OCT 1 8 1972

R. OC. DeYoung, Assistant Director for PWR's, L.

INDIAN POINT #3

PLANT NAME: Indian Point #3

LICENSING STAGE: OL DOCKET NUMBER: 50-286

RESPONSIBLE BRANCH: PWR #1

REQUESTED COMPLETION DATE: October 20, 1972

APPLICANTS RESPONSE DATE NECESSARY FOR

NEXT ACTION PLANNED ON PROJECT: December 20, 1972

DESCRIPTION OF RESPONSE: Answers to Questions

REVIEW STATUS: Q-2

Enclosed are our questions covering the geological and foundations engineering aspects of the Indian Point Unit 3 site for transmittal to the applicant.

signed by

H. R. Denton

Harold R. Denton, Assistant Director for Site Safety Directorate of Licensing

Enclosure: As stated

w/o enclosure

A. Giambusso

W. McDonald

cc: w/enclosure

S. H. Hanauer

J. Hendrie

D. Vassallo

H. Spector

R. McMullen

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INDIAN POINT, UNIT 3, DOCKET NO. 50-286

GEOLOGY AND FOUNDATION ENGINEERING QUESTIONS

The regional geology and seismology were evaluated by USGS and NOAA for the Indian Point Unit 3 PSAR review. The results of their evaluations are still considered to be valid, however, there is insufficient information included within the PSAR and supplements, and the FSAR to evaluate the adequacy of specific foundation conditions beneath Category I structures. Please provide the following:

- Plot plan showing the locations of all Unit 3
 Category I structures, and the locations of borings, profiles, trenches and excavations;
- 2. Geologic profiles showing the relationship between Category I structures and the details of the foundation materials;
- 3. Indentification and evaluation of deformational zones such as shears, joints, fractures, zones of structural weakness relative to Category I foundations;
- 4. Logs of borings not included in the PSAR or FSAR for all units, geologic logs of any trenches dug during the investigations, or logs of excavations for structures:

- 5. Any additional evidence to support the conclusion that there are no cavities or cavernous conditions at the site;
- 6. Definition of site ground water conditions in light of any new information acquired since the PSAR review;
- 7. Geophysical data such as seismic refraction, uphole etc;
- 8. Any available information regarding Units 1, 2 and 3 to indicate the adequacy of design such as foundation performance records since construction, settlement records, etc.;
- 9. Summary of the static and dynamic properties of foundation materials substantiated with representative laboratory test records;
- 10. Description of techniques and the adequacy of operations to improve foundation conditions, such as: grouting, dental work, rock bolting, etc.