U. S. NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT

REGION V

Report No. 50-460/80-11
50-513/80-11

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

Licensee: Washington Public Power Supply System

P. O. Box 968

Richland, Washington 99352

Facility Name: Washington Nuclear Projects Nos. 1 and 4 (WNP 1 & 4)

Inspection at: WNP 1 & 4 Site, Benton County, Washington

Inspection conducted: August 26-29 and September 9-12, 1980

Inspectors: D. F. Kirsch, Reactor Inspector — 10-3-80 Date Signed

A. D. Toth, Reactor Inspector — 10-3-80 Date Signed

G. Hernandez, Reactor Inspector — 10/3/80 Date Signed

Approved By: R. C. Haynes, Chief, Projects Section — 10/3/80 Date Signed

Summary:

Inspection during period of August 26-29 and September 9-12, 1980 (Report Nos. 50-460/80-11 and 50-513/80-11)

Areas Inspected: Routine, unannounced inspection by one resident inspector and two regional based inspectors of construction activities including: licensee action on previous inspection findings; safety related piping work observation and quality record review; reactor coolant pressure boundary piping procedure review, work observation and quality record review; contractor nonconformance report trending; and compliance with ASME certification system. The inspection involved 89 inspector hours by three NRC inspectors.

Results: Of the five areas inspected, no items of noncompliance or deviations were identified in four areas. Two items of noncompliance were identified in the area of safety related piping (paragraph 6.a.1 - uncontrolled and unauthorized removal of arc strikes from stainless steel pipe spool; and undersize shop welds on pipe to pipe stop attachment fillet welds).

DETAILS

1. Individuals Contacted

a. Washington Public Power Supply System (WPPSS)

+*J. P. Thomas, Deputy Project Manager
*L. J. Garvin, Acting QA Division Director
+*T. J. Houchins, Project QA Manager
J. W. Carson, Senior QA Engineer
+M. C. Carrigan, Project Management Specialist

Various other QA and QC representatives.

b. United Engineers and Construction (UE&C)

*G. E. McIntosh, Assistant Deputy Project Manager
*E. C. Har[illegible] Deputy Project QA Manager
M. R. Johns[illegible] Senior Quality Systems Engineer
J. J. Lancon, [illegible] Mechanical/Piping QA Engineer
D. M. McLerran, [illegible]ordinator
C. M. Butler, Fie[illegible]intendent, Quality Assurance
+G. M. Ahearn, Deputy P[illegible]t Manager
N. Amoria, Project Field E[illegible]er Manager
J. Carson, Senior QA Engineer
C. Butler, Senior QA Engineer

Various other QA and QC representatives.

c. G. F. Atkinson, Wright, Schuchart/Harbor (AWSH)

M. D. Latch, QA Manager
J. Rothstein, Senior QA Engineer
T. Canning, Assistant QA Manager
M. Anderson, Assistant QC Supervisor

d. J. A. Jones Construction Company (J.A.J.)

W. Roe, QA Manager
W. Swift, QA Administration Supervisor
D. Higginbotham, QC Supervisor

Various other QA and QC representatives.

e. Other Personnel

+G. Hansen, Senior Project Engineer, EFSEC

*Attended Exit Interview on August 29, 1980.
+Attended Exit Interview on September 12, 1980.

2. General

The licensee informed the inspector on September 9, 1980 of their intent to separate the Construction Manager and Architect Engineer responsibilities at the WNP 1/4 site. A new Construction Manager had not yet been selected. The plans provide for the existing A/E to retain the engineering and design responsibility along with engineering QA responsibility. The licensee had not firmly determined the scope of the new Construction Manager responsibilities although tentative plans had been formulated.

3. Licensee Action on Previous Enforcement Items

a. (Open) Noncompliance (460/79-02-05): Procurement Documents do not contain or reference the applicable PSAR requirements concerning measures for controlling measuring and test equipment

The inspector determined that the licensee had prepared and initiated Field Change Notices on August 27, 1980 for sixteen contract specifications which effectively modify those specifications to include the PSAR commitments regarding the control of measuring and test equipment. The implementation of the FCN's, including any necessary contractor procedural revisions, will be examined during a future inspection.

b. (Closed) Deviation (513/79-10-01): Water on the horizontal construction joint of the spray pond wall

The UE&C field civil engineer evaluated the possible impact of six gallons of water trapped on the construction joint during placement of concrete. Configuration of the keyway, position of the waterstop, the waterproofing on the exterior of the walls, elevation of the water table and operation modes of the structure were considered relative to conceivable reduction in water-tightness. This pond is used only infrequently during testing or emergency conditions, and has makeup capability. Leakage is inconsequential; nor is there concern for rebar rusting, particularly since a 16000 psi allowable stress has been used for the steel, as opposed to the usual 20000 allowed. The engineer also considered the good results of Windsor probe testing in three areas, witnessed by the inspector.

Relative to the neat cement grout on the vertical construction joint, the inspector noted that the licensee has prepared an internal document to assure that this deviation from ACI-318 will be incorporated into the FSAR. The UE&C engineers appeared to have a technical rationale for using only a wetted joint, and had specified this purposely. There apparently are other sites where this approach has been taken and found to be acceptable to NRC.

The inspector had no further question on these two items.

c. (Closed) Deviation (460/80-04-01): Use of SFA-5.1 weld material instead of the SFA-5.5 material identified in the PSAR

The licensee has prepared a PSAR deviation form to assure that the change is incorporated in the FSAR. Confidence in the acceptability of the material has been obtained by the licensee from the NSSS supplier (B&W), based on a review of the certified material test reports by the supplier. The NSSS Contractor recommended SFA-5.5 material on the basis of shop experience and shop particular circumstances, and had included the SFA-5.5 in the part of the PSAR prepared by them. However, the installer (JAJ) considers that SFA-5.1 will meet the ASME Section III Part NB requirements; particular attention was given to notch toughness considerations. In addition to the above, the licensee initiated a review of other welding specifications relative to the PSAR. The inspector had no further questions.

4. Licensee Action on Previously Identified Followup Items

a. (Closed) Followup Item (460/77-03-13): The containment liner contractor (PDM) was not recording the ultrasonic test equipment serial numbers.

On November 11, 1979, PDM procedure WUT-1 was revised to specify that ultrasonic test equipment serial numbers be recorded. The inspector examined thirty ultrasonic test reports and verified that the contractor was complying with the requirement.

This item is closed.

b. (Closed) Followup Item (460/78-03-01): Conflict between PDM's visual inspection procedure for welds and the contract specification.

The inspector reviewed PDM's visual inspection procedure, the contract specification, the code requirements and determined that the visual inspection procedure appeared satisfactory. The contract specification requires conformance with the ASME code, but the code doesn't specify visual inspection acceptance criteria. The licensee and PDM based the procedural limits for porosity on the code specified radiographic acceptance standard for surface porosity. The visual inspection procedure does not appear to conflict with the contract specification and, based on calculation of porosity areas, appeared to be within code allowed radiographic porosity limits. The inspector had no further questions.

c. (Closed) Followup Item (460/78-05-03): Licensee commitment to revise position descriptions to emphasize individual responsibility for quality (See also paragraph 4.f of IE Inspection Report No. 50-460/79-02).

The inspector examined a sample of position descriptions for the WPPSS and UE&C staffs. The position descriptions had received the required approvals and provided for emphasis on the individual responsibility for quality. In addition, the WPPSS personnel appraisal forms were examined and observed to specifically identify the individuals awareness of and attitudes toward quality and quality assurance functions as an item included in an individual's evaluation. The inspector had no further questions.

d. (Closed) Followup Item (460/78-05-07): Licensee commitment to assess bid contractor QA responsibility

The licensee had submitted specifics regarding "QA Program Corrective Measures" by letter no. APO-78-63, dated July 18, 1978, in response to enforcement conference discussions. The particulars of the actions to assess bid contractor responsibilities were addressed by letter subtask nos. 1.1.a.1 and 1.4.d.

In response to subtask 1.4.d, the licensee had issued Project Management Procedure no. 7-103 (Bid Evaluation) which specified bid review responsibilities for quality assurance and engineering. The procedure appeared adequate for assignment of review responsibility, criteria and comment resolution provisions. The inspector examined the documentation of QA review of bids on contract 239 (Instrumentation Installation) for compliance with PMP 7-103 and observed apparent compliance.

The licensee had revised the QA Instructions to require preliminary review of contractor capability in response to letter subtask 1.1.a.1.

The inspector had no further questions.

e. (Closed) Followup Item (460/79-02-02): Quality Control training for contractors

The licensee had developed about 50 Quality Training and Indoctrination Program (QTIP) modules covering a number of specific areas in all disciplines. The system had been made available to site contractors for augmenting the existing contractor training program contents. The inspector examined contractor training personnel and records from AWSH, J. A. Jones and Foley-Wismer/Becker and observed that site contractors have utilized the QTIP system for training of craft, QC and supervisory personnel. The inspector had no further questions.

f. (Closed) Followup Item (460/79-02-03): Development of mandated procedure content guidelines

The licensee had determined that, since the majority of contracts had been awarded, a total incorporation of mandated procedures was not prudent or attainable. The licensee's QA organization had, however, identified a number of contractor procedures to be rewritten and streamlined and had subsequently rewritten and condensed 10 contractor procedures into six procedures to improve content. The inspector had no further questions.

g. (Closed) Followup Item (460/79-02-11): Retention and control of quality records

The inspector reviewed procedure no. FOS-17-2, Revision 3. (Records Review-Receiving) and examined the records center operation for compliance with selected aspects of the procedural requirements. Items examined included: Material Documentation Status Logs; Conduct of Technical Adequacy Reviews; two equipment Data Review-Receiving Checklists and the Data Review-Receiving Checklists for four vendor supplied pipe spools. No items of noncompliance or deviations were identified.

h. (Closed) Followup Item (460/79-02-12): Control of changes to equipment quality classification

The licensee had reexamined procedure no. QAP-3 (Quality Classifications) and had revised the procedure to address changes to equipment quality classification on September 9, 1979. The licensee had also developed a procedure for the determination of quality classification (EDP-4.14) and issued same on May 23, 1980.

The inspector determined that the licensee had not changed the quality classification of any safety related equipment since the finding was documented in IE Inspection Report No. 460/79-02 and stated that any future quality classification/changes would be examined as part of the normal IE inspection system. The inspector had no further questions.

i. (Closed) Followup Item (460/79-02-13): J.A. Jones control of test equipment

The contractor's control of test equipment was the subject of an item of noncompliance identified in IE Inspection Report No. 50-460/79-07. The licensee's action to assure control of the contractor's test equipment was examined and verified previously and is documented in IE Inspection Report No. 50-460/80-06. Therefore, the followup item is considered closed.

j. (Closed) Followup Item (460/79-05-02): Licensee actions to resolve identified deviations from the ASME B&PV code for concrete containments

The licensee had identified three instances of apparent deviation from the ASME code for concrete containment vessels (Division 2). The inspector discussed the status of resolution for these items with UE&C personnel and the Division 2 Authorized Nuclear Inspector (ANI). The deviations had been documented appropriately and were either resolved or in the process of resolution. The ANI was aware of these questions and indicated that the items would be fully resolved prior to affixing the code stamp to the vessel. The inspector had no further questions.

k. (Closed) Unresolved Item (460/79-07-05): AWSH Cadwelding procedure did not address transition splices

The inspector found that the AWSH Cadwelding procedure, QCCP-13 has been revised to address transition splices, and the procedure was approved by the licensee. A review of the procedure indicated that the reference and direction given with respect to transition splices appears adequate. The inspector had no further questions.

l. (Closed) Unresolved Item (460/79-09-01: See IE Inspection Report 50-460/79-10): Licensee evaluation of method for indicating the number of dessicant bags placed inside equipment

The licensee uses a computerized system for the performance of preventive maintenance on stored equipment. The list identifies those various attributes to be examined for each equipment item. An engraved metal tag is affixed to equipment identifying the equipment and the number of dessicant bags inside the component. Several components containing dessicant were examined and no discrepancies were observed.

m. (Closed) Unresolved Item (460/79-09-01): Criteria for assessing reinforcing steel damage during inspection of concrete repairs

The AWSH inspection procedure QCCP-13-7 Revision 4 includes a Concrete Repair Checklist, with one item "No damage to exposed steel". The Architect Engineer (UE&C) has not provided AWSH with criteria for making acceptance judgements on the degree of damage; thus AWSH inspectors document any apparent damage on nonconformance reports (NCRs), which are referred to UE&C for evaluation. The NRC inspector interviewed an AWSH QC inspector and the UE&C field engineer responsible for dispositioning such NCRs. He examined two typical NCRs relative to the extent of description of apparent damage, and the typical size of surface defects and nicks which are reported. Nicks of 1/16 inch depth and greater appear to be routinely documented. The inspector had no further questions.

n. (Closed) Followup Item (460/79-09-03: See IE Inspection Report No. 50-460/79-10): Contractor's (J. A. Jones) method of indicating hold points and concerns regarding by-passed hold points

The NRC first questioned the existence of by-passed QC inspection hold points in IE Inspection Report 50-460/79-10 and again in IE Inspection Report No. 50-460/80-05. The concerns for by-passed hold points were closed in IE Inspection Report 50-460/80-08. The inspector observed that J. A. Jones procedure no. POP-N-308W specifies the method and criteria to be utilized by the contractors QA organization for the selection of process control sheet hold points. This item is closed.

o. (Closed) Unresolved Item (460/79-10-01): Applicability of ASME Code Case N-242 to Unit #1 valves provided by Control Components International (CCI)

Four valves were shipped after the Code Case became effective; these are for Unit #4 and have been referred to the NRC for consideration of the Code Case. Twelve valves were shipped for Unit #1 after the code case became effective. The vendor has not re-evaluated these valves relative to Case N-242 as this was apparently concurred in by the NSSS Contractor (B&W) and the ASME Authorized Nuclear Inspector. The inspector had no further questions on this item.

p. (Closed) Followup Item (460/79-14-02): Licensee controls over radiographic film supplied by vendors as part of quality documentation

The licensee's system for assuring receipt of vendor radiographs was examined. Vendor surveillance representatives are required to sign Quality Shipment Release (QSR) forms signifying that all required documentation is included in the documentation package for transmittal to the site. WPPSS records personnel perform random checks to assure that documentation packages received are complete and perform 100% checks to assure proper completion and legibility of documentation.

The inspector sampled the Document Deficiency Notices, issued by QA records personnel, and verified that the random checks of vendor documentation for completeness were being performed.

A sample of three pipe spools were selected to verify QSR form signoff by vendor surveillance personnel. The twelve vendor radiographs of all shop welds on these pipe spools were located and verified to be on-site in controlled storage.

The licensee's storage areas for quality records were examined for compliance with procedure FQS-17-1 (Records Retention and Control) and ANSI N45.2 standard requirements.

No items of noncompliance or deviations were identified.

q. (Closed) Followup Item (460/79-14-06): Improvement required in housekeeping and equipment preservation

On August 26, 1980 the inspectors conducted a tour of Unit 1 and 4 and noted a general improvement in the state of housekeeping and equipment preservation. The subject of housekeeping and equipment preservation was addressed by an item of noncompliance issued IE Inspection Report No. 80-06 and will be the addressed during the followup of this item once work activities resume following settlement of the current labor dispute.

This followup item is considered closed.

r. (Closed) Unresolved Item (460/80-03-02): Role of the AWSH QC inspector relative to survey work

The applicable AWSH inspection procedure has been revised to clarify the function of the inspector relative to surveyors' work. Surveyors will maintain survey results in their log books, and the inspectors will verify that the surveyor has signed the appropriate QC record to ascertain that the work has been completed as required. The procedure also has provisions for some QC surveillance of the notebooks. The inspector had no further questions.

s. (Closed) Unresolved Item (460/80-03-03): Training of night shift carpenter and surveyor foremen

The recently assigned AWSH training coordinator stated that the night shift party chiefs have now read the applicable procedures, and that this was done in the QC office with the lead QC inspector available for consultation. The QA training records for March 3-6 and April 11-15 show the apparent signatures of the party chiefs for this training. Also, the training records show that QC inspector, QA Engineer and Construction Superintendent training in these procedures was given. Procedures QCP-3, 14, 29 and 30, and QCCP-12, 16 and 21 were involved, regarding formwork, embeds, and waterstops. The inspector had no further questions.

t. (Closed) Unresolved Item (460/80-03-04): Adequacy of correlation test results for use as basis for sampling concrete at the batch plant instead of at the pump discharge

The licensee advised that the correlation test program had been discontinued and that for the remaining concrete placements, the sampling will continue to comply with ASTM-172. The inspector had no further questions.

u. (Closed) Followup Item (460/80-05-02): Contractor's (J.A. Jones) use of "Request for Information" (RFI) forms for documenting nonconforming conditions and directing accomplishment of work. (Also, see IE Inspection Report 50-460/80-08)

The inspector examined all RFI's issued in 1979 by the contractor to verify that RFI's had not been used to resolve nonconforming conditions and that technical direction had not been provided to the contractor without an FCN. All RFI's examined appeared to be properly dispositioned. The inspector has no further questions.

v. (Closed) Unresolved Item (460/80-06-04): Quality record discrepancies involving a torque multiplier, receiving inspection and repair weld examination

(1) Torque multiplier used to torque diesel generator hold-down bolts did not have appropriate calibration documentation

The contractor had documented by 1-CNCR-257-372 that the torque multiplier used to tighten the diesel generator hold-down bolts lacked appropriate calibration documentation. This CNCR was cancelled on July 29, 1980 and the problem was documented in 1-CNCR-257-1186 with the disposition to retorque the diesel generator anchor bolts using approved equipment in accordance with an approved procedure. The contractor had purchased and calibrated a new torque multiplier in accordance with approved procedures, however, the retorquing had not been completed due to the craft work stoppage in effect. It appeared that the means to accomplish the rework was controlled in accordance with the contractor's QA program and the inspector had no further questions.

(2) Equipment appeared to have been installed on the diesel generator without proper receiving inspection

The contractor had documented by 1-CNCR-257-753 that certain diesel generator parts had been installed with "Awaiting Inspection" tags affixed and the assigned disposition was to perform the required inspections in-place since the parts were fully accessible. The inspector examined documentary evidence indicating that the parts in question had been receipt inspected prior to installation however, the documentation received from the vendor had not been fully accepted. UE&C personnel took immediate action to place "conditional release" tags on the parts in question. It appears that the only discrepancy involved the receipt inspection personnel failure to remove the "awaiting inspection" tag and affix a "conditional release" tag. This discrepancy is considered to be of no safety significance and the inspector has no further questions.

(3) Record packages for vendor supplied pipe spools appeared inconsistent and did not fully document NDE of repairs

The observation that the vendor supplied code data report referenced compliance with a later code addenda than the related pipe spool drawings is considered to be of no safety significance and the matter is closed.

The licensee had taken measures to obtain from the vendor all required weld travelers and repair documentation for the pipe spools in question. The repair records and NDE examination reports were examined by the inspector and appeared satisfactory. The inspector had no further questions.

w. (Closed) Followup Item (460/80-09-01): Craftsman concern regarding possible concrete void behind anchor plate of reactor coolant pump

Concrete placements #C-1028 and #C-1025 relate to the small diagonal shelf sections which support the reactor coolant pump anchor plates, as shown on drawing 9779-F-112405. AWSH QC inspectors familiar with the placements stated that the areas were definitely not congested, and there was good access for working of vibrators. The placement depth for the shelves was only about four feet deep, affording good access and visibility during placement. Reinforcing steel drawings and the placement work package showed no congestion and vibrator access to within fifteen inches of the anchor plates. Reinforcing steel and embed spacing of 9-inch grids afforded sufficient access to the 3-inch vibrators used. There was no support for a concrete void thesis. The inspector had no further questions.

x. (Open) Followup Item (460/80-09-02): Criteria for performing pipe wall thickness measurements

The J.A. Jones procedure No. JAJ-WI-030 (Weld and Base Metal Repair) requires, in paragraph 5.2, that, following the removal of weld metal surface defects, the remaining thickness is not reduced below minimum wall thickness and that the depression after defect removal be blended uniformly into the surrounding surface. However, the procedure does not specify acceptable inspection techniques and criteria necessary for the QC inspector to establish compliance with the general statements. In addition, the procedure, in Paragraph 3, did not appear to provide adequate reference to code required NDE of excavations prior to repair by welding. The licensee agreed to revise the procedure as necessary to resolve these questions. This item will be examined during a future inspection.

5. Reactor Coolant Pressure Boundary Pi.

a. Review of Quality Assurance Implementing Procedures

The following sample of contract specifications and quality assurance procedures were reviewed to ascertain whether appropriate procedures have been established for the NSSS piping and whether the procedures conform to the QA program as described in Chapter 17 of the PS R.

(1) Specification 9779-2, NSSS (B&W) piping
(2) Specification 9779-211, NSSS piping and equipment installation
(3) Field Quality Standard 10-1, Revision 3.0, Receiving inspection of pre-purchased items
(4) Field Quality Standard 2.0, Revision 2.0, Indoctrination and certification of personnel
(5) Field Quality Standard 13-2, Revision 2.0, Storage verification
(6) Field General Construction Procedure 16.0, Revision 4.0, Preventive maintenance program
(7) Preventive Maintenance Instruction No. 11, Revision 4.0, General Preventive Maintenance
(8) Preventive Maintenance Instruction No. 12, Revision 1.0, Qualifications/certification of visual checkers
(9) JAJ-NDE-001, Revision 4A, Liquid Penetrant Examination
(10) JAJ-NDE-002, Revision 4A, Magnetic Particle Examinations
(11) JAJ-NDE-003, Revision 4A, Radiographic Examination
(12) JAJ-NDE-004, Revision 2B, Visual Examination
(13) JAJ-WI-016.0, Revision 1C, Large bore piping installation/erection
(14) JAJ-WI-023, Revision 1A, Hydrostatic test
(15) PCS-RCS-211-1, Revision 0N, Installation of the Reactor Coolant Loop piping

Inspection and/or work instructions for post-installation cleaning of the RCPB piping systems have not been approved and will be reviewed during a future inspection.

No items of noncompliance or deviations were identified.

b. Observation of Work and Work Activities

Certain reactor pressure boundary piping activities were examined to determine whether the activities were being accomplished in accordance with NRC requirements and PSAR commitments. The piping activities were examined considering the following attributes: receipt inspection, marking and identification, storage, protection, preventative maintenance, installation, inspection and documentation.

The following Unit No. 4 NSSS piping in storage was examined:

Pipe Spools	Serial Number
(1) 38" Outlet Assembly	20-4A-2032-50-1
(2) 38" Outlet Assembly	20-4A-2032-50-2
(3) 32" Inlet Assembly	21-C5-2032-50-2
(4) 32" Inlet Assembly	21-C5-2032-50-3
(5) 28" Inlet Assembly	21-C2-2032-50-1

The following two "runs" between steam generator 2B and the eastside reactor coolant pumps for Unit No. 1 were examined to verify compliance with applicable procedures and specifications.

Pipe Spools	Stage of Installation
(1) S/N 21-C5-2023-50-2	Field welds nos. 14 & 15 inprocess
(2) S/N 21-C5-2023-50-3	Field welds nos. 16 & 17 fit-up

No items of noncompliance or deviations were identified.

c. Review of Quality Records

The inspector examined quality related records relative to reactor coolant pressure boundary piping to ascertain whether these records reflect work accomplishment consistent with NRC requirements and PSAR commitments. The following records were examined for the Unit No. 4 NSSS pipe spools in storage (see paragraph b): B&W shipment authorization, design certificate, code data reports, list of welds and radiographic acceptance, hydrostatic test reports, report of inspections, final heat treatment reports and receipt inspection records.

The qualification records of ten inspectors performing preventive maintenance inspections and six inspectors performing receipt inspection of NSSS piping were also examined.

The process control sheets for the two installed runs in Unit No. 1 (see paragraph b) were examined for inclusion of the following: inspection reports, nonconformance reports, drawings, filler material and piping weld/NDE records.

The procurement packages and material certification records for the following heats of welding filler material were examined:

Heat Number	Filler Material
(1) 92013 A	E 7018
(2) 0505 A	E 308-16
(3) 0456 B	E 308-16
(4) 0357	E 308-16

No items of noncompliance or deviations were identified.

d. QA Audits

The inspector examined the established audit schedule to determine adherence to the frequency of planned audits for the NSSS piping contractor (J. A. Jones). All audits examined had been performed as scheduled.

The inspector examined two audits and 30 selected surveillance reports conducted by the licensee on J. A. Jones or NSSS piping activities during 1979 and 1980.

No items of noncompliance or deviations were identified.

6. Other Safety Related Piping

a. Observation of Work and Work Activities

The inspector selected the below listed stainless/carbon steel piping spool subassemblies, supplied by the vendor, laying in the pipe storage laydown area for examination. The subassemblies were examined for compliance with the ASME B&PV code and licensee procedures by examination of the attributes of (a) pipe stop attachment fillet weld size and appearance; (b) weld reinforcement size; (c) evidence of site QC inspection and acceptance; (d) piping subassembly surface condition; (e) subassembly storage conditions and (f) evidence of unacceptable shop weld surface preparation.

Spool No.

DHR-412030-2
CSS-442006-2
DHR-441801-8
CSS-411987-1
CSS-411914-5
DHR-412029-3
MSW-411489-2

(1) Findings

The inspector observed, on August 26, 1980, that spool no. DHR-412030-2 (ASME code class 3) had the following apparent discrepancies: (a) Five carbon steel arc strikes existed on the stainless steel pipe surface between shop welds no. 1 and 2; and (b) the pipe surface adjacent to shop weld 2 had been ground raising the question of compliance with code required minimum wall thickness. Examination of that pipe spool on August 27, 1980 identified that (a) the carbon steel arc strikes had been removed and (b) two shop welded pipe stop attachment fillet welds had nominal 1/4" leg size whereas the detail for the pipe spool (no. DHRX-35) required 5/16" fillet welds for those pipe stop attachment welds. The customer drawing number for detail DHRX-35 is 9779-F-412030, Revision 3.

The inspector observed the licensee's performance of measurements of pipe spool wall thickness to verify compliance with the minimum wall thickness criteria of the ASME B&PV code. That measurement verified that the wall thickness did meet the minimum code requirements in the areas questioned.

The licensee measured the fillet weld size of the eight pipe stop/pipe attachment welds and determined that six of the eight fillet welds were undersize and documented the finding by Non-conformance Report No. 1-NCR-137-190 on August 28, 1980. The shop traveler verified that the shop fillet welds had been inspected and accepted by B. F. Shaw shop personnel on April 24, 1980. This is an apparent item of noncompliance. (460/80-11-01)

The licensee's procedure no. FGCP-48, Revision 0 (Corrective Maintenance Management), requires in paragraph 5.0 that "All Maintenance performed under the Maintenance Management Program will be accomplished by Maintenance Work Request." It was determined that the removal of the arc strikes on spool no. DHR-412030-2 was not performed by a Maintenance Work Request and no record of work accomplishment existed. The unauthorized removal of arc strikes, on pipe spool no. DHR-412030-2, is an apparent item of noncompliance. (460/80-11-02)

b. Review of Quality Records

The inspector examined the following quality documentation for pipe spools DHR-441801-8, DHR-412030-2 and CSS-442006-2: vendor's quality shipment release; data review receiving reports, receiving inspection checklist, Form NPP-1 code data report, shop welding traveler, and nondestructive examination reports. No items of noncompliance or deviations were identified.

7. Licensee Actions to Expose and Resolve Trends

As a continuing action to evaluate the licensee's management attention to the QA program (also see, IE Inspection Report 50-460/79-02), the inspector examined the J. A. Jones system for trending deficiencies documented by the contractor's nonconformance reporting system (CNCR).

The contractor has prepared charts indicating the number of discrepancies, since the start of the contract, in the areas of hold point violation, material defects, weld defects, improper material, material damage, procedure or process violations, installation errors and incomplete documentation, among others. The trend analysis has been prepared for both containment work (contract 211) and General Services Building (GSB) work (contract 257) for both WNP 1 and 4.

Examination of the charts for the containment work did not indicate any particular area with a preponderance of CNCR's; however, examination of the charts for the GSB in the areas of hanger installation, pipe installation and support steel indicated a preponderance of CNCR's with respect to procedure compliance, welding compliance and/or installation discrepancies. This was brought to the attention of the licensee's Project QA Manager. A numerical summary of CNCR's, issued by month, since the start of the contract was prepared. The inspector agreed that that summary was indicative of the increase in work activity by the contractor over the contract life and expressed concern that an evaluation of CNCR frequency of occurence in these areas, with appropriate compensation for the increase in work activity, did not appear to have been completed. The licensee agreed to evaluate and resolve the inspector's concerns. (460/80-11-03)

8. Compliance with ASME Certification System Requirements

The inspector examined the ASME certifications of the licensee, architect/ engineer and site contractors J. A. Jones, Wismer & Becker, PDM Steel, Peter Kiewit, and Welk Brothers Metal Products for compliance with article NA-3000 of the appropriate ASME code edition applicable.

No items of noncompliance or deviations were identified.

9. Exit Interview

The inspectors met with licensee representatives (denoted in paragraph 1) on August 29, 1980 and September 12, 1980 to summarize the inspection purpose, scope and findings. The licensee acknowledged the apparent items of noncompliance (see paragraph 6.a.1). The licensee committed to notify the inspector three days prior to the next containment vessel wall concrete placement and at the commencement of work following the settlement of the existing labor dispute.