

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

REGION V

Report No. 50-508/81-17
50-509/81-17

Docket No. 50-508, 50-509 License No. CPPR-154, 155 Safeguards Group _____

Licensee: Washington Public Power Supply System
P. O. Box 1223
Elma, Washington 98541

Facility Name: WNP-3 and WNP-5

Inspection at: WNP-3 and WNP-5 Site (Satsop)

Inspection conducted: October 5-9 and 26-30, 1981

Inspectors: D. P. Haist 12/17/81
D. P. Haist, Reactor Inspector Date Signed

Date Signed

Approved by: R. T. Dodds 12/17/81
R. T. Dodds, Chief, Reactor Projects Section 2 Date Signed
Reactor Construction Projects Branch

Summary:

Inspection during the period of October 5-9 and 26-30, 1981 (Report Nos. 50-508/81-17 and 50-509/81-17).

Areas Inspected: Routine, unannounced inspection by a regional-based inspector of construction activities including quality assurance program and implementing procedures of the reactor building mechanical contractor; corporate audit activities by the reactor building mechanical contractor; reactor vessel and steam generator installation activities; audit and surveillance activities by the construction manager; containment mechanical penetration installation; apparent alterations of pipe weld radiographs; and allegations regarding deletion of quality requirements on Quality Class II and G components. The inspection involved 66 inspector-hours onsite and 16 inspector-hours in office by one NRC inspector.

Results: Of the seven areas inspected, one item of noncompliance was identified relating to the improper release of equipment for installation (Paragraph 6d).

DETAILS

1. Persons Contacted

The inspector interviewed various engineering, management, inspection and construction personnel of the organizations listed below. Key personnel, including those who attended the exit interviews are specifically identified below:

a. Washington Public Power Supply System (WPPSS)

- #*O. E. Trapp, Project Quality Assurance Manager
- #*J. A. Puzauskas, Quality Assurance Engineering Supervisor
- *J. E. Werle, Project Engineering Manager
- *N. C. Kaufman, Project Management
- #*J. M. Walker, Senior Project Quality Engineer
- *J. Peterson, Construction Management
- E. Stevens, Quality Assurance Engineer
- *M. Monopoli, Quality Assurance Operations Supervisor
- *E. Stauffer, Quality Assurance Engineer
- # D. Dobson, Project Manager
- # C. E. Love, Construction Manager
- # R. S. Leddick, Program Director

b. Ebasco Services, Inc. (Ebasco)

- # R. Marshall, Site Manager
- #*R. G. Peck, Quality Assurance Engineer
- #*J. Hasset, Quality Assurance Engineer
- T. E. Cottrell, Senior Resident Engineer
- D. Quamme, Project General Manager
- # C. G. Reid, Resident Engineer
- # R. E. Abel, Project Quality Engineer
- *J. P. Sluka, Project Engineering Manager
- #*A. M. Cutrona, Project Quality Assurance Manager
- #*E. K. Ferguson, Deputy Site Manager
- T. Tully, Lead Project Quality Engineer, Audits
- T. Lavin, Mechanical Engineer
- # J. F. Killian, ESSE Supervising Engineer, Mechanical/Nuclear
- # L. A. Bast, Quality Assurance Engineering Supervisor
- R. Shetty, Civil Engineering
- B. Bragan, Lead Quality Assurance Auditor
- D. Duthie, Lead Quality Assurance Auditor
- C. M. McClaskey, Lead Project Quality Engineer
- # C. B. Tatum, Reactor Building Construction
- # D. R. James, Construction

c. Morrison-Knudsen/ESI/Lord Electric - Joint Venture

- #*D. L. Hartsfield, Project Quality Director
- #*J. R. Sowers, Quality Assurance/Quality Control Manager
- R. Hicks, Quality Assurance Manager
- T. Baumgartner, Audit Supervisor
- G. Fones, Quality Assurance Records Supervisor
- W. Holcombe, Project Quality Assurance Manager
- # R. E. Lawrence, M-K Project Director

In addition, Mr. W. G. Albert, NRC Senior Resident Inspector and Mr. R. T. Dodds, Chief, Reactor Projects Section No. 2, Reactor Construction Projects Branch attended the exit interview on October 30, 1981.

- * Denotes those attending the exit interview on October 9, 1981.
- # Denotes those attending the exit interview on October 30, 1981.

2. Site Tour

The inspector conducted tours of Unit No. 3 on October 5, 1981 and October 26, 1981 to observe completed work, work in process, and storage and maintenance of safety related equipment. The inspector also observed concrete placement and consolidation activities for placement no. 5RB-I-082 and 083. The inspector observed that housekeeping was generally poor in the reactor and reactor auxiliary buildings, particularly in the reactor auxiliary building area near containment penetrations. The licensee took immediate action to improve housekeeping in the area of the containment penetrations and committed to improve housekeeping in the other areas identified. The inspector observed that containment penetration assemblies were not being stored in accordance with manufacturer's recommendations and that construction debris was being placed on the penetrations. The licensee took corrective action to remove the debris and improve the storage of the penetration assemblies however this action was not totally effective as discussed in paragraph 6.

3. Licensee Action on Previous Inspection Findings

a. (Open) Followup Item (50-508/509/81-14/06) - Ebasco Audits and Surveillances of Contract 224 and Associated Management Action.

Ebasco has increased its audit activities on the 224 contract in recent weeks and has just completed an extended 20 day audit. Areas examined include inspection, procurement, calibration, and welding. The inspector discussed recent audit findings with the

auditors. Ebasco audits are disclosing generally the same quality program and implementation deficiencies as the contract 224 corporate audits have identified. Surveillance activities appear to have covered critical contract activities. Ebasco audit, audit followup, and surveillance activities will continue to be examined until the contract 224 quality assurance program is considered to be operating effectively.

b. (Open) Followup Item (50-508/509/81-09/02) - Containment Penetration Leak Testing

The subject of leak testing of containment penetrations was determined to be an apparent item of noncompliance in IE Report No. 50-508/509/81-14. The design aspects of the containment sump penetration secondary bellows were examined during this inspection period.

Previous examinations of containment penetration nos. 23, 24 and 44 had disclosed that the design pressure of the reactor auxiliary building side of these penetrations had been revised from 50 psig to 5 psig. In light of this change, the inspector had questioned the function of the outboard bellows assemblies. Ebasco Site Support Engineering personnel stated that process line rupture or leakage is not postulated for these penetrations. The process lines involved are listed below:

<u>Penetration No.</u>	<u>Process Line</u>	<u>Process Line Design</u>
23	Safety Injection Recirc. Sump discharge	50 psig, 260 ⁰ F
24	Safety Injection Recirc. Sump discharge	50 psig, 260 ⁰ F
44	Reactor Drain Tank Outlet	200 psig, 25 ⁰ F

Penetration nos. 23 and 24 have isolation valves on the outboard end. Penetration No. 44 has inboard and outboard isolation valves.

The inspector examined the PSAR commitments and found that paragraph 3.8.2.1.2(f) specifies the following for containment sump recirculation lines:

Special provisions are made on these lines to reduce the possibility of non-isolatable leakage of sump water during recirculation. Each line will consist of a double barrier concentric pipe from the sump up to the suction line isolation valve outside the containment. In the event of leakage of the inner process pipe, the outer pipe will serve to contain the sump water and no uncontrollable leakage will occur.

This statement is no longer true following revision of the penetration design pressure rating. Ebasco personnel stated that a PSAR Deviation has not, but will be initiated to clarify the pipe rupture criteria for these lines. The inspector reviewed the Ebasco design control procedures to ensure that design change notices are examined for deviation from SAR requirements. The design control program appears adequate to ensure screening of design changes for SAR deviations. This item will remain open pending examination of a PSAR deviation which reflects the revised pipe rupture criteria.

4. Reactor Building Mechanical Equipment and Piping Installation Contract
224 (MK/ESI/LORD)

a. General

The inspector continued examination of the quality assurance program and its implementation by the contractor following the allegations, corporate audit activity, internal stop work orders, and general difficulties identified early in the contract period (Ref. IE Report No. 50-508/509/81-14). The licensee and construction manager have increased surveillance and audit activities on this contractor following the early difficulties and NRC investigation. Improvements have been made in the contractor's quality assurance program; however, the licensee and construction manager have identified significant deficiencies in the quality assurance program implementation in recent weeks, the most significant being the inability to determine whether or not the proper surface finish exists on the #2 steam generator bearing plates.

Significant deficiencies identified by the inspector are detailed in paragraphs 5 and 6 below and include: incomplete and inadequate inspection records of reactor vessel set activities; inadequate storage and maintenance of mechanical containment penetrations; and improper control of weld filler metal. Corrective actions were initiated by the contractor regarding the inspection records, and the licensee committed to address the specific findings of the inspector regarding containment penetration storage and maintenance and weld filler metal control.

On October 29, 1981 the licensee directed the contractor to stop all Quality Class I work related to mechanical containment penetration installation on Unit 3. The licensee also directed Ebasco to subjectively and formally analyze the contractor's total performance and to recommend any appropriate refinements to the stop work order. This action appears appropriate in light of the deficiencies identified in this contractor's program to date and the critical nature of his work activities. The Ebasco evaluation of this contractor's total performance and corrective actions taken in

the contractor's quality assurance program will be examined in conjunction with other outstanding followup items regarding this contractor.

b. Corporate Audit Activities

The inspector examined a quality assurance program evaluation plan and implementation schedule developed by the contractor's corporate audit group to evaluate, in a limited time, the adequacy of the quality assurance program. The evaluation was scheduled over a fifteen week period. Evaluations have been conducted in the areas of procurement; receiving; issuance of material; welding; inspection; inspection, test, and operating status; nonconforming materials, parts, or components; corrective action; receipt inspection; control of measuring and test equipment; and vendor surveillance.

As discussed in IE Report No. 50-508/509/81-14, work was suspended in the areas of welding, procurement, receiving, and issuance of material as a result of corporate audit findings. Significant deficiencies were also identified in the areas of inspection, fabrication and installation (travelers), nonconformance control, receipt inspection, control of measuring and test equipment, and vendor surveillance.

Response to corporate audit findings in the areas of inspection, fabrication and installation, and nonconforming conditions were prepared on October 26, 1981, two months after the date of the findings and five weeks after the response due date. Corrective actions include procedure change, personnel training, and in depth reviews of all inspection reports issued to date to determine their adequacy. Implementation of these corrective actions and the results of the remaining corporate audits to be performed will be examined during the course of subsequent inspections.

5. Safety-Related Components - Unit 3 Reactor Vessel and Steam Generators - Contract 224 (MK/ESI/Lord)

a. Observation of Work and Work Activities

The inspector observed post-installation activities on the reactor vessel and steam generators including maintenance and protection in accordance with the applicable care and maintenance instructions and the requirements of ANSI N45.2.2. The inspector observed that the bearing plates for the No. 1 (north) steam generator were rusted. Contractor and Ebasco personnel were aware of this condition and documented it on a nonconformance report. The contractor and Ebasco were working with Combustion Engineering to obtain an acceptable preservative for the bearing plates.

The licensee reported a potential 50.55(e) construction deficiency regarding the no. 2 steam generator bearing plates on October 19, 1981. The contractor has been unable to establish conclusively the surface finish of the bearing plates due to conflicting inspection reports. An inspection report written at the machine shop by the contractor's supplier auditor indicated a surface finish of 200-650 RMS as measured with a profilometer. Receipt inspection at the site with a surface comparator indicated conformance with the specified surface finish of 125 RMS. The certificate of conformance for the plates specifically excluded the surface finish. An apparent breakdown in the contractor's quality assurance program (failure to effectively communicate the supplier auditor's findings and failure to adequately review the certificate of conformance) resulted in release of the bearing plates and installation of the no. 2 steam generator. The licensee has ordered new bearing plates which will be inspected upon receipt by Ebasco. The no. 2 steam generator will be relifted and the new bearing plates will be installed. The licensee has also requested a corporate quality assurance investigation of the circumstances surrounding this deficiency. This item will be examined during routine 50.55(e) item followup.

b. Review of Records

The inspector reviewed inspection records associated with the reactor vessel and steam generator set activities. The inspector found that, generally, the findings of the contractor's corporate audit personnel (Paragraph 4b) are accurate. Among those findings, the following were confirmed by the inspector's review:

- (1) Inspection reports which record an apparent unsatisfactory condition are marked N/A under the discrepancies column
- (2) Report closed which contains open items
- (3) Reports superseded subsequent to original inspection with different inspection results
- (4) Incomplete reports
- (5) Inspection characteristics not listed; accept/reject criteria not established.
- (6) Inspection personnel denied, by procedure, the freedom to generate nonconformance reports.

In addition to these findings, the inspector found that the steam generator and reactor vessel set activities were not subjected to inspection to verify conformance with the documented instructions, procedures, and drawings for accomplishing the activity, nor was there consistent indirect control by monitoring processing methods, equipment, and personnel. Quality control inspectors did "monitor" or "witness" critical activities such as reactor vessel support column shim gap measurements (I.R. No. M-249), reactor vessel azimuth location, elevation, support column verticality (I.R. No. M-247), reactor vessel angular rotation (I.R. No. M-212), reactor vessel levelness (I.R. No. M-209).

The controlling procedures, FQI-10.20 "Monitoring of Reactor Vessel Set" and FQI-10.22 "Monitoring of Steam Generator Final Setting" provide for "monitoring" of these activities in lieu of independent verification or inspection. This direction appears to lead to confusion and inconsistency on the part of the quality control inspectors regarding their responsibilities. The inspector interviewed three of the inspectors who were assigned to these activities. The inspectors indicated that at the beginning of the activities they performed independent verification, but were told by their supervision that they should only "monitor" the activities. As a result, the inspector's activities ranged from witnessing actual measurements by crafts and verifying the thickness of feeler gauges with a micrometer to merely observing that someone was taking the measurements required by the construction procedure. The data obtained was not attached to an inspection report but was given directly to engineering who determined its acceptability without quality control involvement at the time of measurement. The inspectors interviewed had not been provided with training on the surveying techniques or equipment to be used for these critical measurements. The inspectors were not required to review the surveyors field notes or to establish that measuring equipment was calibrated and generally did not do so. The inspectors rely upon construction to ensure that qualified craft personnel are assigned to perform and record these measurements.

The NRC inspector interviewed the Superintendent of Surveyors regarding calibration of surveying and measuring equipment and qualification of personnel. Some survey personnel are licensed land surveyors, but licensing is not a requirement. An informal calibration program has been in effect with the Superintendent calibrating the tapes and checking instruments.

The contractor agreed that quality control inspectors should verify the field check of instruments, and should have access to measurements. The contractor committed to evaluate the adequacy of the survey equipment calibration program. This item will be examined during a subsequent inspection. Followup Item (50-508/81-17/01).

As a result of the above deficiencies, the contractor committed to perform a 100% review of quality control inspection records for adequacy, perform any corrective action, including reinspection as necessary, and implement new inspection programs to ensure independent verification of quality affecting activities. The construction manager has deemed this commitment a condition precedent to initiation of welding of primary piping. The construction manager has also directed the contractor to perform a formal evaluation of his readiness to perform primary piping welding and to forward the evaluation prior to initiation of that welding. The results of the review of inspection records will be examined during a subsequent inspection. Followup Item (50-508/81-17/02).

6. Containment Penetrations - Unit 3 - Contract 224 (MK/ESI/Lord)

a. Review of Quality Assurance Implementing Procedures

The inspector reviewed the following procedures associated with containment mechanical penetration installation for conformance with contract specifications, PSAR, and ANSI requirements:

<u>Procedure No.</u>	<u>Title</u>
FCP 1033, Rev. 3-EC	Containment Vessel Mechanical Penetration Installation
FEP 1002, Rev. 2-EC	Care and Maintenance
FWP 500N, Rev. 1	Filler Metal Procurement and Control
PSP-MM-11-10, Rev. 0 (Ebasco)	Conditional Release of Material, Equipment for Construction
062K196, Rev. 0 (Vendor-IHI)	Instruction Manual-Installation-Maintenance Instructions for Containment Mechanical Penetrations

The inspector found that procedure FCP-1033 contains provisions for lifting and handling and cleanliness control of the containment penetrations, however a care and maintenance instruction had not been prepared and implemented in accordance with the requirements of FEP-1002. The contractor had recently become aware of the need for a care and maintenance instruction for the containment penetrations and had prepared one for review by the Engineer. As a result, it is not apparent that regular care and maintenance of containment mechanical penetrations has been performed.

Procedure FCP-1033, paragraph IIB specifically excludes pressure testing of the containment penetrations being installed by this contractor. The inspector questioned whether or not the appropriate pressure tests can be performed after the penetrations are installed and welded. The contractor stated that this aspect of the installation has not been considered because the 224 contract does not require pressure testing of the penetration assemblies. The inspector was told that Ebasco is examining this area. This item will be examined in a subsequent inspection during followup of item no. 50-508/81-14/01.

b. Observation of Work and Work Activities

The inspector examined in-process and completed work on the mechanical containment penetrations, beginning with the site tour. As described in paragraph 2, the plant housekeeping in the area of the containment penetrations was considered to be poor. Examples of poor housekeeping practices included concrete debris and dust on the penetration assemblies and floor areas under the penetrations; inadequate protection of stainless steel bellows internals; sawhorse and plywood sheets stored on penetration no. 47, inadequate support under the flued head end of penetration nos. 34 and 91; absence of temporary spacers/supports between concentric pipes of penetration nos. 15, 30, 16, 14, 46, 52 and 93; and welding leads and spare slings stored on penetration no. 16 process pipe while unsupported. The process pipes in penetration nos. 52 and 93 had been deformed and were no longer concentric with the remainder of the penetration assembly.

The above described conditions represent deviation from the requirements of ANSI-N45.2.2, contractor procedure FCP-1033 and vendor requirements for protection and storage. The contractor took some action to correct these conditions but some process pipes were still unsupported at the conclusion of the inspection. Inadequate corrective action by the contractor and inadequate management action by the construction manager and licensee regarding these conditions is demonstrated by continuance of this situation in the face of numerous reports as follows:

<u>Report</u>	<u>Date</u>	<u>Subject</u>
Quality Assurance Report No. WNP-3-52 (WPPSS)	September 14, 1981	Inadequate support and cleanliness control on penetrations.
Quality Assurance Surveillance Report No. WNP-3-60 (WPPSS)	September 25, 1981	Inadequate protection of penetration; damage to end prep.

<u>Report</u>	<u>Date</u>	<u>Subject</u>
Quality Assurance Surveillance Report No. WNP-3-61 (WPPSS)	October 1, 1981	Penetrations contaminated with sandblast material, dust, and grit; damage to weld prep; penetration being used as scaffolding.
Letter from Licensee to Construction Manager No. QA-35-81-470	October 6, 1981	Inadequate care and maintenance of penetrations
Nonconformance Report No. 14152	October 8, 1981	Penetration process pipe contaminated with dirt and debris.
Nonconformance Report No. 14153	October 9, 1981	Penetrations contaminated with water, sand, dirt, and trash
Quality Finding Report No. 224-023	October 16, 1981	Inadequate care and maintenance of penetrations; inadequate corrective action
Quality Finding Report No. 224-079	October 16, 1981	Improper storage of penetrations; failure to take corrective actions; failure to take expedient actions.

Action was taken to stop work by the 224 contractor on October 29, 1981 as described in paragraph 4(a). Improper storage and handling of these containment penetrations has been a recurring problem, beginning with shipment to the site as described in paragraph 6d. The licensee committed to evaluate the care and maintenance of the containment penetrations and to have available for the inspector an explanation of the corrective steps taken to correct this situation and the corrective steps taken to avoid this situation in the future. This will be examined during a subsequent inspection. Followup Item (50-508/81-17/03).

The inspector observed welding on field weld no. 1 on penetration no. 29. This weld was the penetration to containment shell sleeve connection for a type III penetration. The weld braze data card was properly completed to the point of welding with proper signoff by the inspector. The inspector observed that the welder had not ensured that his portable weld filler metal oven was properly energized. The 7018 weld material was cold to the touch. This represents violation of contractor procedure no. FWP-500N, Rev. 1, "Filler Metal Procurement and Control" paragraph nos. 7.4.3, 7.4.10 and 7.6.5 which require use and energization of portable rod ovens.

The inspector questioned the quality control inspector responsible for penetration activities regarding the improper support of process piping and violation of weld filler metal control procedure requirements.

The inspector indicated that the support problem was a common problem and that he was not aware of the violation of the filler metal control procedure but didn't consider it a problem because the filler material had only been withdrawn for two hours. The inspector did not see a need to initiate an inspection report or nonconformance report on either of these items. The inspector also indicated that there was much activity and he was the only inspector assigned to cover this activity. These examples are considered indications of improper training of quality inspectors and craft regarding procedure adherence, inspection, and identification of nonconforming conditions. Action was taken by the licensee to stop work by this contractor as described in paragraph 4(a). The licensee committed to evaluate the circumstances and implications of this welder's failure to follow procedure requirements and to have available for the inspector an explanation of the corrective steps taken to correct this situation and the corrective steps taken to avoid this situation in the future. This will be examined in a subsequent inspection. Followup Item (50-508/81-17/04).

c. Review of Quality Records

The inspector examined records associated with the installation activities on containment penetration no. 29. Records examined included inspection reports of receipt inspection, nozzle surveys and welding activities. The inspector also examined the qualification records of the quality control inspectors involved in this activity and applicable nonconformance reports.

No items of noncompliance were identified.

d. Conditional Release of Mechanical Containment Penetrations - Ebasco

The inspector examined nonconformance report no. 12966 which described improper storage of penetration assemblies at the site laydown area. A joint inspection by the Engineer and Vendor of 37 penetration assemblies revealed that on 27 penetrations, the bellows expansion joints were no longer in their design position. The original disposition of this nonconformance dated May 21, 1981, required the 224 contractor to reset the bellows to the design position by using the Ebasco-approved vendor's procedure. The confirmation of completion of approved disposition, verification of completion of approved disposition, and final review were incorrectly signed-off on June 5, June 17 and June 18, 1981, respectively, without the required resetting of the bellows. Subsequently, page 6 was added to the nonconformance report on June 18, 1981 to require resetting of the bellows by the 224 contractor to the Ebasco approved vendor's procedure. The vendor procedure (Ebasco No. 3240-36529 Rev. 1) "Resetting Procedure for Bellows" requires the penetrations

to be transported to a shop, supported by one of two methods at specific points along the penetration, and then adjusted to meet the proper length dimension. The bellows elongation must be determined to within 0.125 inch. The inspector could not determine when the penetration assemblies were actually released for installation, however conditional release request nos. 54-06 (June 4, 1981) and 54-07 (June 22, 1981) released 22 nonconforming penetration assemblies for installation including welding of the process pipe to the penetrations.

Project Site Procedure No. MM-11-10, Rev. 0, "Conditional Release of Material, Equipment", paragraph 3.2.3 requires the originator of a conditional release request to initiate a change to correct the associated nonconformance report if the conditional release of the item modifies the disposition or evaluation of the nonconformance report. In the case of the penetration assemblies released under the conditional release requests above, the original nonconformance disposition, which requires resetting of the bellows in accordance with the vendor-supplied procedure, cannot be accomplished after the penetration installation activities allowed by the conditional release without deviation from the vendor-supplied procedure by the contractor. The 224 contractor recognized the incompatibility between the nonconformance report and the conditional release and requested direction from the Engineer. At that time, of the penetrations covered by the conditional releases, five (5) were welded to the containment nozzles. The failure to follow provisions of the conditional release procedure is considered an apparent item of noncompliance with 10 CFR 50, Appendix B, Criterion V, Instructions, Procedures, and Drawings (50-508/81-17/05).

7. Steam Generator Anchor Bolt Classification

The inspector had questioned the fact of mislocation of the eight 6-inch diameter anchor bolts of both steam generators. The mislocation of the anchor bolts required remachining of the slots in the sliding base plates. The additional elongation of the slotted holes in the sliding base plates results in the 12-inch diameter circular washers being insufficient to completely cover the slot during the hot condition. The anchor bolts, washers, nuts, and sliding base plates were originally classified as ASME Section III, Subsection NF components. Subsequently, the anchor bolts, washers and nuts were removed from the jurisdiction of subsection NF by the Engineer in DCN No. AS-279. ASME Section III, Subsection NF, 1977 Edition, Figure NF-1131-1 (f) specifies that for a non-integral support (sliding base plate) connected to the building structure, the connection is in accordance with NF. The Engineer bases the classification of the anchor bolts on an ASME code inquiry number NI 80-60 which generally states that the owner may establish the jurisdiction of the ASME code regarding anchor bolts. This appears to conflict with the express provisions of Figure NF-1131 discussed above.

The engineer has not submitted a request for a code case on this item and does not believe it to be necessary. The inspector reminded the licensee that the mechanism for NRC acceptance of code deviations is the code case when reviewed and accepted in Regulatory Guide 1.84 and 1.85. The appropriate code classification of the anchor bolts will remain open pending an NRC position on this matter. Followup Item (50-508/81-17/06).

The Engineer provided calculations to demonstrate that the connections are adequate, with circular washers over the slotted base plate holes, to withstand primary loop pipe break and safe shutdown earthquake loads. These calculations will be examined by the inspector against the physical configuration of the steam generator anchorages. Followup Item (50-508/81-17/07).

8. Alteration of Radiographs of Pipe Welds

The licensee notified the NRC Region V office, on October 19, 1981 of a potential problem regarding apparent enhancement of the "4T" penetrometer hole indication on certain pipe weld radiographs by Associated Piping and Engineering Corporation (AP&E) of Compton, California. The alteration of radiographs was identified by Ebasco home office examiners during the routine radiograph review. Radiographs are normally sent to the Ebasco New York office for review; if acceptable, they are returned to the supplier who then ships them, with the pipe, to the job site for storage. Ebasco New York identified alteration of one or more radiographs associated with twenty-one welds. A nonconformance report was issued to AP&E who responded with an admission to the apparent enhancement and proposed actions to correct the problem.

Ebasco site personnel have examined essentially all AP&E radiographs on site for enhancement of the penetrometer hole indication. This review has identified enhancement of fourteen radiographs associated with eight welds. All radiographs affected are from quality class I, thin wall stainless steel piping. The inspector examined the altered radiographs identified at the site. The enhancement appears to have been accomplished in one of three ways: (1) touch up with a soft lead pencil; (2) scribe or scratch with a sharp object; or (3) indent with a sharp object. The enhancement is very difficult to detect under normal film examination techniques (subdued background lighting). When overhead lights are on, the alteration may be detected by the surface reflection of the film. Eleven of the fourteen radiographs had visible unaltered "2T" penetrometer holes indicating adequate sensitivity. The investigations of this activity to date indicate that the enhancement started as early as December, 1980 and involved principally one Level II radiograph interpretation. Ebasco is continuing to investigate this activity at the AP&E facility. The results of these investigations and corrective actions will be examined during subsequent inspections. Followup Item (50-508/81-17/08).

9. Requirements for Inspections of Class II and G Work Activities

a. Allegation

An allegation was received in IE:HQ stating that the Supply System has deleted all Class II and G inspection at Satsop Plants 3 and 5.

b. Finding

The allegation was substantiated in part. Last Spring, WNP-3/5 management undertook an examination of all work to identify any activities not specifically required by the several codes and standards applicable to the project, including inspection requirements. On September 16, 1981 the Director of Quality Assurance for the Supply System issued a policy statement on the design and construction of non-nuclear safety related items applicable to all projects. The responsibility and authority for execution of this policy was vested in each Program Director. It required a documented quality program and detailed considerations for quality planning. The policy statement also required the following:

"As a minimum, the program should provide for receiving inspection of contractor and Owner procured items. Adequate storage must be provided to prevent deterioration of procured items. Inspection plans with documented inspection reports to verify conformance to technical requirements and applicable drawings will be required. Records requirements will be defined with responsibilities assigned for review of such records. Final acceptance by the Construction Management Organization will occur after satisfactory review of inspection reports, as-built drawings, and appropriate walk-downs of the system. Random surveillance of contractor construction activities and a continuing overview of the Construction Management Organization will be performed by the Owner's Construction Department or Field Engineering Organization and Quality Assurance. The program must provide for the identification and control of items which are nonconforming in order to assure adequate disposition action by Project Engineering and correction."

Project management at the WNP-3/5 has had Ebasco develop a specification entitled "Installation Verification Program for Suppliers of Equipment and Services WPPSS Quality Class II and G" (Ebasco Specification 861W-81). This specification is being imposed on contractors by contract change. The program meets Supply System policy. While it does not specifically require inspection per se, it does require installation verification. Specifically, "Supplier shall perform, or have performed, Installation Verification and tests as specified in the contract. The supplier shall perform installation verifications

and tests of completed items and services to verify completeness, identification, calibration, adjustments, cleanliness, freedom from damage or deterioration, safe operation conditions and other characteristics as applicable in accordance with contract requirements. Defective items and services shall be placed on hold, pending completion and verification as required." The specification states under Authority and Responsibility, "Persons performing inspections, tests and other quality verification functions shall have sufficient responsibility and freedom to identify quality problems, initiate, recommend or provide solutions through authorized channels, and verify implementation of solutions." Special processes such as welding, heat treating and nondestructive testing are to be controlled and accomplished in accordance with applicable codes, standards, specifications, criteria and other special requirements as defined in the contract specifications.

c. Conclusion

While quality control inspections may have been removed in some instances, it appears it will still be required for certain items when required by applicable codes and standards. Further, there is a requirement for a quality program, including installation verification and certification. Therefore, the Region plans no further action on this item.

10. Management Meeting

The inspector met with the licensee and engineering management personnel denoted in paragraph 1 at the conclusion of the inspection on October 9, 1981. The inspector discussed the scope and findings of the inspection. The findings were acknowledged by the licensee.