TENNESSEE VALLEY AUTHORITY
CHATTANOOGA, TENNESSEE 37401
500C Chestnut Street Tower II

JUN 14 1979

Mr. Harold R. Denton, Director
Division 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 June 4, 1979, telephone conversation, Jerry Wills of my staff notified Bob Benedict of your staff that an additional fault had been discovered at our Phipps Bend Nuclear Plant in the unit 2 turbine building area. A conference call was subsequently made to the NRC geologist, Sandra Wastler, on June 4, 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,

J. E. Gilleland
Assistant Manager of Power

Enclosure

2309 080

B001
SE 1/1

Pictures To
Reg Files

7906190 381

An Equal Opportunity Employer

ENCLOSURE

PHIPPS BEND NUCLEAR PLANT

Transverse Fault In Unit 2 Turbine Building

Top of rock cleaning in unit 2 turbine building has exposed a fault which trends northerly across beds striking N. 53° E and dipping southeast, located north of the northeast corner of the central service facility.

The fault can be described as a transverse[1] fault, one which is normal to the regional trend of the geologic structure. The fault is located 267 feet east of the unit 1 north-south baseline and 150 feet south of the east-west baseline. See attached map for location. It strikes N 30° E, dips nearly vertical and extends a total of four feet to the north where it terminates into a calcite filled bedding plane. It originates from a calcite filled bedding plane, two feet east of the northern terminus of a series of northerly striking en echelon joints. The fault is defined by a tight, calcite healed fracture zone exibiting right lateral movement and offsetting beds striking N 53° E, a maximum of four inches. See attached photographs.

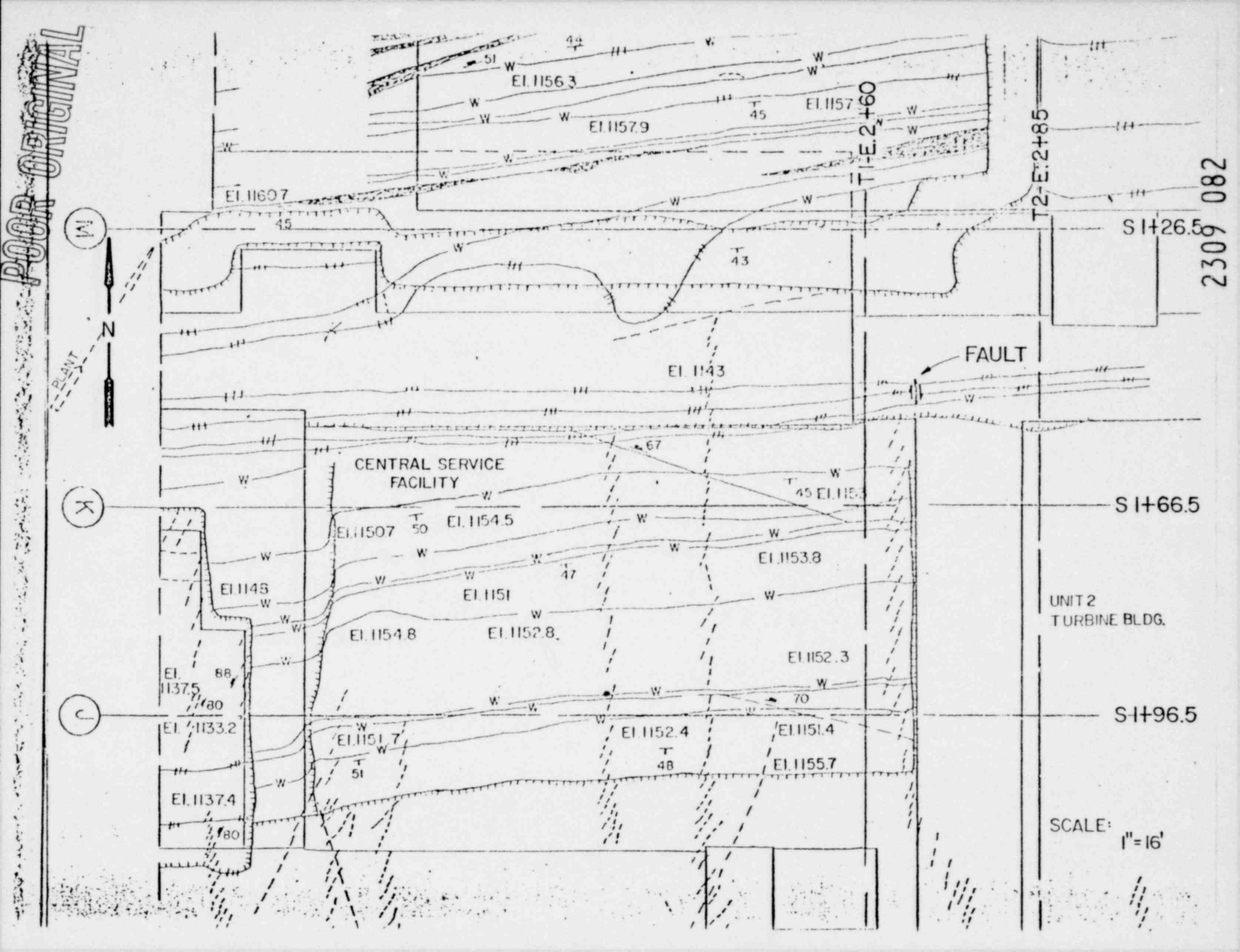
This type fault has been described in the Phipps Bend Nuclear Plant PSAR, section 2.5.1.1.2-14, as a minor cross fault and is considered by Rogers (ref. 93 PB PSAR) to be commonplace in the Saltville Fault family area (four miles northwest of the Phipps Bend site).

The fault was formed by stress relief due to pressure from the northwest and southeast directions during the formation of the Saltville Fault family (250 mybp). This fault, having been stable for 250 million years, is not considered to be capable of producing ground offsets or generating earthquakes. Therefore, we do not classify it as a capable fault, within the meaning of Appendix A to 10 CFR part 100.

---

1. M. P. Billings, Structural Geology (1972): Englewood Cliffs, New Jersey, Printice-Hall, Inc., 3d., p. 194.

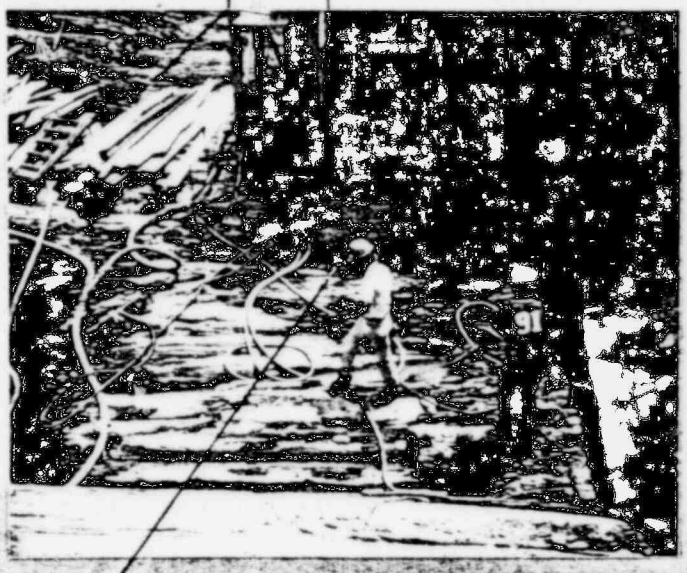
2309 081


POOR ORIGINAL
2309 082
E.2+60
T2-E.2+85
EL.1156.3
EL.1157
EL.1157.9
EL.1160.7
S 1+26.5
FAULT
EL. 1143
CENTRAL SERVICE FACILITY
EL.1153
S 1+66.5
EL.1154.5
EL.1150.7
EL.1153.8
EL.1148
EL.1151
EL.1154.8
EL.1152.8
UNIT 2
TURBINE BLDG.
EL.1152.3
EL. 1137.5
S 1+96.5
EL. 1133.2
EL.1151.7
EL.1152.4
EL.1151.4
EL.1155.7
EL.1137.4
SCALE: 1"=16'
PLANT
N

POOR ORIGINAL

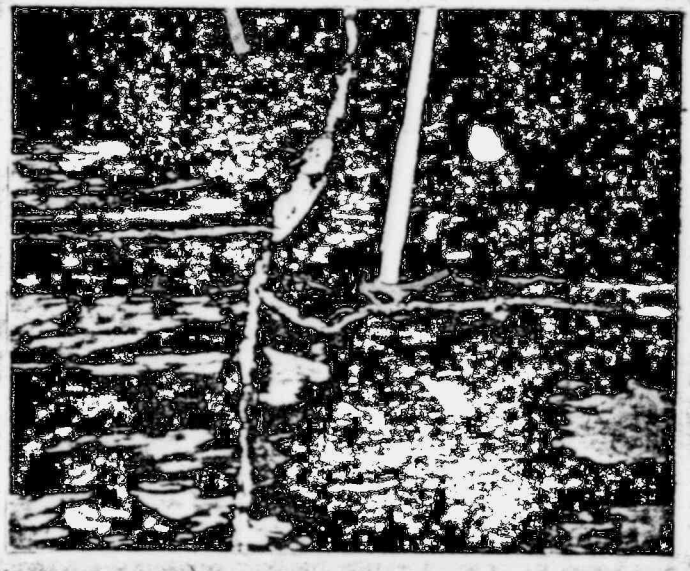
Sta. E 2+80

NE Corner CSF



Fault

N

2309 083

North end of fault