

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

REGION III

Report No. 50-329/78-05; 50-330/78-05

Docket No. 50-329; 50-330

License No. CPPR-81; CPPR-82

Licensee: Consumers Power Company
1945 West Parnall Road
Jackson, MI 49201

Facility Name: Midland Nuclear Power Plant, Units 1 and 2

Inspection At: Midland Site, Midland, Michigan

Inspection Conducted: May 17-19, 1978

Inspectors:

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7/7/78

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Approved By:

D. W. Hayes
D. W. Hayes, Chief
Projects Section

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Inspection Summary

Inspection on May 17-19, 1978 (Report No. 50-329/78-05; 50-330/78-05)

Areas Inspected: Procedure review and observations of work for safety related piping welding, reactor pressure vessel installation, containment penetrations, and storage of safety related components; record review for safety related tubing and piping, and for penetrations; followup review of previous unresolved and noncompliance matters. The inspection involved a total of 86 inspector-hours onsite by four NRC inspectors.

Results: Of the seven areas inspected, two items of noncompliance were identified in two areas (Infractions; failure to control weld rod materials and inadequate protection of materials during handling and storage). Section III, Paragraph 5.b and Section IV Paragraph 1.b)

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DETAILS

Persons Contacted

Principle Licensee Employees

- *W. R. Bird, Section Head Quality Assurance Engineering
- *T. C. Cooke, Project Superintendent
- *J. L. Corley, Section Head Inspection, Evaluation and Test Verification
- *D. B. Miller, Jr., Site Manager
- *B. H. Peck, Construction Supervisor
- D. R. Keating, Quality Assurance Engineer
- R. Ostrowski, NDT Specialist

Other Personnel

- *W. L. Barclay, Project Field Quality Control Engineer, Bechtel
- *J. L. Hurley, Resident Assistant Project Engineer, Bechtel
- *J. F. Newgen, Project Superintendent, Bechtel
- *W. H. Nielson, Assistant Project Field Engineer, Bechtel
- *G. L. Richardson, Lead Quality Assurance Engineer, Bechtel
- *V. N. Asgaonkar, Project Manager, B&W Construction Company
- *R. W. Shope, Quality Control Supervisor B&W Construction Company
- T. Davis, Welding Technician B&W Construction Company

*Denotes those present at the exit interview.

Other Consumers Power Company (CPCo) and Bechtel personnel were contacted during the course of the inspection.

Licensee Action on Previous Inspection Findings

(Closed) Unresolved Matter (IE Rpt No. 50-329/73-04, No. 50-330/73-04)
The licensee representative committed to a follow up review of B&W's RT film interpreters qualifications. During this inspection, the NRC inspector reviewed a licensee audit report of B&W dated March 4-7, 1975 where it was established that a review of qualifications of RT film interpreters established qualifications with the B&W procedures generally compliant with SNT-TC-1A.

(Open) Unresolved Matter (IE Rpt. No. 50-329/73-04, No. 50-330/73-04 and IE Rpt. No. 50-329/76-01, No. 50-330/76-01) regarding Section 50.55(a) of 10 CFR Part 50 code requirements. The following information was reviewed by the inspector.

1. The CPCo position remains as stated in IE Rpt. No. 50-329/76-01, No. 50-330/76-01 Paragraph 9 that the 50.55a Subparagraph (j) is applicable since a construction permit variance was issued on July 30, 1970 and a notice of hearing was issued on October 27, 1970 which proceeded the stipulated December 31, 1970 cut off date for Subparagraph (j). That being the case then, for piping, the 50.55a(d)(1) provisions apply which are that the codes in effect on the purchase order date (June 7, 1968) shall apply.
2. Review of the B&W specification for reactor coolant piping No. 08-1037000012 established that Paragraph 10.2 requires, in lieu of the referenced 2.2.1 of Appendix A requirement (ANSI B31.7 1968 draft standard), that piping materials will be drop weight tested, for material 5/8" thick and greater, or charpy impact tested, for material 1/8" thick and greater not drop weight tested. It additionally required that the test temperature at which successful testing was achieved should be reported to the licensee if different than the temperature limits specified.
3. A review of B&W Data packages for piping components was conducted for the 28" ID inlet reactor coolant pipe spool MK A57-2012-50-2. It could not be determined that the tests had been done nor what the test temperature was.

This item remains open to determine the results of tests.

(Closed) Unresolved Matter (IE Rpt. No. 50-329/76-04, No. 50-330/76-04) Bechtel Management Corrective Action Report (MCAR) No. 12 remains in an open status. MCAR No. 12 was originally issued to identify rebar deficiencies, to determine the causes for those deficiencies, and to provide corrective action. A Bechtel letter dated May 21, 1977 outlined the management action that had been taken to eliminate the deficiencies and the inherent generic problems. Those actions completed included:

- Training Sessions for Field Engineers, Quality Control and Supervision
- Procedure Changes for Project Special Provisions and for Field Instructions
- Revised Inspection Methods
- Reinspection of the Areas for Missing (omitted) Rebar

MCAR No. 12 was closed on June 12, 1977 by the Project Quality Assurance Engineer.

(Closed) Unresolved Matter (IE Rpt. No. 50-329/76-08, No. 50-330/76-08) Paragraph 2.f of that report details indicated an open item regarding possible abuse of Field Inspection Manual (FIM) supplementary procedures. The licensee recognized that at that time the incorporation of the Project Special Provisions (PSP), to replace the FIMs, had not been completed and that some FIM procedures were still in use. The licensee representative felt that the continued use of FIM's until the replacing PSP procedures were in place was no abuse of the procedures but rather assured a continuing control of activities through the transition phase. Ten procedures, G-1.1 through G-10.1 were completed and became effective during a period of October 11, 1976 through February 17, 1978. All planned procedures are now in place and in use with the QA review completion signed off by the Project QA Engineer on January 25, 1978. This item is considered resolved.

(Closed) Noncompliance (IE Rpt. No. 50-329/77-09, and No. 50-330/77-12) Failure to qualify Nelson Stud Welding Procedure. Nelson Stud Welding qualification records were available, additional inspection criteria was incorporated, documentation indicates the qualified craft persons, and Bechtel Audit 18-6 Special No. 2 documents verification of the Nelson Studs installation.

(Closed) Noncompliance (IE Rpt. No. 50-329/77-09, and No. 50-330/77-12) Inadequate welding inspection criteria. Specific acceptance criteria has now been provided to adequately inspect welds.

(Closed) Unresolved Item (IE Rpt. No. 50-329/77-13-03, and No. 50-330/77-15-03) It was reported in the above inspection reports that the UT procedure used by NDT Services, Inc., Plymouth, Michigan for evaluating embedment No. 1-11B(L)-r/B1 fabricated by Willste and Company. During the current inspection, the inspector reviewed the NDT Services UT procedure and determined that a Distance Amplitude Curve was not required and instead the gain control is set so that the response is 75 percent of the full screen height prior to commencing the examination.

(Closed) Unresolved Item (IE Rpt. No. 50-329/78-03-04, and No. 50-330/78-03-04) It was previously reported that inadequate documentation was available on the stiffener plates which were welded to the core flooding tank steel beam supports. During the current inspection, the licensee informed the inspector that the ASTM A-36 stiffener plates were procured on a general purchase order which did not require traceability. The licensee's answer appears to be acceptable.

1. Reportable Deficiencies (50.55(e))

During the inspection, the status of the following reported deficiencies was discussed with the licensee.

- a. The licensee stated that the analyses for seismic supports, for the containment spray system piping located in the containment dome, are still in progress. These analyses are expected to be completed about mid-June 1978.
- b. The licensee has been informed by Babcock and Wilcox Company (B&W) that a potential design deficiency may exist in the "grounding" of Nuclear Instrumentation/Reactor Protection System (NI/RPS) instrumentation. This deficiency may allow a loss-of-ground condition to exist without the loss of ground being detected. The licensee is presently engaged in developing and evaluating test procedures to establish the instrument ground condition for the NI/RPS.
- c. The decay heat removal pump casing radiographic and subsequent repairs, where applicable by B&W Canada, Ltd., is being monitored by the licensee. At present, the "A" and "D" decay heat removal pumps are scheduled for shipment to the site late in May 1978. The "B" decay heat removal pump requires some additional repair work. The "D" decay heat removal pump has approximately 70% of the radiography work completed, with no unacceptable indications.
- d. The proposed fix of replacing flange cap screws with pre-loaded studs and nuts to attach the reactor coolant pump motors "securely" to the pump flange is under evaluation by the licensee. The licensee is addressing the adequacy of the proposed torquing application and means of determining degradation of the preload condition in their evaluation.

Functional or Program Areas Inspected

Section I

Prepared by T. E. Vandel

Reviewed by D. W. Hayes, Chief
Projects Section

1. Part 21 Procedural Provisions

CPCo Quality Assurance Program Procedure No. 50-2 Revision 4 dated September 13, 1977 was reviewed by the inspector and discussed with licensee representatives. It was learned that provisions are included in the procedure for both Part 50.55e and Part 21 reportable noncompliances. The Part 21 provisions included were:

- Posting Requirements
- Review Responsibilities
- Reporting Provisions
- Inclusion of Requirements in Purchase Documents
- Maintenance of Records as Quality Records

The inspector was further informed that no Part 21 reports have been required to date so no examples of records were available for review.

No noncompliance or deviation items were identified.

Section II

Prepared By K. R. Naidu

Reviewed By D. H. Danielson, Chief
Engineering Support Section 2

1. Observation of Containment Structural Steel Support Work Activities (Unit 1)

The inspector observed activities related to the installation of beams 617B1, 617B2, and 610B1 which form the steel framing plan at elevation 640'-0" and a lateral pressurizer support at approximate elevation 637'-7 1/4". The work and inspection requirements were being met in the following areas:

- a. Installation/erection activities were being performed as specified in drawings E-382, Revision 4 and C-378, Revision 4, Detail 5.
- b. Specified materials and components were being used.
- c. Visual inspections were being performed.
- d. Inspections were being documented in the Quality Control Inspection Records (QCIRs) No. C-304-536W and No. C-304-676W.
- e. Inspection personnel qualified by Bechtel were being utilized.

No items of noncompliance or deviations were identified within the areas reviewed.

2. Review of Containment Structural Steel Supports Records (Unit 1)

The inspector reviewed the records relative to the structural steel beams 617B1 and 617B2 which form the steel framing plan at elevation 640'-0". Material Receiving Report (MRR) AEO-1355 dated March 11, 1976, indicates the following:

- a. Beams 617B1 and 617B2 were visually receipt inspected and determined acceptable on February 26, 1976.
- b. Quality Control Inspection Plan (QCIP) Log 2217 indicates that the material was appropriately identified and that no shipping damage was evident.
- c. Preparation and painting record of New City Steel Quality Assurance documents that surface preparation and painting (Carbo Zinc-11) was inspected.

- d. Material certifications from United States Steel identify the steel beams with heat numbers as indicated below:

| <u>Beam</u> | <u>Heat Number</u> |
|-------------|--------------------|
| 617B1 | 09136 |
| 617B2 | H09136 |

Material certifications certify that the above beams conformed to the requirements of ASTM-A-36-70A.

No items of noncompliance or deviations were identified in the above areas.

3. Observation of Containment Structural Steel Support Welding Activities (Unit 1)

The inspector observed structural steel support welding activities relative to the steel framing plan and determined that procedural requirements were being met in the following areas:

- a. Welds on beams 617B1, 617B2, and 610B1 were being identified. Quality Control Inspection Records (QCIR) indicate that the fitup was checked. Weldor qualification records indicate that weldors identified as I-65 and I-129 were qualified to the procedures used.
- b. Weldrods were being stored at the work location in portable electrode ovens.
- c. Uncontrolled weldrod was not observed at this work location.
- d. One QC welding inspector was assigned to inspect ongoing activities in the reactor building area.

No items of noncompliance or deviations were identified in the above areas.

4. Review of Containment Structural Steel Supports Welding Records (Unit 1)

The inspector reviewed QCIR No. C 304-536W and C 304-676W which cover the inspections on the welding performed on the above beams and the pressurizer support and determined the following:

- a. The welds were visually inspected for weld size, length, location, contour, and surface condition and were determined acceptable. In the case of the pressurizer, 1 1/2" backing

plates were welded to the support plate. The embed itself was wharped; the backing plate attachment provided more than a 1/4" opening permitted. Procedural requirements were followed to authorize a weld buildup on the backing plate to provide the required 1/4" opening.

- b. Heat treatment and NDE were not specified.
- c. Weld Procedures PI-A-LH Structural and PI-F (A-CO2) Structural respectively were specified.
- d. Records indicate that the weldors who performed the welding were qualified to weld to the procedures specified.
- e. Fit up was checked where full penetration groove welds (FPGW) were specified; fillet attachment welds (FAW) did not require fit up to be checked.
- f. Final welds were inspected and determined acceptable.

No items of noncompliance or deviations were identified in the above areas.

5. Observation of Safety Related Steel Structures Work Activities
(Unit 2)

The inspector observed installation activities in the auxiliary building relative to seismic pipe restraint identified as No. 2 1/2" -IHBC-217-H13 and seismic supports for cable trays and determined that work and inspection procedures were being met in the following areas:

- a. Installation/erection activities were in accordance with Sketches 1-657-6-1, 1-657-1-23 and Drawings E42, Revision 28; E795, Revision 0; and E750 Sheet 2, Revision 2 respectively.
- b. Materials specified in the drawings were being used.
- c. The activities were being visual inspected.
- d. Inspections were being documented in the respective QCIRs.

No items of noncompliance or deviations were identified in the above areas.

6. Observation of Safety Related Steel Structures Welding Activities
(Unit 2)

The inspector observed structural steel welding activities relative to seismic pipe restraint and weld repairs to seismic supports for cable trays and determined that procedural requirements were being met in the following areas:

- a. Welds at various locations between Columns 7.8 and H-HK, Columns 5.6 and H-HK at approximate elevations 632'-674' had been rejected after visual inspections. The welds were being ground, reexamined and repaired. The subject welds were field attachment welds (FAW); no special weld repair procedure was used since this repair was considered a continuation of the specified weld procedure No. PI-A-LH Structural. Relative to the seismic support, the weld had been completed and the welder was waiting for the QC inspector to inspect the weld.
- b. Weldrods were being stored at work locations in portable electrode cans.
- c. Uncontrolled weldrod was not observed at this location.
- d. 3/8" diameter and 1/8" diameter Type E7018 weldrod with unique identifications NNN007 and BBB084 respectively were being used for welding the seismic restraint at approximate elevation 600'. Welder identified by Symbol P412 performed the welding.
- e. The inspector observed that Sketch 1-657-1-23 required only one leg of the upper 1 1/2" x 2 1/2" x 1/4" angle to be welded to the 1/2" attachment plate; whereas the bottom angle required both legs to be welded as per Sketch 1-657-6-1. The inspector informed the licensee that this is considered an unresolved matter and requested the licensee to verify that the design requirements would be satisfied with only one leg of the angle welded to the base plate.

No items of noncompliance or deviations were identified in the above areas.

7. Review of Weldrod Records

The inspector reviewed the records relative to weldrod identified by unique numbers NNN007 and BB0084 and determined the following:

- a. MRR No. AEO 5360 dated January 20, 1978, indicates that Valley Oxygen Supply Company supplied 48,500 lbs. of 1/8" diameter Chemtron Atom Arc Type E 7018 electrodes. QC IR No. R-100-2669 indicates that receipt inspection was performed and no unacceptable conditions were identified. A Certified Material Test Report from Chemtron indicates that the weldrod with unique Control No. NNN006 and Heat No. 421B5451 conforms to ASME SFA 51 Section II, Part C, and Section III, 1974 Edition with addenda through Winter 1976; Charpy V-Notch Impact Test results at 20°F are provided.
- b. MRR No. AEO 539 dated November 12, 1974, indicates that Chemtron Corporation supplied 3400 lbs of 3/32" diameter Chemtron Atom Arc Type 7018 LH.QCIP dated November 16, 1974, indicates that receipt inspection was performed and no unacceptable conditions were identified. A Certificate of Analysis from Chemtron dated October 31, 1974, indicates that the weldrod conformed to AWS A 5.1-69.

The above records were legible and readily retrievable.

No items of noncompliance or deviations were identified in the above areas.

8. Observation of Containment Penetration Activities (Unit 1)

The inspector observed work activities in progress relative to the installation of Type VIII electrical penetrations identified as IZ 140, IZ 141, and IZ 143 on the containment side and determined that the requirements of applicable specifications and work procedures were being met in the following areas:

- a. Method of installing weldneck flanges and leakchase were in accordance with work specifications and Design Drawing C-388, Revision 12.
- b. After welding the weld neck flange and the leak chase to the penetration sleeve, the final welds were subjected to Magnetic Particle (MP) examination.
- c. Inspection activities were being performed as specified in the respective QCIRs by QC inspectors qualified by Bechtel.

No items of noncompliance or deviations were identified in the above areas.

9. Review of Containment Electrical Penetration Records (Unit 1)

The inspector reviewed the Quality Assurance Records relative to the installation of Type VIII electrical penetrations and determined

that the records confirm that quality requirements were met in the following areas:

- a. ACIR No. C-111-197W indicates that the welding on penetrations identified as IZ 147, IZ 146, IZ 145, IZ 139, IZ 138, IZ 137, and IZ 135 was inspected for the following:
 - (1) Welder Qualification was verified
 - (2) Welder Symbol
 - (3) Fit Up Release for Welding
 - (4) Technique Requirements
- b. The final welds were inspected for size, length, location, contour, and surface condition.
- c. Identity of the weld symbol was verified.
- d. Full penetration groove welds were used to attach the weldneck flanges to the penetration sleeves and fillet attachment welds were used to weld leakchases; Weld Procedure PI-A-4H was utilized.
- e. Magnetic Particle (MP) testing was performed on the finished welds. The inspector reviewed Magnetic Particulate Report No. 5539 dated April 28, 1978. The report indicates that the final welds on penetrations IZ 138, IZ 145, IZ 146, and IZ 147 were examined and determined to be acceptable.

The NDE was performed using Contour Probe Se No. M394 utilizing the yoke method according to Bechtel Procedure MT-Y-1, 2 Revision 0.

- f. MRR No. AEO-5516 dated February 13, 1978, indicates penetrations IZ 130, 2Z 130, 2Z 140, IZ 142, IZ 143, and IZ 144 were received from Amphenol Sams Division/Bunker Ramo Corporation. NCR 1229 dated February 16, 1978, identified shipping damage to some penetrations and lack of documentation on qualification tests. The vendor recommended corrective action was to repair the affected penetrations; records indicate that the repair was done as per those instructions.
- g. Relative to the qualification tests, the licensee personnel stated that the Amphenol Sams Division/Ramo Corporation has not completed the environmental qualification tests. However, procedural requirements were followed to install the electrical penetrations.

- h. The inspector observed that 'O' rings supplied by Parker are being used between the weld neck flange and the penetration. Certifications from Parker on the 'O' rings were not available. The inspector requested the licensee furnish information whether the purchase specification for the 'O' rings stipulated the adverse environment under which the 'O' rings have to operate without deleterious effects, and to verify whether the 'O' ring material successfully withstood radiation and high temperature. This is considered an unresolved item. (329/78-05-01; 330/78-05-02)

10. Observation of Cadwelds

The inspector observed that cadwelds installed in the Unit 2 Refueling Canal Walls (South and North) were not staggered as required in Paragraph A-6-7 of Appendix A of ACI 318-71. Review of the Bechtel drawings C-694(Q), Revision 3 and C-687(Q), Revision 2, both dated April 12, 1978, for Units 1 and 2 respectively, titled "Reactor Building South and North Refueling Canal Walls Reinforcing Elevations" indicate that the cadwelds on the first layer bundle 2 - No. 11 rebar far face do not require to be staggered; the spacing between rebar was 10". However, the cadwelds in bundle 1-No. 11 rebar at the 3rd layer far face which is 3' apart from the above mentioned cadwelds are shown to be staggered. The inspector requested the licensee to furnish information why the cadwelds on the first layer do not require to be staggered in compliance with ACI 318-71. This is considered an unresolved item. (329/78-05-02; 330/78-05-03)

11. Safety Status of Spent Fuel Pool

The licensee informed the RIII inspector that the Spent Fuel Pool (SFP) Liner plate installation is not a Q-listed item. The licensee furnished a copy of Bechtel's letter BLC-4214 dated June 8, 1977, addressed to CPC which confirms that the SFP is not safety related. The inspector informed the licensee that this matter is being referred to IE Headquarters for resolution as to whether or not the SFP liner plate and welding is considered safety related. Pending the final resolution, this item is considered unresolved. (329/78-05-03; 330/78-05-04)

Section III

Prepared by C. M. Erb

Reviewed By D. H. Danielson, Chief
Engineering Support Section 2

1. Safety Related Piping-Procedure Review and Observation of Work
(Unit 1)

- a. The inspector reviewed the following procedures that are used by B&W to install safety related piping.

| <u>Identification</u> | <u>Title</u> |
|-----------------------|---|
| 9QPP-108, Rev. 1 | Receiving Inspection Procedure |
| WIN 119-1, Rev. 1 | Manual Metal Arc Instruction |
| WIN 105, Rev. 1 | Weld Instruction, Buttering Lug. |
| WIN 2119-1, Rev. 1 | Weld Instruction Sheet Combination T.I.G. & Manual |
| 9WP-200, Rev. 0 | General Instruction T.I.G. |
| 9WG-106, Rev. 1 | General-Visual, Weld |
| 9PT-101, Rev. 1 | Penetrant Test |
| 9RT-101, Rev. 1 | Radiography |
| 9QPP-104, Rev. 1 | Update Records |

- b. The inspector observed stainless steel core flooding pipe, 10" and 14" diameter, being welded to Weld Procedure 9WP-200, Rev. 0. Welders No. 30 and 31 were welding on this job, which involved an open butt procedure, an additional pass by the T.I.G. process, followed by SMAW to completion. The pipe spools welded by B&W were furnished by ITT-Grinnell, Category NPT-1 and the B&W welder's names are carried on the weld history paper work.

The completed field welds were faired and ground giving a smooth surface for subsequent NDT. Shop welds in the same line were as welded with a rough surface. This difference in surface was discussed with the licensee and he stated that steps were being taken to assure "Inservice Inspection" surface requirements would be met for all welds. Hold points by the ANI were noted on the weld data sheet. Weld No. 16 and 17 were inspected visually, Liquid Penetrant Tested to 9PT-101, and Radiographed to 9RT-101. ASME Code Section IX 1977 Edition and ASME Code Section III 1971 Edition with Summer 1973 Addenda are applicable to this work.

- c. The inspector observed the installation of stainless steel core detector tubing, and also examined records from the spool supplier, Mercury Company. There are 46 tubes to be installed and there are 290 butt welds to be made by B&W. The welds are between 1/2" tubes and 3/4" connectors which are welded in turn to 3/4" tubing. These welds are in an NPT-1 system and are made by the open butt GTAW process. Weld repair activities and radiographic records for field welds were examined.

The thin wall (.140") tube has a very small heat sink, which requires very close control of weld heat to preclude either fall through or suck back. Weld Nos. C-35, C-34, C-33 and C-23 were radiographed using a SFD of 18" to Procedure 9-RT-101. In some cases it was difficult to see the 2-4T hole on the penetrometer. This is due to secondary radiation.

Certifications for the tubing, connectors and weld materials in the shop welds furnished by Mercury Company were in the Q.C. records. Radiographs of 18 welds made by ITT-Grinnell for the Mercury Company indicated a technique similar to that for the field welds. Two exposures at 90° to each other in order to cover the entire weld and two penetrometers were laid on top of the tubing. Nine welds were lined up side by side for each exposure.

- d. Bechtel is making the welds in the Category NPT-2 portion of the core flooding pipe system. Field Weld No. 5 made by welder P-83 was observed to have a ground finish in contrast to the as welded finish of the ITT-Grinnell shop welds. Welders are qualified in both the 2G and 5G positions with each welder qualified for both the GTAW and SMAW processes.

Welding of two 10" and two 14" W swing check valves in the core flooding system was observed. These welds were Category NPT-1 and were performed by B&W. The welds were faired and ground to a smooth finish. A W 8" manual valve was welded by Bechtel in the Borated Water and Chemical Supply System. Weld No. 25 from this valve to pipe was 90% complete and had been made to Procedure P8-T-AG, Rev. 2, which is a GTAW procedure. Radiography had been performed by X-ray Engineering to Procedure RT-XG-2, Rev. 0. The sign off Authorized Inspector was from Kemper Insurance Company.

No items of noncompliance or deviations were identified in the areas reviewed.

2. Record Review - Valves (Units 1 and 2)

Certifications for four 14" swing check valves made by W were examined.

The inspector determined that the following valve materials and parts met the applicable ASME code procurement documents.

| <u>Part</u> | <u>Spec.</u> | <u>S/N</u> | <u>Supplier</u> |
|-------------|--------------|------------|-------------------|
| Body | SA 182, F316 | 2848 | Cameron Iron Wks. |
| Bonnet | SA 240, 316 | 1972 | G.O. Carlson |
| Disc | SA 182, 316 | 1995 | G.O. Carlson |
| Bolts, Nuts | SA 453, 660 | - | Crucible |

UT was performed on the body, bonnet and disc. A hydro test to 5900 psig was performed with a seat leakage of 4.71 cc per hour at 3950 psig. The AI signature appeared on the certification and source inspection was performed by Bechtel. This valve was Class 1 and was built to meet ASME Code 1974 Edition with Summer 1974 Addenda.

No items of noncompliance or deviations were identified in the areas reviewed.

3. Reactor Pressure Vessel Installation (Unit 2)

The reactor pressure vessel originally intended for Unit 1 has been switched to Unit 2. The vessel was moved into the containment by Reliance Truck Company (Reliance) utilizing a many wheeled conveyance. A heavy duty Reliance lifting device was placed in the polar crane beams and the original wheels for rotation were shored up as the original bearings would not accept the 450+ ton lift. Two steam generators 570 tons each in weight were placed in containment prior to the reactor vessel and a proof lift of 630 ton had also been made. Both Unit 1 and 2 reactor vessels were manufactured by B&W. Procedure 112, Revision 2 was used for erecting the RPV. Final setting and leveling was performed to Field Construction Procedure 10.

4. Safety Related Component Record Review (Unit 2)

Two steam generators were in place, which were identified as S/N 2E51A and 2E51B. These generators, originally intended for installation in Unit 1, were installed in Unit 2 and bore

National Board Numbers 150 and 151 respectively. The inspector reviewed the following records:

- . Noncompliance No. 403 was issued against generator 2E51A because deviation from required true verticality was .350" instead of allowable .250". This NCR was being processed through B&W Engineering.
- . Noncompliance No. 405 was issued against generator 2E51B because the ASME Code plate had been removed. A replacement plate with information from the paper replica of the original will be made up and affixed with the knowledge of the ANI.

No items of noncompliance or deviations were identified.

5. Storage of Components (Unit 1)

- a. Protection and storage of the reactor pressure vessel, steam generators and pressurizer for Unit 1 was inspected. Either nitrogen gas or dessicant was used on the inside and the outside was covered. The internals were stored in a steel cylinder. All items were protected adequately from deterioration by corrosion and other damage.
- b. On May 18, 1978, while on a tour of the plant, the inspector saw several partially burned weld rod stubs. These were retrieved from the floor by a licensee representative and an infraction was given as outlined in Appendix A.

Section IV

Prepared By: R. J. Cook

Reviewed By: D. W. Hayes, Chief
Projects Section

1. Installation of Safety Related Piping

During a physical examination of plant construction activities on a portion of the backshift, the following discrepancies were noted pertaining to the installation of safety-related piping.

- a. During the examination of Room 215, located in Area 3 of the Auxiliary Building at elevation 599 feet, it was noted that a portion of the makeup feed system at spool piece, designated 2 CCB-1-S-604-6-1, was open to the atmosphere without active work being conducted in the area. Prior to the completion of the inspection, the inspector verified that the opening has been taped shut.
- b. During the examination of Room 28, located in Area 3 of the Auxiliary Building at elevation 576 feet, it was noted that a stainless spool piece, designated 2 FCB-34-5-611-4-1, had rubbed against a carbon steel hanger during handling. Prior to completion of the inspection, the inspector verified that a wooden block had been secured to the hanger to prevent additional damage to the piping, and the piping had been visually examined, under QCIR No. P-1.10-611-4-4, to determine if repairs were necessary. No repairs are necessary.

The above reference conditions are considered to be examples of apparent noncompliance with the requirements of 10 CFR 50, Appendix B, Criterion V, and the Technical Specification for Field Fabrication and Installation of Piping, Procedure No. 7220-M-204-(Q).

Prior to the inspection, the licensee had identified similar discrepancies and documented these findings on Nonconformance Report (NCR) No. NCR-01-9-8-041, dated May 9, 1978. This NCR requested Bechtel to make a thorough inspection of the facility, correct and document discrepancies noted, and to instruct craft personnel. A response from Bechtel is expected by May 26, 1978.

Since the licensee corrected the discrepancies noted by the inspector and has taken responsible management action to correct similar discrepancies, no response to the apparent item of noncompliance is required.

The item of noncompliance is identified in Appendix A (329/78-04 and 330/78-05).

2. Procedures for Installation of Safety Related Components

The licensee has been actively pursuing upgrading procedures for the installation and alignment of permanent plant mechanical equipment, Procedures No. FPM-1.000 and FPM-2.000, respectively. The licensee stated, during the exit interview, that these procedures would be implemented three weeks after receipt from the final Bechtel review.

Unresolved Items

Unresolved items are matters about which more information is required in order to ascertain whether they are acceptable items, items of noncompliance, or deviations. Unresolved items disclosed during the inspection are discussed in Section II, Paragraphs 6.e, 9.h, 10, and 11.

Exit Interview

The inspectors met with licensee representatives (denoted in the Persons Contacted paragraph) at the conclusion of the inspection on May 19, 1978. The inspectors summarized the scope and findings of the inspection. The licensee acknowledged the findings.