UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555

JAN 8 1979

MEMORANDUM FOR: J. Carl Stepp, Chief
Geosciences Branch, DSE

THRU: Robert E. Jackson, Leader
Geology & Seismology Section
Geosciences Branch, DSE

FROM: A. T. Cardone, Geologist
Geology & Seismology Section
Geosciences Branch, DSE

SUBJECT: SITE VISIT TO SHEARON HARRIS NUCLEAR POWER PLANT

On December 8, 1978 I visited the Shearon Harris plant site to inspect the main dam core trench between stations 2+90 and 3+90 and the diversion conduit excavation in the vicinity of station 2+50. I was accompanied by representatives of the Carolina Power and Light Company (CP&L) and Ebasco Construction Company. Prior to the field inspection I attended a presentation by Ebasco geologists which provided the results of their structural analysis and thin section study of the schistose zone in the diversion conduit excavation west wall. Following the field inspection all parties met to discuss the conditions observed in the field and to plan a program of investigation and inspection of the main dam core trench. An attendance list is enclosed.

The brittle fracturing and minor faults designed A, B and C, reported to us on November 9, 1978 and observed in the main dam core trench, demonstrate more recent deformation of the rock than the old, deep, ductile deformations which apparently caused the major fault movements in the region. While observing the minor faulting in the south half of the core trench between stations 2+90 and 3+90, I observed evidence of possible significant larger scale faulting in the station area along the northwest wall of the trench. I brought this to the attention of representatives of CP&L and Ebasco, requesting that the area be mapped in detail with special attention to possibly more significant faulting than that already observed. After inspecting the schistose zone in the diversion conduit excavation west wall, I informed CP&L that I had completed my inspection and would require no further information on the area.

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CP&L personnel indicated in the meeting that they expect more faults to be uncovered later and they would like to have an understanding with us that each disclosure doesn't require immediate notification to NRC. They want to characterize and categorize the faults in the area and thus be able to evaluate the significance of newly discovered faults. This characterization would determine whether or not a fault would be reported to NRC. I responded that this was unacceptable since NRC staff must evaluate any faulting at nuclear power plant sites. I said that CP&L is expected to inform NRC of newly-discovered faults as per the November 16, 1978 memo from J. C. Stepp to O. D. Parr. We would evaluate the significance of the newly-discovered faults with respect to our current knowledge of site faulting and its age of last movement. If a site visit is deemed necessary, every effort would be made to visit the site as soon as possible to avoid disrupting construction schedules. At the meeting, I was informed that the rockfill testing for the main dam would begin January 1979; and the U. S. Corps of Engineers, as per arrangements made with NRC staff, will do the testing. Additional material for rockfill will come from the spillway area excavation. Drilling and grouting completed to date is roughly between stations 4+00 and 4+50 of the main dam core trench. The low secondary grout take confirmed the low primary grout take.

For the Auxiliary dam and dike the random rockfill zone testing is being done to confirm the Ebasco CH-8 specs. The testing now done used CH-4 specs for the West Auxiliary dam and the emergency service water discharge. Testing will be completed the week of December 17, 1978. Consolidation grouting between stations 29+00 to 33+00 will be completed by the end of December 1978.

A. T. Cardone, Geologist
Geology and Seismology Section
Geosciences Branch
Division of Site Safety and
Environmental Analysis

Enclosure:
As stated

cc: w/enclosure

R. Denise
J. Stepp
L. Heller
R. Jackson
O. Thompson
S. Miner
T. Cardone
D. Vassallo
PDR
Local PDR

Bob Black	CP & L Licensing
Ashleigh Lucas	CP & L Project Resident Engineer
Ismail Ciloglu	EBASCO - Geologist
David Danady	CP & L Geologist
Gary Forrest	CP & L
Stephen B. Harper	EBASCO - Geologist
George Forehand	CP & L Site Principal QA Specialist
Sarah Wilkinson	EBASCO - Geologist
Tom Cardone	NRC
. Wilcox, Jr.	NRC - OIE
R. Bradley	NRC - OIE
G. L. Stirewalt	EBASCO Principal Geologist
W. Tilford	EBASCO - Geologist
R. Parsons	CP & L Site Manager SHNPP

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