APR 22 1980

SCINS 50-327

MEMORANDUM FOR: H. D. Thornburg, Director, Division of Reactor Construction Inspection, IE

FROM: C. E. Murphy, Chief, Reactor Construction and Engineering Support Branch, RII

SUBJECT: RII REPORT NO. 50-327/80-12 CONCERNING INSPECTION PERFORMED TO EVALUATE REPAIR OF SEQUOYAH UNIT 1 PRESSURIZER RELIEF LINE

The subject report is enclosed. It is to be noted that the report has not been reviewed as yet by the licensee for proprietary information as described in 10 CFR 2.790.

Since this is a sensitive issue, it is requested that you forward this report to the appropriate branch in NRR Division of Project Management for their information.

C. E. Murphy, Chief
Reactor Construction and Engineering
Support Branch

Enclosure:
IE Report No. 50-327/80-12

CONTACT: P. K. VanDoorn
242-5586

8008210243

RCES3:RII	RCES3:RII	RCES3:RII
PKVanDoorn:cw	ARHerdt	CEMurphy
4/21/80	4/ /80	4/ /80

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
101 MARIETTA ST., N.W., SUITE 3100
ATLANTA, GEORGIA 30303

APR 18 1980

In Reply Refer To:
RII:PKV
50-327/80-12
50-328/80-07

Tennessee Valley Authority
ATTN: H. G. Parris
Manager of Power
500A Chestnut Street Tower II
Chattanooga, TN 37401

Gentlemen:

This refers to the inspection conducted by P. K. VanDoorn of this office on March 17-20, 1980 of activities authorized by NRC Operating License No. DPR-77 and Construction Permit No. CPPR-73 for the Sequoyah facilities, and to the discussion of our findings held with T. B. Northern at the conclusion of the inspection.

Areas examined during the inspection and our findings are discussed in the enclosed inspection report. Within these areas, the inspection consisted of selective examinations of procedures and representative records, interviews with personnel, and observations by the inspectors.

Within the scope of this inspection, no items of noncompliance were disclosed.

One new unresolved item resulted from this inspection and is discussed in the enclosed report. This item will be examined during subsequent inspections.

In accordance with Section 2.790 of the NRC's "Rules of Practice", Part 2, Title 10, Code of Federal Regulations, a copy of this letter and the enclosed inspection report will be placed in the NRC's Public Document Room. If this report contains any information that you (or your contractor) believe to be proprietary, it is necessary that you make a written application within 20 days to this office to withhold such information from public disclosure. Any such application must include a full statement of the reasons on the basis of which it is claimed that the information is proprietary, and should be prepared so that proprietary information identified in the application is contained in a separate part of the document. If we do not hear from you in this regard within the specified period, the report will be placed in the Public Document Room.

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Should you have any questions concerning this letter, we will be glad to discuss them with you.

Sincerely,

C. E. Murphy, Chief
Reactor Construction and
Engineering Support Branch

Enclosures:
Inspection Report Nos. 50-327/80-12
and 50-328/80-07

cc w/encl:
G. G. Stack, Project Manager
P. O. Box 2000
Daisy, TN 37319

J. M. Ballentine
Plant Superintendent
P. O. Box 2000
Daisy, TN 37319

J. F. Cox
400 Commerce Street
W10C131 C-K
Knoxville, TN 37902

M. J. Burzynski, Project Engineer
400 Chestnut Street Tower II
Chattanooga, TN 37401

T. B. Northern
Construction Engineer
Post Office Box 2000
Spring City, TN 37381

H. N. Culver
249-A HBB
400 Commerce Avenue
Knoxville, TN 37902

REGION II
101 MARIETTA ST., N.W., SUITE 3100
ATLANTA, GEORGIA 30303

APR 18 1980

Report Nos. 50-327/80-12 and 50-328/80-07

Licensee: Tennessee Valley Authority
500A Chestnut Street
Chattanooga, TN 37401

Facility Name: Sequoyah

Docket Nos. 50-327 and 50-328

License Nos. DPR-77 and CPPR-73

Inspection at Sequoyah Nuclear Plant near Chattanooga, Tennessee

Inspector: P. K. VanDoorn — 4/15/80 Date Signed

Accompanying Personnel: L. D. Zajac (Training)

Approved by: A. R. Herdt, Section Chief, RCES Branch — 4/17/80 Date Signed

SUMMARY

Inspection on March 17-20, 1980

Areas Inspected

This special, announced inspection involved 62 inspector-hours on site in the areas of preservice inspection (Unit 2) and review of actions taken to assure soundness of the pressurizer relief pipe (Unit 1).

Results

Of the two areas inspected, no items of noncompliance or deviations were identified.

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DETAILS

1. Persons Contacted

Licensee Employees

W. F. Popp, Assistant Plant Superintendent
*T. B. Northern, Jr., Construction Engineer
*L. W. Jones, Supervisor, Mechanical & Welding Inspection Unit
*L. McCloud, Nuclear Power QA Supervisor
*J. M. Munns, Construction QA Supervisor
P. Guthrie, Singleton Laboratory Metallurgist
C. R. Brimer, Outage Director
*K. G. Galloway, Radiographer
E. A. Merrick, ENDES Metallurgical Engineer
W. J. Glasser, Office of Power QA Coordinator
J. H. Fox, Power Production Metallurgist
*J. Lewis, Mechanical Engineer
J. R. Haueter, Welding Engineer

Other licensee employees contacted included three construction craftsmen and four technicians.

NRC Resident Inspector

*S. D. Butler

*Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on March 20, 1980 with those persons indicated in Paragraph 1 above.

3. Licensee Action on Previous Inspection Findings

Not inspected.

4. Unresolved Items

Unresolved items are matters about which more information is required to determine whether they are acceptable or may involve noncompliance or deviations. One new unresolved item identified during this inspection is discussed in paragraph 5.b.

5. Independent Inspection Effort (Unit 2)

a. The inspectors reviewed portions of the preservice inspection program (Surveillance Instruction No. 114) and piping angle beam ultrasonic test (UT) Procedure No. UT-1 being employed by TVA. The inspectors observed 45-degree UT inspection of weld No. RHRS-183 for conformance

to program/procedure requirements. Note: Calibration check performed after this inspection was unsuccessful and, therefore, TVA indicated that inspection of this weld would be redone.

b. On March 20, 1980 the inspectors noticed a carbon steel pipe within the Unit 2 containment which had a series of discoloration spots due to application of a flame heat source. The flame heat had apparently been used to assist in bending the pipe. The pipe was marked as No. 47W-450-288, Ht. N37511. It was not determined during this inspection if a site requirement had been violated. Until it can be determined if this item is in noncompliance this will be unresolved Item No. 50-328/80-07-01 - Use of Flame Heat for Pipe Bending.

No items of noncompliance or deviations were identified.

Review of Actions Concerning Soundness of Pressurizer Relief Line (Unit 1)

a. In May 1979, the Unit 1 pressurizer relief line (6-inch stainless steel pipe) was deformed during hot functional testing of the reactor coolant system. Deformation was corrected by use of a weld draw bead technique. (Previous documentation is provided in RII Report Nos. 50-327/79-36, 50-327/79-72 and 50-327/80-02). By NRC letter, TVA has been granted relief from post weld re-hydro testing of the pressurizer relief line based on TVA's contention that full penetration had not been achieved during realignment welding. This inspection was conducted to further verify that full penetration was not achieved.

b. Based on a March 13 meeting between TVA and NRC, Office of Nuclear Reactor Regulation (NRR), TVA performed in place metallographic analysis of the weld heat affected zones (HAZ) of the two groove welds which had been utilized by TVA to affect the line repair. Six HAZ areas were polished utilizing portable field polishing equipment. These areas were electrolytically etched using 10% oxalic acid solution similar to Method A of ASTM A262. This is a standard method to determine whether carbide precipitation (called sensitization) has taken place at the material grain boundaries. The areas were observed at magnifications up to 400X using a portable field metallurgical microscope. The inspectors observed this field metallurgical work in its entirety, including observation of the areas through the microscope. Only slight intermittent ditching was noted in only several grains of hundreds of grains observed under the microscope. The material was therefore considered to be nonsensitized. The lack of a band of sensitization prevented determination of the HAZ width. Also noted was a very small grain size in comparision with grain size of a mockup which had been previously welded by TVA to gather data for this repair. It is generally considered that smaller grain size imparts improved resistance to intergranular carbide precipitation. The inspector requested that the portable polishing equipment be utilized on the TVA mockup which contained a known degree of sensitization in order to show that the equipment was capable of providing an adequate metallurgical polish. TVA verbally reported to the inspector that the carbide