

MAR 20 1986

Docket No. 50-440

Mr. Murray R. Edelman
Vice President - Nuclear Group
The Cleveland Electric Illuminating Company
P.O. Box 5000
Cleveland, Ohio 44101

Dear Mr. Edelman:

SUBJECT: ACRS REPORT ON THE PERRY NUCLEAR POWER PLANT, UNIT 1

Enclosed for your comments is the ACRS March 17, 1986 report to the Chairman of the Nuclear Regulatory Commission regarding the earthquake event which occurred near the Perry Nuclear Power Plant site on January 31, 1986. We particularly would like input on your plans and schedule with respect to the recommendation made in that report regarding the use of sensitive seismological instruments over the next few years for the assessment of any connection between the chemical waste injection wells and the January 31, 1986 earthquake event.

It is requested that you advise the Perry Project Manager (John J. Stefano), within one week after receipt of this letter, of your comments on the enclosed report, and of your plans and schedule for the seismological monitoring of the injection wells.

Sincerely,

Original Signed by

Walter R. Butler, Director
BWR Project Directorate No. 4
Division of BWR Licensing

Enclosure: As stated

cc: See next page

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

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Sincerely,

A handwritten signature in cursive script that reads "Walter R. Butler".

Walter R. Butler, Director
BWR Project Directorate No. 4
Division of BWR Licensing

Enclosure: As stated

cc: See next page

Mr. Murray R. Edelman
The Cleveland Electric
Illuminating Company

Perry Nuclear Power Plant
Units 1 and 2

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
ADVISORY COMMITTEE ON REACTOR SAFEGUARDS
WASHINGTON, D. C. 20555

March 17, 1986

Honorable Nunzio J. Palladino
Chairman
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Dear Dr. Palladino:

SUBJECT: ACRS REPORT ON THE PERRY NUCLEAR POWER PLANT, UNIT 1

During its 311th meeting, March 13-15, 1986, the Advisory Committee on Reactor Safeguards discussed the Ohio earthquake which occurred on January 31, 1986 and reviewed its implications with respect to the Perry Nuclear Power Plant, Unit 1. A meeting of the Subcommittee on Extreme External Phenomena was held on March 12, 1986 to consider this matter. The Reactor Operations Subcommittee discussed this matter during a meeting on February 12, 1986 and the full Committee was briefed during the 310th ACRS meeting, February 13-15, 1986. During our review, we had the benefit of discussions with representatives of The Cleveland Electric Illuminating Company (Applicant), the NRC Staff, and the U. S. Geological Survey (USGS) Staff. We also had the benefit of the documents referenced and comments from several ACRS consultants. We commented on the application for a license to operate this plant on July 13, 1982.

This earthquake occurred near Leroy, Ohio, and was characterized by relatively low energy, low velocities, small displacements, a short duration, and a response spectrum rich in high frequencies. Except at the relatively less significant high frequencies, the excitation of the plant structures and equipment was much less than that considered in the seismic design basis.

No significant damage was observed at the Perry plant in the inspections which were performed by the Applicant and the NRC Staff. The Cleveland Electric Illuminating Company, by using analysis and comparisons with prior qualification testing, has found that all the structures and equipment analyzed thus far have substantial margins of safety relative to the loads and stresses induced by the earthquake. The NRC Staff and our consultants concur in that conclusion.

The NRC Staff has several confirmatory actions that it will require of the Applicant prior to operation above 5 percent power. These confirmatory actions include the analyses of a large sample of equipment. We support the NRC Staff's proposed confirmatory actions.

There currently exists some possibility that the January 31, 1986 earthquake is related to deep well injection activities that took place between the Perry plant site and the town of Leroy or to solution mining

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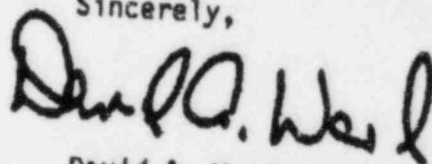
March 17, 1986

that took place in this area. The NRC Staff has engaged the services of USGS to evaluate these hypotheses to see if there really may be a causal connection, and, if so, whether there is any likelihood of substantially larger earthquakes in the future. The NRC Staff will keep the ACRS informed as to the progress of the USGS work.

One of the ACRS consultants suggested that monitoring with sensitive seismological instruments over the next few years would be helpful in assessing the possible causal connection between the deep well injection and the January 31, 1986 earthquake. The USGS representatives attending our discussions agreed that such seismic monitoring would be valuable. Therefore, unless the USGS and the NRC are able to decide that there is no causal connection or that earthquakes of a magnitude sufficient to be of concern can be ruled out from this cause, we recommend that The Cleveland Electric Illuminating Company assure that appropriately sensitive monitoring be continued over the next few years.

We agree with the NRC Staff that the January 31, 1986 earthquake is unlikely to lead to any requirements that would significantly change the design of the Perry plant's structure or its equipment. Based on the information developed in these meetings and considering the above comments, we find no reason to alter the conclusions stated in the Committee's report dated July 13, 1982 regarding operation of this nuclear plant.

Sincerely,



David A. Ward
Chairman

References:

1. The Cleveland Electric Illuminating Company, "Seismic Event Evaluation Report, Perry Nuclear Power Plant," dated February 1986
2. Letter dated March 5, 1986 from Robert M. Bernero, Director, Division of BWR Licensing, NRC, to David Ward, Chairman, ACRS, Subject: Perry Seismic Safety Evaluation, with attached Safety Evaluation Report dated March 1986