



THE CLEVELAND ELECTRIC ILLUMINATING COMPANY

P.O. BOX 97 ■ PERRY, OHIO 44081 ■ TELEPHONE (216) 259-3737 ■ ADDRESS-10 CENTER ROAD

Serving The Best Location in the Nation
PERRY NUCLEAR POWER PLANT

Al Kaplan

VICE PRESIDENT
NUCLEAR GROUP

March 16, 1988
PY-CEI/NRR-0825 L

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

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

Gentlemen:

Enclosed for your information is the Fifth 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 PNPP site. This report provides data and event analysis for the time period between October 16, 1987 and December 31, 1987. This represents a minor deviation from previous reporting periods by concluding the reporting in December rather than January 15, 1988. This was done to conveniently have the reporting period coincide with "calendar" quarters.

Monitoring Results Within Network Configuration

For this quarter there was very little seismic activity recorded in the vicinity of the injection wells. Only one microseismic event was detected as shown on Figure 2 of the report. This event was extremely small being under $M_c=0.0$.

A potential 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. Correlation between seismic events occurrence and well operation data is being studied. Other potential influencing factors have not been totally eliminated such as oil/gas well operation which is highly concentrated in the area.

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.

8803230246 880316
PDR ADCK 05000440
R DCD

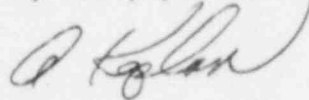
COOL
1/1

Monitoring Results Outside Network Configuration

During this period three other small events, outside the network, were recorded. Two in the vicinity of the July 13 Asthabula event, about 20 miles away, were recorded on December 19 ($M_c=2.0$) and December 25 ($M_c=2.2$). The third event, near Painesville and in the locale of an earlier reported micro earthquake, was recorded on December 29 ($M_c=1.3$).

This report will continue to be submitted on a quarterly basis. The next report will cover the period between January 1, 1988 and March 31, 1988.

Very truly yours,



Al Kaplan
Vice President
Nuclear Group

AK:cab

cc: T. Colburn
K. Connaughton
Leon Reiter