



## Duquesne Light

Nuclear Construction Division  
Robinson Plaza, Building 2, Suite 210  
Pittsburgh, PA 15205

2NRC-5-025

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February 14, 1985

United States Nuclear Regulatory Commission  
Washington, DC 20555

ATTENTION: Mr. George W. Knighton, Chief  
Licensing Branch 3  
Office of Nuclear Reactor Regulation

SUBJECT: Beaver Valley Power Station - Unit No. 2  
Docket No. 50-412  
Procedure Used to Record Calm Winds

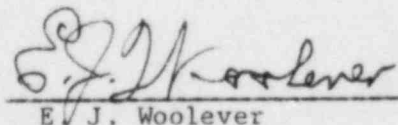
Gentlemen:

As discussed in a meeting with the staff (January 15, 1985) and a subsequent phone call (February 7, 1985), please find enclosed a discussion on the treatment of calms in the BVPS-2 meteorological data base. Incorporated in this discussion is a description of the procedure used to record calm winds on the magnetic tape submitted to the staff on September 25, 1984 (2NRC-4-153).

If you have any questions, please contact Mr. Tom Zoglmann at (412) 787-5141.

DUQUESNE LIGHT COMPANY

By

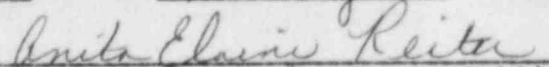
  
E. J. Woolever

Vice President

TJZ/wjs  
Attachment

cc: Mr. B. K. Singh, Project Manager (w/a)  
Mr. G. Walton, NRC Resident Inspector (w/a)

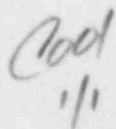
SUBSCRIBED AND SWORN TO BEFORE ME THIS  
14th DAY OF February, 1985.

  
Anita Elaine Reiter

Notary Public

ANITA ELAINE REITER, NOTARY PUBLIC  
ROBINSON TOWNSHIP, ALLEGHENY COUNTY  
MY COMMISSION EXPIRES OCTOBER 20, 1986

8502200339 850214  
PDR ADOCK 05000412  
A PDR



COMMONWEALTH OF PENNSYLVANIA )  
 ) SS:  
COUNTY OF ALLEGHENY )

On this 14th day of February, 1985, before me, a  
Notary Public in and for said Commonwealth and County, personally appeared  
E. J. Woolever, who being duly sworn, deposed and said that (1) he is Vice  
President of Duquesne Light, (2) he is duly authorized to execute and file  
the foregoing Submittal on behalf of said Company, and (3) the statements  
set forth in the Submittal are true and correct to the best of his knowledge.

Anita Elaine Reiter  
Notary Public

ANITA ELAINE REITER, NOTARY PUBLIC  
ROBINSON TOWNSHIP, ALLEGHENY COUNTY  
MY COMMISSION EXPIRES OCTOBER 20, 1986

## TREATMENT OF CALMS IN BVPS-2 METEOROLOGICAL DATA BASE

As reported in FSAR Table 2.3-34, the starting speed of the anemometer (Climet Model WS-011-1) used to collect wind speed data at BVPS-2 is 0.6 mph. The starting speed of the vane (Climet Model WD-012-10) used to collect wind direction data is 0.75 mph. Therefore, in accordance with Regulatory Guide 1.145, Revision 1, calms are defined as any wind speed less than 0.75 mph. Since the wind speed data are recorded to the nearest 0.1 mph, wind speeds of 0.7 mph or less are considered calms. Therefore, any wind speed equal to or less than 0.7 mph (0.3 m/sec) has a corresponding wind direction value of 77777 on the NRC tape as directed by Regulatory Guide 1.23. As a result, the lowest non-calm wind speed on the NRC tape (transmitted to NRC on September 25, 1984, via letter 2NRC-4-153) is 0.4 m/sec.

In the X/Q calculations, the wind speed assigned to the calm observations (wind direction = 77777) is 0.75 mph (0.34 mps) and the calm observations are distributed among the sixteen 22.5° wind directions according to the directional distribution of wind speeds between 0.4 and 1.5 mps as directed in Regulatory Guide 1.145, Rev. 1.

The determination of calm wind speeds in the BVPS-2 meteorological data base (1977-1981) is based on the definition of "Calm" as any hourly-average wind speed below the vane or anemometer starting speed, whichever is higher. In this case, the vane starting speed of 0.75 mph is the higher of the two and defines the lowest valid wind speed (0.8 mph).

For the year 1977 and portions of 1980, all hourly-average wind speeds, including those that fall below 0.8 mph, were determined by electronically digitizing the analog wind speed trace using a minimum of 12 points per hour equally spaced across the hour; more points were used for rapidly fluctuating traces. Thus, wind speed values below 0.8 mph on the chart scale entered into the averaging process as well as those above 0.8 mph. If the average of the 12 or more points was less than 0.8 mph, then the wind speed for that hour was considered a calm (e.g.,  $0.3 + 0.3 + 0.5 + 0.7 + 0.8 + 0.9 + 1.0 + 0.8 + 0.7 + 0.5 + 0.5 + 0.4 \text{ mph} / 12 = 0.6 \text{ mph}$ ).