U. S. NUCLEAR REGULATORY COMMISSION

REGION V

Report No. 50-460/82-03

Docket No. 50-460 License No. CPPR-134 Safeguards Group

Licensee: Washington Public Power Supply System

P. O. Box 968

Richland, Washington 99352

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

Inspection at: WNP-1 Site Benton County Washington

Inspection conducted: January 18-22 and February 1-5, 1982

Inspectors: P P Narbut — 3/16/82
P. P. Narbut, Reactor Inspector — Date Signed

Anthony D'Angelo — 3/12/82
A. D'Angelo, Reactor Inspector — Date Signed

O. C. Shackleton — 3/16/82
O. C. Shackleton, Senior Investigator — Date Signed

O. C. Shackleton for — 3/16/82
E. J. Power, Physical Protection Inspector — Date Signed

Approved by: R T Dodds — 3/12/82
R. T. Dodds, Chief, Reactor Project Section 2, Reactor Construction Project Branch — Date Signed

Summary:

Inspection during the period of January 18-22 and February 1-5, 1982

Areas Inspected: Routine unannounced inspection by regional based inspectors of licensee activities including licensee action on previous inspection findings, structural steel welding, allegations against the piping, HVAC and electrical contractors, allegations regarding design control, licensee action on bulletins and generic letters. The inspection involved 170 inspector-hours onsite and 8 inspectors-hours in office by four NRC inspectors.

Results: One item of noncompliance was identified in the area of structural steel welding concerning welds which were undersize and had excess convexity.

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DETAILS

1. Persons Contacted

a. Washington Public Power Supply System (WPPSS)

+D. W. Mazur, Program Director
* W. Root, Assistant Program Director, Construction
+C. B. Organ, Assistant Program Director, Engineering
*+C. R. Edwards, Project QA Manager
*+M. E. Rodin, Senior QA Engineer
*+M. J. Farrel, QA Specialist
* G. K. Dyekman, Design Engineering Manager

b. Bechtel Power Corporation (Bechtel)

* E. W. Edwards, Project Manager
*+G. A. Hierzer, Project Construction Manager
+D. R. Johnson, Manager of Quality
*+J. Gatewood, Project QAE
+T. Fallon, Project CQCE
*+J. L. Ruud, QA Engineer
* C. K. Kasch, Lead QC Engineer
* L. Roberts, Contract Coordinator

c. United Engineers and Constructors (UE&C)

*+E. C. Haren, Project QA Manager
*+G. Faust, Field Superintendent Quality Assurance
* G. M. Ahearn, Resident Construction Manager
+K. Iverson, Manager Construction Support

d. Shurtleff and Andrews (S&A)

* R. Byrd, Project Superintendent
* W. Labor, QA Manager

e. University Nuclear Systems Inc. (UNSI)

+S. Cohen, Project Manager
+B. L. Sachs, Project QA/QC Manager

* Attended exit interview of January 22, 1982
+ Attended exit interview of February 5, 1982

2. Inspection Report Coordination

During the week of February 1-5, 1982, inspections were conducted at the WNP-1 site by two Region V based inspectors, two Region V based investigators, one Region IV based vendor branch inspector, and the senior resident inspector for the WNP-1/4 site. The main subjects

of inspection were design verification and various allegations. The NRC inspection reports are being coordinated in the following manner: 1) the design verification inspection will be reported in a Region IV report; 2) the allegations examined by the senior resident will be reported in his normal monthly report; and 3) the remainder is contained in this report. This report also contains the information regarding the inspection conducted during the week of January 18-22, 1982 concerning structural steel welding.

3. Significant Events

During the conduct of the inspection the licensee stated that the following significant events had occurred.

a. WNP-4 Termination. On January 22, 1982 the Supply System's board voted to terminate construction of WNP-4.

b. Owner "N" Stamp Certification. During the week of January 25-29, 1982, ASME performed a survey of WPPSS for Unit 1 Owner "N" Stamp certification. The exit comments were reported to be favorable but a decision by the ASME board will not be rendered until March 1982.

c. No Strike Clause. The licensee reported a no strike/no lockout agreement had been signed with the local unions.

4. Discussion Items

The inspector discussed several items of interest with the licensee. The items discussed are as follows:

a. General Electrical Modification of Vertical Lift Metal Clad Switchgear Short Circuit Bracing

The inspector discussed the General Electric letter forwarded by an internal NRC letter from Baer to Crews on December 30, 1981. The licensee engineering representative stated that the subject switchgear was not used in safety related areas. (Closed) (Followup Item 50-460/82-03-01)

b. IE Information Notice 81-35 Check Valve Failures

The inspector discussed the Notice regarding failed locking devices on check valves from several manufacturers. The licensee had not completed their investigation of this item. This item will be examined during a future inspection (Open) Followup Item (50-460/82-03-02)

UE&C is presently analyzing the effect of the reduced number of lumped masses on the solution accuracy. The Supply System was in the process of preparing a thirty (30) day report to the NRC Regional Office. This item remains open.

6. Licensee Action on Previously Identified Items

a. (Open) (460/81-12-02) Followup Item: Control of Technical Contract Changes

The inspector examined WPPSS Letter QA 1/4-82-16 of January 15, 1982 which was generated in response to the licensees commitment to define a position as to whether the contract change problem had been adequately researched and resolved, and to define the remaining actions to be taken, responsibilities and completion dates. In the letter the licensee committed to perform a 100% review of "Requests for Information" (RFI's) for those RFI's which inappropriately authorized technical changes. The letter listed items such as a review and pending decision regarding the handling of "generic FCN's". It appears the decisions and actions necessary to resolve this item will be accomplished in the February/March time frame. At the exit interview of January 22 the licensee committed to have a final letter which will address the points discussed in the original inspection of this item.

During the inspection of structural steel welding, discussed later in this report, two items were identified which relate to this followup item on control of technical contract changes.

First, Quality Finding Report (QFR) No. 1/4-138 of January 20, 1982 identifies that certain installations of structural steel have been made that are not in accordance with approved FCN's or PCP's. The inspector interviewed personnel who stated that design engineers gave verbal direction to change requirements in FCN's and PCP's and to record the different configurations on as-built drawings.

Secondly, the inspector found that the design engineer used an improper vehicle for issuing technical changes, that is contract modifications. The problem is that contract modifications have not been included in the design engineer's design verification methodology. An example of the use of a contract modification used for a technical change was Modification No. 66 Change Control FBT to contract 9779.207 which authorized a change from welded to bolted connections of structural steel to embedments. The technical changes were described on field sketches attached to the contract modification which were not issued as a field change notice (FCN).

c. Hydrogen Embrittlement of Lockwashers

The inspector discussed WNP-3/5 letter SQA-81-191 of May 12, 1981 concerning certain lockwashers with hydrogen embrittlement used for cable tray supports. Licensee representatives stated the subject lockwashers were not used at the WNP-1/4 site.

d. Use of Sherwin Williams Flaxoap for Cable Pulling

The inspector discussed the subject potentially generic issue forwarded by NRC Letter (Starosteki to Crews) of September 28, 1981. Licensee personnel stated the subject brand of cable pulling lubricant was not used at the WNP-1/4 site. (Closed) (Followup Item 50-460/82-03-03)

e. WKM Valve Locking Pin

A Babcock & Wilcox letter to Stello (NRC) dated May 11, 1981 was discussed. The letter identifies certain WKM valves supplied to WNP-1/4 require inspection for mismachting of a locking pin hole.

Licensee personnel verified the inspection had been performed but the pins were found to be carbon versus stainless steel and had notified the NRC that the situation was potentially reportable in accordance with 10 CFR 50.55(e) on January 26, 1982.

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

a. (Open) Potential 50.55(e) Construction Deficiency Report of January 14, 1982 - Deviation from Pipe Stress Assumptions

The licensee had informed the NRC of a potential deficiency in performing dynamic analysis on ASME class piping. The deficiency relates to the performance of seismic (response spectra) calculations by United Engineers and Constructors (UE&C) using a lumped mass technique.

The specific deficiency discussed by UE&C with the inspector concerned modeling of a large piping system (the piping system is modeled with many node points). The number of lumped masses needed, as determined by UE&C Engineering Standards, exceeded the computer program capability. The deficiency consists of a decision by the UE&C stress analysis group to use less lumped masses than specified in UE&C Engineering Standards. The stress analysis group did not assure by some other method that solution accuracy was maintained within acceptable limits. The decision to deviate from UE&C Engineering Standard requirements was a conscious decision to allow modeling of the piping system with the present computer code (ADLPIPE). UE&C also stated, only a small number of piping systems were affected, but did not identify the affected systems.

At the exit interview licensee management committed, pursuant to these latest findings, to include as part of this followup item an assessment of their document control system (DCS) used in design verification as to whether contract modifications should be included and whether other improper vehicles were used by the designer such as contract waiver request (CWR) answers, CNCR answers, etc. The commitment was to assess these questions for all contractors and to include an assessment of how verbal changes to design change documentation would be accurately included in the design verification process.

This item remains open.

b. (Closed) (460/81-12-04) Followup Item: Review of Drawings for Inclusion in the Document Control System

This item dealt with FCN's/PCP's which did not list an affected drawing or the listed affected drawing was found, by the Design Document Group (DDG), to be not applicable. These types of FCN's/PCP's were not being included in the Document Control System (DCS).

The inspector determined that all such FCN's/PCP's have been forwarded to the discipline engineers for inclusion of the proper affected drawing and will be included in the DCS by the DDG.

Therefore, this item is closed based on the licensee's actions underway.

c. (Closed) (460/81-10-01) Followup Item: The WPPSS QA program is not fully defined or implemented

The licensee's response to this item and Appendix A of IE Inspection Report 81-10 is contained in WPPSS letter G01-82-0032 of January 22, 1982.

The inspector reviewed the response with the Project QA Manager (PQAM) and determined the QA program will be fully described and implemented 30 days after the issuance of Revision 2 of the QAR manual. The QAR manual revision is expected March 1, 1982.

This item will be examined in the normal course of future inspections and is considered closed.

d. (Closed) (460/79-01-01) Followup Item: Disposition of shear studs welded through metal decking*

The remaining aspects of the item dealt with review of the UE&C report, "Investigation of Studs" dated May 1, 1980.

Regional based inspectors examined the report. In summary the report states that poor stud welding was caused by gaps and dirt between the decking and the structural beams. The licensee tested 12,856 studs on 555 beams to assess the failure rate, which was 4%. The analysis of floor response was reviewed including changes in the moment of inertia, deflection and seismic response. The report concludes that there was negligible change in the structural integrity, in part due to the fact that 4,000 psi concrete was used whereas the original design was based on 3,000 psi concrete. The report stated that 20% of future stud installations would be tested by bending the sample 15°. However, the contractor requested and the designer approved the option to cut holes in the decking and weld studs directly to the beams. This was done by Contract Modification 69 Change Order FBP of March 15, 1979 and FCN 207-1-79-167 of January 3, 1979.

This item is considered closed based on the licensee's response.

e. (Closed) (460/81-06-04) Followup Item: Inconsistant methods of structural bolt tightening

The inspector reviewed Shurtleff & Andrews procedure QAP-3, Revision B of September 22, 1981 and reviewed the training records for craft and QC personnel. The procedure had been revised to specify the use of the turn of the nut method and the contractor personnel had been trained to the revised procedure. These actions completed the licensees commitments on this item.

This item is considered closed.

f. (Closed) (513/80-09-01) Followup Item: Inspection Checklist does not list protective covers for penetrations

The inspector examined AWASH procedure QCCD-14-Rev. 3 of December 8, 1980 which was changed to provide specific requirements for protective covers for various types of penetrations and pipe spools. The items were also added to the QC checklist included in the procedure.

This item is considered closed.

*Note: For reference this item was discussed in Report 460/80-06.

g. (Closed) 460/81-06-06 Followup Item: WPPSS to evaluate 1/2 inch weld returns on HVAC.

The inspector examined the revised duct standards which eliminated the requirement for 1/2 inch weld returns on certain duct details. The revised drawings examined were Sheet SB-1, Revision 2 and Sheet BD-10, Revision 2 as contained in Revision 9 to Drawing 9779-L-604900.

This item is considered closed.

h. (Closed) 460/81-07-02 Followup Item: Welk Brothers Inc. was not certifying their QC engineers nor were the QC inspectors initialling preheat requirements.

The inspector examined WPPSS surveillance report 1-243-011 of October 19, 1981. The information provided showed that the entries for preheat had been annotated "base metal verified to be above minimum welding temperature requirements prior to welding". The contractor documented this action on CAR 243-9.

In regards to the certification of QC personnel, Bechtel letter BEC WP-81-5897 of September 24, 1981 stated that they had determined that QA/QC personnel, at Welk, met the minimum requirements of ANSI N 45.2.6.

The inspector reviewed the contract for Welk Bros. Contract 243, Section 1D and the PSAR Section 3.12 (under Regulatory Guide 1.58) and noted the licensee commitment to ANSI N 45.2.6 requires contractors to submit procedures for the qualification of their personnel, but does not specially address certification requirements.

The inspector determined the licensee is meeting their PSAR commitment in regards to QC personnel certification at Welk Bros. Inc.

This item is considered closed.

i. (Closed) (460/81-10-03) Unresolved Item: Hilti bolts installed in grout.

During the inspection conducted November 16-20, 1981 report number 50-460/513-81-10 the inspector raised the question of possible reduced pull-out strengths of Hilti bolts installed in grout or dry pack mortar. To resolve questions regarding the installation of Hiltis in grouting materials, the licensee conducted field tests to verify the design adequacy of such an installation. The tests were initiated by Quick Fix Project

Change Proposal (PCP) No. 01Q01813, Transmittal No. 8698. Procedures describing the test were written for Pacific Testing Laboratories (PTL) who conducted the test, by United Engineers and Constructors (UE&C).

The Hilti-Kwik Bolt test procedure called for the installation nine (9) Hilti bolts for testing. Three (3) bolts installed in dry pack mortar, three (3) installed in 10" X 10" grout patch and three (3) installed in structural concrete. Tests were run for one half (1/2") inch and three quarter (3/4") inch size Hilti Kwik Bolts. Measurements taken during the test indicate the ultimate pull out strength of Hilti bolts installed in dry pack mortar or grout is greater than the design tension plus factor of safety used by UE&C for pipe support installations.

The licensee is currently reviewing site contractors procedures for adequate instruction on installation of Hilti bolts in dry pack mortar or grout. This item is considered closed.

j. (Closed) (460/81-10-02) Followup Item: Design Verification

Design verification was previously examined during the inspection conducted November 16-20, 1981 report number 50-460/513-81-10 in which questions were raised on the subject of design verification performed on site. United Engineers and Constructors (UE&C) system for generating calculations and performing design verification were examined by the Region IV inspector and a Region V inspector. Their findings will be discussed in the Region IV inspection report. This item is considered closed since RIV will assume the followup responsibilities for any open issues.

7. Licensee Actions on IE Bulletins

a. (Closed) IE Bulletin 81-02 and Supplement 1: Failure of Gate Type Valves to Close Against Differential Pressure

The bulletin listed certain valves which failed to close against high differential pressures. The licensee was required to determine whether they had the listed valves installed or stocked as spares. Supplement 1 to the bulletin added additional valves to the list.

The licensees responses to the bulletin and supplement were reviewed, letters G01-81-199 of July 16, 1981 and G01-81-394 of November 20, 1981. The letters state none of the listed valves have been purchased by WPPSS.

This bulletin is considered closed.

b. (Open) IE Bulletin 81-03 Flow Blockage of Cooling Water to Safety System Components by Corbicula Sp. (Asiatic Clam) and Mytius SP (Mussel)

The bulletin required the licensee to determine if clams or mussels were present in the vicinity of the station, evaluate the potential for infestation, evaluate prevention and protection methods for future use.

The licensee's response letter G01-81-207 of July 7, 1981 to the bulletin was reviewed. The licensee stated clams had been found in the Columbia River and that random inspections of systems will be accomplished after the introduction of river water into those systems during preoperational testing and during refueling outages.

This item remains open and will be inspected further during preoperational testing.

c. (Open) IE Bulletin 79-02, Revision 1, Revision 2, Supplement 1

The bulletin requires the licensee to verify that pipe support base plate flexibility was accounted for in the calculation of anchor bolt loads, specifies certain minimum factors of safety, requires anchor bolt preload, documentation of correct installation, a determination of the use of anchor bolts in masonry walls, and the use of nonstandard shapes for pipe support attachment to walls.

The licensee's responses to this bulletin's revisions and the supplement are contained in the following letters:

- G01-79-380 of July 10, 1979
- G01-80-50 of January 24, 1980
- G01-80-218 of September 25, 1980
- G01-80-355 of November 13, 1980
- G01-81-300 of October 1, 1981

The licensee also reported this item as a 50.55(e) item on January 4, 1980.

Inspections of this subject bulletin and 50.55(e) report were conducted in inspections 79-14, 80-13, 81-06, and this inspection.

The licensee uses Hilti Kwik bolts exclusively. The inspector examined procedures ITI-005, Revision 4 of June 8, 1981 and WI 10.5, Revision 0B of April 9, 1981. The pipe support anchor bolt procedures include the requirements for and verification of satisfactory installation of concrete expansion anchor bolts.

The design method used by the licensee's designer to account for baseplate flexibility was described in G01-80-50. The inspector verified that the factors of safety used meet, in fact exceed, the bulletin requirements.

The licensee stated in letter G01-80-50 that anchors are not used in masonry walls and structural shapes, when used in lieu of standard baseplates, are designed consistent with the bulletin criteria.

Completion of the following items is necessary to close the bulletin:

(1) Complete design revision of those supports having design deficiencies, currently scheduled for the third quarter of 1982 per G01-81-330.

(2) Complete modification of those supports with revised designs.

(3) Complete retorquing of anchor bolts torqued to the values given in G01-80-50 to the values given in G01-81-330 as committed in G01-80-50.

(4) Complete the 100% verification of bolt embedment committed to in G01-80-50.

(5) NRR review and accept the design method presented in G01-80-50 as supplemented by the information provided in G01-80-335.

Subsequent to the exit interview, the licensee committed to provide verification of items (1) through (4) above by providing additional reports as items are completed. Therefore letter G01-81-330 of October 1, 1981 is no longer considered the final report as stated.

8. Structual Steel Welding

The inspector examined structural steel welding at Shurtleff and Andrews, Contract 207A, the structural steel erection contractor.

a. Welding Procedure Specifications and Quality Assurance Procedures

The inspector examined the following weld procedure specifications and quality assurance procedures for conformance to AWS D 1.1 requirements including definition of essential variables and qualification of procedure.

WPS-1, Fillet Weld Procedure
WPS-2, Full Penetration Butt and Tee, Limited Thickness
WPS-3, Full Penetration, Unlimited Thickness
WPS-4, Repair Gouges over 3/16 inch
WPS-5, Repair of Cracked Base Metal
WPS-6, Repair of Surface Defects
WPS-Supplement, Supplemental Repair of Undercut

QAP-2A, Weld Filler Metal Control
QAP-2B, Qualification of Procedures and Welders
QAP-2C, Welding Operation
QAP-2D, Visual Welding Procedure
QAP-2E, Stud Welding
QAP-2F, Procedure for Plug and Slot Welds
QAP-13, Qualification of QA Personnel
QAP-17, Audits
QAP-18, Magnetic Particle Examination
QAP-18B, Procedure for Certifying, MTE Personnel
QAP-20, Installation and Inspection of Hilti Bolts

The inspector noted several procedural weaknesses. Inspection in the field and discussion with welders and QC personnel did not indicate a problem with proper implementation. The following procedural weaknesses were discussed with licensee management at the exit interview on January 22, 1982:

(1) The preheat tables in QAP-2C agree with AWS D 1.1; however, some of the WPS's provided preheat information which does not agree with QAP-2C.

(2) The repair procedures do not contain information requiring the magnetic particle examination of base metal after gouge removal before welding. Likewise, information was not provided regarding the acceptable lamination criteria allowed by AWS.

(3) The welding rod definition in WPS 1, 2, 3 and Supplement calls for "70XX" which permits Low Hydrogen and non-Low Hydrogen electrodes to be used.

(4) Plug weld fill criteria is not defined; it is cited as "as required".

(5) QAP-13 allows Level I Quality Control inspectors to inspect and accept welds, whereas NRC guidance states that procedures which allow a Level I individual to be the sole person to evaluate and sign for final acceptance of QC inspections and test are not considered to be in compliance with the pertinent provisions of ANSI N45.2.6.

(6) The contractor has no procedure for performing bend tests of welder qualification samples. This item was identified by WPPSS personnel.

Licensee management committed to examine and resolve the procedural descrepancies. This item will be inspected further during a future inspection. (Followup Item: 50-460/82-03/04)

b. Welding Material Control

The inspector examined weld material control for conformance to AWS D 1.1 and the contractors procedure QAP-2A.

The inspector examined the rod control rooms in Unit 1 and in the prefabrication area. Oven temperatures and baking times were in accordance with AWS D 1.1. Withdrawal slips were completed in accordance with the contractors procedure. The inspector selected one heat of 7018 rod in use in the field and checked the physical and chemical certifications and found them to be in accordance with AWS specifications.

No items of noncompliance or deviations were observed.

c. Observation of Welding

The inspector examined welding in progress and completed welds for conformance to AWS D 1.1 and the designer and contractor drawings and procedures. The examination of welding in progress on beam 4273A (work packages 207A-074 and 056) included observation of welder technique, interpass temperature, and conformance to drawing. The weld rod in use and weld machine settings were checked. The welders were equipped with weld gages and temperature indicating crayons. The welders names and numbers were taken for a subsequent check of their qualifications.

The inspector examined completed welds at elevation 478 outside the containment. The items examined were beam seats described in work package 56 for beam 4269A and 4271A. The beam seats consisted of three gusset plates welded to an embed plate in the containment wall.

Per the designer drawings the gusset plates were to be fillet welded to the embed plates as follows:

Beam 4271A on drawing E155 Detail E186 was to have 1/2 inch fillets.

Beam 4269A on drawing E155 Detail E185 was to have 5/16 inch fillets.

However, work package 056, which is used by the craft and inspector in the field for installation and installation inspection contained an error in that it called for 1/2 inch fillets for both beams.

Using the work package weld size the beam seat for beam 4269A had two of the six fillet welds undersize, that is 3/8 inch versus 1/2 inch, but had been erroneously final accepted by the welding inspector. These welds were of acceptable size when compared to the designers drawing but had not been inspected to that criteria.

Using the work package and designer drawing weld size, the beam seat gusset plates for beam 4271A, had one of the six fillet welds undersize (3/8 inch vice 1/2 inch). The fillet weld documentation is shown as signed off complete by the QC inspector on package 207A-056, erection sketch 6, 4343A to embed. The sketch is dated December 28, 1981.

The inspector also examined completed welding in the containment at elevation 454 between lines 15 and 16. The inspector examined beam connections to shield wall embedments for beams 4154A, B, C and D. Beam 4154A had been inspected and final accepted on June 8, 1981 as shown on the Field Weld Inspection Report, Form W-1, for Unit 1 Containment, Print E147. Beams 4154 B, C and D had not been signed as final accepted. The beam connection is shown on Drawing E167, Detail 15.

The beam connection was changed by Contract Modification FBT Change 66. The change shows a 4 X 4 X 3/8 horizontal angle **welded to the embedment by a 5/16 inch fillet.** The weld appearance was very poor, had a very bumpy contour, and had excess convexity of 1/16 inch greater than the maximum convexity allowed by AWS D 1.1.

The inspector interviewed the inspectors involved in accepting the two welds. They stated they were very busy at the time they accepted the welds and did not necessarily measure each and every weld they accepted.

The inspection procedure OAP No. 20, Revision 4 dated November 8, 1978 "Visual Welding Inspection" paragraph 4.1.3 states inpart the inspector will inspect all field welds and that welds will be acceptable if weld size is as shown on drawings and meet the requirements of AWS D.1.1-72, Section 3.6. Section 3.6 of AWS D.1.1 shows quantitative criteria for weld convexity.

The QC inspector final acceptance of welds which were undersize or had excess convexity is an apparent item of noncompliance. (Enforcement Item 50-460/82-03/05)

d. Welder Qualification

The inspector examined the qualification records for four welders, including the aforementioned welders, for compliance to AWS D 1.1 and the contractor procedures regarding thickness of material, material positions, process, and bend test results. The inspector interviewed the contractor personnel who had administered the welder qualification tests and examined the bend test equipment.

No items of noncompliance or deviations were observed.

e. QC Qualification

The inspector examined the qualification records of two welding inspectors for conformance to ANSI N 45.2.6.

No items of noncompliance or deviations were observed.

9. Allegations Regarding the HVAC Contractor

During the week of February 1-5, 1982 two investigators and an inspector conducted a preliminary investigation of allegations against University Nuclear System Inc. (UNSI) which were received February 1, 1982. The results of that investigation will be reported in a future inspection report when the investigation is completed.

10. Allegations Regarding Design Control

During the week of February 1-5, 1982, two investigators and an inspector conducted an examination of allegations received January 21, 1982 regarding Design Control at WNP-1/4. The allegations and the findings are discussed below.

a. Allegation: There is a lack of a design document control system. There is no updated matrix. There is no way to tell by objective evidence what QC inspectors have inspected to. See correspondence 262 bec 81-007.

Finding: Partially substantiated. The licensee's design change control problems were recognized by the licensee in 1980. The corrective actions taken and additional corrective actions necessary were discussed in detail in a series of correspondance discussed in inspection report 460/81-12. There are still several outstanding items which require resolution as discussed in the inspection report 81-12 and in paragraph 6.a. of this report.

A brief summary of the licensee's approach to the problem, recognizing that design change control was lost to some degree in the past, is to establish a master list of design change documents (DCS-Design Control System), to require as-built drawings of the as-built configuration and contractor listing of the design changes incorporated, to compare the incorporated changes against the master list and resolve any differences, and, lastly, to reperform design calculations based on the as-built drawings (design verification). This approach appears to conform to the guidance provided by the NRC in Quality Assurance Branch (QAB) Interpretation No. 10 issued May 15, 1979, dealing with flexibility in timeliness for design verification.

b. Allegation: There is a knowing disregard for procedures. If UE&C does not approve a change in 15 days it goes into effect anyway.

Finding: Not substantiated. The inspectors did not find any knowing disregard for procedures. The inspectors did find that a policy was in process of being put into effect which permitted contractor procedure changes to become effective 15 days after receipt by UE&C if no adverse comments were received within that 15 days. This policy was described in WPPSS letter WPBEC-81-5583 of December 21, 1981. The policy is being put into effect at each contractor by a contract change, e.g., PCP No. 01015794 of January 7, 1982 for Contract 253. The policy was put into effect by the designer by Interim Change No. 1 to FGCP38 Revision 6 dated January 15, 1982.

Personnel interviewed stated the reason for the policy was to improve the long and complex review cycle required to obtain approval of changes to the site contractors quality related procedures.

The following weaknesses in the policy were identified through interviews with the affected personnel.

(1) There is a lack of administrative procedure, either written or practiced, which would enable a supervisor or independent auditor to verify that contractor procedure changes were reviewed for deviations by UE&C within the 15 day effectivity date.

(2) Licensee management interviewed stated all contractor procedures will be reviewed and signed by UE&C, even though this may be done after the procedures become automatically effective (in 15 days).

Administrative controls have not been established to monitor the backlog of unreviewed contractor procedures.

(3) The policy as being implemented does not provide for contingency actions; for example, actions to be taken by a contractor if a procedure has been into effect and belated changes are required as a result of UE&C reviews.

The licensee QA had scheduled and was conducting an surveillance of the implementation of the new contractor procedure review policy. The above mentioned weaknesses may also have been identified by the licensee as a result of that surveillance.

This item was discussed at the exit interview with licensee management. Licensee personnel committed to look at the above listed aspects in the conduct of their current surveillance of the policy implementation. (Followup item: 460/82-03-06)

c. Allegation: J. A. Jones correspondence QAM-82-006 dated January 12, 1982 shows that QA wanted to stop work on all class one hangers but that was overridden.

Finding: Examination of this item will be completed during a future inspection.

d. Allegation: A letter was attached to the allegation. It appears to be an in house memorandum dated April 3, 1981 addressed to "Bill". The letter dealt with the electrical contractors reinspection of cable tray support welds (prompted by an NRC item of noncompliance). The letter addressed relating to two major areas (1) the use of an "area" criteria for weld inspection and (2) problems with verification documents for cable tray supports where the contractor used out of date drawings and did not record the authorizing documents for deviations.

Finding: The allegations will be investigated during a future inspection.

The letter to "Bill" was determined to be to Bill Taylor UE&C Construction Manager from W. Morehead, currently Bechtel Contracts Coordinator for Electrical. The item is being carried as followup item 50-460/82-01/06.

11. Allegations Regarding the Piping Contractor

During the week of February 1-5, 1982 the senior resident inspector conducted an investigation of allegations against the piping contractor which were received January 21, 1982.

These allegations will be addressed by the resident inspector in his inspection report.

12. Exit Interview

The persons identified in paragraph 1 met with the inspectors on the dates indicated in paragraph 1. The scope of the inspection and the findings were discussed.