

MONTICELLO

APPENDIX 2.5-A

ANNUAL AND MONTHLY JOINT FREQUENCY  
DISTRIBUTIONS APPROPRIATE FOR SURFACE  
RELEASES AT MONTICELLO

The meteorological data presented are the frequency of the 10 m wind speed classes and the 10 m wind direction classes by atmospheric stability class. The stability class was determined by  $\Delta T_{140 \text{ ft} - 10 \text{ m}}$  ( $\Delta T_{43 - 10 \text{ m}}$ ). The data were collected on the Monticello meteorological tower from January 1, 1974 to December 31, 1974.

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NORTHERN STATES POWER COMPANY - MONTICELLO NUCLEAR GENERATING PLANT  
SITE METEOROLOGY - FREQUENCY DISTRIBUTION TABLES  
10 METER STABILITY CLASSES DETERMINED USING 140 FT - 10 METER DELTA T  
140 FT AND 100 METER STABILITY CLASSES DETERMINED USING BEST AVAILABLE DELTA T

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD 1/ 1/74 THROUGH 12/31/74  
STABILITY CLASS A  
ELEVATION 10 METER

DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL						TOTAL
	1 TO 3	4 TO 7	8 TO 12	13 TO 16	19 TO 24	ABOVE 24	
N	0	21	47	13	2	0	83
NNE	2	6	22	5	0	0	37
NE	0	4	25	6	0	0	40
ENE	1	14	17	1	0	0	33
E	0	10	18	5	0	0	33
ESE	1	6	18	20	0	0	45
SE	1	12	24	58	2	0	97
SSE	0	4	38	59	26	2	134
S	2	12	47	112	25	3	201
SSW	2	20	32	50	6	0	110
SW	0	17	47	13	0	0	77
WSW	0	25	34	12	3	0	74
W	1	28	33	7	3	0	72
WNW	2	26	50	41	6	0	127
NW	0	30	62	52	14	0	158
NNW	0	15	50	48	11	0	124
VAR	0	0	0	0	0	0	0

TOTAL HOURS THIS PAGE  
HOURS OF CALM THIS PAGE

1445  
0

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HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD 1/ 1/74 THROUGH 12/31/74  
STABILITY CLASS B  
ELEVATION 10 METER

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DIRECTION	WIND SPEED (MPH) AT 10 METER LEVEL						TOTAL
	1 TO 3	4 TO 7	8 TO 12	13 TO 18	19 TO 24	ABOVE 24	
N	0	13	10	4	0	0	27
NNE	2	7	15	1	0	0	25
NE	2	3	11	1	0	0	17
ENE	2	13	4	2	0	0	21
E	3	4	11	1	0	0	19
ESE	2	10	4	6	1	0	23
SE	2	7	7	6	0	0	22
SSE	2	5	11	4	1	0	23
S	5	12	19	6	2	0	44
SSW	1	9	17	2	1	0	30
SW	3	11	15	0	0	0	29
WSW	3	10	6	0	0	0	19
W	1	13	19	5	1	0	39
WNW	0	11	13	17	0	0	41
NW	1	13	18	17	9	0	58
NNW	0	8	18	14	1	0	41
VAR	0	0	0	0	0	0	0

TOTAL HOURS THIS PAGE  
HOURS OF CALM THIS PAGE

478  
0