

May 1, 2002

Re: Indian Point Units No. 1 and No. 2

Docket Nos. 50-03 and 50-247

NL-02-065

U.S. Nuclear Regulatory Commission

ATTN: Document Control Desk

Mail Stop O-P1-17

Washington, D.C. 20555-0001

Subject: Annual Effluent and Waste Disposal Report

Dear Sir:

Attached is the 2001 Annual Effluent and Waste Disposal Report for Entergy Nuclear Operation, Inc.'s (ENO's) Indian Point Units No. 1 and 2.

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

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

Sincerely,

Fred Dacimo

Vice President - Operations

Indian Point 2

Attachments

IE 25

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

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

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

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

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

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### ANNUAL

# EFFLUENT AND WASTE DISPOSAL REPORT

2001

ENTERGY NUCLEAR OPERATIONS, INC. INDIAN POINT UNITS NO. 1 & 2 DOCKET NOS. 50-03 & 50-247 MAY 2002

NL-02-065 May, 2002 Indian Point Unit Nos. 1 & 2

Docket Nos. 50-03 & 50-247

Re:

### ANNUAL

# EFFLUENT AND WASTE DISPOSAL REPORT

2001

FACILITY: Indian Point Station (Units 1 and 2)

LICENSEE: Entergy Nuclear Operations, Inc.

This information is provided pursuant to 10 CFR 50.36a(a)(2) and employs certain guidance as set forth in Regulatory Guide 1.21, Revision 1. The numbered sections of this part of the report reference corresponding sections of the subject Regulatory Guide, pages 1.21-10 through 1.21-12. This Annual Effluent and Waste Disposal Report for Indian Point Units 1 and 2 covers discharges for 2001. Entergy Nuclear Operations, Inc., the licensee for Indian Point Unit 3, will also issue a report for the Indian Point Unit No. 3 facility, separately.

# A. Supplemental Information and Definition

### 1. Regulatory Limits

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

# 2. Maximum Permissible Concentrations (MPC)

#### Gaseous Effluents

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

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

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## Liquid Effluents

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

The tritium limit has been established in the same manner as the limits for other isotopes in liquid effluents. A derived MPC of  $2x10^{-4}$  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 2001 are provided below:

	1st	2nd	3rd	4th
	Quarter	Quarter	Quarter	Quarter
Beta	0.110	0.120	0.152	0.158
Gamma	0.034	0.034	0.037	0.048

<sup>\*</sup> 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

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

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

### b.&.c Iodines and Particulates

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

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

#### d. Liquid Effluents

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

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

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

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### 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%.

Re:

5	Batch Releases	:

a.	Liquid	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	
	Number of Batch Releases	41	42	26	17	
	Total Time Period of Batch Releases (Minutes)	11700	9720	9340	3330	
	Maximum Time Period of Batch Release (Minutes)	1500	455	1870	780	
	Average Time Period of Batch Release (Minutes)	286	231	359	196	
	Minimum Time Period of Batch Release (Minutes)	37	83	85	77	
	Average Stream Flow (cfs) 1999 2000 2001	543	3 19	87 803 42 197 62 847		

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

b.	Gaseous	1st <u>Qtr.</u>	2nd Qtr.	3rd Qtr.	4th Qtr.
	Number of Batch Releases	136	134	151	166
	Total Time Period of Batch Releases (Minutes)	141000	147000	148000	154000
	Maximum Time Period of Batch Release(Minutes)	129000	131000	132000	132000
	Average Time Period of Batch F (Minutes)	Release 1040	1100	978	930
	Minimum Time Period of Batch F (Minutes)	Release	1	1 1	1

### 6. Abnormal Releases

- a. Liquid None
- b. Gaseous None

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### EFFLUENT AND WASTE DISPOSAL REPORT

B - GASEOUS EFFLUENTS

2001

ENTERGY NUCLEAR OPERATIONS, INC. INDIAN POINT UNIT NOS. 1 & 2 DOCKET NOS. 50-03 & 50-247 MAY, 2002

Entergy Nuclear Operations, Inc. Indian Point Station

2001 EFFLUENT AND WASTE DISPOSAL
GASEOUS EFFLUENTS -- SUMMATION OF ALL RELEASES

			- <del>-</del>			- <del>-</del> 				
		: t					QUARTER 2			
A. F	ISSION AND ACTIVATION	GZ								
: 1.	TOTAL RELEASE	:	CI	:	6.55E+00	:	1.09E+01	:	1.50E+	01 :
: 2.	AVERAGE RELEASE RATE FOR PERIOD					: :	1.38E+00	: :	<del></del>	
: 3.	PERCENT OF TECHNICAL SPECIFICATION LIMIT	:	8	:	1.61E-03	: : :	1.99E-03	: :		
B. I	ODINES									
: 1.	TOTAL IODINE-131	:	CI	:	0.00E+00	:	8.31E-07	:	1.50E+	)1 :
: 2. :	AVERAGE RELEASE RATE FOR PERIOD	:UC	CI/SEC	:	0.00E+00	:	1.06E-07	:		
: 3.	PERCENT OF TECHNICAL SPECIFICATION LIMIT	:	ક	:	0.00E+00	: :	5.19E-07	:		
C. P.	ARTICULATES									
: 1.	PARTICULATES WITH HALF-LIVES >8 DAYS			: :	1.55E-04		3.83E-03	: :	1.50E+0	)1 :
: 2.	AVERAGE RELEASE RATE FOR PERIOD					: :	4.87E-04	:		
: 3.	PERCENT OF TECHNICAL SPECIFICATION LIMIT		8	: :	1.77E-05	:	9.68E-06	:		
: 4.	GROSS ALPHA RADIOACTIVITY		CI	:	2.46E-03	:	2.23E-03	:		
D. T	RITIUM									
: 1.	TOTAL RELEASE	:	CI	:	9.33E-02	:	3.41E-01	: :	1.50E+0	)1 :
: 2.	AVERAGE RELEASE RATE FOR PERIOD	:UC	CI/SEC	: :	1.20E-02	:	4.33E-02	: : :		
: 3.	PERCENT OF TECHNICAL SPECIFICATION LIMIT	:		:		:		:		
							<del>-</del> -	-		

# EFFLUENT AND WASTE DISPOSAL 2001 ANNUAL REPORT GASEOUS EFFLUENTS FOR ALL RELEASE POINTS

CONTINUOUS MODE BATCH MOD										DDE	
:	NUCLIDES RELEASED	:	UNITS	: :	QUARTER 1	: :	QUARTER 2	 : :	QUARTER 1	 : :	QUARTER 2
1.	FISSION AM	1D	ACTIVA	ATI	ON GASES						
:	н3	:	CI	:	9.33E-02	:	3.41E-01	:	0.00E+00	:	0.00E+00
:	C14	:	CI	:	1.77E+00	:	1.99E+00	:	0.00E+00	:	0.00E+00
:	AR41	:	CI	:	0.00E+00	:	0.00E+00	:	2.66E-02	:	3.58E-03
:	KR85M	:	CI	:	0.00E+00	:	0.00E+00	:	4.47E-05	:	1.32E-04
:	KR85	:	CI	:	0.00E+00	:	0.00E+00	:	5.21E-01	:	9.16E-01
:	KR87	:	CI	:	0.00E+00	:	0.00E+00	:	1.33E-05	:	7.42E-05
:	KR88	:	CI	:	0.00E+00	:	0.00E+00	:	2.81E-05	:	1.88E-04
:	XE131M	:	CI	:	0.00E+00	:	0.00E+00	:	0.00E+00	:	6.38E-06
:	XE133M	:	CI	:	0.00E+00	:	0.00E+00	:	1.02E-04	:	4.94E-05
:	XE133	:	CI	:	0.00E+00	:	0.00E+00	:	4.23E+00	:	7.92E+00
:	XE135M	:	CI	:	0.00E+00	:	0.00E+00	:	2.70E-05	:	6.31E-05
:	XE135	:	CI	:	0.00E+00	:	0.00E+00	:	2.13E-03	 :	3.89E-02
:	XE138	:	CI	:	0.00E+00	:	0.00E+00	:	9.99E-06	 :	2.81E-05
:	TOTAL FOR PERIOD (ABOVE)	:	CI	:	0.00E+00	:	2.33E+00	:	4.78E+00 :	•	8.88E+00
					CONTINU	JOU	s mode		ВАТСН	MC	DDE
:									QUARTER :		
2.	IODINES										
:	I131	:	CI	:	0.00E+00	:	0.00E+00	: :	0.00E+00	:	8.31E-07
:	TOTAL FOR PERIOD (ABOVE)	:	CI	:	0.00E+00	:	0.00E+00	:	0.00E+00 :	:	8.31E-07

# EFFLUENT AND WASTE DISPOSAL 2001 ANNUAL REPORT GASEOUS EFFLUENTS FOR ALL RELEASE POINTS

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					CONTIN	JOU	S MODE		BATCI	H M	ODE	
:	NUCLIDES RELEASED	:	UNITS	: :	QUARTER 1	: :	QUARTER 2	: :	QUARTER 1	: : :	QUARTER 2	:
3.	PARTICULA	re:	5									
:	MN54	:	CI	:	0.00E+00	:	0.00E+00	:	0.00E+00	:	3.82E-06	:
:	CO58	:	CI	:	0.00E+00	:	8.76E-07	:	0.00E+00	:	0.00E+00	:
:	C060	:	CI	:	1.74E-05	:	6.77E-06	:	0.00E+00	:	0.00E+00	:
:	CS137	:	CI	:	1.11E-04	:	6.41E-05	:	0.00E+00	:	0.00E+00	:
:*	TE123M	:	CI	:	0.00E+00	:	0.00E+00	:	0.00E+00	:	6.04E-07	:
:*	NI63	:	CI	:	6.65E-06	:	1.24E-06	:	0.00E+00	:	0.00E+00	:
:*	AC228	:	CI	:	0.00E+00	:	3.60E-03	:	0.00E+00	:	0.00E+00	:
:*	CD109	:	CI	:	0.00E+00	:	5.17E-05	:	0.00E+00	:	0.00E+00	:
:*	RB88	:	CI	:	0.00E+00	:	0.00E+00	:	2.05E-05	:	8.93E-05	:
:*	NB95M	:	CI	:	0.00E+00	:	0.00E+00	:	0.00E+00	:	2.09E-06	:
:*	SN113	:	CI	:	0.00E+00	:	0.00E+00	:	0.00E+00	:	3.38E-07	:
:*	TI201	:	CI	:	0.00E+00	:	0.00E+00	:	0.00E+00	:	6.80E-06	:
:*	TI301	:	CI	:	0.00E+00	:	0.00E+00	:	0.00E+00	:	1.13E-06	:
:*	MB95M	:	CI	:	0.00E+00	:	0.00E+00	:	0.00E+00	:	3.45E-07	:
:	TOTAL FOR PERIOD (ABOVE)	:	CI	:	1.35E-04	:	3.73E-03	:	2.05E-05	: : :	1.04E-04	:

<sup>\*</sup> DENOTES SUPPLEMENTAL ISOTOPES

# EFFLUENT AND WASTE DISPOSAL 2001 ANNUAL REPORT GASEOUS EFFLUENTS -- SUMMATION OF ALL RELEASES

: UNITS : QUARTER : QUARTER :EST. TOTAL: : 3 : 4 : ERROR, %: A. FISSION AND ACTIVATION GASES : 1. TOTAL RELEASE : CI : 5.51E+01 : 2.83E+02 : 1.50E+01 : : 2. AVERAGE RELEASE :UCI/SEC: 6.94E+00 : 3.56E+01 : RATE FOR PERIOD : : : : \_\_\_\_\_\_ : 3. PERCENT OF TECHNICAL: % : 1.13E-02 : 6.30E-02 : SPECIFICATION LIMIT : B. IODINES : 1. TOTAL IODINE-131 : CI : 0.00E+00 : 0.00E+00 : 1.50E+01 : : 2. AVERAGE RELEASE :UCI/SEC: 0.00E+00 : 0.00E+00 : : : : : : 3. PERCENT OF TECHNICAL: % : 0.00E+00 : 0.00E+00 : SPECIFICATION LIMIT : C. PARTICULATES : 1. PARTICULATES WITH : CI : 4.20E-04 : 7.68E-02 : 1.50E+01 : HALF-LIVES >8 DAYS : : 2. AVERAGE RELEASE :UCI/SEC: 5.29E-05 : 9.66E-03 : : RATE FOR PERIOD : : : : : : 3. PERCENT OF TECHNICAL: % : 1.91E-06 : 5.40E-06 : SPECIFICATION LIMIT : : : 4. GROSS ALPHA : CI : 2.52E-07 : 1.41E-07 : RADIOACTIVITY : : : : : : D. TRITIUM : 1. TOTAL RELEASE : CI : 1.42E+00 : 6.40E-01 : 1.50E+01 : : 2. AVERAGE RELEASE :UCI/SEC: 1.79E-01: 8.05E-02: RATE FOR PERIOD : : \_\_\_\_\_ : 3. PERCENT OF TECHNICAL: % : 4.39E-04 : 1.98E-04 : SPECIFICATION LIMIT : :

Re:

EFFLUENT AND WASTE DISPOSAL 2001 ANNUAL REPORT

GASEOUS EFFLUENTS FOR ALL RELEASE POINTS

				CONTINU	ΙΟŪ	S MODE		ватсн	M	ODE
NUCLIDES RELEASED	:	UNITS	 : :	QUARTER 3	: :	QUARTER 4	:	QUARTER 3	: :	QUARTER 4
. FISSION A	ND	ACTIV	TT <i>F</i>	ON GASES	· <del></del>					
н3	:	CI	:	1.42E+00	:	6.40E-01	:	0.00E+00	:	0.00E+00
C14	:	CI	:	1.99E+00	:	1.99E+00	:	0.00E+00	:	0.00E+00
AR41	:	CI	:	0.00E+00	:	1.65E-05	:	1.39E-02	:	4.52E-02
KR85M	:	CI	:	0.00E+00	:	1.64E-05	:	1.40E-03	:	3.31E-01
KR85	:	CI	:	0.00E+00	:	0.00E+00	:	1.07E+01	:	3.88E+01
KR87	:	CI	:	0.00E+00	:	0.00E+00	:	1.58E-04	:	3.66E-04
KR88	:	CI	:	0.00E+00	:	0.00E+00	:	5.08E-04	:	9.94E-02
XE131M	:	CI	:	0.00E+00	:	0.00E+00	:	1.14E-01	:	9.93E-01
XE133M	:	CI	:	0.00E+00	:	0.00E+00	:	2.33E-01	:	3.31E+00
XE133	:	CI	:	0.00E+00	:	1.27E+01	:	4.16E+01	 :	2.14E+02
XE135M	:	CI	:	0.00E+00	:	0.00E+00	:	6.58E-05	:	1.60E-04
XE135	:	CI	:	0.00E+00	:	2.42E-04	:	4.15E-01	:	1.10E+01
XE138	:	CI	:	0.00E+00	:	0.00E+00	:	3.48E-05	:	5.69E-05
TOTAL FOR PERIOD (ABOVE)	:	CI	:	3.41E+00	:	1.53E+01	:	5.32E+01	 : :	2.69E+02
		<del></del>		CONTINU	OU	S MODE		ВАТСН	M	ODE
NUCLIDES RELEASED				QUARTER 3				QUARTER 3		
. IODINES										
TOTAL FOR PERIOD (ABOVE)		CI	:	0.00E+00	:	0.00E+00	:	0.00E+00	:	0.00E+00

Re: Indian Point Unit Nos. 1 & 2

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GASEOUS EFFLUENTS FOR ALL RELEASE POINTS

					CONTIN	JOU	S MODE		BATCI	H M	ODE	
:	NUCLIDES RELEASED	: :	UNITS		-		QUARTER 4		QUARTER 3	: :	QUARTER 4	:
3.	PARTICULA:	re:	S									
:	MN54	:	CI	:	0.00E+00	:	6.32E-06	:	0.00E+00	:	0.00E+00	:
:	CO58	:	CI	:	4.12E-06	:	1.30E-05	:	0.00E+00	:	0.00E+00	:
:	C060	:	CI	:	0.00E+00	:	8.10E-06	:	0.00E+00	:	0.00E+00	:
:	CS137	:	CI	:	1.44E-05	:	2.38E-05	:	0.00E+00	:	0.00E+00	:
:*	NI63	:	CI	:	9.96E-07	:	5.05E-07	:	0.00E+00	:	0.00E+00	:
:*	AC228	:	CI	:	2.22E-04	:	0.00E+00	:	0.00E+00	:	0.00E+00	:
:*	RB88	:	CI	:	0.00E+00	:	0.00E+00	:	1.79E-04	:	7.68E-02	:
:	TOTAL FOR PERIOD (ABOVE)	:	CI	: : :	2.41E-04	:	5.17E-05	:	1.79E-04	: : :	7.68E-02	:

<sup>\*</sup> DENOTES SUPPLEMENTAL ISOTOPES

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Re: Indian Point Unit Nos. 1 & 2

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### ANNUAL

### EFFLUENT AND WASTE DISPOSAL REPORT

C - LIQUID EFFLUENTS

2001

# Entergy Nuclear Operations, Inc. Indian Point Station

EFFLUENT AND WASTE DISPOSAL 2001 ANNUAL REPORT LIQUID EFFLUENTS -- SUMMATION OF ALL RELEASES

				-		
	: UNITS	: :	QUARTER 1	: :	QUARTER 2	:EST. TOTAL:
A. FISSION AND ACTIVATION	N PRODUCT	rs				
: 1. TOTAL RELEASE (EXCL : TRIT., GASES, ALPHA	.: CI ):	:	1.54E-01	:	1.03E-01	: 1.50E+01 :
: 2. AVERAGE DILUTED : CONC. DURING PERIOD						: :
: 3. PERCENT OF : APPLICABLE LIMIT	: % :	: :	1.11E-03	:	8.17E-04	: :
B. TRITIUM						
: 1. TOTAL RELEASE	: CI	:	8.89E+01	:	1.14E+01	: 1.50E+01 :
: 2. AVERAGE DILUTED : CONC. DURING PERIOD				:	3.23E-08	: :
: 3. PERCENT OF : APPLICABLE LIMIT				:	3.61E-04	: : 
C. DISSOLVED AND ENTRAIN	ED GASES					
: 1. TOTAL RELEASE	: CI	:	3.46E-05	- <b>-</b> -	0.00E+00	: 1.50E+01 :
: 2. AVERAGE DILUTED : CONC. DURING PERIOD	:UCI/ML			:	0.00E+00	:
: 3. PERCENT OF : APPLICABLE LIMIT	: %	:	5.32E-08	:	0.00E+00	: :
D. GROSS ALPHA RADIOACTIV	JITY					
: 1. TOTAL RELEASE						
E. VOLUME WASTE RELEASED: (PRIOR TO DILUTION)	:LITERS :	•		: 		: :
F. VOLUME DILUTION WATER : USED DURING PERIOD	:LITERS	:	3.26E+11	:	3.52E+11	

					CONTIN	JOU	S MODE		ВАТСН	I M	ODE
:	NUCLIDES RELEASED	:	UNITS	: :	QUARTER 1	:	QUARTER 2	: :	QUARTER 1	:	QUARTER :
:	 нз	 :	CI	 :	1.16E-01	 :	5.07E-02	 :	8.88E+01	:	1.13E+01 :
:	CR51	:	CI	:	0.00E+00	:	0.00E+00	:	8.96E-04	:	0.00E+00 :
:	MN54	:	CI	:	0.00E+00	:	0.00E+00	:	8.87E-04	:	6.42E-03 :
:	FE55	:	CI	:	0.00E+00	:	0.00E+00	:	0.00E+00	:	4.03E-03 :
:	FE59	:	CI	:	0.00E+00	:	0.00E+00	:	4.74E-07	:	0.00E+00 :
:	CO58	:	CI	:	8.06E-04	:	0.00E+00	:	3.34E-03	:	5.57E-03 :
:	CO60	:	CI	:	5.71E-04	:	3.51E-04	:	6.63E-03	:	1.63E-02 :
:	NI63	:	CI	:	0.00E+00	:	6.12E-03	:	9.67E-03	:	1.81E-03 :
:	ZN65	:	CI	:	0.00E+00	:	0.00E+00	:	4.15E-05	:	0.00E+00 :
:	SR89	:	CI	:	0.00E+00	:	0.00E+00	:	5.99E-05	:	0.00E+00 :
:	SR90	:	CI	:	1.06E-03	:	9.96E-04	:	4.77E-04	:	4.22E-04 :
:	NB95	:	CI	:	0.00E+00	:	0.00E+00	:	4.49E-05	:	0.00E+00 :
:	AG110M	:	CI	:	0.00E+00	:	0.00E+00	:	3.55E-04	:	0.00E+00 :
:	CS134	:	CI	:	0.00E+00	:	0.00E+00	:	3.32E-03	:	1.56E-03 :
:	CS137	:	CI	:	4.08E-02	:	6.77E-03	:	5.94E-02	:	4.78E-02 :
:*	SB124	:	CI	:	0.00E+00	:	0.00E+00	:	1.52E-03	:	0.00E+00 :
	FLUENT AND QUID EFFLU	ENT	S FOR	AL:	L RELEASE	PO	INTS		<b>-</b>		
-					CONTIN	JOU	S MODE		BATCH		ODE
:	RELEASED	:		:	1	:	2	:	QUARTER 1	:	QUARTER:
LI	QUID EFFLU	ENT	S (CON	1TD	)						
:*	SB125	:	CI	:	0.00E+00	:	0.00E+00	:	2.43E-02	:	4.37E-03 :
:*					0.00E+00	;	0.00E+00	:	4.22E-05		0.00E+00 :
:*					0.00E+00		0.00E+00		1.00E-04	:	2.63E-04 :

Re: Indian Point Unit Nos. 1 & 2

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:*	SB122	:	CI	:	0.00E+00	:	0.00E+00	:	1.02E-05	:	0.00E+00	:
:*	GAPLHA	:	CI	:	0.00E+00	:	1.45E-04	: :	0.00E+00	:	0.00E+00	:
:	TOTAL FOR PERIOD (ABOVE)	:	CI	:	1.59E-01	: : :	6.51E-02	: : :	8.89E+01	:	1.14E+01	:
_	CONTINUOUS MODE BATCH MODE											
					CONTING	JOU	S MODE		BATC	M E	ODE	
:	NUCLIDES RELEASED	:	UNITS	:	CONTINU QUARTER 1		S MODE  QUARTER 2	:		H M	ODE  QUARTER 2	 : :

<sup>\*</sup> DENOTES SUPPLEMENTAL ISOTOPES

# EFFLUENT AND WASTE DISPOSAL 2001 ANNUAL REPORT LIQUID EFFLUENTS -- SUMMATION OF ALL RELEASES

	: UNITS	: : :	QUARTER 3	:	QUARTER 4	:E	ST. 7 ERROR,	TOTAL:
A. FISSION AND ACTIVATION	N PRODUCT	S						
: 1. TOTAL RELEASE (EXCL : TRIT., GASES, ALPHA	.: CI						1.501	E+01 :
: 2. AVERAGE DILUTED : CONC. DURING PERIOD						:		
: 3. PERCENT OF : APPLICABLE LIMIT	: %	:	4.68E-04	:	4.31E-04	:		
B. TRITIUM				- <del></del>				
: 1. TOTAL RELEASE	: CI	:	2.63E+01	:	3.33E+01	:	1.50E	E+01 :
: 2. AVERAGE DILUTED : CONC. DURING PERIOD	:	:	6.28E-08	:	8.14E-08	:		
: 3. PERCENT OF : APPLICABLE LIMIT	: % :	:		:		:		
C. DISSOLVED AND ENTRAIN	ED GASES							
: 1. TOTAL RELEASE	: CI	:	0.00E+00	:	4.01E-02	:	1.50E	E+01 :
: 2. AVERAGE DILUTED : CONC. DURING PERIOD	:	:	0.00E+00	:	9.78E-11	:		
	: %	:	0.00E+00	: :	4.89E-05	:		
D. GROSS ALPHA RADIOACTIV	/ITY							
: 1. TOTAL RELEASE	: CI	:	0.00E+00	:	2.35E-05	:	5.00E	E+01 :
E. VOLUME WASTE RELEASED : (PRIOR TO DILUTION)	:LITERS :	:	5.98E+07	:				
F. VOLUME DILUTION WATER : USED DURING PERIOD	:LITERS	:	4.19E+11			:	1.00E	E+01 :

\_\_\_\_\_

# EFFLUENT AND WASTE DISPOSAL 2001 ANNUAL REPORT LIQUID EFFLUENTS FOR ALL RELEASE POINTS

\_\_\_\_\_

					CONTIN	CONTINUOUS MODE			BATCH MODE			
:	NUCLIDES RELEASED	 : :	UNITS	: :	QUARTER 3	: : :	QUARTER 4	: : :	QUARTER 3	: :	QUARTER 4	:
:	н3	 :	CI	:	1.26E-01	:	1.34E-01	:	2.62E+01	:	3.32E+01	- <del>-</del>
:	NA24	:	CI	:	0.00E+00	:	0.00E+00	:	0.00E+00	:	8.04E-05	:
:	CR51	:	CI	:	0.00E+00	:	0.00E+00	:	0.00E+00	:	5.83E-05	:
:	MN54	:	CI	:	0.00E+00	:	0.00E+00	:	5.43E-04	:	1.09E-04	:
:	FE55	:	CI	:	0.00E+00	:	0.00E+00	:	1.38E-04	:	1.44E-03	:
:	CO58	:	CI	:	0.00E+00	:	0.00E+00	:	2.50E-04	:	1.22E-03	:
:	C060	:	CI	 :	0.00E+00	:	0.00E+00	:	4.32E-03	:	6.19E-03	:
:	NI63	:	CI	:	3.19E-03	:	6.17E-03	:	6.87E-03	:	7.26E-03	:
:	SR89	:	CI	:	0.00E+00	:	0.00E+00	:	3.68E-05	:	0.00E+00	:
:	SR90	:	CI	:	4.31E-04	:	4.75E-04	:	6.43E-04	:	6.57E-04	:
:	AG110M	:	CI	:	0.00E+00	:	0.00E+00	:	0.00E+00	:	2.33E-04	:
:	I131	:	CI	:	0.00E+00	:	0.00E+00	:	0.00E+00	:	7.55E-05	:
:	CS134	:	CI	:	0.00E+00	:	0.00E+00	:	4.57E-05	:	0.00E+00	:
:	CS137	:	CI	:	1.98E-03	:	7.61E-04	:	3.67E-02	:	8.96E-03	:
:	BA140	:	CI	:	0.00E+00	:	1.01E-03	:	3.14E-05	:	0.00E+00	:
:*	SB124	:	CI	:	0.00E+00	:	0.00E+00	:	0.00E+00	:	2.84E-03	:
	FLUENT AND							RT 				
					CONTINU	JOU	S MODE		BATCH	I M	ODE	
:	NUCLIDES RELEASED	 : :	UNITS	: :	QUARTER 3	: : :	QUARTER 4	:	QUARTER 3	:	QUARTER 4	:

Indian Point Unit Nos. 1 & 2 Re:

Docket Nos. 50-03 & 50-247

LI	QUID EFFLUE	ΞN.	rs (con	UTD	)							
:*	SB125	:	CI	:	0.00E+00	:	0.00E+00	:	2.16E-03	:	1.09E-02	•
:*	CO57	:	CI	:	0.00E+00	:	0.00E+00	:	2.57E-05	:	0.00E+00	:
:*	SB122	:	CI	:	0.00E+00	:	0.00E+00	:	0.00E+00	:	1.70E-04	:
:	TOTAL FOR PERIOD (ABOVE)	:	CI	: : :	1.31E-01	: : :	1.42E-01	:	2.63E+01	:	3.33E+01	:
	CONTINUOUS MODE BATCH MODE											
 : :	NUCLIDES RELEASED	: :	UNITS	 : :	QUARTER 3	 : :	QUARTER 4	: :	QUARTER 3	:	QUARTER 4	:
 : :  :*		•		: : : 	3	:	4	:	3	: 	~	•
	RELEASED	: 	CI	:	3	:  : 	4	: 	3	:	~ 	
 :*	RELEASED XE133	:	CI	:	3 0.00E+00 0.00E+00	:  : 	0.00E+00 0.00E+00	: : : :	3 0.00E+00 0.00E+00	:	4  2.37E-02	:
 :*  :*	RELEASED XE133 XE131M	:	CI	:	3 0.00E+00 0.00E+00 0.00E+00	:  : 	0.00E+00 0.00E+00	:	3 0.00E+00 0.00E+00	:	2.37E-02 1.45E-03 8.04E-06	:

<sup>\*</sup> DENOTES SUPPLEMENTAL ISOTOPES

NL-02-065 May, 2002

Re: Indian Point Unit Nos. 1 & 2

Docket Nos. 50-03 & 50-247

# ANNUAL

### EFFLUENT AND WASTE DISPOSAL REPORT

D - SOLID WASTE

2001

Re: Indian Point Unit Nos. 1 & 2

Docket Nos. 50-03 & 50-247

Solid Radwaste Disposal Report 2001. Solid Radwaste Shipped Offsite for Burial, Reprocessing, or Disposal (No irradiated fuel).

### 12 MONTH PERIOD

1.	Ту	pe of Waste	Units	Class A	Class B	Class C	Error, %
	a.	Spent Resins, sludges, etc.			6.8 412.0	3.4 115.0	± 10- 25
	b.	DAW	m³ Ci	401.6 6.04	3.4 17.0	0 0	± 10- 25
	c.	Irradiated components control rods,			0 0	0 0	± 10- 25

Measurement of major nuclide composition in percent (by type of waste). 2. Resins, Filters, Sludges, etc.

Class A		
Isotope	mCi	Percent
H-3	1.49E+01	2.00E+00
Mn-54	2.42E+01	3.25E+00
Fe-55	6.44E+01	8.66E+00
Co-57	1.03E+00	1.39E-01
Co-58	1.58 <b>E</b> +01	2.13E+00
Co-60	7.90E+01	1.06E+01
Ni-63	1.80E+02	2.42E+01
Sr-90	2.10E+01	2.82E+00
Ag-110m	3.23E-01	4.34E-02
Sb-124	3.89E+00	5.23E-01
Sb-125	1.04E+01	1.40E+00
Cs-134	6.27E+01	8.43E+00
Cs-137	1.83E+02	2.46E+01
Ce-144	6.56E+01	8.82E+00
Pu-238	3.86E-01	5.19E-02
Pu-239	1.51E-01	2.03E-02
Pu-241	1.67E+01	2.25E+00

Resins, Filters, Sludges, etc. (Cont'd)

Class B		
Isotope	mCi	Percent
C-14	2.04E+02	4.95E-02
Fe-55	2.32E+04	5.63E+00
Co-60	1.04E+05	2.53E+01
Ni-63	2.12E+05	5.14E+01
Sr-90	2.43E+02	5.89E-02
Cs-134	1.45E+04	3.52E+00
Cs-137	5.80E+04	1.41E+01
		1

Class C		
Isotope	mCi	Percent
H-3	5.29E+02	4.62E-01
C-14	6.96E-01	6.07E-04
Fe-55	2.08E+04	1.81E+01
Co-60	4.79E+04	4.18E+01
Ni-59	7.20E+02	6.28E-01
Ni-63	1.77E+04	1.54E+01
Sr-90	1.33E+00	1.16E-03
Tc-99	5.22E+01	4.55E-02
Cs-137	2.69E+04	2.35E+01
Pu-238	1.87E+00	1.63E-03
Pu-239	1.42E+00	1.24E-03
Am-241	3.69E+00	3.22E-03
Cm-242	1.53E+00	1.33E-03
Cm-243	1.57E+00	1.37E-03

May, 2002 Indian Point Unit Nos. 1 & 2 Re: Docket Nos. 50-03 & 50-247

DAW

Class A		
Isotope	mCi	Percent
H-3	1.17E+01	1.94E-01
Cr-51	1.06E+00	1.75E-02
Mn-54	3.59E+01	5.94E-01
Fe-55	5.25E+02	8.69E+00
Co-58	4.67E+01	7.72E-01
Co-60	1.43E+03	2.36E+01
Ni-63	1.38E+03	2.29E+01
Zn-65	1.11E+02	1.84E+00
Sr-90	3.00E+01	4.97E-01
Tc-99	1.32E+00	2.19E-02
Ag-110m	7.37E-02	1.22E-03
Sb-124	7.41E-02	1.23E-03
Sb-125	1.12E+01	1.85E-01
Cs-134	1.04E+02	1.73E+00
Cs-137	2.34E+03	3.87E+01
Ce-144	4.44E+00	7.35E-02
Pu-238	1.25E-01	2.07E-03
Pu-239	6.52E-02	1.08E-03
Pu-241	1.14E+01	1.89E-01
Am-241	2.65E-02	4.38E-04
Cm-243	1.06E-02	1.75E-04

DAW (Cont'd)

Class B		
Isotope	mCi	Percent
H-3	4.29E+01	2.52E-01
Fe-55	6.73E+01	3.96E-01
Co-58	3.68E+01	2.16E-01
Co-60	4.67E+03	2.75E+01
Ni-63	7.25E+02	4.26E+00
Sr-90	3.49E+00	2.05E-02
Tc-99	9.39E+00	5.52E-02
Cs-134	7.55E+01	4.44E-01
Cs-137	1.13E+04	6.64E+01
Ce-144	7.47E+01	4.39E-01
Am-241	1.88E-01	1.11E-03
Cm-243	7.51E-02	4.42E-04

### 3. Solid Waste Disposition

Number of	Mode of Transport	Destination
Shipments		
1	Cask, Hittman Transport	Chem-Nuclear Consolidation Facility
1	Van / Flat Bed, Hittman Transport	Diversified Scientific Services Inc.
7	Van / Flat Bed, Hittman Transport	GTS Duratek Inc. (GIC)
19	Van / Flat Bed, Hittman Transport	GTS Duratek Inc.
4	Cask, Hittman Transport	Studsvik Processing Facility

#### 4. Solid Waste Containers

- a. 8-120 High Integrity Container 120.3 cubic ft.
- b. 14-215 High Integrity Container 215 cubic ft.
- c. 55 gallon drum 7.5 cubic ft.

During 2001 two (2) Type B containers were used for the shipment of two (2) 8-120 liners in an 8-120 Type B shipping cask. All others were LSA.

No solidification agents or absorbents were used.

Note: Waste characterization and classification is determined using the Radman Software Program.

NL-02-065 May, 2002

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

# ANNUAL

### EFFLUENT AND WASTE DISPOSAL REPORT

E - RADIOLOGICAL IMPACT ON MAN

2001

NL-02-065 May, 2002 Indian Point Unit Nos. 1 & 2

Docket Nos. 50-03 & 50-247

Re:

#### RADIOLOGICAL IMPACT EVALUATION

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

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

Integrated dose from the population within 50 miles of Indian Point from gaseous effluents were computed based on the most current population data.\*

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

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

NUREG-0017, "Calculation of Release of Radioactive Materials in Gaseous and Liquid Effluents from Pressurized Water Reactors", assumes an annual release of 8.0 Ci/yr of Carbon-14. Therefore, to be consistent with NUREG-0017, a release of 7.6 Curies of Carbon-14 was assumed for the year, (adjusted for actual power operating capacity) in addition to the radioactive materials measured in Indian Point's gaseous effluents.

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

\* Population data was based on the 1990 census.

NL-02-065 May, 2002 Re: Indian Point Unit Nos. 1 & 2 Docket Nos. 50-03 & 50-247

### 2001

### INDIAN POINT UNITS 1 AND 2

### RADIOLOGICAL IMPACT ON MAN\*

(Reference Regulatory Guide 1.21, Page 12)

### A. Maximum Individual Doses

(1)	Pathways (Gaseous)  a) Nobel Gas Immersion	Total Body millirem 5.50E-3	<u>Skin</u> millirem 1.73E-2	Thyroid millirem N/A	Bone millirem N/A
	·				
	b) Inhalation	2.82E-2	N/A	2.82E-2	1.43E-1
	c) Ground Deposition	1.03E-2	1.21E-2	1.03E-2	1.03E-2
	d) Milk Ingestion	7.66E-2	N/A	7.65E-2	3.58E-1
	e) Meat Ingestion	1.18E-2	N/A	1.18E-2	5.88E-2
	f) Vegetable Ingestion	2.23E-1	N/A	2.23E-1	1.12E+0

•

# (2) Pathways (Liquid)

### Maximum Dose to Individuals 2001 millirem:

	BONE	LIVER	TOTAL BODY	THYROID	KIDNEY	LUNG	GI	SKIN
Shore Exposure								
ADULT TEEN CHILD	5.90E-04 7.80E-04 1.58E-04	5.90E-04 7.80E-04 1.58E-04	5.90E-04 7.80E-04 1.58E-04	5.90E-04 7.80E-04 1.58E-04	5.90E-04 7.80E-04 1.58E-04	5.90E-04 7.80E-04 1.58E-04	5.90E-04 7.80E-04 1.40E-04	6.80E-04 9.10E-04 1.94E-04
Fresh Water Spor	rt Fish							
ADULT TEEN CHILD	1.79E-02 1.79E-02 2.07E-02	1.66E-02 1.78E-02 1.64E-02	1.21E-02 7.00E-03 3.22E-03	2.83E-04 4.60E-05 3.90E-05	5.70E-03 6.00E-03 5.20E-03	1.92E-03 2.30E-03 1.90E-03	1.00E-03 7.30E-04 2.92E-04	0.00E+00 0.00E+00 0.00E+00
Fresh Water Inve	ertebrate							
ADULT TEEN CHILD	6.30E-03 5.90E-03 6.90E-03	6.90E-03 7.00E-03 6.20E-03	3.99E-03 2.70E-03 1.71E-03	1.32E-05 1.01E-05 8.80E-06	2.25E-03 2.26E-03 1.92E-03	4.80E-04 5.80E-04 4.80E-04	9.11E-03 6.04E-03 1.99E-03	0.00E+00 0.00E+00 0.00E+00
Total All Pathwa	ays							
ADULT TEEN CHILD	2.40E-02 2.49E-02 2.78E-02	2.49E-02 2.51E-02 2.25E-02	1.67E-02 1.05E-02 5.20E-03	6.60E-04 8.40E-04 2.09E-04	8.50E-03 9.00E-03 7.30E-03	2.97E-03 3.72E-03 2.56E-03	1.07E-02 7.49E-03 2.50E-03	6.80E-04 9.10E-04 1.94E-04

N/A = Not Applicable

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

NL-02-065 May, 2002

Re: Indian Point Unit Nos. 1 & 2

Docket Nos. 50-03 & 50-247

2001

### B. Population

(1)	<u>Pathways</u> (Gaseous)		
		Total Body (Man-rem)	Thyroid* (Man-rem)
	a) Nobel Gas Immersion	7.1E-01	7.1E-01
	b) Inhalation	9.4E-01	9.4E-01
	c) Ground Deposition	7.2E-02	7.2E-02
	d) Totals	1.7E+00	1.7E+00

<sup>\*</sup> The thyroid values consist of a sum of total body and thyroid.

### (2)

<u>Pathways</u> (Liquid) Liquid Population Dose 2001 Person-rem:

	Shore Exposure	Fresh Water Sport Fish Ingestion	Commercial Fish Ingestion	Fresh Water Invertebrate Ingestion
Bone	0.14	6.50E-02	1.10E-01	1.20E-02
Liver	0.14	6.10E-02	1.00E-01	1.20E-02
Total Body	0.14	3.60E-02	6.10E-02	6.30E-03
Thyroid	0.14	1.90E-04	3.20E-04	2.20E-05
Kidney	0.14	2.00E-02	3.50E-02	3.90E-03
Lung	0.14	7.10E-03	1.20E-02	9.10E-04
GI	0.14	3.00E-03	5.10E-03	1.40E-02
Skin	0.16	0	0	0

### Average Dose to Individuals

#### (1)Pathways

- a) Liquid-Total Body 1.55E-5 millirem
- b) Gaseous-Total Body 1.10E-7 millirem

NL-02-065 May, 2002 Re: Indian Point Unit Nos. 1 & 2

Docket Nos. 50-03 & 50-247

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JAN/FEB/MAR 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/ 1/ 1/ 0] TO [2001/ 3/31/23]

PASQUILL STABILITY: A

	WIND SPEED	(MPH)						
WIND FROM	CALMS					18.50 - 24.00	24.00 -	TOTAL
N NNE NE ENE	.0	.0	. 0 . 0 . 0	5.0 1.0 .0	.0 .0 .0	.0		1.0
E ESE SE SSE	.0 .0 .0	.0 .0 .0	.0 .0 .0 5.0	.0 .0 .0	.0 .0 .0	.0	.0 .0 .0	
s ssw sw wsw		.0.0	.0 .0 2.0 .0	1.0 3.0 .0	.0 .0 .0	.0 .0 .0	.0 .0 .0	1.0 3.0 2.0
W WNW NW NNW	.0 .0 .0		4.0 15.0 13.0 3.0	5.0 18.0		.0	.0 .0 .0	4.0 20.0 31.0 9.0
TOTAL	.0	.0	42.0	39.0	.0	.0	.0	81.0
DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 10.00 TEMPERATURE SENSOR SEPARATION (METERS) 50.90								
MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 14 VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2146								

NL-02-065 May, 2002 Re: Indian Point Unit Nos. 1 & 2 Docket Nos. 50-03 & 50-247

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JAN/FEB/MAR 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/ 1/ 1/ 0] TO [2001/ 3/31/23]

PASQUILL STABILITY: B

	WIND SPEED	(MPH)						
WIND FROM	CALMS			7.50 - 12.50	12.50 - 18.50	18.50 - 24.00		TOTAL
N NNE NE ENE	. 0 . 0 . 0	.0	5.0 .0 .0	3.0 .0 .0	1.0 .0 .0	.0	.0	9.0 .0 .0
E ESE SE SSE	.0 .0 .0	.0 .0 .0	.0 .0 .0 3.0		.0 .0 .0	.0		.0 .0 .0 3.0
s ssw sw wsw	.0 .0 .0	.0 .0 .0	1.0 2.0 .0 1.0	1.0		.0 .0 .0	.0 .0 .0	3.0 3.0 .0 1.0
W WNW NW NNW	.0 .0 .0	.0 .0 .0	5.0 4.0	1.0 1.0 4.0 5.0	.0 2.0	.0 .0 .0		
TOTAL	.0	.0	32.0	17.0	3.0	.0	.0	52.0
DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 10.00 TEMPERATURE SENSOR SEPARATION (METERS) 50.90								
MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 14 VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2146								

NL-02-065 May, 2002 Re: Indian Point Ùnit Nos. 1 & 2 Docket Nos. 50-03 & 50-247

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JAN/FEB/MAR 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/ 1/ 1/ 0] TO [2001/ 3/31/23]

PASQUILL STABILITY: C

	WIND SPEED	(MPH)						
WIND FROM	CALMS					18.50 - 24.00		TOTAL
N NNE NE ENE	.0 .0	.0	.0	7.0 3.0 .0	2.0 .0 .0	.0 .0 .0	.0	4.0
E ESE SE SSE	. 0 . 0	. 0 . 0	.0 .0 .0 5.0		.0 .0 .0	.0	.0	.0 .0 .0 6.0
s ssw sw wsw	.0 .0 .0	.0.0	8.0 1.0 3.0 .0	1.0	.0 .0 .0	.0	.0 .0 .0	13.0 2.0 3.0 .0
W WNW NW NNW	.0 .0 .0	.0 .0 1.0 1.0	7.0	.0 2.0 16.0 4.0		.0 .0 .0	.0	5.0 4.0 25.0 14.0
TOTAL	.0	3.0	56.0	38.0	3.0	.0	.0	100.0
DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 10.00 TEMPERATURE SENSOR SEPARATION (METERS) 50.90								
MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 14 VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2146								

NL-02-065 May, 2002 Re: Indian Point Unit Nos. 1 & 2 Docket Nos. 50-03 & 50-247

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JAN/FEB/MAR 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/ 1/ 1/ 0] TO [2001/ 3/31/23]

PASQUILL STABILITY: D

	WIND SPEED	(MPH)						
WIND FROM	CALMS					18.50 -	80.00	TOTAL
N NNE NE ENE	.0	32.0 17.0	89.0	63.0 37.0 2.0	11.0 2.0 .0	.0	.0	
E ESE SE SSE	.0	6.0 9.0	6.0 4.0 1.0 22.0	.0	.0 .0 .0	.0	.0 .0 .0	10.0 10.0
S SSW SW WSW	.0	18.0 19.0	23.0 12.0 5.0 10.0	2.0 3.0	.0	.0	.0 .0 .0	27.0
W WNW NW NNW	. 0 . 0	11.0 8.0	36.0 57.0 118.0 84.0	25.0	.0 1.0	.0	. 0	
TOTAL	.0	244.0	625.0	256.0	14.0	.0	.0	1139.0
DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 10.00 TEMPERATURE SENSOR SEPARATION (METERS) 50.90								
MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 14 VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2146								

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JAN/FEB/MAR 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/ 1/ 1/ 0] TO [2001/ 3/31/23]

PASQUILL STABILITY: E

	WIND SPEED	(MPH)						
WIND FROM	CALMS					18.50 - 24.00		TOTAL
N NNE NE ENE	. 0 . 0	54.0 38.0	16.0 27.0 22.0 2.0	.0	.0	.0	.0 .0 .0	41.0 81.0 60.0 21.0
E ESE SE SSE	. 0	9.0 14.0	.0 .0 .0 8.0	.0 .0 .0	.0	.0		
s ssw sw wsw	. 0	33.0 20.0	37.0 6.0 5.0 11.0	.0	.0 .0 .0	.0	.0 .0 .0	76.0 39.0 25.0 25.0
W WNW NW NNW	.0	8.0 5.0	14.0 21.0 13.0 13.0	4.0 3.0	.0	.0	.0	33.0 21.0
TOTAL	.0	336.0	195.0	14.0	.0	.0	.0	545.0
	EASUREMENT H ATURE SENSOR					10.00 50.90		
MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 14 VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2146								

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JAN/FEB/MAR 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/ 1/ 1/ 0] TO [2001/ 3/31/23]

PASQUILL STABILITY: F

	WIND SPEED	(MPH)						
WIND FROM	CALMS				18.50	18.50 -		TOTAL
N NNE NE ENE	.0	13.0 27.0 21.0		.0	.0	.0	.0	14.0 51.0 47.0 14.0
E ESE SE SSE	.0	3.0 2.0	.0	.0 .0 .0	.0 .0 .0	.0	.0	
s ssw sw wsw	.0	8.0 11.0 3.0 5.0	4.0 .0 2.0 .0	.0	.0 .0 .0		.0 .0 .0	11.0
W WNW NW NNW	.0		.0 .0 1.0	.0	.0	.0	.0 .0 .0	1.0 1.0 4.0 4.0
TOTAL	.0	134.0	59.0	.0	.0	.0	.0	193.0
	EASUREMENT H ATURE SENSOR					10.00 50.90		
	G OBS. DURIN OBSER. DURIN							

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JAN/FEB/MAR 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/ 1/ 1/ 0] TO [2001/ 3/31/23]

PASQUILL STABILITY: G

	WIND SPEED	(MPH)						
WIND FROM	CALMS					18.50 -		TOTAL
N	.0	3.0	.0	.0	. 0	.0	. 0	3.0
NNE	.0	4.0	6.0	.0	.0	.0		10.0
NE	.0	3.0	4.0	.0	.0	.0		7.0
ENE	.0	4.0	.0	.0	.0	.0	.0	4.0
E	.0	.0	.0	. 0	.0	.0	.0	.0
ESE	.0	1.0	1.0	.0	.0	.0	.0	2.0
SE		1.0	.0	. 0	.0	.0	.0	1.0
SSE	.0	4.0	. 0	.0	. 0	.0	.0	4.0
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		1.0	.0	.0	.0	.0	.0	1.0
WNW		1.0	.0	.0	. 0	.0	.0	1.0
NW	.0	.0 3.0	.0	. 0	.0	.0	.0	.0
NNW	. 0	3.0	. 0	.0	.0	.0	.0	3.0
TOTAL	.0	25.0	11.0	.0	.0	.0	.0	36.0
DATA MI	EASUREMENT H	ETGHT (	M ABOVE G	RADE		10.00		
TEMPERATURE SENSOR SEPARATION (METERS) 50.90								
MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 14 VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2146								

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JAN/FEB/MAR 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/ 1/ 1/ 0] TO [2001/ 3/31/23]

PASQUILL STABILITY: ALL

	WIND SPEED	(MPH)						
WIND FROM	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	18.50	18.50 -	80.00	TOTAL
N NNE NE ENE	. 0 . 0 . 0	62.0 117.0 79.0	178.0 147.0	78.0 41.0 2.0	14.0 2.0 .0	.0	.0 .0 .0	307.0
E ESE SE SSE	.0	19.0 26.0	1.0	.0 .0	.0	.0	.0	24.0 27.0
S SSW SW WSW	.0	62.0	73.0 21.0 17.0 22.0	7.0	0	.0 .0 .0	.0	
W WNW NW NNW	.0 .0 .0	21.0 17.0	156.0	37.0 136.0		.0	.0	
TOTAL	.0	742.0	1020.0	364.0	20.0	.0	.0	2146.0
DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 10.00 TEMPERATURE SENSOR SEPARATION (METERS) 50.90								
		MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 14 VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2146						

NL-02-065 May, 2002

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

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JAN/FEB/MAR 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/ 1/ 1/ 0] TO [2001/ 3/31/23]

PASQUILL STABILITY: A

	WIND SPEED	(MPH)						
WIND FROM	CALMS					18.50 - 24.00		TOTAL
N NNE NE ENE	. 0 . 0	.0.0	.0 .0 .0	.0 .0 .0	.0	.0	.0	.0
E ESE SE SSE		.0	.0 .0		.0 .0 .0	.0	. 0 . 0	.0 .0 .0 5.0
S SSW SW WSW	.0 .0 .0	.0.0	.0	1.0	2.0 1.0	.0 1.0 .0		
W WNW NW NNW	.0 .0 .0	.0 .0 .0	. 0 . 0	5.0	11.0 15.0	.0 1.0 7.0 4.0	.0	
TOTAL	.0	.0	3.0	20.0	33.0	17.0	8.0	81.0
DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 60.00 TEMPERATURE SENSOR SEPARATION (METERS) 50.90								
MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 14 VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2146								

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JAN/FEB/MAR 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/ 1/ 1/ 0] TO [2001/ 3/31/23]

PASQUILL STABILITY: B

	WIND SPEED	(MPH)						
WIND FROM	CALMS					18.50 -		TOTAL
N NNE NE ENE	.0.0.0	. 0 . 0	.0	.0	. 0	.0 .0	1.0 .0 .0	.0
E ESE SE SSE		.0	.0	.0	.0 .0 .0	.0	.0 .0 .0	.0 .0 .0 3.0
S SSW SW WSW	.0 .0 .0	.0	1.0	1.0 1.0	.0 .0 1.0	.0	.0 .0 .0	2.0
W WNW NW NNW	.0 .0 .0	.0 .0 .0	.0	2.0	2.0 3.0 3.0 6.0	.0 .0 1.0	.0 5.0	11.0
TOTAL	. 0	. 0	6.0	20.0	17.0	3.0	6.0	52.0
	EASUREMENT H ATURE SENSOR			•		60.00 50.90		
	G OBS. DURIN OBSER. DURIN							

NOTE: CALMS WERE DISTRIBUTED 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 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/ 1/ 1/ 0] TO [2001/ 3/31/23]

PASQUILL STABILITY: C

	WIND SPEED	(MPH)						
WIND FROM	CALMS					18.50 ~ 24.00		TOTAL
N NNE NE ENE	. 0 . 0	.0	.0	. 0	.0	.0	. 0	.0
E ESE SE SSE	.0	. 0 . 0	. 0 . 0	.0 .0 .0 4.0	.0		.0	.0 .0 .0 9.0
S SSW SW WSW	.0 .0 .0	.0 .0 .0	2.0 1.0 2.0 .0	.0	1.0	.0	.0 .0 .0	3.0
W WNW NW NNW	.0	.0	.0 1.0	.0 2.0				5.0 23.0
TOTAL	.0	.0	23.0	25.0	25.0	19.0	8.0	100.0
DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 60.00 TEMPERATURE SENSOR SEPARATION (METERS) 50.90								
MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 14 VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2146								

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JAN/FEB/MAR 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/ 1/ 1/ 0] TO [2001/ 3/31/23]

PASQUILL STABILITY: D

	WIND SPEED	(MPH)						
WIND FROM	CALMS					18.50 - 24.00		TOTAL
N NNE NE ENE	.0 .0 .0	9.0 10.0	46.0 12.0	40.0 15.0	13.0 3.0		27.0 .0 .0	
E ESE SE SSE	.0	5.0 3.0	5.0 6.0	3.0 4.0 2.0 10.0	.0	.0 .0 .0	.0	14.0 11.0
S SSW SW WSW	.0 .0	8.0	18.0 13.0	4.0	4.0	2 2	.0	34.0
W WNW NW NNW		6.0	2.0 8.0 6.0 11.0		14.0 47.0 98.0 48.0	8.0 56.0	.0 2.0 11.0 1.0	95.0 234.0
TOTAL	. 0	109.0	256.0	333.0	300.0	100.0	41.0	1139.0
DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 60.00 TEMPERATURE SENSOR SEPARATION (METERS) 50.90								
MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 14 VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2146								

NL-02-065 May, 2002

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

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JAN/FEB/MAR 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/ 1/ 1/ 0] TO [2001/ 3/31/23]

PASQUILL STABILITY: E

	WIND SPEE	D (MPH)						
WIND FROM	CALMS	.60 - 3.50				18.50 - 24.00		TOTAL
N NNE NE ENE	.1	16.0 8.0 15.0 6.0		13.0 7.0 1.0	. 0 . 0		.0	82.1
E ESE SE SSE	.0	.0 5.0	4.0 4.0 6.0 20.0	.0	.0 .0 .0	.0		10.1 4.0 11.0 35.1
S SSW SW WSW		12.0	32.0 28.0 18.0 14.0	25.0	3.0	.0 .0 .0	.0	68.1 26.0
W WNW NW NNW	.0 .0 .0	3.0 2.0	9.0 2.0 2.0 7.0	14.0 16.0	3.0 9.0 5.0 7.0	2.0	1.0 .0 2.0	31.0 29.0
TOTAL	1.0	103.0	261.0	133.0	36.0	8.0	3.0	545.0
DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 60.00 TEMPERATURE SENSOR SEPARATION (METERS) 50.90								
MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 14 VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2146								

NL-02-065 May, 2002 Re: Indian Point Unit Nos. 1 & 2

Docket Nos. 50-03 & 50-247

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JAN/FEB/MAR 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/ 1/ 1/ 0] TO [2001/ 3/31/23]

PASQUILL STABILITY: F

	WIND SPEED	(MPH)						
WIND FROM	CALMS					18.50 -	80.00	TOTAL
N NNE NE ENE	.0 .0 .0	12.0 3.0	15.0 47.0 4.0 .0	1.0 .0	.0	.0	.0	29.0 60.0 7.0 4.0
E ESE SE SSE	. 0	1.0 3.0	2.0 .0 .0 7.0	. 0 . 0	.0		.0	3.0
S SSW SW WSW	.0 .0 .0	4.0 2.0	9.0 12.0 5.0 4.0	5.0 7.0	.0 .0	.0 .0 1.0	.0	21.0
W WNW NW WNN	.0	2.0 2.0	1.0 1.0 1.0	.0	.0 .0 1.0		.0	3.0 3.0 4.0 4.0
TOTAL	. 0	57.0	109.0	25.0	1.0	1.0	.0	193.0
DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 60.00 TEMPERATURE SENSOR SEPARATION (METERS) 50.90								
MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 14 VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2146								

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JAN/FEB/MAR 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/ 1/ 1/ 0] TO [2001/ 3/31/23]

PASQUILL STABILITY: G

	WIND SPEED	(MPH)						
WIND FROM	CALMS					18.50 - 24.00		TOTAL
N NNE NE ENE	.0	$\frac{4.0}{1.0}$	3.0 5.0 1.0	1.0	.0	.0	.0	10.0 2.0
E ESE SE SSE	.0		.0 .0 .0 4.0	.0	.0 .0 .0	.0 .0 .0	.0 .0 .0	1.0 1.0 .0 5.0
S SSW SW WSW		2.0	1.0 2.0 .0 1.0	1.0	.0	.0	.0 .0 .0	2.0 5.0 .0 2.0
W WNW NW NNW	.0	.0 .0 1.0 1.0	1.0 .0 1.0 .0	.0 .0 .0	.0 .0 .0	.0	.0 .0 .0	1.0 .0 2.0 1.0
TOTAL	.0	15.0	19.0	2.0	.0	.0	.0	36.0
	EASUREMENT H ATURE SENSOR					60.00 50.90		
	G OBS. DURIN OBSER. DURIN					14 2146		

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JAN/FEB/MAR 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/ 1/ 1/ 0] TO [2001/ 3/31/23]

PASQUILL STABILITY: ALL

	WIND SPEED	(MPH)						
WIND FROM	CALMS				18.50	18.50 -		TOTAL
N NNE NE ENE	.1	33.0 29.0	165.0 33.0	49.0 16.0	13.0 3.0	35.0 2.0 .0	34.0 .0 .0	399.2 262.1 81.1 25.1
E ESE SE SSE		7.0 11.0	14.0 9.0 12.0 73.0	4.0 2.0	.0	.0 .0 .0	.0	30.1 20.0 25.0 131.1
S SSW SW WSW	.1	8.0	38.0	17.0	3.0	.0 2.0 4.0 .0	.0	147.1 137.1 70.0 62.1
W WNW NW NNW		8.0 11.0	11.0 11.0	48.0 83.0	75.0 131.0	12.0 74.0	1.0 2.0 26.0 3.0	156.0 336.0
TOTAL	1.0	284.0	677.0	558.0	412.0	148.0	66.0	2146.0
DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 60.00 TEMPERATURE SENSOR SEPARATION (METERS) 50.90								
MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 14 VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2146								

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JAN/FEB/MAR 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/ 1/ 1/ 0] TO [2001/ 3/31/23]

PASQUILL STABILITY: A

MIND	SPEED	(MPH)

			- <b></b>					
WIND		.60 -	3.50 -	7.50 ~	12.50 -	18.50 -	24.00 -	
FROM	CALMS	3.50	7.50	12.50	18.50	24.00	80.00	TOTAL
								TOTAL
								<b>_</b>
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	
ENE	.0	.0	.0	.0				.0
	. 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	
SSE	.0	.0	.0					.0
OOL	. 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	. 0	. 0	. 0	.0	.0	.0
W	.0	.0	.0	1.0	.0	.0	.0	1.0
WNW	.0	.0	.0	.0	.0	. 0	.0	.0
NW	.0	.0	.0	.0	.0	.0	.0	
NNW	.0	.0	.0					.0
TATANA	.0	.0	.0	.0	.0	.0	11.0	11.0
TOTAL	.0	.0	.0	1.0	.0	.0	11.0	12.0

	DATA MEASUREMENT HEIGHT (M ABOVE GRADE) TEMPERATURE SENSOR SEPARATION (METERS)					
MISSING OBS. VALID OBSER.				146 2014		

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JAN/FEB/MAR 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/ 1/ 1/ 0] TO [2001/ 3/31/23]

PASQUILL STABILITY: B

	WIND SPEED	(MPH)						
WIND FROM	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 -	TOTAL
N NNE NE ENE	.0	.0	.0	.0	.0	.0	.0	.0
E ESE SE SSE	.0 .0 .0	.0 .0 .0	.0 .0 .0	.0 .0 .0	.0 .0 .0	.0 .0 .0	.0 .0 .0	.0
S SSW SW WSW	. 0 . 0 . 0	.0.0	.0 .0 .0	.0	.0 .0 .0 1.0	.0 .0 .0	.0 .0 .0	.0 .0 .0
W WNW NNW	.0 .0 .0	. 0 . 0 . 0	.0 .0 .0	1.0 .0 .0	.0 .0 .0	.0 .0 .0 2.0	.0 .0 .0 5.0	1.0 .0 .0 7.0
TOTAL	.0	.0	.0	1.0	1.0	2.0	5.0	9.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) TEMPERATURE SENSOR SEPARATION (METERS)	122.00 112.00
MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) VALID OBSER. DURING THIS PERIOD (ALL STABILITIES)	146 2014

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JAN/FEB/MAR 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/ 1/ 1/ 0] TO [2001/ 3/31/23]

PASQUILL STABILITY: C

	WIND SPEED	(MPH)						
WIND FROM	CALMS	.60 - 3.50	3.50 - 7.50		12.50 - 18.50	18.50 - 24.00		TOTAL
				<b>-</b>				
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	2.0	.0	.0	.0	2.0
SSE	. 0	.0	.0	.0	.0	.0	.0	.0
S	.0	.0	.0	.0	1.0	2.0	.0	3.0
SSW	.0	.0	.0	.0	.0	.0	.0	.0
SW	.0	.0	.0	.0	.0	.0	.0	. 0
WSW	.0	.0	.0	.0	1.0	.0	.0	1.0
W	.0	. 0	.0	.0	2.0	.0	.0	2.0
WNW	.0	. 0	.0	2.0	4.0	6.0	1.0	13.0
NW	.0	. 0	. 0	.0	.0	4.0	.0	4.0
NNW	.0	.0	.0	2.0	.0	.0	3.0	5.0
TOTAL	.0	.0	.0	7.0	8.0	12.0	4.0	31.0
חביים א	MEASHREMENT H	ЕТСИТ (	M ABOVE	CRADE)		122 00		

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 122.00
TEMPERATURE SENSOR SEPARATION (METERS) 112.00
MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 146
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2014

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JAN/FEB/MAR 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/ 1/ 1/ 0] TO [2001/ 3/31/23]

PASQUILL STABILITY: D

	WIND SPEED	(MPH)						
WIND FROM	CALMS				18.50	18.50 - 24.00	80.00	TOTAL
N NNE NE ENE	. 0 . 0	8.0 6.0	15.0 7.0	11.0 3.0	12.0 .0		2.0 .0 .0	49.0 16.0
E ESE SE SSE	. 0 . 0	9.0 12.0	11.0	6.0 29.0	.0 5.0	.0 .0 .0	.0 .0	26.0 84.0
S SSW SW WSW	. 0 . 0	4.0 3.0	9.0 10.0	3.0 9.0	3.0 7.0	3.0 .0 1.0 8.0	.0	19.0 30.0
W WNW NW NNW	.0	1.0	6.0 22.0	31.0 45.0	$104.0 \\ 44.0$	28.0 60.0 16.0 25.0	33.0 4.0	235.0 131.0
TOTAL	.0	82.0	243.0	352.0	383.0	150.0	86.0	1296.0
DATA M TEMPER	EASUREMENT H ATURE SENSOR	EIGHT ( SEPARA	M ABOVE G TION (MET	RADE) ERS)		122.00 112.00		
	G OBS. DURIN OBSER. DURIN							

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JAN/FEB/MAR 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/ 1/ 1/ 0] TO [2001/ 3/31/23]

PASQUILL STABILITY: E

	WIND SPEED	(MPH)						
WIND FROM	CALMS				12.50 - 18.50	18.50 - 24.00		TOTAL
N		15.0		7.0		. 0	.0	42.2
NNE	. 2	15.0	11.0	1.0	.0	.0	.0	27.2
NE				1.0		.0	.0	16.1
ENE	.1	7.0	10.0	3.0	.0	.0	.0	20.1
E		4.0	4.0	1.0	.0	.0	.0	9.1
ESE	. 2	11.0	1.0	2.0	.0	.0	.0	14.2
SE			17.0	10.0	2.0	.0	.0	47.3
SSE	.1	10.0	30.0	29.0	7.0	1.0	.0	77.1
S	.1	7.0	24.0	34.0	6.0	.0	.0	71.1
SSW	.1	8.0	15.0	19.0	2.0	.0	1.0	45.1
SW	.1	4.0		9.0	3.0	.0	.0	27.1
WSW	.0	3.0	7.0	8.0	4.0	.0	2.0	24.0
W	.1	6.0	9.0	7.0	.0	3.0	1.0	26.1
WNW	.1	4.0	8.0	7.0	1.0	.0	1.0	21.1
NW		7.0	10.0	5.0	.0	.0	.0	22.1
NNW	.1	8.0	24.0	26.0	2.0	1.0	1.0	62.1
TOTAL	2.0	136.0	207.0	169.0	27.0	5.0	6.0	552.0
DATA M	EASUREMENT I	HEIGHT (	M ABOVE O	GRADE)		122.00		

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

TEMPERATURE SENSOR SEPARATION (METERS)

MISSING OBS. DURING THIS PERIOD (ALL STABILITIES)

VALID OBSER. DURING THIS PERIOD (ALL STABILITIES)

112.00

146

2014

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JAN/FEB/MAR 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/ 1/ 1/ 0] TO [2001/ 3/31/23]

PASQUILL STABILITY: F

	WIND SPEED	(MPH)						
WIND FROM	CALMS	.60 - 3.50			12.50 - 18.50	18.50 - 24.00	24.00 -	TOTAL
N NNE NE	.0 .0 .0	4.0 .0 3.0	6.0 5.0 .0	.0 .0 .0	.0 .0 .0	.0 .0 .0	.0 .0 .0	10.0 5.0 3.0
ENE	.0	4.0	.0	.0	.0	. 0	. 0	4.0
E ESE SE SSE	.0 .0 .0	3.0 2.0 3.0 1.0	.0 .0 2.0 12.0	.0 .0 .0 3.0	.0 .0 .0	.0 .0 .0	.0 .0 .0	3.0 2.0 5.0 16.0
s ssw sw wsw	.0 .0 .0	6.0 4.0 5.0 1.0	5.0 2.0 .0	2.0 1.0 1.0	1.0 .0 .0	1.0 .0 .0	.0 .0 .0	15.0 7.0 6.0 2.0
MNM NIM NIM	.0 .0 .0	3.0 3.0 1.0 2.0	.0 2.0 4.0 5.0	.0 1.0 .0	.0 1.0 1.0	.0 .0 .0	.0 1.0 .0	3.0 8.0 6.0 8.0
TOTAL	. 0	45.0	43.0	9.0	4.0	1.0	1.0	103.0

DATA MEASURES TEMPERATURE :			122.00 112.00
		(ALL STABILITIES) (ALL STABILITIES)	146 2014

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JAN/FEB/MAR 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/ 1/ 1/ 0] TO [2001/ 3/31/23]

PASQUILL STABILITY: G

	WIND SPEED	(MPH)						
WIND FROM	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 -	TOTAL
N NNE NE ENE	. 0 . 0 . 0	.0	1.0 .0 .0	.0	.0	.0 .0 .0	.0	1.0 .0 .0
E ESE SE SSE	. 0 . 0 . 0	.0.0.0	.0 .0 .0	.0 .0 .0	.0 .0 .0 1.0	.0 .0 .0	.0 .0 .0	.0 .0 .0
s ssw sw wsw	.0 .0 .0	.0 .0 .0	.0 2.0 .0 1.0	1.0 .0 .0 2.0	.0 .0 .0	.0 .0 .0	.0 .0 .0	1.0 2.0 .0 3.0
W WNW NW NNW	.0 .0 .0	.0 1.0 .0	.0 .0 .0	.0 1.0 .0	.0 .0 .0	.0 .0 .0	.0	.0 2.0 .0 1.0
TOTAL	.0	1.0	5.0	4.0	1.0	.0	.0	11.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) TEMPERATURE SENSOR SEPARATION (METERS)	122.00 112.00
MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) VALID OBSER. DURING THIS PERIOD (ALL STABILITIES)	146 2014

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JAN/FEB/MAR 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/ 1/ 1/ 0] TO [2001/ 3/31/23]

PASQUILL STABILITY: ALL

	WIND SPEED	(MPH)						
WIND FROM	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50		80.00	TOTAL
N NNE NE ENE	.2 .1	23.0 18.0	31.0 13.0	12.0 4.0	12.0 .0	6.0 3.0 .0	2.0 .0 .0	81.2 35.1
E ESE SE SSE	.3	33.0	57.0	8.0 41.0	2.0 .0 7.0 15.0	.0 .0 .0	.0 .0 .0	42.2 138.3
S SSW SW WSW		16.0 12.0	28.0 21.0	23.0 19.0	5.0 10.0	.0 1.0	.0 1.0 .0 2.0	73.1 63.1
W WNW NW NNW	.1	8.0	36.0	50.0	45.0	20.0	11.0 36.0 4.0 57.0	163.1
TOTAL	2.0	264.0	498.0	543.0	424.0	170.0	113.0	2014.0
DATA MI	EASUREMENT H ATURE SENSOR		122.00 112.00					
MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 146 VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2014								

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - APR/MAY/JUN 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/ 4/ 1/ 0] TO [2001/ 6/30/23]

PASQUILL STABILITY: A

	WIND SPEED	(MPH)						
WIND FROM	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	18.50	18.50 - 24.00	24.00 -	TOTAL
N NNE NE ENE	. 0 . 0	.0 1.0	44.0 11.0 1.0 1.0	11.0 .0	.0	.0 .0 .0	.0	64.0 22.0 2.0 1.0
E ESE SE SSE	. 0 . 0	.0 .0 .0	.0 .0 3.0 34.0	.0 .0 .0 2.0	.0 .0 .0	.0		.0 3.0
s ssw sw wsw	.0 .0 .0	1.0	39.0 10.0 2.0 8.0	4.0 1.0	.0	.0		15.0 5.0
MNM MNM MNM	.0	2.0	14.0 17.0 21.0 26.0	1.0	. 0	.0	. 0	20.0
TOTAL	.0	11.0	231.0	66.0	.0	.0	.0	308.0
DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 10.00 TEMPERATURE SENSOR SEPARATION (METERS) 50.90								
MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 1 VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2183								

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - APR/MAY/JUN 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/ 4/ 1/ 0] TO [2001/ 6/30/23]

PASQUILL STABILITY: B

	WIND SPEED	(MPH)						
WIND FROM	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 -	18.50 - 24.00		TOTAL
N NNE NE ENE	.0	. 0 . 0	29.0 11.0 5.0	3.0 2.0	.0	.0	.0	
E ESE SE SSE	.0 .0	.0 2.0 .0 .0	2.0	.0	.0 .0 .0	.0	.0 .0 .0	
S SSW SW WSW	. 0 . 0	2.0	13.0 6.0 7.0 4.0	3.0	.0	.0		
W WNW WNN	. 0 . 0	.0 1.0 2.0 1.0	5.0 5.0 3.0 6.0	4.0 1.0	.0 .0	.0	.0	5.0 10.0 6.0 7.0
TOTAL	.0	16.0	106.0	19.0	.0	.0	.0	141.0
DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 10.00 TEMPERATURE SENSOR SEPARATION (METERS) 50.90								
MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 1 VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2183								

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - APR/MAY/JUN 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/ 4/ 1/ 0] TO [2001/ 6/30/23]

PASQUILL STABILITY: C

	WIND SPEED	(MPH)						
WIND FROM	CALMS					18.50 -	80.00	TOTAL
N NNE NE ENE	. 0 . 0	2.0 .0	18.0 10.0 5.0 2.0	4.0 1.0	.0	.0 .0 .0	. 0 . 0 . 0	22.0 16.0 6.0 3.0
E ESE SE SSE	.0 .0 .0	1.0 1.0	.0 .0 .0 4.0	.0	.0 .0 .0	.0		1.0 1.0 1.0 6.0
s ssw sw wsw	.0	3.0 3.0	15.0 7.0 1.0 3.0	.0 1.0	.0	.0	.0 .0 .0	10.0
W WNW NW NNW	.0	.0 3.0	2.0 2.0 3.0 4.0	3.0	.0	.0 .0 .0	.0	3.0 5.0 6.0 7.0
TOTAL	.0	29.0	76.0	13.0	1.0	.0	.0	119.0
DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 10.00 TEMPERATURE SENSOR SEPARATION (METERS) 50.90								
MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 1 VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2183								

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - APR/MAY/JUN 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/ 4/ 1/ 0] TO [2001/ 6/30/23]

PASQUILL STABILITY: D

	WIND SPEED	(MPH)						
WIND FROM	CALMS		3.50 - 7.50			18.50 - 24.00		TOTAL
N	.0		74.0			.0	.0	118.0
NNE		40.0	90.0	31.0	.0	.0	.0	161.0
NE		30.0	39.0	1.0	.0	.0	.0	70.0
ENE	.0	21.0	7.0	.0	.0	.0	.0	28.0
E	.0	25.0	4.0	.0	.0	.0	.0	29.0
ESE	.0	18.0	3.0	. 0	.0	.0	.0	21.0
SE	.0	19.0	3.0	.0	.0	.0	.0	22.0
SSE	. 0	46.0	29.0	1.0	.0	.0	.0	76.0
S	.0	29.0	79.0	.0	.0	.0	.0	108.0
SSW	.0	30.0	21.0	1.0	. 0	.0	.0	52.0
SW	.0	13.0	13.0	.0	.0	.0	.0	26.0
WSW	. 0	18.0	6.0	1.0	.0	.0	.0	25.0
W	.0	12.0	8.0	3.0	.0	.0	.0	23.0
WNW	.0	13.0	11.0	4.0	.0	.0	.0	28.0
NW	.0	9.0		8.0	.0	.0	.0	36.0
NNW	.0	11.0	16.0	11.0	.0	.0	.0	38.0
TOTAL	.0	353.0	422.0	81.0	5.0	.0	.0	861.0
DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 10.00 TEMPERATURE SENSOR SEPARATION (METERS) 50.90								
	G OBS. DURIN		·	ŕ	LITIES)	1		

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

VALID OBSER. DURING THIS PERIOD (ALL STABILITIES)

2183

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - APR/MAY/JUN 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/ 4/ 1/ 0] TO [2001/ 6/30/23]

PASQUILL STABILITY: E

	WIND SPEED	(MPH)						
WIND FROM	CALMS					18.50 - 24.00		TOTAL
N	.0	18.0	23.0 39.0	.0	.0	.0		41.0
NNE	. 0	34.0	39.0	2.0	.0	. 0		75.0
NE			24.0				.0	
ENE	.0	8.0	. 0	.0	.0	.0	.0	8.0
E			.0		.0			8.0
ESE		14.0	1.0	.0	.0		.0	15.0
SE	.0	16.0	.0		.0	. 0		16.0
SSE	.0	52.0	13.0	.0	.0	.0	.0	65.0
S	.0	39.0	20.0	.0	.0		.0	
SSW		28.0	7.0			. 0	.0	
SW				1.0			.0	
WSW	.0	16.0	7.0	.0	.0	.0	.0	23.0
W			6.0	.0	.0		.0	16.0
WNW		2.0	1.0	. 0	.0	.0	.0	3.0
NM		9.0	5.0 10.0	. 0	.0	.0	.0	14.0
MMM	.0	18.0	10.0	1.0	.0	.0	.0	29.0
TOTAL	.0	324.0	158.0	5.0	.0	.0	.0	487.0
DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 10.00 TEMPERATURE SENSOR SEPARATION (METERS) 50.90								
TEMPER	ATURE SENSOR	SEPARA	TION (MET	EKS)		50.90		
	G OBS. DURIN					1		
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2183								

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - APR/MAY/JUN 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/ 4/ 1/ 0] TO [2001/ 6/30/23]

PASQUILL STABILITY: F

	WIND SPEED	(MPH)						
WIND FROM	CALMS	.60 - 3.50	3.50 ~ 7.50	7.50 - 12.50	12.50 -	18.50 - 24.00		TOTAL
N NNE NE ENE	. 0 . 0	44.0 19.0	.0 17.0 20.0 2.0	.0	.0	.0 .0 .0	.0	61.0 39.0
E ESE SE SSE	.0 .0 .0	3.0 7.0 4.0 2.0	.0 .0 .0	.0	.0	.0	.0	3.0 7.0 4.0 2.0
s ssw sw wsw	. 0 . 0				.0 .0 .0		.0	5.0 5.0 10.0 8.0
W WNW NW NNW	. 0 . 0	3.0 3.0 3.0 13.0	.0 .0 .0	. 0 . 0	.0 .0 .0	.0 .0 .0	.0	3.0
TOTAL	.0	163.0	40.0	.0	.0	.0	.0	203.0
DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 10.00 TEMPERATURE SENSOR SEPARATION (METERS) 50.90								
MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 1 VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2183								

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - APR/MAY/JUN 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/ 4/ 1/ 0] TO [2001/ 6/30/23]

PASQUILL STABILITY: G

	WIND SPEED	(MPH)						
WIND FROM	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 -	18.50 - 24.00	24.00 -	TOTAL
N NNE NE ENE	. 0 . 0	9.0	.0 5.0 11.0	.0	.0 .0 .0	.0	.0	26.0
E ESE SE SSE	.0 .0 .0	.0 .0 .0	.0 .0 .0	.0	.0	.0	.0	.0 .0 .0
s ssw sw wsw	.0	.0	.0 .0 .0	. 0	.0 .0 .0	.0	.0	.0 .0 .0
W WNW NW NNW	. 0 . 0	.0 1.0 1.0		.0	.0 .0 .0	.0 .0 .0		
TOTAL	. 0	48.0	16.0	.0	.0	.0	.0	64.0
DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 10.00 TEMPERATURE SENSOR SEPARATION (METERS) 50.90								
MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 1 VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2183								

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - APR/MAY/JUN 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/ 4/ 1/ 0] TO [2001/ 6/30/23]

PASQUILL STABILITY: ALL

	WIND SPEED	(MPH)	_					
WIND FROM	CALMS					18.50 - 24.00		TOTAL
N	. 0	76.0	188.0	48.0	6.0	.0	. 0	318.0
NNE	.0	141.0	183.0	51.0	.0	. 0	.0	375.0
NE	.0		105.0			. 0	.0	
ENE	.0	40.0	12.0					52.0
E	.0	37.0	4.0	.0	.0	.0	.0	41.0
ESE	.0	42.0	6.0	.0	.0	.0	.0	48.0
SE	.0	40.0		. 0		.0	.0	46.0
SSE	.0	102.0	90.0	3.0	.0	.0	.0	195.0
s	.0	87.0	166.0	15.0	.0	.0	.0	268.0
SSW	.0	69.0	51.0	9.0	.0	.0	.0	129.0
SW	. 0	52.0	25.0	3.0	.0	.0	. 0	80.0
WSW	.0	47.0	28.0	1.0	.0	.0		76.0
W	.0	25.0	35.0	5.0	.0	.0	.0	65.0
WNW	.0	22.0	36.0	12.0	.0	.0	.0	70.0
NW	.0	27.0	51.0	16.0	.0	.0	.0	94.0
NNW	.0	48.0	63.0	17.0	.0	.0	.0	128.0
TOTAL	. 0	944.0	1049.0	184.0	6.0	.0	.0	2183.0
DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 10.00 TEMPERATURE SENSOR SEPARATION (METERS) 50.90								
MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 1 VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2183								

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - APR/MAY/JUN 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/4/1/0] TO [2001/6/30/23]

PASQUILL STABILITY: A

	WIND SPEED	(MPH)						
WIND		.60 -	3.50 -	7.50 -	12.50 -	18.50 -	24.00 -	
FROM	CALMS						80.00	TOTAL
N	.0	.0	7.0	27.0	22.0	8.0	1.0	65.0
NNE	.0						.0	
NE					.0		.0	
ENE	.0	. 0	.0	1.0	.0	.0	.0	1.0
E		.0	.0			.0		1.0
ESE	.0	.0	1.0	1.0		.0		2.0
SE	.0	.0	.0	2.0	.0 5.0	.0		2.0
SSE	.0	1.0	20.0	39.0	5.0	.0	.0	65.0
S	.0	.0	13.0	15.0	3.0	.0		31.0
SSW			3.0					7.0
SW			.0			1.0	.0	
WSW	.0	. 0	1.0	4.0	.0	.0	.0	5.0
W	.0	. 0	5.0	3.0	2.0	.0	.0	10.0
WMW	.0	.0	3.0	13.0	11.0	.0	.0	27.0
NW	. 0					7.0		
NNW	.0	.0	2.0	12.0	16.0	1.0	.0	31.0
TOTAL	. 0	2.0	59.0	145.0	84.0	17.0	1.0	308.0
DATA MEASUREMENT HEIGHT (M ABOVE GRADE) TEMPERATURE SENSOR SEPARATION (METERS)						60.00 50.90		
MICCIN	a oba bubin	O MUTC	DEDICO /2	TT CONTEST		1		
MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 1 VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2183								

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - APR/MAY/JUN 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/ 4/ 1/ 0] TO [2001/ 6/30/23]

PASQUILL STABILITY: B

	WIND SPEED	(MPH)						
WIND FROM	CALMS					18.50 - 24.00		TOTAL
N NNE NE ENE	. 0 . 0	.0	9.0 4.0 .0 2.0	3.0	.0	4.0 .0 .0	.0	31.0 7.0 5.0 3.0
E ESE SE SSE		. 0 . 0 . 0	.0 1.0 .0 9.0	3.0	.0	.0	.0 .0 .0	
S SSW SW WSW	.0 .0 .0	.0	5.0	1.0 1.0 .0 2.0	3.0	.0 .0 .0	.0	
W WNW NW NNW			4.0	3.0	2.0	.0 1.0 3.0	.0	6.0 11.0 12.0 10.0
TOTAL	.0	1.0	62.0	49.0	21.0	8.0	.0	141.0
DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 60.00 TEMPERATURE SENSOR SEPARATION (METERS) 50.90								
MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 1 VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2183								

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - APR/MAY/JUN 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/ 4/ 1/ 0] TO [2001/ 6/30/23]

PASQUILL STABILITY: C

	WIND SPEED	(MPH)						
WIND FROM	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	18.50	18.50 - 24.00	80.00	TOTAL
N NNE NE ENE	. 0 . 0	.0 .0	2.0	4.0 4.0	1.0	1.0	1.0 .0 .0	8.0 7.0
e ese se sse	.0 .0 .0	.0 1.0 1.0	1.0 .0 2.0 10.0	1.0 .0 .0 3.0	.0 .0 .0	.0 .0 .0	.0 .0 .0	
S SSW SW WSW	. 0 . 0	2.0	11.0 2.0 3.0 .0	1.0 .0	.0 1.0	.0 .0 .0 1.0	. 0 . 0	16.0 5.0 6.0 3.0
W WNW NW NNW	.0	.0 .0 2.0 1.0	.0 .0 2.0 5.0	1.0 4.0 4.0 1.0	2.0 2.0 2.0 .0	.0 3.0 2.0	.0	3.0 9.0 12.0 7.0
TOTAL	. 0	10.0	51.0	38.0	12.0	7.0	1.0	119.0
DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 60.00 TEMPERATURE SENSOR SEPARATION (METERS) 50.90								
MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 1 VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2183								

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - APR/MAY/JUN 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/ 4/ 1/ 0] TO [2001/ 6/30/23]

PASQUILL STABILITY: D

	WIND SPEED	(MPH)						
WIND FROM	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50		18.50 - 24.00	80.00	TOTAL
N NNE NE ENE	.0	1.0 8.0 5.0		25.0 38.0 16.0	46.0 8.0	13.0 .0 .0	6.0 .0 .0	
E ESE SE SSE	.0	13.0 6.0 7.0 18.0	24.0 23.0	6.0 3.0	1.0 .0 .0 5.0	.0		33.0
S SSW SW WSW	. 0 . 0	12.0 6.0	15.0 6.0	9.0 1.0	2.0 1.0 2.0 2.0	.0	.0	15.0
W WNW WN WNN	.0 .0	4.0 5.0	2.0 7.0	4.0 12.0	4.0 11.0 18.0 24.0	2.0 6.0	1.0 1.0 2.0	24.0 50.0
TOTAL	.0	128.0	347.0	218.0	125.0	33.0	10.0	861.0
DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 60.00 TEMPERATURE SENSOR SEPARATION (METERS) 50.90								
MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 1 VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2183								

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - APR/MAY/JUN 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/ 4/ 1/ 0] TO [2001/ 6/30/23]

PASQUILL STABILITY: E

	WIND SPEED	(MPH)						
WIND FROM	CALMS		3.50 - 7.50			18.50 - 24.00		TOTAL
N NNE NE	. 0 . 0	7.0 3.0	51.0 10.0	23.0 .0	1.0		.0	82.0 13.0
ENE	.0	4.0	2.0	.0	.0	.0	.0	6.0
E ESE SE SSE		4.0 11.0	2.0 4.0 8.0 56.0	1.0	.0 1.0	.0 .0 .0	.0 .0 .0	5.0 9.0 21.0 103.0
s ssw sw wsw	.0	7.0 4.0	12.0 9.0	8.0 5.0 2.0 3.0	.0	.0 .0 .0	.0 .0 .0	25.0 15.0
W WNW NW NNW	.0	3.0	3.0 5.0	7.0 21.0	4.0 3.0 9.0 7.0	.0 4.0	.0 .0 .0	16.0
TOTAL	.0	98.0	214.0	142.0	29.0	4.0	.0	487.0
DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 60.00 TEMPERATURE SENSOR SEPARATION (METERS) 50.90								
MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 1 VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2183								

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - APR/MAY/JUN 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/ 4/ 1/ 0] TO [2001/ 6/30/23]

PASQUILL STABILITY: F

	WIND SPEED	(MPH)						
WIND FROM	CALMS	.60 - 3.50	3.50 - 7.50	12.50	12.50 -	18.50 - 24.00	80.00	TOTAL
N NNE NE ENE		18.0 15.0 1.0	18.0 44.0 3.0	10.0 7.0 1.0	.0	.0	.0	46.0 66.0 5.0 2.0
e ese se sse	.0	3.0 1.0	.0 .0 1.0 7.0	.0	.0 .0 .0	.0	.0 .0 .0	1.0 3.0 2.0 15.0
S SSW SW WSW	.0 .0 .0	9.0 7.0	5.0 4.0 5.0 2.0	.0	. 0		.0	
W WNW NW NNW	.0 .0 .0	.0 1.0	2.0	.0 2.0 1.0 3.0	.0	.0	.0	4.0 2.0 4.0 15.0
TOTAL	.0	73.0	102.0	28.0	.0	.0	.0	203.0
DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 60.00 TEMPERATURE SENSOR SEPARATION (METERS) 50.90								
	G OBS. DURING							

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - APR/MAY/JUN 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/ 4/ 1/ 0] TO [2001/ 6/30/23]

PASQUILL STABILITY: G

	WIND SPEED (MPH)								
WIND FROM	CALMS		3.50 ~		12.50 - 18.50	18.50 - 24.00		TOTAL	
N NNE NE ENE	.0	3.0 3.0	4.0 8.0 1.0	3.0	.0	.0	. 0	14.0 14.0 4.0 2.0	
E ESE SE SSE	.0 .0 .0	2.0 4.0 1.0 4.0	.0 .0 .0	.0 .0 .0	.0 .0 .0	.0 .0 .0	.0 .0 .0	2.0 4.0 1.0 5.0	
S SSW SW WSW	.0 .0 .0	2.0 2.0 3.0 .0	2.0 .0 .0	.0	.0 .0 .0	.0	.0 .0 .0	4.0 2.0 3.0 .0	
W WNW NW WNN		1.0 1.0	.0	.0 .0 1.0 1.0		.0	.0 .0 .0	-	
TOTAL	. 0	33.0	19.0	12.0	.0	.0	.0	64.0	
	EASUREMENT : ATURE SENSO					60.00 50.90			
MISSIN	G OBS. DURI		PERIOD (A		,	1			

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

VALID OBSER. DURING THIS PERIOD (ALL STABILITIES)

2183

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - APR/MAY/JUN 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/ 4/ 1/ 0] TO [2001/ 6/30/23]

PASQUILL STABILITY: ALL

	WIND SPEED	(MPH)						
WIND FROM	CALMS				12.50 - 18.50			TOTAL
N		29.0	97.0	105.0	79.0	25.0	8.0 .0	343.0
NNE		33.0	158.0	83.0	11.0	1.0	.0	286.0
NE	.0	12.0	57.0	27.0	1.0	.0		97.0
ENE	.0	16.0	35.0	13.0	.0	.0	.0	64.0
E	.0	19.0	28.0	5.0	1.0	.0	.0	53.0
ESE	.0	18.0	30.0	11.0	.0	.0	.0	59.0
SE	.0	21.0	34.0	6.0	1.0	. 0	.0	62.0
SSE	.0	47.0	150.0	129.0	10.0	.0	.0	336.0
s	. 0	35.0	103.0	54.0	5.0	.0	.0	197.0
SSW	. 0	32.0	39.0	19.0	5.0	n	.0	95.0
SW	.0	23.0	28.0	4.0	8.0 6.0	.0 1.0	.0	64.0
WSW	.0	13.0	13.0	16.0	6.0	2.0	.0	50.0
W	.0	10.0	21.0	22.0	14.0	2.0	1.0	70.0
WNW	.0	9.0			29.0		1.0	
NW	.0			59.0	52.0	22.0	2.0	170.0
NNW	.0	14.0	28.0	46.0	49.0	10.0	.0	147.0
TOTAL	.0	345.0	854.0	632.0	271.0	69.0	12.0	2183.0
DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 60.00 TEMPERATURE SENSOR SEPARATION (METERS) 50.90								
MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 1 VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2183								

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - APR/MAY/JUN 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/ 4/ 1/ 0] TO [2001/ 6/30/23]

PASQUILL STABILITY: A

	WIND SPEED	(MPH)						
WIND FROM	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 -	18.50 -	24.00 ~	TOTAL
N NNE NE ENE	.0	.0.0	.0	.0	1.0 .0 .0	.0	.0 .0 .0	1.0 .0 .0
E ESE SE SSE	.0 .0 .0	1.0 .0 .0	.0 .0 1.0	.0 1.0 5.0	.0 .0 3.0	.0	.0 .0 .0	1.0 1.0 9.0
s ssw sw wsw	.0 .0 .0	.0 .0 .0	.0	.0	.0 .0 .0	.0 .0 .0	.0 .0 .0	.0 .0 .0
W WNW NW NNW	.0 .0 .0	.0.0.0	.0 .0 .0	.0 1.0 .0	2.0 .0 1.0 3.0	.0 3.0 .0 4.0	.0 .0 .0	2.0 4.0 1.0 7.0
TOTAL	.0	1.0	1.0	7.0	10.0	7.0	.0	26.0

DATA MEASURES	•		122.00 112.00
		(ALL STABILITIES) (ALL STABILITIES)	1 2183

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - APR/MAY/JUN 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/ 4/ 1/ 0] TO [2001/ 6/30/23]

PASQUILL STABILITY: B

	WIND SPEED	(MPH)						
WIND FROM	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 -	TOTAL
N NNE NE ENE	.0.0.0	.0 .0 .0	.0 1.0 .0	.0 .0 .0	1.0 .0 .0	.0 .0 .0	.0 .0 .0	1.0 1.0 .0
E ESE SE SSE	.0 .0 .0	.0	.0 .0 1.0	.0 1.0 15.0 4.0	.0 .0 3.0 1.0	.0	.0 .0 .0	.0 1.0 19.0 5.0
s ssw sw wsw	.0 .0 .0	.0 .0 .0	.0 .0 .0	.0 .0 .0 2.0	.0 .0 .0	.0 .0 .0	.0 .0 .0	.0 .0 .0 2.0
W WNW NW NNW	.0 .0 .0	.0 .0 .0	.0 .0 .0	5.0 6.0 2.0 2.0	4.0 6.0 4.0 4.0	.0 8.0 1.0 5.0	.0 1.0 .0	9.0 21.0 7.0 11.0
TOTAL	.0	.0	2.0	37.0	23.0	14.0	1.0	77.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) TEMPERATURE SENSOR SEPARATION (METERS)	122.00 112.00
MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) VALID OBSER. DURING THIS PERIOD (ALL STABILITIES)	1 2183

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - APR/MAY/JUN 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/ 4/ 1/ 0] TO [2001/ 6/30/23]

PASQUILL STABILITY: C

	WIND SPEED	(MPH)						
WIND FROM	CALMS	.60 - 3.50			12.50 - 18.50	18.50 - 24.00	24.00 -	TOTAL
N	.0	.0	1.0	5.0	1.0	.0	.0	7.0
NNE	.0	.0	.0	2.0	.0	.0	.0	2.0
NE	.0	.0	.0	.0	.0	.0	.0	.0
ENE	. 0	2.0	.0	1.0	.0	.0	.0	3.0
E	.0	.0	.0	.0	.0	.0	.0	.0
ESE	.0	.0	2.0	.0	.0	.0	.0	2.0
SE	. 0	.0	5.0	7.0	6.0	.0	.0	18.0
SSE	.0	1.0	3.0	7.0	2.0	.0	.0	13.0
s	.0	. 0	2.0	2.0	1.0	.0	.0	5.0
SSW	.0	.0	.0	.0	.0	. 0	1.0	1.0
SW	.0	.0	. 0	.0	.0	.0	.0	.0
WSW	. 0	.0	2.0	3.0	2.0	.0	.0	7.0
W	.0	.0	.0	5.0	10.0	2.0	.0	17.0
WNW	.0	.0	.0	5.0	5.0	5.0	.0	15.0
NW	.0	.0	. 0	4.0	9.0	1.0	.0	14.0
NNW	.0	.0	4.0	26.0	11.0	8.0	1.0	50.0
TOTAL	.0	3.0	19.0	67.0	47.0	16.0	2.0	154.0

DATA MEASUREMENT HEIGH	122.00	
TEMPERATURE SENSOR SEI	112.00	
	HIS PERIOD (ALL STABILITIES) HIS PERIOD (ALL STABILITIES)	1 2183

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - APR/MAY/JUN 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/ 4/ 1/ 0] TO [2001/ 6/30/23]

PASQUILL STABILITY: D

	WIND SPEED	(MPH)						
WIND FROM	CALMS					24.00	80.00	TOTAL
N NNE NE	.0 .0 .0	8.0 8.0 2.0	41.0 27.0	56.0 31.0 20.0	7.0 4.0 4.0	5.0 .0 .0	.0	70.0 54.0
	. 0 . 0	17.0 11.0	21.0 31.0 70.0 48.0	11.0	.0 1.0 25.0 14.0	. 0	. 0	
S SSW SW WSW	. 0 . 0	7.0 4.0	16.0 3.0 6.0 9.0	2.0 9.0	5.0 6.0	3.0 3.0	.0 .0 .0 2.0	20.0 28.0
W WNW NW NNW	.0	1.0 6.0	18.0	17.0 20.0	35.0 26.0	25.0	.0	101.0 76.0
TOTAL	.0	103.0	396.0	384.0	213.0	92.0	24.0	1212.0
	EASUREMENT H ATURE SENSOR					122.00 112.00		
	G OBS. DURIN OBSER. DURIN							

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - APR/MAY/JUN 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/ 4/ 1/ 0] TO [2001/ 6/30/23]

PASQUILL STABILITY: E

	WIND SPEED	(MPH)						
WIND FROM	CALMS			7.50 - 12.50	12.50 - 18.50		24.00 -	TOTAL
N	.0	2.0	13.0	11.0	3.0	.0	.0	29.0
NNE	. 0	4.0	6.0	2.0	.0	.0	.0	12.0
NE	.0	5.0	6.0	1.0	.0	.0	.0	12.0
ENE	.0	1.0	3.0	.0	.0	. 0	.0	4.0
E	.0	7.0	3.0	2.0	.0	.0	.0	12.0
ESE	.0	8.0	11.0	1.0	.0	1.0	.0	21.0
SE	.0	15.0	43.0	42.0	6.0	.0	.0	
SSE	.0	9.0	33.0	19.0	4.0	.0	.0	65.0
S	.0	7.0	11.0	7.0	.0	1.0	. 0	26.0
SSW	.0	8.0	7.0	5.0	.0	.0	۰.0	20.0
SW	. 0	3.0	5.0	10.0	2.0	.0	.0	20.0
WSW	.0	2.0	3.0	6.0	9.0	2.0	.0	22.0
W	. 0	2.0	1.0	4.0	7.0	2.0	.0	16.0
WNW	.0	3.0	4.0	14.0	10.0	1.0	3.0	35.0
NW	.0	3.0	15.0	17.0	5.0	.0	.0	40.0
NNW	. 0	3.0	22.0	25.0	4.0	.0	.0	54.0
TOTAL	.0	82.0	186.0	166.0	50.0	7.0	3.0	494.0

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

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - APR/MAY/JUN 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/ 4/ 1/ 0] TO [2001/ 6/30/23]

PASQUILL STABILITY: F

	WIND SPEED	(MPH)						
WIND FROM	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 -	TOTAL
N NNE NE ENE	.0 .0 .0	4.0 .0 7.0 2.0	2.0 .0 .0	2.0 1.0 .0	1.0 .0 .0	.0	.0	9.0 1.0 7.0 2.0
E ESE SE SSE	.0 .0 .0	6.0 3.0 12.0 7.0	1.0 2.0 7.0 18.0	.0 .0 .0 2.0	.0 .0 .0	.0 .0 .0	.0 .0 .0	7.0 5.0 19.0 27.0
s ssw sw wsw	. 0 . 0 . 0	12.0 8.0 3.0 5.0	13.0 3.0 3.0 .0	.0 2.0 .0 1.0	.0 .0 .0	.0 .0 .0	.0 .0 .0	25.0 13.0 6.0 6.0
W WNW NW NNW	.0 .0 .0	5.0 3.0 8.0 3.0	5.0 8.0 15.0 9.0	3.0 2.0 5.0 6.0	.0 4.0 2.0 2.0	.0 .0 .0	.0 .0 .0	13.0 17.0 30.0 20.0
TOTAL	.0	88.0	86.0	24.0	9.0	.0	.0	207.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) TEMPERATURE SENSOR SEPARATION (METERS)	122.00 112.00
MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) VALID OBSER. DURING THIS PERIOD (ALL STABILITIES)	1 2183

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - APR/MAY/JUN 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/ 4/ 1/ 0] TO [2001/ 6/30/23]

PASQUILL STABILITY: G

	WIND SPEED	(MPH)						
WIND FROM	CALMS				12.50 - 18.50	18.50 -		TOTAL
N NNE NE ENE		.0 .0 2.0 .0	1.0 .0 .0	.0	.0		.0 .0 .0	1.0 .0 2.0
E ESE SE SSE	.0 .0 .0	1.0 2.0 .0	.0 .0 .0	.0 .0 .0	.0 .0 .0	.0 .0 .0	.0 .0 .0	1.0 2.0 .0
S SSW SW WSW	.0 .0 .0	.0 .0 .0	.0 1.0 .0	.0 .0 .0	.0 .0 .0	.0 .0 .0	.0 .0 .0	.0 1.0 .0
W WNW NW WNN	.0 .0 .0	.0 .0 1.0 .0	.0 2.0 1.0 2.0	.0 .0 .0	.0 .0 .0	.0 .0 .0	.0 .0 .0	.0 2.0 2.0 2.0
TOTAL	.0	6.0	7.0	.0	.0	.0	.0	13.0
TEMPER	EASUREMENT H ATURE SENSOR	SEPARA	TION (MET	TERS)		122.00 112.00		
MISSIN	G OBS. DURIN	G THIS	PERIOD (A	LL STABI	LITIES)	1		

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

VALID OBSER. DURING THIS PERIOD (ALL STABILITIES)

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - APR/MAY/JUN 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/ 4/ 1/ 0] TO [2001/ 6/30/23]

PASQUILL STABILITY: ALL

	WIND SPEED	(MPH)						
WIND FROM	CALMS	3.50	7.50		18.50		80.00	TOTAL
N	.0	14.0	58.0	74.0	14.0	5.0	.0	165.0
NNE		12.0	34.0				.0	86.0
NE	.0		34.0	21.0	4.0	.0	.0	75.0
ENE	.0		34.0	15.0	1.0	1.0	.0	62.0
E	.0	22.0	25.0	18.0	.0	.0	.0	65.0
ESE	.0		46.0			1.0		92.0
SE	.0	38.0	127.0	143.0		.0		351.0
SSE	.0	26.0	102.0	71.0	21.0	.0	.0	220.0
S	.0				9.0		.0	
SSW		23.0	14.0	9.0	5.0	3.0	1.0	55.0
SW	.0	10.0	14.0	19.0	8.0 21.0	3.0 7.0	.0	54.0
WSW	.0	8.0	14.0	18.0	21.0	7.0	2.0	70.0
W	.0	9.0	13.0	30.0	39.0	12.0	4.0	107.0
WNW	.0	7.0	32.0	45.0	60.0	42.0	9.0	195.0
NW	.0						.0	
NNW	.0	11.0	68.0	108.0	75.0	44.0	14.0	320.0
TOTAL	.0	283.0	697.0	685.0	352.0	136.0	30.0	2183.0
DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 122.00 TEMPERATURE SENSOR SEPARATION (METERS) 112.00								
	G OBS. DURIN OBSER. DURIN					1		
ANDID	ODSEK. DUKIN	G TUT2	FERTON (F	INT SIMBI	DTITES)	2103		

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JUL/AUG/SEP 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/ 7/ 1/ 0] TO [2001/ 9/30/23]

PASQUILL STABILITY: A

	WIND SPEED	(MPH)						
WIND FROM				7.50 - 12.50		18.50 -		TOTAL
N	.0	. 0	53.0	3.0	.0	.0	.0	56.0
NNE	. 0	. 0	7.0	6.0	.0	.0	.0	13.0
NE	.0	.0	2.0	.0	.0	.0	.0	2.0
ENE	.0	.0	2.0	.0	.0	.0	.0	2.0
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	3.0	25.0	.0	.0	.0	.0	
s	.0	2.0	107.0	5.0	.0	.0	.0	114.0
SSW	.0	.0	34.0		.0	.0		44.0
SW	.0	1.0		.0	.0	.0		12.0
WSW	.0	1.0	3.0	.0	.0	.0	.0	4.0
W	.0	. 0	8.0	.0	. 0	.0	.0	8.0
WNW	.0	.0	9.0	.0	.0	.0	.0	9.0
NW	.0	.0	14.0	.0	.0	.0	.0	
NNW	.0	1.0	15.0	.0	.0	.0	.0	16.0
TOTAI	٥. د	8.0	292.0	24.0	.0	.0	.0	324.0
DATA	MEASUREMENT H	EIGHT (	M ABOVE O	RADE)		10.00		

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

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JUL/AUG/SEP 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/ 7/ 1/ 0] TO [2001/ 9/30/23]

PASQUILL STABILITY: B

	WIND SPEED	(MPH)						
WIND FROM	CALMS				12.50 - 18.50			TOTAL
N NNE NE ENE	. 0 . 0	1.0 .0	20.0 11.0 5.0 1.0	2.0		.0 .0	. 0 . 0	
E ESE SE SSE	.0	.0 .0 .0 3.0	.0 .0 .0 2.0	.0	.0 .0 .0	.0	.0 .0	.0 .0 .0 5.0
S SSW SW WSW	. 0	1.0 3.0	32.0 10.0 2.0 7.0	1.0 .0	.0	.0		
W WNW WN WNN	.0 .0	1.0 5.0	.0 2.0 3.0 4.0	.0		.0	.0	1.0 3.0 8.0 6.0
TOTAL	.0	27.0	99.0	6.0	.0	.0	.0	132.0
	EASUREMENT H ATURE SENSOR					10.00 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 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/ 7/ 1/ 0] TO [2001/ 9/30/23]

PASQUILL STABILITY: C

	WIND SPEED	(MPH)						
WIND FROM	CALMS	.60 - 3.50	3.50 -	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 -	TOTAL
N NNE NE ENE		5.0 6.0 1.0	6.0 27.0 7.0 2.0	.0 8.0 .0	.0	.0	.0	11.0 41.0 8.0 2.0
e ese se sse	.0 .0 .0	.0 .0 4.0 5.0	.0 .0 .0 2.0	.0 .0 .0	.0	.0 .0 .0	.0 .0 .0	.0 .0 4.0 7.0
s ssw sw wsw	.0 .0 .0	13.0 6.0 .0 4.0		.0 3.0 .0	.0 .0 .0	.0 .0 .0	.0 .0 .0	30.0 18.0 .0 7.0
W WNW NW NNW	.0 .0 .0	2.0 4.0 2.0 .0	2.0 1.0 .0 2.0	.0 .0 .0	.0 .0 .0	.0 .0 .0	.0	4.0 5.0 2.0 2.0
TOTAL	. 0	52.0	78.0	11.0	. 0	.0	.0	141.0
	EASUREMENT H ATURE SENSOF					10.00 50.90		

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

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

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JUL/AUG/SEP 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/ 7/ 1/ 0] TO [2001/ 9/30/23]

PASQUILL STABILITY: D

	WIND SPEED	(MPH)						
WIND FROM	CALMS					18.50 - 24.00		TOTAL
N NNE NE ENE	.0	17.0 21.0		75.0 .0	.0	.0	. 0 . 0	48.0 183.0 45.0 22.0
E ESE SE SSE	.0 .0 .0	14.0	.0 2.0 .0 8.0	.0	.0 .0 .0	.0	.0 .0 .0	16.0 16.0
s ssw sw wsw	.0	20.0	97.0 34.0 11.0 10.0	4.0		.0	.0 .0 .0	58.0 15.0
W WNW NW NNW	.0	6.0 2.0	5.0 2.0 6.0 11.0	.0	.0 .0 .0	.0		9.0 8.0 8.0 13.0
TOTAL	. 0	220.0	338.0	88.0	.0	.0	.0	646.0
	EASUREMENT H ATURE SENSOR					10.00 50.90		
	G OBS. DURIN OBSER. DURIN					0 2208		

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JUL/AUG/SEP 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/ 7/ 1/ 0] TO [2001/ 9/30/23]

PASQUILL STABILITY: E

	WIND SPEED	(MPH)						
WIND FROM	CALMS			7.50 - 12.50		18.50 -		TOTAL
	•							
N	.0	20.0	9.0	.0	.0	.0		29.0
NNE			107.0	.0	.0	.0	.0	161.0
NE			43.0	.0	.0	.0		97.0
ENE	.0	30.0	3.0	.0	.0	.0	.0	33.0
E	.0	24.0	1.0	.0	.0	.0	.0	25.0
ESE	.0	22.0	.0	.0	.0	.0	.0	22.0
SE	.0	33.0	.0	.0	.0	.0	.0	33.0
SSE	.0	48.0	7.0	.0	.0	.0	.0	55.0
S	. 0	83.0	58.0	2.0	2.0	.0	.0	145.0
SSW	.0	45.0	28.0	2.0		.0	. 0	75.0
SW	. 0	31.0	7.0	.0	.0	.0	.0	38.0
WSW	.0	17.0	8.0	.0	.0	.0	.0	25.0
W	. 0	14.0	2.0	.0	.0	.0	.0	16.0
WNW			1.0	.0	.0	.0	.0	4.0
NW	.0	4.0	1.0	.0	. 0	.0	.0	5.0
NNW	.0	6.0	1.0	.0	.0	.0	.0	7.0
TOTAL	. 0	488.0	276.0	4.0	2.0	.0	.0	770.0
	EASUREMENT H ATURE SENSOR					10.00 50.90		
				,		20.50		

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

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

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JUL/AUG/SEP 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/ 7/ 1/ 0] TO [2001/ 9/30/23]

PASQUILL STABILITY: F

	WIND SPEED	(MPH)						
WIND FROM	CALMS					18.50 - 24.00		TOTAL
N NNE NE ENE	.0 .0	25.0	4.0 16.0	.0	.0 .0 .0	.0		
E ESE SE SSE	.0	14.0 13.0 5.0 9.0	.0 .0 .0	.0	.0 .0 .0	.0 .0 .0	.0	14.0 13.0 5.0 9.0
S SSW SW WSW	.0	4.0	.0 .0 .0	.0	.0 .0 .0	.0	.0 .0 .0	
W WNW WNN	. 0 . 0	3.0 .0 2.0 .0	.0	. 0 . 0	.0 .0 .0	.0 .0 .0		3.0 .0 2.0
TOTAL	.0	169.0	22.0	.0	.0	.0	. 0	191.0
DATA M	EASUREMENT H ATURE SENSOR	EIGHT ( SEPARA	M ABOVE G TION (MET	RADE) ERS)		10.00 50.90		
	G OBS. DURIN OBSER. DURIN							

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JUL/AUG/SEP 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/ 7/ 1/ 0] TO [2001/ 9/30/23]

PASQUILL STABILITY: G

	WIND SPEED	(MPH)						
WIND FROM	CALMS					18.50 - 24.00	24.00 -	TOTAL
N NNE NE ENE	.0	1.0 .0 .0	.0 .0 2.0 .0	.0	.0	.0	.0	1.0 .0 2.0
E ESE SE SSE	.0 .0 .0	1.0 .0 .0	.0 .0 .0	.0 .0 .0	.0 .0 .0	.0 .0 .0	.0 .0 .0	1.0 .0 .0
S SSW SW WSW	.0 .0 .0	.0 .0 .0	.0 .0 .0	.0 .0 .0	.0 .0 .0	.0 .0 .0	.0	.0 .0 .0
W WNW NW WNN	.0 .0 .0	.0 .0 .0	.0 .0 .0	.0 .0 .0	.0 .0 .0	.0 .0 .0	.0 .0 .0	.0 .0 .0
TOTAL	.0	2.0	2.0	.0	.0	.0	.0	4.0
	EASUREMENT ATURE SENSO					10.00 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 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/ 7/ 1/ 0] TO [2001/ 9/30/23]

PASQUILL STABILITY: ALL

	WIND SPEED	(MPH)						
WIND FROM	CALMS	.60 - 3.50	3.50 -	7.50 - 12.50	12.50 -	18.50 -	80.00	TOTAL
N	.0	61.0	122.0	8.0	.0	.0	.0	191.0
NNE	. 0	121.0	247.0	91.0	.0		.0	459.0
NE	.0	101.0	99.0	. 0	.0		.0	200.0
ENE	. 0	66.0	13.0	.0	.0	.0	.0	79.0
E	.0	57.0	2.0	.0	.0	.0	.0	59.0
ESE		49.0	3.0	.0	.0	.0		52.0
SE	.0	58.0	.0	.0	.0	. 0	.0	58.0
SSE	.0	96.0	.0 44.0	.0	.0		.0	
s	. 0	139.0	311.0	14.0	2.0	.0	.0	466.0
SSW	.0		115.0			.0	.0	211.0
SW		43.0	31.0	.0	.0	.0	.0	74.0
WSW	.0	35.0	31.0	.0	.0	.0	.0	66.0
W		24.0	17.0	.0	.0	.0	.0	41.0
WNW	.0	14.0	15.0	.0		.0	.0	29.0
NW	.0		24.0	.0	.0	.0	.0	39.0
NNW	. 0	11.0	33.0	.0	.0	.0	. 0	44.0
TOTAL	.0	966.0	1107.0	133.0	2.0	.0	.0	2208.0
DATA ME	EASUREMENT H ATURE SENSOR	EIGHT ( SEPARA	M ABOVE G TION (MET	RADE) ERS)		10.00 50.90		
MISSING VALID (	G OBS. DURIN	G THIS	PERIOD (A	LL STABII LL STABII	LITIES) LITIES)	0 2208		

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JUL/AUG/SEP 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/ 7/ 1/ 0] TO [2001/ 9/30/23]

PASQUILL STABILITY: A

	WIND SPEED	(MPH)						
WIND FROM	CALMS				18.50	18.50 - 24.00	80.00	TOTAL
N NNE NE ENE	. 0 . 0 . 0	.0 .0 .0	6.0 1.0	19.0 2.0 .0	8.0 1.0 .0	.0	.0	33.0 4.0 .0 3.0
E ESE SE SSE	.0 .0 .0	.0	1.0 1.0 .0 41.0	.0	.0	.0 .0	.0	2.0 1.0 2.0 102.0
s ssw sw wsw	.0 .0 .0	.0	20.0 11.0 1.0 2.0	11.0	5.0 6.0	.0	.0	18.0
W WNW NW NNW	.0	. 0 . 0	2.0 1.0	8.0 15.0	8.0 18.0	.0 .0 3.0	.0	7.0 18.0 37.0 23.0
TOTAL	.0	.0	96.0	163.0	62.0	3.0	.0	324.0
	EASUREMENT H ATURE SENSOR					60.00 50.90		
	G OBS. DURIN OBSER. DURIN					0 2208		

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JUL/AUG/SEP 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/ 7/ 1/ 0] TO [2001/ 9/30/23]

PASQUILL STABILITY: B

	WIND SPEED	(MPH)						
WIND FROM	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 -	TOTAL
N NNE NE ENE	. 0 . 0	.0 .0	16.0 2.0 1.0	2.0 .0	.0	. 0 . 0	.0	28.0 4.0 1.0 5.0
E ESE SE SSE	. 0 . 0	.0 .0		.0	.0 .0 .0	.0	.0	
S SSW SW WSW	.0	.0 .0 1.0	2.0	2.0	1.0 1.0	.0	.0	21.0 4.0 6.0 4.0
W WNW NW NNW	.0	1.0	3.0 .0 4.0 4.0	2.0 6.0	1.0 5.0		.0	8.0 4.0 17.0 6.0
TOTAL	.0	4.0	73.0	37.0	17.0	1.0	.0	132.0
	EASUREMENT H ATURE SENSOR					60.00 50.90		
	G OBS. DURIN OBSER. DURIN							

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JUL/AUG/SEP 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/ 7/ 1/ 0] TO [2001/ 9/30/23]

PASQUILL STABILITY: C

	WIND SPEED	(MPH)						
WIND FROM	CALMS					18.50 - 24.00		TOTAL
N NNE	.0		7.0		7.0	.0	.0	26.0
NE ENE	. 0	.0	3.0	1.0 3.0	.0	.0		4.0 3.0
E ESE SE SSE			1.0 1.0 3.0 6.0	.0.0	.0 .0 .0 1.0	.0 .0 .0	.0	1.0 1.0 5.0 19.0
S SSW SW WSW		5.0 1.0 .0 1.0	2.0	4.0 4.0 2.0	.0 2.0	.0 .0 .0	.0 .0 .0	19.0 7.0 7.0 3.0
W WNW MNW		.0 1.0 .0 1.0		.0 5.0 .0 1.0	1.0 1.0 3.0	.0 .0 .0	.0 .0 .0	5.0 8.0 5.0 7.0
TOTAL	.0	15.0	67.0	43.0	16.0	.0	.0	141.0
DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 60.00 TEMPERATURE SENSOR SEPARATION (METERS) 50.90								

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

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

NL-02-065 May, 2002 Re: Indian Point Unit Nos. 1 & 2

Docket Nos. 50-03 & 50-247

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JUL/AUG/SEP 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/ 7/ 1/ 0] TO [2001/ 9/30/23]

PASQUILL STABILITY: D

	WIND SPEED	(MPH)						
WIND FROM	CALMS	.60 - 3.50	3.50 - 7.50	12.50	18.50	18.50 - 24.00	80.00	TOTAL
N							.0	
NNE						1.0		
NE	.0		19.0	2.0	.0	.0	.0	29.0
ENE	.0	12.0	16.0	1.0	.0	.0	.0	29.0
E	.0	11.0	9.0	.0	.0	.0	.0	20.0
ESE	.0	6.0	5.0	.0	.0	.0	.0	11.0
SE	. 0		21.0	7.0		.0	.0	35.0
SSE	.0	6.0			12.0	.0	.0	78.0
S	.0	4.0	12.0	47.0	9.0	.0	.0	72.0
SSW	. 0	4.0	9.0	22.0	3.0	.0	.0	38.0
SW	.0	3.0	9.0	6.0	7.0 3.0	.0	.0	25.0
WSW	.0	2.0	2.0	8.0	3.0	.0	.0	15.0
W	.0	1.0	2.0	6.0	3.0	1.0	.0	13.0
WNW	.0				7.0			24.0
NW			2.0	10.0	13.0	8.0	2.0	35.0
NNW	.0	1.0	4.0	11.0	7.0	1.0	.0	
TOTAL	.0	73.0	192.0	227.0	135.0	17.0	2.0	646.0
	EASUREMENT H ATURE SENSOR					60.00 50.90		
	G OBS. DURIN							

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JUL/AUG/SEP 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/ 7/ 1/ 0] TO [2001/ 9/30/23]

PASQUILL STABILITY: E

	WIND SPEED	(MPH)						
WIND FROM	CALMS				18.50	18.50 - 24.00		TOTAL
N NNE NE ENE	.0	14.0 8.0	16.0 121.0 12.0 5.0	56.0 2.0	.0	.0	. 0 . 0	54.0 191.0 22.0 12.0
E ESE SE SSE	.0	5.0 7.0	3.0 6.0 9.0 29.0	1.0	.0 .0 1.0 3.0	.0 .0 .0 1.0	.0	7.0 12.0 29.0 70.0
S SSW SW WSW	. 0	4.0 5.0	32.0 30.0	35.0 6.0	8.0	. 0 . 0	2.0 .0 .0	79.0 <b>4</b> 3.0
W WNW NW NNW	.0	9.0 7.0 1.0 8.0	25.0 9.0 7.0 9.0	5.0 7.0	8.0 3.0	.0 2.0 .0	.0	45.0 31.0 18.0 31.0
TOTAL	.0	111.0	367.0	245.0	42.0	3.0	2.0	770.0
DATA MI	EASUREMENT H ATURE SENSOR	EIGHT ( SEPARA	M ABOVE G TION (MET	RADE) PERS)		60.00 50.90		
	G OBS. DURIN OBSER. DURIN					0 2208		

NL-02-065 May, 2002 Re: Indian Point Unit Nos. 1 & 2

Docket Nos. 50-03 & 50-247

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JUL/AUG/SEP 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/ 7/ 1/ 0] TO [2001/ 9/30/23]

PASQUILL STABILITY: F

	WIND SPEED	(MPH)						
WIND FROM	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	18.50	18.50 - 24.00	24.00 -	TOTAL
N NNE NE ENE	.0	15.0 9.0	38.0	8.0	.0		.0	61.0 14.0
e ese se sse	. 0 . 0	4.0 4.0		.0 .0 4.0 .0		.0	.0	2.0 4.0 9.0 5.0
s ssw sw wsw	. 0 . 0	4.0 7.0	2.0 7.0 8.0 4.0	.0	.0	.0	.0	
W WNW NW NNW	.0	3.0 6.0	1.0 1.0 4.0 3.0	.0	.0	.0	.0	5.0 4.0 10.0 9.0
TOTAL	. 0	84.0	90.0	17.0	.0	.0	.0	191.0
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								

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JUL/AUG/SEP 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/ 7/ 1/ 0] TO [2001/ 9/30/23]

PASQUILL STABILITY: G

WIND FROM	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 -	TOTAL
N	. 0	.0	1.0	2.0	.0	.0	.0	3.0
NNE	.0	. 0	.0	. 0	.0	.0	.0	.0
NE	.0	.0	.0	.0	.0	.0	.0	.0
ENE	.0	.0	.0	. 0	.0	.0	.0	.0
E	. 0	.0	.0	.0	.0	.0	.0	.0
ESE	. 0	.0	.0	.0	.0	.0	.0	.0
SE	.0	.0	.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	1.0	2.0	.0	.0	.0	4.0
ווא אווי אינד	EASUREMENT	III TOUR	(M. ADOLES (			60.00		

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

TEMPERATURE SENSOR SEPARATION (METERS)

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

50.90

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JUL/AUG/SEP 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/ 7/ 1/ 0] TO [2001/ 9/30/23]

PASQUILL STABILITY: ALL

	WIND SPEED	(MPH)						
WIND FROM	CALMS					18.50 - 24.00		TOTAL
			~~					
N	.0	13.0	67.0	101.0	73.0	6.0	.0	260.0
NNE		35.0	222.0	104.0		1.0		381.0
NE	.0	25.0				.0		70.0
ENE	.0	32.0	24.0	10.0	.0	.0		66.0
E						.0		33.0
ESE		15.0	13.0	1.0	.0	.0		29.0
SE		20.0	34.0	25.0	1.0	.0	. 0	80.0 297.0
SSE	. 0	21.0	120.0	136.0	19.0	1.0	.0	297.0
S	.0	16.0	99.0	114.0	19.0	.0	2.0	250.0
SSW		13.0	63.0	68.0	17.0	.0	.0	161.0
SW					18.0		.0	115.0
WSW	. 0	14.0	30.0	21.0	7.0	.0	.0	72.0
W	.0	13.0	39.0	23.0	7.0	1.0	.0	83.0
WNW				31.0			.0	
NM	.0					11.0		
NNW	.0	16.0	29.0	29.0	25.0	1.0	.0	100.0
TOTAL	.0	288.0	886.0	734.0	272.0	24.0	4.0	2208.0
DATA M	EASUREMENT H	EIGHT (	M ABOVE C	FRADE)				
TEMPERA	ATURE SENSOR	SEPARA	TION (MET	ERS)		50.90		
	G OBS. DURIN							
VALID (	OBSER. DURIN	G THIS	PERIOD (A	LL STABI	LITIES)	2208		

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JUL/AUG/SEP 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/ 7/ 1/ 0] TO [2001/ 9/30/23]

PASQUILL STABILITY: A

	WIND SPEED	(MPH)						
WIND FROM	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 -	TOTAL
N	.0	.0	.0	.0	.0	.0	.0	.0
NNE	.0	.0	.0	.0	.0	.0	.0	. 0
NE	.0	.0	. 0	.0	.0	.0	.0	.0
ENE	.0	.0	.0	.0	.0	.0	.0	.0
E	.0	.0	.0	.0	.0	.0	.0	.0
ESE	. 0	. 0	.0	.0	. 0	.0	.0	.0
SE	.0	.0	.0	10.0	3.0	.0	.0	13.0
SSE	. 0	.0	.0	.0	.0	.0	.0	.0
S	.0	.0	.0	.0	. 0	.0	.0	.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	1.0	.0	1.0
NW	.0	.0	.0	.0	.0	.0	.0	.0
NNW	.0	.0	.0	.0	.0	.0	.0	.0
TOTAL	.0	.0	.0	10.0	4.0	1.0	.0	15.0

DATA MEASUREMENT H TEMPERATURE SENSOR	•	 122.00 112.00
MISSING OBS. DURIN		,

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JUL/AUG/SEP 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/ 7/ 1/ 0] TO [2001/ 9/30/23]

PASQUILL STABILITY: B

	WIND SPEED	(MPH)						
WIND FROM	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 -	TOTAL
N NNE NE ENE	.0 .0 .0	.0.0.0	.0 .0 .0	1.0 .0 .0	2.0 .0 .0	.0	.0 .0 .0	3.0 .0 .0
E ESE SE SSE	.0 .0 .0	.0 .0 .0	.0 .0 5.0 1.0	.0 .0 19.0 1.0	.0 .0 2.0 2.0	.0 .0 .0	.0 .0 .0	.0 .0 26.0 4.0
S SSW SW WSW	. 0 . 0 . 0	.0 .0 .0	.0 .0 .0	2.0 2.0 .0 1.0	2.0 4.0 .0	1.0 .0 .0	.0 .0 .0	5.0 6.0 .0 1.0
W WNW NW NNW	.0 .0 .0	.0 .0 .0	.0 .0 .0	1.0 2.0 1.0 2.0	1.0 5.0 3.0 7.0	.0 2.0 1.0 .0	.0	2.0 9.0 5.0 9.0
TOTAL	.0	. 0	6.0	32.0	28.0	4.0	.0	70.0

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

DATA MEASUREMENT HEIGHT (M ABOVE GRADE)

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

TEMPERATURE SENSOR SEPARATION (METERS)

122.00

112.00

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JUL/AUG/SEP 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/ 7/ 1/ 0] TO [2001/ 9/30/23]

PASQUILL STABILITY: C

	WIND SPEED	(MPH)						
WIND FROM	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50		18.50 - 24.00	24.00 -	TOTAL
N NNE NE ENE	.0	.0	1.0 1.0 1.0	3.0 .0 .0	1.0 .0 .0	.0	.0	5.0 1.0 1.0
E ESE SE SSE	.0 .0 .0	.0 .0 .0	1.0 .0 21.0 8.0	.0 2.0 13.0 10.0		.0 .0 .0	.0 .0 .0	1.0 2.0 42.0 23.0
S SSW SW WSW	. 0 . 0 . 0	.0	5.0 1.0 1.0 2.0	4.0 2.0 3.0 .0	3.0 3.0 2.0 1.0	.0 1.0 .0	.0 .0 .0	12.0 7.0 6.0 3.0
W WNW NW NNW	.0 .0 .0	.0	.0 1.0 2.0 6.0	4.0 9.0 2.0 14.0		1.0 3.0 1.0 2.0	.0 .0 .0	10.0 20.0 8.0 35.0
TOTAL	.0	.0	51.0	67.0	51.0	8.0	.0	177.0

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

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JUL/AUG/SEP 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/ 7/ 1/ 0] TO [2001/ 9/30/23]

PASQUILL STABILITY: D

	WIND SPEED	(MPH)							
WIND FROM	CALMS					18.50 - 24.00		TOTAL	
N NNE NE	.0	6.0	58.0 15.0 14.0 10.0	6.0	2.0	12.0 .0 .0	.0	29.0	
ENE	.0	8.0	10.0	2.0	.0	.0	.0		
E ESE SE SSE	.0	9.0 10.0	17.0	7.0 58.0	2.0 35.0	1.0 2.0	.0 .0 1.0	36.0 151.0	
S SSW SW WSW	.0	2.0 1.0	11.0 13.0		17.0 9.0		.0 .0 .0	33.0	
W WNW NW NNW	.0	3.0 2.0	8.0 12.0		26.0 16.0	12.0		74.0 43.0	
TOTAL	.0	80.0	338.0	316.0	277.0	73.0	11.0	1095.0	
DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 122.00 TEMPERATURE SENSOR SEPARATION (METERS) 112.00 MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 0									
MICCIN	a ODS. DOKING	2 THIS	LEKIOD (V	rr STABII	JITIES)	0			

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

VALID OBSER. DURING THIS PERIOD (ALL STABILITIES)

NL-02-065 May, 2002

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

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JUL/AUG/SEP 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/ 7/ 1/ 0] TO [2001/ 9/30/23]

PASQUILL STABILITY: E

	WIND SPEED	(MPH)						
WIND FROM	CALMS	.60 - 3.50				18.50 - 24.00		TOTAL
N NNE NE ENE	.0	9.0 7.0	20.0 8.0 1.0 4.0	2.0	1.0	.0	.0 .0	57.0 20.0 8.0 9.0
E ESE SE SSE	. 0 . 0	5.0 18.0	19.0	7.0 26.0	4.0	.0	.0 .0 .0 2.0	18.0 65.0
S SSW SW WSW	.0	20.0 9.0	32.0 21.0	16.0 11.0	10.0 2.0 6.0 4.0	1.0	.0 .0 .0	95.0 71.0 48.0 31.0
W WNW NW NNW	. 0	8.0 7.0	18.0 17.0	3.0 5.0	3.0 4.0	.0		32.0
TOTAL	. 0	162.0	266.0	235.0	57.0	7.0	4.0	731.0
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								

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JUL/AUG/SEP 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/ 7/ 1/ 0] TO [2001/ 9/30/23]

PASQUILL STABILITY: F

	WIND SPEED	(MPH)						
WIND FROM	CALMS		3.50 - 7.50			18.50 - 24.00	24.00 -	TOTAL
N NNE NE ENE	.0 .0 .0	5.0 5.0 3.0 1.0	6.0 1.0 1.0	1.0 .0 .0	.0 .0 .0	.0 .0 .0	.0 .0 .0	12.0 6.0 4.0 1.0
E ESE SE SSE	.0 .0 .0	1.0 4.0 4.0 7.0	.0 .0 1.0 2.0	.0 .0 .0	.0 .0 .0	.0 .0 .0	.0 .0 .0	1.0 4.0 5.0 9.0
s ssw sw wsw	. 0 . 0 . 0	2.0 8.0 3.0 2.0	5.0 5.0 1.0	.0 .0 .0	.0 .0 .0	.0 .0 .0	.0 .0 .0	7.0 13.0 4.0 3.0
W WNW NW NNW	.0.0.0	2.0 3.0 6.0 2.0	3.0 2.0 6.0 12.0	1.0 4.0 2.0 7.0	.0 1.0 .0	.0 .0 .0	.0 .0 .0	6.0 10.0 14.0 21.0
TOTAL	.0	58.0	46.0	15.0	1.0	.0	.0	120.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) TEMPERATURE SENSOR SEPARATION (METERS)						
			(ALL STABILITIES) (ALL STABILITIES)	0 2208		

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JUL/AUG/SEP 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/ 7/ 1/ 0] TO [2001/ 9/30/23]

PASQUILL STABILITY: G

	WIND SPEED	(MPH)						
WIND FROM	CALMS	.60 - 3.50	3.50 -	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 -	TOTAL
N NNE NE ENE	.0.0.0	.0	.0 .0 .0	.0 .0 .0	.0	.0	.0	.0
E ESE SE SSE	.0.0.0	.0.0	.0.0	.0 .0 .0	.0	.0	.0 .0 .0	.0 .0 .0
S SSW SW WSW	.0 .0 .0	.0	.0 .0 .0	.0 .0 .0	.0 .0 .0	.0 .0 .0	.0 .0 .0	.0
W WNW NW NNW	.0 .0 .0	.0 .0 .0	.0 .0 .0	.0 .0 .0	.0 .0 .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 ST VALID OBSER. DURING THIS PERIOD (ALL ST	

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - JUL/AUG/SEP 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/ 7/ 1/ 0] TO [2001/ 9/30/23]

PASQUILL STABILITY: ALL

	WIND SPEED	(MPH)						
WIND FROM	CALMS					18.50 - 24.00	24.00 -	TOTAL
					_======			
N	.0	23.0	85.0	60.0	36.0	12.0	.0	216.0
NNE	.0	20.0	25.0	8.0	3.0	.0	.0	56.0
NE	.0	20.0	17.0	13.0	.0	.0		
ENE	.0	14.0	14.0	3.0		.0		
E	.0	15.0	17.0	1.0	.0	.0	.0	33.0
ESE	. 0	18.0	19.0	16.0	6.0	1.0	.0	60.0
SE	.0	32.0	91.0	126.0	50.0	2.0	1.0	
SSE	. 0	29.0	96.0	107.0	54.0	.0	2.0	
s	.0	18.0	67.0	68.0	33.0	3.0	.0	189.0
SSW	.0	30.0	49.0	28.0	27.0	8.0	.0	142.0
SW	.0	13.0	36.0	24.0	17.0	1.0	.0	91.0
WSW	. 0	8.0	23.0	22.0	15.0	2.0	.0	70.0
W	.0	12.0	16.0	40.0	23.0	14.0	2.0	107.0
WNW	.0	14.0	29.0	37.0	42.0	18.0	6.0	146.0
NW	.0	15.0	37.0	22.0	26.0	2.0	1.0	103.0
NNW	.0	19.0	86.0	100.0	86.0	30.0	3.0	
TOTAL	. 0	300.0	707.0	675.0	418.0	93.0	15.0	2208.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) TEMPERATURE SENSOR SEPARATION (METERS)							
			(ALL STABILITIES) (ALL STABILITIES)	0 2208			

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - OCT/NOV/DEC 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/10/ 1/ 0] TO [2001/12/31/23]

PASQUILL STABILITY: A

	WIND SPEED	(MPH)						
WIND FROM	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 -	18.50 - 24.00	24.00 -	TOTAL
N NNE NE ENE	.0	.0	4.0 .0 .0	.0	.0		.0	6.0 1.0 .0
E ESE SE SSE	. 0 . 0	. 0 . 0	.0	.0 .0 .0	.0 .0 .0	.0	.0 .0 .0	.0
S SSW SW WSW	. 0 . 0				.0	.0 .0 .0	.0	1.0
W WNW WW WNN	.0 .0 .0	0	4.0 13.0 8.0 11.0	4 0	Λ	.0 .0 .0	.0 .0 .0	18.0
TOTAL	.0	4.0	90.0	28.0	.0	.0	.0	122.0
DATA ME	DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 10.00 TEMPERATURE SENSOR SEPARATION (METERS) 50.90							
MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 4 VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2204								

NL-02-065 May, 2002

Re: Indian Point Unit Nos. 1 & 2

Docket Nos. 50-03 & 50-247

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - OCT/NOV/DEC 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/10/ 1/ 0] TO [2001/12/31/23]

PASQUILL STABILITY:

	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 -	TOTAL
N NNE NE ENE	. 0 . 0	1.0 .0			.0	.0	.0	5.0
E ESE SE SSE	.0	.0 .0 .0	.0	.0 .0 .0	.0 .0 .0	.0		.0 .0 1.0 7.0
S SSW SW WSW	.0	.0	20.0 7.0 .0 4.0	1.0 1.0	.0 .0 .0	.0 .0 .0		1.0
W WNW NW NNW	. 0	.0 1.0 .0 1.0	8.0	4.0	.0 .0 .0	.0		
TOTAL	.0	4.0	70.0	28.0	.0	.0	.0	102.0
	EASUREMENT H ATURE SENSOR					10.00 50.90		
MISSIN	G OBS. DURING OBSER. DURING	G THIS	PERIOD (A PERIOD (A	LL STABII LL STABII	LITIES) LITIES)	4 2204		

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - OCT/NOV/DEC 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/10/ 1/ 0] TO [2001/12/31/23]

PASQUILL STABILITY: C

	WIND SPEED	(MPH)						
WIND FROM	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 -	18.50 -	24.00 -	TOTAL
N NNE NE ENE	.0	. 0 . 0	8.0 5.0 .0	1.0 .0	. 0	. 0		
E ESE SE SSE	. 0 . 0	.0 .0	1.0 .0 .0 2.0	.0	.0	.0	.0	
S SSW SW WSW	. 0 . 0		18.0 9.0 2.0 3.0	3.0	.0	.0 .0 .0	.0	12.0
W WNW WW WNN	.0	1.0 1.0		3.0 2.0 3.0 4.0	. 0 . 0		.0	17.0 8.0 9.0 11.0
TOTAL	.0	15.0	76.0	22.0	.0	.0	.0	113.0
DATA ME TEMPERA	DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 10.00 TEMPERATURE SENSOR SEPARATION (METERS) 50.90							
MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 4 VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2204								

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - OCT/NOV/DEC 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/10/ 1/ 0] TO [2001/12/31/23]

PASQUILL STABILITY: D

	WIND SPEED	(MPH)						
WIND FROM	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 - 80.00	TOTAL
N		14.0	71.0	10.0	1.0	.0	.0	96.0
NNE	. 0	25.0	62.0	14.0	.0	.0	.0	101.0
NE		23.0	4.0	.0	.0	.0	.0	27.0
ENE	. 0	8.0	1.0	.0	.0			9.0
E	.0	6.0	.0	.0	.0	.0	.0	6.0
ESE	.0			. 0		.0		
SE	. 0	15.0	2.0	.0	.0	.0	.0	17.0
SSE	.0	21.0	20.0	7.0	.0	.0		
S	.0	28.0	51.0	10.0	.0	.0	.0	89.0
SSW	.0	18.0	22.0	6.0	.0		.0	
SW	- 0	12.0	21.0	4.0	.0	.0		
WSW	. 0	6.0	43.0	5.0	.0	.0	.0	
W	.0	9.0	58.0	6.0	.0	.0	.0	73.0
WNW	.0			10.0		.0		57.0
NW	.0	10.0	71.0	29.0	.0	.0		
NNW	. 0			16.0		.0		85.0
TOTAL	. 0	227.0	529.0	117.0	1.0	.0	.0	874.0
DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 10.00 TEMPERATURE SENSOR SEPARATION (METERS) 50.90								
MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 4 VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2204								

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - OCT/NOV/DEC 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/10/ 1/ 0] TO [2001/12/31/23]

PASQUILL STABILITY: E

	WIND SPEED	(MPH)						
WIND		.60 -	3.50 -	7.50 -	12.50 -	18.50 -	24.00 -	
FROM	CALMS	3.50	7.50	12.50		24.00		TOTAL
N	.0	20.0	12.0	.0	.0	.0	.0	32.0
NNE	.0	41.0	37.0	2.0	.0	.0		80.0
NE	. 0				.0		.0	81.0
ENE	. 0	22.0	4.0	.0	. 0	.0	.0	26.0
E	.0	26.0	1.0	.0	.0	.0	.0	27.0
ESE	.0	22.0	1.0	.0	.0	.0	.0	
SE		14.0	1.0	.0	.0		.0	
SSE	.0	38.0	9.0	1.0	.0			48.0
s	.0	47.0	67.0	8.0	.0	.0	. 0	122.0
SSW	. 0		16.0	2.0	.0	.0	.0	61.0
SW	.0	39.0	8.0	.0	.0	.0	.0	47.0
WSW	.0	30.0	7.0	. 0 . 0	.0	.0	.0	37.0
W	.0	18.0	2.0	1.0	.0	.0	.0	21.0
WINW	.0			.0		.0	.0	
NW	.0			.0		.0	.0	21.0
NNW	.0	9.0	4.0	.0	.0	.0	.0	13.0
TOTAL	.0	430.0	229.0	15.0	.0	.0	.0	674.0
	EASUREMENT H ATURE SENSOR					10.00 50.90		
MISSING VALID	G OBS. DURIN OBSER. DURIN	G THIS	PERIOD (A	LL STABII	LITIES) LITIES)	4 2204		

NL-02-065 May, 2002 Re: Indian Point Unit Nos. 1 & 2

Docket Nos. 50-03 & 50-247

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - OCT/NOV/DEC 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/10/ 1/ 0] TO [2001/12/31/23]

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 -	TOTAL
N NNE NE ENE	. 0 . 0	78.0 44.0	.0 17.0 13.0 1.0	.0				95.0 57.0
E ESE SE SSE	.0 .0 .0	5.0 6.0 4.0 16.0	.0 .0 .0	.0	.0	.0 .0 .0	.0	4.0
S SSW SW WSW	. 0 . 0	13.0 10.0	3.0 .0 .0	. 0 . 0	.0 .0 .0		.0	13.0
W WNW NW NNW	.0	3.0 6.0 5.0 8.0	.0 .0 .0	.0		.0 .0 .0	.0	
TOTAL	. 0	259.0	34.0	.0	.0	.0	.0	293.0
DATA M TEMPER	EASUREMENT H ATURE SENSOR	EIGHT ( SEPARA	M ABOVE G TION (MET	RADE) PERS)		10.00 50.90		
MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 4 VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2204								

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - OCT/NOV/DEC 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/10/ 1/ 0] TO [2001/12/31/23]

PASQUILL STABILITY: G

	WIND SPEED	(MPH)						
WIND FROM	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 ~ 18.50	18.50 - 24.00	24.00 -	TOTAL
N NNE NE ENE	. 0 . 0	9.0 4.0	2.0 4.0 2.0 .0	.0	.0	. 0 . 0	.0	4.0 13.0 6.0 2.0
E ESE SE SSE		.0 .0 .0	.0 .0 .0	.0 .0 .0	.0 .0 .0	.0	.0	.0 .0 .0
S SSW SW WSW	.0	1.0 .0 .0	.0	.0 .0 .0	.0 .0 .0	.0	.0 .0 .0	.0
W WNW NW NNW	.0 .0 .0	.0 .0 .0	.0 .0 .0	. 0 . 0	.0 .0 .0	.0 .0 .0		.0 .0 .0
TOTAL	.0	18.0	8.0	.0	.0	.0	.0	26.0
	EASUREMENT H ATURE SENSOR	,		,		10.00 50.90		
MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 4 VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2204								

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - OCT/NOV/DEC 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 10.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/10/ 1/ 0] TO [2001/12/31/23]

PASQUILL STABILITY: ALL

	WIND SPEED	(MPH)						
WIND FROM	CALMS					18.50 - 24.00		TOTAL
N NNE NE	.0	154.0 119.0	103.0 125.0 51.0	22.0	.0	.0 .0 .0	.0	183.0 301.0 171.0
ENE	. 0		6.0					48.0
E ESE SE SSE	. 0 . 0	43.0 33.0	2.0 5.0 4.0 65.0		.0 .0 .0	.0	.0	41.0 48.0 37.0 150.0
S SSW SW WSW	. 0 . 0	74.0 61.0	176.0 55.0 32.0 60.0	12.0 6.0	.0	.0	.0 .0 .0	141.0 99.0
W WNW NW NNW	.0 .0 .0	17.0 23.0	106.0	12.0 20.0 51.0 25.0	.0	.0		127.0 118.0 180.0 141.0
TOTAL	.0	957.0	1036.0	210.0	1.0	.0	.0	2204.0
DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 10.00 TEMPERATURE SENSOR SEPARATION (METERS) 50.90								
MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 4 VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2204								

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - OCT/NOV/DEC 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/10/ 1/ 0] TO [2001/12/31/23]

PASQUILL STABILITY: A

	WIND SPEED	(MPH)						
WIND FROM	CALMS					18.50 -		TOTAL
								<del></del>
N		.0				.0	.0	4.0
NNE	.0	.0	. 0			.0	.0	1.0
NE	.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	2.0	.0	.0	.0	3.0
SSE	.0	.0	17.0	20.0	.0	.0	.0	37.0
S	.0	1.0	1.0	7.0	1.0	.0	.0	10.0
SSW	.0		1.0			.0	.0	2.0
SW	.0	.0	.0	1.0	.0	.0	.0	1.0
WSW	.0	.0	. 0	.0	.0	2.0	.0	2.0
W	. 0	.0	.0	3.0	2.0	1.0	.0	6.0
WINW	.0	.0	1.0	4.0	6.0		.0	14.0
MM.	.0	. 0			13.0		3.0	28.0
MMM	. 0	. 0	. 0	2.0	4.0	8.0	.0	14.0
TOTAL	. 0	2.0	21.0	43.0	29.0	24.0	3.0	122.0
	EASUREMENT H ATURE SENSOR					60.00 50.90		
	G OBS. DURIN OBSER. DURIN							

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - OCT/NOV/DEC 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/10/ 1/ 0] TO [2001/12/31/23]

PASQUILL STABILITY: B

	WIND SPEED	(MPH)						
WIND FROM	CALMS					18.50 - 24.00		TOTAL
N NNE NE ENE	.0	.0 .0 .0	. 0 . 0	5.0 .0 .0	.0	1.0 .0 .0	. 0 . 0	11.0 .0 .0
E ESE SE SSE	.0	.0	.0 .0 1.0 9.0	.0	.0 .0 .0 2.0	.0	.0 .0 .0	
S SSW SW WSW	.0 .0 .0	. 0 . 0	.0	2.0 3.0	3.0 1.0	.0 .0 .0 2.0	. 0 . 0	14.0 5.0 4.0 3.0
W WNW NW NNW	.0 .0 .0	. 0 . 0	1.0	5.0	4.0	.0 3.0 11.0	.0 1.0 1.0	14.0 22.0
TOTAL	.0	2.0	18.0	35.0	28.0	17.0	2.0	102.0
DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 60.00 TEMPERATURE SENSOR SEPARATION (METERS) 50.90								
MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 4 VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2204								

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - OCT/NOV/DEC 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/10/ 1/ 0] TO [2001/12/31/23]

PASQUILL STABILITY: C

	WIND SPEED	(MPH)						
WIND FROM	CALMS					18.50 - 24.00		TOTAL
N	.0	.0 1.0	.0	7.0	4.0	.0		11.0
NNE NE	.0 .0	1.0	1.0	4.0	.0			6.0
ENE	.0	.0 .0	.0 .0	.0	.0		.0 .0	
2142			.0	.0	.0	.0	. 0	, 0
E					.0			1.0
ESE		1.0	.0		.0		.0	1.0
SE	.0	.0	.0 5.0	.0	.0	.0		.0
SSE	.0	1.0	5.0	4.0	.0	.0	.0	10.0
S	.0	.0	16.0	2.0	.0	.0	.0	18.0
SSW	.0		2.0			.0		9.0
SW	.0	.0	2.0	3.0	1.0	.0	.0	6.0
WSW	.0	.0	.0	1.0	3.0	1.0	.0	5.0
W	.0	. 0	3.0	2.0	5.0	2.0	.0	12.0
WNW	.0	.0	1.0	5.0	2.0	3.0	.0	11.0
NW	.0	.0	4.0	.0	4.0		2.0	14.0
NNW	.0	1.0	1.0	2.0	2.0	2.0	1.0	9.0
TOTAL	.0	4.0	35.0	36.0	23.0	12.0	3.0	113.0
DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 60.00 TEMPERATURE SENSOR SEPARATION (METERS) 50.90								
MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 4 VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2204								

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - OCT/NOV/DEC 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/10/ 1/ 0] TO [2001/12/31/23]

PASQUILL STABILITY: D

	WIND SPEED	(MPH)						
WIND FROM	CALMS	.60 - 3.50	3.50 - 7.50	12.50	18.50	18.50 - 24.00	80.00	TOTAL
N NNE NE ENE		12.0 12.0	28.0 14.0	21.0 2.0	19.0 3.0 .0	.0	.0	64.0
E ESE SE SSE	.0 .0 .0	6.0	5.0	6.0	1.0	.0 .0 .0 2.0	.0	
S SSW SW WSW	. 0 . 0 . 0	8.0	10.0	13.0	12.0	.0 1.0 .0 6.0	. 0	44.0 21.0
W WNW NW NNW	.0 .0 .0	1.0 4.0	3.0 9.0	26.0 20.0	37.0 58.0	15.0 29.0	.0 4.0 8.0 2.0	86.0 128.0
TOTAL	.0	107.0	186.0	256.0	232.0	76.0	17.0	874.0
DATA MI	EASUREMENT H ATURE SENSOR	EIGHT ( SEPARA	M ABOVE G	RADE) ERS)		60.00 50.90		
	G OBS. DURIN OBSER. DURIN							

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - OCT/NOV/DEC 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/10/ 1/ 0] TO [2001/12/31/23]

PASQUILL STABILITY: E

	WIND SPEED	(MPH)						
WIND FROM	CALMS					18.50 - 24.00	80.00	TOTAL
N	.0	17.0 15.0	26.0 53.0	13.0 21.0 3.0	2.0 1.0 .0	.0	.0	45.0 92.0 34.0 8.0
E ESE SE SSE	.0	7.0	3.0	2.0	.0	.0 .0 .0	.0	
S SSW SW WSW		8.0 12.0	34.0 27.0	35.0 11.0	1.0	1.0 1.0 1.0	. 0	88.0 52.0
W WNW NW NNW	.0 .0 .0	9.0 7.0 2.0 7.0	6.0 6.0	10.0 17.0	7.0 9.0	.0 1.0 .0	.0 1.0 .0	26.0 32.0 34.0 23.0
TOTAL	.0	139.0	285.0	195.0	50.0	4.0	1.0	674.0
DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 60.00 TEMPERATURE SENSOR SEPARATION (METERS) 50.90								
MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 4 VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2204								

NL-02-065 May, 2002

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

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - OCT/NOV/DEC 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/10/ 1/ 0] TO [2001/12/31/23]

PASQUILL STABILITY: F

	WIND SPEED	(MPH)						
WIND FROM	CALMS				18.50		24.00 -	TOTAL
N			18.0			.0		
NNE			51.0	8.0	.0	.0		77.0
NE		9.0	1.0	.0		.0	.0	
ENE	. 0	8.0	2.0	.0	.0	.0	.0	10.0
E	.0	7.0	1.0			.0		8.0
ESE		3.0		.0	.0	.0	.0	3.0
SE	.0	5.0	.0	.0	.0	.0		
SSE	.0	7.0	5.0	.0	.0	.0	.0	12.0
S	. 0		25.0				.0	
SSW			21.0			.0	. 0	
SW			13.0			.0	.0	
WSW	.0	6.0	4.0	3.0	.0	.0	.0	13.0
W		6.0	.0	1.0	.0	.0	.0	7.0
WNW		4.0	1.0	1.0	.0	.0	.0	6.0
NW	.0		1.0			.0	.0	5.0
NNW	.0	3.0	3.0	1.0	.0	.0	.0	7.0
TOTAL	.0	111.0	146.0	36.0	.0	.0	.0	293.0
DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 60.00 TEMPERATURE SENSOR SEPARATION (METERS) 50.90								
	G OBS. DURIN							
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2204								

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - OCT/NOV/DEC 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/10/ 1/ 0] TO [2001/12/31/23]

PASQUILL STABILITY: G

	WIND SPEED	(MPH)						
WIND FROM	CALMS					18.50 - 24.00		TOTAL
N NNE NE ENE	.0 .0	2.0	.0 6.0 .0	.0	.0	.0	.0	3.0 9.0 2.0
E ESE SE SSE	.0 .0	.0 .0 .0 2.0	.0 1.0 .0		.0 .0 .0	.0	.0 .0 .0	.0 1.0 .0 2.0
S SSW SW WSW			1.0 1.0 .0		.0 .0 .0	.0	.0 .0 .0	1.0 1.0 .0
W WNW NW NNW	.0	2.0 .0 2.0 2.0	.0 .0 .0	.0	. 0 . 0 . 0	.0 .0 .0	.0 .0 .0	2.0 .0 3.0 2.0
TOTAL	.0	15.0	9.0	2.0	.0	.0	.0	26.0
DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 60.00 TEMPERATURE SENSOR SEPARATION (METERS) 50.90								
	G OBS. DURIN OBSER. DURIN							

NL-02-065 May, 2002

Re: Indian Point Unit Nos. 1 & 2

Docket Nos. 50-03 & 50-247

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - OCT/NOV/DEC 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 60.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/10/ 1/ 0] TO [2001/12/31/23]

PASQUILL STABILITY: ALL

	WIND SPEED	(MPH)							
	CALMS	3.50					80.00	TOTAL	
N	.0	12 0	66.0	77.0	33.0	10.0	3.0	201.0	
NNE		50.0	139.0	56.0	4.0	.0		249.0	
NE	.0	38.0	31.0	5.0	.0	.0		74.0	
ENE	. 0	19.0	9.0	1.0	.0	.0	.0	29.0	
E	.0	13.0	6.0	1.0	.0	.0	.0	20.0	
ESE	. 0			8.0		.0		41.0	
SE				9.0		.0		35.0	
SSE	.0	37.0	82.0	72.0	16.0	2.0	.0	209.0	
S	.0					1.0		263.0	
SSW		26.0	69.0	66.0		2.0		190.0	
SW		24.0	50.0	27.0	8.0	1.0 11.0	.0	110.0	
WSW	.0	18.0	27.0	40.0	23.0	11.0	.0	119.0	
W	.0		23.0	42.0	33.0	7.0	.0	124.0	
WNW	.0	12.0				25.0		163.0	
NW							14.0		
NNW	. 0	17.0	13.0	37.0	53.0	20.0	3.0	143.0	
TOTAL	.0	380.0	700.0	603.0	362.0	133.0	26.0	2204.0	
DATA MEASUREMENT HEIGHT (M ABOVE GRADE) 60.00 TEMPERATURE SENSOR SEPARATION (METERS) 50.90									
TEMPER	WIONE BENBOL	SEFARE	IIIOIV (ME.	ן פאנם ו		30.30			
MISSIN VALID	IG OBS. DURIN OBSER. DURIN	G THIS	PERIOD (A	ALL STABI ALL STABI	LITIES) LITIES)	4 2204			
VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2204									

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - OCT/NOV/DEC 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/10/ 1/ 0] TO [2001/12/31/23]

PASQUILL STABILITY: A

	WIND SPEED	(MPH)						
WIND FROM	CALMS					18.50 - 24.00		TOTAL
N NNE NE ENE	.0	.0	.0 .0 .0		.0	.0	.0 .0 .0	.0 .0 .0
E ESE SE SSE	.0 .0 .0	.0 .0 .0	.0	.0 .0 .0	.0 .0 .0	.0 .0 .0	.0 .0 .0	.0 .0 .0
s ssw sw wsw	. 0 . 0 . 0	.0 .0 .0	.0 .0 .0	.0 .0 .0	.0 .0 .0	.0 .0 .0	.0 .0 .0	.0 .0 .0
W WNW NW NNW	.0 .0 .0	.0.0.0	.0 .0 .0	.0		.0 1.0 .0	.0	.0 1.0 .0
TOTAL	.0	.0	.0	.0	.0	1.0	.0	1.0
	EASUREMENT H ATURE SENSOR					122.00 112.00		
MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 4 VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2204								

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - OCT/NOV/DEC 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/10/ 1/ 0] TO [2001/12/31/23]

PASQUILL STABILITY: B

	WIND SPEED	(MPH)						
WIND FROM		.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 -	TOTAL
N	.0	.0	.0	.0	1.0	.0	.0	1.0
NNE	.0	.0	.0	. 0	.0	.0	.0	.0
NE	. 0	.0	.0	. 0	.0	.0	.0	.0
ENE	.0	.0	.0	.0	.0	.0	.0	.0
E	.0	.0	.0	.0	.0	.0	.0	.0
ESE	.0	.0	.0	.0	.0	.0	.0	.0
SE	.0	.0	2.0	8.0	1.0	.0	.0	11.0
SSE	. 0	.0	.0	2.0	1.0	.0	.0	3.0
s	.0	.0	.0	.0	.0	.0	.0	.0
SSW	.0	.0	.0	. 0	. 0	.0	.0	.0
SW	.0	.0	.0	.0	.0	1.0	.0	1.0
WSW	.0	. 0	.0	1.0	.0	1.0	.0	2.0
W	.0	.0	.0	3.0	2.0	1.0	.0	6.0
WNW	.0	.0	.0	.0	2.0	2.0	1.0	5.0
NW	. 0	.0	.0	. 0	1.0	.0	.0	1.0
NNW	.0	.0	. 0	.0	.0	1.0	.0	1.0
TOTAL	.0	.0	2.0	14.0	8.0	6.0	1.0	31.0

DATA MEASURE TEMPERATURE	•	•	122.00 112.00
MISSING OBS. VALID OBSER.		•	 4 2204

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - OCT/NOV/DEC 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/10/ 1/ 0] TO [2001/12/31/23]

PASQUILL STABILITY: C

	WIND SPEED	(MPH)						
WIND FROM	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 - 24.00	24.00 -	TOTAL
N	.0	.0	.0	.0	.0	.0	.0	.0
NNE	.0	.0	.0	.0	.0	.0	.0	.0
NE	.0	.0	.0	.0	.0	.0	.0	. 0
ENE	. 0	.0	.0	.0	.0	.0	.0	.0
E	.0	. 0	.0	. 0	.0	.0	.0	.0
ESE	. 0	.0	. 0	1.0	.0	.0	.0	1.0
SE	. 0	.0	8.0	9.0	2.0	.0	.0	19.0
SSE	.0	. 0	1.0	3.0	4.0	.0	.0	8.0
S	. 0	.0	.0	2.0	2.0	.0	.0	4.0
SSW	.0	.0	.0	. 0	.0	.0	.0	. 0
SW	.0	.0	.0	1.0	.0	1.0	.0	2.0
WSW	. 0	.0	.0	1.0	5.0	.0	.0	6.0
W	. 0	. 0	.0	3.0	7.0	5.0	1.0	16.0
WNW	.0	.0	1.0	1.0	5.0	14.0	7.0	28.0
NW	.0	.0	.0	3.0	4.0	5.0	.0	12.0
NNW	.0	.0	.0	1.0	10.0	2.0	1.0	14.0
TOTAL	.0	.0	10.0	25.0	39.0	27.0	9.0	110.0
DATA M	EASUREMENT H	EIGHT (	M ABOVE O	GRADE)		122.00		

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

TEMPERATURE SENSOR SEPARATION (METERS)

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

112.00

2204

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - OCT/NOV/DEC 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/10/ 1/ 0] TO [2001/12/31/23]

PASQUILL STABILITY: I

	WIND SPEED	(MPH)						
WIND FROM	CALMS	.60 - 3.50	3.50 - 7.50	12.50	18.50	18.50 - 24.00	80.00	TOTAL
N	.0	1.0	23.0	34.0	8.0	1.0	.0	67.0
NNE	.0	5.0	9.0	4.0	.0	.0	.0	
NE	.0	2.0	12.0	1.0	. U	.0	.0	
ENE	. 0	8.0	12.0	2.0	.0	.0	.0	22.0
E	.0	3.0	6.0	8.0	4.0	.0	.0	21.0
	.0	5.0	8.0	13.0	2.0	.0	.0	28.0
SE	.0	14.0	44.0	31.0	16.0	4.0	.0	
SSE	.0	15.0	44.0	27.0	13.0	2.0	.0	101.0
S	.0	7.0	11.0	14.0	28.0	5.0	.0	65.0
SSW	.0	9.0	3.0	13.0	14.0	2.0	1.0	42.0
SW	.0	5.0	10.0	26.0	28.0	7.0	6.0	82.0
WSW	.0	4.0	8.0	30.0	45.0	12.0	2.0	101.0
W	.0	2.0	5.0	29.0	53.0	29.0	13.0	131.0
WNW	.0	2.0	14.0	27.0	71.0	45.0	33.0	192.0
NW	.0	2.0	5.0	13.0	36.0	25.0	2.0 4.0	83.0
MMM	.0	2.0	13.0	52.0	37.0	8.0	4.0	116.0
TOTAL	.0	86.0	227.0	324.0	355.0	140.0	61.0	1193.0
								•
DATA M	EASUREMENT H	EIGHT (	M ABOVE G	RADE)		122.00		
TEMPER	ATURE SENSOR	SEPARA	TION (MET	ERS)		112.00		
MISSIN	G OBS. DURIN	G THIS	PERIOD (A	LL STABII	LITIES)	4		
MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 4 VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2204								

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - OCT/NOV/DEC 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/10/ 1/ 0] TO [2001/12/31/23]

PASQUILL STABILITY: E

	WIND SPEED	(MPH)						
WIND FROM	CALMS					18.50 - 24.00		TOTAL
N	. 0 . 0 . 0	3.0 6.0 6.0	16.0 4.0 2.0	.0 1.0	1.0 .0 .0	.0 .0		30.0 10.0 9.0 10.0
E ESE SE SSE	.0	8.0 17.0	4.0	.0 19.0	1.0	.0 .0 3.0 3.0	.0	11.0 13.0 95.0 159.0
s ssw sw wsw	.0	17.0 10.0	21.0	21.0 6.0	9.0 7.0	3.0 .0 .0 1.0	.0	68.0 37.0
W WNW NW NNW	.0	6.0 5.0	4.0 10.0 16.0 17.0	5.0 17.0	2.0	.0 1.0 .0	.0	24.0 24.0 38.0 51.0
TOTAL	.0	157.0	274.0	208.0	71.0	11.0	.0	721.0
DATA M TEMPER	EASUREMENT H ATURE SENSOR	EIGHT ( SEPARA	M ABOVE O	FRADE)		122.00 112.00		
MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 4 VALID OBSER. DURING THIS PERIOD (ALL STABILITIES) 2204								

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - OCT/NOV/DEC 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/10/ 1/ 0] TO [2001/12/31/23]

PASQUILL STABILITY: F

	WIND SPEED	(MPH)						
WIND FROM						18.50 - 24.00		TOTAL
N NNE NE ENE	.0	4.0 1.0	5.0 8.0 2.0	2.0	.0	.0	.0	8.0 14.0 3.0 1.0
E ESE SE SSE	.0	3.0 6.0 5.0 6.0	.0 .0 4.0 3.0	.0 .0 .0 8.0	.0 .0 .0	.0 .0 .0	.0 .0 .0	3.0 6.0 9.0 17.0
s ssw sw wsw	. 0	6.0	10.0 8.0 7.0 1.0	2.0	1.0	.0 .0 .0	.0 .0 .0	17.0
W WNW NW NNW	. 0 . 0	1.0 1.0 .0 2.0	1.0 3.0 4.0 9.0	1.0	2.0 1.0 .0	.0 .0 .0	.0	4.0 6.0 4.0 12.0
TOTAL	.0	56.0	65.0	20.0	4.0	.0	.0	145.0
	EASUREMENT H ATURE SENSOR					122.00 112.00		
MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) 4								

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

VALID OBSER. DURING THIS PERIOD (ALL STABILITIES)

2204

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - OCT/NOV/DEC 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/10/ 1/ 0] TO [2001/12/31/23]

PASQUILL STABILITY: G

	WIND SPEED	(MPH)						
WIND FROM	CALMS	.60 - 3.50	3.50 - 7.50	7.50 - 12.50	12.50 - 18.50	18.50 ~ 24.00	24.00 - 80.00	TOTAL
N	.0	.0	.0	.0	.0	.0	.0	.0
NNE	.0	.0	.0	.0	.0	.0	.0	.0
NE	.0	.0	.0	.0	.0	.0	.0	.0
ENE	.0	.0	.0	.0	.0	.0	. 0	.0
E	.0	. 0	.0	.0	0	٥	0	^
ESE	.0	.0			.0	.0	.0	.0
SE	.0	.0	.0	.0	.0	.0	.0	.0
SSE	.0	.0	.0	.0	.0	.0	.0	.0
2211	. 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	3.0	.0	. 0	. 0	.0	3.0
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	.0	.0	.0	.0	3.0

DATA MEASUREMENT HEIGHT (M ABOVE GRADE) TEMPERATURE SENSOR SEPARATION (METERS)	122.00 112.00
MISSING OBS. DURING THIS PERIOD (ALL STABILITIES) VALID OBSER. DURING THIS PERIOD (ALL STABILITIES)	4 2204

INDIAN POINT (UNITS 2 & 3) - JOINT FREQUENCY DISTRIBUTIONS - OCT/NOV/DEC 2001

BASIC METEOROLOGICAL OBSERVATIONS AT 122.0 (M) FOR PERIOD [Year/Month/Day/Hour] [2001/10/ 1/ 0] TO [2001/12/31/23]

PASQUILL STABILITY: ALL

	WIND SPEED	(MPH)						
WIND FROM	CALMS	.60 - 3.50	3.50 -	7.50 ~ 12.50	12.50 - 18.50	24.00	24.00 -	TOTAL
N NNE NE ENE	.0	15.0 9.0	44.0 21.0 16.0 17.0	6.0 2.0	10.0	1.0	.0	42.0 27.0
	. 0	19.0 36.0	8.0 12.0 106.0 117.0	14.0 67.0	3.0 27.0	.0	.0	
S SSW SW WSW	. 0 . 0	32.0 18.0	32.0 34.0	36.0 34.0	24.0 35.0	2.0 9.0	.0 1.0 6.0 2.0	127.0 136.0
W WNW NW NNW	.0	7.0	25.0	33.0	41.0	30.0	14.0 41.0 2.0 5.0	138.0
TOTAL	.0	299.0	581.0	591.0	477.0	185.0	71.0	2204.0
	EASUREMENT H ATURE SENSOR					122.00 112.00		
MISSING VALID	G OBS. DURING OBSER. DURING	G THIS	PERIOD (A PERIOD (A	LL STABII LL STABII	LITIES) LITIES)	4 2204		

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

NL-02-065 May, 2002

Re: Indian Point Unit Nos. 1 & 2 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

2001

ENTERGY NUCLEAR OPERATIONS, INC. INDIAN POINT UNIT NOS. 1 & 2 DOCKET NOS. 50-03 & 50-247 MAY, 2002

#### SECTION F

#### Reportable Changes

#### A. Process Control Program (PCP)

Section 6.14.1 of the Indian Point Unit No. 2 Technical Specifications requires that the licensee initiated changes to the PCP be reported to the Commission in the Annual Radioactive Effluent Release Report. During the 2001 reporting period there were no changes to the PCP.

## B. Offsite Dose Calculation Manual (ODCM)

Section 6.15.2 of the Indian Point Unit No. 2 Technical Specifications requires that changes to the ODCM be reported to the Commission in the Annual Radioactive Effluent Release Report. During the 2001 reporting period there were no changes to the ODCM.

### C. Radioactive Waste Systems (RWS)

Section 6.16.1 of the Indian Point Unit No. 2 Technical Specifications requires that major changes to the RWS be reported to the Commission in the Annual Radioactive Effluent Release Report. During the 2001 reporting period there were no major changes made to the RWS.

# SECTION G

### Reportable Items

- A. Radioactive Liquid Effluent Monitoring Instrumentation

  None
- B. Radioactive Gaseous Effluent Monitoring Instrumentation
  None

NL-02-065 May, 2002

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

### SECTION H

### Unplanned Releases

A. <u>Unplanned Liquid Releases</u>

None

B. <u>Unplanned Gaseous Releases</u>

None