

JUL 05 1984

Docket No. 50-412

MEMORANDUM FOR: Theodore R. Quay, Leader
Systems Analysis Section, AEB

FROM: Irwin Spickler, Leader
Meteorology Section, METB

SUBJECT: ACCIDENT X/Q VALUES FOR BEAVER VALLEY, UNIT NO. 2

We have completed our evaluation of accident X/Q values for Beaver Valley, Unit No. 2. We recommend using the following values in the Safety Evaluation Report:

Time Period	Distance (m)	Direction	X/Q (sec/m ³)
0-2 hours	455 (EAB)	NW	2.4×10^{-3}
0-8 hours	5800 (LPZ)	NW	8.8×10^{-5}
8-24 hours	5800 (LPZ)	NW	6.4×10^{-5}
1-4 days	5800 (LPZ)	NW	3.2×10^{-5}
4-30 days	5800 (LPZ)	NW	1.2×10^{-5}

This evaluation supersedes our preliminary evaluation transmitted to you in my 1/6/84 memorandum. The maximum X/Q value at the exclusion area boundary remains unchanged from the preliminary evaluation, while the X/Q values at the Low Population Zone distance have increased slightly (about 10%).

The X/Q values were calculated in accordance with Regulatory Guide 1.145, using five years (1977-1981) of onsite meteorological data. Wind speed and direction data were based on measurements at the 10.7m level, and atmospheric stability was defined by the vertical temperature difference measured between the 45.7m and 10.7m levels. As with our preliminary evaluation, the exclusion area boundary distance (455m) and low population zone distance (5800m) were taken from the FSAR. A building wake correction factor (cA) of 800m² was used in the computations. The annual average X/Q values (used in the determination of X/Q values for the various time periods at the LPZ distance) were adjusted by site-specific factors provided by the applicant.

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T. R. Quay

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These X/Q values are considered as final unless the exclusion area boundary distance and/or LPZ distance are found to be incorrect. Questions regarding this review should be directed to E. Markee at x27635.

Original signed by:

Irwin Spickler, Leader
Meteorology Section
Meteorology and Effluent Treatment Branch

cc: L. Hulman
W. Gammill
K. Dempsey
E. Markee

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