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

REGION V Report No. 50-513/81-06	
Docket N 50-460, 50-513 License No. CPPF	R-134, -174 Safeguards Group
Licensee: Washington Public Power Supply System	
P. O. Box 968	
Richland, Washington 99352	
Facility Name: Washington Nuclear Projects Nos. 1	& 4 (WNP-1/4)
Inspection at: WNP-1/4 Site, Benton County, Washir	ngton
Inspection conducted: June 22-26 and July 6-10, 19	981
Inspectors: PPNalt	9/11/81
P. P. Narbut, Reactor Inspector	Date Signed
allow D'Angel	9/11/81
A. D'Angelo, Reactor Inspector	Date Signed
PNNalt for	9/11/81
G. Hernandez, Reactor Inspector	Date Signed
Approved by: PPNantot -10	9/11/81
R. T. Dodds, Chief, Reactor Project S Reactor Construction Projects Branch	Section 2 Date Signed

Summary:

8109230567 81091 PDR ADDCK 050004

Inspection during the period of June 22-26 and July 5-10, 1981 (Report Nos. 50-460/81-06 and 50-513/81-06).

<u>Areas Inspected</u>: Routine, unannounced inspection by regional based inspectors of construction activities including: licensee actions on previous inspection findings, investigation of HVAC allegations, and review of containment steel structures and supports quality records. The inspection involved 185 inspectorhours onsite by four NRC inspectors.

Results: No items of noncompliance or deviations were identified.

RV Form 219 (2)

DETAILS

1. Individuals Contacted

a. Washington Public Power Supply System

*+D. W. Mazur, Program Director WNP 1 & 4
*+F. C. Hood, Manager Quality Assurance & Safety
*+C. R. Edwards, Project Quality Assurance Manager
*+M. E. Rodin, Senior Quality Assurance Engineer
*+A. D. Kohler, Deputy Program Director
* R. P. Walton, Manager Operations Support
* C. B. Organ, Assistant Program Director Engineering
* J. P. Thomas, Assistant Program Director Construction
* L. J. Garvin, Manager QA Engineering & Systems
* L. Martin, QA Engineer
R. Mertens, Lead QA Engineer
G. Hanna, QA Engineer
M. J. Farrell, QA Engineer

b. Bechtel Power Corporation (Eachtel)

*+J. L. Ruud, QA Engineer

*+J. B. Gatewood, Project QA Engineer

* E. W. Edwards, Project Manager

+G. A. Hierzer, Field Construction Manager

+L. W. Roberts, Contract Coordinator

+F. G. Waterhouse, Scheduling

+D. R. Johnson, Manager of Quality

*+T. Fallon, Project Construction QC Engineer

B. Raymond, Lead Receiving Inspection QCE

M. Hopfenspirger, Lead Civil QCE

A. Lamack, Civil, QCE

R. Richardson, Mechanical, QCE

G. Minor, Quality Control Engineer

c. United Engineers and Constructors (UE&C)

E. C. Haren, Project Quality Assurance Manager

R. H. Bryans, Manager Construction Support

E. B. Zipperer, Assistant Project Manager

T. Hundel, Lead Structural Engineer

L. Rakerstaw, Field Project Engineer

E. Schmeckpeper, Field Project Engineer

N. Minhas, Field Project Engineer

- d. H. P. Foley/Wismer & Becker (F/W&B)
 - L. J. Maenpaa, Quality Director
 - R. W. Jones, QA Manager
 - P. R. Merlin, QC Manager
 - L. J. Adams, Project Manager

e. J. A. Jones Construction Company (JAJ)

+W. Roe, Project Quality Assurance Manager

f. Shurtleff and Andrews

*+J. Pericola, QA Manager

- *+R. Byrd, Project Superintendent
 - E. Noves, Erection Foreman
 - H. Brack, Erection Foreman
 - G. Gale, Erection Foreman

g. Univeristy Nuclear Systems Inc. (UNSI)

* B. L. Sachs, Project QA/QC Manager

- * M. Schulze, Project Manager
- +R. Robinson, General Superintendent
 - D. W. Jones, Assistant Project QA/QC Manager
- J. Stewart, QC Inspector
- h. G. F. Atkinson, Wright, Schuchart/Harbor (AWSH)

+M. D. Latch, Project Quality Assurance Manager +J. E. Kapinos, Project Manager

1. Pittsburgh Testing Laboratory (PTL)

C. Bonson, Inspector

*Denotes persons attending 6/26/81 Exit Meeting.

+Denotes persons attending 7/10/81 Exit Meeting.

2. Site Tour

A site tour was conducted of the Unit 1 and Unit 4 work activities. With some exceptions as noted below, several minor problems were identified and corrected within the time of inspection. No = "ditional action on the minor items"

is considered warranted at this time. The minor items are discussed below for record purposes only, should a trend be observed in subsequent inspections.

- a. Switchgear heater indicator lights were off in Unit 1 elevation 421 of the GSB. The indicator lights were determined to be burned out.
- b. A weld rod stub bucket with approximately 100 partially used, not-bent rods, were found in a H. P. Foley/Wismer and Becker weld work area in the General Services Building at elevation 421. The bucket was to have been returned to the weld rod issue station at the end of the shift, but had not been returned. The problem was explained by the licensee to be a lack of specific assigned responsibility for the general work area. The bucket was removed and specific responsibility for the work area was assigned.
- c. Tool boxes, solvent cans and other foreign matter were found inside Main Steam piping being assembled in the containment building at elevation 475, azimuth 42°. The piping run was horizontal and the foreign material was removed prior to piping fitup. The licensee's procedure and pipe cleanliness practices will be examined further in a future inspection. Followup item (50-460/81-06/01).
- d. Reinforcing steel was observed not properly embedded in a concrete placement. The hook portion of the adjacent vertical bar was not embedded in the floor slab placement 3883A at elevation 501 of Unit 4 (Drawing 4GS (79W-79). The condition was not tagged and interviews with responsible personnel determined that the condition had not been documented on a CNCR. This item will be inspected further in a future inspection. Unresolved Item (50-513/81-06/02)
- e. An AWASH inspection report (IR) was noted which apparently authorized bending of embedded reinforcing steel. Since an IR is an inappropriate document to authorize deviations from specifications the inspector questioned the reason for this practice. Licensee personnel provided the contract waiver request (CWR No. W-223 of 2/5/79) which authorized the use of an IR as the vehicle to provide the ASME-code-required "designer approval" for bending of embedded bar. Since the CWR is part of the specification the matter was satisfactorily resolved.

3. Licensee Action on 50.55(e) Construction Deficiency Reports

In general, it was determined that the licensee's method of tracking the status of actions on 50.55(e) reports and the determination of the source of some of the statements made by the licensee in correspondence dealing with the 50.55(e) reports needed improvement. This was in part due to the reorganization and changing of responsibilities.

Additionally, the requirement to send copies of 50.55(e) reports to NRC, IE Headquarters as well as the regional NRC office had not been fulfilled for several of the recent reports.

At the exit interview licensee management committed to rectify the report mailing discrepancy and discussed the actions which they had undertaken to improve the tracking of 50.55(e) action items and other NRC followup items.

The licensee's action and status on open 50.55(e) reports are described below.

-3-

a. (Open) 50.55(e) of 1-4-80 Re: Pipe Support Design (WPPSS Letter G01-80-50 of 1/24/80).

The inspector reviewed the status of action on this item. Licensee personnel stated that the final report was expected shortly. No specific date was provided. Therefore this item will remain open.

D. (Open) 50.55(e) of 1-30-80 Re: Nonconforming Retaining Clips on WKM Gate Valves (WPPSS Letter G01-80-68 of 2-11-80).

The inspector examined this item and determined that the improper retaining clips had been changed out on all twelve affected valves but not all valve data packages had been updated to show that the repair had been accomplished. At the exit interview licensee management committed to update the valve data packages. This item remains open.

c. (Open) 50.55(e) of 6-11-80 Re: Incorrect Vertical Amplified Response Spectra (WPPSS Letter G01-80-199 of 7/11/80)

WPPSS had sent a final report, letter G01-81-23 of 1-28-81, and closed the item on the basis of a UE&C Part 21 report to the commission.

In discussions with UE&C engineering personnel and licensee management subsequent to the exit interviews, licensee management committed to consider a revised response to reopen the item and to provide a means of tracking the completion of the UE&C actions. Therefore this item remains open.

d. (Open) 50.55(e) of 11-13-80 Ra: RCS Attached Piping, Incomplete Analysis.

Discussions with licensee management at the exit interview of 6/26/81 were subsequently confirmed by WPPSS letter GO1-81-198 of July 2, 1981 which stated the condition had been determined to be reportable and that interim status reports on the extensive design analysis will be provided on a quarterly basis.

e. (Open) 50.55(e) of 1-7-81 Re: Decay Heat Removal Heat Exchangers.

The inspector discussed the significance of the eddy current indications in the heat exchanger tubes with the cognizant engineering personnel. Licensee personnel indicated that their final report on this item was forthcoming. This item remains open.

f. (Closed) 50.55(e) (Potential) of 5-18-81 Re: Torquing Anchor Bolts or Equipment.

Licensee personnel had verbally reported a potential 50.55(e) which dealt with the apparent lack of specifying torque values for concrete anchor bolts for equipment.

The inspector reviewed this item with cognizant licensee personnel. The licensee management had concluded that the item is not in fact reportable since component concrete anchor bolt torquing was being performed to the standard values of J. A. Jones procedure WI-004 Appendix A even though specific torque values were not provided in all component installation drawings. Licensee engineering representatives stated that the proper torquing of components had been verified by audit sampling. Therefore this item is considered closed.

g. (Open) 50.55(e) of 1-7-81 Re: Spent Fuel Cask Handling Crane

The licensee's letters GO1-81-27 of 2/2/81 and GO1-81-163 of 6/1/81 describe the problem which was that the GSB could not withstand the 30 foot drop of a 150 ton cask as had been stated in the PSAR. The problem was due to nonconservative analysis. The solution is to be reported in a final report. The inspector inquired as to other areas where the nonconservative analysis may have been used. In a telephone call with the licensee present, A/E personnel stated that other areas had been considered, specifically:

- 1) Tornado missiles had been reassessed and were satisfactory.
- Internal building missiles (such as valve stems) had been reassessed and were satisfactory.
- 3) Other crane load drop areas were under reassessment.

Followup on 10 CFR Part 21 Items

a. One Inch Diameter Hilti Kwik Bolts

Hilti Kwik Bolts are concrete expansion anchor bolts. Hilti described in a Part 21 report that the ultimate tensile strength of their one inch diameter bolts were found to be on the order of 15% lower than the values published. The inspector interviewed design personnel on site and reviewed design guides for pipe support usage of Hilti anchor bolts, the design factor of safety of 5.33 used by UE&C exceeds the minimum factor of safety of 4.00 required by IE Bulletin 79-02. This more than compensates for the 15% ultimate tensile strength reduction reported by Hilti.

The inspector verified that in cable tray supports the allowable capacity values for one inch Hilti Kwik bolts had been appropriately reduced and that the applied factors of safety more than compensated for the Hilti reported ultimate strength reduction. Therefore, this item is considered closed.

b. B&W L.O. Cocler Heads Misoriented

7

B&W had informed NRC that the heads of lube oil (L.O.) Coolers for the high pressure make up pumps could be misoriented.

The inspector examined the action taken at the site and determined that B&W had issued a L.O. Cooler Technical Manual Change. The change cautioned maintenance personnel regarding the possibility of misorienting the cooler head. The change had been received on site but the change had not been forwarded to the maintenance group.

At the exit interview licensee management committed to resolve the actions necessary to assure that pertinent maintenance information is received by the maintenance engineers. This item will be inspected further in a future inspection.

5. Licensee Action on Previously Identified Enforcement Items

a. (Open)(460-79-13-02) Infraction: Excessive Weld Weave Width.

The original infraction dealt with a weld in which the weld procedure requirements for weld weave width were exceeded. The WPPSS response to the notice of violation provided corrective actions to prevent recurrence of the item. However subsequent to the WPPSS response to NRC they changed their position and decided to relax the weld weave width criteria.

Additionally a previous inspection (30-16) identified that the actual corrective actions differed from the stated corrective actions. The current status of the item is that the licensee committed, at the exit interview, to submit a revised response by July, 1981.

b. (Open)(80-01-01) Failure to Specify Temporary Weld Controls.

This item had been reinspected as reported in inspection report 81-01. The remaining actions described in report 81-01 were examined. The procedure, JAJ-WI-10.4, had been corrected except for the inspectors comment regarding documenting the superintendents approval of temporary attachment welds. Since the superintendent's approval of temporary attachment welds is not a requirement of any applicable code or standard, the procedure is considered acceptable as written. The licensee's committment to evaluate CNCR's for 1.5" column thicknesses had not been accomplished therefore this item remains open.

c. (Closed)(80-01-02) Inadequate Shop Fillet Welds on Pipe Hangers (Huico).

The inspector reviewed the licensee's response to the item of noncompliance, Letter GO1-80-140 of 5-7-80 which stated sampling had been performed and the undersize welds appeared to be isolated cases. The letter stated that Project Quality Assurance would perform surveillance inspections for undersize welds by Huico on a routine basis. However, the licensee has changes this action and UE&C vendor surveillance personnel are now required to spot check by their check plan. The inspector examined a sample of three Huico hangers in the laydown area and verified certain weld sizes met drawing requirements. Based on the licensee's action this item is considered closed.

d. <u>(Closed)(460/513/80-06-01)</u> Failure to Properly Store/Preserve Safety Related Equipment.

Based on the generally adequate conditions observed in the field and based on the fact that a new construction management organization is responsible for the overveiw of preservation and storage items, this item is considered closed and will be looked at in the normal course of future inspections.

e. (Open)(460/513/80-06-0) Failure to Control Work on Completed Supports.

The Supply System had provided two responses to this item. The first response was not adequate and an amended response was submitted. In interviews with field personnel the inspector was told that there was a recurring problem and that a memorandum had been sent to J. A. Jones QA reidentifying the problem and requesting resolution. Therefore this item remains open and will be inspected further in a future inspection. At the exit interview the inspector discussed the apparent ineffective corrective action taken as a result of this item of noncompliance.

f. (Open)(460/80-10-01) Undersize Shop Welds in Structural Steel (Allied Capital-Contract 207).

The original item of noncompliance dealt with undersize welds on structural steel members. The supply system response stated, in part, all steel in the storage areas would be inspected. The inspector determined through discussion with cognizant personnel that project quality assurance personnel performed the reinspection of welds. However the project personnel were not formally qualified, and did not have a formal inspection procedure. The inspector was satisfied that the involved personnel had been reasonably trained and that identified defects were reinspected by a qualified inspector.

As was stated at the exit interview, the methods chosen by project quality assurance management to resolve this item of noncompliance were abnormal.

The inspector observed that all unsatisfactory inspection results were recorded on NCR's and that many of the NCR's were signed off as complete. Part of the corrective action of the NCR's was to make an as built drawing of the repair however the inspector was not able to verify as built drawing had been done.

At the exit interview licensee management committed to followup and determine if as built drawings had been generated.

6. General Items of Interest

The inspector discussed several items of interest with licensee personnel.

a. Snubber Testing

The inspector verified that site personnel had received NRC (Tedesco) to WPPSS (Ferguson) Letter of March 6, 1981 regarding snubber preservice inspection and testing. At the exit interview the inspector explained that this item, snubber preservice examination, would be carried as a followup item for tracking purposes only. Followup item (50-460/81-06/03).

7. Safety Related Structural Steel

a. Observations of Work and Work Activities

The inspector reviewed contract 9779-207 procedure no. QAP-3, revision 6 (entitled "Installation and Inspection of High Strength Bolts", for aspects relating to high strength bolting activities. These areas of the procedure were examined for compliance to the requirements of the AISC Steel Construction Manual, the Specification for Structural Joint: Using ASTM A325 and A490 Bolts, the contract specifications (no. 9779-207, section 5A), and the PSAR. During an inspection of the three (3) bolting crews working in the General Services Building (GSB) and Containment Building of Unit 1 the inspector observed that the three (3) crews were not using the same method for observing nut rotation in the Turn of the Nut method for bolt tensioning.

The inspector was able to determine that the following methods were used for bolt tensioning by interviewing the three (3) bolting crew foremen. Crew one was marking the turned element connection with marking crayon after the element (bolt) was snug tight. The element was then tightened with an impact wrench and rotation was determined by observing the crayon mark movement. This is the same method shown on Shurtleff and Andrews training documents.

Crew two's method was to observe the rotation of the socket of the impact wrench. No marking was made of the initial position of the socket before tightening began. This method is not shown on Shurtleff and Andrews training documents.

Crew three's method was for the iron worker to "feel the wrench" for proper tensioning of the bolt. No marking of the elements initial position is made before tightening begins. This method is not shown on Shurtleff and Andrews training documents.

The inspector's concerns are:

- a. Two (2) of the three (3) bolting foremen appear to have inadequate training in Turn of the Nut method of bolt tensioning as shown on Shurtleff and Andrews training documents.
- b. Some bolts may not achieve the required tension needed for the design of the connection.
- c. Since the inspection procedure requires only 10% or 2 bolts whichever is greater to be checked some under tensioned bolt may escape inspection and not be discovered.

The licensee has committed to review the Shurtleff and Andrews bolting procedure for completeness and to review Shurtleff and Andrews training for adequacy. The issue of bolting is considered to be a followup item (460/81-06-04).

b. Review of Quality Records

The inspector examined the quality records pertaining to weld filler metal control and physical and chemical test on structural steel and bolts. The records were examined for completeness and compliance to the requirements of the procedures, ASTM A36-74, ASTM A325-75 and contract specification. Shurtleff and Andrews Quality Assurance Procedure No. 2A requires that the "Requisition for Filler Material" form S-1 contain the signature or initial of the person issuing weld rod, person receiving weld rod and the welder's foreman authorizing signature. During an inspection of weld rod requisitions on June 25, 1981, the inspector observed that the weld rod requisition for Unit 1 rod issue station dated June 24, 1981 was not completed as described in Shurtleff and Andrews procedure no. 2A. The requisition however had not yet been reviewed by the Shurtleff and Andrews Quality Assurance Manager. The inspector reviewed all weld rod requisitions for 1981 and found all other requisitions completed as required by procedure.

The licensee has committed to review the training of welder foremen and quality assurance inspectors to insure that documentation is completed as required by procedure before leaving the rod issue station. The issue of weld material control is considered to be a followup item (460/81-06-05).

Physical and chemical tests for structural steel members and bolts were reviewed for compliance with the above stated standards and contract specifications. Texas Bolt order nos. 109895 and 120296 contain results for nuts and bolts conforming to ASTM A307 and A325. The inspector was unable to determine if specific bolt lots were in compliance with ASTM A325 Type I chemical properties. Contract specifications require ASTM A325 bolts to be type I only. Several bolt lots were below minimum carbon content for Type I bolts. However those lots may be ASTM A307 bolts and be in compliance with ASTM standard. The licensee had committed to review physical and chemical test reports of bolts purchased from Texas Bolt Company and identify the specific physical and chemical tests for ASTM A307 bolts and ASTM A325 bolts. The reports were provided on a subsequent inspection and showed the low carbon lots were in fact purchased as 307 bolts.

8. Allegations Regarding HVAC Welding

Background

On April 6, 1981, the NRC Region V office received an allegation concerning workmanship deficiencies on work performed by University Nuclear Systems, Incorporated (UNSI) at the 421' elevation of the Unit 1 General Service Building. UNSI is the heating, ventilating and air-conditioning (HVAC) contractor at the WNP-1/4 site.

Allegation: Fifteen specific areas were alleged to have HVAC supports and ductwork with welding deficiencies such as; undercut, porosity, arc strikes, peening in the weld, missing and undersized welds. NRC Finding: The allegation was substantiated in part. Examination by the inspector of supports and ductwork in a sample of ten of the fifteen areas referenced (two of which were later determined to be Class G areas) disclosed the following:

- a. Three hangers were found to have what appeared to be unauthorized work performed on hanger material and/or hanger welds.
 - Hanger no. 21-1805-25 was found to have gouges and grind marks on the southside vertical member in the area just below the field welds of the support to the existing building steel. Visual examination of the field welds indicated that the welds had been inspected and accepted by UNSI's Quality Control as evidenced by the zinc paint covering the welds. Zinc paint is applied to field welds to give a visual indication of which welds have been inspected and accepted. Examination of Erection Traveler No. 73830 indicated that all field welds, except for welds on the bottom duct brace had been inspected and accepted on 8/29/79. Further UNSI Quality Control Procedure, QCP/CP No. 27 requires that the OC inspector list the number of any NCR generated during the installation activity in the remarks column of the erection traveler. No NCR's were noted in Erection Traveler No. 73830. Discussion with the OC inspector who examined and accepted the welds indicated that the hanger discrepancies were not present when he accepted the hanger welds on 8/29/79. The contractor further stated that UNSI has not performed any work or inspertion activities at the 421' elevation of the Unit 1 General Service Building in the past year.

Hanger Nos. 21-1805-49 and 21-1805-54 were found to have arc strikes on the welds of the vertical support members to the existing building steel. The arc strikes were across the center of two welds in each of the two hangers, as if someboly had deliberately run hot welding electrode across the center of the welds, blistering the zinc paint covering the welds. A review of Erection Traveler No. 73832 indicated that these welds had been inspected and accepted on 6/29/79.

After notification of the above hanger discrepancies the contractor initiated Contractor Nonconformance Report No. 1-CNCR-216-394 to document and effect corrective action on the discrepant hangers. At the exit interview on 6/26/81 the licensee committed to include in the contractor's as-built drawing program (scheduled to start July 1, 1981) examination of hanger support material and/or welds for obvious discrepancies and unauthorized work.

b. Welds on vertical support members to building steel for hanger no. 21-1805-25 (same hanger as in item 1) were found not to terminate as specified in the UNSI Duct Standards. Page 23 of the UNSI Duct Standards in effect at the time the hanger was inspected and accepted, requires that the fillet welds be looped around the end of the vertical members and be returned 1/2 inch. Contrary to this the inspector observed that both vertical support members did not have the 1/2 inch weld returns.

Discussion with cognizant UE&C engineers indicated that although 1/2 inch returns provided an extra margin of safety the missing weldments would not prevent the hanger from performing its safety function. The engineers also pointed out that the recently revised UNSI Duct Standards specify that the 1/2 inch return are to be made only when conditions permit.

Based on this information and because it is recognized that the 1/2 inch weld returns have no safety significance the inspector does not consider this an item of noncompliance. However, a licensee evaluation appears to be needed to (1) formally determine the status of the 1/2 inch weld returns and (2) determine the status of those hangers which have been inspected and accepted and do not comply with the UNSI Duct Standards for 1/2 inch weld returns.

The results of this evaluation will be examined during a future inspection. This is a followup item. (50-460/81-06/06)

c. At the exit interview on June 26, 1981, eight wall penetration hangers were identified by the inspector as having undersized welds. This determination was made based on welding and weld acceptance criteria believed to have been used by the UNSI's San Diego shop during fabrication of the penetration hangers. On July 6, 1981 the licensee provided the inspector information which indicated that only one of the wall penetrations had undersized welds. The contractor has identified this wall penetration (duct piece no. 21-0024-39) on Nonconformance Report No. 1-CNCR-216-394 to effect corrective action. Since this appeared to be an isolated case, no additional action was considered warranted.

. .

1.

9. Licensee Action on Previous Enforcement Items

a. (Closed)(50-460/513/81-02/01) Enforcement Item: Failure to prescribe a procedure for control of the QC Problem Report System

The licensee's response to the item of noncompliance (WPPSS Letter No. G01-81-81, dated March 25, 1981) was examined and the actions described in the response verified.

The use of the QC Problem Report form has been discontinued and a formal procedure (QCP/CP No. 39, OC Request for Information") generated to provide a vehicle for QC personnel to document their concerns and solicit management response. The new procedure appears to be adequately described and all UNSI QC personnel have been instructed in the use of procedure.

This item is closed.

b. (Closed)(50-513/81-02/02) Enforcement Item: Failure to comply with nonconformance reporting requirements.

On December 17, 1980, UNSI identified, in Quality Control Problem Report No. 172, that 24 weldments had been installed in the Unit 4 General Services Building (GSB) on quality class 1 hangers (Nos. 20, 21, 22 and 23 on drawing no. DS-4590, sheet 7) using straight polarity. The approved Welding Procedure Specifications for the weldments specified the use of reverse polarity.

The licensee's response to the item of noncompliance (WPPSS letter No. G01-81-81, dated March 25, 1981) was examined and the actions described in the response verified.

The discrepant hangers are identified on nonconformance reports (NCR) and the NCR's are dispositioned to rework the hangers in accordance with the contractor's procedures. However, due to the proposed suspension of construction activity in Unit 4, the contractor estimates that the actual rework won't be accomplished for one year. In accordance with o commitments made by the licensee, the inspector verified that the contractor has performed a review of all QC Problem Reports prepared and submitted to date and has issued nonconformance reports where needed. UNSI has also held training sessions with all welders to ensure their understanding of the ramifications of the wrong polarity in welding. The inspector has no further questions on this matter.

This item is closed.

c. (Closed)(50-460/513/81-02/04) Enforcement Item: Failure to provide weld electrode controls as required by AWS D1.1.

The licenses's response to the item of noncompliance (WPPSS letter No. G01-81-81, dated March 25, 1981) was examined and the actions described in the response verified.

The contractor has revised QCP/CP No. 7, "Weld Filler Metal Control Procedure," to comply with the requirements of AWS D1.1 and all UNSI welders, issuing attendants and QC inspectors have been instructed in the use of the procedure. The inspector examined UNSI's weld rod issue stations, interviewed the cognizant personnel and verified that they understood and were correctly implementing the revised procedure.

In verifying the commitments made with respect to this item, the inspector noted that the licensee stated in the response, that an evaluation had been performed to determine the acceptability of welds made with weld rod which had not been redried in accordance with the AWS D1.1 requirements. During the inspection licensee personnel stated that the evaluation consisted of an opinion from a UE&C engineer on the acceptability of the welds.

At the exit interview of July 10, 1981 the inspectors expressed concern when statements in licensee responses to NRC items of noncompliance are not auditable and verifiable through documented evidence. The licensee acknowledged the concern and indicated that in the future all evaluations would be formally performed and documented. The inspector had no further concerns on this item or with the licensee response on this item.

This item is closed.

d. (Closed)(50-460/81-02/05) Enforcement Item: Failure to install/ inspect HVAC support as required by procedure.

The licensee's response to the item of noncompliance (WPPSS letter no. G01-81-81, dated March 25, 1981) was examined and the actions described in the response verified.

The two discrepant hangers (nos. 24-1805-320 and 24-1805-317) identified in the item of noncompliance have been documented and repaired in accordance with the contractor's procedures. Other commitments made in the response and verified by the inspector included training of welders and weld inspectors, inspection by a level II inspector of welds accepted by another inspector, and the selected reinspection of hanger welds. The contractor has further committed per UNSI memorandum no. QA-412, Revision 1, to perform 100% reinspection of all hanger welds during the asbuilt drawing program. This program is duscussed further in paragraph 8a.

This item is closed.

e. (Closed)(50-460/81-02/06) inforcement Item: Failure to install/ inspect HVAC plenums as required by procedure.

The licensee's response to the item of noncompliance (WPPSS letter No. G01-81-81, dated March 25, 1981) was examined and the actions described in the response verified.

The three HVAC plenums listed on drawing No. DH-4590, Sheet 4 and identified in the item of noncompliance have been documented and repaired in accordance with the contractor's procedures. The contractor also has performed a 100% reinspection of all HVAC plenums on the 399' elevation of the Unit 1 General Service Building and found numerous welding and/or other procedural violations with the plenums examined. These findings are documented on nonconformance reports Nos. 1-CNCR-216-367, 349, 54, 40 and have been dispositioned to be repaired in accordance with the contractor's procedures.

In view of the number of welding and/or other procedural violations found the inspector solicited and received from the licensee a commitment to perform a random reinspection of other plenums at other locations and elevations to assure that a generic problem with the plenums does not exist. This matter is discussed further in paragraph 10 and is assigned a separate followup item number therein. The inspector considers that the licensee has taken appropriate corrective action with this item and has complied with all the commitments made in the licensee response letter of March 25, 1981.

This item is closed.

f. (Closed)(50-460/81-02/08) Enforcement Item: Failure to provide adequate measures to control weld repairs.

The licensee's response to the item of noncompliance (WPPSS letter No. G01-81-81, dated March 25, 1981) was examined and the actions described in the response verified.

The contractor has revised QCP/CP No. 22, "General Welding Standards" to clarify the manner for documenting weld repairs and all welders, QC inspectors and foremen have been instructed in the use of the procedure. The revised procedure now requires that upon rejection of a weld by a QC inspector, the QC inspector is to mark the base metal adjacent to the weld with a low stress metal stamp. After four such stamp markings (the original plus the three repair attempts) a CNCR is to be written and no further repair of the state of the st made without written approval from the Engineer. Paragraph 7.1 of QCP/CP 22.0 also requires that, "The identity of all welders and inspectors who have worked on specific joints and the details of inspection and any repairs shall be recorded for all Quality Class I weld joints made under this procedure and the referenced codes and standards." The inspector is satisfied that the licensee has taken appropriate corrective action with regard to this item.

This item is closed.

10. Licensee Action on Previously Identified Followup and Unresolved Items

a. (Closed)(50-460/81-02/07) Followup Item: UNSI's control of superseded Internal Work Authorizations (IWA)

The contractor has revised QCP/CP 5.0, "Document Control" and QCP/CP 6.0, "Item Identification and Control" to phase out the IWA form and replace it with a new system entitled the "Engineering Action Form" (EAF). The EAF system as described in the revised procedure appears that it will prevent and control the problem of superseded IWA/EAF's in the field. The contractor has also committed to initiate a formal program to review and purge his system of superseded Internal Work Authorizations. The inspector considers that the contractor has taken appropriate action with regard to this item and has no further questions.

This item is closed.

b. (Closed)(50-460/81-02/09) Followup Item: UNSI Controls for temporary attachment welds.

The JNSI system for controlling the installation/removal of temporary attachment welds to existing structural steel as specified by QCP/CP 22.0 and QCP/CP 27.0 was examined during the NRC inspection of January 1981. The examination indicated that the procedures appeared to lack sufficient direction to assure compliance with the requirements of the AWS Code. During this inspection the inspector verified that both procedures have been revised to provide appropriate control/installation criteria, inspection, and documentation of preheat temperatures and temporary attachment welds.

This item is closed.

11. Additional Information Requested in I. E. Inspection Report No. 81-02

In the cover letter to I. E. Inspection Report No. 81-92 the licensee was requested to provide information to assure that, (1) the UNSI quality control/construction procedures appropriately and adequately address and comply with the requirements of the above identified documents, (2) craft and quality control personnel are sufficiently knowledgeable of and adequately implement procedural requirements, and (3) installations of quality class 1 and seismic category 1 supports and duct ork, performed previously by UNSI, comply with applicable codes, standards and procedures.

The inspector verified that UNSI has reviewed their procedures to comply with item 1 above, but was unable to verify what function the licensee performed in determining whether UNSI's review was adequate. Discussion with cognizant personnel indicated that no audits of UNSI were performed by the Supply System or Bechtel to assure compliance with item 1.

With respect to items 2 and 3, the contractor is establishing a formal training program for craft and Quality Control personnel and on July 1, 1981 started an as-built drawing program of category I supports and ductwork.

The above items will be examined further during a future inspection to verify that the licensee has complied with the requests made in items 1 and 2. This is a followup item (50-460/81-06/07).

The results of the contractor's reinspection and as-built drawing program for item 3 will be followed up as part of the followup item in paragraph 12.

12. UNSI Reinspection Program

The licensee at the exit interviews of June 26, 1981 and July 10, 1982 committed as a result of Items of Noncompliance Nos. 81-02-05and 81-02-06 to perform a 100% reinspection of all hanger welds during the course of the contractor's as-built drawing program and to perform a random reinspection of HVAC plenums at various locations to assure that a generic problem with the plenums does not exist. The results of both of these programs will be examined during a future inspection. This is a followup item (50-460/81-06/08).

13. UNSI Warehouse Storage Controls

In verifying the licensee's corrective action for Item of Noncompliance No. 81-02-04, the inspector examined UNSI's Main Tool Crib/Storage Building for compliance to the contractor's storage and ANSI requirements.

The inspector identified on July 8, 1981 that access controls to the storage area were weak, that food and associated items were being stored and concumed on the premises and three open cans of E7018 low

hydrogen welding electrodes did not have status indicating tags or were segregated as nonconforming material.

Upon notification of the above deficiencies the licensee took immediate action and corrected all of the above items. On July 9, 1981 the inspector examined the licensee's corrective action and confirmed that the contractor was in compliance with his procedures and the ANSI requirements.

14. Pipe Laydown Area

The inspector examined the pipe laydown area of Units 1 and 4 and the receiving inspection program for compliance with ANSI N45.2.2.

The inspector toured the pipe laydown area June 23, 1981 and found two (2) pipe spools without end plugs and twelve (12) spools without status control tags attached.

During a previous inspection conducted April 13-16, 1981 (IE Inspection Report No. 50-460/81-04) two (2) pipe spools were found without end plugs and approximately twenty (20) status tags were found unattached to pipe spools within the laydown area. The licensee had committed to perform a surveillance of all laydown areas for Units 1 and 4. At the time of this inspection the surveillance had not yet been performed. However, receiving inspection activities as of May 14, 1981 are being performed by the new construction management, Bechtel. Receiving inspection had been performed by UE&C before May 14, 1981.

The current applicable procedure for receiving inspection is Bechtel Project Quality Control Instruction (PQCI) No. 14632/R-1.00. Under the Bechtel system for receiving inspection, no status control tags are used. Nonconforming pipe spools are to be segregated. Acceptable pipe spools within the laydown area require no tags to be attached. The licensee stated that Eechtel is currently performing complete review of all previous CNCR's written for nonconforming pipe spools in the laydown area.

Presently, nonconforming pipe spools are not segregated from conforming pipe spools within the laydown area per the Bechtel method nor is all pipe tagged per the UE&C method.

At the exit interview licensee management committed to finalize the method of operation of receiving and storage, to describe that method in a procedure which recognizes the merger of the UE&C and Bechtel methods. This item will be examined further in a future inspection. (Followup Item 50-460/81-06-09)

15. 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. An unresolved item disclosed during this inspection is discussed in Paragraph 2d. of this report.

16. Exit Interview

The inspectors met with the licensee's representatives, denoted in paragraph 1, at the conclusion of the inspections on June 26 and July 10, 1981. The scope of the inspection and the inspector's observations and findings were discussed.