



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY  
WASHINGTON 25, D. C.

BUCKET

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August 29, 1966

Mr. Edson G. Case, Assistant Director  
Division of Reactor Licensing  
U. S. Atomic Energy Commission  
4915 St. Elmo Avenue  
Bethesda, Maryland 20545

Dear Mr. Case:

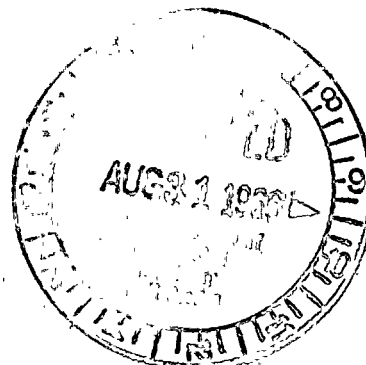
Transmitted herewith is a preliminary draft report concerning the aspects of the geology of the Turkey Point site that may have a bearing on your evaluation of suitability.

Sincerely yours,

*Donald R. Nichols*

Donald R. Nichols  
Acting Assistant Chief Geologist  
for Engineering Geology

Enclosure



2500

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DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY  
WASHINGTON, D.C.



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*Handwritten signature*  
R. M. ...

DOCKET NO.

50-250 file Copy  
-251 Suppl. Only

Florida Power and Light Company  
Turkey Point Nuclear Generating Units No. 3 and No. 4  
by H. W. Coulter

The logs of borings presented in U. S. Atomic Energy Commission docket 50-250 and 50-251 Supplement No. 2, indicate that the deposits underlying the proposed plant comprise a heterogeneous assemblage of limestone and calcareous sand. The deposits range from relatively hard and well-cemented to weak, soft and uncemented. Interconnected solution cavities and voids are abundant and randomly distributed throughout the sampled section. It is unlikely that laboratory tests of compressive strength performed on selected core samples from a sequence of materials of this type will adequately characterize the average bearing capacity of these deposits throughout the entire foundation area. Individual load tests for proper foundation design of each concrete mat or spread footing may be required.

Assuming wave action of the magnitude which may be anticipated accompanying a hurricane flood tide of 14' m.s.l. and maximum wind velocities of the order of 190 m.p.h. consideration should be given to the following contingencies:

1. Deposition of wave carried sediment and debris in the intake channel and at the mouth of the intake structure which may seriously restrict the total intake capacity.

2. Unless adequate wave resistant facings are provided on the revetment slopes surrounding the plant, rapid erosion which could imperil those portions of the plan footings founded on compacted limerock fill may take place.

INTERNATIONAL TELEGRAPHIC



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3. There is no apparent wave protection provided for the fuel storage tanks on the north side of the installation. Wave damage to these structures could result in a general conflagration in the immediate environs of the plant or mixing of fuel oil with cooling water at the intake structure.

