

JUL 13 1982

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Docket Nos.: 50-352/353

Mr. Edward G. Bauer, Jr.
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2301 Market Street
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Dear Mr. Bauer:

Subject: Request for Additional Information - Limerick (Meteorology - EROL)

The Meteorology Section of the Accident Evaluation Branch has reviewed the Limerick EROL and has identified a need for the additional information delineated in Enclosure 1.

Please provide us, within 7 working days from receipt of this letter, with the date(s) on which you plan to respond to the above. Any questions concerning this information request should be directed to Dr. Harvey Abelson, (301) 492-9774, the Licensing Project Manager.

Sincerely,

A. Schwencer, Chief
Licensing Branch No. 2
Division of Licensing

Enclosure:
As stated

cc: See next page

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PDR ADOCK 05000352
C PDR

OFFICE	DL:LB#2/PM	DL:LB#2/BC					
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DATE	7/13/82	7/13/82					

Limerick

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Limerick Generating Station
50-352/353
Requests for Additional Information
Environmental Report - Operating License Stage
Meteorology

- E451.5
(2.3) Much of the information presented in the discussion of severe weather phenomena is not up to date. For example, the frequency of hurricanes is based on a period of record ending in 1963 and the tornado statistics are based on a period of record that ended in 1976.
- a. Identify all hurricanes that have affected the site area since 1963 and update the number of storms (winds exceeding 74 mph) for those which have occurred since 1967.
 - b. Identify tornadoes that have occurred in the vicinity of the site since 1976, and provide revised estimates of mean path area, annual frequency and strike probability of tornadoes resulting from this change in data base.
 - c. Similarly, update the occurrence of thunderstorms, hail, ice storms and freezing rains, and peak winds.

(Much of this information request was requested in Q451.4 on the FSAR)

- E451.6
(2.3) Section 2.3.1 of the ER provides a description of air quality in the vicinity of the site. Describe station sources of criteria air pollutants as defined by the Environmental Protection Agency, including estimated emissions, and compare these emissions to the DeMinimus criteria established by the Environmental Protection Agency (EPA). If station emissions are above the DeMinimus levels, provide a quantitative assessment of the impact of station emissions on local air quality using current EPA guidelines on atmospheric dispersion modeling.

E451.7
(2.3) Tables 2.3.2-26 through 2.3.2-31 present wind direction frequency distributions and Tables 2.3-2 through 2.3.2-25 present joint frequency distributions of wind directions and wind speed by atmospheric stability class. In both of these sets of distributions, calms are distributed by wind direction.

- a. Provide the definition of calm wind conditions, based on data reduction procedures, used to produce the frequency of calms in the tables.
- b. Provide a description of how the calm conditions were distributed according to the joint frequency of wind direction, wind speed and atmospheric stability class (vertical temperature difference method) in the tables, and the resultant distributed frequencies of calms by wind direction and atmospheric stability.
- c. Provide the basis for any departures from the definitions of calms in Regulatory Guide 1.111. Regulatory Guide 1.111 states that calms should be defined as hourly average wind speeds below the starting speed of the vane or anemometer, whichever is higher, and that calms in joint frequency distributions should be assigned, as a separate wind speed class, to wind directions in proportion to the directional distribution, within an atmospheric stability class, of the lowest noncalm wind speed class.

(This information was also requested as Q451.8 on the FSAR)

E451.8 (2.3) Five years (1972-1976) of data record have been submitted in joint frequency distribution form. Regulatory Guide 4.2 (Revision 2) states that the data set should include the most recent one year period for an operating license application. Provide the joint frequency distributions of wind direction and wind speed by atmospheric stability class (as defined by vertical temperature difference) for the most recent annual cycle of meteorological data (1980 or later) for all levels of wind and vertical temperature difference measurements based on data from tower 1 and, if available, from the other towers. The data year selected should represent conditions which were unobstructed by temporary terrain modifications. Provide the frequency (hours and percent) of calms (as defined in question E451.7 from Regulatory Guide 1.111) by stability class and do not include calms in the joint frequency distribution tables by wind direction.

(This information was also requested as a part of Q451.9 on the FSAR).

E451.9 (6.1.3) Table 6.1-32 provides meteorological system specifications and accuracies. This table does not include the accuracies for temperature difference measurements. Provide the component and system accuracies for these measurements.

E 451.10 In section 5.2B 2.2 of Appendix 5.2B, it is stated that annual average concentration of noble gases are decayed using the average wind speed in each sector. Provide the basis for using simple arithmetic averages of wind speed rather than geometric means,

since the decay process is an exponential function.

E451.11 Since the long-term diffusion estimates are based on wind measured
(5.2) at the 175-foot level and atmospheric stability is based on the Brookhaven Turbulence Class System and the Smith-Singer vertical dispersion coefficients,

- (a) provide the basis for utilization of these parameters, because they differ from those primarily recommended in Regulatory Guide 1.111, and
- (b) provide a comparison of these diffusion estimates with diffusion estimates based on wind measured at the 30-foot level and vertical temperature difference as the stability indicator with vertical dispersion curves as indicated in Regulatory Guide 1.111.

(This information was also requested as Q451.13 on the FSAR).