### U. S. NUCLEAR REGULATORY COMMISSION

#### REGION III

Reports No. 50/456-84-08(DPRP); 50/457-84-08(DPRP)

Docket Nos. 50-456/ 50-457

Licenses No. CPPR-132; CPPR-133

Licensee: Commonwealth Edison Company Post Office Box 767 Chicago, Il 60690

Facility Name: Braidwood Nuclear Power Station, Units 1 and 2

Inspection Conducted: April 1 through April 30, 1984

Inspectors: L. G. McGregor

R. Schulz

Approved By:

W. Forney, Chief Projects Section 1B

Inspection Summary

Inspection April 1 through April 30, 1984 (Reports No. 50-456/84-08(DPRP); 50-457/84-08(DPRP)

<u>Areas Inspected</u>: Routine, unannounced safety inspection to review preoperational testing, plant tours of general work activity including fire, safety and implementation of housekeeping requirements, review of structual steel installation inspection program, review of cable tray installation, inspection of safety related welding records and review of material purchasing records. The inspection consisted of 294 inspector hours onsite by two NRC inspectors including 43 inspection hours onsite during off shifts.

<u>Results</u>: Of the six areas inspected, no item of noncompliance or deviations were identified in five areas, two items of noncompliance were identified for failing to perform required fit-up inspection and failure to take corrective action with regard to welding inspections (paragraph 3.a).

# DETAILS

#### 1. Persons Contacted

### Commonwealth Edison Company (CECo)

- \*M. Wallace, Project Manager
- \*R. Cosaro, Construction Superintendent
- \*C. Schroeder, Licensing and Compliance Superintendent
- \*T. Quaka, Quality Control Supervisor
- \*L. Tapella, Engineer
- G. Groth, Lead Mechanical Engineer
- B. Tanouyi, Engineer
- S. Reutcke, Quality Assurance Engineer
- R. Tate, Quality Assurance Engineer
- \*S. Hunsader, Quality Assurance Supervisor
- G. Fitzpatrick, Assistant Manager Quality Assurance Corporate
- M. Curinka, Engineer
- \*R. C. Lemke, Technical Staff Supervisor
- \*C. J. Tomashek, Startup Superintendent \*E. R. Wendorf, Project Field Engineering Mechanical Supervisor
- \*R. Wrucke, Licensing Engineer
- \*D. L. Shamblin, Project Field Engineering Manager

Phillips Getschow Company (PGCo)

- T. G. O'Connor, Site Manager
- K. J. Hamilton, Consultant
- J. Carlson, Quality Control Supervisor
- L. J. Butler, Assistant Quality Control Supervisor
- M. Galloway, Assistant Project Engineer

G. K. Newberg Company

J. J. Hairston, Quality Assurance Manager

L. K. Comstock and Company, Inc. (LKC)

- R. E. Marino, Quality Assurance Manager Corpo ate
- L. G. Seese, Assistant Quality Control Manager Site
- J. A. Hii, Project Engineer
- R. Brown, Lead Inspector Mechanical
- D. Holley, Quality Control Inspector

# Pittsburgh Testing Laboratory (PTL)

- F. Forest, Site Manager
- T. Frazier, Assistant Site Manager

\*Denotes those personnel attending the exit interview.

## 2. Plant Tours

The inspectors observed work activities in progress, completed work and plant status in numerous areas during general inspections of the plant. Activities witnessed included transfer and rigging of pipe spools, end prepping of pipe, pipe installation, structual support welding, anchor bolt installation, cable tray support installation, and housekeeping. Craft personnel, supervision, and quality inspection personnel were interviewed as such personnel were available in the work areas. The inspectors noted that many cable trays are extremely dirty and will require a significant amount of effort to bring them to the required cleanliness levels, prior to final cable tray acceptance. Also the protection of installed cables, located beneath in-process welding activities, requires additional attention. During one of the tours it was noted that some pipe, that had not been permanently supported, was being used to support scaffolding. The inspectors brought this concern to the attention of the PGCo Site Manager, who immediately corrected the situation by removing the scaffolding.

No items of noncompliance or deviations were identified.

## 3. Structual Steel

The inspector reviewed Napolean Steel Contractors, Inc. (NSCI) structual steel erection and inspection program. Napolean was awarded the structual steel erection contract on March 28, 1979 for Containment No. 1 and No. 2.

Documents reviewed included:

- . Napolean Procedure #5, Welding, Revision 6
- . Napolean Procedure #6, Erection of Structual Steel, Revision 1
- . AISC Specification For Structual Joints Using ASTM A325 or A490
- Bolts, dated 1976
- . AISC Manual of Steel Construction
- Sargent and Lundy Specification, F/L-2735, Structual Steel 11-25-77
- . AWS D1.1, Structual Welding Code, 1975
- a. Welding/NDE

In-process welding inspections were done by Napolean quality control inspectors while Pittsburgh Testing Laboratory quality control inspectors performed the final welding inspection and subsequent nondestructive examinations. In-process welding inspections were required to be done every three months on a random selection of welders. Napolean employed approximately two to twelve welders during their structual steel erection work, which is now completed, and utilized seven welding procedures consisting of four groove weld procedures and three fillet weld procedures. The in-process inspection records were checked, by the NRC inspector, for the period April 1979 through April 1981 and in-process inspections were performed every three months on an appropriate number of welders, with the exception of the period that Braidwood construction activities ceased, from September 1979 through March 1980. The following attributes were checked:

- . welding current
- . proper procedure
- . electrode condition
- . welds properly stamped
- . correct current and voltage of welding machine

Napolean Quality control personnel did not perform fit-up checks as the Napolean Quality Assurance Program for welding in-process inspections did not require fit-up verifications. This is in violation of 10 CFR 50, Appendix B, Criterion IX and AWS D1.1, Section 6, Inspection (456/84-08-01; 457/84-08-01).

Commonwealth Edison Audit No. QA-20-80-22, performed on 5/30/80 and 7/10/80 for Napolean construction activities, was reviewed and the auditor reported a finding concerning the lack of depth of in-process inspections. The audit report stated:

"In process inspections of welding activities conducted by NSCI have not been performed in sufficient depth to adequately assure that welding is being performed according to procedures."

"Although in-process welding inspections are being performed on welding activities in the areas of electrode condition, welding machine condition, stamping, and proper current levels, no documented in-process inspection is performed on the actual welding process itself for such items as pre-heat, interpass temperature, position, weld bead layering and interpass grinding or cleaning. This type of surveillance is very important for multi pass welds where a defect could conceivably be buried deep within the weld."

The QC Manager for Napolean responded on July 22, 1980 as follows:

"To clarify the documentation of NSCI in process welding inspection, the welding detail, weld number, and activities monitored such as the cleaning, grinding, layering etc, will be noted in the remarks section on future NS-10 reports."

NS-10 reports were the inspection reports documenting the three month in-process inspections. The response was accepted by the Commonwealth Edison QA Supervisor on October 8, 1980. The acceptance of this response failed to consider corrective action for past work with regard to multi-pass welds where a defect, caused by improper welder workmanship or technique, could conceivably be buried deep within the weld. AWS D1.1, Section 4, Technique, addresses proper preheat, interpass temperature, layering, progression and position. AWS D1.1 Section 3, Workmanship, addresses in-process cleaning. AWS D1.1, Section 6, Inspection, requires the inspector to examine the work to the requirements of Section 3 and Section 4. Failure to take corrective action with regard to past welding inspection activities, which are found to be inadequate, is in violation of 10 CFR 50, Appendix B, Criterion XV (456/84-08-02, 457/84-08-02).

Subsequently, the inspector reviewed numerous Pittsburgh Testing Laboratory (PTL) final welding inspection reports and nondestructive examination reports, including a review of the PTL inspection request logs and weld details. From this review the inspector identified the following issues, and requested the licensee to investigate each issue in detail for resolution and possible corrective action:

(1) Some of the visual weld inspections performed by PTL were performed after the weld joints were painted. An example of this inspection method after painting is documented on PTL inspection report #709VW. The visual weld inspections were for Unit 2 Containment and identified on #709VW as follows:

| Drawing No. | Weld No. | Weld Type | Size  |
|-------------|----------|-----------|-------|
| E209        | 1344A    | Fillet    | 3/16" |
| E209        | 1344B    | Fillet    | 3/16" |
| E201        | 1585E    | Fillet    | 3/8"  |
| E201        | 1585F    | Fillet    | 1/4"  |

The report stated "Inspected through paint per Commonwealth Edison QA".

- (2) It appeared that when a weld was nondestructively examined, such as a full penetration weld, the final visual weld inspection was waived. Final visual weld inspection is required by AWS D1.1, Section 6.
- (3) There did not appear to be a quality documentation system established, assuring that all the structual steel welds which Napolean completed, had all the required examinations performed, such as visual, magnetic particle, ultrasonic, or radiograph as applicable for each weld. For example, although weld No. 1052, had a Ultrasonic Test Report #206, PTL was not able to locate a final visual report or magnetic particle report. This full penetration weld was located in Unit 2 Containment and identified on drawing E203.

Pending licensee evaluation and possible corrective action and subsequently supplying the appropriate information to the NRC for review, these three issues will remain unresolved (456/84-08-03; 457/84-08-03).

Napolean Procedure #5, Welding, stated that all welding performed by Napolean was deemed prequalified joints and exempt from tests or qualification. The inspector has requested the licensee to address whether <u>all</u> joints completed by Napolean are considered prequalified. Normally, considering the scope of Napolean's work, approximately five percent of the joints would not be prequalified and therefore would be subject to qualification. Review by the licensee needs to include a review of all the Sargent and Lundy weld details within the scope of Napolean's contract. This issue will remain open pending licensee review (456/84-08-04; 457/84-08-04).

## b. High Strength Bolting

The inspector determined through visual inspections and documentation reviews that each day Pittsburgh Testing Laboratory tested three bolts in a tension device and determined a torquetension relationship for each bolt diameter as stipulated in Sargent and Lundy Specification, F/L-2735, Structual Steel. Based on the torque-tension relationship, ten percent of the installed high strength bolts, but never less than two, were tested to the derived torque value with a calibrated torque wrench as required by AISC Specification For Structual Joints Using ASTM A325 or A490 Bolts. If any of the bolts tested failed, all the bolts in the connection were re-torqued.

Pittsburgh Testing Laboratory inspection reports for the following beam and column connections were reviewed:

| Connection     | No. of<br>Bolts-Size | Inspection<br>Torque,<br>Ft-lbs | Bolt<br>Specification | Report<br>No. |
|----------------|----------------------|---------------------------------|-----------------------|---------------|
| 246B3, 212R29* | 24-1 1/8"            | 1150                            | ASTM A490             | SB-283        |
| 242B1, embed   | 6-1 1/8"             | 1150                            | ASTM A490             | SB-283        |
| 247B4, 210R31* | 24-1 1/8"            | 1150                            | ASTM A490             | SB-283        |
| 267B2, R31*    | 3-1 1/8"             | 850                             | ASTM A490             | SB-281        |
| 237B1, 211R30* | 6 7/8"               | 360                             | ASTM A325             | SB-283R1      |
| 185B2, A159B1  | 9 7/8"               | 360                             | ASTM A325             | SB-245        |
| 158B1, 159B1   | 16 7/8"              | 360                             | ASTM A325             | SB-245        |
| 157B1, A171R17 | 16 7/8"              | 360                             | ASTM A325             | SB-245        |
| 188B2, 188B3   | 9 7/8"               | 360                             | ASTM A325             | SB-264        |
| 183B2, 199R5   | 15 7/8"              | 360                             | ASTM A325             | SB-249        |
| A182B2, 197B1  | 14 7/8"              | 360                             | ASTM A325             | SB-249        |
| 257B1, 279R30  | 9 7/8"               | 360                             | ASTM A325             | SB-281        |

| 9 7/8"  | 360  | ASTM A325  | SB-283   |
|---------|--|--|--|
| 6 7/8"  | 360  | ASTM A325  | SB-281   |
| 9 7/8"  | 360  | ASTM A325  | SB-283   |
| 9 7/8"  | 360  | ASTM A325  | SE-285   |
| 44 7/8" | 360  | ASTM A325  | SB-298   |
| 6 7/8"  | 360  | ASTM A325  | SB-270   |
| 66 7/8" | 360  | ASTM A325  | SB-298   |
| 6 7/8"  | 360  | ASTM A325  | SB-272   |
| 44-7/8" | 360  | ASTM A325  | SB-298   |
| 6-7/8"  | 360  | ASTM A325  | SB-272   |
| 6-7/8"  | 360  | ASTM A325  | SB-281   |
| 44-7/8" | 360  | ASTM A325  | SB-283   |
| 66-7/8" | 360  | ASTM A325  | SB-285   |
| 6-7/8"  | 360  | ASTM A325  | SB-285   |
| 6-7/8"  | 360  | ASTM A325  | SB-283R1   |
| 9-7/8"  | 360  | ASTM A325  | SB-281   |
|         | 6 7/8"<br>9 7/8"<br>9 7/8"<br>44 7/8"<br>6 7/8"<br>66 7/8"<br>66 7/8"<br>44-7/8"<br>6-7/8"<br>6-7/8"<br>44-7/8"<br>66-7/8"<br>6-7/8"<br>6-7/8" | 6 7/8" 360   9 7/8" 360   9 7/8" 360   44 7/8" 360   6 7/8" 360   66 7/8" 360   66 7/8" 360   67/8" 360   67/8" 360   6-7/8" 360   6-7/8" 360   6-7/8" 360   6-7/8" 360   6-7/8" 360   6-7/8" 360   6-7/8" 360 | 67/8"360ASTM A32597/8"360ASTM A32597/8"360ASTM A325447/8"360ASTM A325647/8"360ASTM A325667/8"360ASTM A325667/8"360ASTM A32567/8"360ASTM A32567/8"360ASTM A3256-7/8"360ASTM A3256-7/8"360ASTM A3256-7/8"360ASTM A32566-7/8"360ASTM A3256-7/8"360ASTM A3256-7/8"360ASTM A3256-7/8"360ASTM A3256-7/8"360ASTM A3256-7/8"360ASTM A3256-7/8"360ASTM A3256-7/8"360ASTM A3256-7/8"360ASTM A3256-7/8"360ASTM A325 |

\*The connections with an asterisk were re-torque tested and examined by the NRC inspector for correct marking of bolts, minimum edge distance, and correct number cf washers.

All of the ASTM A325 bolts were installed correctly and passed the additional NRC requested torque test, with the exception of connection 211R30, 237B1, which is a column to beam connection in Unit 2, Reactor Containment. All six bolts were torque tested and witnessed by the NRC with the following results:

2 bolts - 50 Ft.-lbs. 1 bolt - 100 Ft.-lbs. 2 bolts - 175 Ft.-lbs. 1 bolt - 275 Ft.-lbs.

These figures are considerably below the 360 Ft.-lb. installation inspection torque. It appears these bolts had been removed and replaced, but not re-torque tested. The inspector has requested the licensee to determine if these torque values are acceptable for this type of connection. Pending licensee review and possible corrective action the acceptability of this connection will remain unresolved (456/84-08-05; 457/84-08-05).

All of the ASTM A490 bolts were acceptable with regard to number of washers, correct marking, and minimum edge distance. Identified below are the results of the NRC witnessed additional beam to column torque test:

| Connection           | No. of<br>Bolts<br>Torque<br><u>Tested</u>   | Bolts In<br>Connection | Original<br>Inspection<br>Torque<br>Ftlbs. | Date of<br>Original<br>Inspection |
|----------------------|--|------------------------|--|-----------------------------------|
| (1<br>(5<br>(2<br>(3 | 14<br>(Results)<br>- 300 Ft-1bs<br>- 400 Ft-1bs<br>- 600 Ft-1bs<br>- 800 Ft-1bs<br>- 900 Ft-1bs<br>- 1050 Ft-1bs | )<br>)<br>)            | 1150                                       | 1-15-81                           |
| (3                   | 11<br>(Results)<br>- 500 Ft-lbs<br>- 700 Ft-lbs<br>- 1050 Ft-lbs   | )                      | 1150                                       | 1-15-81                           |
| (2                   | 3<br>(Results)<br>- 550 Ft-1bs<br>- 900 Ft-1bs<br>- 1050 Ft-1bs  | )                      | 850  | 11-18-80                          |

\*The bolts with an asterisk did not turn at 1050 Ft.-lbs., therefore they were torqued to a value higher than 1050 Ft.-lbs. The other bolts turned at the value reported. A calibrated torque wrench was used for the testing. All the connections were located in Unit 2, Reactor Containment.

Baced on the ASTM A490 torque test results the inspector has requested the licensee to address the following three questions:

- (1) What relaxations (Ft.-lbs.), over time, are anticipated for ASTM A490 bolts, considering size of bolts and type of connections?
- (2) Are these ASTM A490 Connections, tested and witnessed by the NRC, acceptable or do they require bolt replacement?
- (3) Since the low torque values recorded only represent a sample, what generic implications, if any, need to be considered; and is the testing of only 10% of the bolts but never less than two, adequate to assure acceptable installations?

Pending licensee review and evaluation, and NRC review based on licensee submitted information, the ASTM A490 high strength bolt installations will remain unresolved (456/84-08-06; 457/84-08-06).

## 4. Cable Tray Support Welding

The following documents were initially reviewed:

- . Sargent and Lundy Specification, F/L-2790, Electrical Installation Work, Amendment 30, 7-14-83.
- L. K. Comstock Procedure 4.8.3, Weld Inspection, 12/28/83.
- L. K. Comstock Procedure 4.3.3, E7018, Welding Procedure For Structual Attachments, 12/3/83.
- . L. K. Comstock Procedure 4.3.3.1, E6013, Welding Procedure For Structual Attachments, 4/05/84.
- . AWS D1.1, 1975

After reviewing the above documents and interviewing craft personnel and L. K. Comstock quality control inspectors, the NRC inspector learned that the correct welding detail is selected and documented by craft personnel, (and not stipulated by engineering personnel prior to commencement of welding), on the traveler package or as referred to by L. K. Comstock, the "Welding Installation Record".

Obtaining the correct detail involves examining the hanger list and subsequently reviewing various cross reference tables. Numerous welding details exist, with only slight variations for some of the details. Placing this responsibility on craft personnel, rather than on engineering personnel, can only be justified if all craft personnel are thoroughly familiar with all the welding details and therefore, only the correct welding details are selected.

The inspector selected six cable tray supports, located in the auxillary building, Unit 2, and examined the field welded details and associated hardware. On two of the six supports, craft personnel recorded an incorrect welding detail. The supports selected are identified below:

#### Acceptable Supports

| Cable Tray Support | Welding Details Recorded | Correct Welding Details |
|--------------------|--------------------------|-------------------------|
| H110-13H           | Yes                      | Yes                     |
| H-115-A/S          | Yes                      | Yes                     |
| H534-A/S           | Yes                      | Yes                     |
| H106-A/S           | Yes                      | Yes                     |

Deficient Supports

For cable tray support H96-4H, craft personnel recorded a welding detail of DV-89 on the "Welding Installation Record", while the actual field welded detail (as installed) for connection #1, STD-EB-116.4 was DV-90-B-2. In addition, after checking the hanger and cross reference tables the inspector learned that connection #1 was stipulated as a DV-58 detail. For connection #2, STD-EB-116.4, the actual field welded detail (as installed) was DV-1, but craft personnel recorded the detail on the "Welding Installation Record" as DV-2. The connection was stipulated as a DV-1 detail per the hanger and cross-reference tables.

For cable tray support H105-13H, craft personnel recorded a welding detail of DV-89 on the "Welding Installation Record", while the actual field welded detail (as installed) for connection #1, STD-EB-116.13, was DV-90 alternate. This connection was correct, as installed, per the hanger and cross-reference tables.

Since December 1983 craft personnel have been selecting and recording the welding detail on the "Welding Installation Record." Cable tray support H96-44 had a "Welding Installation Record" dated 1/26/84. Cable tray support H105-13H had a "Welding Installation Record" dated 2/3/84. Therefore, due to the NRC sample inspection identifying the previously mentioned deficiencies, the inspector has requested the licensee to take the following corrective action:

- a. Examine all field welded electrical supports installed since December 3, 1983 for the purpose of determining the accuracy of the documentation and the acceptability of the actual field welded detail.
- b. Transfer the responsibility and task of correct welding detail selection to engineering personnel prior to commencement of welding, instead of the present welding detail selection by craft personnel.

or

Propose an alternative to (1) and (2) that will assure correct installations and accurate documentation.

Pending licensee review, evaluation, and corrective action, the issue of correct electrical support details and accurate documentation will remain an unresolved item (456/84-08-07; 457/84-08-07).

5. Preoperational Test Performance

The inspector witnessed the performance of portions of test procedure AP-13 Auxiliary Power 480 volt unit substations and above (ESF),

section 9.1. The trist included briefings, installation of calibrated test equipment, observations of precautions, documentation of results.

No apparent items of noncompliance were observed.

#### 6. Records Review

During a review of plant certified material test reports and product specification sheets, it was noted by the inspector that ASME piping components and material was being ordered under the requirements of ASME Section III, Division 1, Class 1, 1980 edition including Summer of 1980 addenda. In the Final Safety Analysis Report (FSAR), the licensee has established, per ASME Code requirement, the Code Edition and Addenda to be included in the Design Specifications. The licensee's QA Manual (Section 17 of the FSAR) and the Design Specifications have committed to the construction of the Braidwood Nuclear Power Plant to ASME Section III, Division 1, Class 1, 1974 edition including Summer 1975 addenda. The use of differing code editions becomes compounded by the following statement which is part of the product specification sheet for material purchasing. "The code dates and addendas specified herein have been accepted in lieu of the former requirements of the Summer of 1975 edition by the enforcement authorities having jurisdiction at the Braidwood Nuclear Power Station Site."

The Code definition for Enforcement Authority; denotes a regional or local governing body, such as a State of Municipality of the United States or Canadian Province, empowered to enact and enforce boiler code legislation. The Regulatory authority denotes a Federal Government Agency, such as the United States Nuclear Regulatory Commission, empowered to issue and enforce regulations concerning the design, construction and operation of nuclear power plants.

The failure to follow FSAR commitments with regard to ASME Code requirements and the position of the Division of Project Management, Office of Nuclear Reactor Regulation has been stated in a reply letter to Boyce H. Grier, Director, Division of Reactor Inspection Programs and the appropriate section follows:

"It is our position that selective (partial) substitution of construction requirement from later code editions or addenda to a given component should not be permitted without appropriate justification and evaluation which demonstrates that any additional requirements or restrictions associated with the use of the later requirements are also satisfied. This is especially true when the use of a part from a later code edition results in relaxation of the original construction requirements. The applicant's justification should also describe the reason for such substitution and evaluate any effects on the component or system integrity." The Braidwood FSAR does not contain sufficient information to permit an evaluation, an amendment or reference to applicable ASME Code Cases number N242-1. Materials Certification Section III, Division 1, Class 1, 2, 3, MC and CS Construction, approved by Council April 10, 1980. The Commission has found this Code Case acceptable subject to those conditions specified in the Code Case and with the following condition, that the "applicant should identify in their Safety Analysis Report the components and supports for which the Code Case is being applied and should specify the respective paragraphs of the Code Case".

The resident inspector has contacted the Director of Boiler Safety, a Division of the State of Illinois Fire Marshal, requesting confirmation of correspondence or other forms of communication the licensee has submitted with regard to the use of the 1980 ASME Boiler and Pressure Vessel Code or the adoption of ASME Boiler and Pressure Vessel Code Case N-242-1. The Chief State Inspector and his staff reported the Licensee has had no contact with the State enforcement authority with regard to the above mentioned ASME Code change. The Office of Nuclear Regulatory Commission, (regulatory authority) and the Illinois Department of Nuclear Safety were also contacted with the same negative response as supplied by the Director of the Illinois Boiler Safety division.

The licensees statement accepting the 1980 ASME Code in lieu of the 1974 Summer 1975 edition on product specification for material purchasing, the ASME Materials Certification Code Case with the Nuclear Regulatory Commission requirements, the requirement of 10 CFR 50.30, "Filing of applications for Licenses" which states in part: "each applicant for a license, including where appropriate, a construction permit, or amendment therefore, and each amendment of such application, and correspondence, reports or other written communication from the applicant...should be filed with the Director of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission and the requirements of 10 CFR 50.55(a) "Codes and Standards" paragraph a, b and d are obligations which the licensee has not addressed formally or informally to the NRC. The licensees statement accepting the 1980 ASME Boiler and Pressure Vessel Code in lieu of the 1974 Summer 1975 edition, which is a portion of the material purchasing specification, is also contrary to the above requirements.

This item is considered an open item (456/84-08-08; 457/81-08-08) pending the licensee demonstration of supportive documentation which requested the acceptance of the 1980 ASME Boiler and Pressure Vessel Code for the purchasing of safety related piping and components.

## 7. Welding Records Review

The inspector reviewed welding records, associated with the feedwater and component cooling water systems for unit one and two. The field fabrication process and data sheet was examined for completion by various craft individual, quality control and appropriate review personnel. Weld rod issue slips assigned to each field weld were also examined for conformity with rod issue procedures. This review disclosed discrepancies between the dates when craft personnel accomplished their assigned tasks and when the hold points monitoring these installation tasks were signed by quality control personnel. The following examples were noted.

| Weld | <u>No. C</u>       | QC<br>Pre-Weld<br>leanliness | QC<br>Pipe<br><u>Alignment</u>  | QC<br>Root Weld<br>Installed | Weld Rod<br>Issued   |
|------|--------------------|------------------------------|---|------------------------------|----------------------|
|      |                    |                              | 1/9/84<br>completed by welder M   |                              |                      |
|      |                    |                              | 11/30/83<br>completed on 1/24/84)                                       |                              | 1/24/84              |
| CC 1 | FW23<br>(The root  | 9/26/77<br>weld was          | 9/26/77<br>completed by Welder M  | 9/26/77<br>No. 124 on 9/     | 9/23/77<br>(23/77)   |
| CC 1 |                    |                              | 7/10/78<br>completed on 7/7/78)   |                              | 7/7/78               |
|      |                    |                              | 12/27/78<br>completed on 12/21/78                                       |                              | 12/21/78             |
| CC 1 | FW13A<br>(The root | 4/8/82<br>weld was           | 4/9/82<br>completed on 4/8/82)  | 5/18/82                      | 4/8/82               |
|      |                    |                              | 6/26/78<br>completed between 6/2  |                              |                      |
| FW25 | - FW6              | 12/14/82                     | 12/20/82  | 12/14/82                     | 12/14/82             |
| FW13 | - FW7              | 4/14/83,                     | or signatures on form<br>QC hold points assign<br>plished between 6/25/ | ned on 4/20/8                | 33 and welding       |
|      |                    |                              | 8/31/81<br>completed on 8/31/81)  |                              | 8/31/81              |
| CC 1 |                    |                              | 11/29/78<br>completed on 11/28/78                                       |                              | 11/28/78             |
| FW15 | - FW9<br>(The root | 10/13/81<br>weld was         | (18/27/81?)<br>completed between 10/                                    | 2/22/82<br>/31/81 and 10     | 10/13/81<br>)/26/81) |
| This | is conside         | ered an un                   | resolved item (456/84   | 4-08-09; 457/                | /84-08-09)           |

pending licensee demonstration of Quality Assurance Records, and

appropriate evidence of proper weld inspections which comply with FSAR requirements and ASME Boiler and Pressure Vessel Code requirements.

No items of noncompliance were identified.

## 8. Unresolved Items

Unresolved items are matters about which information is required in order to ascertain whether they are acceptable items, items of noncompliance, or deviations. Unresolved items disclosed during this inspection are discussed in Paragraphs 3, 4, 6, and 7.

# 9. Exit Interview

The inspector met with licensee representatives (denoted under Persons Contacted) during and at the conclusion of the inspection on December 16, 1983. The inspector summarized the scope and findings of the inspection. The licensee acknowledged the information.

| NAME OF FACILITY   | Bedwood Ruth  | DATE MAILED  |
|--|---|--|
| 7  | EPRODUCED<br>RRENCES W/REPORT<br>CURRENCES W/REPORT |  |
|  | RRENCES W/RESPONSE FROM LIC                         | 승규가 이번 것이 같아요. 그 같이 집에 가지 않는 것 같아. 것 같아. 것 같아. 것 같아.   |
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