

U. S. NUCLEAR REGULATORY COMMISSION

REGION V

Report No. 50-397/82-15

Docket No. 50-397 License No. CPPR-93 Safeguards Group \_\_\_\_\_

Licensee: Washington Public Supply System

P. O. Box 968

Richland, Washington 99352

Facility Name: Washington Nuclear Project No. 2 (WNP-2)

Inspection at: WNP-2 Site, Benton County, Washington

Inspection conducted: July 12 - 30, 1982

Inspectors: J. D. Toth, Senior Resident Inspector 8-23-82  
Construction

J. A. Feil, Senior Resident Inspector 8-23-82  
Construction/Operations

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Date Signed

Approved by: R. T. Dodds 8/23/82  
R. T. Dodds, Chief

Reactor Projects Section 1

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Date Signed

Summary: Inspection July 12 - 30, 1982 (Report No. 50-397/82-15)

Areas Inspected: Routine, unannounced inspection of reactor coolant loop piping weld records, the mechanical contractor's records review program and correction activities, work re-verification program activities, status of previously identified NRC inspection findings, and review of an allegation regarding placement of reinforcing steel. The inspection involved 85 inspection hours on-site by two resident inspectors.

Results: No items of noncompliance were identified.

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## DETAILS

### 1. Persons Contacted

#### Washington Public Power Supply System

R. Matlock, Program Director  
\*C. Carlisle, Deputy Program Director  
\*D. Dickenson, Construction Management  
\*R. Johnson, Project Quality Assurance Manager  
\*B. Holmberg, Deputy Project Manager, Engineering  
W. Keltner, Acting Deputy Project Manager, Construction  
\*R. Knawa, Quality Verification Program Manager  
C. Park, Quality Assurance Engineer  
\*P. Powell, Licensing Engineer  
M. Rodin, Quality Assurance Engineering Manager  
G. Baker, Quality Assurance Engineer Lead

#### Burns and Roe Engineers (B&R)

\*J. Forrest, Project Director  
\*A. Luksic, Licensing Engineer  
\*R. Sabol, Quality Assurance Engineer  
\*R. Schlosser, Project Engineer  
\*H. Tuthill, Quality Assurance Manager

#### Bechtel Power Corporation (BPC)

\*T. Mangelsdorf, Project Manager  
\*D. Johnson, Manager of Quality  
\*J. Gatewood, Project Quality  
\*H. Boarder, Quality Assurance Engineer  
\*D. Cosgrove, Quality Assurance Engineer  
\*J. Curtis, Assistant Project Field Engineer  
R. Gaines, Reverification Group Engineer  
C. Headrick, Project Quality Control Engineer  
\*D. Hell, Engineering Manager  
D. Kennon, Reverification Inspector  
B. Poplin, Engineering Administrative Assistant  
R. Scott, WBG Documentation Review Manager  
C. Shelton, Quality Control Inspector

#### Wright-Schuchart-Harbor/Boecon Corp./General Energy Resources, Inc. (WBG)

M. Clinton, Quality Assurance Manager  
C. Fox, Quality Assurance Documentation Supervisor  
G. Peltier, Technical Engineering Supervisor  
C. Montebello, Technical Engineering Engineer

Bonneville Power Administration

- \*P. Grady, Representative
- \*W. Chin, Representative

Other General Contacts and Notes

In addition to the persons identified above, the inspectors interviewed other construction, engineering, and quality control personnel from the site contractor organizations.

\*Denotes personnel present at the exit management meeting.

2. General

The resident inspectors were on-site July 12-16, 19-23, and 26-30. During this period, the inspectors performed routine examinations of activities, including plant tours, record reviews, and interview of personnel.

One regional office inspector (J. Elin) was on-site July 19-22. A second regional office inspector (A. D'Anelo) was on-site July 26-30. Their activities are documented in separate inspection reports.

An aerial survey was conducted during the week of July 19 by an NRC contractor (EGG). A 10-mile square grid was mapped centered on the WNP-2 site. The mapping showed that radiation background levels at the site were slightly lower than the surrounding area.

3. Mechanical Contractor Records Review Program

In July 1980, the licensee responded to the NRC inquiry under 10 CFR 50.54(f), identifying various corrective actions planned to assure adequacy of previously completed work. Subsequent activities during July 1980 through July 1981 showed that numerous discrepancies existed in the WBG records. Bechtel assumed the responsibility for completion of remaining mechanical work, and assigned WBG responsibility for identifying documentation discrepancies and resolving these to the extent possible without physical rework. This major review effort was conducted under direction of a Bechtel administrator. As the review progressed, a workable data base and detailed review procedures were developed. The architect-engineer assisted through the usual functions of modification of specifications, approval of Code cases which had not previously been invoked for the project, and performing engineering calculations to determine those cases where accept as-is dispositions could be made. Consolidated and computerized reference data bases were compiled from existing records to assist in searches for relationships of data to support conclusions which would resolve some apparent discrepancies. By late 1981 the procurement and installation record review organization included up to 300 field engineers, technicians and clerks.

The inspector interviewed personnel and examined records relative to the WBG activities and associated Bechtel corrective action for hardware deficiencies.

a. Reference Data Bases

The inspector interviewed various WBG personnel regarding the data bases available to them for their use during the document reviews. These included: a welder qualification log; micro-film file of all weld issuance slips; welder identification log; material heat number and purchase order log; computer listing of valves; computer reports of design changes, nonconformance reports, and inspection reports; and a comprehensive general reference library of procedures, specifications, codes, standards, NRC regulatory guides, and other technical references. The WBG engineers stated that the purchase order data appearing in heat-number logs had been reviewed and cleared by prior document review activities regarding the purchase orders. The data bases appeared to be sufficient for the comprehensive review activities which have been in progress.

b. WBG Disposition of Identified Discrepancies

The WBG Systems Completion Guideline No. SC/D - 41 provides for record review personnel to have recorded documentation discrepancies on a Document Deficiency List for each work package. Each matter which could not be resolved in accordance with criteria of other existing SC/D Guidelines was then transferred to an internal Inspection Report (IR) or Nonconformance Report (NCR) for WBG ad hoc evaluation and action. A technical engineering group was formed to attempt resolution of these open items, and other open IRs which had been generated prior to June 1980.

WBG had identified apparent unqualified welders by compiling a computerized list of every weld record, with applicable weld procedure and welders. The list included welder qualification dates for each procedure, and incorporated a flagging of those welds made by any welder who appeared to not have been qualified to the applicable procedure prior to use, or who had exceeded the 90-day inactive period defined by the ASME Code.

The NRC inspector interviewed a WBG technical engineer and reviewed his in-process files of pending actions for welding done by some unqualified welders (e.g. identification codes: 1R, 19, F3, 08, and 6U; and respective inspection reports: IR-09195, IR-09257, IR-09293, IR-9275, and IR-09231). In some cases the engineer was able to obtain data from time cards, internal foreman memoranda, personal interviews of weld test

booth administrators, and other logs to substantiate with a high confidence that the welder was adequately qualified. The records show that the technical engineer has routinely used the provision of QW-304.1 of the ASME Code Section IX Summer 1978 Addenda, which allows qualification of a welder through radiography of his first production welds. (WBG obtained State approval for use of this Addenda in a May 14, 1982 letter). The WBG technical engineer's conclusions are subject to the WBG ASME Authorized Nuclear Inspector's concurrence, Bechtel quality control approval, and Bechtel ASME Authorized Nuclear Inspector's review.

The inspector also randomly selected and examined two WBG inspection reports that were pending classification (validation) by Bechtel. Both of these contained a WBG recommended disposition to cut and replace the material. The IR-10186 identified attachments of ASTM-A500 material to ASME piping; this did not meet the review criteria of SC/F Guideline No. 15 (ASTM material is required to be identical to the ASME material). IR-1798 identified socket welds completed without required scribe marks to ascertain that fit-up gaps had been properly maintained.

The records showed attention to detail and WBG staff and management willingness to identify as deficiencies those areas where existing documentation does not clearly demonstrate the quality of installed material and work. Research appeared to be of sufficient depth to support the conclusions for disposition of IRs by the technical engineer.

c. Bechtel Disposition of Identified Discrepancies

Bechtel procedure SWP-P-G18 provides for open WBG Inspection Reports (IRs) to be provided to Bechtel as part of the system completion activity. Bechtel reviewed and classified each "OPEN" WBG IR as either valid or invalid, in accordance with the procedure. This validation process was subject to concurrence by the Bechtel quality control organization and ASME Authorized Nuclear Inspector. In some cases this Bechtel review proceeded in parallel with the WBG technical engineering efforts to resolve the issues.

Where the Bechtel reviewers deemed the WBG IR as valid, and rework was required, the Bechtel procedure required documentation of the matter on a Bechtel nonconformance report. Alternatively, a Bechtel Quality Control Instruction/Inspection Recorded (QCI/IR) was used if the work was classified as "work unfinished" (e.g. cases such as incomplete testing or heat treatment, or cases where the WBG internal disposition actions had not yet been completed).

Where the Bechtel reviewers deemed the WBG IR as invalid, the Bechtel procedure required the Bechtel reviewer to note the reason on the bottom of the IR (an invalid IR was defined as one which should not have been written). On July 16, 1982 the Bechtel WBG-IR Closure Log listed 739 open IRs that had been received by Bechtel; 358 of these were identified as having been deemed invalid (50 percent).

The inspector inquired into the apparently high proportion of invalid IRs, discussing this with personnel within the WBG organization and with the Bechtel coordinator of the reviews. The reasons cited were acceptable, and included: Some IRs were duplicates; WBG internal reviews had voided the IR after its transmittal to Bechtel; Bechtel had already removed the material and scrapped it as part of another action; redesign of the item required removal of the problem part; acceptance criteria had been modified since release of the IR; and field examination (Bechtel responsibility) revealed subsequent data which could resolve apparent discrepancies. The review includes a specific examination of IR Nos. IR-5290, 5919, 9190, 9275, 9630, 9655, 9906, and 9908.

The inspector examined eleven valid IRs (8151, 8910, 9873, 11028, 11072, 11080, 11082, 11092, 11094, 11099 and 11100) which the Bechtel coordinator had just received for logging. For the valid IRs, he also examined the Bechtel files to ascertain proper conversion into work-controlling Bechtel NCRs (NCR-1321, 1280, 1321, 1320, 1328, 1324, 1262, 1322, 1326, 1399 and 1327 respectively). He also interviewed a Bechtel systems completion engineer who was entering the NCRs (and IRs which had not yet been dispositioned by WBG and Bechtel) into the master work list for the applicable systems. The valid IRs examined generally involved replacing materials for which material traceability had been lost, such as U-bolts, nuts, hanger bracket parts. Also included were weld cut-out dispositions involving a case of a missing weld record (IR08151) and an unqualified welder (IR-8910).

The records showed attention to detail and Bechtel staff and management willingness to call for corrective action where existing documentation did not clearly demonstrate the quality of installed material and work.

d. Burns & Roe Disposition of Identified Discrepancies

The Bechtel procedure SWP-P-G-7 provided for referral of certain discrepancies to the architect-engineer (B&R) for disposition, via a B&R nonconformance report (e.g. proposals for accept-as-is or repairs where existing B&R repair procedures do not apply).

The inspector examined three typical Bechtel NCRs which were referred to B&R. These included NCR-656 and 10274 (referred via B&R NCR-215-10003 and 10266 respectively); these document B&R evaluation of pipe wall thickness reduction from grinding activities, and accept-as-is disposition based upon acceptable minimum design thickness. A Bechtel field engineer attested to his impressions of B&R conservative dispositions to such NCRs, based upon a prescribed repair for disposition of NCR-10063 (which involved .001-inch encroachment on the design minimum wall thickness). Also, B&R NCR-215-06795 addresses fifteen Bechtel or contractor NCR's (NCE-1278 and NCR-6795 through 6811) regarding missing nondestructive test data for 3/4-inch ASME Class 1 piping and fittings. Disposition of the NCR prescribes replacement of the items with acceptable material.

The records showed attention to detail and B&R staff and management willingness to prescribe corrective action where existing data did not clearly demonstrate compliance with the design specifications.

e. Application of ASME Code Cases and Interpretations

A Bechtel letter BECMCL-82-0058 (dated January 25, 1982) prescribes the method of obtaining State and WPPSS approvals for use of optional code provisions. Washington State Department of Labor and Industries letters to WPPSS (dated October 28, 1981), to Bechtel (dated June 7, 1982), and to WBG (dated December 11, 1981) show typical state approvals. Where a Code Case is not identified in Regulatory Guides RG-1.84 or RG-1.85 the licensee may request ad hoc NRC approvals for use. In the Bechtel review of WBG discrepancy reports, resolution might in some instances have been achieved through application of such a Code Case. The Bechtel responsible engineer stated that several such Code Cases had been submitted to WPPSS, and only one had been approved for use (but it had not been applied). He stated that all other Code Cases used were acceptable under regulatory Guide 1.84/1.85.

The WBG Guideline No. SC/D - 56 requires that each Certificate of Code Status (CoCS) identify those ASME Code Cases applied to the item; this is similar to requirements for ASME Code Data Report Forms N-5. (The CoCS is used by WBG for incomplete items released to Bechtel for completion.) The WBG guidelines did not instruct the document reviewers to affirm that associated supplementary requirements of NRC Regulatory Guides 1.84 and 1.85 have been implemented, where each Code Case was applied. At the time of this inspection, the WBG Technical Engineering staff was in the process of compiling files of all Code Cases applied during the discrepancy resolution phase of the WBG review activities. These are summarized

in procedure WP-790 with symbols which were used in the heat log. The staff interviewed by the inspector could not identify all of the applicable Regulatory Guide requirements above those required by the Code Cases.

The WBG Guideline No. SC/D - 41 provides an additional specific example of the above concern. It allows record review personnel to apply ASME Code Case N-1644-5 through 9, and N-249-1. The Bechtel ASME Code cognizant engineer stated that the WBG vendors had listed all material specifications which had been used. He then reviewed each specification for compliance with the 170 Ksi maximum ultimate tensile strength criteria of the Regulatory Guide 1.85, and affirmed that the supplementary criteria of RG-1.85 were not applicable. However, the WBG technical engineer supervisor subsequently stated that this review was limited to type F and type W parts from the pipe support vendor (NPS), based upon binders of certified mill test reports. This data was not necessarily accurate for other raw steel procured for fabrication of supports. He stated that he now plans to review all material in the WBG heat log, using the Code Case symbols list in procedure WP-790, to identify any instances where the Code Case N-1644 was used; he plans to check each purchase order against the 170 Ksi criteria to assure the non-applicability of the supplemental criteria of RG-1.85. He stated that WBG would certify the heat log as correct, as part of the records turnover activity. The results of this Case N-1644 review will be examined during a future inspection. (Follow-up item 397/82-15-01)

The WBG quality assurance records supervisor stated that none of the other Code Cases used by WBG involved supplementary criteria, other than the above and N242-1 (discussed below). He stated that the procedure WP-790 may be revised, or a separate letter issued, to attest to review against all the associated Regulatory Guide requirements. The proper documentation of this Regulatory Guide compliance will be reviewed during a future inspection. (Follow-up item 397/82-15-02).

The WBG SC/D Guideline No. 44 provides detailed instruction to WBG record review personnel for use of ASME Code Case N-242-1. On December 11, 1981, the State of Washington approved use of N-242-1 conditional upon the supplemental requirements of NRC Regulatory Guide-1.85 Revision 18. The RG-1.85 is recognized by FSAR Section 3.8.2.2.4.9 (May 1982 Amendment); it requires that the safety analysis report identify the specific components and supports for which the Code Case



was applied and specify the respective paragraphs of the Code Case. The required FSAR information has not yet been submitted. Although the WBG Guideline No. 44 provides for identification of specific paragraphs invoked, and it identifies various items which are shown on isometric drawings, it did not require identification of the specific components and structures where the Code Case was applied. Also, the Bechtel responsible review engineer stated that the required listing cannot be prepared without the ASME certified design specifications, which define the boundaries of components and structures. These had been requested from WPPSS via letter BECWNP-2-82-0126 dated February 4, 1982. At the time of this inspection, the requested information had not been received by the engineer, nor had activities commenced or been assigned for the identifications required for the FSAR.

The licensee stated that this matter would be reviewed. Implementation of the RG-1.85 supplemental requirements for Code Case N-242-1 is unresolved. (Unresolved item 397/82-15-03)

4. Reverification Program

The inspectors received routine daily reports of reverification program activities, including hardware reinspections planned each day. The inspectors observed typical activities including the following which were inspected during this report period:

a. Small Bore Piping

Two Bechtel inspectors were interviewed and accompanied during their inspection of small bore piping installations shown on isometric drawing RRC-1336-3 (Reactor Cooling Pump RRC-P-1A Seal Leak Detection and Seal Staging to EDR). The RVP inspectors demonstrated sufficient familiarity with the applicable procedure RVP-3.00. The inspectors have been instructed to inspect weld size (fillet/socket welds) through existing paint, however they stated that removal of the paint could and would be arranged for them should the observed conditions be questionable.

b. Heat and Ventilating System

The NRC inspector accompanied a BPC QC inspector during a reverification inspection of "Home Office" supplied ductwork for The Waldinger Corporation (Contract 2808-216). The BPC QC inspector observed the Waldinger QA engineer perform a review for ductwork fabrication in accordance with applicable drawings and procedures. The documents were reviewed for (1) inspectors certification (2) receipt of certificate of conformance and (3) site receipt including home office and site inspection reports. Minor deficiencies which were resolved by preparing appropriate deficiency reports.

c. Diesel Oil Storage and Transfer System

The Reverification System Report for the Diesel Oil Storage and Transfer System (System 47.2) by BPC on contract 2808-215, WSH/BOECON/GERI (WBG) has been completed. The report summary states: "The work performed by WBG which is subject to reverification consists of 14 Quality Class 1 isometrics. Two of these hangers were selected for reverification and were reinspected by Bechtel QC. A number of cosmetic hardware deficiencies were identified which were accepted by the Architect Engineer (AE) in the field. All of the documentation packages were acceptable."

d. Electro - Hydraulic Control System

The Reverification System Report for the Digital Electro - Hydraulic Control System (System 48.2) by BPC on contract 2808 - 215, WSH/BOECON/GERI(WBG) has been completed. The report summary states: "The work performed by WBG which is subject to reverification consists of 1 Quality Class 1 isometric. This isometric was selected for reverification and was reinspected by Bechtel QC. One hanger on the isometric required a lug to be reworked. The remaining deficiencies were accepted by the Architect Engineer (AE) in the field. The documentation package was acceptable."

No items of noncompliance were identified.

5. Reactor Coolant Loop Pipe Welding Records and Other Safety-Related Pipe Welding Records

The inspector examined welding and nondestructive examination records and interviewed personnel regarding the reactor coolant loop and other safety-related piping welds. This included examination of the WBG work packages which had been subjected to the WBG Systems Completion Documentation review. It also included a comparison of the final record for each weld with copies of the records which had been obtained by NRC in June 1980 (reference IE Inspection report 50-397/80-08 and follow-up item 397/81-03-04). Also related to such weld records, the inspector examined inspection reports and nonconformance reports which call for weld repairs and observed the liquid penetrant examination of a weld repair of reactor pump discharge line weld BC/G-216-A10 (NRC-5017) and excavation for weld repair of residual heat removal system weld RHR-899-48-002-FW3 (NCR-5007).

The inspector considered ASME criteria for weld/welder/ and material identification, preheat and interpass temperature, purge

gas for stainless steel welding, and repairs where indicated by initial inspection/NDE results. Evidence of the WBG system completion review activity was noted in each case. The review included the following 35 welds:

ASME III Class 1 Piping RFW-419-3

24" Diameter Welds Nos. 12, 12-1, 13, 14  
2" Diameter (small bore) Welds Nos. 1 thru 10  
Repair Welds Nos. 13R1 and 14R1

ASME III Class 1 Piping HPCS-630-29.30

12" Diameter Welds Nos. 1, 2-1 and 2A

ASME III Class 2 Piping RHR-880-1.6

18" Diameter Welds Nos. 1 thru 9 and 7A  
2" Diameter (Small bore) Welds Nos. 10 and 11  
Weld Repairs Nos. 1R1, 7R1, 7AR1 and 8R1

No significant discrepancies were identified. The prescribed weld procedure was identified on the weld record in each case, but the particular revision number had not been included. The technical reviewers have identified the particular revision number which was effective on the date of the welding, and have added this to the weld records. The WBG quality assurance and engineering representatives stated that WBG had issued new weld procedures each time there was a change in an essential variable, such that revisions to procedures would have involved only non-essential variables, as described by the ASME Code.

No items of noncompliance were identified.

6. Allegation - Placement of Tie-Rebar In Base Mat

Livermore Rebar was the company that installed the rebar in the base mat. Somehow, in placement of the rebar, they did not follow the design and, instead of a 360 degree circle, the result was a "362" degree circle? As a result, the setting of the tie bars to the vertical rebar did not follow the design. Source advised that the tie bars were not placed as originally required and questioned if this would have an effect upon the safety of the plant should there be a seismic event.

The allegation was one of two allegations given to the licensee for investigation as documented in Report Nos. 50-397/82-07 and 50-397/82-14. The licensee was not able to determine the basis for the allegation regarding a "362° circle". The licensee did investigate the design and placement of the base mat rebar and

the tie bars. The original design for the base mat rebar as shown on Gilmore Steel Drawing No. 8701 Revision 5 indicates spacing at 10-inch intervals at radius 47-feet 10½-inches. This equates to 361 bars. Bethlehem Steel Corporation Drawing No. BS-RB-21 modified the 10-inch spacing requirement to a 1 degree spacing requirement for the base mat rebar. This equates to 360 degrees. On February 10, 1976, NCR 206-01526 identified a deviation of tie bar from elevation 422-feet 3-inches to elevation 446-feet 0-inches consisting of 2 extra tie bar indicating that there was 362 tie bars between those elevation. (Top of Base mat is 422-feet 3-inches). Burns and Roe Inc. reviewed the deviation and concluded that the deviation did not affect the structural integrity of the shield wall. A contract change was initiated on November 5, 1975 changing the spacing of the vertical rebar from elevation 446-feet 0-inches up to 1° allowing for 360 bars.

No records were identified showing a 362° circle. The licensee has concluded that there is adequate rebar in the base mat and the biological shield wall. This item could not be substantiated.

7. Plant Tours

The inspectors toured the safety-related areas of the physical plant at various times between July 12 - 30, 1982, and performed follow-up record reviews as indicated. No items of noncompliance were identified relative to this general inspection activity. The inspectors also attended several on-site construction and quality management meetings relative to the reverification program, overall project status (including problem areas and work schedules), and WBG document reviews. Attendance at these sessions is useful to the inspectors in inspection planning and compilation of overall assessments of the quality assurance program implementation.

8. Licensee Actions On Previous NRC Findings

The Bechtel quality assurance group prepared a matrix of prior NRC findings which had been resolved primarily by procedures related commitments to the NRC. It included items from reports 50-397/77-03 through 81-05. The matrix identified each finding by specific contractor, status as fully implemented versus requiring continued implementation, the procedure which initially implemented the commitment, the procedure and/or area of the quality assurance program which currently implements the commitment, and the contractor responsible for assuring continued implementation. This information was conveyed to the licensee via December 9, 1981 letter BECWNP2-81-0644. It included the Bechtel identification of licensee oriented commitments, but it declared that no attempt was made to determine the current implementation status of these items. The licensee action on these items will be reviewed during a future inspection. (Follow-up item 397/82-15-04)

The responsible quality assurance engineer stated that he had identified the items and obtained status assessment from the various Bechtel contract coordinators and verified the responses. Handwritten response sheets demonstrated the basis for the matrix. He had also issued a December 8, 1981 memorandum to the contractor coordinators, along with the compiled matrix, for use in future procedure reviews.

The inspector considered these efforts to be a reasonable attempt to retain the benefits of the extensive procedure review which were conducted during the 1980/1981 work restart activities.

In addition to the above general matter, the inspector reviewed the licensee actions on the following specific matters:

a. (Closed) Unresolved Item (397/80-08-17) - Unapproved Shipping Location

In August 1978 the mechanical contractor had obtained welding material from Page Welding Division of ACCO (Bowling Green Kentucky), where as this shipping location was prohibited by the quality assurance manager as a condition of vendor approval of Enterprise Oxygen in November 1977.

The status of this item was reviewed in NRC inspection report 50-397/81-10 during the restart review activities at the WNP-2 site. At that time it was noted that the contractor had not yet determined the cause or significance of the shipping location restraint, and that the contractor appeared to be continually deferring investigation of this 1978 question.

WBG had been unable to resolve this issue during the 1980-1981 work restart activities. WBG inspection report 215-IR-08137 was issued May 27, 1981 and revised three times until voided November 17, 1981. Related Burns and Roe nonconformance report 215-6877 was issued October 9, 1981, and was dispositioned by the engineer accept-as-is. This disposition was based upon the certified mill test reports meeting the specification requirements, and this purchase order having been subjected to the WBG new documentation review process. Supporting documents included an October 1978 WBG vendor survey and a December 18, 1981 vendor teletype stating that the quality assurance manual in effect between May 1978 thru October 1978 had not had any revisions which would affect conformance with ASME Section III NCE-3800. This appears to be reasonable basis to conclude validity of certified reports and acceptability of the material.

This matter is resolved.

b. (Closed) Follow-up Item (397/80-14-02) - Specific Specification Guidance

WPPSS Task Force 1 activities in 1980-1981 were focused upon reduction of backlogs of outstanding problems. Progress was routinely monitored by NRC. Inspection report 50-397/80-17 identified a specific concern over the WBG procedure QA-5 for control of nonconformances, which did not incorporate specific specification guidance.

The Bechtel quality assurance engineer has ascertained that the current WBG procedure contains the appropriate excerpt appendix from the WPPSS project management instruction PMI 4-4. Also, deficiency trending for all the site contractors is performed by Bechtel quality assurance department under detailed instructions of the Bechtel quality assurance manual Section C-19. The inspector reviewed this effort, as noted in NRC inspection report 50-397/82-14.

c. (Closed) Follow-up Item (397/80-18-05) - Applicability of ASME Code to Retrofit Work

The licensee was evaluating the applicability of the ASME Code Sections III and IX for containment wetwell retrofit work, including hydrotest requirements.

ASME letters to Bechtel dated June 5, 1981 (ASME file NI-81-43) and dated May 18, 1981 (ASME file NI-81-80) define that the retrofit may be performed under ASME Section III and that hydrotests of the containment be performed in accordance with Sections NE-1132 and 6113 of the Code. The Washington State Deputy Boiler Inspector affirmed this position.

This matter is closed.

d. (Closed) Unresolved Item (397/80-18-07) - Evaluation of Noncompliances

The WPPSS replies to the NRC July 11, 1980 Notice of Violation committed to a subsequent identification of underlying causes of the noncompliances. Reference was made to a pending response to the NRC annual appraisal. In September 1981, the licensee representatives could not identify this information, and it appeared that it had not been submitted.

However, the licensee has identified that additional information had been provided in a timely manner via August 12, 1980 letter to NRC (correspondence number GO-80-177).

This matter is resolved.

e. (Closed) Follow-up Item (397/81-18-04) - Operations Quality Assurance and Quality Control Interface

Changes to the Operations Quality Assurance activity were required and planned to clarify the quality control inspection functions and interfaces.

A plant quality assurance manager was appointed, reporting to the corporate operational quality assurance manager in February 1982. A plant QA/QC Program Manual was issued with procedures in February 1982. The manual included procedure PQA-04, which defined the quality assurance organization detailed functions for procedure reviews. It defined criteria for procedure content (including establishment of hold points) and methods of quality assurance representative participation in the Test Working Group (TWG) meetings, including actions to resolve comment disagreements. Associated procedure PQA-07 was issued at the same time, "Criteria For Hold Points".

This matter is resolved.

f. (Closed) Follow-up Item (397/81-18-05) - Quality Control Organizational Relationships

Test engineers were performing quality verification functions in addition to technical direction of work. The quality control organizational relationship was not clear.

The QA/QC Program manual has been issued, including 13 procedures as of July 1, 1982. Organizational relationships have been reinforced with quality assurance reporting to the corporate office. The quality assurance procedures (especially PQA-04 and PQA-07) clearly provide for quality assurance personnel to establish work hold points into operations and startup organization work procedures, with inspection by quality control inspectors.

This matter is resolved.

g. (Closed) Unresolved Item (397/81-21-01) - Arc-Strike Evaluation

Bechtel procedures and training for arc-strike evaluations were inadequate and a Bechtel field engineer supervisor did not assign personnel to allow compliance with specification requirements for evaluation of arc-strikes.

The licensee corrective actions have been described in a letter to NRC dated January 20, 1982, and appear to be as stated therein.

The inspector reviewed the following documents relative to this matter:

- (1) PED-215-W-B199, which clarifies arc-strike inspection criteria.
- (2) Printed training/reference booklet (with photographs) for "Arc-Strike Evaluation" and improved instructions for removal of indications.
- (3) Bechtel quality control form QCF-4000, which defines the ASME Code examination requirements for various types of products.
- (4) Bechtel quality control instruction 14631/P-1.10, which includes form QCF-4000 and specific requirements for inspection and wall thickness verification of areas of arc-strike removal.
- (5) The following Bechtel piping records packages. (Note: These packages were all ASME Section III Class 3 welds, which requires liquid penetrant inspection of removed surface defects only on cast materials. No cast materials were identified and absence of liquid penetrant inspection evidence appears acceptable.)

SW(7)312-1	SW(9)305-6
SW(17)300-4.9	SW(27)308-1.2
SW(29)298-1.3 & 4.6	SW(29)298-7.8
SW(80)091-6.13-1	SW(80)2707-1
SW(100)013-1.8	SW(100)4481-1 & 2

- (6) A quality inspector's review list of cast valves which had been inspected.

This matter is resolved.

h. (Open) Follow-up Item (397/82-11-01)

It appeared that attachment welds on flanges would require future in-service examination under ASME Section IX latest addenda (1980 or later).

The licensee had contacted the ASME Code Committee and determined that the ASME Code Main Committee has passed two items (ISI-81-34 and 35) to be issued in late 1982, which clarify Category B-K-1 requirements and their application to integrally welded support attachments only.



This matter will be further reviewed relative to the pending clarifications and NRC Regulatory Guide acceptance.

i. (Closed) Unresolved Item (50-397/82-12-01) - Fire Protection Inspection Boundaries

The licensee performed a review of each contractors compliance with Appendix A of Branch Technical Position APCSB 9.5-1, C.1. Quality Assurance Program and the governing specification. In addition, the review encompassed compliance with the BPC Quality Assurance Manual, the BPC implementing procedure, FSAR compliance evaluation and contractor responsibility. The inspector reviewed the hydrostatic test results of selected protions of the fire protection system. No deficiencies were identified. This item is closed.

9. Unresolved Items

Unresolved items are matters about which more information is required in order to ascertain whether they are acceptable items, items of noncompliance, or deviatitions. Unresolved items identified during this inspection are discussed in paragraphs 3.e and 8.

10. Management Meeting

On July 30, 1982 the inspectors met with the Program Director, the quality assurance manager, and other licensee and construction management representatives to discuss the status of inspection findings and other inspector activities relating to this project. Persons contacted who attended this meeting are so noted (\*) in paragraph 1 of this report.