TENNESSEE VALLEY AUTHORITY
CHATTANOOGA TENNESSEE 37401

400 Chestnut Street Tower II

October 24, 1979

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Dear Mr. Denton:

In the Matter of the Application of	)	Docket Nos. STN 50-553
Tennessee Valley Authority	)	STN 50-554

In a September 24, 1979, telephone conversation, Jerry Wills of my staff notified Bob Benedict of your staff that additional faults had been discovered at our Phipps Bend Nuclear Plant in the area of the unit 1 ESW pumping station. A conference call was subsequently made to the NRC geologist, Sandra Wastler, on September 24, 1979, to discuss the fault. The enclosure provides a detailed description of this feature.

We do not consider this minor fault to be capable within the meaning of Appendix A to 10 CFR Part 100.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

L. M. Mills, Manager
Nuclear Regulation and Safety

Enclosure

1240 232

BOB S. 1 ORIGINAL PHOTOS TO FILES

7910300 155

A

PHIPPS BEND NUCLEAR PLANT

REVERSE AND TRANSVERSE FAULTS

IN THE UNIT 1 ESW PUMPING STATION

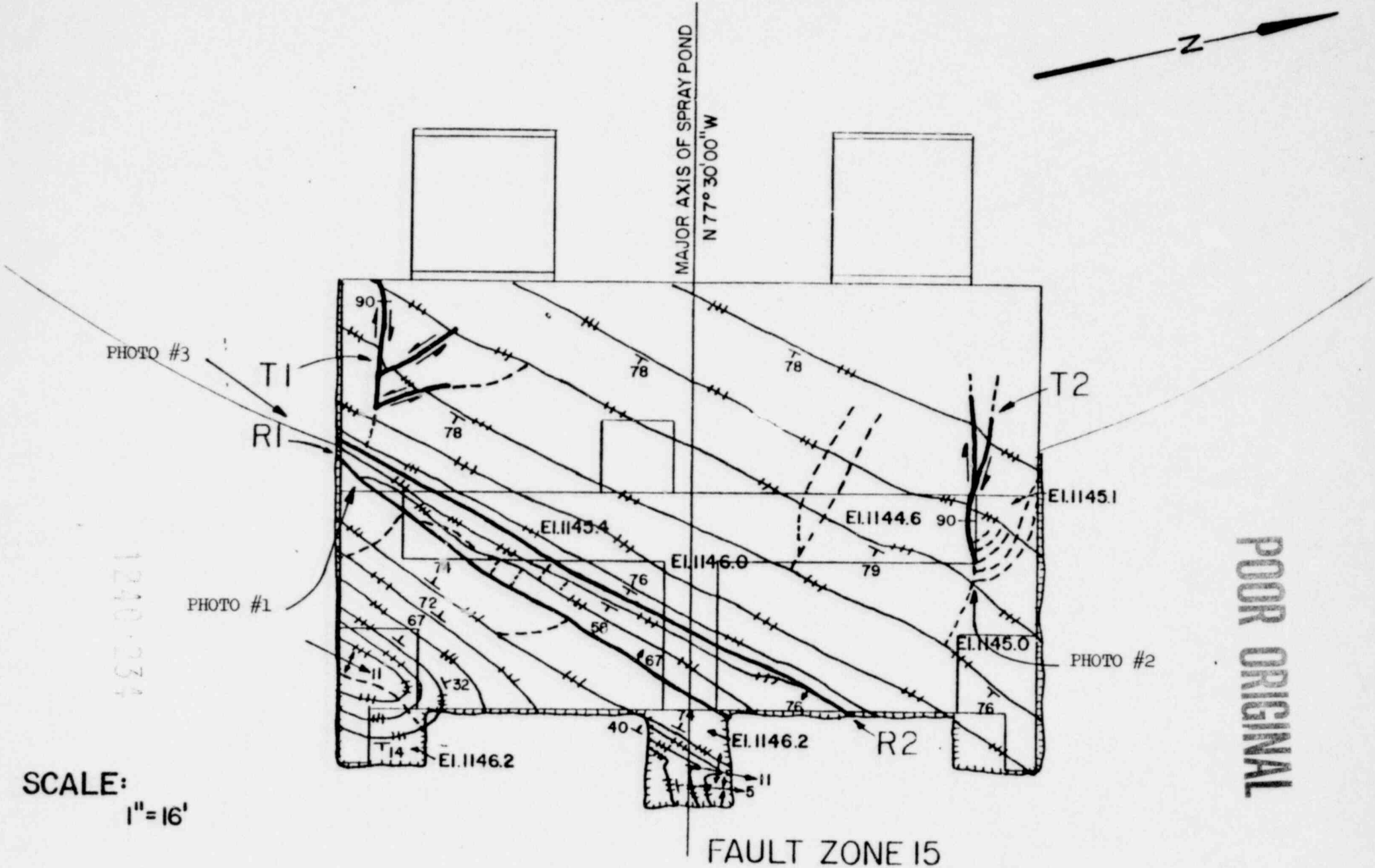
Geologic mapping of foundation bedrock in the Unit 1 ESW pumping station has revealed two reverse faults in the southeast quadrant of the building, and two transverse faults located west of the reverse faults. They are grouped as fault zone 15 and designated R1, R2, T1, and T2 (see attached photos and drawing for locations).

Faults R1 and R2 are reverse faults parallel to the axis of an anticline to the southeast. R1 dips 67° NW. and strikes N. 50° E. R2 dips 76° SE. and strikes N. 50° E. Both fault traces are defined by calcite-healed fractures that extend across the floor of the excavation from the south wall to the east wall of the building.

Transverse faults T1 and T2 are located west and northwest, respectively, of R1 and R2. T1 consists of three nearly vertical branches, one striking N. 52° W., and the other two striking N. 10° E The fault traces are defined by calcite-healed fractures that offset bedding from 3 to 7 inches. T2 is 70 feet north of T1 and exhibits essentially the same characteristics.

All four faults described were formed during the Paleozoic Era and are characteristic of tectonic forces that developed during the formation of the Saltville fault family. These faults, having been stable for 250 my, are not considered to be capable of producing ground offsets or generating earthquakes. Therefore, we do not classify them as capable faults, within the meaning of Appendix A to 10 CFR Part 100.

UNIT 1 ESW PUMPING STATION



SCALE:
1" = 16'

FAULT ZONE 15

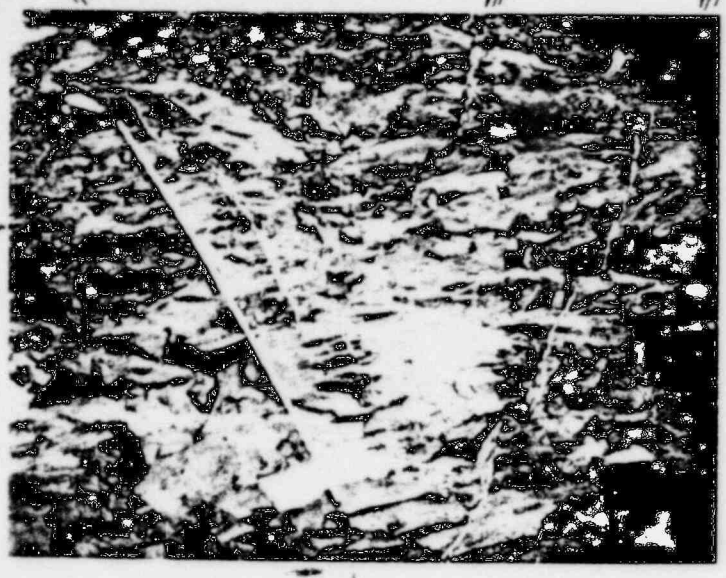


PHOTO #1 - Fault zone #15 - T1
View Northwest

PHOTO #3 - Fault zone #15 - R1 & R2
View Northeast

PHOTO #2 - Fault zone #15 - T2
View Northwest