

PDR

40-1341

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401
400 Chestnut Street Tower II

October 22, 1980

Mr. Ross A. Scarano
U.S. Nuclear Regulatory Commission
Uranium Recovery Licensing Branch
Mail Stop SS 483
7914 Eastern Avenue
Silver Spring, Maryland 20910



Dear Mr. Scarano:

In The Matter of the
Tennessee Valley Authority

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Docket No. 40-1341

This letter is in response to requests for meteorological and air quality information, regarding the Edgemont Mill Decommissioning Project, by the Oak Ridge National Laboratory (ORNL).

Enclosure 1 (two sheets) provides the joint frequency distributions (JFD's) of the 10-meter level winds at the Edgemont meteorological facility, as requested. Sheet 1 is the 3-year JFD for the period from March 24, 1977, to March 23, 1980, for all hours. Sheet 2 is the JFD for the period from May 1, 1977, to October 31, 1979, for only the months from May through October, and only during the hours from 8 a.m. through 5 p.m. This latter information is provided to represent the timeframe when project work is anticipated to occur and the time when the likelihood for emissions would be greatest.

Enclosure 2 is the Burdock, South Dakota, total suspended particulate data for the period of April 1979 through August 1980, as requested.

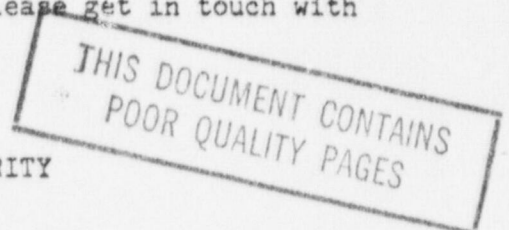
If you have any questions regarding this response, please get in touch with David L. Dunn at (FTS) 857-3331.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

L. M. Mills

L. M. Mills, Manager
Nuclear Regulation and Safety



Enclosures

cc: Mr. Minton Kelly
Energy Division
Oak Ridge National Laboratory
P.O. Box X
Oak Ridge, Tennessee 37830

8012080725

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JOINT RECEPTION FACILITY: WIND SPEED BY DIRECTION

WIND SPEED CLASS

JOINT RECEPTION FACILITY

WIND SPEED CLASS

| DIRECTION | 0.5-1.5 | 1.5-3.5 | 3.5-5.5 | 5.5-7.5 | 7.5-9.5 | 9.5-11.5 | 11.5-13.5 | 13.5-15.5 | 15.5-17.5 | 17.5-19.5 | 19.5-21.5 | 21.5-23.5 | 23.5-25.5 | TOTAL |
|-----------|---------|---------|---------|---------|---------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-------|
| N | 0.05 | 0.55 | 0.32 | 0.20 | 0.21 | 0.04 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 1.43 |
| NNE | 0.05 | 0.70 | 0.41 | 0.15 | 0.16 | 0.04 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 1.50 |
| NNE | 0.13 | 0.70 | 0.41 | 0.21 | 0.43 | 0.11 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 2.30 |
| ENE | 0.10 | 1.00 | 0.67 | 0.51 | 1.03 | 0.52 | 0.06 | 0.06 | 0.06 | 0.06 | 0.06 | 0.06 | 0.06 | 3.29 |
| E | 0.12 | 0.99 | 1.23 | 1.60 | 4.43 | 2.17 | 0.32 | 0.32 | 0.32 | 0.32 | 0.32 | 0.32 | 0.32 | 11.76 |
| ESE | 0.05 | 0.53 | 0.45 | 1.19 | 3.49 | 1.70 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 7.93 |
| SE | 0.00 | 0.65 | 0.42 | 0.00 | 2.04 | 0.54 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 | 5.09 |
| SSE | 0.15 | 1.49 | 1.04 | 0.70 | 0.47 | 0.33 | 0.06 | 0.06 | 0.06 | 0.06 | 0.06 | 0.06 | 0.06 | 4.77 |
| S | 0.30 | 4.20 | 2.04 | 0.67 | 0.64 | 0.12 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 7.06 |
| SSW | 0.17 | 1.50 | 0.73 | 0.31 | 0.32 | 0.09 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 3.29 |
| SW | 0.11 | 0.55 | 0.35 | 0.21 | 0.30 | 0.15 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 2.11 |
| WSW | 0.12 | 1.02 | 0.41 | 0.33 | 0.50 | 0.32 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 | 3.49 |
| W | 0.20 | 4.41 | 3.65 | 1.51 | 1.00 | 0.69 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 12.89 |
| WNW | 0.15 | 2.50 | 3.10 | 2.29 | 3.97 | 2.52 | 0.42 | 0.42 | 0.42 | 0.42 | 0.42 | 0.42 | 0.42 | 15.64 |
| W | 0.17 | 1.70 | 2.02 | 1.40 | 2.61 | 1.95 | 0.40 | 0.40 | 0.40 | 0.40 | 0.40 | 0.40 | 0.40 | 11.32 |
| NW | 0.13 | 1.19 | 0.20 | 0.45 | 0.12 | 0.26 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 3.77 |
| SUB-TOTAL | 2.30 | 25.75 | 19.54 | 12.58 | 23.30 | 12.71 | 2.72 | 2.72 | 2.72 | 2.72 | 2.72 | 2.72 | 2.72 | 99.59 |

| | |
|--|-------|
| TOTAL HOURS OF VALID WIND OBSERVATIONS | 24644 |
| TOTAL HOURS OF OBSERVATIONS | 26304 |
| PERCENTAGE OF OBSERVATIONS | 93.7 |
| TOTAL HOURS CALCD | 100 |

ALL COLUMNS AND CALCD TOTAL 100 PERCENT OF JOINT VALID OBSERVATIONS

JOINT RECEPTION FACILITY: WIND SPEED BY DIRECTION

DATE PRINTED: 09/15/80

WIND SPEED CLASS = 7.0 MPH

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY DIRECTION

DISREGARDING STABILITY CLASS

DAY TIME 759- 1701 HOURS

EDGE MONT METEOROLOGICAL FACILITY

MAY 1, 77 - Oct 31, 79

| WIND DIRECTION | WIND SPEED (MPH) | | | | | | | | TOTAL |
|-------------------|------------------|---------|---------|---------|----------|-----------|-----------|-------|-------|
| | 0.6-1.4 | 1.5-3.4 | 3.5-5.4 | 5.5-7.4 | 7.5-12.4 | 12.5-18.4 | 18.5-24.4 | ≥24.5 | |
| N | 0.07 | 0.58 | 0.49 | 0.29 | 0.37 | 0.05 | 0.0 | 0.0 | 1.85 |
| NNE | 0.0 | 0.82 | 0.62 | 0.18 | 0.18 | 0.09 | 0.0 | 0.0 | 1.89 |
| NE | 0.02 | 0.84 | 0.68 | 0.29 | 0.49 | 0.20 | 0.0 | 0.0 | 2.52 |
| ENE | 0.02 | 0.66 | 0.64 | 0.42 | 0.93 | 0.80 | 0.02 | 0.0 | 3.49 |
| E | 0.02 | 0.53 | 0.93 | 1.15 | 4.29 | 3.89 | 0.40 | 0.0 | 11.21 |
| ESE | 0.04 | 0.44 | 0.91 | 1.17 | 4.64 | 2.76 | 0.13 | 0.0 | 10.09 |
| SE | 0.0 | 0.29 | 1.15 | 1.15 | 3.12 | 1.00 | 0.07 | 0.02 | 6.80 |
| SSE | 0.05 | 0.77 | 1.33 | 1.06 | 1.46 | 0.51 | 0.09 | 0.02 | 5.29 |
| S | 0.11 | 1.13 | 1.44 | 0.89 | 0.60 | 0.16 | 0.0 | 0.0 | 4.33 |
| SSW | 0.05 | 0.62 | 1.02 | 0.47 | 0.46 | 0.15 | 0.02 | 0.0 | 2.79 |
| SW | 0.0 | 0.37 | 0.57 | 0.31 | 0.47 | 0.26 | 0.09 | 0.0 | 2.07 |
| WSW | 0.04 | 0.64 | 0.73 | 0.46 | 0.89 | 0.57 | 0.18 | 0.0 | 3.51 |
| W | 0.04 | 1.19 | 1.73 | 1.10 | 1.64 | 0.53 | 0.16 | 0.0 | 6.37 |
| WNW | 0.05 | 1.30 | 2.74 | 2.76 | 4.51 | 2.19 | 0.37 | 0.27 | 14.19 |
| NW | 0.04 | 1.84 | 3.65 | 2.52 | 4.25 | 2.85 | 1.11 | 0.33 | 16.59 |
| NNW | 0.07 | 1.64 | 1.64 | 1.04 | 1.66 | 0.60 | 0.13 | 0.11 | 6.89 |
| SUBTOTAL | 0.62 | 13.66 | 20.27 | 15.26 | 29.96 | 16.61 | 2.77 | 0.75 | 99.90 |

| | |
|--|------|
| TOTAL HOURS OF VALID WIND OBSERVATIONS | 5478 |
| TOTAL HOURS OF OBSERVATIONS | 5520 |
| RECOVERABILITY PERCENTAGE | 99.2 |
| TOTAL HOURS CALM | 4 |

ALL COLUMNS AND CALM TOTAL 100 PERCENT OF JOINT VALID OBSERVATIONS

METEOROLOGICAL FACILITY: EDGE MONT METEOROLOGICAL FACILITY
WIND SPEED AND DIRECTION MEASURED AT THE 10.00 METER LEVEL

DATE PRINTED: 09/16/80

MEAN WIND SPEED = 8.2 MPH

24-Hour Averaged Total Suspended Particulate Data
Burdock

| <u>Date</u> | <u>Suspended Particulates</u> <u>µg/m³</u> | <u>Date</u> | <u>Suspended Particulates</u> <u>µg/m³</u> |
|-------------|--|-------------|--|
| 4/4/79 | 9 | 10/6/79 | 38 |
| 4/9/79 | 33 | 10/12/79 | - |
| 4/15/79 | 20 | 10/18/79 | 26 |
| 4/21/79 | 36 | 10/24/79 | 41 |
| 4/27/79 | 21 | 10/30/79 | 9 |
| 5/3/79 | 14 | 11/5/79 | 27 |
| 5/9/79 | 8 | 11/11/79 | 13 |
| 5/15/79 | 28 | 11/17/79 | 50 |
| 5/21/79 | 25 | 11/23/79 | 14 |
| 5/27/79 | 40 | 11/29/79 | 21 |
| 6/2/79 | 29 | 12/5/79 | 16 |
| 6/8/79 | 16 | 12/11/79 | 29 |
| 6/14/79 | 43 | 12/17/79 | 49 |
| 6/20/79 | 14 | 12/23/79 | 31 |
| 6/26/79 | 32 | 12/29/79 | 30 |
| 7/2/79 | 34 | 1/4/80 | 17 |
| 7/8/79 | 36 | 1/10/80 | 18 |
| 7/14/79 | 45 | 1/16/80 | 25 |
| 7/20/79 | 42 | 1/22/80 | 5 |
| 7/26/79 | 17 | 1/28/80 | 7 |
| 8/1/79 | 35 | 2/3/80 | 9 |
| 8/7/79 | 69 | 2/9/80 | 9 |
| 8/13/79 | 33 | 2/15/80 | 4 |
| 8/19/79 | 20 | 2/21/80 | 8 |
| 8/25/79 | 22 | 2/27/80 | 12 |
| 8/31/79 | 27 | | |
| 9/6/79 | 67 | | |
| 9/12/79 | 14 | | |
| 9/18/79 | 63 | | |
| 9/24/79 | 66 | | |
| 9/30/79 | 59 | | |

24-Hour Averaged Total Suspended Particulate Data
Burdock

| <u>Date</u> | <u>Suspended Particulates</u> <u>ug/m</u> |
|-------------|--|
| 3/4/80 | 4 |
| 3/10/80 | 7 |
| 3/16/80 | 1 |
| 3/22/80 | 13 |
| 3/28/80 | LR |
| 4/3/80 | 5 |
| 4/9/80 | 11 |
| 4/15/80 | 38 |
| 4/21/80 | 77 |
| 4/27/80 | 21 |
| 5/3/80 | 49 |
| 5/9/80 | LR |
| 5/15/80 | 13 |
| 5/21/80 | 146 |
| 5/27/80 | 27 |
| 6/2/80 | 35 |
| 6/8/80 | 3 |
| 6/14/80 | 56 |
| 6/20/80 | LR |
| 6/26/80 | 63 |
| 7/2/80 | 38 |
| 7/8/80 | 47 |
| 7/14/80 | 45 |
| 7/20/80 | 53 |
| 7/26/80 | LR |
| 8/1/80 | 51 |
| 8/7/80 | 43 |
| 8/13/80 | 38 |
| 8/19/80 | 26 |
| 8/25/80 | 22 |
| 8/31/80 | 16 |