

U. S. NUCLEAR REGULATORY COMMISSION

REGION V

Report No. 50-460/82-11

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-1/4 Site Benton County Washington

Inspection conducted: June 28 - July 2, 1982

Inspectors: PP Narbut
P. P. Narbut, Reactor Inspector

July 21, 1982
Date Signed

Approved by: T. W. Dodds for
R. T. Dodds, Chief, Reactor Project
Section 2, Reactor Construction Projects Branch

7/21/82
Date Signed

Summary:

Inspection during the period of June 28 - July 2, 1982

Areas Inspected: Routine unannounced inspection by one region based inspector of licensee activities including an allegation against the heating ventilation and air conditioning contractor, licensee action on previous inspection findings and examination of licensee action on certain IE Circulars.

The inspection involved 30 inspector-hours onsite by one region based inspector.

Results: No items of noncompliance or deviations were identified.

DETAILS

1. Persons Contacted

a. Washington Public Power Supply System

R. W. Root, Program Director
*C. R. Edwards, Project Quality Assurance Manager
*G. K. Dykeman, Design Engineering Manager
*R. F. Mazurkiewicz, Operations Manager
*J. L. Jackson, Construction Manager
*M. C. Carrigan, Assistant Program Director
J. Steidle, Senior Quality Assurance Engineer
L. C. Oakes, Senior Mechanical Engineer
D. McClure, Maintenance Supervisor

b. Bechtel Power Corporation (Bechtel)

*W. Horn, Field Construction Manager
*G. K. Frazier, Acting Project Quality Assurance Engineer
*C. Kasch, Project Construction Quality Control Engineer

c. United Engineers and Constructors (UE&C)

*G. L. Faust, Field Surveillance Quality Assurance
W. C. Anderson, Electrical Field Project Superintendant

d. University Nuclear Systems Incorporated (UNSI)

*S. Cohen, Project Manager
*B. Sachs, Project Quality Assurance/Quality Control Manager
*C. Holt, Assistant Project Quality Assurance/Quality Control Manager

e. Foley Wismer Becker Incorporated (FWB)

R. Anderson, Cable Engineer

*Attended exit interview on July 2, 1982.

2. Allegation against UNSI

Allegation: An allegation was received which indicated the UNSI Assistant Quality Assurance/Quality Control Manager did not meet the experience requirements of ANSI N 45.2.6 for level 3 qualifications, in particular, he did not have two years of nuclear experience.

Finding: The allegation was not substantiated.

The inspector examined the Assistant Manager's employment and training history, the UNSI procedure for qualification, the licensee's PSAR commitment and ANSI and Regulatory Guide requirements. The inspector also interviewed the Assistant Manager.

The inspector found that the Assistant Manager exceeded all the ANSI N 45.2.6 requirements for level 3 qualification with the exception of not having two years nuclear experience. At the time of his certification to level 3 by UNSI he had 14 months nuclear experience.

However, certain exceptions to the ANSI standard applied.

The licensee commitment in the PSAR was that, for contractors, personnel qualification would be performed in accordance with contractor procedures which were only required to meet the "basic elements" of the ANSI standard. The ANSI standard mitigated its own requirements by stating that the extent to which individual requirements apply would depend upon the nature and scope of the work to be performed. Both the ANSI standard and the UNSI qualification procedure stated that the education and experience requirements should not be treated as absolute when other factors provided reasonable assurance that a person could competently perform.

In the inspector's review of the Assistant Quality Assurance/Quality Control Manager's history, he found no evidence which would indicate the Assistant Manager was not competent to perform.

Certain items were identified by the inspector which were not directly related to the allegation. Those items were:

- a. The Assistant Manager's annual eye test certification had expired. However, he was promptly recertified during the week of the inspection.
- b. The Assistant Manager's certification to level 3 was signed by the Corporate Quality Assurance Manager whereas the UNSI procedure required certification by the Executive Vice President. This item, however, had been previously identified by UNSI Quality Assurance personnel and was documented on Quality Finding Report QFR 82-1-3-3 dated June 2, 1982. UNSI had not completed action on the QFR at the time of inspection.

- c. UNSI had previously committed to perform 100% re-inspection of welds in response to an NRC item of noncompliance. During the inspection, it was discovered that UNSI was no longer planning to perform that re-inspection. The inspector alerted licensee management to this departure from their commitment to the NRC.
- d. The UNSI Quality Assurance Manager informed the inspector that UNSI had received a specification change to eliminate quality control from the as-built drawing process. The inspector alerted licensee management that the NRC considers the generation of as-built drawings (which are used as design input for seismic analysis confirmation) to be a safety related activity and therefore applicable to the provisions of 10 CFR 50, Appendix B. The as-built drawing program will be inspected in the normal course of future inspections.

3. Licensee Action on Previously Identified Items

The licensee submitted five previously identified items as closeable, that is, items for which the licensee considered the necessary actions to close the item had been completed. The inspector closed two of the items submitted. The following paragraphs include the status of the other three items which were not ready for closure. At the exit interview the inspector discussed the items and his opinion that the items should have been recognized as not closeable by the licensee staff. This subject had been previously discussed in report 50-460/82-08.

- a. (Open) (460/81-12-01) Enforcement Item: Failure to verify nonconformance report actions were complete prior to closing the report

The licensee's actions to resolve this item were described in letter G01-82-49 of February 11, 1982. In the letter the licensee committed to:

- (1) Issue a nonconformance report to document the incomplete actions.
- (2) Issue an information letter to UE&C and Bechtel by February 26, 1982.
- (3) To have Bechtel issue a letter of direction to active contractors by March 1, 1982.
- (4) To have UE&C establish a program for reevaluation of all old nonconformance reports for closed contracts.

The inspector verified actions (1) and (2) above were taken. Actions (3) and (4) above had not been taken at the time of inspection. Therefore, this item remains open.

b. (Closed) (460/80-13-02) Followup Item: Deficient procedures for installation and termination of cables

The problems identified in the item were that controls were not provided in the contractor's procedure for determining (prior to cable pulls) whether limits would be exceeded on the maximum allowable cable tension, minimum cable bending radius, maximum cable sidewall pressure, and minimum cable pulling temperature.

The licensee representatives stated the contractor's procedure and specifications have been revised to resolve the identified problems. The inspector examined the revised procedure QCP-10, Revision 7 dated June 9, 1982 and the revised technical specification 9779-218, Revision 176, Division 16D, Section '6K.

The procedure references the specification and the specification provides methods of calculating expected cable tension and sidewall pressure.

The procedure does not specifically require calculations to be performed prior to cable pulls, it requires the maximum allowable tension (a tabular value for a cable type) to be listed on the cable pull package.

The procedure infers, by reference to the specification, that calculations of sidewall pressure and expected tension be performed.

The licensee/contractor representatives stated that controls of minimum cable bending radius are provided by conduit design engineers in the design process and normal quality control surveillance of cable pulls and that minimum cable pull temperature limits are given in the procedure and controlled through quality control inspection required by the procedure.

The inspector interviewed the cable engineer and determined that the calculations of expected tension and sidewall pressure were being performed prior to cable pulls.

At the exit interview the inspector discussed the contractor's procedure and the lack of a specific requirement to perform the calculations inferred by reference to the specification. Licensee

management acknowledged that this item could be closed with the understanding that the contractor's procedure as written is considered to require the calculations be performed prior to cable pulls.

- c. (Open) 460/80-13-03 Followup Item: Electrical contractor procedures to be modified to include channel separation inspections per IEEE 384

This item had been previously followed up in inspection 50-460/81-04. The remaining issues were:

- (1) The specification drawings for the use of fire barriers (when minimum separation criteria could not be met) did not include the dimensional information given in IEEE 384.

The licensee action on this aspect was to delete the existing fire barrier detail drawings in the specification and to defer new detail drawings until the licensee's study of 10 CFR 50 Appendix R requirements is completed. This study is currently expected to complete in late 1982.

This aspect of the item therefore remains open.

- (2) The specification does not provide separation criteria for flexible conduit or state the type to be used.

The licensee representative stated the separation criteria given in the specification for conduit applies both to rigid and flexible conduit. Additionally, the type of flexible conduit to be used was added to the specification Section 16D paragraph 2.1.2.1. The specification requires "Greenfield" flexible conduit which is spiral wound metal flexible conduit.

This aspect of the item is considered closed.

- (3) The specification defines "M" division as an associated circuit and a safety related division. "M" division is not defined in the PSAR or FSAR.

The licensee action was to include a definition of "M" division in the FSAR submitted to the NRC for docketing.

The aspect of the item is considered closed.

d. (Open) 460/80-16-05 Followup Item: Receipt inspection of ASME prepurchased equipment

This item as originally written stated the NRC would inspect receipt inspection of vendor supplied equipment.

The licensee's receipt inspection program methodology was inspected in conjunction with an inspection of the receipt tagging in the laydown area (reference report 460/82-08).

The licensee's program depends on quality assurance provisions imposed in the contract to the supplier, that is, the supplier's quality assurance program and UE&C's vendor surveillance program. Receipt inspection at the site is limited to an inspection for item count, damage, and documentation review. There is no program requirement for onsite reinspection or sampling inspection of vendor supplied hardware. The program established by the licensee has been generally recognized as an acceptable method of controlling vendor supplied equipment quality.

During this inspection the inspector examined the licensee's quality assurance staff surveillances for the last year and determined that no hardware reinspections of vendor items had been performed. Responsible Bechtel quality control management personnel stated their contract does not require reinspection or sampling inspection of vendor supplied items. Additionally, site contractors performing installation of vendor hardware are not required to inspect vendor supplied items and in some cases (e.g. JAJ ITI-005) contractor procedures specifically limit contractor personnel to looking at contractor work only.

At the exit interview the inspector discussed examples of vendor supplied hardware which had been received at the site with significant deficiencies. The examples were:

- . Enforcement Item 80-16-04: Pipe supports not in conformance with drawing.
- . Enforcement Item 80-11-01: Pipe stop attachment welds undersize.
- . Enforcement Item 82-06-01: Pipe whip restraint welds undersize.
- . Enforcement Item 80-10-01: Allied Capital welds undersize.

- . Enforcement Item 80-01-02: Undersize welds on pipe supports.
- . 50:55(e) Report of August 15, 1979: Defective welds on Superstrut assemblies.
- . 50:55(e) Report of December 7, 1979: WKM valve defects.
- . 50:55(e) Report of January 26, 1982: WKM valve material discrepancy.
- . 50:55(e) Report of January 26, 1982: DuBois steel tube defects.
- . 50:55(e) Report of February 10, 1982: Powell Electric breaker connectors misaligned.

The following related inspection finding was also discussed with licensee management:

- . Followup Item 81-10-04: Supplier evaluation appears weak.

At the exit interview licensee management committed to consider the benefit of instituting an on-site sampling program of vendor supplied items for compliance to drawings and specification requirements.

This item will be inspected further during a future inspection.

- e. (Close) (460/79-06-01) Followup Item: IE Circulars 78-08, 78-09, 78-13, 78-15 and 78-16 require followup.

The inspector examined the licensee's action on these circulars and will report on the examined circulars later in this report. This item is being closed since circular closeout actions are tracked separately by NRC and this item is redundant.

In regards to the licensee's readiness to close this item (presented as closeable), one circular (78-09) was listed with action still required on the licensee's tracking system and one circular (78-16) was not considered closeable by the inspector. The remaining three circulars were closed by the inspector.

Additionally, the inspector examined the licensee's revised site Bulletin/Circular/Information Notice tracking system. In general the revised system appears to provide better control of actions with certain exceptions noted which are discussed later in this report in the discussion of individual circulars.

The inspector observed that the Supply System corporate procedure defining the interface of responsibilities between the corporate offices and the site for NRC items was deleted during the Supply System reorganization in early 1982. The procedure was previously identified as EDP-8.5. It will be reissued according to the licensee.

The reestablishment of the corporate procedure will be inspected further in a future inspection. (Followup item 50-460/82-11-01)

4. Licensee Action on IE Circulars

a. (Closed) Circular 78-08 Environmental Qualification of Safety Related Electrical Equipment

The licensee closed this item with memorandum E14 NSD-7808 dated September 15, 1978 in which the licensee evaluated their program as comprehensive.

The inspector closed this item on the basis of IE Bulletin 79-01 which supercedes this Circular. The Bulletin remains open.

b. (Closed) Circular 78-13 Inoperability of Service Water Pumps

The licensee closed this item based on the information provided in letter E-14 NSP-79-29 dated May 24, 1979.

The inspector reviewed the licensee's information and closed the circular on the basis of the information presented.

c. (Closed) Circular 78-15 Tilting Disk Check Valves Fail to Close with Gravity in the Vertical

Licensee letter E14 NSP-79-27 dated May 23, 1979 provides the information that the WNP-1/4 site does not use check valves in vertical runs. The inspector closed the circular on the basis of the information presented.

d. (Open) Circular 78-16 Limitorque Valve Operators

The circular presented operational problems with certain models of Limitorque valve operators. The problem presented was that when used in the manual mode for extended periods of time, the valve operators may fail to operate in the motorized mode. The Circular recommended implementing a procedure for verifying the operator was functional with the motor after performing manual operations.

The licensee closed the circular on the basis of letter E14-NSP-79-30 of May 24, 1979 and letters referenced therein.

The licensee's letter and references suggested that other actions such as design changes to add bypass valves could be made to eliminate the need for manual operation of Limitorque valve operators. However, no such alternative action was indicated to have been taken, and cognizant engineering personnel stated no alternative actions had been taken. Therefore, the inspector disagreed with the licensee's closing of this circular. This circular remains open.

e. (Closed) Circular 79-03 Inadequate Guard Training

The licensee closed this item on the basis that it was not applicable to power plants. The inspector closed the item on the basis that the circular was issued to holders of special nuclear material licenses in safeguards Group 1 which does not include WNP-1/4. Therefore, this circular is closed.

f. (Open) Circular 79-04 Loose Locking Nuts on Limitorque Valve Operators

The circular stated that certain models of Limitorque operators had become inoperable due to locking nuts becoming loose and the operator disengaging. The circular suggested (1) surveying the operators and verifying the lock nuts were staked and (2) verifying assembly and maintenance instructions contain directions for staking the locknuts.

The inspector examined the licensee's survey of valve suppliers and the on-site inspection actions. The inspector closed the first part of the circular on the basis of the licensee's actions.

In regards to the second part of the circular, the licensee had no basis for close out in his file (regarding assembly and maintenance instruction actions).

The inspector examined site copies of the certified vendor instruction (CVI) files and interviewed licensee maintenance personnel.

The CVI files had staking instructions for some valves and did not for other valves. The inspector examined the valve operator instructions for a sample of three valve manufacturers. Two of the three did not have staking instructions included.

Engineering and maintenance personnel interviewed indicated that:

- . CVI files were to be transferred to the site but that process had not been finalized.
- . Maintenance instructions would be prepared from the CVI files but that was a future action.
- . Maintenance/operations actions in NRC Bulletins/Circulars/Information Notices and in manufacturer's notices and service advisories were not currently being clearly administered and that "holes" probably did exist in the information provided to operations/maintenance.

This circular was discussed at the exit interview as well as the administration of information to operations/maintenance. This circular and the licensee's actions to provide information to operations/maintenance will be inspected further in a future inspection.

g. (Closed) Circular 79-11 Design/Construction Interface Problem

The circular provided the example of a site that had installed a misoriented reactor vessel and requested licensee's examine their Design/Construction interface.

The licensee closed the circular on the basis that it was "not applicable" to WNP-1/4 as stated in an internal engineering memorandum dated June 18, 1982.

Although the inspector did not consider the basis of closure used by the licensee to be adequate, the inspector closed the item on the basis of the past and planned NRC inspections of the Design/Construction interface.

This item was discussed at the exit interview with licensee management.

h. (Closed) Circular 79-13 Replacement of Diesel Fire Pump Starting Contactors.

The licensee closed the circular on the basis that the site did not have the type of fire pump which was the subject of the circular.

The inspector closed the circular on the basis of the information provided in letter E14 JVH 79-023.

i. (Closed) Circular 79-17 Contact Problems in SB-12 Switches on GE Metalclad Circuit Breakers.

The circular was closed by the licensee on the basis of letter UE-WD-79-1123 which stated the subject switches would be replaced.

The inspector closed the circular on the basis that nonconformance reports 1-NCR-048-041 and 4-NCR-048-08 were written to identify the specific breakers which required switch replacement. Since NCR's are a controlled, tracked document the inspector closed the circular.

j. (Closed) Circular 79-18 Proper Installation of Target Rock Safety Relief Valves

The licensee closed this circular on the basis of letter E14 NSP-79-59 of September 20, 1979.

The inspector closed this item based on its applicability to BWR's versus PWR's.

k. (Closed) Circular 79-19 Loose Impeller Locking Device on Ingersol Rand Pumps

The licensee closed this item based on letter E14 JVH-79-030 for pumps on Contract 62.

The inspector closed this item on the basis of the licensee's letter and after verifying the Contract 62 was the only contract which involved safety related pumps from Ingersol Rand.

l. (Closed) Circular 79-20 Failure of GTE Sylvania Relays

The licensee closed this item based on letter WPUE-79-1383 dated November 13, 1979 which stated the subject relays were not used at the WNP-1/4 site. The inspector closed the bulletin on the basis of the licensee's letter.

5. Exit Interview

The persons identified in paragraph 1 met with the inspector on the date indicated in paragraph 1. The scope of the inspection and the findings were discussed as stated in this report.