

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20515

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FEB 19 1981



The Honorable Les Aspin
United States House of Representatives
Washington, D. C. 20515

Dear Congressman Aspin:

This letter is in regards to your request dated January 26, 1981, on a concern expressed by Mr. Elgin Tophan of Kenosha, Wisconsin, on why the Zion Station is located near a minor fault.

Geologic faults are common everywhere. However, in the eastern and central United States they are generally hundreds of million years old. Faults of that age in the central and eastern U. S. are not considered to be hazardous. Commonwealth Edison investigated the site and region and the results of its investigations were reviewed by the U. S. Geological Survey (USGS), the U. S. Coast and Geodetic Survey (USC&GS), and the AEC. The results of these reviews led to the conclusion that there are no faults in the site vicinity that would tend to localize earthquakes and therefore be considered hazardous. These conclusions were documented in the AEC Safety Evaluation Reports for the Zion Station dated 21 August 1968 and 6 October, 1971.

In addition, the Zion plant has been designed to withstand earthquake ground motions of 0.17g, which is equivalent to the occurrence of a Modified Mercalli Intensity (MMI) VII-VIII near the site. No earthquake that large has ever been recorded within 200 miles of the site. MMI VII-VIII is equal to the largest historical earthquake that has been recorded in the Central Stable Region of North America, a very broad area that extends from the Rocky Mountain Front to the Appalachian Plateaus.

To assure ourselves that all available information has been and continues to be reviewed so that we may carry out our responsibility to protect the health and safety of the public, our staff contacted Mr. Tophan in hopes of following up on any lead Mr. Tophan may have had on uninvestigated faults. While Mr. Tophan had no specific information and could not recall any geologists that might have the information required, it did provide us the opportunity to indicate to Mr. Tophan that the NRC (former AEC) does require that nuclear power plants be designed assuming the occurrence of the maximum historic earthquake at the site.


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The NRC staff maintains frequent communications with the states in the Zion area and is usually aware of most published information concerning areas around nuclear power plants. Mr. Tophan was not aware that the NRC staff had a team of staff geologists and seismologists nor the fact that nuclear power plants have to be designed for earthquakes as great as the maximum historical. Since Mr. Tophan has not raised any new information which the staff is not generally aware of, we see no need to pursue this subject further. We trust this answers your request. Please let us know if there are any further questions.

Sincerely,

(Signed) T. A. Rehm

 William J. Dircks
Executive Director for Operations