	1.0	.0	.0	45.0
SW	.0	22.0	6.0	.0	.0	.0	.0	28.0
WSW	.0	12.0	7.0	.0	.0	.0	.0	19.0
W	.0	7.0	19.0	1.0	.0	.0	.0	27.0
WNW	.0	6.0	15.0	1.0	.0	.0	.0	22.0
NW	.0	7.0	24.0	5.0	.0	.0	.0	36.0
NNW	.0	11.0	49.0	7.0	.0	.0	.0	67.0
TOTAL	.0	317.0	501.0	132.0	12.0	.0	.0	962.0

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

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 3  
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2181

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M)  
 FOR PERIOD [Year/Month/Day/Hour]  
 [1998/ 4/ 1/ 0] TO [1998/ 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	19.0	14.0	2.0	2.0	.0	.0	37.0
NNE	.0	43.0	59.0	.0	.0	.0	.0	102.0
NE	.0	28.0	20.0	.0	.0	.0	.0	48.0
ENE	.0	18.0	6.0	.0	.0	.0	.0	24.0
E	.0	19.0	4.0	1.0	.0	.0	.0	24.0
ESE	.0	12.0	1.0	.0	.0	.0	.0	13.0
SE	.0	17.0	.0	.0	.0	.0	.0	17.0
SSE	.0	36.0	4.0	.0	.0	.0	.0	40.0
S	.0	44.0	36.0	2.0	.0	.0	.0	82.0
SSW	.0	16.0	7.0	.0	.0	.0	.0	23.0
SW	.0	16.0	4.0	.0	.0	.0	.0	20.0
WSW	.0	8.0	5.0	.0	.0	.0	.0	13.0
W	.0	7.0	6.0	.0	.0	.0	.0	13.0
WNW	.0	8.0	5.0	1.0	.0	.0	.0	14.0
NW	.0	12.0	1.0	.0	.0	.0	.0	13.0
NNW	.0	11.0	9.0	1.0	.0	.0	.0	21.0
TOTAL	.0	314.0	181.0	7.0	2.0	.0	.0	504.0

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

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 3  
 VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2181

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M)  
 FOR PERIOD [Year/Month/Day/Hour]  
 [1998/ 4/ 1/ 0] TO [1998/ 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	17.0	1.0	.0	.0	.0	.0	18.0
NNE	.0	27.0	21.0	.0	.0	.0	.0	48.0
NE	.0	16.0	8.0	.0	.0	.0	.0	24.0
ENE	.0	7.0	2.0	.0	.0	.0	.0	9.0
E	.0	4.0	.0	.0	.0	.0	.0	4.0
ESE	.0	7.0	.0	.0	.0	.0	.0	7.0
SE	.0	5.0	.0	.0	.0	.0	.0	5.0
SSE	.0	8.0	.0	.0	.0	.0	.0	8.0
S	.0	23.0	2.0	.0	.0	.0	.0	25.0
SSW	.0	7.0	.0	.0	.0	.0	.0	7.0
SW	.0	4.0	.0	.0	.0	.0	.0	4.0
WSW	.0	2.0	.0	.0	.0	.0	.0	2.0
W	.0	1.0	1.0	.0	.0	.0	.0	2.0
WNW	.0	6.0	.0	.0	.0	.0	.0	6.0
NW	.0	1.0	.0	.0	.0	.0	.0	1.0
NNW	.0	6.0	.0	.0	.0	.0	.0	6.0
TOTAL	.0	141.0	35.0	.0	.0	.0	.0	176.0

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

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 3  
 VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2181

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M)  
FOR PERIOD [Year/Month/Day/Hour]  
[1998/ 4/ 1/ 0] TO [1998/ 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	13.0	.0	.0	.0	.0	.0	13.0
NNE	.0	8.0	3.0	.0	.0	.0	.0	11.0
NE	.0	.0	4.0	.0	.0	.0	.0	4.0
ENE	.0	.0	.0	.0	.0	.0	.0	.0
E	.0	2.0	.0	.0	.0	.0	.0	2.0
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	2.0	1.0	.0	.0	.0	.0	3.0
SSW	.0	1.0	.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	.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	4.0	.0	.0	.0	.0	.0	4.0
TOTAL	.0	32.0	8.0	.0	.0	.0	.0	40.0

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

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 3  
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2181

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M)  
 FOR PERIOD [Year/Month/Day/Hour]  
 [1998/ 4/ 1/ 0] TO [1998/ 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	71.0	169.0	55.0	9.0	.0	.0	304.0
NNE	.0	104.0	180.0	84.0	4.0	.0	.0	372.0
NE	.0	65.0	57.0	11.0	1.0	.0	.0	134.0
ENE	.0	48.0	16.0	.0	.0	.0	.0	64.0
E	.0	45.0	13.0	1.0	.0	.0	.0	59.0
ESE	.0	39.0	9.0	.0	.0	.0	.0	48.0
SE	.0	42.0	8.0	.0	.0	.0	.0	50.0
SSE	.0	86.0	72.0	4.0	.0	.0	.0	162.0
S	.0	120.0	223.0	25.0	.0	.0	.0	368.0
SSW	.0	43.0	47.0	6.0	1.0	.0	.0	97.0
SW	.0	46.0	23.0	.0	.0	.0	.0	69.0
WSW	.0	25.0	23.0	.0	.0	.0	.0	48.0
W	.0	15.0	43.0	1.0	.0	.0	.0	59.0
WNW	.0	20.0	59.0	8.0	.0	.0	.0	87.0
NW	.0	23.0	65.0	25.0	.0	.0	.0	113.0
NNW	.0	38.0	92.0	17.0	.0	.0	.0	147.0
TOTAL	.0	830.0	1099.0	237.0	15.0	.0	.0	2181.0

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

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 3  
 VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2181

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M)  
FOR PERIOD [Year/Month/Day/Hour]  
[1998/ 4/ 1/ 0] TO [1998/ 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	.0	10.0	12.0	2.0	.0	25.0
NNE	.0	.0	.0	2.0	.0	.0	.0	2.0
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	18.0	22.0	5.0	.0	.0	45.0
S	.0	.0	7.0	6.0	4.0	.0	.0	17.0
SSW	.0	.0	.0	.0	.0	.0	.0	.0
SW	.0	1.0	.0	3.0	.0	.0	.0	4.0
WSW	.0	.0	2.0	1.0	.0	.0	.0	3.0
W	.0	.0	.0	.0	.0	.0	.0	.0
WNW	.0	1.0	3.0	17.0	20.0	4.0	.0	45.0
NW	.0	.0	1.0	13.0	29.0	20.0	.0	63.0
NNW	.0	.0	3.0	6.0	16.0	.0	.0	25.0
TOTAL	.0	3.0	34.0	81.0	86.0	26.0	.0	230.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 60.00  
TEMPERATURE SENSOR SEPARATION (METERS) 50.90  
MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 3  
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2181

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M)  
 FOR PERIOD [Year/Month/Day/Hour]  
 [1998/ 4/ 1/ 0] TO [1998/ 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	2.0	12.0	8.0	2.0	.0	24.0
NNE	.0	.0	.0	2.0	.0	.0	.0	2.0
NE	.0	.0	.0	.0	2.0	1.0	.0	3.0
ENE	.0	.0	1.0	.0	.0	1.0	.0	2.0
E	.0	.0	.0	.0	.0	.0	.0	.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	13.0	6.0	.0	.0	.0	19.0
S	.0	1.0	9.0	9.0	1.0	.0	.0	20.0
SSW	.0	.0	3.0	.0	.0	.0	.0	3.0
SW	.0	1.0	5.0	1.0	.0	.0	.0	7.0
WSW	.0	.0	4.0	.0	.0	.0	.0	4.0
W	.0	.0	1.0	3.0	.0	.0	.0	4.0
WNW	.0	.0	1.0	.0	4.0	.0	.0	5.0
NW	.0	.0	2.0	6.0	8.0	4.0	.0	20.0
NNW	.0	1.0	3.0	4.0	7.0	2.0	.0	17.0
TOTAL	.0	3.0	45.0	44.0	30.0	10.0	.0	132.0

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

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 3  
 VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2181

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M)  
FOR PERIOD [Year/Month/Day/Hour]  
[1998/ 4/ 1/ 0] TO [1998/ 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	9.0	9.0	3.0	3.0	1.0	25.0
NNE	.0	1.0	1.0	1.0	.0	.0	.0	3.0
NE	.0	.0	1.0	1.0	1.0	.0	.0	3.0
ENE	.0	1.0	.0	.0	.0	.0	.0	1.0
E	.0	.0	1.0	.0	.0	.0	.0	1.0
ESE	.0	.0	1.0	1.0	.0	.0	.0	2.0
SE	.0	.0	.0	2.0	.0	.0	.0	2.0
SSE	.0	.0	7.0	13.0	1.0	.0	.0	21.0
S	.0	1.0	12.0	3.0	1.0	.0	.0	17.0
SSW	.0	.0	6.0	1.0	1.0	.0	.0	8.0
SW	.0	.0	2.0	4.0	.0	.0	.0	6.0
WSW	.0	.0	6.0	.0	.0	.0	.0	6.0
W	.0	1.0	1.0	1.0	1.0	.0	.0	4.0
WNW	.0	.0	.0	2.0	4.0	.0	.0	6.0
NW	.0	2.0	3.0	1.0	6.0	3.0	.0	15.0
NNW	.0	1.0	6.0	2.0	4.0	4.0	.0	17.0
TOTAL	.0	7.0	56.0	41.0	22.0	10.0	1.0	137.0

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

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 3  
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2181

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M)  
FOR PERIOD [Year/Month/Day/Hour]  
[1998/ 4/ 1/ 0] TO [1998/ 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	2.0	22.0	28.0	32.0	25.0	6.0	115.0
NNE	.0	10.0	34.0	47.0	34.0	2.0	.0	127.0
NE	.0	8.0	33.0	10.0	16.0	1.0	.0	68.0
ENE	.0	12.0	21.0	2.0	2.0	.0	.0	37.0
E	.0	8.0	15.0	4.0	1.0	.0	.0	28.0
ESE	.0	6.0	19.0	10.0	.0	.0	.0	35.0
SE	.0	12.0	28.0	12.0	.0	.0	.0	52.0
SSE	.0	12.0	73.0	47.0	3.0	.0	.0	135.0
S	.0	15.0	53.0	12.0	7.0	.0	.0	87.0
SSW	.0	6.0	15.0	11.0	4.0	1.0	.0	37.0
SW	.0	6.0	11.0	4.0	1.0	.0	.0	22.0
WSW	.0	4.0	3.0	4.0	1.0	.0	.0	12.0
W	.0	4.0	6.0	6.0	1.0	.0	.0	17.0
WNW	.0	1.0	4.0	9.0	25.0	1.0	1.0	41.0
NW	.0	3.0	4.0	32.0	32.0	7.0	.0	78.0
NNW	.0	4.0	10.0	24.0	24.0	8.0	1.0	71.0
TOTAL	.0	113.0	351.0	262.0	183.0	45.0	8.0	962.0

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

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 3  
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2181

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M)  
 FOR PERIOD [Year/Month/Day/Hour]  
 [1998/ 4/ 1/ 0] TO [1998/ 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	17.0	10.0	1.0	.0	2.0	34.0
NNE	.0	12.0	72.0	22.0	.0	.0	.0	106.0
NE	.0	9.0	15.0	2.0	.0	.0	.0	26.0
ENE	.0	2.0	6.0	2.0	.0	.0	.0	10.0
E	.0	6.0	5.0	.0	.0	.0	.0	11.0
ESE	.0	5.0	12.0	.0	.0	.0	.0	17.0
SE	.0	6.0	11.0	3.0	.0	.0	.0	20.0
SSE	.0	9.0	21.0	11.0	1.0	.0	.0	42.0
S	.0	9.0	39.0	21.0	.0	1.0	.0	70.0
SSW	.0	7.0	18.0	14.0	.0	1.0	.0	40.0
SW	.0	6.0	11.0	7.0	1.0	.0	.0	25.0
WSW	.0	6.0	7.0	3.0	1.0	.0	.0	17.0
W	.0	2.0	3.0	5.0	3.0	1.0	.0	14.0
WNW	.0	1.0	6.0	6.0	3.0	1.0	.0	17.0
NW	.0	1.0	8.0	13.0	5.0	.0	.0	27.0
NNW	.0	1.0	6.0	12.0	6.0	2.0	1.0	28.0
TOTAL	.0	86.0	257.0	131.0	21.0	6.0	3.0	504.0

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

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 3  
 VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2181

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M)  
 FOR PERIOD [Year/Month/Day/Hour]  
 [1998/ 4/ 1/.0] TO [1998/ 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	2.0	12.0	1.0	.0	.0	.0	15.0
NNE	.0	11.0	27.0	9.0	.0	.0	.0	47.0
NE	.0	3.0	3.0	.0	.0	.0	.0	6.0
ENE	.0	8.0	.0	.0	.0	.0	.0	8.0
E	.0	3.0	.0	.0	.0	.0	.0	3.0
ESE	.0	2.0	2.0	.0	.0	.0	.0	4.0
SE	.0	.0	.0	.0	.0	.0	.0	.0
SSE	.0	2.0	8.0	.0	.0	.0	.0	10.0
S	.0	4.0	13.0	1.0	.0	.0	.0	18.0
SSW	.0	5.0	5.0	10.0	.0	.0	.0	20.0
SW	.0	2.0	7.0	4.0	.0	.0	.0	13.0
WSW	.0	2.0	4.0	1.0	.0	.0	.0	7.0
W	.0	1.0	3.0	.0	.0	.0	.0	4.0
WNW	.0	2.0	.0	2.0	.0	.0	.0	4.0
NW	.0	3.0	.0	.0	1.0	.0	.0	4.0
NNW	.0	6.0	6.0	1.0	.0	.0	.0	13.0
TOTAL	.0	56.0	90.0	29.0	1.0	.0	.0	176.0

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

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 3  
 VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2181

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

May, 1999

Docket Nos. 50-03 &amp; 50-247

## INDIAN POINT (UNITS 2 &amp; 3) - JOINT FREQUENCY DISTRIBUTIONS - APR/MAY/JUN 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M)  
 FOR PERIOD [Year/Month/Day/Hour]  
 [1998/ 4/ 1/ 0] TO [1998/ 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	3.0	.0	.0	.0	8.0
NNE	.0	1.0	4.0	1.0	.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	.0	.0	.0	.0	.0	.0	.0
SE	.0	1.0	.0	.0	.0	.0	.0	1.0
SSE	.0	1.0	.0	2.0	.0	.0	.0	3.0
S	.0	1.0	.0	.0	.0	.0	.0	1.0
SSW	.0	1.0	.0	.0	.0	.0	.0	1.0
SW	.0	2.0	.0	.0	.0	.0	.0	2.0
WSW	.0	1.0	.0	.0	.0	.0	.0	1.0
W	.0	4.0	.0	.0	.0	.0	.0	4.0
WNW	.0	2.0	1.0	1.0	.0	.0	.0	4.0
NW	.0	2.0	3.0	.0	.0	.0	.0	5.0
NNW	.0	1.0	2.0	.0	.0	.0	.0	3.0
TOTAL	.0	20.0	13.0	7.0	.0	.0	.0	40.0

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

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 3  
 VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2181

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M)  
 FOR PERIOD [Year/Month/Day/Hour]  
 [1998/ 4/ 1/ 0] TO [1998/ 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	11.0	65.0	73.0	56.0	32.0	9.0	246.0
NNE	.0	35.0	138.0	84.0	34.0	2.0	.0	293.0
NE	.0	21.0	52.0	13.0	19.0	2.0	.0	107.0
ENE	.0	23.0	28.0	4.0	2.0	1.0	.0	58.0
E	.0	17.0	21.0	4.0	1.0	.0	.0	43.0
ESE	.0	13.0	34.0	11.0	.0	.0	.0	58.0
SE	.0	19.0	40.0	19.0	.0	.0	.0	78.0
SSE	.0	24.0	140.0	101.0	10.0	.0	.0	275.0
S	.0	31.0	133.0	52.0	13.0	1.0	.0	230.0
SSW	.0	19.0	47.0	36.0	5.0	2.0	.0	109.0
SW	.0	18.0	36.0	23.0	2.0	.0	.0	79.0
WSW	.0	13.0	26.0	9.0	2.0	.0	.0	50.0
W	.0	12.0	14.0	15.0	5.0	1.0	.0	47.0
WNW	.0	7.0	15.0	37.0	56.0	6.0	1.0	122.0
NW	.0	11.0	21.0	65.0	81.0	34.0	.0	212.0
NNW	.0	14.0	36.0	49.0	57.0	16.0	2.0	174.0
TOTAL	.0	288.0	846.0	595.0	343.0	97.0	12.0	2181.0

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

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 3  
 VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2181

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M)  
 FOR PERIOD [Year/Month/Day/Hour]  
 [1998/ 4/ 1/ 0] TO [1998/ 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	.0	.0	.0	.0	.0
SE	.0	.0	.0	.0	.0	.0	.0	.0
SSE	.0	.0	1.0	.0	.0	.0	.0	1.0
S	.0	.0	.0	.0	1.0	.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	.0	.0	.0	.0	.0
W	.0	.0	.0	.0	.0	.0	.0	.0
WNW	.0	.0	.0	.0	4.0	2.0	.0	6.0
NW	.0	.0	.0	1.0	2.0	1.0	.0	4.0
NNW	.0	.0	.0	.0	1.0	1.0	.0	2.0
TOTAL	.0	.0	1.0	1.0	8.0	4.0	.0	14.0

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

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 3  
 VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2181

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M)  
 FOR PERIOD [Year/Month/Day/Hour]  
 [1998/ 4/ 1/ 0] TO [1998/ 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	6.0	1.0	.0	8.0
NNE	.0	.0	.0	.0	1.0	.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	1.0	.0	.0	1.0
SSE	.0	.0	5.0	8.0	5.0	1.0	.0	19.0
S	.0	.0	.0	2.0	.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	1.0	.0	.0	.0	1.0
W	.0	.0	.0	1.0	.0	.0	.0	1.0
WNW	.0	.0	.0	6.0	5.0	7.0	2.0	20.0
NW	.0	.0	.0	2.0	6.0	13.0	1.0	22.0
NNW	.0	.0	.0	1.0	6.0	1.0	.0	8.0
TOTAL	.0	.0	5.0	22.0	30.0	23.0	3.0	83.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE)	122.00
TEMPERATURE SENSOR SEPARATION (METERS)	112.00
MISSING OBS. DURING THIS PERIOD (ALL STABILITIES)	3
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES)	2181

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M)  
 FOR PERIOD [Year/Month/Day/Hour]  
 [1998/ 4/ 1/ 0] TO [1998/ 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	9.0	9.0	3.0	.0	21.0
NNE	.0	.0	.0	1.0	1.0	.0	.0	2.0
NE	.0	.0	.0	.0	.0	1.0	.0	1.0
ENE	.0	.0	.0	.0	.0	1.0	.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	10.0	7.0	3.0	.0	.0	20.0
S	.0	.0	2.0	5.0	.0	.0	.0	7.0
SSW	.0	.0	.0	.0	.0	.0	.0	.0
SW	.0	.0	.0	4.0	.0	.0	.0	4.0
WSW	.0	.0	.0	.0	.0	.0	.0	.0
W	.0	.0	.0	1.0	.0	.0	.0	1.0
WNW	.0	.0	1.0	8.0	10.0	4.0	.0	23.0
NW	.0	.0	.0	5.0	13.0	8.0	2.0	28.0
NNW	.0	.0	2.0	.0	9.0	2.0	.0	13.0
TOTAL	.0	.0	15.0	40.0	45.0	19.0	2.0	121.0

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

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 3  
 VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2181

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M)  
FOR PERIOD [Year/Month/Day/Hour]  
[1998/ 4/ 1/ 0] TO [1998/ 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	4.0	23.0	41.0	30.0	36.0	27.0	161.0
NNE	.0	5.0	17.0	22.0	42.0	13.0	2.0	101.0
NE	.0	5.0	14.0	15.0	16.0	9.0	.0	59.0
ENE	.0	5.0	22.0	12.0	1.0	1.0	.0	41.0
E	.0	3.0	13.0	6.0	2.0	.0	.0	24.0
ESE	.0	2.0	17.0	12.0	4.0	.0	.0	35.0
SE	.0	11.0	26.0	18.0	6.0	.0	.0	61.0
SSE	.0	14.0	69.0	77.0	13.0	2.0	.0	175.0
S	.0	9.0	44.0	31.0	14.0	1.0	.0	99.0
SSW	.0	3.0	16.0	9.0	9.0	3.0	2.0	42.0
SW	.0	3.0	12.0	9.0	2.0	.0	.0	26.0
WSW	.0	3.0	6.0	5.0	4.0	1.0	.0	19.0
W	.0	2.0	9.0	12.0	1.0	2.0	.0	26.0
WNW	.0	1.0	6.0	19.0	33.0	16.0	3.0	78.0
NW	.0	2.0	13.0	31.0	61.0	30.0	3.0	140.0
NNW	.0	2.0	20.0	22.0	36.0	13.0	6.0	99.0
TOTAL	.0	74.0	327.0	341.0	274.0	127.0	43.0	1186.0

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

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 3  
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2181

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M)  
 FOR PERIOD [Year/Month/Day/Hour]  
 [1998/ 4/ 1/ 0] TO [1998/ 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	23.0	18.0	1.0	.0	1.0	47.0
NNE	.0	10.0	12.0	21.0	2.0	.0	.0	45.0
NE	.0	12.0	12.0	7.0	1.0	.0	.0	32.0
ENE	.0	8.0	15.0	1.0	.0	.0	.0	24.0
E	.0	11.0	6.0	1.0	.0	.0	.0	18.0
ESE	.0	10.0	19.0	4.0	.0	.0	.0	33.0
SE	.0	9.0	15.0	14.0	.0	.0	.0	38.0
SSE	.0	20.0	38.0	19.0	1.0	.0	.0	78.0
S	.0	14.0	36.0	40.0	4.0	2.0	.0	96.0
SSW	.0	11.0	30.0	26.0	1.0	.0	.0	68.0
SW	.0	5.0	9.0	14.0	6.0	.0	.0	34.0
WSW	.0	2.0	7.0	6.0	4.0	2.0	.0	21.0
W	.0	2.0	3.0	7.0	.0	1.0	.0	13.0
WNW	.0	.0	3.0	6.0	5.0	2.0	.0	16.0
NW	.0	2.0	5.0	13.0	7.0	1.0	1.0	29.0
NNW	.0	5.0	18.0	17.0	9.0	1.0	1.0	51.0
TOTAL	.0	125.0	251.0	214.0	41.0	9.0	3.0	643.0

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

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 3  
 VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2181

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M)  
FOR PERIOD [Year/Month/Day/Hour]  
[1998/ 4/ 1/ 0] TO [1998/ 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	5.0	10.0	8.0	2.0	.0	.0	25.0
NNE	.0	.0	4.0	4.0	.0	.0	.0	8.0
NE	.0	5.0	2.0	.0	.0	.0	.0	7.0
ENE	.0	2.0	.0	.0	.0	.0	.0	2.0
E	.0	2.0	2.0	.0	.0	.0	.0	4.0
ESE	.0	2.0	.0	.0	.0	.0	.0	2.0
SE	.0	1.0	.0	.0	.0	.0	.0	1.0
SSE	.0	1.0	3.0	.0	.0	.0	.0	4.0
S	.0	5.0	7.0	6.0	.0	.0	.0	18.0
SSW	.0	2.0	5.0	.0	.0	.0	.0	7.0
SW	.0	.0	1.0	1.0	.0	.0	.0	2.0
WSW	.0	4.0	.0	1.0	.0	.0	.0	5.0
W	.0	3.0	1.0	.0	1.0	.0	.0	5.0
WNW	.0	1.0	4.0	1.0	1.0	.0	.0	7.0
NW	.0	1.0	2.0	3.0	.0	.0	.0	6.0
NNW	.0	3.0	8.0	3.0	.0	.0	.0	14.0
TOTAL	.0	37.0	49.0	27.0	4.0	.0	.0	117.0

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

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 3  
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2181

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M)  
 FOR PERIOD [Year/Month/Day/Hour]  
 [1998/ 4/ 1/ 0] TO [1998/ 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	2.0	3.0	.0	.0	.0	5.0
NNE	.0	1.0	.0	1.0	.0	.0	.0	2.0
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	1.0	1.0	.0	.0	.0	2.0
WNW	.0	1.0	2.0	2.0	.0	.0	.0	5.0
NW	.0	.0	.0	2.0	.0	.0	.0	2.0
NNW	.0	.0	.0	1.0	.0	.0	.0	1.0
TOTAL	.0	2.0	5.0	10.0	.0	.0	.0	17.0

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

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 3  
 VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2181

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M).  
FOR PERIOD [Year/Month/Day/Hour]  
[1998/ 4/ 1/ 0] TO [1998/ 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	13.0	58.0	80.0	48.0	40.0	28.0	267.0
NNE	.0	16.0	33.0	49.0	46.0	13.0	2.0	159.0
NE	.0	22.0	28.0	22.0	17.0	10.0	.0	99.0
ENE	.0	15.0	37.0	13.0	1.0	2.0	.0	68.0
E	.0	16.0	21.0	7.0	2.0	.0	.0	46.0
ESE	.0	14.0	36.0	16.0	4.0	.0	.0	70.0
SE	.0	21.0	41.0	32.0	7.0	.0	.0	101.0
SSE	.0	35.0	126.0	111.0	22.0	3.0	.0	297.0
S	.0	28.0	89.0	84.0	19.0	3.0	.0	223.0
SSW	.0	16.0	51.0	35.0	10.0	3.0	2.0	117.0
SW	.0	8.0	22.0	28.0	8.0	.0	.0	66.0
WSW	.0	9.0	13.0	13.0	8.0	3.0	.0	46.0
W	.0	7.0	14.0	22.0	2.0	3.0	.0	48.0
WNW	.0	3.0	16.0	42.0	58.0	31.0	5.0	155.0
NW	.0	5.0	20.0	57.0	89.0	53.0	7.0	231.0
NNW	.0	10.0	48.0	44.0	61.0	18.0	7.0	188.0
TOTAL	.0	238.0	653.0	655.0	402.0	182.0	51.0	2181.0

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

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 3  
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2181

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M)  
FOR PERIOD [Year/Month/Day/Hour]  
[1998/ 7/ 1/ 0] TO [1998/ 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	14.0	.0	.0	.0	68.0
NNE	.0	.0	2.0	6.0	.0	.0	.0	8.0
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	.0	.0	.0	.0	.0	.0	.0
SE	.0	.0	.0	.0	.0	.0	.0	.0
SSE	.0	2.0	27.0	.0	.0	.0	.0	29.0
S	.0	1.0	71.0	12.0	.0	.0	.0	84.0
SSW	.0	1.0	14.0	4.0	.0	.0	.0	19.0
SW	.0	.0	8.0	.0	.0	.0	.0	8.0
WSW	.0	2.0	4.0	.0	.0	.0	.0	6.0
W	.0	.0	3.0	1.0	.0	.0	.0	4.0
WNW	.0	.0	10.0	1.0	.0	.0	.0	11.0
NW	.0	.0	18.0	.0	.0	.0	.0	18.0
NNW	.0	1.0	18.0	2.0	.0	.0	.0	21.0
TOTAL	.0	7.0	230.0	40.0	.0	.0	.0	277.0

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M)  
FOR PERIOD [Year/Month/Day/Hour]  
[1998/ 7/ 1/ 0] TO [1998/ 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	23.0	3.0	.0	.0	.0	26.0
NNE	.0	.0	13.0	2.0	.0	.0	.0	15.0
NE	.0	1.0	.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	.0	.0	.0	.0	.0	.0
SE	.0	.0	1.0	.0	.0	.0	.0	1.0
SSE	.0	1.0	9.0	.0	.0	.0	.0	10.0
S	.0	3.0	37.0	3.0	.0	.0	.0	43.0
SSW	.0	1.0	14.0	4.0	.0	.0	.0	19.0
SW	.0	.0	6.0	.0	.0	.0	.0	6.0
WSW	.0	.0	3.0	.0	.0	.0	.0	3.0
W	.0	.0	4.0	1.0	.0	.0	.0	5.0
WNW	.0	2.0	3.0	.0	.0	.0	.0	5.0
NW	.0	3.0	5.0	.0	.0	.0	.0	8.0
NNW	.0	1.0	7.0	.0	.0	.0	.0	8.0
TOTAL	.0	12.0	127.0	13.0	.0	.0	.0	152.0

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M)  
FOR PERIOD [Year/Month/Day/Hour]  
[1998/ 7/ 1/ 0] TO [1998/ 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	25.0	1.0	.0	.0	.0	28.0
NNE	.0	1.0	17.0	1.0	.0	.0	.0	19.0
NE	.0	.0	4.0	.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	1.0	.0	.0	.0	.0	.0	1.0
SE	.0	.0	.0	.0	.0	.0	.0	.0
SSE	.0	3.0	5.0	.0	.0	.0	.0	8.0
S	.0	9.0	23.0	.0	.0	.0	.0	32.0
SSW	.0	5.0	11.0	5.0	.0	.0	.0	21.0
SW	.0	1.0	4.0	.0	.0	.0	.0	5.0
WSW	.0	3.0	.0	.0	.0	.0	.0	3.0
W	.0	3.0	4.0	1.0	.0	.0	.0	8.0
WNW	.0	.0	1.0	.0	.0	.0	.0	1.0
NW	.0	1.0	.0	.0	.0	.0	.0	1.0
NNW	.0	5.0	6.0	1.0	.0	.0	.0	12.0
TOTAL	.0	34.0	101.0	9.0	.0	.0	.0	144.0

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M)  
FOR PERIOD [Year/Month/Day/Hour]  
[1998/ 7/ 1/ 0] TO [1998/ 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	18.0	86.0	4.0	.0	.0	.0	108.0
NNE	.0	16.0	103.0	25.0	3.0	.0	.0	147.0
NE	.0	13.0	19.0	.0	.0	.0	.0	32.0
ENE	.0	9.0	3.0	.0	.0	.0	.0	12.0
E	.0	12.0	1.0	.0	.0	.0	.0	13.0
ESE	.0	9.0	.0	.0	.0	.0	.0	9.0
SE	.0	20.0	.0	.0	.0	.0	.0	20.0
SSE	.0	32.0	17.0	.0	.0	.0	.0	49.0
S	.0	24.0	102.0	13.0	.0	.0	.0	139.0
SSW	.0	20.0	45.0	12.0	.0	.0	.0	77.0
SW	.0	10.0	9.0	.0	.0	.0	.0	19.0
WSW	.0	9.0	3.0	.0	.0	.0	.0	12.0
W	.0	6.0	2.0	.0	.0	.0	.0	8.0
WNW	.0	2.0	11.0	.0	.0	.0	.0	13.0
NW	.0	7.0	14.0	1.0	.0	.0	.0	22.0
NNW	.0	6.0	25.0	.0	.0	.0	.0	31.0
TOTAL	.0	213.0	440.0	55.0	3.0	.0	.0	711.0

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M)  
 FOR PERIOD [Year/Month/Day/Hour]  
 [1998/ 7/ 1/ 0] TO [1998/ 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	26.0	8.0	2.0	.0	.0	.0	36.0
NNE	.0	68.0	104.0	1.0	.0	.0	.0	173.0
NE	.0	38.0	40.0	3.0	.0	.0	.0	81.0
ENE	.0	28.0	.0	.0	.0	.0	.0	28.0
E	.0	22.0	.0	.0	.0	.0	.0	22.0
ESE	.0	22.0	1.0	.0	.0	.0	.0	23.0
SE	.0	28.0	.0	.0	.0	.0	.0	28.0
SSE	.0	47.0	2.0	.0	.0	.0	.0	49.0
S	.0	76.0	63.0	1.0	.0	.0	.0	140.0
SSW	.0	50.0	39.0	1.0	.0	.0	.0	90.0
SW	.0	15.0	.0	.0	.0	.0	.0	15.0
WSW	.0	15.0	3.0	.0	.0	.0	.0	18.0
W	.0	13.0	3.0	.0	.0	.0	.0	16.0
WNW	.0	10.0	3.0	.0	.0	.0	.0	13.0
NW	.0	3.0	1.0	.0	.0	.0	.0	4.0
NNW	.0	7.0	1.0	.0	.0	.0	.0	8.0
TOTAL	.0	468.0	268.0	8.0	.0	.0	.0	744.0

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M)  
FOR PERIOD [Year/Month/Day/Hour]  
[1998/ 7/ 1/ 0] TO [1998/ 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	12.0	.0	.0	.0	.0	.0	12.0
NNE	.0	56.0	18.0	1.0	.0	.0	.0	75.0
NE	.0	19.0	7.0	.0	.0	.0	.0	26.0
ENE	.0	9.0	1.0	.0	.0	.0	.0	10.0
E	.0	11.0	.0	.0	.0	.0	.0	11.0
ESE	.0	.0	.0	.0	.0	.0	.0	.0
SE	.0	6.0	.0	.0	.0	.0	.0	6.0
SSE	.0	4.0	.0	.0	.0	.0	.0	4.0
S	.0	11.0	1.0	.0	.0	.0	.0	12.0
SSW	.0	7.0	.0	.0	.0	.0	.0	7.0
SW	.0	2.0	.0	.0	.0	.0	.0	2.0
WSW	.0	1.0	1.0	.0	.0	.0	.0	2.0
W	.0	3.0	.0	.0	.0	.0	.0	3.0
WNW	.0	1.0	.0	.0	.0	.0	.0	1.0
NW	.0	3.0	.0	.0	.0	.0	.0	3.0
NNW	.0	4.0	.0	.0	.0	.0	.0	4.0
TOTAL	.0	149.0	28.0	1.0	.0	.0	.0	178.0

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M)  
FOR PERIOD [Year/Month/Day/Hour]  
[1998/ 7/ 1/ 0] TO [1998/ 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	2.0	.0	.0	.0	.0	2.0
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	2.0	.0	.0	.0	.0	2.0

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M)  
FOR PERIOD [Year/Month/Day/Hour]  
[1998/ 7/ 1/ 0] TO [1998/ 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	196.0	24.0	.0	.0	.0	278.0
NNE	.0	141.0	257.0	36.0	3.0	.0	.0	437.0
NE	.0	71.0	73.0	3.0	.0	.0	.0	147.0
ENE	.0	46.0	5.0	.0	.0	.0	.0	51.0
E	.0	45.0	3.0	.0	.0	.0	.0	48.0
ESE	.0	32.0	1.0	.0	.0	.0	.0	33.0
SE	.0	54.0	1.0	.0	.0	.0	.0	55.0
SSE	.0	89.0	60.0	.0	.0	.0	.0	149.0
S	.0	124.0	297.0	29.0	.0	.0	.0	450.0
SSW	.0	84.0	123.0	26.0	.0	.0	.0	233.0
SW	.0	28.0	27.0	.0	.0	.0	.0	55.0
WSW	.0	30.0	14.0	.0	.0	.0	.0	44.0
W	.0	25.0	16.0	3.0	.0	.0	.0	44.0
WNW	.0	15.0	28.0	1.0	.0	.0	.0	44.0
NW	.0	17.0	38.0	1.0	.0	.0	.0	56.0
NNW	.0	24.0	57.0	3.0	.0	.0	.0	84.0
TOTAL	.0	883.0	1196.0	126.0	3.0	.0	.0	2208.0

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

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

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

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JUL/AUG/SEP 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M)  
FOR PERIOD [Year/Month/Day/Hour]  
[1998/ 7/ 1/ 0] TO [1998/ 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	1.0	27.0	16.0	2.0	.0	46.0
NNE	.0	.0	.0	2.0	2.0	.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	.0	.0	.0	.0	.0	.0
ESE	.0	.0	.0	.0	.0	.0	.0	.0
SE	.0	.0	2.0	.0	.0	.0	.0	2.0
SSE	.0	.0	45.0	37.0	.0	.0	.0	82.0
S	.0	.0	10.0	18.0	1.0	.0	.0	29.0
SSW	.0	1.0	3.0	2.0	3.0	.0	.0	9.0
SW	.0	.0	1.0	6.0	6.0	.0	.0	13.0
WSW	.0	.0	2.0	2.0	.0	.0	.0	4.0
W	.0	.0	4.0	2.0	1.0	.0	.0	7.0
WNW	.0	.0	6.0	2.0	2.0	2.0	.0	12.0
NW	.0	.0	.0	16.0	24.0	6.0	1.0	47.0
NNW	.0	.0	1.0	9.0	10.0	1.0	.0	21.0
TOTAL	.0	1.0	76.0	123.0	65.0	11.0	1.0	277.0

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M)  
FOR PERIOD [Year/Month/Day/Hour]  
[1998/ 7/ 1/ 0] TO [1998/ 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	6.0	14.0	2.0	2.0	.0	24.0
NNE	.0	.0	2.0	7.0	.0	.0	.0	9.0
NE	.0	.0	1.0	.0	.0	.0	.0	1.0
ENE	.0	.0	.0	.0	.0	.0	.0	.0
E	.0	.0	1.0	.0	.0	.0	.0	1.0
ESE	.0	.0	2.0	.0	.0	.0	.0	2.0
SE	.0	.0	.0	.0	.0	.0	.0	.0
SSE	.0	1.0	17.0	9.0	1.0	.0	.0	28.0
S	.0	.0	17.0	11.0	.0	.0	.0	28.0
SSW	.0	.0	6.0	2.0	5.0	.0	.0	13.0
SW	.0	.0	1.0	3.0	1.0	.0	.0	5.0
WSW	.0	.0	2.0	1.0	.0	.0	.0	3.0
W	.0	.0	2.0	3.0	1.0	.0	.0	6.0
WNW	.0	.0	2.0	2.0	1.0	2.0	.0	7.0
NW	.0	.0	4.0	3.0	7.0	1.0	.0	15.0
NNW	.0	.0	4.0	3.0	3.0	.0	.0	10.0
TOTAL	.0	1.0	67.0	58.0	21.0	5.0	.0	152.0

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M)  
FOR PERIOD [Year/Month/Day/Hour]  
[1998/ 7/ 1/ 0] TO [1998/ 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	16.0	4.0	2.0	1.0	.0	23.0
NNE	.0	.0	8.0	5.0	.0	.0	.0	13.0
NE	.0	.0	1.0	2.0	.0	.0	.0	3.0
ENE	.0	.0	1.0	2.0	.0	.0	.0	3.0
E	.0	.0	1.0	.0	.0	.0	.0	1.0
ESE	.0	.0	1.0	.0	.0	.0	.0	1.0
SE	.0	.0	.0	.0	.0	.0	.0	.0
SSE	.0	1.0	11.0	4.0	.0	.0	.0	16.0
S	.0	1.0	17.0	5.0	.0	.0	.0	23.0
SSW	.0	1.0	10.0	3.0	1.0	.0	.0	15.0
SW	.0	1.0	4.0	.0	4.0	1.0	.0	10.0
WSW	.0	1.0	1.0	1.0	.0	.0	.0	3.0
W	.0	1.0	2.0	1.0	.0	.0	.0	4.0
WNW	.0	.0	2.0	1.0	1.0	3.0	.0	7.0
NW	.0	.0	5.0	.0	3.0	.0	1.0	9.0
NNW	.0	1.0	5.0	7.0	.0	.0	.0	13.0
TOTAL	.0	7.0	85.0	35.0	11.0	5.0	1.0	144.0

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M)  
 FOR PERIOD [Year/Month/Day/Hour]  
 [1998/ 7/ 1/ 0] TO [1998/ 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	5.0	11.0	46.0	20.0	8.0	1.0	91.0
NNE	.0	8.0	41.0	39.0	1.0	.0	.0	89.0
NE	.0	12.0	15.0	4.0	.0	.0	.0	31.0
ENE	.0	3.0	4.0	2.0	.0	.0	.0	9.0
E	.0	8.0	4.0	1.0	.0	.0	.0	13.0
ESE	.0	11.0	3.0	.0	.0	.0	.0	14.0
SE	.0	6.0	8.0	1.0	.0	.0	.0	15.0
SSE	.0	13.0	24.0	40.0	8.0	.0	.0	85.0
S	.0	10.0	24.0	39.0	12.0	.0	.0	85.0
SSW	.0	5.0	28.0	30.0	3.0	.0	.0	66.0
SW	.0	4.0	10.0	8.0	12.0	1.0	.0	35.0
WSW	.0	2.0	4.0	8.0	3.0	.0	.0	17.0
W	.0	.0	1.0	7.0	.0	.0	.0	8.0
WNW	.0	3.0	1.0	12.0	6.0	3.0	.0	25.0
NW	.0	4.0	7.0	18.0	36.0	15.0	2.0	82.0
NNW	.0	3.0	4.0	21.0	16.0	1.0	1.0	46.0
TOTAL	.0	97.0	189.0	276.0	117.0	28.0	4.0	711.0

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M)  
FOR PERIOD [Year/Month/Day/Hour]  
[1998/ 7/ 1/ 0] TO [1998/ 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	11.0	30.0	16.0	.0	.0	.0	57.0
NNE	.0	14.0	112.0	54.0	.0	.0	.0	180.0
NE	.0	9.0	13.0	.0	.0	.0	.0	22.0
ENE	.0	11.0	2.0	.0	.0	.0	.0	13.0
E	.0	8.0	3.0	.0	.0	.0	.0	11.0
ESE	.0	7.0	5.0	.0	.0	.0	.0	12.0
SE	.0	5.0	11.0	5.0	.0	.0	.0	21.0
SSE	.0	9.0	25.0	15.0	.0	.0	.0	49.0
S	.0	16.0	45.0	43.0	3.0	.0	.0	107.0
SSW	.0	7.0	69.0	44.0	3.0	.0	.0	123.0
SW	.0	9.0	26.0	9.0	3.0	.0	.0	47.0
WSW	.0	9.0	13.0	3.0	.0	.0	.0	25.0
W	.0	4.0	5.0	7.0	2.0	.0	.0	18.0
WNW	.0	7.0	2.0	5.0	5.0	1.0	.0	20.0
NW	.0	8.0	6.0	6.0	6.0	.0	.0	26.0
NNW	.0	2.0	5.0	2.0	2.0	1.0	1.0	13.0
TOTAL	.0	136.0	372.0	209.0	24.0	2.0	1.0	744.0

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M)  
FOR PERIOD [Year/Month/Day/Hour]  
[1998/ 7/ 1/ 0] TO [1998/ 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	9.0	7.0	1.0	.0	.0	.0	17.0
NNE	.0	15.0	29.0	7.0	.0	.0	.0	51.0
NE	.0	8.0	2.0	.0	.0	.0	.0	10.0
ENE	.0	8.0	.0	.0	.0	.0	.0	8.0
E	.0	3.0	1.0	.0	.0	.0	.0	4.0
ESE	.0	5.0	2.0	.0	.0	.0	.0	7.0
SE	.0	6.0	.0	.0	.0	.0	.0	6.0
SSE	.0	3.0	4.0	.0	.0	.0	.0	7.0
S	.0	4.0	8.0	2.0	.0	.0	.0	14.0
SSW	.0	4.0	11.0	2.0	.0	.0	.0	17.0
SW	.0	3.0	3.0	1.0	.0	.0	.0	7.0
WSW	.0	5.0	2.0	2.0	.0	.0	.0	9.0
W	.0	4.0	.0	3.0	.0	.0	.0	7.0
WNW	.0	1.0	2.0	1.0	1.0	.0	.0	5.0
NW	.0	1.0	.0	.0	.0	.0	.0	1.0
NNW	.0	6.0	.0	2.0	.0	.0	.0	8.0
TOTAL	.0	85.0	71.0	21.0	1.0	.0	.0	178.0

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M)  
 FOR PERIOD [Year/Month/Day/Hour]  
 [1998/ 7/ 1/ 0] TO [1998/ 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	2.0	.0	.0	.0	2.0
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	2.0	.0	.0	.0	2.0

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M)  
 FOR PERIOD [Year/Month/Day/Hour]  
 [1998/ 7/ 1/ 0] TO [1998/ 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	25.0	71.0	108.0	40.0	13.0	1.0	258.0
NNE	.0	37.0	192.0	116.0	3.0	.0	.0	348.0
NE	.0	29.0	33.0	6.0	.0	.0	.0	68.0
ENE	.0	22.0	7.0	4.0	.0	.0	.0	33.0
E	.0	19.0	10.0	1.0	.0	.0	.0	30.0
ESE	.0	23.0	13.0	.0	.0	.0	.0	36.0
SE	.0	17.0	21.0	6.0	.0	.0	.0	44.0
SSE	.0	27.0	126.0	105.0	9.0	.0	.0	267.0
S	.0	31.0	121.0	118.0	16.0	.0	.0	286.0
SSW	.0	18.0	127.0	83.0	15.0	.0	.0	243.0
SW	.0	17.0	45.0	27.0	26.0	2.0	.0	117.0
WSW	.0	17.0	24.0	17.0	3.0	.0	.0	61.0
W	.0	9.0	14.0	23.0	4.0	.0	.0	50.0
WNW	.0	11.0	15.0	23.0	16.0	11.0	.0	76.0
NW	.0	13.0	22.0	43.0	76.0	22.0	4.0	180.0
NNW	.0	12.0	19.0	44.0	31.0	3.0	2.0	111.0
TOTAL	.0	327.0	860.0	724.0	239.0	51.0	7.0	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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M)  
 FOR PERIOD [Year/Month/Day/Hour]  
 [1998/ 7/ 1/ 0] TO [1998/ 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	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	.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	1.0	8.0	.0	.0	.0	9.0
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	1.0	.0	.0	1.0
NW	.0	.0	.0	.0	2.0	.0	.0	2.0
NNW	.0	.0	.0	1.0	2.0	.0	.0	3.0
TOTAL	.0	.0	1.0	10.0	6.0	.0	.0	17.0

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M)  
FOR PERIOD [Year/Month/Day/Hour]  
[1998/ 7/ 1/ 0] TO [1998/ 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	10.0	7.0	2.0	.0	19.0
NNE	.0	.0	.0	1.0	1.0	.0	.0	2.0
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	6.0	17.0	.0	.0	.0	23.0
S	.0	.0	.0	5.0	2.0	.0	.0	7.0
SSW	.0	.0	.0	.0	.0	.0	.0	.0
SW	.0	.0	.0	1.0	2.0	.0	.0	3.0
WSW	.0	.0	.0	2.0	.0	.0	.0	2.0
W	.0	.0	2.0	3.0	.0	.0	.0	5.0
WNW	.0	.0	2.0	.0	1.0	1.0	.0	4.0
NW	.0	.0	.0	8.0	7.0	8.0	3.0	26.0
NNW	.0	.0	.0	4.0	3.0	2.0	.0	9.0
TOTAL	.0	.0	10.0	51.0	23.0	13.0	3.0	100.0

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M)  
FOR PERIOD [Year/Month/Day/Hour]  
[1998/ 7/ 1/ 0] TO [1998/ 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	13.0	10.0	2.0	1.0	27.0
NNE	.0	.0	.0	3.0	.0	.0	.0	3.0
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	2.0	.0	.0	.0	.0	2.0
SE	.0	.0	1.0	.0	.0	.0	.0	1.0
SSE	.0	.0	27.0	10.0	.0	.0	.0	37.0
S	.0	1.0	3.0	9.0	1.0	.0	.0	14.0
SSW	.0	.0	.0	2.0	2.0	.0	.0	4.0
SW	.0	.0	1.0	3.0	5.0	.0	.0	9.0
WSW	.0	.0	.0	.0	.0	.0	.0	.0
W	.0	.0	3.0	.0	.0	.0	.0	3.0
WNW	.0	.0	2.0	3.0	1.0	.0	2.0	8.0
NW	.0	.0	1.0	7.0	8.0	5.0	1.0	22.0
NNW	.0	.0	3.0	1.0	3.0	1.0	.0	8.0
TOTAL	.0	1.0	44.0	52.0	30.0	8.0	4.0	139.0

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M)  
 FOR PERIOD [Year/Month/Day/Hour]  
 [1998/ 7/ 1/ 0] TO [1998/ 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	32.0	66.0	42.0	11.0	9.0	164.0
NNE	.0	7.0	39.0	26.0	7.0	.0	.0	79.0
NE	.0	6.0	13.0	5.0	.0	.0	.0	24.0
ENE	.0	6.0	10.0	5.0	.0	.0	.0	21.0
E	.0	8.0	9.0	2.0	.0	.0	.0	19.0
ESE	.0	6.0	3.0	.0	.0	.0	.0	9.0
SE	.0	9.0	7.0	7.0	.0	.0	.0	23.0
SSE	.0	17.0	49.0	60.0	24.0	.0	.0	150.0
S	.0	16.0	57.0	70.0	33.0	.0	.0	176.0
SSW	.0	8.0	29.0	44.0	19.0	2.0	.0	102.0
SW	.0	4.0	13.0	16.0	18.0	6.0	1.0	58.0
WSW	.0	4.0	7.0	11.0	5.0	.0	.0	27.0
W	.0	2.0	10.0	8.0	3.0	.0	.0	23.0
WNW	.0	2.0	6.0	13.0	13.0	11.0	4.0	49.0
NW	.0	1.0	14.0	16.0	49.0	23.0	11.0	114.0
NNW	.0	3.0	6.0	22.0	25.0	5.0	2.0	63.0
TOTAL	.0	103.0	304.0	371.0	238.0	58.0	27.0	1101.0

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M)  
FOR PERIOD [Year/Month/Day/Hour]  
[1998/ 7/ 1/ 0] TO [1998/ 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	2.0	36.0	45.0	7.0	.0	.0	90.0
NNE	.0	7.0	17.0	11.0	1.0	.0	.0	36.0
NE	.0	5.0	9.0	1.0	.0	.0	.0	15.0
ENE	.0	5.0	6.0	.0	.0	.0	.0	11.0
E	.0	1.0	1.0	.0	.0	.0	.0	2.0
ESE	.0	2.0	6.0	.0	.0	.0	.0	8.0
SE	.0	8.0	7.0	2.0	.0	.0	.0	17.0
SSE	.0	13.0	17.0	23.0	.0	.0	.0	53.0
S	.0	28.0	65.0	56.0	6.0	.0	.0	155.0
SSW	.0	16.0	44.0	50.0	10.0	.0	.0	120.0
SW	.0	19.0	21.0	17.0	6.0	.0	.0	63.0
WSW	.0	12.0	16.0	5.0	2.0	.0	.0	35.0
W	.0	7.0	9.0	8.0	6.0	1.0	.0	31.0
WNW	.0	8.0	9.0	5.0	3.0	2.0	.0	27.0
NW	.0	2.0	10.0	7.0	5.0	1.0	.0	25.0
NNW	.0	7.0	19.0	6.0	2.0	.0	1.0	35.0
TOTAL	.0	142.0	292.0	236.0	48.0	4.0	1.0	723.0

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M)  
FOR PERIOD [Year/Month/Day/Hour]  
[1998/ 7/ 1/ 0] TO [1998/ 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	3.0	16.0	5.0	.0	.0	.0	24.0
NNE	.0	5.0	13.0	4.0	.0	.0	.0	22.0
NE	.0	3.0	1.0	.0	.0	.0	.0	4.0
ENE	.0	.0	.0	.0	.0	.0	.0	.0
E	.0	1.0	.0	.0	.0	.0	.0	1.0
ESE	.0	2.0	.0	.0	.0	.0	.0	2.0
SE	.0	.0	.0	.0	.0	.0	.0	.0
SSE	.0	5.0	.0	.0	.0	.0	.0	5.0
S	.0	6.0	3.0	.0	.0	.0	.0	9.0
SSW	.0	4.0	4.0	1.0	.0	.0	.0	9.0
SW	.0	11.0	3.0	.0	.0	.0	.0	14.0
WSW	.0	6.0	3.0	.0	.0	.0	.0	9.0
W	.0	7.0	2.0	1.0	1.0	.0	.0	11.0
WNW	.0	5.0	1.0	.0	.0	.0	.0	6.0
NW	.0	3.0	1.0	.0	.0	.0	.0	4.0
NNW	.0	7.0	1.0	.0	.0	.0	.0	8.0
TOTAL	.0	68.0	48.0	11.0	1.0	.0	.0	128.0

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M)  
 FOR PERIOD [Year/Month/Day/Hour]  
 [1998/ 7/ 1/ 0] TO [1998/ 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	.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)	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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M)  
 FOR PERIOD [Year/Month/Day/Hour]  
 [1998/ 7/ 1/ 0] TO [1998/ 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	9.0	85.0	140.0	67.0	15.0	10.0	326.0
NNE	.0	19.0	69.0	45.0	9.0	.0	.0	142.0
NE	.0	14.0	23.0	7.0	.0	.0	.0	44.0
ENE	.0	11.0	16.0	5.0	.0	.0	.0	32.0
E	.0	10.0	10.0	2.0	.0	.0	.0	22.0
ESE	.0	10.0	11.0	.0	.0	.0	.0	21.0
SE	.0	17.0	15.0	9.0	.0	.0	.0	41.0
SSE	.0	35.0	100.0	118.0	24.0	.0	.0	277.0
S	.0	51.0	128.0	140.0	42.0	.0	.0	361.0
SSW	.0	28.0	77.0	97.0	31.0	2.0	.0	235.0
SW	.0	34.0	38.0	37.0	31.0	6.0	1.0	147.0
WSW	.0	22.0	26.0	18.0	7.0	.0	.0	73.0
W	.0	16.0	26.0	20.0	10.0	1.0	.0	73.0
WNW	.0	15.0	20.0	21.0	19.0	14.0	6.0	95.0
NW	.0	6.0	26.0	38.0	71.0	37.0	15.0	193.0
NNW	.0	17.0	29.0	34.0	35.0	8.0	3.0	126.0
TOTAL	.0	314.0	699.0	731.0	346.0	83.0	35.0	2208.0

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

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

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

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - OCT/NOV/DEC 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M)  
 FOR PERIOD [Year/Month/Day/Hour]  
 [1998/10/ 1/ 0] TO [1998/12/31/23]

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	4.0	7.0	.0	.0	.0	11.0
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	2.0	.0	.0	.0	.0	2.0
S	.0	.0	3.0	.0	.0	.0	.0	3.0
SSW	.0	.0	.0	.0	.0	.0	.0	.0
SW	.0	.0	.0	.0	.0	.0	.0	.0
WSW	.0	.0	4.0	.0	.0	.0	.0	4.0
W	.0	.0	8.0	.0	.0	.0	.0	8.0
WNW	.0	.0	13.0	3.0	.0	.0	.0	16.0
NW	.0	.0	12.0	9.0	.0	.0	.0	21.0
NNW	.0	.0	13.0	.0	.0	.0	.0	13.0
TOTAL	.0	.0	59.0	19.0	.0	.0	.0	78.0

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

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 23  
 VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2185

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M)  
 FOR PERIOD [Year/Month/Day/Hour]  
 [1998/10/ 1/ 0] TO [1998/12/31/23]

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	14.0	12.0	.0	.0	.0	26.0
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	4.0	.0	.0	.0	.0	4.0
S	.0	.0	9.0	3.0	.0	.0	.0	12.0
SSW	.0	.0	3.0	2.0	.0	.0	.0	5.0
SW	.0	.0	.0	.0	.0	.0	.0	.0
WSW	.0	1.0	1.0	.0	.0	.0	.0	2.0
W	.0	.0	4.0	.0	.0	.0	.0	4.0
WNW	.0	.0	3.0	4.0	.0	.0	.0	7.0
NW	.0	1.0	8.0	12.0	.0	.0	.0	21.0
NNW	.0	.0	4.0	1.0	.0	.0	.0	5.0
TOTAL	.0	2.0	50.0	34.0	.0	.0	.0	86.0

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

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 23  
 VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2185

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M)  
 FOR PERIOD [Year/Month/Day/Hour]  
 [1998/10/ 1/ 0] TO [1998/12/31/23]

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	9.0	3.0	.0	.0	.0	12.0
NNE	.0	.0	1.0	1.0	.0	.0	.0	2.0
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	1.0	.0	.0	.0	.0	.0	1.0
SSE	.0	.0	7.0	.0	.0	.0	.0	7.0
S	.0	1.0	7.0	3.0	.0	.0	.0	11.0
SSW	.0	.0	2.0	2.0	.0	.0	.0	4.0
SW	.0	1.0	.0	.0	.0	.0	.0	1.0
WSW	.0	1.0	4.0	.0	.0	.0	.0	5.0
W	.0	.0	7.0	.0	.0	.0	.0	7.0
WNW	.0	.0	8.0	.0	.0	.0	.0	8.0
NW	.0	1.0	10.0	9.0	.0	.0	.0	20.0
NNW	.0	1.0	6.0	2.0	.0	.0	.0	9.0
TOTAL	.0	6.0	61.0	20.0	.0	.0	.0	87.0

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

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 23  
 VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2185

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M)  
FOR PERIOD [Year/Month/Day/Hour]  
[1998/10/ 1/ 0] TO [1998/12/31/23]

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	22.0	104.0	40.0	.0	.0	.0	166.0
NNE	.0	15.0	69.0	70.0	.0	.0	.0	154.0
NE	.0	16.0	17.0	.0	.0	.0	.0	33.0
ENE	.0	6.0	.0	.0	.0	.0	.0	6.0
E	.0	6.0	1.0	.0	.0	.0	.0	7.0
ESE	.0	11.0	.0	.0	.0	.0	.0	11.0
SE	.0	20.0	.0	.0	.0	.0	.0	20.0
SSE	.0	25.0	34.0	3.0	.0	.0	.0	62.0
S	.0	18.0	69.0	18.0	.0	.0	.0	105.0
SSW	.0	9.0	36.0	6.0	1.0	.0	.0	52.0
SW	.0	9.0	8.0	.0	.0	.0	.0	17.0
WSW	.0	14.0	17.0	.0	.0	.0	.0	31.0
W	.0	4.0	30.0	3.0	.0	.0	.0	37.0
WNW	.0	9.0	54.0	19.0	2.0	.0	.0	84.0
NW	.0	9.0	66.0	46.0	.0	.0	.0	121.0
NNW	.0	8.0	77.0	7.0	.0	.0	.0	92.0
TOTAL	.0	201.0	582.0	212.0	3.0	.0	.0	998.0

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

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 23  
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2185

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M)  
 FOR PERIOD [Year/Month/Day/Hour]  
 [1998/10/ 1/ 0] TO [1998/12/31/23]

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	17.0	6.0	.0	.0	.0	.0	23.0
NNE	.0	30.0	45.0	2.0	.0	.0	.0	77.0
NE	.0	33.0	27.0	.0	.0	.0	.0	60.0
ENE	.0	22.0	.0	.0	.0	.0	.0	22.0
E	.0	18.0	.0	.0	.0	.0	.0	18.0
ESE	.0	20.0	.0	.0	.0	.0	.0	20.0
SE	.0	42.0	3.0	.0	.0	.0	.0	45.0
SSE	.0	48.0	27.0	2.0	.0	.0	.0	77.0
S	.0	55.0	65.0	12.0	1.0	.0	.0	133.0
SSW	.0	50.0	23.0	2.0	.0	.0	.0	75.0
SW	.0	19.0	4.0	.0	.0	.0	.0	23.0
WSW	.0	20.0	20.0	.0	.0	.0	.0	40.0
W	.0	20.0	33.0	3.0	.0	.0	.0	56.0
WNW	.0	13.0	25.0	3.0	.0	.0	.0	41.0
NW	.0	10.0	14.0	.0	.0	.0	.0	24.0
NNW	.0	8.0	3.0	.0	.0	.0	.0	11.0
TOTAL	.0	425.0	295.0	24.0	1.0	.0	.0	745.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 10.00  
 TEMPERATURE SENSOR SEPARATION (METERS) 50.90  
 MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 23  
 VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2185

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M)  
FOR PERIOD [Year/Month/Day/Hour]  
[1998/10/ 1/ 0] TO [1998/12/31/23]

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	10.0	.0	.0	.0	.0	.0	10.0
NNE	.0	20.0	14.0	.0	.0	.0	.0	34.0
NE	.0	20.0	21.0	.0	.0	.0	.0	41.0
ENE	.0	6.0	.0	.0	.0	.0	.0	6.0
E	.0	2.0	.0	.0	.0	.0	.0	2.0
ESE	.0	5.0	.0	.0	.0	.0	.0	5.0
SE	.0	6.0	.0	.0	.0	.0	.0	6.0
SSE	.0	11.0	1.0	.0	.0	.0	.0	12.0
S	.0	12.0	10.0	.0	.0	.0	.0	22.0
SSW	.0	9.0	4.0	.0	.0	.0	.0	13.0
SW	.0	8.0	.0	.0	.0	.0	.0	8.0
WSW	.0	2.0	.0	.0	.0	.0	.0	2.0
W	.0	5.0	.0	.0	.0	.0	.0	5.0
WNW	.0	1.0	.0	.0	.0	.0	.0	1.0
NW	.0	1.0	1.0	.0	.0	.0	.0	2.0
NNW	.0	2.0	.0	.0	.0	.0	.0	2.0
TOTAL	.0	120.0	51.0	.0	.0	.0	.0	171.0

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

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 23  
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2185

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M)  
FOR PERIOD [Year/Month/Day/Hour]  
[1998/10/ 1/ 0] TO [1998/12/31/23]

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	3.0	.0	.0	.0	.0	.0	3.0
NNE	.0	3.0	6.0	.0	.0	.0	.0	9.0
NE	.0	1.0	4.0	.0	.0	.0	.0	5.0
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	.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	1.0	.0	.0	.0	.0	.0	1.0
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	.0	.0	.0	.0	.0	.0	.0
NNW	.0	.0	.0	.0	.0	.0	.0	.0
TOTAL	.0	10.0	10.0	.0	.0	.0	.0	20.0

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

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 23  
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2185

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M)  
 FOR PERIOD [Year/Month/Day/Hour]  
 [1998/10/ 1/ 0] TO [1998/12/31/23]

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	52.0	137.0	62.0	.0	.0	.0	251.0
NNE	.0	68.0	135.0	73.0	.0	.0	.0	276.0
NE	.0	70.0	69.0	.0	.0	.0	.0	139.0
ENE	.0	35.0	.0	.0	.0	.0	.0	35.0
E	.0	26.0	1.0	.0	.0	.0	.0	27.0
ESE	.0	36.0	.0	.0	.0	.0	.0	36.0
SE	.0	69.0	3.0	.0	.0	.0	.0	72.0
SSE	.0	84.0	75.0	5.0	.0	.0	.0	164.0
S	.0	86.0	163.0	36.0	1.0	.0	.0	286.0
SSW	.0	69.0	68.0	12.0	1.0	.0	.0	150.0
SW	.0	38.0	12.0	.0	.0	.0	.0	50.0
WSW	.0	38.0	46.0	.0	.0	.0	.0	84.0
W	.0	29.0	82.0	6.0	.0	.0	.0	117.0
WNW	.0	23.0	103.0	29.0	2.0	.0	.0	157.0
NW	.0	22.0	111.0	76.0	.0	.0	.0	209.0
NNW	.0	19.0	103.0	10.0	.0	.0	.0	132.0
TOTAL	.0	764.0	1108.0	309.0	4.0	.0	.0	2185.0

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

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 23  
 VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2185

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M)  
 FOR PERIOD [Year/Month/Day/Hour]  
 [1998/10/ 1/ 0] TO [1998/12/31/23]

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	3.0	6.0	2.0	.0	11.0
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	2.0	2.0	.0	.0	.0	4.0
S	.0	.0	.0	1.0	.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	.0	.0	.0	1.0
W	.0	.0	.0	3.0	2.0	.0	.0	5.0
WNW	.0	.0	.0	6.0	10.0	6.0	.0	22.0
NW	.0	.0	1.0	5.0	11.0	9.0	4.0	30.0
NNW	.0	.0	.0	.0	4.0	.0	.0	4.0
TOTAL	.0	.0	3.0	21.0	33.0	17.0	4.0	78.0

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

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 23  
 VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2185

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M)  
 FOR PERIOD [Year/Month/Day/Hour]  
 [1998/10/ 1/ 0] TO [1998/12/31/23]

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	8.0	5.0	4.0	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	.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	7.0	.0	.0	.0	.0	7.0
S	.0	.0	2.0	4.0	1.0	.0	.0	7.0
SSW	.0	.0	.0	2.0	3.0	.0	.0	5.0
SW	.0	.0	.0	2.0	.0	.0	.0	2.0
WSW	.0	.0	.0	.0	.0	.0	.0	.0
W	.0	.0	1.0	3.0	.0	.0	.0	4.0
WNW	.0	.0	1.0	2.0	3.0	3.0	1.0	10.0
NW	.0	.0	2.0	1.0	11.0	8.0	2.0	24.0
NNW	.0	.0	1.0	6.0	1.0	1.0	.0	9.0
TOTAL	.0	.0	14.0	28.0	24.0	16.0	4.0	86.0

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

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 23  
 VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2185

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M)  
FOR PERIOD [Year/Month/Day/Hour]  
[1998/10/ 1/ 0] TO [1998/12/31/23]

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	9.0	3.0	.0	.0	12.0
NNE	.0	.0	1.0	.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	1.0	.0	.0	.0	.0	1.0
SSE	.0	1.0	5.0	3.0	.0	.0	.0	9.0
S	.0	.0	4.0	2.0	3.0	.0	.0	9.0
SSW	.0	.0	1.0	2.0	.0	.0	.0	3.0
SW	.0	.0	.0	.0	1.0	.0	.0	1.0
WSW	.0	.0	2.0	2.0	.0	.0	.0	4.0
W	.0	.0	1.0	6.0	.0	.0	.0	7.0
WNW	.0	.0	.0	1.0	9.0	1.0	.0	11.0
NW	.0	.0	2.0	2.0	14.0	6.0	.0	24.0
NNW	.0	.0	.0	.0	3.0	2.0	.0	5.0
TOTAL	.0	1.0	17.0	27.0	33.0	9.0	.0	87.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 60.00  
TEMPERATURE SENSOR SEPARATION (METERS) 50.90  
MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 23  
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2185

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M)  
FOR PERIOD [Year/Month/Day/Hour]  
[1998/10/ 1/ 0] TO [1998/12/31/23]

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	5.0	40.0	50.0	88.0	14.0	.0	197.0
NNE	.0	9.0	38.0	29.0	4.0	.0	.0	80.0
NE	.0	6.0	11.0	1.0	.0	.0	.0	18.0
ENE	.0	5.0	6.0	.0	.0	.0	.0	11.0
E	.0	4.0	5.0	.0	.0	.0	.0	9.0
ESE	.0	5.0	6.0	.0	.0	.0	.0	11.0
SE	.0	7.0	19.0	.0	.0	.0	.0	26.0
SSE	.0	8.0	26.0	38.0	1.0	.0	.0	73.0
S	.0	4.0	30.0	20.0	11.0	.0	.0	65.0
SSW	.0	4.0	19.0	19.0	9.0	1.0	.0	52.0
SW	.0	7.0	11.0	11.0	5.0	1.0	.0	35.0
WSW	.0	3.0	7.0	7.0	5.0	.0	.0	22.0
W	.0	2.0	7.0	22.0	3.0	1.0	.0	35.0
WNW	.0	1.0	12.0	38.0	33.0	12.0	6.0	102.0
NW	.0	3.0	10.0	33.0	91.0	28.0	8.0	173.0
NNW	.0	1.0	7.0	36.0	38.0	6.0	1.0	89.0
TOTAL	.0	74.0	254.0	304.0	288.0	63.0	15.0	998.0

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

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 23  
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2185

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M)  
FOR PERIOD [Year/Month/Day/Hour]  
[1998/10/ 1/ 0] TO [1998/12/31/23]

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	7.0	22.0	9.0	.0	.0	.0	38.0
NNE	.0	11.0	35.0	29.0	.0	.0	.0	75.0
NE	.0	5.0	17.0	1.0	.0	.0	.0	23.0
ENE	.0	4.0	7.0	.0	.0	.0	.0	11.0
E	.0	1.0	4.0	.0	.0	.0	.0	5.0
ESE	.0	5.0	6.0	.0	.0	.0	.0	11.0
SE	.0	5.0	15.0	6.0	2.0	.0	.0	28.0
SSE	.0	4.0	39.0	18.0	.0	2.0	.0	63.0
S	.0	8.0	30.0	33.0	18.0	1.0	.0	90.0
SSW	.0	4.0	49.0	48.0	3.0	2.0	.0	106.0
SW	.0	10.0	27.0	13.0	1.0	.0	.0	51.0
WSW	.0	9.0	19.0	11.0	1.0	.0	.0	40.0
W	.0	8.0	10.0	31.0	5.0	1.0	.0	55.0
WNW	.0	2.0	15.0	40.0	18.0	3.0	1.0	79.0
NW	.0	2.0	9.0	26.0	8.0	.0	.0	45.0
NNW	.0	2.0	16.0	3.0	4.0	.0	.0	25.0
TOTAL	.0	87.0	320.0	268.0	60.0	9.0	1.0	745.0

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

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 23  
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2185

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M)  
 FOR PERIOD [Year/Month/Day/Hour]  
 [1998/10/ 1/ 0] TO [1998/12/31/23]

PASQUILL STABILITY: F

WIND SPEED (MPH)								
WIND FROM	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N	.0	3.0	10.0	3.0	.0	.0	.0	16.0
NNE	.0	3.0	24.0	10.0	.0	.0	.0	37.0
NE	.0	4.0	8.0	1.0	.0	.0	.0	13.0
ENE	.0	.0	.0	.0	.0	.0	.0	.0
E	.0	2.0	.0	.0	.0	.0	.0	2.0
ESE	.0	.0	.0	.0	.0	.0	.0	.0
SE	.0	3.0	.0	.0	.0	.0	.0	3.0
SSE	.0	2.0	6.0	1.0	.0	.0	.0	9.0
S	.0	4.0	10.0	9.0	.0	.0	.0	23.0
SSW	.0	3.0	8.0	11.0	.0	.0	.0	22.0
SW	.0	1.0	4.0	13.0	1.0	.0	.0	19.0
WSW	.0	.0	2.0	4.0	.0	.0	.0	6.0
W	.0	4.0	4.0	1.0	.0	.0	.0	9.0
WNW	.0	3.0	3.0	.0	.0	.0	.0	6.0
NW	.0	2.0	2.0	1.0	.0	.0	.0	5.0
NNW	.0	1.0	.0	.0	.0	.0	.0	1.0
TOTAL	.0	35.0	81.0	54.0	1.0	.0	.0	171.0

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

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 23  
 VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2185

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M)  
FOR PERIOD [Year/Month/Day/Hour]  
[1998/10/ 1/ 0] TO [1998/12/31/23]

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	5.0	.0	.0	.0	5.0
NNE	.0	1.0	2.0	1.0	.0	.0	.0	4.0
NE	.0	1.0	1.0	.0	.0	.0	.0	2.0
ENE	.0	.0	.0	.0	.0	.0	.0	.0
E	.0	.0	.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	1.0	.0	.0	.0	.0	2.0
S	.0	.0	2.0	.0	.0	.0	.0	2.0
SSW	.0	.0	.0	1.0	.0	.0	.0	1.0
SW	.0	1.0	.0	.0	.0	.0	.0	1.0
WSW	.0	1.0	.0	.0	.0	.0	.0	1.0
W	.0	1.0	.0	.0	.0	.0	.0	1.0
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	6.0	7.0	7.0	.0	.0	.0	20.0

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

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 23  
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2185

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M)  
FOR PERIOD [Year/Month/Day/Hour]  
[1998/10/ 1/ 0] TO [1998/12/31/23]

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	72.0	87.0	102.0	20.0	1.0	297.0
NNE	.0	24.0	100.0	69.0	4.0	.0	.0	197.0
NE	.0	16.0	37.0	3.0	.0	.0	.0	56.0
ENE	.0	9.0	13.0	.0	.0	.0	.0	22.0
E	.0	7.0	9.0	.0	.0	.0	.0	16.0
ESE	.0	10.0	12.0	.0	.0	.0	.0	22.0
SE	.0	15.0	35.0	6.0	2.0	.0	.0	58.0
SSE	.0	16.0	86.0	62.0	1.0	2.0	.0	167.0
S	.0	16.0	78.0	69.0	33.0	1.0	.0	197.0
SSW	.0	11.0	77.0	83.0	15.0	3.0	.0	189.0
SW	.0	19.0	42.0	39.0	8.0	1.0	.0	109.0
WSW	.0	13.0	30.0	25.0	6.0	.0	.0	74.0
W	.0	15.0	23.0	66.0	10.0	2.0	.0	116.0
WNW	.0	6.0	31.0	87.0	73.0	25.0	8.0	230.0
NW	.0	7.0	26.0	68.0	135.0	51.0	14.0	301.0
NNW	.0	4.0	25.0	45.0	50.0	9.0	1.0	134.0
TOTAL	.0	203.0	696.0	709.0	439.0	114.0	24.0	2185.0

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

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 23  
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2185

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M)  
FOR PERIOD [Year/Month/Day/Hour]  
[1998/10/ 1/ 0] TO [1998/12/31/23]

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	.0	.0	.0
NW	.0	.0	.0	.0	2.0	.0	.0	2.0
NNW	.0	.0	.0	.0	.0	.0	.0	.0
TOTAL	.0	.0	.0	.0	2.0	.0	.0	2.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE)	122.00
TEMPERATURE SENSOR SEPARATION (METERS)	112.00
MISSING OBS. DURING THIS PERIOD (ALL STABILITIES)	23
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES)	2185

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M)  
 FOR PERIOD [Year/Month/Day/Hour]  
 [1998/10/ 1/ 0] TO [1998/12/31/23]

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	1.0	.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	.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	3.0	1.0	6.0	1.0	11.0
NW	.0	.0	.0	.0	2.0	4.0	1.0	7.0
NNW	.0	.0	.0	.0	3.0	.0	.0	3.0
TOTAL	.0	.0	.0	4.0	6.0	10.0	2.0	22.0

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

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 23  
 VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2185

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M)  
 FOR PERIOD [Year/Month/Day/Hour]  
 [1998/10/ 1/ 0] TO [1998/12/31/23]

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	7.0	6.0	4.0	.0	17.0
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	2.0	2.0	.0	.0	.0	4.0
S	.0	.0	.0	.0	.0	.0	.0	.0
SSW	.0	.0	.0	.0	2.0	.0	.0	2.0
SW	.0	.0	.0	.0	1.0	.0	.0	1.0
WSW	.0	.0	.0	.0	.0	.0	.0	.0
W	.0	.0	1.0	4.0	1.0	.0	.0	6.0
WNW	.0	.0	.0	3.0	7.0	3.0	2.0	15.0
NW	.0	.0	2.0	3.0	4.0	8.0	4.0	21.0
NNW	.0	.0	.0	1.0	3.0	1.0	.0	5.0
TOTAL	.0	.0	5.0	20.0	24.0	16.0	6.0	71.0

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

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 23  
 VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2185

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M)  
FOR PERIOD [Year/Month/Day/Hour]  
[1998/10/ 1/ 0] TO [1998/12/31/23]

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	25.0	62.0	91.0	47.0	2.0	228.0
NNE	.0	5.0	39.0	30.0	14.0	1.0	.0	89.0
NE	.0	8.0	9.0	3.0	.0	.0	.0	20.0
ENE	.0	3.0	2.0	.0	.0	.0	.0	5.0
E	.0	2.0	7.0	1.0	.0	.0	.0	10.0
ESE	.0	3.0	14.0	1.0	.0	.0	.0	18.0
SE	.0	.0	19.0	13.0	5.0	.0	.0	37.0
SSE	.0	6.0	35.0	43.0	18.0	.0	.0	102.0
S	.0	9.0	34.0	37.0	26.0	5.0	.0	111.0
SSW	.0	4.0	22.0	31.0	15.0	3.0	2.0	77.0
SW	.0	3.0	8.0	16.0	6.0	3.0	.0	36.0
WSW	.0	3.0	10.0	13.0	6.0	1.0	.0	33.0
W	.0	1.0	8.0	27.0	23.0	3.0	1.0	63.0
WNW	.0	2.0	12.0	51.0	76.0	32.0	12.0	185.0
NW	.0	2.0	8.0	58.0	102.0	65.0	20.0	255.0
NNW	.0	3.0	13.0	31.0	47.0	15.0	4.0	113.0
TOTAL	.0	55.0	265.0	417.0	429.0	175.0	41.0	1382.0

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

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 23  
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2185

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M)  
FOR PERIOD [Year/Month/Day/Hour]  
[1998/10/ 1/ 0] TO [1998/12/31/23]

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	3.0	19.0	13.0	4.0	.0	.0	39.0
NNE	.0	1.0	15.0	12.0	.0	.0	.0	28.0
NE	.0	8.0	6.0	2.0	.0	.0	.0	16.0
ENE	.0	2.0	6.0	.0	.0	.0	.0	8.0
E	.0	6.0	5.0	1.0	.0	.0	.0	12.0
ESE	.0	3.0	4.0	.0	.0	.0	.0	7.0
SE	.0	1.0	6.0	3.0	1.0	.0	.0	11.0
SSE	.0	7.0	30.0	25.0	.0	.0	.0	62.0
S	.0	5.0	29.0	39.0	14.0	2.0	2.0	91.0
SSW	.0	3.0	26.0	36.0	14.0	2.0	.0	81.0
SW	.0	6.0	30.0	23.0	7.0	1.0	1.0	68.0
WSW	.0	2.0	13.0	13.0	2.0	.0	.0	30.0
W	.0	4.0	14.0	17.0	13.0	3.0	.0	51.0
WNW	.0	5.0	9.0	11.0	5.0	1.0	.0	31.0
NW	.0	8.0	21.0	14.0	3.0	2.0	.0	48.0
NNW	.0	5.0	13.0	8.0	1.0	.0	.0	27.0
TOTAL	.0	69.0	246.0	217.0	64.0	11.0	3.0	610.0

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

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 23  
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2185

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M)  
FOR PERIOD [Year/Month/Day/Hour]  
[1998/10/ 1/ 0] TO [1998/12/31/23]

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	1.0	6.0	12.0	.0	.0	.0	19.0
NNE	.0	1.0	6.0	3.0	.0	.0	.0	10.0
NE	.0	.0	2.0	.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	3.0	.0	.0	.0	.0	.0	3.0
SSE	.0	2.0	.0	1.0	.0	.0	.0	3.0
S	.0	.0	6.0	5.0	1.0	.0	.0	12.0
SSW	.0	2.0	2.0	7.0	.0	.0	.0	11.0
SW	.0	2.0	1.0	7.0	3.0	.0	.0	13.0
WSW	.0	2.0	3.0	8.0	.0	.0	.0	13.0
W	.0	1.0	3.0	1.0	.0	.0	.0	5.0
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	1.0	.0	.0	.0	.0	.0	1.0
TOTAL	.0	18.0	31.0	44.0	4.0	.0	.0	97.0

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

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 23  
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2185

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M)  
 FOR PERIOD [Year/Month/Day/Hour]  
 [1998/10/ 1/ 0] TO [1998/12/31/23]

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	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	.0	.0	.0	.0	.0	.0	.0
NNW	.0	.0	.0	.0	.0	.0	.0	.0
TOTAL	.0	1.0	.0	.0	.0	.0	.0	1.0

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

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 23  
 VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2185

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 1998

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M)  
 FOR PERIOD [Year/Month/Day/Hour]  
 [1998/10/ 1/ 0] TO [1998/12/31/23]

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	5.0	50.0	95.0	101.0	51.0	2.0	304.0
NNE	.0	7.0	60.0	45.0	14.0	1.0	.0	127.0
NE	.0	16.0	17.0	5.0	.0	.0	.0	38.0
ENE	.0	5.0	8.0	.0	.0	.0	.0	13.0
E	.0	9.0	12.0	2.0	.0	.0	.0	23.0
ESE	.0	6.0	18.0	1.0	.0	.0	.0	25.0
SE	.0	4.0	25.0	16.0	6.0	.0	.0	51.0
SSE	.0	15.0	67.0	71.0	18.0	.0	.0	171.0
S	.0	14.0	69.0	81.0	41.0	7.0	2.0	214.0
SSW	.0	9.0	50.0	74.0	31.0	5.0	2.0	171.0
SW	.0	12.0	39.0	46.0	17.0	4.0	1.0	119.0
WSW	.0	7.0	26.0	34.0	8.0	1.0	.0	76.0
W	.0	6.0	26.0	49.0	37.0	6.0	1.0	125.0
WNW	.0	8.0	22.0	68.0	89.0	42.0	15.0	244.0
NW	.0	11.0	32.0	75.0	113.0	79.0	25.0	335.0
NNW	.0	9.0	26.0	40.0	54.0	16.0	4.0	149.0
TOTAL	.0	143.0	547.0	702.0	529.0	212.0	52.0	2185.0

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

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 23  
 VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2185

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

Re: Indian Point Unit Nos. 1 & 2  
May, 1999  
Docket Nos. 50-03 & 50-247

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  
1998

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.  
INDIAN POINT UNIT NOS. 1 & 2  
DOCKET NOS. 50-03 & 50-247  
MAY, 1999

SECTION F

Reportable Changes

A. Process Control Program (PCP)

Section 6.14.1 of the Indian Point Unit No. 2 Technical Specifications requires that licensee initiated changes to PCP be reported to the Commission in the Annual Radioactive Effluent Release Report. During the 1998 reporting period there was a change to the PCP which installed a temporary evaporator type system used for the clean up of unit 1 tanks and pools. The use of this evaporator system was evaluated as required using procedure RW-SQ-4.007, process Control Program and the station Temporary Facility Change procedure. The evaporator system will be removed upon completion of the clean up project.

B. Offsite Dose Calculation Manual (ODCM)

Section 6.15.2 of the Indian Point Unit No. 2 Technical Specifications requires that changes to ODCM be reported to the Commission in the Annual Radioactive Effluent Release Report. During the 1998 reporting period there were no changes made.

Radioactive Waste Systems (RWS)

Section 6.16.1 of the Indian Point Unit No. 2 Technical Specifications requires that major changes to RWS be reported to the Commission in the Annual Radioactive Effluent Release Report. During the 1998 reporting period there were no major changes made to the RWS.

SECTION G

Reportable Items

A. Radioactive Liquid Effluent Monitoring Instrumentation

During the 1998 outage, R-49 and R-54, Steam Generator Blowdown Monitor and Liquid Waste Distillate Radiation Monitors were inoperable for greater than thirty days.

R-49, the Steam Generator Blowdown Monitor, was out of service for greater than 30 days contrary to the requirements of Technical Specification 3.9.A.2.c. The monitor was out of service since the monitor cannot pass sufficient flow to meet the monitor flow requirements with steam generators at atmospheric pressure. During releases with R-49 out-of-service compensatory monitoring was performed by the chemistry section as required by Technical Specifications.

R-54 was out of service for greater than 30 days due to a reinterpretation of the Technical Specification associated with the low flow testing for R-54. The functional test was revised to test the low flow feature of the monitor; the revised test was performed within the 30 day period. However, one of the valves associated with the low flow test failed extending the inoperable period, and subsequently the R-54 liner was also decontaminated extending the outage period for R-54 from June 22, 1998 through September 11, 1998. During releases from the Distillate Tanks with R-54 out-of-service compensatory monitoring was performed by the chemistry section as required by Technical Specifications.

B. Radioactive Gaseous Effluent Monitoring Instrumentation

During the reporting period from March 5, 1998 through June 5, 1998 the Waste Gas Holdup System Explosive Monitoring System Hydrogen and Oxygen monitor was out-of-service due to the Oxygen cell failure as a result of aging. The cell could not be replaced with an exact replacement resulting in a delay while a modification was developed and a replacement cell obtained. During the out-of-service period compensatory action was taken by the chemistry section to provide manual sampling in accordance with the requirements of Technical Specification 3.9.B.2.c.

SECTION H

Unplanned Releases

A. Unplanned Liquid Releases

There was one unplanned liquid release that occurred on June 12, 1998 during the hydrostatic test of the Steam Generator Blowdown Purification System (SBBPS). The hydrostatic test evaluates the SBBPS for potential leakage prior to placing this system into operation. The hydro test procedure and resulting configuration has had the historical potential to result in a similar release pathway. The 1998 test resulted in approximately 270 gallons of water containing  $1.13 \text{ E-4 uCi/cc}$  to be released from an unconsidered pathway. The release was quantified and a release permit completed. Based on this result, the release was estimated to be 0.0175% of the Technical Specification limit. The SBBPS hydrostatic test procedure has been revised to preclude this event during future hydrostatic tests.

B. Unplanned Gaseous Releases

There were no unplanned gaseous releases during the reporting period.