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

REGION V

Report No. 50-508/79-09

Docket No. 50-508 License No. CPPR-154 Safeguards Group

Licensee: Washington Public Power Supply System

P. O. Box 468

Richland, Washington 99352

Facility Name: WNP-3

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

Investigation conducted: October 3-11, 1979

Inspectors: D. F. Kirsch 10-19-79
D. F. Kirsch, Reactor Inspector Date Signed

for O. C. Shackleton, Investigator 10-19-79
Date Signed

Date Signed

Approved By: R. T. Dodds 10-22-79
R. T. Dodds, Chief, Engineering Support Section, Date Signed
Reactor Construction and Engineering Support Branch

Summary:

Investigation during period of October 3-11, 1979 (Report No. 50-508/79-09)

Areas Investigated: An unannounced investigation was conducted of the allegation that a radiograph purported to be of a repaired weld was taken of a different weld than the original, before repair, radiograph depicted. The alleger was interviewed and supplied a signed statement. The investigation involved 9 man-hours by one NRC inspector and one NRC investigator.

Results: No items of noncompliance or deviations were identified.

RV Form 219 (7)

DETAILS

1. Individuals Contacted

   a. Washington Public Power Supply System (WPPSS)

      J. C. Lockhart, QA Manager
      R. M. Simons, Senior Project Quality Engineer

   b. Ebasco Services, Inc.

      A. M. Cutrona, Deputy QA Manager
      W. J. Lear, Level III NDE Examiner

   c. Chicago Bridge and Iron (CBI)

      J. W. Cain, Project Welding and QA Superintendent

   d. Other Personnel

      S. D. Bos, Sr., Alleger

2. Background

   On September 28, 1979, Region 5 was notified by IE:HQ that an allegation had been received by the Headquarters staff. The allegation implied that radiographs of Unit 3 containment vessel seam T20c, increment 11-12, before and after repair, were not taken of the same weld area. A regional inspector was dispatched to the site on October 3, 1979, in response to IE:HQ request, with instructions to review licensee audit report 79-116 and seal the radiographs in question.

   During a routine inspection at the WNP 3/5 site on August 27-30, 1979 the licensee notified the inspector that they had received allegations to the effect that the radiograph after repair, taken of Unit 3 containment vessel weld seam T20c, increment 11-12, did not depict the same weld as that of the original radiograph of Seam T20c, increment 11-12, which showed a slag inclusion.

   The licensee investigated the allegation and determined that the radiographs of Seam T20c, increment 11-12, both before and after repair, depicted the same weld area.

   The results of the NRC inspector's examination of that allegation during that inspection is documented in IE Inspection Report No. 50-508/79-07, paragraph 7.

3. NRC Investigation and Action

The allegation was not substantiated during this or the previous examination.

The NRC inspector examined the following documentation, radiographic film and weld:

a. CBI drawing R12, Rev. 1 showing weld seam T20c and documenting welder traceability.

b. CBI Record Drawing Table R12, sheet 31, documenting CBI welding activities on Seam T20c.

c. CBI Record Drawing Table R12, sheet 31A, documenting CBI repair welding activities on seam T20c.

d. CBI Report of Radiography for seam T20c, increments 11-12 (before repair radiograph) and 11-12 R1 (after repair radiograph).

e. License QA audit report No. 79-116 and Quality Finding Report (QFR) No. 30 of 43 (which was the only finding addressing radiography).

f. IOM QA-35-79-687 documenting licensee action to resolve QFR-30 of 43.

g. IOM QAE-79-026 documenting the results of the licensee's review of radiographs taken of seam T20c, increment 11-12, both before and after repair, in response to the allegation.

h. Radiographic film of seam T20c, increment 11-12, taken on May 1, 1979 before repair.

i. Radiographic film of seam T20c, increment 11-12, taken on May 21, 1979 after repair.

j. Radiographic film of seam T20c, increment 11-12, taken on August 24, 1979. Radiography shots had been taken of the subject area from both the inside and outside of the plate.

k. Radiographic film of seam T20c, increments 10-11 and 12-13.

l. Visual examination of seam T20c, increment 11-12.

The licensee's Audit Report No. 79-116 was examined for background information as requested by IE:HQ. The allegation was not identified by this audit. However, QFR No. 30 of 43 in the audit report identified that special process records (radiographs and microfilm) were in a vault which did not appear to have been checked for temperature

and humidity as required by licensee procedures. The Licensee stated that their alleger had been hired to sample and examine radiographs and microfilm, which were stored in the vault during the period in question, for damage, mildew and fungus. No deficiencies were identified by the licensee's sampling and examination of radiographs and microfilm.

The inspector's examination of the radiographs and weld area of seam T20c, increment 11-12, established that a surface blemish exists on the inside containment surface near weld T20c increment mark 11 which was discernable on the radiographs identified as those depicting weld T20c, increment 11-12, taken both before and after repair. Evidence of repair was also apparent on the outside containment surface of the increment in question. All radiographs were double film shots.

The inspector subsequently sealed, in the presence of licensee personnel, the documentation and radiographs identified by items b, c, d, h, i, j and k, above.

4. Interview of Alleger

The alleger was interviewed by a regional-based inspector and investigator on October 10, 1979 in Portland, Oregon. He furnished the following information:

a. He was working for a job shop, Power Engineering Corp., 15 South Grady Way, Renton, Washington 98055 on or about July 1, 1979 when his employer contracted for him to work for WPPSS at WNP-3 as a Records Analyst.

b. His job assignment at WNP-3 required that he review all documentation on the contract between WPPSS and Chicago Bridge and Iron (CBI), Contract #3420-213.

c. To the best of his recollection six or seven days prior to July 30, 1979, while reviewing documents on the CBI contracts in response to a licensee audit finding, he examined two radiographs.

d. These radiographs were of welding done on the heavy steel plates for the Unit 3 containment vessel and were designated as T20c increment 11 through 12.

e. One of the radiographs was for the original weld and designated as T20c increment 11 through 12. The other radiograph was designated as T20c increment 11 through 12 R1. The R1 meaning a radiograph of a repaired weld.

f. He placed these two radiographs on a viewer to check them for possible damage while in storage in an uncontrolled environment. When he looked at them he noticed what he thought was a deficiency. In his opinion the weld in one radiograph did not match the weld in the other radiograph. The contours of the welds in the films did not match. He stated that a Level III Technician told him no matter how the radiograph was taken the weld would look the same. His lead person saw the film and agreed with him that the films did not look like they were of the same weld. However, his lead person said he was not a qualified interpreter.

g. He reported his concerns to his supervision with a recommendation that an investigation be conducted of the weld in question to make certain the weld had been properly repaired.

h. He stated he does not consider himself an expert radiograph interpreter and could be wrong concerning the film in question. He was formerly certified as a Level II RT film reader in accordance with SNT-TC-1A and B31.1, ASME on 5/31/78 while working for another firm. He stated that the examination for this certification was done at the Peabody Laboratories in the San Francisco Bay area.

i. He did not participate in the WPPSS investigation of the questioned weld and radiographs. The investigation was done by people who performed the QC surveillance on the weld when the work was originally performed. He did not consider this proper from his experience on other job sites where the investigation would have been done by a separate group not originally involved with the work in question. (NRC Finding: The investigation was performed by the licensee's QA/QC group and complies with the QA program and 10 CFR 50, Appendix B, requirements.)

j. A few days later he was told that CBI had told the investigating team that they had taken the repair film with the source positioned on the opposite side of the weld from the side that the original shot had been taken.

k. He told his supervisor he did not think that shooting the shot from the opposite side was right. He told him that it was common practice in the trade that the film of the repair be shot from the same side as the rejected film. His supervisor asked him if this was in any of the codes or standards that CBI was working under. He told him he did not think so. (NRC Finding: The ASME B&PV code does not require that radiographs of repair welds be taken from the same side as the original, before repair, shot.)

l. The only other concern he has from his experience at WNP-3 is that the contract with CBI does not require CBI to furnish WPPSS with film of rejected welds. His experience on other construction jobs was that contractors were required to furnish the owner film of rejected welds. His supervisor told him to review the codes and standards to see if there was anything to force CBI to turn over rejected film. (NRC Finding: The ASME B&PV code doesn't require a contractor to turn over rejected film. Discussion with licensee personnel indicate that CBI does turn over to the licensee all rejected film even though this is not required.)

m. A few days later, on 7/30/79, while he was still reviewing the codes and standards, he was terminated.

n. The only radiographs he saw while working on the WPPSS project were the two described above.

o. He has no objections to his identity being used in NRC reports on this matter.

p. The alleger stated he was satisfied after being informed by the reactor inspector who conducted the NRC investigation concerning the two radiographs that the weld volume disclosed by the two radiographs appeared to be of the same weld. He said that he could not in good conscience let the question on the radiographs and the weld go by without the matter being properly resolved since it related to a safety structure.

(See Appendix A for his signed statement covering his concerns over the radiographs for the weld designated as T20c, increments 11 and 12.)

5. Exit Interview

The inspector discussed the investigation status and results with the licensee's QA Manager by telephone on October 15, 1979.