U.S. NUCLEAR REGULATORY COMMISSION

REGION V

Report No. 50-460/82-05
50-513/82-03

Docket No. 50-460/513 License No. CPPR-134/174 Safeguards Group _____

Licensee: Washington Public Supply System

P. O. Box 968

Richland, Washington 99352

Facility Name: Washington Nuclear Project No. 1/4 (WNP-1/4)

Inspection at: WNP-1/4 Site, Benton County, Washington

Inspection conducted: March 1-31, 1982

Inspectors: R T Dodds
A. D. Toth, Senior Resident Inspector — 4/22/82 Date Signed

_____ Date Signed

_____ Date Signed

Approved By: R T Dodds
R. T. Dodds, Chief
Reactor Construction Projects Section 2 — 4/22/82 Date Signed

Summary: Unit #1 Summary: Inspection March 1-31, 1982 (Report No. 50-460/82-05)

Areas Inspected: Routine, unannounced inspection of safety related pipe supports, reactor coolant loop pipe welding and post-weld heat treatment, welding materials for reactor coolant system and other safety related system pipe welding, and status of previous inspection findings. The inspection involved 111 inspection hours on-site by the senior resident inspector.

Results: Of the five areas inspected one item of noncompliance was identified relative to post-weld heat treatment of reactor coolant piping. (Paragraph 6)

Unit #4 Summary: Inspection March 1-31, 1982 (Report No. 50-513/82-03)

Areas Inspected: Routine, unannounced inspection of the status of the maintenance of facilities and equipment during the project termination activities. The inspection involved 4 inspection hours on-site by the senior resident inspector.

Results: No items of noncompliance were identified.

DETAILS

1. Persons Contacted

Washington Public Power Supply System

*R. Root, Acting Program Director WNP-1
*C. Edwards, Project Quality Assurance Manager
*M. Farrell, Quality Assurance Specialist
*F. Hood, Acting Deputy Program Director, Construction
*C. Organ, Assistant Program Director, Engineering
*M. Rodin, Quality Compliance Senior Quality Assurance Engineer
M. Rogers, WNP-4 Termination Team Site Representative

United Engineers and Constructors

*G. Faust, Field Surveillance Quality Assurance
*E. Haren, Project Quality Assurance Manager
M. Lasota, Field Project Engineer (Piping Supports)
*V. Mani, Director of Operations
S. Nathan, Site Design Engineering Analysis Supervisor
*W. Taylor, Resident Construction Manager

Bechtel Power Corporation (BPC)

W. Clayton, Quality Control Supervisor, Mechanical
*E. Edwards, Project Manag.
*T. Fallon, Project Quality Control Engineer
*J. Gatewood, Project Field Quality Assurance Engineer
*T. Johnson, Manager of Quality
*J. Rudd, Quality Assurance Engineer
D. Webb, Preventive Maintenance Supervisor

J. A. Jones Construction Company

*C. Anderson, Assistant Project Quality Assurance Manager
J. Dale, Quality Verification Lead Inspector, Containment
T. Daines, Welding Engineer
D. Higginbotham, Senior Quality Assurance Supervisor
D. Plowman, Field Engineer
J. Stannard, Lead Welding Engineer
R. Wilson, Quality Assurance Manager

Other General Contacts and Notes

In addition to the persons identified above, the inspector interviewed other personnel from the construction, engineering, and quality control site contractor organizations. He interviewed various craft and supervision who were present in the work areas during the inspector's activities, or who had visited the inspector's office.

*Denotes personnel present at the exit management meeting.

2. General

The resident inspector was on-site March 1-4, 8-12, 15-19, 22-26, and 29-31. During this period, the inspector performed routine examinations of activities, including plant tours, record reviews, and interviews of personnel. He interviewed several craft and inspection individuals regarding their quality concerns and the applicability of NRC regulations. No significant issues were identified which were not already being addressed by the Hotline program or contractor management internal corrective actions programs.

Two NRC regional office investigators were on-site the week of March 1-5. One NRC regional office inspector and two investigators were on-site the week of March 8-12. Their activities are documented in separate reports.

3. Significant Personnel Changes Noted

On March 9 WPPSS announced that Mr. D. Mazur was appointed WPPSS Director of Projects, with WNP-1,2,3 Program Directors reporting to him. Mr. W. Root has been designated acting Program Director, and Mr. F. Hood Acting Assistant Program Director for Construction at WNP-1.

4. Unit #4 Layup Quality Assurance

Inspection Objectives

By direct observation, and independent evaluation of work performance, work in progress and completed work, ascertain whether extended construction delay activities were being accomplished in accordance with NRC requirements and licensee commitments. The observation and evaluations were to generally consider the following:

a. Availability, use and control of procedures

b. Protection and preservation (where applicable)

c. Nonconforming activities and conditions

d. Utilization of inspection personnel

e. Use of measuring and test equipment (where applicable)

f. Quality assurance audits

g. Site access control (to safety related components)

Inspection Approach

The inspector observed the on-site storage yards and structures, including the lay-down areas of the steam generators, reactor vessel, reactor internals, pipe supports, piping, and general construction materials. He interviewed the Bechtel quality control inspectors and supervision responsible for preventive maintenance of equipment, and the WPPSS manager responsible for the WNP-4 site activities. Personnel qualifications and training, disposition of preventive maintenance inspection findings, and QA surveillance were discussed with supervision. He examined the various work orders which have been issued for conduct of activities through June 1982. These items were considered relative to the mothball plan previously submitted to NRC.

Findings

No items of noncompliance were identified.

5. Preplanning of Complex Construction Activities

Inspection Objectives

The inspector reviewed the preparations and planning which were made by the J. A. Jones Company to commence heat treatment activities for the reactor coolant loop piping, (also discussed elsewhere in this report). The objective was to assure it's sufficiency, specifically to determine whether:

a. Necessary procedures have been developed and whether they were adequate for the expected complexity of the work activity, including potential problems that may arise, and for interfaces with concurrent or subsequent work.

b. Special training of craft personnel in the complex work activity was or will be conducted.

c. QC personnel were properly trained in the inspection requirements for the work activity.

d. Staffing plans for construction and QC personnel provided for adequate coverage and anticipate schedular delays.

e. Equipment definition was consistent with the complexity of the activity, and that backup equipment was provided in cases where continuity of the activity was important to assure quality.

f. Provision was made for timely technical assistance should problems be encountered during the activity.

g. QC inspection hold and/or witness points were identified at critical step of appropriate complex construction activities, or on a continuous basis if appropriate.

h. Licensee Quality Assurance surveillance of preplanning activities will assure that contractor preplanning of activities having potential for construction difficulties is conducted in an effective manner.

Inspection Approach

The inspector accomplished the above objectives through: interview of the welding engineering, quality control, and training personnel; review of training records and films; review of process control sheets and procedures (included JAJ-HT-002, JAJ-PCS-002 and Cooperheat Post Weld Heat Treatment Instructions) and observation of the mobilization for the post weld heat treatment of field weld FW-016 of the primary reactor cooling loop.

Findings

No items of noncompliance, deviations, or insufficiency were identified, with exception of the by-passed hold point problem identified in paragraph 6 below.

6. Reactor Coolant Loop Piping Weld Heat Treatment

Inspection Objectives

The inspector observed the post weld heat treatment in process for field weld FW-016 to assure that the following items were satisfied:

a. Weld area was instrumented to provide time-temperature recordings for the duration of the entire heat treatment cycle.

b. The temperature monitoring instruments were properly calibrated as required by the applicable procedure.

c. Sufficient thermocouples or other appropriate temperature measuring devices were used to measure the anticipated hottest and coldest temperatures of the weld during holding at temperatures and to measure temperature variation. (This variation should not exceed minimum specification requirements.)

d. The PWHT temperature and holding time was specified, was adhered to, and was consistent with applicable Code requirements based on the material type and thickness.

e. The maximum initial temperature, heat-up and cool-down rates were specified, were adhered to, and were consistent with applicable Code requirements.

f. The temperature records being generated reflected adherence to the above (item e.) requirements.

Inspection Approach

The inspector interviewed the weld engineers and the quality control inspectors responsible for heat treatment of FW-016, observed the activities as the holding temperature was approached (1125°F) on the second shift of March 9, 1982, and reviewed the temperature charts the following day with the weld engineer. The location of the thermocouples and the spares was examined following removal of the thermal insulation the following day.

Findings

The maximum specified holding temperature of 1150°F had been exceeded (1157°F) for short times, not exceeding half an hour and well within the ASME Code allowable limits. This was recorded and properly documented by an NCR.

The heat treatment of FW-016 initially commenced on February 22, but inability to control the temperature band led to termination of the process. (reference IE Inspection Report 460/82-02). Following the preparation and approval of a new process control sheet, internal heaters were installed. During this interim period a nonconformance report had been issued on March 2. This report (NCR-211-1542) identified that the weld documentation package had no evidence that (trisodium phosphate) coatings had been removed prior to welding FW-016 on August 17, 1981.

Issuance of that nonconformance report should have stopped further processing of the weld (including PWHT) until resolution of the matter by the Engineer. The ASME QA Manual par XIV and the contractor procedure POP-703W require that the quality verification inspector attach a hold tag to the nonconforming item, and annotate the tag number on the traveler or process control sheet. When the NRC inspector examined the documents and interviewed personnel on March 9, 1982 at 4:00-7:00 PM, the continuation of the PWHT was already in-progress with temperature at 900°F. At this time the required notation was not in the weld nor heat treatment work packages,

nor was it in the table of contents of either of these. Also, there was no HOLD-TAG evident on the work area or in the PWHT work package or process control sheet. As stated by the lead Quality Verification (QV) inspector for day shift work, the existence of this nonconformance was not detected until the weld FW-016 had been raised to 900°F toward the end of the day shift on March 9, at about 3:00 pm. At this time, verbal direction was conveyed to the second shift Quality Verification personnel that management had decided to proceed with the heat treatment, rather than cycle the weld once again. The second shift QV personnel were instructed to sign off their hold points and issue a new nonconformance report and HOLD-TAG because of having proceeded through a hold-point. At this time, the J. A. Jones disposition of the nonconformance report had not been accepted by the Engineer (UE&C), although engineering personnel within J. A. Jones thought that the recommended disposition would be accepted. On March 10 the NRC inspector interviewed the UE&C engineer responsible for disposition of the nonconformance report. The disposiiton had not yet been established, but it was subsequently dispositioned to accept as-is.

Once at the 900°F temperature, the decision to proceed appears to have been sound, based upon incentives to avoid repeated temperature recycles and the Engineer's ultimate disposition of the NCR as acceptable as-is. However, the absence of any proper authorizing written direction for the swing shift personnel introduced a conflict with procedural requirements for concurring in hold points for proceeding to higher temperatures in the PWHT cycle. The March 2 failure to process the new nonconformance report and hang the hold-tag contributed to this situation, is a departure from the QA program procedures, and appears to be an item of noncompliance. (460/82-05-01)

The effect of verbal directions, described above, supports the concern noted previously in NRC identified item 460/81-09-03. This matter will continue to be monitored during routine NRC inspection activities.

Since identification of this item on March 10, the licensee, construction manager, and contractor site management have met to review the effectiveness of the pre-planning function and the relevance of the procedure noncompliance. Improvements to the control of future work packages have been implemented to assure that applicable documents are incorporated into work packages daily prior to release to the field for work. This effort is part of the general corrective action of the J. A. Jones corrective action report CAR-21 (previously noted

by NRC, item 460/81-10-06). Progress to date on CAR-21, training accomplished, and current sensitivity to the issue appear to have satisfactorily resolved the above noncompliance item 460/82-05-01.

7. Reactor Coolant Loop Piping Special Welding Applications Inspection Objectives

The inspector determined whether special welding applications such as weld repairs, with or without postweld heat treatment, conformed to the requirements established by the ASME B&PV Code and other licensee or contractor requirements. This included the following:

a. The welding procedure used for weld repair was qualified in accordance with applicable Code requirements.

b. The repair procedure specification included all of the special requirements pertaining to welding technique, electrode baking, pre-heat, and base metal conditioning as specified in the Code and applicable construction specifications.

c. The repair welding procedure qualification test plate size and composition were in accordance with the applicable ASME Section III requirements and the test plate was evaluated in accordance with these requirements.

d. Welder performance qualifications were in accordance with all applicable code requirements.

e. The welders involved in the weld repairs inspected were identified for future qualification reviews.

f. The welding performance qualification was witnessed by an authorized (Code) inspector, as applicable.

g. The area to be repaired did not exceed limits specified in Section III of the ASME Code.

h. The base or filler materials to be repaired were the type specifically referenced in the Code or other requirements.

i. Repairs to the base metal were properly documented in a special report as required by Section III of the ASME Code, where applicable.

j. Nondestructive examination of the repair was performed in accordance with the special ASME Section III requirements, as applicable.

k. Records of repairs were included as a part of the licensee/contractor Data Report, where required.

Inspection Approach

The inspector observed the repairs and reviewed in-process records for the following welds:

a. Weld repairs consisting of mechanical removal of surface defects with no re-welding.

b. Weld repairs involving metal removal by chipping, grinding or machining followed by re-welding.

c. Weld repairs including base metal and/or cladding.

Specific repairs examined this period included (1) undercut at primary pump weld FW-014, (2) fit-up lug removal at reactor pump weld FW-014, and (3) cladding of the reactor pump inlet nozzle weld FW-006. He inspected the work, interviewed the welders and quality control inspectors, reviewed the work packages at the work areas, and reviewed the specifications and weld procedures,(including WP-P8, WP-P8-3, WP-P8-3A and JAJ-WI-030). The criteria of the ASME Code sections NB-4130, NB-4400, NB-4600 were particularly considerd.

Findings

Code data reports have not yet been prepared, however, the locations and nature of the repairs have been documented for eventual inclusion into the reports. No items of non-compliance, deviations, or discrepancies were identified.

8. Reactor Coolant Loop Piping Welding Material Control

Inspection Objectives

The inspector determined whether welding material purchase, acceptance, storage and handling associated with reactor coolant pressure boundary piping were in accordance with the licensee/contractor work and QA procedures, and applicable ASME B&PV Code requirements. This included the following actions:

a. Determine whether the licensee/contractor had established adequate procedures for purchasing welding materials that include requirements consistent with the ASME B&PV Code, as applicable.

b. Determine whether the licensee/contractor had established adequate procedures for receiving, storing, distributing, and handling of welding materials, including welding electrodes, filler metal, consumable inserts, fluxes, and gases.

c. A selective sample and review of welding material purchasing and receiving records to determine whether these operations were conducted in accordance with approved procedures or instructions and whether the material was in conformance with specifications.

d. Determine whether welding materials were clearly identified at all times in accordance with approved procedures and whether identification as acceptable material was retained throughout storage, handling and use until the material was used/consumed in the process.

e. Determine, by examination of representative records or direct observation, whether ASME code required tests were performed on each lot of cored flux, covered or bare electrodes, rod, or wire, for each heat of consumable inserts and for each combination of bare electrodes and dry blend of flux mix used for welding.

f. Determine whether welding material storage procedures contained requirements for environment (moisture) control, specified appropriate holding and baking temperatures for each class of materials, and whether actual practice followed these requirements.

g. At each weld issuing station, determine whether distribution of welding materials was controlled in accordance with approved procedures and that unused welding materials were scrapped or recycled in accordance with special provisions which include maintaining identification and rebaking of coated electrodes when applicable.

h. Determine whether there were effective procedures for limiting electrode moisture pick-up and maintaining identification after the welding materials were issued to the welder and whether these procedures were being strictly enforced.

Inspection Approach

The inspector reviewed the J. A. Jones procedures that generally and specifically apply to purchasing, receiving,

storage, issuance, and control of welding materials, including the current revisions of POP-306W, 401W, 402W, 404W, 405W, 706W, 711W, 712W, WI-007, 040, and 041. Weld records for the reactor coolant loop piping (welds FW-4, 5, 6, 12, 15, 19, 22) and identified weld material heat numbers which were recorded as having been used and verified by inspection were examined. For these heats of material he examined purchase orders which had been issued, and the associated suppliers' certified test reports. The inspector also reviewed the purchasing files for welding material vendors on the approved supplier list, and selected several of the purchase orders for review of receiving data. He interviewed the welding engineer responsible for issuing the purchase orders currently and in 1979, and the quality assurance engineer currently assigned review responsibilities. Those interviewed also included purchasing, engineering, and quality assurance personnel engaged in the on-going and restarted review of all purchase orders, as prescribed under corrective action report CAR-20 (reference IE Inspection Report Item 460/81-10-06). The inspector visited the weld material issuing stations this period and drew upon his previous observations during inspections since November 1981. The inspector included E7018, 705-2, E705-3, and ER308 weld rod and electrode, Inconel 382 consumable insert rings, argon purge gas, and soluble purge dams in the review and inspection. Dry blends of flux mix were not applicable to this work. The requirements of ASME Section III NB2400, NB4600, NCA, and Section II in particular were considered during the review.

Findings

The welding material purchase orders include various documentation problems. These are being addressed in connection with corrective action report CAR-20. The NSSS piping system welding records, including the weld material records, also were undergoing intensive review by the clerical and engineering personnel in preparation for future releases for post-weld heat treatment. Minor record discrepancies identified by the inspector were conveyed to the responsible reviewers for incorporation into the corrective action program, since these were similar or repetitive to the items which they identified in their initial review tabulations.

Procurement procedures were being re-written to improve the purchasing process, including new requirements to assure that required documentation is received prior to the suppliers shipping the material. The inspector identified no procedural deficiencies directly contrary to applicable Codes and Standards. Weaknesses identified in procedures POP-306W, 402W and 712W appear to be in the process of being addressed under CAR-20.

Weld materials appeared to be clearly controlled and identified. The inspector observed a case where the QV inspector had failed

to verify acceptability of heat No. 65210 weld filler metal awaiting shipment from the warehouse. Subsequent record review substantiated the acceptability of the material and acceptable vendor identification of heat number on the container. The supervisor conducted retraining of the QV inspector. The corrective action appeared acceptable for the circumstances.

The contractor has no special procedures for receipt of welding gases, and has apparently not been receiving a certificate of conformance with each shipment. Purchase order No. 5-0558-391 (dated March 1, 1979) requires, "Three copies of a Certificate of Conformance for each delivery that states supplied bulk and cylinder gas meets the purity requirement of 99.995 percent. The certificate of conformance does not appear to qualify as a certifying document under current QA criteria, nor does it satisfy the purchase order requirements. The ASME Code requires welding grade purge gases, without specifying precise impurity limits. The project specification 211 part 17A Paragraph 3.5.7 specifies welding grade argon of 99.996 percent purity. The contractor has appeared to impose the specification requirement rigorously without commensurate enforcement. This matter is unresolved, pending evaluation by the Engineer. (460/82-05-02)

9. Safety-Related Pipe Support and Restraint Systems

Inspection Objectives

The inspector ascertained whether the installation of safety-related pipe support and restraint systems were in compliance with NRC requirements, licensee commitments and applicable codes. This included selection of installed component support structure, consisting of a support bracket and a multiple pipe support in the general services building, and ascertaining by visual examination whether the following conditions exist:

a. The component support structures were located and installed as specified.

b. The surface of welds met applicable requirements and was free from unacceptable grooves, abrupt ridges, valleys, undercuts, cracks, discontinuities or other detrimental indications which can be observed on the welded surface.

c. Sliding supports and brackets were provided with material and/or lubricants suitable for the environment of the metal at the point of sliding contact.

d. Ascertain whether materials used in the construction of the component support structure have been certified by reviewing the material test report or a certificate of compliance.

e. Determine whether the bolting materials were as specified. By visual examination, ascertain whether any rejectable defects were evident, including incorrect size or shape.

Inspection Approach

The inspector selected the main steam system work-in-progress guide bracket MSS-4-RG-1A and the nuclear service water system installed multiple support NSW-11-SG-11 for inspection of the work and review of the work packages. The principal support NSW-11-SG-11 contained minor attached supports numbered DWD-53-SG, PSA-23-SG, IAS-142-SG and NSW-9-SG. The inspector measured fillet weld sizes and locations for comparison to the drawings. He also examined the pipe support ASME material storage area at elevation 455-feet of the general services building. He identified stock material heat numbers 65660, D26778, Y33420, 66139 and 89261, and examined the purchase order and certified material test report data for this material, relative to ASME Section NF Class 1 requirements.

Findings

No items of noncompliance, deviations, or discrepancies were identified. For future reference the inspector noted the disposition of an apparent discrepancy in material certifications. Pipe support material purchase orders (P.O. 8593, 7894, and 8264) specified Charpy impact tests for materials. The suppliers' test reports, in some cases, failed to include these. This apparent discrepancy has also been identified by the contractor's CAR-20 review. It has been found acceptable via a Bechtel letter of September 21, 1981 (BEC-211-81-247), which clearly relieves the contractor of this requirement, based upon UE&C design specifications.

The inspector also examined support MSS-4-RG-1A and DWS-17-RM-1, for which installation was in progress inside the containment building. The work packages contained appropriate skew-weld guidance and the configuration of the support was as shown on the drawings. The completed welds on FWS-17-RM-1 met visual acceptance criteria. The inspector noted that the fitters had cut pieces off the ends of MSS-4-RG-1A, and these pieces contained the material identification numbers for the support. However, the cut pieces were still at the scaffold and the traceability of the material was able to be ascertained. From this, it was not apparent to the inspector that the craft was sensitive to the procedurally defined hold-point for QV verification of material identification transfers prior to cutting material. This item and the post-weld heat treatment hold-point matter discussed in paragraph 6 of this report appear to

indicate that the corrective action on item 460/80-15-02 has not been fully effective in achieving rigorous compliance with this aspect of the quality assurance program (see paragraph 11.b.).

10. Plant Tours

The inspector toured the general services building and the containment building during various times this report period. Particular noteworthy items, relative to implementation of the quality assurance program and attention to associated corrective actions, are described below:

a. The inspector observed the welding preparations for containment penetration number 46. The weld joint appeared to be clean with adequate weld root gap and "J-Bevel" configuration called for by current design instructions. The welders described the steps which they were taking to protect the configuration from influences of drafts and through-joint air flow during gas-tungsten arc welding.

b. The inspector observed tungsten-arc welding in-process on field weld DHR-411810-FW-011, a 20-inch stainless steel connection to decay heat removal system valve V14B. Gas purge had been established. The welder interviewed (NX) was familiar with electrical parameters, limits and reasons for the limits. The weld record showed that quality inspection of joint fit-up had been made, including verification of valve transition bevel limits.

c. The inspector observed tungsten-arc welding in-process on field weld DHR-411801-FW-004, a 12-inch stainless steel decay heat removal system line in the general services building. The welder interviewed (HM) was familiar with fit-up and purge-gas requirements. The observed root pass appeared uniform. The weld record showed that quality inspection of joint fit-up had been made, including verification of purge gas.

d. The inspector observed tungsten-arc welding in-process on field weld DHR-411690-FW-011, a 12-inch stainless steel decay heat removal system line in the general services building. The welder interviewed (T7) was familiar with fit-up and purge gas requirements for tack welding. The joint had not yet had the root pass performed; the fit-up appeared to be within mismatch and root-gap tolerances, with acceptable tack welds. Purge gas was in use. The weld record showed that quality inspection of joint fit-up had been made, including verification of purge gas.

e. The inspector identified deteriorating machined surfaces of flanges in the general services building area which had been subject to accidental flooding on January 9. The flanges, DHR-VSL-1A(5P) and DHR-VSL-2B, were for the containment encapsulation assemblies of decay heat removal system valves. The machined sealing-surfaces of these flanges were not coated with a rust inhibiting material, nor were they protected from physical damage, (except for some broken partial plywood covering on one surface of DHR-VSL-2B). The inspector directed this matter to the attention of the construction manager quality assurance representative, who committed to have the situation corrected. This matter is unresolved pending review of corrective action in accordance with ANSI-N45.2.2. (460/82-05-03)

11. Licensee Action On Previous NRC Inspection Findings

The inspector reviewed licensee actions taken to resolve issues identified during previous NRC inspection activities. This involved review of records, examination of work, and interview of personnel.

a. (Closed) Unresolved Item (460/79-12-03)

Equipment alignment procedures did not appear to incorporate manufacturer's instructions for preliminary alignment. The preliminary alignment of MUS-PUMP-1A exceeded the alternative limit identified in the procedure.

The procedure WI-006 has been clarified to require that preliminary alignment be within .005-inches of the manufacturer's recommendation, as determined by a field engineer. The alignment record provides space for the engineer to document the required tolerances (manufacturer's recommendation). The same form is used for both preliminary and final alignments; separate forms would be used for coupling to each side of a gear-box. A nonconformance report (257-NCR-3247) had been issued to control re-alignment of MUS-PUMP-1A. This matter is closed.

b. (Open) Noncompliance (460/80-15-02)

The mechanical contractor construction personnel demonstrated lack of compliance with procedures prohibiting proceeding with work past established hold points.

The inspector examined the corrective actions described in the WPPSS letter to NRC dated January 12, 1981. The J. A. Jones corrective action report CAR-006, procedures

POP0308W and POP-N-501W, and training records show more clear definition of hold-points and training of personnel through July 1981.

However, the J. A. Jones CAR-22 (dated November 2, 1981) reports on continued adverse trends of by-passed hold points. Further corrective action included emphasis on a reprimand system and further QA trending of this item. (On March 10, 1982 the new QA manager returned this trending function to the J. A. Jones construction department). CAR-22 was closed and accepted by J. A. Jones on January 15, 1982.

Current training facility postings and training data, notices apparent throughout the plant, and interview of craft/supervisory personnel regarding their knowledge of management attitudes toward hold-point violations demonstrates licensee and contractor attempts to improve this area. (Also reference IE Inspection Report 460/81-10 paragraph 9. (i).

However, current findings regarding starting of post-weld heat treatment of weld FW-016 and transfer of markings during cutting of pipe-support material (see paragraphs 6 and 9 of this report) suggest that the corrective actions have not been fully effective. This matter is considered to be uncorrected.

c. (Rescinded) Noncompliance Item (460/82-01-01)

The slope of transitions appeared to exceed that specified by the ASME Code Section III Subarticle NC-4250, at welds to valves 1-HPR-V392 and 1-CCW-V280.

On March 10, 1982 the inspector witnessed ultrasonic measurement of the pipe wall thickness at the welds in question. This showed that the inspector's original ruler measurements of January 7, 1982 had been in error. Because the welds were complete at the valves, the inspector's original measurements were taken at accessible weld joint preparations at the containment penetrations, a distance of one to six feet from the completed welds in question. For the HPR valve, the original measurement was taken on a pipe diameter which was larger than the valve and for which the wall thicknesses were not similar. The ultrasonic measurement has now shown the pipe wall to be .432-inch, for which the observed 5/8-inch transition distance appears acceptable. For the CCW valve, the original

measurement appears to have been inaccurately recorded. The ultrasonic measurement has now shown the pipe wall to be .373-inch, for which the observed 1/2-inch transition distance appears acceptable.

The item of noncompliance cited in the NRC letter dated February 24, 1982 had been rescinded via NRC letter dated March 12, 1982.

As a result of the inspector's inquiry on this matter, the contractor had initiated a more general reinspection program and had identified conditions leading to issuance of more than fifty nonconformance reports for corrective action. The construction manager has monitored this program and provided assistance in ASME Code interpretation confirming weld transition requirements. Currently, the contractor weld records are documenting verification of transition configurations at unequal diameter components prior to welding. The contractor's aggressiveness in addressing this question within his own quality assurance program has resolved this matter.

d. (Closed) Follow-up Item (460/82-02 Paragraph 12)

A quality verification inspection report (No. 1428) contained minor changes which were not entered in accordance with the administrative procedure for altering records (POP-709). The contractor indicated that forthcoming training activities would include this topic; the licensee stated that a quality assurance surveillance would be performed on this training.

Training records of March 4-5, 1982 attest to training of about 200 craft, engineers, inspectors, supervisors, and Bechtel QA surveillance. The contractor's training emphasis appeared to be sufficient. This matter is closed.

12. 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 deviations. Unresolved items disclosed during this inspection are discussed in Paragraphs 8 and 10 of this report.

13. Management Meeting

The inspector met with the licensee quality assurance manager approximately weekly to discuss the status of inspection findings and other inspector activities relating to this project. On April 2, the inspector met with the WPPSS QA and construction management and representatives of some of

the contractor organizations. Principal personnel who attended this meeting are so noted (*) in paragraph 1 of this report.

The licensee representative committed to define action plans by April 9, for resolution of items involving welding gas purity (460/82-05-02) and rust on flanges (460/82-05-03). The licensee stated that Bechtel plans to increase its management emphasis on resolving the matter of by-passing of hold points (460/80-15-02).