

U.S. NUCLEAR REGULATORY COMMISSION

Region I

Report No. 83-01

Docket No. 50-410

License No. CPPR-112 Priority -- Category A

Licensee: Niagara Mohawk Power Corporation
300 Erie Boulevard West
Syracuse, New York 13202

Facility Name: Nine Mile Point, Unit 2

Inspection at: Scriba, New York

Inspection conducted: January 3-February 4, 1983

Inspectors: R. D. Schulz
R. D. Schulz, Senior Resident Inspector

2/16/83
date signed

J. Grant
J. Grant, Reactor Inspector

2/24/83
date signed

Approved by: H. B. Kister
H. B. Kister, Chief, Reactor Projects
Section 1C

date signed
2/24/83
date signed

Inspection Summary:

Inspection on January 3-February 4, 1983 (Report No. 50-410/83-01)

Areas Inspected: Routine inspection by the resident inspector of work activities relative to licensee action on construction deficiency reports, instrumentation, restraint structures, engineering and design coordination reports, pipe supports, preventive maintenance, safety-related piping, and cable installations. The inspector also performed plant inspection tours, reviewed licensee action on previously identified items, and followed up on an allegation received on February 2, 1983 (paragraph 12). The inspection involved 115 inspector hours by the resident inspector and 20 inspector hours by a regional based inspector in the area of safety-related piping.

Results: One violation was identified. Failure to follow procedures concerning production welding due to inadequate training of craft supervisory personnel, (paragraph 12).

DETAILS

1. Persons Contacted

Niagara Mohawk Power Corporation

W. D. Baker, Construction Engineer
J. L. Dillon, Q. A. Engineer, Site Lead
D. P. Dise, Vice President, Quality Assurance
L. G. Fenton, Senior Q. A. Technician
F. J. Osypiewski, Q. A. Engineer
J. P. Ptak, Manager of Construction, Site
J. Swenszkowski, Q. A. Technician

Johnson Controls, Inc.

M. Brenner, Q. A. Manager
D. Depew, Q. C. Inspector
W. E. Morris, Engineering Manager
V. Williams, Q. C. Inspection Supervisor

Stone & Webster Engineering Corporation

R. Bolick, Senior Q. C. Inspector
K. E. Conrad, CCCP Administrator
T. Dean, Senior Q. C. Inspector
D. Gibson, Senior Q. C. Engineer
P. Heft, Maintenance Supervisor
J. P. Kelley, Principal Pipe Support Engineer
J. Martin, Purchasing Agent
F. Novak, Maintenance Manager
G. W. Pierce, Q. A. Site Supervisor
A. H. Rovetti, Supervising Engineer
L. E. Shea, Superintendent of Engineering
D. C. Shelton, Chief Engineer
C. A. Sperling, Senior Material Controller

ITT Grinnell Industrial Piping, Inc.

R. Banks, Q. C. Documentation Supervisor
L. Beckwith, Q. C. Technician
J. Collins, Q. C. Engineer, P301X
S. Dasgupta, Senior Pipe Support Engineer
H. Freydenfelt, Hanger Inspector
D. R. Giguere, Q. C. Manager
D. Green, Piping Engineer
D. L. Grodi, Inspection Supervisor
C. L. Highland, Assistant Piping Superintendent
S. Keech, Q. C. Inspector
A. Mageski, Q. C. Supervisor
D. Margrey, Q. C. Training Specialist
G. McDonough, Senior Piping Engineer

T. Moran, Foreman
 J. Newman, Q. C. Supervisor
 T. Nichols, Piping Engineer
 R. Odin, Q. C. Inspector
 E. O'Hara, Senior Hanger Engineer
 L. Pela, Technical Superintendent
 F. Ponzi, General Foreman
 K. Rose, Hanger Inspector
 G. Rozner, Hanger Inspector
 R. Stevens, NDE Technician
 J. Thompson, Assistant Engineer

2. Plant Tours

The inspectors observed work activities in-progress, completed work and plant status in several areas during general inspections of the plant. Particular note was taken of the presence of quality control inspectors and quality control evidence such as inspection records, material identification, nonconforming material identification, housekeeping and equipment preservation. Craft personnel, supervision, and quality inspection personnel were interviewed as such personnel were available in the work areas.

Specifically, cable tray support welds, structural stud welds in the secondary containment, HVAC support welds in the control room building, and rebar placement in the area of the fuel pool liners were examined. The inspectors also witnessed the establishment of access control at elevation 288' of the control room building. The power generation control complex is tentatively scheduled for delivery in February 1983.

No violations were identified.

3. Licensee Action on Previous Inspection Findings

- a. (Closed) UNRESOLVED (79-09-01): Inspection of pipe supports was not conducive to prompt corrective action. ITT Grinnell Procedure FQC-4.2-14 has been revised authorizing quality control to perform pipe support inspections on completed installations, rather than wait for engineering release. This procedure revision lends itself to timely inspections and prompt corrective action.
- b. (Closed) FOLLOWUP ITEM (82-11-08): Inspections intended to be performed upon completion of pipe support installation as stated in ITT Grinnell Procedure FQC-4.2-14 were not likely to occur due to required engineering releases prior to turnover to quality control. The procedure was revised stipulating that the Construction Superintendent shall forward the work package to Field Quality Control for inspection, rather than to Engineering. Field Quality Control can now perform inspections upon completion of pipe support installations in accordance with Procedure FQC-4.2-14.

- c. (Closed) FOLLOWUP ITEM (82-07-06): An NDE Level II radiographer's qualifications were questionable with regard to SNT-TC-1A. All the film reviewed by the Level II in question was re-reviewed and found to be acceptable. The additional review included a re-radiograph of Field Weld No. 004 R2 (4 to 8) on Residual Heat Removal Isometric 66-37. The Level II radiographer is no longer employed by ITT Grinnell.
- d. (Closed) VIOLATION, SEVERITY LEVEL V (81-14-01): Construction Completion Checklists were not being completed as required by CMP-6.2 and CMP-6.4. Construction Completion Checklists are now being completed as required.
- e. (Closed) VIOLATION, SEVERITY LEVEL IV (82-07-01): Measures were not established to control the handling of material and equipment. Corrective actions formulated and implemented include:
- Revision of Field Quality Control Procedure FQC-4.2-8 to include instructions to quality control inspectors stipulating responsibilities concerning rigging and handling.
 - Training sessions given to field quality control inspectors and rigging supervisors on proper handling and rigging techniques.
 - Training sessions given concerning ITT Grinnell's Quality Control stop work authority as outlined in QAM 1.2, Quality Assurance Organization, Purpose and Responsibility.
- f. (Closed) UNRESOLVED (82-11-04): Drawing controls by Reactor Controls, Inc. were lacking. Reactor Controls, Inc. produced drawings are now approved by engineering. Also, a revision was made to the Controlling Specification, NMP2-P301V, deleting the requirement that Reactor Controls, Inc. produce isometric drawings for the recirculation system. Instead, the General Electric furnished drawings take precedence.
- g. (Closed) VIOLATION, SEVERITY LEVEL V (82-11-01): Unauthorized modification of a spool piece, regarding a cut and re-bevel, was contrary to the ITT Grinnell Quality Assurance Manual. The spool piece was placed on hold until control measures in accordance with approved procedures were implemented. Training sessions were conducted to prevent recurrence of this item. The NPP-1 Code Data Report was modified to document the actual length of the spool piece resulting from the cut.
4. Licensee Action on Construction Deficiency Reports (CDR's)
- a. (Closed) 80-00-05: The licensee issued a final report on January 26, 1981 concerning rigging and handling deficiencies. Adequate control measures have been formulated and implemented which include:
- Notifying field quality control of Class A and B lifts at least 8 hours prior to the lift.

- Mandatory periodic inspections by field quality control.
 - Mandatory construction inspection reports on all Category A and B lifts.
 - Corrective actions as stipulated in licensee response to violation 82-07-01 (Reference Section 3).
 - Construction Methods Procedure 10.1-8.82, Piping and Equipment Maintenance, establishes requirements for the safe and orderly handling of items on the construction job site.
- b. (Closed) 81-00-04: A final report for the deficiency regarding water leakage into the five emergency core cooling system suction barrel pits was issued on January 15, 1983. A steel, cylindrical liner has been installed in all five pits to prevent water leakage. The resident inspector verified that adequate control measures were established for the installations, including the establishment of quality control in-process checks, final weld visuals, and non-destructive examination of the welds.
- c. (Open) 81-00-06: On April 2, 1982, the licensee issued a final report concerning a deficiency in Power Strut spring nuts. The inspector advised the licensee that since 150 nuts on FPO #12234 were not returned to the vendor, additional investigation and analysis appears warranted. Pending licensee resolution, this item remains open.
- d. (Open) 82-00-07): On September 23, 1982, the licensee issued a final report for a deficiency regarding the control building termination cabinet support sills. However, the resident was unable to close this item because the Construction Completion Checklist, required as part of the corrective action, has no programmatic requirement since CMP-6.3 deleted the requirement for the checklist in June 1982.
- e. (Closed) 82-00-06: Incorrect welding procedures were used on ASME Class 1 joints. Corrective action included:
- Removal of ten weld joints.
 - Recalled and revised the field planners for ninety-two joints which had incorrect welding procedures specified.
 - Upgraded the training programs for ITT Grinnell engineering and quality control personnel.
 - ITT Grinnell QA/QC organization has been modified and expanded.
 - Review of field planners by Stone & Webster Engineering Corporation.

The resident inspector reviewed the penetrant test reports of the end preps resulting from the removal of the welds and adjacent base metal.

5. Instrumentation

As of January 4, 1983, Johnson Controls, Inc. had not started installation of safety-related components, but had received and inspected numerous items. The resident inspector examined tubing, fittings, and plate for markings and traceability to certified material test reports and certificates of compliance. The certifications were in accordance with the ASME Boiler and Pressure Vessel Code, Section II and III. A material traceability log was being maintained for fabrication and installation identification purposes in order to assure that the correct materials were used. The resident inspector noted that the traceability log lacked material specifications, code classifications, and in some cases wall thicknesses. The attached tags also lacked this information. The matter was discussed with the Johnson Control Q. C. Inspection Supervisor and Receiving Inspector, since their traceability log and tagging system did not appear to prevent the use of incorrect material. The inspector emphasized that identifying plate as carbon steel rather than SA-515 GR. 65 could lead to misuse since other grades of material, such as ASTM A-36 or SA-516 GR. 70 carbon steel plate, are required for installation. Subsequently, planner packages were released authorizing fabrication of instrument racks requiring ASTM A-36, carbon steel plate. Prior to the use of the stocked, carbon steel SA-515 GR. 65 plate, the Receiving Inspector noted that the drawing required carbon steel ASTM A-36 plate and placed the planner packages on hold. The Johnson Control Q. C. Inspection Supervisor is in the process of stipulating material specifications, code classifications, and wall thicknesses in the traceability logs and on the material tags to assure that material fabricated and installed is correct. The implementation of this change will be inspected in a future inspection period and is considered an open item (410/83-01-01).

Receipt inspection reports and procurement documents were reviewed in order to verify that material specifications were in accordance with Design Specification NMP-M090A, Revision 2, Procurement of ASME Section III Materials, Engineering and Design Coordination Report #C01321 dated June 3, 1982, and applicable drawings. The resident inspector discovered that the SA-515 GR. 65 plate, ordered to NF-2000 of the ASME Code was not stipulated in Design Specification NMP-M090A or in drawings approved and released to Johnson Controls, Inc. by Stone & Webster Engineering Corporation. The material was ordered in bulk quantities to assure adequate lead time for delivery and scheduled installation, rather than wait for drawing releases. This process is acceptable, however, the inspector has requested the licensee to verify that adequate design reviews are done for bulk quantity orders to assure suitability of application of materials, and whether it is an acceptable practice to release this material from the Stone & Webster warehouse to Johnson Controls for fabrication and installation prior to translating the specification into drawings. Pending licensee review, this will remain an open item (410/83-01-02).

Items identified as nonconforming during receipt inspection were adequately controlled.

No violations were identified.

6. Restraint Structures

The following ITT Grinnell procedures were reviewed for compliance to Specification NMP2-P301X, Installation of Pipe Rupture Restraints and Restraint Structures and regulatory requirements:

- FQCR-4.2-31-3, Visual Inspection
- FQCR-4.2-32-0, Field Cleaning
- FQCR-4.2-33-0, Final Inspection
- FQCR-6.1-31-0, Non-Destructive Examination

The procedures were adequate with the exception that Field Cleaning Procedure, FQCR-4.2-32-0 was not in accordance with Addendum 1 of NMP2-P301X, dated June 15, 1982, in that cleaning prior to painting of carbon weld seams, damaged areas, and other carbon steel restraint structure areas for the purpose of removing scale, slag, flux, oxides etc., was not addressed for areas that will become inaccessible nor were methods of control formally established to assure cleaning prior to inaccessibility. Subsequently, ITT Grinnell decided to revise Field Cleaning Procedure, FQCR-4.2-32-0 and address cleaning of carbon steel prior to inaccessibility and formulate control measures to assure cleaning. Pending procedure revision, this will remain an open item (410/83-01-03).

Various restraint structure welds in the primary containment were examined for main steam, feedwater, and reactor water clean-up piping systems. Welding was in accordance with the ASME Boiler and Pressure Vessel Code, Section III, NF-4000. Charpy impact tests were performed on the base metal, weld metal, and heat affected zone. The welds were magnetic particle tested on a progressive examination basis with the first $\frac{1}{2}$ -inch and each subsequent $\frac{1}{2}$ -inch of weld thickness tested. Acceptance standards were in accordance with ASME III, NF-5000. Numerous inspection records were reviewed for cantilever restraints including plumbness reports, weld fit-up reports, pre-heat reports, welding reports, and magnetic particle reports. The ITT Grinnell inspectors identified deficiencies with regard to allowable gaps, loss of pre-heat, and welding such as undercutting or insufficient weld reinforcement. The deficiencies were documented and subsequently corrected. The certifications and training of the restraint structure quality control inspectors were reviewed and found to be in accordance with ANSI N45 2.6. Training involved general, specific, and practical examinations as outlined in SNT-TC-1A.

While reviewing several completed traveler packages, the resident inspector discovered that ITT Grinnell weld map drawings were not being approved by

the ITT Grinnell Engineering Department or identified as being drawn by ITT Grinnell engineering personnel. In addition, the use of weld map drawings was not proceduralized and approved by Stone & Webster Engineering Corporation. Pending licensee review and clarification, this issue is unresolved (410/83-01-04).

No violations were identified.

7. Engineering and Design Coordination Reports

The inspector reviewed Engineering and Design Coordination Reports (E&DCR's) for the month of December 1982. The E&DCR's are the vehicle used to authorize: location and configuration changes due to building and material interferences, welding detail revisions, specification clarification and corrections, and drawing clarification and corrections. The inspector determined that the E&DCR's were adequate with respect to completeness, format, problem description, and resolution.

No violations were identified.

8. Pipe Supports

The ITT Grinnell Pipe Support Program was reviewed for compliance to ASME Boiler and Pressure Vessel Code, Section III, NF, and Specification NMP2-P301J, Field Fabrication and Erection of Pipe Supports. Specification NMP2-P301J delineates dimensional clearance requirements concerning installed pipe supports in relation to adjacent supports, conduits or structures. The ITT Grinnell quality control inspection checklist, specified as form F2.1A in procedure FQC 4.2-14-9, Inspection of Installed Pipe Supports, did not include a clearance attribute sign-off. The ITT Grinnell Inspection Supervisor is in the process of revising form F2.1A to include a clearance attribute. Pending this revision, this will remain an open item (410/83-01-05).

While reviewing various pipe support planner packages and drawings, the resident inspector discovered that Stone & Webster Class 1, NF pipe support drawings do not specify, in the bill of material section of the drawing, whether the material is required to be impact tested. In addition, ITT Grinnell did not appear to have adequate measures established to assure the installation of impact tested materials which were integral with pressure boundary piping components that required impact testing, either by Section II or Section III of the ASME Boiler and Pressure Vessel Code. ASME Section III, NF-2311 states that supports integral with components shall meet the requirements for impact testing stipulated for such components. In order to assure that material, which has not been impact tested, is not integral with impact tested pressure boundary components, ITT Grinnell engineering is reviewing all issued planner packages and in the process will verify that impact tested welding procedures were employed. Pending this review and possible Stone & Webster drawing clarification or additional ITT Grinnell control measures, the impact testing issues will remain unresolved (410/83-01-06).

The resident inspector verified that the ITT Grinnell pipe support drawings adequately specified the required classifications, such as linear, plate or

shell type for traceability controls, and primary and secondary member listings for nondestructive examination requirements. Regarding nondestructive examinations, ASME Section III, NF-5212 requires that radiography be performed for Class 1 Linear Type Support Welds unless the results of radiography do not yield meaningful examination results, otherwise an ultrasonic examination and a magnetic particle or liquid penetrant examination shall be performed. If neither an ultrasonic or radiographic examination can be done, then a magnetic particle or liquid penetrant examination will suffice. In discussion with ITT Grinnell pipe support engineers, it was learned that their interpretation of NF-5212 was that magnetic particle or liquid penetrant testing was acceptable without justification for not performing ultrasonic or radiography. This is not in accordance with NF-5212. The licensee is reviewing this situation for possible corrective action. This issue will remain unresolved (410/83-01-07).

Various installed pipe supports were examined in the secondary containment and service water tunnels for the residual heat removal and service water piping systems. The inspector checked:

- (1) Welding
- (2) Configuration
- (3) Offset and tolerance gaps
- (4) Traceability of pressure boundary components
- (5) In-Process controls including inspection reports and engineering and design coordination reports

The ITT Grinnell inspectors were knowledgeable of installation requirements, and the installations were in accordance with the drawings and ASME Section III, NF. However, the structural tubing which does not require end capping was being used to dispose of refuse, and the uncapped tubing in the north-south service water tunnel was filling up with snow and water. This issue will remain open pending licensee resolution (410/83-01-08).

No violations were identified.

9. Preventive Maintenance

The storage and maintenance program was reviewed to verify compliance with NMP2-SM01, Storage and Maintenance During Storage of Permanent Plant Equipment, dated August 3, 1982. The quality control maintenance inspection records and construction maintenance inspection records were reviewed for the following fifteen pieces of equipment and components:

- High Pressure Core Spray Motor Control Transformer
- Service Water Self Cleaning Strainer
- Service Water Centrifugal Pump

- Spent Fuel Pool Cooling Water Circulation Pump
- Space Cooler 2HVR-UC403A
- Space Cooler 2HVR-UC401A
- Residual Heat Removal Heat Exchanger
- Reactor Water Clean-Up Pump
- Hydrogen Recombiner
- Service Chilled Water Pump
- Space Cooler 2HVC-UC101A
- Transformer 2EJA-XD101A
- Centrifugal Liquid Chillers
- Residual Heat Removal Safety Relief Valve
- Main Steam Safety Relief Valve

The records were in accordance with SM01 requirements. Records indicated inspections were performed concerning meggering, lubricating, shaft rotation, nitrogen pressure checks, chemical preservation checks, dessicants, and general visual checks. The subject equipment was examined by the resident inspector and was found to be stored and maintained in accordance with the requirements of SM01 for in-place storage or warehouse storage, as applicable.

After reviewing additional unsatisfactory inspection reports by Stone & Webster quality control personnel, Niagara Mohawk quality assurance personnel, and Stone & Webster construction inspection personnel, the resident inspector requested resolution of the following three items:

- a. Although the preventive maintenance construction inspectors and quality control inspectors appear to be performing quality inspections and are identifying deficiencies for corrective action, there is frequent difficulty in obtaining timely corrective action from craft construction supervision.
- b. ANSI N45 2.3-1973 establishes cleanness zone designations depending on construction progress. It appears that consideration should be given to establishing Zone IV areas around equipment such as pumps and motors. Numerous amounts of refuse has been found in and around equipment installed in their permanent locations. Zone IV established areas would regulate eating areas, help to assure material and equipment protection, and eliminate fire hazards.

- c. On November 17, 1982, the licensee's Site Lead Q. A. Engineer identified a concern with regard to corrosion protection of fifty-six heat exchangers. Initially, the fifty-six heat exchangers were stored with a nitrogen blanket on both tube and shell sides. However, when piping installation began at heat exchanger connections, a nitrogen blanket was no longer feasible. Stone & Webster Engineering determined that keeping room temperature control from 40°F to 140°F assures adequate protection. Other options identified by the Site Lead Q. A. Engineer include:
- Maintaining purges as long as possible prior to start-up and incorporation into plant systems, and making piping connections last.
 - Desiccant is used as a vapor inhibitor.
 - Internals are specially coated by manufacturers for long term storage.
 - Vapor inhibitors such as Cortec VCI-319 should be considered for extended storage periods since the inhibitors can be flushed from the system (water soluble).

The resident inspector has requested the licensee to justify only using room temperature controls due the length of time prior to heat exchanger operation.

Pending licensee investigation, these items will remain open (410/83-01-09).

No violations were identified.

10. Safety-Related Piping

Actual welding conditions, the sequence of operations, and the use and documentation of welding materials, were spot-checked. The inspectors noted the presence or availability of Q. C. welding inspectors and checked their inspection verification of hold point items on the weld data sheets. In-process verification included welding material and component traceability, fit-ups, and visual weld inspection on the following piping lines:

- 10" High Pressure Core Spray - Primary Containment
- 24" Feedwater - Primary Containment
- 3" Hydrogen Recombiner - Secondary Containment
- 12" Reactor Building Closed Loop Cooling Water - Secondary Containment
- 4" Residual Heat Removal - North Auxiliary Bay

Completed records were reviewed for the following piping lines:

- 18" Residual Heat Removal
- 12" Residual Heat Removal
- 8", 10" and 12" Reactor Core Isolation Cooling
- 16" and 12" Low Pressure Core Spray
- 2½" Main Steam Safety and Relief Valves Vents and Drains

The records reviewed that were applicable to these piping lines included:

- Purchase orders
- Receipt inspection reports
- Material certifications-plate/welding materials
- Isometric-boundaries, ASME/ANSI B31.1
- Weld data sheets
- Deviation reports
- Base metal repairs
- Weld metal repairs
- Welding procedure qualifications
- Welder qualifications
- Final NDE

The records were in accordance with the corresponding section of the ASME Boiler and Pressure Vessel Code and 10 CFR 50, Appendix B.

The inspectors reviewed numerous field planner packages for small bore piping that had been issued as Category 2, non-safety related piping, to verify that the piping was actually non-safety related since NRC inspection report no. 82-12 identified a Category I, safety-related planner, which had been released by ITT Grinnell engineering as non-safety related. It was verified that the piping was correctly classified as issued and ITT Grinnell appeared to have adequate controls to prevent a recurrence of incorrect piping classification. Subsequently, the inspectors reviewed the pipe bending qualifications for 1" S/40 and 2" S/40, SA-312 TP 304 pipe. Although the qualifications were well within the 8% ovality tolerance as defined in ASME Boiler and Pressure Vessel Code, Section III, NC, ITT Grinnell had not measured the outside diameter of the pipe before bending as stipulated in

NC-3642.1, Pipe Bends. The ITT Grinnell Inspection Supervisor stated that the measurements would be taken for documentation compliance to NC-3642.1. Pending the recording of these measurements, this will remain an open item (410/83-01-10).

No violations were identified.

11. Cable Installation

The following documents were reviewed:

- Quality Assurance Inspection Plan/Cable Installation
- Quality Assurance Inspection Plan/Field Raceway Supports
- QAD-10.18, Raceway and Cable Installation Inspections
- Inspection System Handbook
- NMP2-E061A, Specification for Electrical Installation

The following discrepancies were noted:

- (a) Section 3.2.3 of NMP2-E061A states, "Cable may be pulled through cable tray sections with temporary supports or supports which have not yet been inspected, provided that the tray sections are adequately supported as determined by the Construction Electrical Supervisor." Delegating this responsibility to the Construction Electrical Supervisor who may not have the engineering background that appears to be needed to determine the adequacy of supports requires resolution.
- (b) The Stone & Webster Quality Assurance Inspection Plans in the electrical installation areas have not programmatically established the frequency of inspections for numerous attributes. For example, the Cable Installation Inspection Plan, N20E061AFA025, signifies by the letter R, (Routine), that the following inspections will be performed by the Stone & Webster Inspector at his discretion as he visits the work areas. The attributes for discretionary inspections include:
 - Identification of cable
 - Cable tie down and support
 - Spacing
 - Physical integrity (imperfection, damage)

The inspector commented that the inspections need to be programmatically established either on a 100% basis or in accordance with a statistical sampling plan to assure a proper level of quality. The licensee was

requested to re-evaluate the inspection plan. This should include the determination of the adequacy of inspections for the previous installations.

The licensee is reviewing these two issues for possible corrective action. Items (a) and (b) will remain unresolved (410/83-01-11).

Records were reviewed for cable installations including inspections as detailed below:

- Raceway status
- Raceway cleanliness
- Cable ticket issue
- End protection
- Color code
- Physical integrity
- Routine
- Pull tension
- Calibration (dynamometer)
- Bend radii
- Spacing
- Identification

No violations were identified.

12. Allegation

On February 2, 1983, the resident inspector received a phone call from an individual who identified himself as an ITT Grinnell welder. The welder stated that he had requested to review a welding procedure for a ASME Class 1 pipe weld joint in the drywell area that he was to begin welding on, but was told a procedure was not available and it would not be possible for him to see the welding procedure for that weld. This request was made to his foreman and general foreman. He went on to say that he felt it was his right and obligation to review the welding procedure prior to making the weld and considered it a breakdown in the quality control program.

On February 3, 1983, the resident inspector interviewed the welder, foreman, general foreman, rod issue station supervisor, craft personnel, and ITT Grinnell Q. C. training specialist. The following statements are a result

of those interviews:

- (a) The rod issue station supervisor stated that he was unaware that welding procedures were in the rod issue station and available to the welders for review. The welder, on February 2, 1983, had asked the rod issue station supervisor if he could review the welding procedure for a 12" S/80 Low Pressure Core Spray weld, FW-006 on Iso. 26-5. The weld joint was a ASME Section III, Class 1 joint subject to impact test properties and located in the primary containment. The rod issue station supervisor stated the welding procedure was not available.
- (b) The welder repeated that he had requested access to the welding procedure for the 12" S/80 weld joint but was told it was not available by the foreman, general foreman, and rod issue station supervisor.
- (c) The welder stated that he previously had requested access to a welding procedure for a 6" Reactor Building Closed Loop Cooling Water weld but was again not able to review that procedure. The weld was made on January 25, 1983 and was a ASME Section III, Class 3 joint identified as FW-008 on Iso. 18-11, and located in the primary containment.
- (d) The welder and craft supervisory personnel interviewed stated that appropriate training on the availability of welding procedures was needed.
- (e) The foreman, general foreman, and rod issue station supervisor stated they were interested in meeting the highest quality standards and did not intentionally try to keep the welder from reviewing the welding procedure. The problem appeared to stem from inadequate training regarding the importance of the availability of the welding procedures.
- (f) A training program has not been established for craft supervisory personnel, including the rod issue station supervisor, either initially or on a refresher basis with regard to the availability and use of welding procedures. This was confirmed through interviews with craft supervisory personnel and the Q. C. training specialist.

ITT Grinnell Quality Assurance Manual QCF-5.4, Control of Production Welds, Revision 5, states in part, "All qualified welders shall have available and be familiar with the required Weld Procedure Specification before performing any welding as required by the Process Planner."

The 12" S/80 Low Pressure Core Spray weld was not made, as upon notification to the resident inspector and subsequent notification by the resident to ITT Grinnell, a stop work order was issued and training was given to craft personnel in the drywell area regarding the availability of welding procedure documents.

A review of the welding procedures at the rod issue stations revealed that the welding procedures were not indexed or in numerical order and therefore, welder review would be strenuous due to the number of welding procedure documents.

Failure to make welding procedures available to a welder, as required by the Q. A. Manual, is a violation of 10 CFR 50, Appendix B, Criterion V, and failure to provide adequate training is a violation of 10 CFR 50, Appendix B, Criterion II (410/83-01-12).

13. Unresolved Items

Unresolved items are matters about which more information is required in order to ascertain whether they are acceptable items, violations or deviations. Unresolved items disclosed during the inspection are discussed in paragraphs 6, 8, and 11.

14. Management Meetings

At periodic intervals during the course of this inspection, meetings were held with senior plant management to discuss the scope and findings of this inspection. The licensee acknowledged the inspectors findings and concerns, and all parties were cooperative.