

U. S. NUCLEAR REGULATORY COMMISSION

REGION V

Report No. 50-508/85-02

Docket No. 50-508

Construction Permit No. CPPR-154

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

Facility Name: Washington Nuclear Project 3

Inspection at: WNP-3 Site, Satsop, Washington

Inspection conducted: July 15-19, 1985

Inspector:

*Talbert Young Jr. for*  
W. J. Wagner, Reactor Inspector

7-26-85

Date Signed

Approved by:

*Talbert Young Jr.*  
T. Young, Jr., Chief  
Engineering Section

7-26-85

Date Signed

Summary:

Inspection on July 15-19, 1985 (Report No. 50-508/85-03)

Areas Inspected: Special unannounced inspection by a regional based inspector of activities associated with welding of containment vessel penetrations. The inspection involved 38 inspector-hours by one NRC inspector.

Results: No violations of NRC requirements or deviations were identified.

8508150421 850729  
PDR ADOCK 05000508  
G PDR

## DETAILS

### 1. Persons Contacted

#### a. Washington Public Power Supply System (WPPSS)

\*D. R. Coody, Project Quality Assurance Manager  
\*C. E. Love, Construction Manager  
N. F. Blais, Quality Assurance Engineer  
A. G. Carlyle, Quality Assurance Engineer  
R. D. Madden, Quality Assurance Engineer

#### b. Ebasco Services, Inc. (Ebasco)

\*P. L. Pitman, Quality Program Site Manager  
\*W. K. Drinkard, Project Quality Engineer  
D. W. Cutting, Site Welding Engineer  
T. A. Letchford, Quality Control Site Supervisor

#### c. Other Personnel

\*M. E. Mills, State of Washington, EFSEC, Energy Site Specialist  
\*S. F. Swearngin, BPA, Program Analyst

\* Denotes those attending the exit interview on July 19, 1985.

### 2. Background

The licensee is in process of activating the Chicago Bridge and Iron (CB&I) contract to perform work required to close and test the Reactor Building Steel Containment Vessel. Prior to commencement of the CB&I contract on September 1, 1985 certain support work is required to be performed. This work consists of completing the containment vessel penetrations and installing isolation valves or closure assemblies. All support work is to be performed to Ebasco's procedures in accordance with the Ebasco's Quality Assurance Program. The purpose of this inspection was to assure that the welding activities associated with this support work are being performed in accordance with the ASME Code, and that the licensee's quality assurance systems are adequate for the production of sound welds.

### 3. Review of Quality Assurance Implementing Procedures

The following procedures and work instructions were examined for compliance with ASME Code and regulatory requirements:

- ° ESP-9.0153 General Welding Procedure
- ° ESP-9.0253 Control of Welding
- ° ESP-9.0353 Filler Metal Control
- ° ESP-9.0453 Welder Qualification
- ° Work Instruction No. QCI-M-1 Inspection of Piping Systems Fabrication and Installation

- ° Quality Assurance Instruction No. QAI 10-2 Site Surveillance of Design/Construction

No violations of NRC requirements or deviations were identified.

#### 4. Welding Activities

##### a. Review of Welding Procedures

The following welding procedures and the supporting procedure qualification records (PQR) were examined for compliance with ASME Section IX requirements:

- ° WP-24, Revision 20 of 7/7/83, Carbon Steel (P-1 to P-1), PQR's M-340, M-7137, M-7224 and M-7293.
- ° WP-43, Revision 19 of 4/12/85, Stainless Steel (P-8 to P-8), PQR's W43A and W43B.
- ° WP-9 (R), Revision 12 of 3/13/85, Carbon to Stainless Steel (P-1 to P-8), PQR W9C.
- ° WP-57 (R), Revision 3 of 5/10/83, Carbon to Alloy Steel (P-1 to P-3) PQR's W57C and W57D.
- ° WP-1005, Revision 1 of 4/18/85 Carbon Steel (P-1 to P-1) PQR's 1005B, 1005C and 1005D.

Four of the welding procedures are for use in applications requiring impact testing for notch toughness, and therefore are qualified using the maximum anticipated heat input to be used in production welding. The inspector performed calculations on the maximum heat input allowed by the PQR and compared this value with the maximum that could be obtained using the corresponding welding procedure. One procedure, WP-9 (R), had a heat input value of 9 percent over that allowed by the PQR. Inquires revealed that this procedure has no affect on hardware since this procedure has never been used. Also, there appears to be no application that would require use of this procedure. To prevent inadvertent use the licensee has removed WP-9(R) from the manual of approved site welding procedures.

##### b. Observation of Welding Activities

The inspector observed in process welding being performed on penetration number 4. This was Field Weld 8, a pipe to pipe weld on the main steam line. Welding was in the 5G position with uphill progression. The welding was accomplished utilizing a Weld Data Sheet (traveler) which specified the required QC hold points. The portable rod oven was energized and contained the correct filler material. The inspector did note the absence of a filler material requisition slip at the weld joint. Although there is no ASME Code or licensee procedural requirement for this, the inspector was informed that this subject was under discussion a few weeks ago. The final decision was made, by the Vice President and General

Manager Nuclear and Defense, to have these requisition slip located at the weld joint.

c. Welder Qualification

The qualification records of four welders, including the two welders involved in welding penetration number 4, were examined. The welders were properly qualified to weld under the respective welding procedures.

d. Welding Material Control

The inspector observed implementation of the QA program established for the handling and control of welding materials for compliance with ASME Code and procedural requirements. All welding materials were properly controlled; the issuance and return of welding materials, identification of acceptable material and holding ovens were in accordance with the approved procedure.

The inspector reviewed the certified material test reports for eight different heats of filler material located in the rod room. The reports provided the results of the chemical analyses and mechanical property tests as required by the applicable specification including the ferrite requirements for austenitic filler materials.

The inspection revealed that the handling and control of welding materials are in compliance with the QA program requirements. The inspector did however make the following observations:

- (1) Two of the three rod holding ovens contained more than one electrode classification. Also the holding ovens were not appropriately identified as to type of filler material being stored. The licensee has committed to correct this concern by clearly identifying the particular areas that each of the types of electrodes will occupy in a particular holding oven. The concern is the potential for mixing of electrodes and subsequent issuance of incorrect electrodes.
- (2) Not all of the rod holding ovens have temperature indicating devices utilized for continuous monitoring of the oven temperature. Although this is not a ASME Code requirement, the licensee agreed that these temperature devices would be beneficial and therefore committed to have them installed on all holding ovens.

e. Welding Inspector Qualification

The Ebasco QC welding inspectors were all qualified to the ANSI N45.2.6 requirements. The inspectors have the experience, training and knowledge in welding technology, and are certified AWS welding inspectors.

f. Quality Assurance Involvement

The purpose of this portion of the inspection was to determine the licensee's involvement in overseeing the welding activities being performed. To accomplish this the inspector reviewed implementation of the surveillance requirements of the QA programs of the Supply System and Ebasco respectively. This review revealed that the Supply System was not following their surveillance schedule of the on-going construction activities for the months of May and June 1985. However this finding was identified during a recent supply system corporate audit. Since the corporate audit, two QA Engineers have been added to the Supply System QA staff, and two surveillances have been performed, one scheduled and one unscheduled. Due to management awareness of this problem and the resulting increase in the QA staff it appears that the scheduled QA surveillance will be performed as required.

The Ebasco QA staff, rather than relying on a surveillance schedule that is dependent upon unpredictable production schedules is performing in process unannounced inspections. In this system the Ebasco QA supervisor is kept aware of all ongoing production activities, and consequently, directs inspections to be performed when that activity, such as fit-up and in process welding, is being performed. Since June 26, 1985, 14 of these unannounced in process inspections have been performed.

No violations of NRC requirements or deviations were identified.

5. Exit Meeting

The inspector met with licensee management representatives denoted in paragraph 1 on July 19, 1985. The scope of the inspections and the inspector's findings as noted in this report were discussed.