



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
230 PEACHTREE STREET, N.W. SUITE 1217
ATLANTA, GEORGIA 30303

JUL 19 1977

In Reply Refer To:
RII:WBS
50-390/77-7
50-391/77-7

Tennessee Valley Authority
Attn: Mr. Godwin Williams, Jr.
Manager of Power
830 Power Building
Chattanooga, Tennessee 37401

Gentlemen:

This refers to the inspection conducted by Mr. W. B. Swan of this office on June 20-23, 1977, of activities authorized by NRC Construction Permit Nos. CPPR-91 and CPPR-92 for the Watts Bar Nuclear Plant, Unit 1 and 2 facilities, and to the discussion of our findings held with Mr. T. B. Northern, Jr. on June 22 and 23, 1977.

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

During the inspection, it was found that certain activities under your license appear to be in noncompliance with NRC requirements. These items and references to pertinent requirements are listed in the attached Notice of Violation to this letter. This notice is sent to you pursuant to the provisions of Section 2.201 of the NRC's "Rules of Practice," Part 2, Title 10, Code of Federal Regulations. Section 2.201 requires you to submit to this office, within 20 days of your receipt of this notice, a written statement or explanation in reply including: (1) corrective steps which have been taken by you, and the results achieved; (2) corrective steps which will be taken to avoid further noncompliance; and (3) the date when full compliance will be achieved.

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 attached inspection report will be placed in the NRC's Public Document Room. If this report contains any information that you believe to be proprietary, it is necessary that you submit a written application to this office requesting that such information be withheld from public disclosure. If no proprietary information is identified, a written

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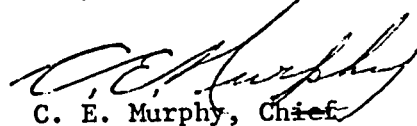
Tennessee Valley Authority

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statement to that effect should be submitted. If an application is submitted, it must fully identify the bases for which information is claimed to be proprietary. The application should be prepared so that information sought to be withheld is incorporated in a separate paper and referenced in the application since the application will be placed in the Public Document Room. Your application, or written statement, should be submitted to us within 20 days. If we are not contacted as specified, the attached report and this letter may then be placed in the Public Document Room.

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

Very truly yours,



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

Attachments:

Notice of Violation
RII Inspection Report Nos.
50-390/77-7 and 50-391/77-7

cc: Mr. J. E. Gilleland
Assistant Manager of Power
831 Power Building
Chattanooga, Tennessee 37401

Mr. T. B. Northern, Jr.
Project Manager
Watts Bar Nuclear Plant
P. O. Box 2000
Spring City, Tennessee 37381

Mr. Stan Duhan
400 Commerce Street
E4D112
Knoxville, Tennessee 37902

Attachment A
Notice of Violation

Based on the results of NRC inspection conducted June 20-23, 1977, certain items appear to be in noncompliance with the requirements of 10 CFR 50, Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Processing Plants" as indicated below:

Infractions

390/77-7N1
391/77-7N1

Failure to Follow Welding Material Control Procedures

Criterion V of Appendix B to 10 CFR 50, as implemented by the FSAR, paragraph 17.1A.5, requires in part that, "Activities affecting quality shall be prescribed by documented instructions, procedures, . . . and shall be accomplished in accordance with these instructions, procedure, . . ."

Contrary to the above requirement, weld material control procedures were not being followed in two areas inspected.

- A. A welder was observed welding a stainless steel pipe weld with welding material which was not identified by type. This is a violation of TVA process specification 1.M.3.1(e). (Details I, paragraph 4)
- B. The rod room No. 4 daily log of holding oven temperatures was observed at approximately 11:00 A.M. on June 20, 1977. The required 7:30 A.M. temperature check and log entry had not been made. This is a violation of TVA procedure QCP 4.1. (Details I, paragraph 4)



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Report Nos.: 50-390/77-7 and 50-391/77-7

Docket Nos.: 50-390 and 50-391 License Nos.: CPPR-91 and CPPR-92

Categories: A2/A2

Licensee: Tennessee Valley Authority
830 Power Building
Chattanooga, Tennessee 37401

Facility Name: Watts Bar Nuclear Plant, Units 1 and 2

Inspection at: Watts Bar Dam, Tennessee

Inspection conducted: June 20-23, 1977

Inspectors: W. B. Swan
B. R. Crowley

Reviewed by: C. E. Murphy 7/15/77
C. E. Murphy, Chief Date
Reactor Construction and Engineering Support Branch

Inspection Summary

Inspection on June 20-23, 1977 (Report Nos. 50-390/77-7 and 50-391/77-7)

Areas Inspected: Containment structural steel; reactor coolant pressure boundary piping; safety-related piping; pressurizer support, Unit 1; support for emergency diesel generators; emergency diesel generator sets for Units 1 and 2. The inspection involved 42 inspector-hours onsite by two NRC inspectors.

Results: Of the six areas inspected, no apparent items of noncompliance or deviations were identified in five areas; an apparent item of noncompliance (infraction - failure to follow welding material control procedures - Details I, paragraph 4) was identified.

DETAILS I

Prepared by: B. R. Crowley
B. R. Crowley, Metallurgical Engineer
Engineering Support Section No. 2
Reactor Construction and Engineering
Support Branch

7/6/77
Date

Dates of Inspection: June 20-22, 1977

Reviewed by: A. R. Herdt
A. R. Herdt, Chief
Engineering Support Section No. 2
Reactor Construction and Engineering
Support Branch

7/6/77
Date

1. Persons Contacted

a. Tennessee Valley Authority (TVA)

*T. B. Northern, Jr., Project Manager
*H. C. Richardson, Construction Engineer
L. C. Northard, Jr., Supervisor, Welding and NDE
*A. W. Rogers, Site QA Supervisor
*J. M. Lamb, Supervisor, Mechanical Engineering
*R. L. Heatherly, Supervisor, QC and Records
*S. J. Boney, Welding Engineer
*J. S. Colley, Engineering Design, QEB
*S. Duhan, Supervisor, Quality Audits Section, OEDC
B. L. Majors, Engineering Associate, Welding
D. W. Miller, Engineering Associate, Welding
F. D. Black, Engineering Associate, Welding
J. D. Shanlever, Mechanical Engineer

b. Contractor Organization

Chicago Bridge and Iron Company (CB&I)

G. Rowe, QA Engineer

*Denotes those present at the exit interview.

2. Licensee Action on Previous Inspection Findings

Actions on previous findings were not inspected during this inspection.

3. Unresolved Items

No unresolved items were identified during this inspection.

4. Independent Inspection Effort (Units 1 and 2)

The inspector observed in-process safety-related pipe welding activities to determine whether the requirements of applicable specifications, codes, standards and procedures were being met. Welding is being accomplished in accordance with the ASME Boiler and Pressure Vessel Code, Section III, 1971 Edition with addenda through the summer of 1973. The welding observed was TVA Classes B and C or code Classes I and II. The following welding was observed:

a. Unit 1

Weld No. 1-074A-D046-02: This is a 14"x.438" wall stainless steel weld and was observed during fill pass welding. Weld appearance, weld history record, use of correct welding procedure and welding material, welder qualification, and inspector qualification were examined.

Weld No. 1-062A-D022-09: This is a 8"x.322" wall stainless steel weld and was observed during an RT repair cycle. Weld appearance, weld history record, use of correct welding procedure and welding material, welder qualification, and inspector qualification were examined.

During observation of this weld, the inspector noted that the welder's filler material (1/16" and 3/32" ER308) was not identified. For each piece of bare wire, the welder had snipped off the end that carried the identifying tag. TVA process specification 1.M.3.1(e), "Specification for Welding Material Control," paragraph 3.2, requires that "After welding materials have been removed from container or packages, they shall be identifiable by type until consumed." This finding represents non-compliance with the requirements related

to procedure compliance in 10 CFR 50, Appendix B, Criterion V, and will be identified as noncompliance Nos. 390/77-7N1 and 391/77-7N1.

Weld No. 1-070A-D151-02: This is a 3"x.216" wall carbon steel weld and was observed during root pass welding. Weld appearance, weld history record, use of correct welding procedure and welding material, welder qualification, and inspector qualification were examined.

b. Unit 2

Weld No. 2-072A-D115-07: This is a 3"x.218" wall stainless steel weld and was examined after fitup release prior to start of welding. Fitup, weld history record, welder qualification, and inspector qualification were examined.

Weld No. 2-062A-D008-07: This is a 8"x.322" wall stainless steel weld and was observed during root pass welding. Fitup, weld history record, use of correct welding procedure and welding material, weld appearance inside and outside, welder qualification, and procedure qualification were examined.

- c. Activities in the weld material issue station were observed. At approximately 11:00 A.M. on June 20, 1977, the inspector noted the required 7:30 A.M. daily check and log entry of holding oven temperatures had not been made for rod room number 4. A review of the previous week's log indicated that on some shifts only one temperature check had been made and logged. TVA procedure QCP 4.1, "Procurement, Storage, Issue and Control of Welding Materials," paragraph 6.5.2, requires that "A daily log of holding oven temperatures shall be maintained . . . Temperatures shall be recorded at the beginning and at the midpoint of each shift during which covered electrodes are issued." This finding represents another example (see paragraph a. above) of noncompliance with requirements related to procedure compliance in 10 CFR 50, Appendix B, Criterion V and will be identified as noncompliance Nos. 390/77-7N1 and 391/77-7N1.

Within the areas inspected, no other items of noncompliance or deviations, except as discussed in paragraphs a. and c., were identified.

5. Reactor Coolant Pressure Boundary Pipe Welding - Observation of Work and Work Activities (Unit 1)

The inspector observed the welding activities described below relative to reactor coolant pressure boundary pipe to determine whether the requirements of applicable specifications, codes, standards, and procedures were being met. The welding is being performed in accordance with the ASME Boiler and Pressure Vessel Code, Section III, subsection NB, 1971 Edition with addenda through the summer of 1973. The following welding was observed:

<u>Weld No.</u>	<u>Size</u>	<u>Status</u>
1-068F-W004-01	31"x2.60"	Approx. 75% complete
1-068F-W003-02	27½"x2.32"	Welding capping layer
1-068B-W004-01	27½"x2.32"	Approx. 90% complete

- a. Weld identification, use of applicable weld procedure, welder qualification, interpass temperature, use of specified weld material, use of specified purge, preparation of starts and stops, weld appearance, and periodic welding variable checks were examined.
- b. Welding material issue station was examined for storage of materials, issue records, and handling of returned material.
- c. Welding areas were examined for the presence of uncontrolled filler material.
- d. A sufficient number of adequately qualified QA and QC personnel commensurate with the work in progress were observed at the site.

No items of noncompliance or deviations were identified.

6. Reactor Coolant Pressure Boundary Pipe Welding - Review of Quality Records (Unit 1)

Quality records relative to reactor coolant pressure boundary pipe welding were reviewed to determine whether the records reflected work accomplishment consistent with applicable specifications, codes, standards, and procedures. See paragraph 5 above for the applicable welding code.

For the three reactor coolant welds listed in paragraph 5 above, quality records relative to visual and dimensional inspection, weld history, preheat and interpass temperature, NDE covering quality of welds, welding material control, welder qualification, and inspector qualification were examined. Two TVA QA audits, WB-M-77-04, "Material Traceability"; and WB-M-76-07, "Documentation of ASME Section III Welds" were reviewed. Finding No. 7 (discrepancy on rebake temperature and hold time for E-7018 electrodes) was selected for further review. It was determined that proper, timely and adequate corrective action was taken to resolve this finding.

No items of noncompliance or deviations were identified.

7. Reactor Coolant Pressure Boundary Piping - Review of Quality Records (Unit 1)

Quality records for the following reactor coolant pipe components were reviewed to determine whether the records reflected material/component characteristics consistent with applicable requirements (see paragraph 5 above for the applicable piping code):

SPIN WAT-RCPCCF-01: 31" LR 40° Ell, Ht. 82485-2
31" LR 40° Ell, Ht. 84141-1
31" LR 40° Ell, Ht. 83976-1

SPIN WAT-RCPCFB-12: 27½" Loop 4-5
27½" Loop 4-1

For the Ells, material test reports including chemical composition, physical characteristics, and nondestructive examination; vendor manufacturing and NDE records; NSSS manufacturer's quality release forms; TVA quality release forms; and receipt inspection reports were reviewed.

For the loop pieces, NSSS manufacturer's quality release forms, TVA quality release forms, NPP-1 code data reports, and receipt inspection reports were reviewed.

No items of noncompliance or deviations were identified.

8. Containment Structural Steel Welding - Observation of Work and Work Activities (Unit 2)

The inspector observed the welding described below relative to the steel containment structure to determine whether welding was being accomplished in accordance with applicable specifications and procedures. The welding is being performed in accordance with the ASME Boiler and Pressure Vessel Code, Section III, Class MC, 1971 Edition with addenda through the winter of 1971.

Weld "7-8 Girth 90°-180°" was at a stage of fabrication in which three different fabrication sequences could be observed. A part of the weld was observed in the fitup condition; a second part was observed during backgauge, removal of tacks and welding of low spots in the backgauge area; and a third part was observed during seal pass welding with the automatic FCA process. Weld identification, joint preparation and alignment, evidence of QC verification of fitup, use of specified weld procedures, welder qualification, use of specified welding materials, performance of specified NDE at proper state of fabrication, and periodic welding variable checks were examined.

Weld "7-8 Girth 180°-270°" between vertical welds 8E and 8F was observed in the fitup condition after QC release prior to welding. Weld identification, joint preparation and alignment, and evidence of QC verification of fitup were observed.

Vertical welds 8B and 8C were observed during fill pass welding using the SMA process on the ID. Weld identification, use of specified weld procedure, welder qualification, use of specified weld material, performance of specified NDE at the proper stage of fabrication, and periodic weld variable checks were examined.

Welding areas were examined for the presence of uncontrolled welding materials.

The welding material issue station was examined for material identification and storage conditions, temperature control, issue records, and handling of returned materials.

A sufficient number of adequately qualified QA and QC personnel commensurate with the work in progress were observed at the site.

No items of noncompliance or deviations were identified.

9. Containment Structural Steel Welding - Review of Quality Records (Units 1 and 2)

Quality records described below relative to containment structural steel welding records were reviewed to determine whether these records reflected work consistent with applicable specifications and procedures. See paragraph 8 above for the applicable welding code.

a. Unit 2

Records for vertical welds 6E, 6F, 6H and 6J and ring 5 to 6 girth weld were reviewed for visual and dimensional inspections, weld history records, preheat and interpass temperature control records, NDE records, weld repair records, welding material control records, welder qualification records, and inspector qualification records.

b. Unit 1

Records for the roof course ring 1 to 2 girth weld and vertical welds 10A, 10B, 10C, 10D and 10E were reviewed for visual and dimensional records, weld history records, preheat and interpass temperature control records, NDE records, weld repair records, welding material control records, welder qualification records, and inspector qualification records.

- c. TVA audit WR-S-77-01 was reviewed. Finding number 1 (CB&I radiographic film densities greater than 3.0) was chosen for further review by the inspector. Proper, timely and adequate corrective action was taken.

No items of noncompliance or deviations were detected.

10. Containment Steel Structures and Supports - Observation of Work and Work Activities (Units 1 and 2)

The inspector observed in-process containment structural steel work as follows:

Unit 1

Plate cleanup adjacent to roof course ring 1 to 2 girth weld was observed. This process included grinding tie-strap and alignment lug tack areas, welding any low spots, and magnetic particle inspection.

Unit 2

Attachment or fitup lugs to ring 7 at 0°-90° location and fitup and alignment of ring 8 between vertical welds 8D and 8E were observed.

The containment installation work and inspection is being accomplished in accordance with TVA specification 1440, "Structural

Steel Containment Vessels for the Reactor Buildings at Watts Bar Nuclear Plant Units 1 and 2." See paragraph 8 for the applicable code.

No items of noncompliance or deviations were detected.

11. Containment Steel Structures and Supports - Review Quality Records (Units 1 and 2)

Quality records described below relative to containment structural steel were reviewed to determine whether these records reflected work consistent with applicable specifications and procedures:

- a. Material and quality records for the following containment steel were compared with the requirements of CB&I's "Nuclear QA Manual for ASME III Products Div. 4 Construction," Section 4.0, "Material Control":

Unit 1 - Containment ring 10 plates 210-2/3, 210-2/8, 210-2/7, 210-2/5, 210-2/6, 210-2/1, 210-2/9, 210-2/2, and 210-2/4.

Unit 2 - Containment ring 8 plates 98-2/7, 98-1/1, 98-2/6, 98-2/2, 98-2/1 and 98-2/9.

The records were reviewed in the areas of material certification records and receiving inspection reports.

- b. Installation/erection and testing and inspection records for the following containment steel were compared with CB&I procedure DCP 72-4333/4, "Dimensional Control Procedure Containment Vessel," and TVA Specification 1440:

Unit 1 - Containment ring 10 in-process and final dimensional check records.

Unit 2 - Containment ring 6 in-process dimensional check records.

The records were reviewed in the areas of compliance with construction/erection specifications, plate installed and located as specified, compliance with testing requirements, verification of quality requirements, and verification of inspection personnel qualifications.

No items of noncompliance or deviations were identified.

12. Exit Interview

The inspector met with licensee representatives (denoted in paragraph 1) at the conclusion of the inspection on June 22, 1977 and summarized the scope and findings of the inspection.

With regard to the noncompliance (paragraph 4), the licensee acknowledged the inspector's findings.

DETAILS II

Prepared by:

W. B. Swan
W. B. Swan, Civil Engineer
Engineering Support Section No. 1
Reactor Construction and Engineering
Support Branch

7/14/77
Date

Dates of Inspection: June 21-23, 1977

Reviewed by:

T. E. Conlon
T. E. Conlon, Chief
Engineering Support Section No. 1
Reactor Construction and Engineering
Support Branch

7/15/77
Date

1. Persons Contacted

Tennessee Valley Authority (TVA)

- *T. B. Northern, Jr., Project Manager
- *H. C. Richardson, Construction Engineer
 - J. M. Lamb, Mechanical Engineering Unit Supervisor
- *C. O. Christopher, Civil Engineering Unit Supervisor
- *J. S. Colley, QA Engineer, EN DES
- *J. C. Cofield, Materials Engineering Unit Supervisor
- *A. W. Rogers, Site QA Unit Supervisor
- *R. L. Heatherly, Quality Control and Records Unit Supervisor
 - A. R. White, General Construction Superintendent
 - W. K. Peacher, Civil Engineer

2. Licensee Actions on Previous Inspection Findings

Licensee's actions on previous inspection findings were not examined during this inspection.

3. Unresolved Items

No unresolved items were identified during this inspection.

4. Independent Inspection Effort

The following areas were inspected:

- a. Concrete: (1) Completed concrete in the intake pumping station, control building, auxiliary building and both reactor buildings.

- (2) Preparations for concrete placements in the reactor buildings, in the roof of the control building, and in the conduit trench between RB1 and the diesel generator building.
- (3) Concrete placements in the wall of fuel pool in RB1 and the final placement in roof of the control building.
- (4) Stripping and curing of concrete on wall of the diesel generator building.
- (5) Completed test pad for roller compacted concrete being placed as missile shield over water lines between the intake pumping station and reactor buildings.
- (6) Activation preparations for new semi-portable batch plant to replace the larger original plant which is to be dismantled and sent to Hartsville, Plant B.
- (7) Observed concrete cylinder and mix testing and verified calibration of equipment in the materials laboratory.

In these areas, the acceptance criteria are set out in General Construction Procedures G-2 and G-48, and in drawings. Quality Controls are implemented by Procedure WBNP-QCP-2.2 R2, "Concrete Placement and Documentation," and by ASIM-ACI tests in the Materials Laboratory.

In the areas examined no noncompliance was identified.

- b. Storage of reactor internals in RB1. The assemblies were examined and found to be protected from dust and construction operations.
- c. Observed placement of the first gore assembly for Unit 2 containment dome on the ground level concrete template by CB&I. No check was made on acceptance criteria or quality control during this inspection.

5. Containment (Steel Structures and Supports) - Observation of Work and Work Activities for Pressurizer Support - Unit 1

The pressurizer was inspected in its installed position. It is supported on a concrete haunch, and is bolted onto a steel template ring. Documents which contain acceptance criteria and installation instructions are: TVA-Bristol contract specification; Westinghouse Pressurizer Manual TM-1440-C255; WBFI-M-11; FSAR Sections 3 and 17; and TVA and Bristol Steel drawings.

To verify that requirements had been met, QC reports and other documents were reviewed covering the following areas:

Installation/erection
Testing and NDE
Inspection
Utilization of qualified NDE and Inspection personnel
Calibration and use of proper test equipment

The inspector reviewed the following documents: WBFI-M-11, paragraphs A9 and H; Equipment Installation Operation Sheet MIQP 1-68-F-F/8 - Installation of Pressurizer; and TVA memo to file dated March 23, 1977 from C. O. Christopher, Supervisor of Civil Engineering Unit "Survey Controls for Setting Unit 1 R. C. Pumps and Pressurizer." This memo included certification of calibration of optical level S/N 401 558.

No noncompliance was identified in the areas reviewed.

6. Containment (Steel Structures and Supports) - Review of Quality Records for Pressurizer Support - Unit 1

Requirements for quality records are shown in the TVA-Bristol contract specification; in WBNP-QCP-1.6 R4; -4.5 R5; and -1.18 R4; and in WBFI-M-11.

During this follow on inspection, the inspector reviewed records showing that the supports were installed and tested as specified. Inspection records reviewed demonstrate that quality requirements were met and that the inspection and engineering personnel involved were qualified.

In the records reviewed no noncompliance was identified.

7. Acceptance Criteria for Installation and Supporting of Diesel Driven Emergency Generators for Units 1 and 2

The following six numbered paragraphs cover inspection efforts on the supports for, and the installation of, the D-G assemblies for Units 1 and 2. Acceptance Criteria for the D-G units and their supports are included in the following documents:

- a. FSAR Section 17 QA; Section 3 Design Criteria; Sub-Section 3.7 Seismic Design
- b. TVA Procurement Specification No. 2042
- c. Regulatory Guides 1.38; 1.58; 1.88
- d. Appendix B to 10 CFR 50, Criterion XVII Quality Records
- e. Manual of GM Electromotive Division, Power System Division for Model R16-645-E4
- f. Bruce GM Division Drawing No. 17W586 for generator installation
- g. TVA drawing 10 N320-1, R5, Detail I for supports
- h. TVA drawing 45N727R0

8. Safety Related Structures (Structural Steel and Supports) - Review of Quality Assurance Implementing Procedures for Diesel Driven Emergency Generators (D-G) for Units 1 and 2

The QA acceptance criteria for these supports were implemented by TVA drawing 10N320-1, Rev. 5, Detail I, Typical Diesel Generator Support Foundation, and by WBNP-QCP-4.8R2 Inspection and Documentation of Seismically Qualified Supports. These documents had been used to install and utilize the supports for the D-G assemblies. The procedure and drawing were reviewed in relation to the installed assemblies. This review was to ascertain whether the procedure adequately implemented QA criteria; to determine that the procedures included inspection and work instructions and included provisions for receiving inspection, storage, protection, issue, identification and records of materials and components.

In this document review no nonconformance was identified.

9. Safety Related Structures (Structural Steel and Supports I)
- Observation of Work and Work Activities for Diesel Generator
Supports for Units 1 and 2

The support installations were found to be complete except for grouting under the eight engines. The four generators were grouted to their supports.

The equipment installation sheet, Attachment A of WBNP-QCP-4.7 RI, was examined at each engine. The work items were being recorded and signed off by QC personnel. The inspector observed seismic supports for piping and cable trays being welded to embedments in the reinforced concrete walls and ceiling of the D-G building.

In the areas examined no noncompliance was identified.

10. Safety Related Structures (Structural Steel and Supports 1) -
Review of Quality Records for Diesel Generator Supports
(Units 1 and 2)

Provisions for implementation of criteria pertaining to quality records were implemented by WBMP-QCP-4.7R1, "Mechanical Equipment Installation and Documentation," and by WBNP-QCP-4.8 R0, "Inspection and Documentation of Seismically Qualified Supports." Civil engineering memoranda verified the accuracy of the support positioning. The records required by the two procedures were reviewed and found current with the work status.

In the area of quality document review no noncompliance was identified.

11. Safety Related Components - Review of Quality Assurance Implementing
Procedures for Diesel Generators for Units 1 and 2

The licensee has implemented the quality requirements for the D-G sets by contract provision for GM specialist help in final check out and startup of the D-G sets and through procedures WBNP-MCP-4.5 R5, "Handling, Storage and Maintenance of Permanent Mechanical Equipment"; WBNP-QCP-4.7R1, "Mechanical Installation Standard Inspections and Documentation;" and WBMP-QCP-1.18 R5, "Lifting and Transporting Major Components."

Review of pertinent sections of these documents and generated records gives assurance that the QA program is adequate for this area. Adequate provisions were included in the referenced documents to assure compliance with criteria requirements in the area's of receipt inspections; installation, testing and inspection; crane testing and component lifting; and post-installation cleaning, preservation and inspection.

In the areas examined, no noncompliance with requirements was identified.

12. Safety Related Components II - Observation of Work and Work Activities for Diesel Generator Sets for Units 1 and 2

All four generators were found to have been permanently installed and the eight engines were mounted on their supports awaiting grouting after shaft alignment and coupling are completed.

The licensee had implemented quality acceptance criteria for the work activities required through procedures WBMP-QCP-45R5; -4.7R1; and 1.18R5. Pertinent records generated under these procedures and the work observed demonstrate that requirements are being met.

In the areas examined no noncompliance was identified.

13. Safety-Related Components I - Review of Quality Records for Diesel Generator Sets for Units 1 and 2

Provisions for criteria requirements for quality records for the D-G sets have been made by the licensee principally through procurement documents and by the records required by procedures WBMP-QCP-4.7R1 and WBMP-QCP-4.5R5.

The inspector reviewed the records for receiving, storage, handling and installation generated under these two procedures and under WBMP-QCP-1.18R5. In addition QA audit reports WB-17-77-01 and -02 were reviewed.

This review demonstrated the adequacy of the licensee procedure pertaining to: storage inspection, installation inspection, material and fabrication certifications and test; nonconformance and deviation resolution; and audits.

In the records reviewed no noncompliance was identified.

14. Exit Management Interview

An exit interview was held with Mr. T. B. Northern, Jr., Project Manager, his support staff representatives, and QA representatives from the site QA unit and Knoxville. The inspector outlined the scope of his inspection and stated that no noncompliance had been identified and there was no unresolved matter.