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PERRY NUCLEAR POWER PLANT

Al Kaplan

VICE PRESIDENT
NUCLEAR GROUP

May 06, 1988
PY-CEI/NRR-0856 L

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

Perry Nuclear Power Plant
Docket Nos. 50-440; 50-441
Sixth Quarterly
Seismic Monitoring Report

Gentlemen:

Enclosed for your information is the Sixth Quarterly Seismic Monitoring Report for the CEI operated Micro-net, which is monitoring an area in the vicinity of two waste injection wells located about 3 miles south of the FNPP site. This report provides data and event analysis for the time period between January 1, 1988 and March 31, 1988.

Monitoring Results Within Network Configuration

During this quarter three microearthquakes ($M_c = 1.8, 0.5$ and 0.5) occurred within the network aperture, automatically triggering the digital seismic monitoring system on January 16, 17 and February 5, 1988. Additionally, five other records were detected upon a close examination of the analog records and were assigned magnitudes $M_c = -0.6$, too low to provide an automatic system trigger. These tiny events are thought to be foreshocks and aftershocks of the January 16 event. All of the events are clustered to the northern edge of the cumulative seismicity pattern.

The potential for a relationship between the local injection wells and the microseismicity continues to be evaluated. The local microseismicity remains near the injection wells at a depth of about 2 km. Analysis of seismic events occurrence and concurrent injection well operating data is being conducted, looking for a possible correlation. The analysis is monitoring well no. 1 and well no. 2 independently. Additional monitoring data will be required to properly assess the origin of the microseismicity.

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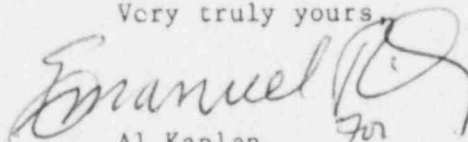
Although there exists microseismicity in the vicinity of the injection wells, these events are not considered to be associated with the January 31, 1986 Leroy earthquake which occurred 8 miles south of the wells.

Monitoring Results Outside Network Configuration

Another event, outside the network aperture of study, was recorded 40/50 miles south of the plant and was estimated to be a magnitude $M_c = 2.8$. This event was lightly felt in the surrounding area of Nelson, Ohio, however, it was only reported to your staff to keep them informed.

This report will continue to be submitted on a quarterly basis. The next report will cover the period between April 1, 1988 and June 30, 1988.

Very truly yours,



Al Kaplan
Vice President
Nuclear Group

AK:cab

cc: T. Colburn
K. Connaughton
Leon Reiter