



**CENTERIOR
ENERGY**

PERRY NUCLEAR POWER PLANT

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VICE PRESIDENT - NUCLEAR

June 4, 1991
PY-CEI/NRR-1355 L

U.S. Nuclear Regulatory Commission
Document Control Desk
Washington, D. C. 20555

Perry Nuclear Power Plant
Docket No. 50-440
Seismic Monitoring
Report Number 17

Gentlemen:

Enclosed for your information is Seismic Monitoring Report Number 17 for the CEI operated Micro-Net, which is monitoring an area in the vicinity of two waste injection wells, operated by ICI Americas (formally Calhio), located 3 miles south of the Perry Nuclear Power Plant (PNPP) site. This report provides data and event analysis for the period between January 1, 1991 and March 31, 1991. Appendix A of the report provides the volumetric data from the two ICI Americas injection wells for the same period. Results of seismic monitoring for this reporting period are summarized below.

During the first quarter of 1991, one small event ($M_c = -0.2$) was detected on January 17 in the January 31, 1986 epicentral area, while no events were detected in the corridor between the January 31, 1986 epicenter and the injection wells.

Three other earthquakes, with locations outside the CEI network, were detected. On January 26, an event ($M_c = 3.5$), was located in Lake Erie, offshore of Euclid, Ohio, a suburb east of Cleveland. The event was felt throughout the Cleveland metropolitan area, however, no damage was reported, and the event did not trigger strong motion instrumentation at the Perry Nuclear Power Plant. Appendix B summarizes a felt report survey for this event. Another event ($M_c = 0.3$) was detected on February 25 and was located in Lake Erie, about 14 km north of PNPP. The third event ($M_c = 2.3$), which was not felt, occurred on March 12 and was located between Solon and Aurora, Ohio, suburbs southeast of Cleveland.

Operating Companies
Cleveland Electric Illuminating
Toledo Edison

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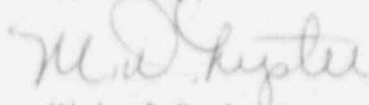
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The events recorded this quarter are consistent with a previously observed pattern of regionally scattered low seismicity. This observation remains consistent with our assessments after the 1986 earthquake and provides further evidence that our seismic monitoring program can now be re-evaluated.

Please contact us should you have any questions.

Sincerely,



Michael D. Lyster

MDL:MJH:njc

Attachment

cc: NRC Project Manager
NRC Resident Inspector Office
NRC Region III
R. Rothman