

*Robert Files*



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

April 22, 1977

Docket No: 50-329, 330

Consumers Power Company  
ATTN: Mr. S. H. Nowell  
Vic: President  
212 West Michigan Avenue  
Jackson, Michigan 49201

Gentlemen:

SUBJECT: STANDARD FORMAT FOR METEOROLOGICAL DATA ON MAGNETIC TAPE

Regulatory Guide 1.70, Revision 2, "Standard Format and Content of Safety Analysis Reports for Nuclear Power Plants" (September 1975), recommends that, if possible, hour-by-hour meteorological data should be provided on magnetic tape. The draft Environmental Standard Review Plan for meteorology (included in NUREG-0158, Part 1, January 1977) provides some guidance on the types of magnetic tapes that are acceptable and identifies limitations on block size and density. We have also developed a standardized format (Enclosure 1) for providing hour-by-hour meteorological data on magnetic tapes that would facilitate our review of atmospheric diffusion characteristics and cooling system impacts. Enclosure 2 provides a sample tape dump using this format. We would prefer receiving meteorological data magnetic tapes in the standard format; however, we will accept data on magnetic tape in any reasonable format, if the format is completely described (per guidance in NUREG-0158, Part 1) and a sample tape dump is provided. Questions on this standard format should be referred to William Snell, Hydrology-Meteorology Branch, Division of Site Safety and Environmental Analysis, phone number 301-492-7384.

This request for generic information was approved by GAO under blanket clearance number B-180225 (R0072). This clearance expires July 31, 1977.

Sincerely,

Domenic B. Vassallo, Assistant Director  
for Light Water Reactors  
Division of Project Management

Enclosures:  
As Stated

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Enclosure 1

PROPOSED FORMAT FOR HOURLY METEOROLOGICAL  
DATA TO BE PLACED ON MAGNETIC TAPE

Use:           9 track tape (7 will be acceptable)  
  
                Standard Label which would include  
  
                    Record Length = 160  
  
                    Block Size (3200 - fixed block size)  
  
                    Density (1600 BPI - 800 will be accepted)

Do Not Use:    Magnetic tapes with unformatted or spanned records.

At the beginning of each tape, use the first five (5) records (which is the equivalent of ten cards) to give a tape description. Include plant name, and location (latitude, longitude) dates of data, information explaining data contained in the "other" fields if they are used, height of measurements, and any additional information pertinent to identification of the tape. Make sure all five records are included, even if some are blank. Format for the first five records will be 160A1. Meteorological data format is (I6, I2, I3, I4, 25F5.1, F5.2, 3F5.1). Decimal points should not be included when copying data onto the tape.

All data should be given to a tenth of a unit except solar radiation which should be given to a hundredth of a unit. This does not necessarily indicate the accuracy of the data. (e.g. wind direction is usually given to the nearest degree but record it with a zero in the tenth's place. That is 275 degrees would be 275.0 degrees and placed on the tape as 2750.)

All nines in any field indicates a lost record (99999). All sevens in a wind direction field indicates calm (77777).

If only two levels of data, use the upper & lower levels. If only one level of data, use the upper level.

Enclosure 1

MAGNETIC TAPE  
METEOROLOGICAL DATA

LOCATION:

DATE OF DATA RECORD:

<u>I6</u>	Identifier (can be anything)	
<u>I2</u>	Year	
<u>I3</u>	Julian Day	
<u>I4</u>	Hour (on 24 hr clock)	
		<u>ACCURACY</u>
<u>F5.1</u>	Upper Measurements: Level = meters	
<u>F5.1</u>	Wind Direction (degrees)	_____
<u>F5.1</u>	Wind Speed (meter/sec)	_____
<u>F5.1</u>	Sigma Theta (degrees)	_____
<u>F5.1</u>	Ambient Temperature (°C)	_____
<u>F5.1</u>	Moisture: _____	_____
<u>F5.1</u>	Other: _____	_____
<u>F5.1</u>	Intermediate Measurements: Level = meters	
<u>F5.1</u>	Wind Direction (degrees)	_____
<u>F5.1</u>	Wind Speed (meters/sec)	_____
<u>F5.1</u>	Sigma Theta (degrees)	_____
<u>F5.1</u>	Ambient Temperature (°C)	_____
<u>F5.1</u>	Moisture: _____	_____
<u>F5.1</u>	Other: _____	_____

Enclosure 1

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<u>F5.1</u>	Lower Measurements: Level = meters	
<u>F5.1</u>	Wind Direction (degrees)	_____
<u>F5.1</u>	Wind Speed (meters/sec)	_____
<u>F5.1</u>	Sigma Theta (degrees)	_____
<u>F5.1</u>	Ambient Temperature (°C)	_____
<u>F5.1</u>	Moisture: _____	_____
<u>F5.1</u>	Other: _____	_____
<u>F5.1</u>	Temp Diff (Upper-Lower) (°C/100 meters)	_____
<u>F5.1</u>	Temp Diff (Upper-Intermediate) (°C/100 meters)	_____
<u>F5.1</u>	Temp Diff (Intermediate-Lower) (°C/100 meters)	_____
<u>F5.1</u>	Precipitation (mm)	_____
<u>F5.2</u>	Solar Radiation (cal/cm <sup>2</sup> /min)	_____
<u>F5.1</u>	Visibility (km)	_____
<u>F5.1</u>	Other: _____	_____
<u>F5.1</u>	Other: _____	_____

