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

Report Nos. 50-390/81-20, 50-391/81-20, 50-438/81-24, 50-439/81-24, 50-518/81-16, 50-519/81-16, 50-520/81-16, 50-521/81-16, 50-553/81-8, 50-554/81-8, 50-566/81-9, 50-567/81-9

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

Facility Name: Watts Bar, Bellefonte, Hartsville, Phipps Bend and Yellow Creek

Docket Nos. 50-390, 50-391, 50-438, 50-439, 50-518, 50-519, 50-520, 50-521, 50-553, 50-554, 50-566, 50-567

License Nos. CPPR-91, CPPR-92, CPPR-122, CPPR-123, CPPR-150, CPPR-151, CPPR-152, CPPR-153, CPPR-162, CPPR-163, CPPR-172, CPPR-173

Inspection at Office of Engineering Design and Construction, Knoxville, TN

Inspectors: R. W. Wright — 10-21-81
R. W. Wright — Date Signed

A. G. Debbage — 10-21-81
A. G. Debbage — Date Signed

N. Merriweather — 10-21-81
N. Merriweather — Date Signed

Approved by: C. M. Upright — 10/27/81
C. M. Upright, Section Chief — Date Signed
Engineering Inspection Branch
Engineering and Technical Inspection Division

SUMMARY

Inspection on September 28 through October 2, 1981

Areas Inspected

This routine, announced inspection involved 106 inspector-hours on site in the areas of the licensee's quality assurance program, design, procurement, audits and licensee identified (50.55(e)) items.

Results

Of the five areas inspected, no violations or deviations were identified.

REPORT DETAILS

1. Persons Contacted

Licensee Employees

*S. Duhan, Supervisor Quality Compliance, OEDC-QA
*R. W. Dibeler, Chief Quality Assurance Branch, Const-QA
*P. E. Ortstadt, Supervisor Quality Compliance, Const-QA
*R. A. Costner, Chief Quality Assurance Branch, EN DES-QA
*J. S. Colley, Supervisor QA Engineering Section, EN DES-QA
*J. W. Mabee, Supervisor QA Audit Section, EN DES-QA
*R. E. Whitt, Staff Engineer, OEDC-QA
*D. W. Wilson, Head Nuclear Engr., EN DES-NEB
*D. L. Williams, Licensing Engr., EN DES
*J. Raulston, Chief Nuclear Engr., EN DES
*W. R. Brown, Assistant to Manager, Const.
E. G. Beasley, Manager of Quality Assurance, OEDC
M. V. Sinkule, Nuclear Safety Review Staff
M. H. Miller, Engineer Civil Design Branch, EN DES
R. O. Hernandez, Sites, Structure & Civil Engineering Supervisor, CEB EN DES
R. J. Ogle, Assistant to Chief, Mechanical Engineering Branch
N. Lange, Quality Assurance Evaluator
A. Ritter, Quality Assurance Engineer
W. L. Liggett, Technical Superivsor, Yellow Creek Design Project (YCDP)
B. Hill, Engineer Associate, YCDP
F. W. Chandler, Branch Chief, Electrical Engineering Branch (EEB)
R. Reeves, Nuclear Staff, EEB
A. F. Pagano, Jr., Group Head, I&C, EEB
T. S. Woodson, Group Head, Systems Engineering Layout (SEL), EEB
J. H. Boehms, Electrical Engineer, SEL, EEB
M. V. Miller, Mechanical Engineer, I&C, EEB
M. R. Belew, Mechanical Engineer, I&C EEB
G. R. Reed, Supervisor Auxiliary Power Systems, SEL, EEB
R. C. Williams, Supervisor I&C Systems Section 1, EEB
D. Gandy, Technical Supervisor, I&C System Section 1, EEB
R. Cornwell, Electrical Engineer, I&C Systems Section 1, EEB
J. M. Fontenot, Supervisor Instrumentation & Aux Wiring Section 3, YCDP
W. Hornbeck, Engineer Associate Instrumentation & Aux Wiring Section 3, YCDP
D. Mages, Engineer Instrumentation & Aux Wiring Section 3, YCDP
D. Webb, Technical Supervisor Instr. & Aux Wiring Section 3, YCDP
W. E. Knight, Branch Staff, EEB

*Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on October 2, 1981 with those persons indicated in paragraph 1 above.

3. Licensee Action on Previous Inspection Findings

Not inspected.

4. Unresolved Items

Unresolved items were not identified during this inspection.

5. Quality Assurance Program (35060B)

a. QA Program Changes

TVA submitted letters to the NRC dated October 8 and December 18, 1980 describing the results of their internal investigative activities, actions and organizational changes TVA initiated to strengthen the management of the quality assurance function and to give increased emphasis and stature to the Quality Assurance organization in the Office of Engineering, Design and Construction. Actions taken were; the OEDC QA staff was elevated to the same organizational level as the branches and projects in Engineering Design and Construction, and new supervisors were appointed to manage the OEDC and EN DES QA units. Topical Report TVA-TR75-1, Rev 5 which was submitted to the NRC for approval describes the present organizational alignment. The newly appointed supervisors were found to possess strong nuclear engineering backgrounds and have successfully managed prior key positions concerning nuclear safety within TVA. Discussions conducted with various personnel from EN DES and OEDC QA indicate that their QA organizations are now receiving more management attention; there is better interface between groups (Construction, EN DES, ODEC QA); they feel they have the authority, independence and freedom to evaluate unbiasedly without fear of reprisal. The newly appointed supervisors appear to have gained the confidence and respect of not only employees within their own supervisory jurisdiction but throughout the entire OEDC organization.

OEDC QA and EN DES QAB personnel staffing has remained relatively unchanged since the last NRC inspection; however, some names have changed due to routine promotions or transfers. The EN DES QA audit section has advertised six vacancies and discussions revealed that offers are in the process of being made for many of these positions. The EN DES QA engineering section anticipate the possible addition of a few engineering aides to assist its project engineers and help in its training responsibility. Although the OEDC QA compliance section has not been increased in personnel, the group as a whole appears to have been exposed to an ever increasing volume of review work (NCR's and audit deficiencies) generated by construction sites and EN DES and other incidental tasks which consumes a considerable amount of the auditors time. The inspector found no evidence to date to indicate the group was not meeting its requirements but if work loads continue to increase in other areas, OEDC management must be careful not to sacrifice the present scope and indepth review of the current audit program to accommodate other functions. A recent Nuclear Safety Review Staff

finding mentioned in NSRS Report No. R-81-14-OEDC (BLN) (DRAFT) states that, "The NSRS does believe that additional resources would be required to provide extension of the overview activities currently being performed in OEDC QA and EN DES QAB" and they consequently recommend that these additional resources be obtained. Construction QAB staffing appears satisfactory to handle current work loads. The mothballing of Plant B at Hartsville and the projected construction delay at Phipps Bend and possibly the Yellow Creek site have made available additional auditor personnel for the Watts Bar and Bellefonte Nuclear Plants.

The QA procedures listed below were examined for changes (revisions) implemented to verify that these changes were approved at appropriate management levels and to assure that document control (distribution) requirements had been effectively complied with:

MO-QAP 3.1, Rev. 4	Manager's Office QA Audit Program
EN DES-EP4.04, Rev.6	Handling of Squadchecks

The changes made to these procedures were found to conform to the following respective applicable procedures:

MO-QAP 2.2, Rev. 0	Preparation, Review and Approval of Material For the OEDC Manager's Office QA Staff Procedure Manaual
MO-QAP 2.3., Rev. 0	Maintenance of Material For MOM, IPM, and PRM
EN DES-EP 1.01, Rev. 9	Preparation and Processing of EN DES Engineering Procedures

b. Licensee Reviews of QA Program Effectiveness

The OEDC Manager's office, EN DES Quality Assurance Branch, and Construction QAB each conduct audits to evaluate compliance with QA Program policies and procedures. The results of these audits serve as a bases for evaluating the effectiveness of the various programs. Copies of audit reports and quality trend analysis reports are distributed to cognizant management, including the QA Manager.

The Office of Power and OEDC at least annually will either jointly or separately conduct independent management reviews of selected parts of their respective portions of the TVA QA Program to assess its scope; implementation, and effectiveness and to assure that each portion is meaningful and effectively complies with Appendix B. A review of all

parts of each TVA QA program is to be completed in a two year cycle. Reports of these reviews will be made to the Manager of OEDC and the Manager of Power for their action. Typical reports examined were:

(1) Executive Summary Management Performance Review of OEDC, December 1978, by Theodore Barry & Associates Management Consultants (TBA&A)

(2) Review of OEDC Implementation Progress, February 1980, by TB&A

(3) Joint Public Utility Audit of TVA, October 1979

(4) Review of Design Verification Program, March 1979 by United Engineers

(5) Report of Management Review of the OEDC QA Program for 1980, June 1981, by R. E. Whitt

(6) Major Management Review of the Office of Engineering Design and Construction (DRAFT), July 81, by TVA's Nuclear Safety Review Staff (NSRS)

(7) Major Management Review of The Division of Purchasing, September 1981 by TVA's NSRS

TVA augments the above evaluation reports with further evaluations of specific TVA areas of concern and for addressing various NRC queries. A few such typical evaluations examined were:

(1) NRC Concerns on the OEDC Program for Control of Repetitive NCR's, January 1981, by R. E. Whitt

(2) An Appraisal of the Field Change Control System Used in OEDC (DRAFT), May 1981, by R. E. Whitt

(3) OEDC QA Program Applicable to Safety-Piping and Support System for TVA Nuclear Plants (TVA's Program to Meet IEB 79-14), September 1980, by R. W. Whitt

c. Corporate QA - Site QA Interface

All site construction QA audits are conducted with sufficient regularity to assure compliance with all aspects of the QA program and to determine its effectiveness. The inspector examined the latest 1981 quarterly audit schedule submitted by site QA unit supervisors for all TVA sites currently under construction. Audit dates mentioned in these schedules are only approximate and are adjusted to incorporate ongoing

construction activities. Copies of all audit reports generated and respective followup actions are transmitted to both OEDC QA and Construction QA Branch for their review.

In addition to the above audits each construction site QA Unit Supervisor prepares and submits a "Quarterly Trend Analysis Report of Audit Items," (Construction, OEDC, ANI Audits and ASME Surveys/audits); a "Quarterly Trend Analysis Report of Significant and Reportable Items" (signficant construction deficiencies, reportable 10 CFR 50.55(e) and 10 CFR 21 items, NRC violations); and a semiannual "Quality Trend Analysis Report (QCIR and NCR reports) to both OEDC QA and Construction QAB for their review and evaluation.

The inspector examined the Quarterly Trend Analysis Reports for Audit Items and Significant and Reportable Items, dated April - June 1981 for Bellefonte Nuclear Plant. The semiannual Quality Trend Analysis on Bellefonte Nuclear Plant (Rpt BN-TA-81-01) dated January 1981 - June 1981 was also reviewed.

Within this area, no violations or deviations were identified.

6. Electrical Engineering Design Review [35060B]

a. Documents Examined

EP1.02,R10	Preparation and Processing of Branch/Design Project/TAS Engineering Procedures
EP3.03,R5	Design Calculations
EP4.01,R5	Signatures/Initials for Preparation, Review and Approval of EN DES Drawings
EP4.02,R9	Engineering Change Notices-Handling
EP4.03,R4	Field Change Requests
EP4.04,R6	Handling of Squadchecks
EP4.18,R2	Design Change Requests (DCR's) Processing, Reviewing and Approving
EP4.25,R4	Design Review and Interface Coordination of Detailed Construction and Procurement Drawings
EEB AI-03,RO	Handling EEB Contract and Plant/Project General Correspondence

EEB EP 22.01,R1	Preparation and Handling of Outgoing Correspondence and Requisitions in the Electrical Engineering Branch
EEB EP 22.07,R0	Handling, Initialing, and Signing of Drawings Within the Electrical Engineering Branch

b. QA Program Requirements

The quality assurance program for all phases of design, construction, and operation of TVA's nuclear power plants is described in the Watts Bar FSAR, in the Bellefonte, Hartsville, and Phipps Bend PSARs, and in TVA Topical Report TR75-1A. Sections 17.1A.3 and 17.1A.5 of the FSAR, PSARs and Topical Report specify the QA requirements for design control and instruction, procedures and drawings. The Bellefonte, Hartsville and Phipps Bend PSARs and the Topical Report commit to the requirements of Regulatory Guide 1.64, Revision 2 and ANSI Standard N45.2.11-1974. The procedures listed in paragraph 6.a above are the controlling procedures for design verification and were reviewed for compliance with the requirements of NRC regulations, codes and QA commitments.

c. Personnel Interviews

The inspector reviewed the licensee's organizational structure to determine which organizations were responsible for design assurance and selected managers in the Electrical Engineering Branch (EEB) and Yellow Creek Design Project to discuss the following items:

(1) Their understanding of design verification.

(2) Their interface with design assurance and QA.

(3) Their implementation of design verification.

(4) Means of dispositioning design verification findings.

(5) Criteria for competency of design verifiers.

The inspector discussed design control activities with personnel in the EEB Systems Engineering Layout Group, EEB Instrumentation and Controls Group, and Yellow Creek Design Project Instrumentation and Auxiliary Wiring Section 3. The EEB Systems Engineering Layout Group is responsible for the design criteria, conceptual system design (key diagrams), and relay coordination studies. The EEB Instrumentation and Controls Group is responsible for developing the Functional Control Logic Diagrams (FCLD's). These FCLD's and key diagrams are used in conjunction with Design Criteria Documents, Design Criteria Diagrams and applicable codes, standards and regulations to develop detailed design

drawings. Design procedures require these drawings to be coordinated with other groups within the organization and with other branches and/or projects whose design must be compatible. Then the drawings must be reviewed by the checker performing the design verification. After the drawing has been coordinated, checked and signed it will be issued. Most Engineering design changes will be handled using "Engineering Change Notices" and "Field Change Requests."

The inspector talked to design engineers responsible for I&C system designs and verifications in both EEB and Yellow Creek Design Project to determine their understanding of design verification; knowledge of the procedures controlling design verification activities; how design inputs are reviewed and established; and how design changes are controlled.

d. Design Verification

The following design drawings were selected to determine if design verification documentation conforms with procedural controls and that design verifiers are independent of the designers.

Documents Reviewed:

YCNP DWG. No. 2GE0900-KE-01, R3	Functional Control Logic Diagram Essential Raw Cooling Systems
YCNP DWG. No. 2GW0910-NV-1, R4	Make-up and Purification System (NV)
YCNP DWG. No. 5YE0802-RU-05, R1	General Arrangement Tunnels and Conduit Banks
WB DWG. No. 15E5001-2	Key Diagram Station Auxiliary Power System

Within this area, no violations or deviations were identified.

7. Procurement (35060B)

a. Procurement Review

Procurement quality assurance is monitored by the QA audit section which is part of the Quality Assurance Branch within the Division of Engineering Design. The section is subdivided into three units with responsibilities for procurement, internal audits and external audits. The head of the audit section is also the TVA/CASE representative. The activities of the section and the personnel allocated to each unit were

examined to determine adequacy for fullfilling the section's reponsibilities. Procedures used by the section were reviewed for completeness and effectiveness. These included the following:

QAB-EP 26.34 RO	Review of Purchase Requisitions
QAB-EP 26.33 RO	Evaluation of Bidder's Quality Assurance Qualifications and Supplier's Revised Quality Assurance Program
QAB-EP-26.36 RO	Vendor Quality Assurance Program Evaluation Index - Maintenance and Handling
EN DES-EP-5.01 R11	Purchase Requisitions - Evaluation of Bids and Recommendations - Rejection of Contract Award - Revisions to Contract

The following records are maintained in the section:

- Vendor quality assurance manuals and manual status
- Vendor evaluation data sheets
- Vendor index number files
- Supplier performance evaluation sheets
- Coordinating agency for supplier evaluation (CASE) register
- Companies holding nuclear certificate of authorization
- Summary results of pre-award surveys and audits
- Contract history files
- Recommendation for audits from procurement branches

Six checklists have been developed for reviewing various procurement items; i.e., material manufacturing, personnel services, calibration, material supplies, N45.2 contracts and none-code suppliers. Methods used to accept an item or service or service inspection, receiving inspection, certificate of conformance, post installation at the site or any combination of these. These acceptance methods are adequately defined in the Procedure EN DES-EP 5.33, Procurement Quality Assurance:

b. Equipment Procurement

Two procurement actions were examined in detail. Purchase requisition number 828938 was for fire dampers, motor-operated dampers, tornado dampers, backdraft dampers and manual dampers required for Bellefonte Nuclear Plant. Quality Assurance requirements and 10 CFR Part 21 notice were specified. The requisition incorporated the following TVA specifications:

10.1 General requirements HVAC, heat recovery, and miscellaneous heat removal equipment for TVA projects.

10.3 Technical specifications for HVAC system dampers for TVA projects.

Specification 10.1 required strict adherence to this specification and that any apparent deviation between this specification and other documents to be brought to the attention of TVA prior to any action. Provision was made that if the contractor subcontracted any work that all specifications and applicable QA requirements had to be met by the subcontractor and that TVA had the right of approval of the subcontractor. Full unrestricted access was required for audits, inspections, witnessing tests to determine conformance to specifications and drawings. Procedures used by the contractor (e.g., welding, testing, handling, storage, seismic, etc.) were to be submitted to TVA for approval if requested. The types and quality of documentation were specified (e.g., drawings, material properties, heat treatment records, test reports, major defect repair record, disposition of nonconforming reports and minimum wall thickness verification).

Specification 10.3 detailed the technical requirements for the dampers complete with all standard accessories. This specification incorporated appendix A, design criteria for seismic qualification of Category I fluid system components and electrical or mechanical equipment. The specification also incorporated the quality assurance requirements for non-ASME code components requiring seismic Category I qualification. This required the contractor to maintain a QA program that met the requirements of ANSI N45.2-1971. Specific attention was directed to handling of nonconformances and seismic qualification program documentation.

Purchase requisition number 828752 was for main switchboard equipment radiation monitor panels required for Sequoyah and Watts Bar nuclear plants. The requistion incorporated specification 4932 and attachments which specified the technical requirements and seismic qualification procedure, specified drawing quality and access for TVA inspection, the quality assurance requirements to be met by the contractor and any subcontractors, and the handling of nonconforming items.

Both purchases requisitions and subsequent contract controls were found to be adequate and implemented in a satisfactory manner. All QA requirements and acceptance criteria were relative to the complexity and importance of the item being procured.

c. Service Procurement

Two service contracts were reviewed. Both were long term contracts which had been renewed with several supplements to the original contract. The performance of the suppliers was satisfactory and in both cases a copy of their QA program had been required for review and acceptance by TVA Quality Assurance Branch, and access to facilities for inspection was specified in their contracts.

d. Supplier Audits

The overall supplier audit program for the previous year was reviewed. Approximately fifty audits were conducted. Three audits were deferred to later dates than scheduled; the reason for postponement was that no work was in progress at the scheduled time. EN DES QA Vendor Audit Plan 4th Quarter 1981 was examined. Seventeen vendors - some with multiple contracts and more than one geographical location--were scheduled for completion in 1981.

The following audits reports were selected to review the audit finding and followup actions

80V-56 Yellow Creek--Stationary Screens for Essential Raw Cooling Water System

81V-8 Bellefonte Nuclear Plant--Aluminum Honeycomb Energy Asborbing Material for Pipe Whip Restraints

81V-13 Hartsville and Phipps Bend - Local Panels and Instrumentation

Audit 81V-8 was conducted at the vendor fabrication facility - Hexal Corporation, Casa Grande, Arizona. The audit team identified eight deficiencies and issued a stop work recommendation. Six weeks later the stop work order was lifted because the corrective action had proved satisfactory.

The qualifications of the audit team members were examined. They were found to be well experienced with good backgrounds and participation in vendor audits. Certification of the auditors and records of their participation in vendor audits were adequately documented.

e. Supplier Index

A controlled supplier index "Construction - Field purchasing of QA material, equipment and services" is maintained by the QA audit section, and published quarterly. It lists current suppliers with QA contracts for which acceptable QA experience has been obtained. Notes provided with the index adequately define the certification levels used in the index; i.e., Certificate of Conformance, Certified Test Report, CASE, licensee controlled vendor inspection program (LCVIP) and ASME certification. The expiration date of ASME certifications are given and survey reports, audit reports and supplier QA manual reviews are included.

The latest index, revision 12 issued June 22, 1981 was reviewed and compared with earlier revisions to determine changes in the index, and review additions and removal of suppliers in the index. During the previous twelve months approximately forty suppliers were removed from the index and a similar number added to the index.

The majority of suppliers (60%) removed from the index were because a survey was needed before an award could be made. The others were for resolution of audit deficiences before the award could be made; or no longer supplying nuclear material; or because the code certificates had expired.

Within this area, no violations or deviations were identified.

8. Audits (35060B)

a. Audit Program

The inspector examined the following controlling OEDC QA, EN DES QAB, and Construction QAB audit procedures:

PRM - OEDC - QAI - 5, Rev. 0	Performing Quality Audits Within OEDC
MO-QAP 3.1, Rev. 4	Manager's Office Quality Assurance Audit Program
ID-QAP 18.1, Rev. 1	Qualification, Certification and Recertification of Quality Audit Personnel
Const. - QAPP - 18, Rev. 1	Audits
Const. - QAP - 18.1, Rev. 2	Audits
Const - QASP - 6.2, Rev. 2	Qualification and Certification of Audit Personnel
Const - QASP - 7.1, Rev. 8	Auditing Construction Activities
Const - CEP - 18.01, Rev. 6	Auditing Construction Activities
EN DES - EP-1.29, Rev. 2	Internal EN DES QA Audit Program
EN DES - EP - 5.34, Rev. 2	Vendor QA Audit Program

Individual audit schedules for all corporate QA groups (OEDC QA, EN DES QA and Const QA) and licensee 1981 composite OEDC-ENDES, OEDC - Construction audit program matrices were examined and their respective QA management was interviewed to ascertain that the corporate QA program encompasses all internal and external organizations and extends to all elements of the QA program within a reasonable time frame. The audit team size, composition and use of specialists routinely assigned from other organizations to the audit team was discussed with QA management. The inspector examined auditor training, experience and certifications

for the OEDC QA and ENDES QAB auditors and found the auditors all qualified to the requirements of ANSI N45.2.23, Draft 3, Revision 0. Qualification records for construction site auditors are maintained at their respective construction sites and are routinely examined during construction inspections.

b. Audit Reviews

The following audits and respective audit plan/checklists as available (audit plan/checklists for construction audits exist at construction sites only) were examined to determine applicability to the QA element audited; qualification of audit team members, that audit findings were reported to upper management and the organization audited, corrective actions as required are being initiated and that there is followup and re-audit by QA as necessary:

Audit JA-8100-03	Design Control For Modifications of Operating Plants
Audit M 81-4	QA Program Implementation, Nuclear Engineering Branch, EN DES
Audit HT-G-81-10	Procurement Document Control
Audit SS-81-1	Document Control, All EN DES Branches, Projects and TAS
Audit M 81-6	QA Program Implementation, Hartsville Nuclear Plant
Audit BN-G-81-07	HVAC System Installation and Inspection

Within this area, no violations or deviations were identified.

9. Licensee Identified Items (92700B)

a. (Closed) 390/79-26-08, 391/79-22-08: Deficiences in Penn Ventilator Co. QA program (QEB 79-3). On June 18, 1979, TVA initially notified RII of the subject deficiency. Interim reports were submitted on July 16, 1979, September 10, 1979, March 20, August 13, and November 7, 1980. The Final Construction Deficiency Report was submitted on December 18, 1980. Licensee inspection of the subject ventilators has established that the equipment as presently designed meets the necessary seismic and environmental qualifications for safety-related service. All equipment that had been shipped was field inspected and the remaining equipment was inspected before shipment and found to be in compliance. Review of the subject closed NCR and discussion with responsible EN DES vendor audit personnel revealed that Penn Ventilator

Co. had been removed from TVA's approved vendor list until adequate objective evidence is presented of an implemented QA program.

b. (Closed) 390/79-23-02, 391/79-19-02: Piles supporting Essential Raw Cooling Water (ERCW) pipe slab not driven to drawing requirements (CDB 79-3). On May 4, 1979, TVA initially notified RII of the subject deficiency and interim reports were submitted on June 4 and November 30, 1979 followed by a final report on the matter dated March 24, 1980. The inspector examined the extensive pile load test results on six piles driven to the same criteria as the existing piles beneath the ERCW pipe slab. Those piles were driven in accordance with instructions provided in TVA memorandum CDB 791116002 and Civil Design Guide DC-C 1.4.6, Quick Load Test Procedure, was employed in testing. The test results show that the existing piles will support the design loads. Factors of safety for these piles vary from 1.41 for the safe shutdown earthquake (SSE) condition to 2.67 for the normal loading condition (i.e., no earthquake loads). These factors of safety (FS) appear to be adequate in that the NRC standard review plan section 3.8.5 for foundations specifies a minimum FS of 1.1 for SSE cases against overturning and various foundation texts and industry literature recommend a minimum FS of 1.5 to $\geq$ 2.0 for static loading conditions. Field measurements also show that the ERCW pipe slab has not settled after two years, even though it has been subjected to crane and equipment loadings during construction of the intake pumping station. Based on the above evaluation, the ERCW pipe slab appears to be an adequate structure as designed and constructed and requires no further corrective action.