U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Report No. 84-21

Docket No. 50-410

License No. CPPR-112 Priority -- Category A

Licensee: Niagara Mohawk Power Corporation

300 Erie Boulevard

Syracuse, New York 13202

Facility Name: Nine Mile Point, Unit 2

Inspection At: Scriba, New York

Inspection Conducted: December 24, 1984 to February 1, 1985

Inspectors: R. A. Gramm, Senior Resident Inspector — date 3/12/85

R. M. Wheeler, Resident Inspector — date 3/12/85

Approved By: W. J. Lazarus, Chief, Reactor Projects Section 2C, DPRP (Acting) — date 3/12/85

Inspection Summary: Inspection on December 24, 1984 to February 1, 1985 (Report No. 50-410/84-21)
Areas Inspected: Routine inspection by the resident inspector of work activities, procedures and records relative to concrete expansion anchors, design control, HVAC supports, rework control, preservice inspection program and QA corrective action systems. The inspector also reviewed licensee action on previously identified items and performed plant inspection tours. The inspection involved 269 hours by the inspectors.

Results: Two violations were identified: Inadequate design change control resulting in the failure to properly translate FSAR QA commitments into site design documents (paragraph 5), and failure to provide adequate technical review of HVAC support drawings and concurrent failure to provide adequate QC configuration inspection for the HVAC support tension bracing (paragraph 6).

DETAILS

1. Project Organizations

   Niagara Mohawk Power Corporation (NMPC)

   Stone and Webster Engineering Corporation (SWEC)

   General Electric Company (GE)

   ITT-Grinnell Industrial Piping, Inc. (ITT)

   Johnson Controls, Inc. (JCI)

   Reactor Controls, Inc. (RCI)

2. Plant Inspection Tours

   The inspector observed work activities in-progress, completed work and plant status in several areas during general inspection tours. Work was examined for any obvious defects or noncompliance with regulatory requirements or license conditions. 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. The inspector interviewed craft personnel supervision, and quality inspection personnel in the work areas. Observations are noted below:

   The inspector observed RCI fit up and welding operations associated with the fabrication of feedwater sparger section number 6. Work on weld joint 10 which connects the thermal sleeve to the feedwater ring was in progress. An installation package for the the feedwater sparger work had been assembled and was located near the fabrication area. The installation package included the weld data sheets, the GE installation drawing 794E824 Rev. 2 and the GE installation specification 22A7145 Rev. 0 sheets 34 through 44. The installation package was found to contain all the documents required to perform and document the fit up and welding of the feedwater sparger. The inspector had no further questions.

   The inspector monitored work on the Main Steam Isolation Valve (MSIV) internals. The inconel 625 overlay welding and machining of the spool bores has been completed and the reassembly phase of the modification work has begun. The inspector was informed by SWEC site engineering materials group that 5 Nonconformance and Disposition (N&D's) had been issued for deficiencies on the valve balls. During the preparation to install the valve internals, pitting on the ball seating surface was identified. The largest pit was approximately 5/64" and about .096" deep on valve ball 6d. SWEC engineering has consulted with the valve manufacturer (Crosby Valve) to determine the significance of the ball defects. The SWEC engineering groups are appropriately pursuing the resolution of this concern. The inspector will continue to monitor the licensee actions and progress in this area of the MSIV modifications. The inspector has no further questions at this time.

As a follow up to the NRC Vendor Inspection Report No.99900403/84-02, the inspector attempted to verify whether an aluminum separation barrier at Nine Mile Point Unit 2 had been replaced within a PGCC cabinet. He was informed that:

- GE had issued a FDI (Field Disposition Instruction) to inspect all GE panels. As a result of the inspection, an aluminum barrier was found in panel H13-P601.

- GE issued a FDDR (Field Deviation Disposition Request) to remove and replace the aluminum separation barrier.

- As of 1/8/85 the SWEC inspection check list CCC No. 3-03-9-4-TYQA-13 had not documented the removal of the aluminum barrier. NMPC Engineering verified the aluminum barrier was still installed.

The installation status of the aluminum barrier, as verified by the licensee does not support the statements made by GE San Jose to the NRC vendor inspection group. This item has been referred to the NRC vendor inspection group for follow up.

The inspector reviewed FSAR table 3.2-1 which indicates the licensee will comply with Reg. Guide 1.29 Sections C2 and C3 under the operations QA program. It is not clear how the licensee intends to identify the QA category II or III commodities which may impact safety related systems due to their physical relationship. The extent of the QA program to be applied to non-safety related items suspended over safety related items is also not clearly defined. This is open pending the inspectors review of the licensee program to meet the requirements of Reg. Guide 1.29 during operations. (84-21-01)

The inspector was informed that the Lone Star Screw Company of Houston Texas had made a 10 CFR 21 report to the NRC regarding deficient lockwashers and small nuts. Lone Star had simultaneously notified SWEC Purchasing that NMP2 - FPO 18336 items were potentially deficient. The inspector was informed that Nonconformance and Disposition (N&D) Report 8771 had been generated by SWEC. This item is unresolved pending a review of the actions taken by SWEC to provide a disposition to N&D Report 8771. (84-21-02)

The inspector observed base plate grouting operations and reviewed documentation for pipe support BZ-412CT-4. The curing of the Master Flow 713 grout was observed and compared with the SWEC QC documentation. SWEC QC inspection records S5A60036 (preplacement record), S5A60039 (placement record), S5A60052 (curing record) and S5A60058 (curing record) were reviewed. During the grout mixing phase, the grout proportions and mixing water temperatures were verified for conformance with Manufacturers recommendations. The curing temperatures were verified during the curing period. Based on the records review and the work observation, the inspector had no further questions.

The inspector reviewed the procedural controls for incorporating approved E&DCR's into project specifications. The SWEC Project Procedure, PP16, requires that after 10 Engineering and Design Coordination Reports (E&DCR's) and N&D's have been issued against a specification, a revision to the specification must be initiated. The project procedure also provides a list of specifications "exempted" from the above rule, these high activity specifications are to be revised every 6 months. Specifications S203G Rev. 5, dated December 21, 1984 entitled "Drilled in Expansion Anchors" and P413L Rev.4, dated June 25, 1984 entitled "Ventilation and Air Conditioning System" were examined to determine compliance with Procedure PP16. The incorporation of engineering issued changes was in accordance with PP16.

The inspector examined small bore pipe support BZ-419VE. He further reviewed the ASME Control drawing; the engineering design drawing; and the following Advance Change Notices (ACNs) 26858, 30367, 30391, 26418, 29271 and 29288. He verified that the support installation was proceeding in accordance with the design instructions.

The inspector observed in process concrete anchor expansion bolt installation. He noted the mapping of buried reinforcing bar material and the use of equipment that stops the drill upon contact with embedded steel.

The inspector observed welding and machining activity within the refueling cavity. He reviewed the following documents that were available in the work area:

- SWEC drawing EV-2M-2
- Weld Technique sheet W76K
- E7DCR C91259 and V17075
- Weld Material Requisition (WMR) 215081

The inspector had no further questions, and no violations were identified.

3. Licensee Action On Previously Identified Items

a. (Closed) CONSTRUCTION DEFICIENCY (82-00-07) Undersized embedded sills were installed in Control Building to support termination cabinets. The inspector reviewed the following documents that pertain to the installation of sill material:

-- NMPC Nonconformance Report 360

-- SWEC Nonconformance and Disposition Reports 3323 and 3457

-- SWEC QA Inspection Plan N20E061AF0003

-- SWEC procedures CMP-6.3, "Automatically Timed Stud Welding" and CSI-3.1, "Implementation of the Embedment Traceability Log"

-- SWEC drawing EE-38A-4 "Arrangement Sill Details Control Building"

The cabinet anchorage was reworked with the addition of through floor anchor bolts to reduce the sill loadings. The installation and inspection procedures now require verification of the embedded sill material and size through the Embedment Traceability Log and material hard markings. SWEC quality control reverified that proper size sill material had been installed at all other locations. This item is closed.

b. (Closed) CONSTRUCTION DEFICIENCY REPORT (82-00-08) Main steam safety and relief line tee-quencher diffusion holes were improperly fabricated. The tee-quencher fabricator, ITT-Grinnell, inspected the items to assemble as-built information as to diffusion hole sizes and location. The design requirements for hole size tolerance was exceeded at numerous locations. SWEC initiated Nonconformance and Disposition (N&D) report V10,560 to provide engineering analysis of the tee-quencher as-built hole geometries. The tee-quencher designer, Kraftwork Union Offenback (KWU), analyzed the design deviation with regards to hole geometry and found the suppression pool boundary loads unaffected. However, the loading on the tee-quenchers could be 10% greater. SWEC engineering re-analyzed the tee-quencher stresses and found them to be acceptable. This item is closed.

c. (Closed) CONSTRUCTION DEFICIENCY REPORT (82-00-13) This CDR involved errors in the GHOSH computer program for reactor building hydrodynamic loadings. The GHOSH program was used to generate Amplified Response Spectra (ARS) for the qualification of equipment and piping systems. The program error was corrected and the calculational results of the revised and original programs were compared. The comparison of the ARS's at 49 node locations indicated an ARS higher than originally calculated at 5 nodes. Equipment was located at only two of the nodes. In both cases the associated equipment was qualified to a more conservative ARS than was generated from the corrected GHOSH program. The inspector reviewed the use of radial ARS's in lieu of tangential ARS's and agreed with the SWEC design approach. The inspector additionally reviewed the NRC Vendor Branch report 99900509/83-02 which pertained to the GHOSH program.

Based on the licensee's correction and evaluation of the GHOSH program error, this item is closed.

d. (Open) FOLLOWUP ITEM (82-01-06) This item involved the lack of bolting material traceability for ITT hanger components. The N&D's issued to identify the specific ASME NF bolting materials have been closed. A construction site instruction CSI-20.12 Rev. 1 has been issued to provide uniform direction to the ASME contractors to ensure traceability of bolting materials. ITT inspection plan FQC-4.2-14 has been changed to document a traceability check at the time of final hanger walkdown. However, the inspector ascertained that RCI's current program does not require a bolting traceability verification through the installation process. RCI also does not possess a copy of the CSI-20.12. This item will remain open, pending verification that all ASME contractors verify bolting traceability through the installation process.

e. (Closed) UNRESOLVED ITEM (83-16-06) This item involved RCI document control deficiencies for the CRD Restraint beam. Engineering documents essential to the CRD beam installation were not in RCI's possession nor were they listed in RCI's Engineering Control Checklist (ECCL). RCI identified that the beam inspection records had been misfiled and the associated torque inspection records were located. The missing E&DCR 15435 was distributed to RCI and placed on the ECCL. RCI did not receive a copy of the AISC manual since SWEC performed the AISC work scope. Recent inspector reviews for completeness of the documents utilized to perform the feedwater sparger installation were conducted. A search of the ECCL, GE drawing list and the installation specification (P301V) did not identify any document deficiencies for the feedwater sparger installation. Based on the review of current RCI document control implementation, this item is closed.

f. (Closed) FOLLOWUP ITEM (83-17-04) This item involved calibration requirements of preheat thermocouples. ITT heat treatment procedure HT-K-111-10 permits the use of temperature crayons, pyrometers and thermocouples for post and preheat verifications. Preheat verifications were performed with temperature crayons or calibrated pyrometers. ITT revised FQC 7.1-3-14 "Control of Calibration Measuring and Testing Equipment" to include thermocouple calibration for preheat verifications. Based on the revision to FQC 7.1-3-14, and control of past preheat checks, this item is closed.

g. (Open) FOLLOWUP ITEM (83-18-39) This item involved a lack of QC verification of configuration location on a unit cooler. The fan for the unit cooler 2CRS-VCIC was shorter than shown on the vendor drawing. Due to the drawing discrepancy the attachment welds to the house steel were not made in accordance with the vendor drawing. Although the drawing was in error, the welds were at the intended locations. N&D 5987 was issued and the unit coolers were dispositioned as acceptable. Although an N&D has been closed, the vendor drawings 0010.411-087-003E and 0010. 411-087-002E remain uncorrected. This item will remain open pending revision to the affected vendor drawings.

h. (Closed) FOLLOWUP ITEM (83-18-44) This item involved the method for identifying Radiographic film. ITT radiographic procedure RTP-3-1C did not specify the method for identifying radiographic film. ITT procedure RTP-3-1C was revised to establish lead letter marking as the preferred method. A review of five QA category I field weld radiographic packages confirmed the use of the lead letter marking method. Permanent hard marking of field welds is not required for ASME Section III, however, within this report open item 84-21-08 was generated relative to ASME Section XI weld identification. Based on review of the revised ITT procedure and the recent ITT film, this item is closed.

i. (Closed) FOLLOWUP ITEM (83-18-50) Walsh fabrication welds were unacceptable. Four out of 100 sampled structural steel QC category II shop welds did not comply with AWS D.1.1. The four welds were reinspected and three of the four were deficient. N&D 6035 was issued against the three nonconforming welds. Two of the welds were dispositioned rework while the remaining weld was accepted as is. The two welds were reworked and the N&D has been closed. Based on the licensee corrective actions, this item is closed.

j. (Closed) FOLLOWUP ITEM (83-18-64) Weld rod holding oven temperature was below the lower limit. ITT issued an inspection report (Cal 70) identifying lower than required temperature for rod oven #11. ITT verified that no rod was issued from oven #11 during the time period the temperature was below 155 degree F. The receptacles for all the ITT stationary rod ovens were changed to twist lock type to prevent inadevertent unplugging. NMPC QA has not identified additional problems with stationary weld oven temperatures through contractor surveillances. Based on the licensee corrective actions, this item is closed.

k. (Open) CONSTRUCTION DEFICIENCY (84-00-15) Rosemount 510 DU racks may not withstand seismic event. GE's response to the problem concerning the seismic qualification of the Rosemount 510 DU racks involved using the test results from the Grand Gulf panels to justify the configuration without rear hold down bolts. GE concluded that the panels meet all the qualification requirements. GE also stated that trip light flashing occurred during the tests, but that no failure occurred. GE has been asked to provide additional information pertaining to whether the trip units did pass the seismic qualification test. This item is open pending the NRC's review of additional information to be provided by GE.

l. (Closed) UNRESOLVED ITEM (84-01-01) Electrical tape applied to stainless steel piping in the suppression pool was unqualified. The licensee initiated N&D report IG-1992 to document the noted condition. The tape was analyzed and found to have chloride and halogen content in excess of allowable limits. The tape was removed, and the contact area was subsequently cleaned with solvent and washed with demineralized water. SWEC disseminated a site wide memorandum to all contractors that prohibits the use of the tape for non-electrical purposes. This item is closed.

m. (Open) UNRESOLVED ITEM (84-02-02) This item involved control of ambient temperature within the Diesel Generator building. The inspector reviewed the following documents with regard to the control of the ambient air temperature:

-- FSAR Review Question F430.74

-- Logic Diagram LSK-22-7A-Rev. 6

-- Drawing ESK-10ANN635

-- Loop Calibration Report IL2HVP-013

The inspector noted inconsistent set points for the low level temperature alarm. The licensee was asked to review the design. This item remains open.

n. (Closed) UNRESOLVED ITEM (84-05-02) This item involved Quality Control inspection of small bore valve reassembly. SWEC issued Inspection Report (IR) P4S00469 to document the following corrective actions:

-- Issuance of bolted joint data sheets for all installed valves with 100% torque check performed.

-- Sampling reinspection of valve body marking in accordance with Contromatics data reports to assure correct pieces were reassembled for each valve. The sample found that no deficiencies were present.

-- Revision to Construction Procedure CSI-14.16, "Disassembly/Reassembly of ASME III Large and Small Bore Valves or Components" require FQC notification whenever the valves are disassembled or reassembled.

-- Control of future installation of the Contromatics valves through the issuance of ASME Bolted Joint Data Sheets.

The inspector reviewed the SWEC inspection records regarding the valve re-inspection and issuance of Bolted Joint Data Sheets. The inspection records noted the existence of voided records. SWEC QA ascertained that the records should have been superseded instead of voided. Measures were implemented to correct the marking. This item is closed.

o. (Closed) VIOLATION (84-06-05) Thread engagement of spring canister support rod was not verified by Quality Control. The licensee determined that six Type A spring canisters had been previously installed. SWEC issued Engineering and Design Coordination Report (E&DCR) C02644 to provide sight holes on all Type A spring canisters. The installed supports were modified to include sight holes. The installed engagements were satisfactory. ITT modified inspection plan FQC-4.2.-14-11, "Inspection of Installed Pipe Supports" to include an inspection attribute to verify sight holes as required. The ITT QC inspectors were retrained to the revised procedure. This item is closed.

p. (Closed) UNRESOLVED ITEM (84-08-07) Radiographic film archive quality tests were not performed by Reactor Controls. RCI has modified procedures RE-1, "Radiographic Examination Procedure" and RE-2, "Radiographic Examination Procedure for RPV Modification Work" to include provisions to perform archive quality checks on a routine basis while film is developed. The inspector reviewed correspondence where film samples had been forwarded to Kodak for residual thiosulfate concentration checks. This item is closed.

q. (Closed) FOLLOWUP ITEM (84-09-02) Controls for the application of fireproofing were inadequate. Debris associated with the fire protection activity was found in a cable tray. Unsatisfactory inspection reports E4007361 and S4027457 were closed based on FQC reinspection of the work area and cable trays for cleanliness. The fireproofing contractor personnel were trained in their responsibility to provide protection of permanent plant equipment from their work activities. The inspector observed fireproofing work in progress and concluded the other installations in the affected area were adequately protected from the fireproofing operation. Based on the recent observations, this item is closed.

r. (Closed) UNRESOLVED ITEM (84-11-07) This item involved station battery installation seismic and environmental qualification documentation for the interrack and inter-tier cables on batteries 2BYS*BAT2A and 2BYS*BAT2B. The cable vendor certified that the cables can withstand the associated mild environment requirments. SWEC engineering ascertained the seismic battery tests were conducted with equivalent connected cable weights. The licensee determined that the HPCS battery seismic qualification had not taken into account the connected

cable mass. A Construction Deficiency Report (CDR) 84-00-47 was identified for that concern. SWEC issued E&DCR F41663A to replace the 750 MCM cable with a #2AWG cable to reduce the loadings on the battery terminal. The original concerns regarding battery installations 2B45*BAT2A and 2BYS* BAT2B have been resolved. The full resolution of the HPCS inter-rack and inter-tier cables will be verified during the closure of CDR 84-00-47. This item is closed.

s. (Closed) UNRESOLVED (84-11-09) Controls for the application of fireproofing were inadequate. Several class IE electrical cables between the control and reactor buildings were coated with fireproofing materials. SWEC FQC issued an unsatisfactory inspection report E4008135 identifying the affected cables. After removal of the fireproofing coatings, the electrical cables were reinspected by SWEC FQC and found satisfactory. The fireproofing contractor was reinstructed to exercise greater controls over the application of fireproofing. SWEC Engineering evaluated the compatability of the fireproofing materials with the electrical cables. SWEC Engineering concluded the cable jacketing material would not be affected adversely by the fireproofing material. The inspector observed some fireproofing work on elevation 261' of the control building. Duct work, piping, pipe supports, cable tray, electrical equipment and other installed commodities were adequately protected by the plastic covers to prevent inadvertent application of fireproofing materials. Based on the licensee actions and the inspector's observation, this item is closed.

t. (Open) VIOLATION (Inspection Report 84-13) Inspection Report 84-13 issued two notices of violation. The licensee responded by letter dated November 9, 1984 which detailed planned corrective and preventive actions. The licensee response has been accepted and the implemented actions will be examined during a future inspection.

u. (Open) UNRESOLVED ITEM (84-15-06) This item involved adequacy of RCI responses to NMPC generated Corrective Action Requests (CARs). The inspector noted that SWEC has implemented the following steps to enhance the timeliness and quality of the RCI responses:

-- SWEC QA will pre-review the issued CARs for clarity.

-- The CARs will be hand delivered to the affected organization.

-- Within three days of receipt, a draft response to the CAR will be provided from the affected organization to SWEC QA.

-- NMPC QA will review the draft response for acceptability.

-- Two SWEC QA personnel have been dedicated to coordinate the CAR responses.

The inspector reviewed the NMPC CAR status report of January 24, 1985. It was noted that 13 RCI responses to either Audit Finding Reports (AFRs) or CARs were overdue. Pending the resolution of the outstanding overdue RCI responses, and the verification that the enhancements outlined above are effective, this item will remain open.

v. (Closed) UNRESOLVED ITEM (84-15-09) This item involved certification and use of Nondestructive Examination (NDE) Level I personnel. The inspector reviewed ASME code Interpretation III-1-77-128 which clarifies that Level I personnel may evaluate NDE indications in accordance with written instructions. The inspector was informed that the liquid penetrant examinations had been conducted in accordance with CBI Procedure PT 11. The licensee has substituted the SWEC Standard Nuclear Quality Assurance Program for Section 3 of the Nine Mile Point 2 PSAR. The SWEC program complies with the 1975 version of SNT-TC-1A. The inspector informed the licensee that Level I personnel may not interpret NDE results such as radiographic or ultrasonic test data. This item is closed.

w. (Closed) FOLLOWUP ITEM (84-19-06) This item involved the use of leveling nuts on concrete anchor installations. Specification S203G has been changed by E&DCR C03161 which specifically prohibits the use of leveling nuts for concrete expansion anchor installations. The inspector examined 22 supports in secondary containment and the auxiliary bay areas to determine if leveling nuts were used in concrete expansion anchor installations. None of the expansion anchors were found with leveling nuts under the support base plate. Based on the change to the specification S203G and the inspector's observations, this item is closed.

4. Concrete Expansion Anchors

a. As noted above in section 3w, the inspector examined 22 supports to determine if leveling nuts were used under baseplates. During this inspection, ITT support BZ-71-AAV in the south auxiliary bay elevation 175' was found with 2 oversized nuts concentric to the installed concrete expansion anchors. These nuts were being used as shim material between the bottom of the base plate and the concrete floor. Support BZ-71-AAV had been FQC accepted by ITT. Specification P301J Rev.3 only allows solid shims and grouting as acceptable shimming materials. The inspector reviewed ITT's inspection plan FQC 4.2-16-7 which contains an attribute to verify the use of correct shimming materials. ITT issued F10.1B number FU6637 identifying the deviation. The support was subsequently reworked and found to be acceptable. Training has been provided to inspectors and craft regarding proper shimming material. The inspector had no further questions.

b. To determine the frequency of FQC inspections for concrete expansion anchors the inspector reviewed the following documents:

- SWEC QC inspection plan N203GFA001 Rev.8
- SWEC QC inspection plan N203GFA003 Rev.8
- ITT QC inspection FQC-4.2-16-7 Rev. 4
- JCI QC inspection QAS-1104
- ITT IOM to Bob Tidd dated 9/1/83
- SWEC IOM dated 1/11/83 Serial 9M2M-1937 from R.L. Wagner to all site contractors.
- Specification S203G Rev.5

All inspection plans were found to comply with the inspection frequency as required by specification S203G. The inspection plans exceed the specification frequency for final installation inspections. The specification calls for random inspections while FQC is inspecting at least 85% of the installations. Although the inspection frequency is adequate, the documents that define the frequency in some cases are not clearly stated. The inspector found the ITT's inspection frequency to be defined by an IOM dated 9/1/83. Through discussions by the inspector with JCI personnel, it was apparent that the JCI daily surveillance inspections on expansion anchor drilling operations are not consistently implemented as defined by the FQC inspection plan, QAS 1104. This item is open pending the review by the licensee of the necessity to incorporate the concrete expansion anchor inspection frequencies within the ITT and JCI inspection programs. (84-21-03)

QA Category II support BZ-416-P-2 was identified by the inspector to be in conflict with the spacing requirements given in specification S203G between the support expansion anchor and an embedded unistrut (PT5ON). The spacing violation potentially affects the use of the QA Category I unistrut. The inspector was informed that neither ITT QC nor Field Engineering had been involved with the installation. N&D IG-5742 was issued to identify the Hilti bolt spacing violation. This item is unresolved pending the inspectors review of the final disposition of this item and the identification of the licensee control over Category II anchor installations in close proximity to Category I items. (84-21-04)

5. Design Control

a. The inspector observed welding and grinding operations on the refueling equipment platform at elevation 353' of the Reactor Building. A Weld Material Request that identified the work to be QA Category II was reviewed. A cognizant SWEC engineer who stated that the platform erection was in accordance with QA Category II requirements was interviewed. The inspector reviewed E&DCR C91328 which amended job specification P275D to allow SWEC to errect the GE designed refueling platform. The E&DCR had classified the platform as a QA Category II component, and no QC inspection had been performed during the field erection activity.

The inspector reviewed FSAR Table 3.2-1 and section 9.1.4.1.1 which both identified the refueling platform as a safety related item fabricated under 10 CFR 50 Appendix B criteria. The inspector reviewed the following documents that pertain to design changes and QA classification:

-- PSAR Appendix D.3.4

-- SWEC Engineering Assurance Procedure (EAP) 3.6, 'Definition of Quality Assurance Categories and Marking of Documents"

-- EAP 6.5, "Preparation, Review, Approval, and Control of Engineering and Design Coordination Reports (E&DCRs) - Computerized Logging and Tracking System"

The inspector noted that the PSAR specifies that design changes will receive the same level of review as original issue specifications or drawings. EAP 3.6 requires that the QA level affixed to a drawing be reviewed to assure conformance with the FSAR section 3.2.2 QA Category definition. EAP 6.5 does not specify how to determine the QA category associated with an E&DCR, nor does it reference EAP 3.6 to achieve the review commensurate with the original design. The failure of SWEC engineering to control design interfaces and to institute design change control measures commensurate with those applied to original design documents, which resulted in the incorrect QA classification of a component relative to the FSAR description, is a violation of 10 CFR 50, Appendix B, Criterion III. (84-21-05)

The licensee subsequently issued E&DCR C91328A which upgraded the refueling platform to QA Category I. NMPC licensing then evaluated the platform and determined it was non-QA Category I. E&DCR C91218B was issued to remove the component from Appendix B QA treatment. The inspector noted the issuance of Licensing Document Change Notice 1498 to revise the FSAR to reflect the new QA classification of the platform. As the Safety Evaluation Report (SER) has been issued, the inspector informed the licensee that classification of the platform

as a Category II item would be at their risk until NRR has reviewed and approved the FSAR amendment. The inspector additionally requested that the licensee solidify their position on Regulatory Guide 1.29 QA requirements for inspection criteria of seismic II over I items.

6. HVAC Supports

The inspector examined QC accepted QA Category I HVAC supports DSA-1360 and DSR-1361 at elevation 261' of the Control Building to ascertain compliance with the design drawings. The inspector reviewed the following design drawings that depict the support configurations:

-- Drawing BZ-739D-19, "Seismic Duct Support Details Control Building" (sheet 32 of 390)

-- Drawing BZ-739D-19, "Seismic Duct Support Design 4" (sheet 5 of 390)

-- Drawing BZ-739D-19, "Seismic Duct Support Design 5" (sheet 6 of 390)

-- Drawing BZ-739J-15, "Seismic Duct Supports/Support Tabulation" (sheet 22 of 27)

-- Drawing BZ-739C-14 (sheet 3)

The inspector found that support DSR-1361 was in compliance with the design requirements.

The inspector noted conflicting design details have been issued for the generic support design and alternate design details for Support DSA-1360. In particular, several dimensions had been mislabeled on the alternate design that depict details for the location of the tension bracing. The inspector observed that support DSA-1360 failed to conform to the design requirement that the tension bracing angular tolerance remain within plus or minus 5 degrees. The inspector was informed by SWEC QC that tension bracing configuration checks had not been performed for a majority of the DSA-1360 generic HVAC supports. The failure of SWEC engineering to convey consistent HVAC support design information to the field in conjunction with the failure of SWEC QC to perform inspections to ensure the configuration conformance of generic support type DSA-1360 is a violation of 10 CFR 50, Appendix B, Criteria III and X. (84-21-06)

The licensee has subsequently initiated a reinspection of approximately 130 HVAC supports of the same generic type as DSA-1360. The inspector was additionally informed that SWEC engineering has reviewed the HVAC support details to assure that no other inconsistent design information has been presented to the field.

7. Rework Control

SWEC small bore pipefitters were observed on elevation 261' of the control building disassembling service water system valve SWV88A. The valve was disassembled to prevent potential leakage through gaskets during system pressurization. The disassembly of this QA Category I valve had been authorized by an IOM from SWEC advisory operations department (AOD). It was determined FQC had not been involved with the disassembly and reassembly process even though the valve had been previously FQC accepted. According to SWEC procedure QS 14.1-NM, rework of this nature is to be initiated and controlled by the use of a rework control form. This item is unresolved pending the licensee's review of the adequacy and implementation of rework controls during test phases. (84-21-07)

8. Preservice Inspection Program (PSI)

The inspector interviewed personnel associated with the site Preservice Inspection Program (PSI). In particular personnel from SWEC engineering, Nuclear Energy Services (NES), and Factory Mutual (ANI). The following documents that pertain to the PSI program were reviewed:

-- FSAR "Preservice and Inservice Inspection Plan"

-- Specification P281V, "ASME XI Preservice and Inservice Inspection Services"

-- NES document 80A9021 "Inservice Inspection QAM" Rev 6

-- NES procedures 80A7716, "Visual Examination Procedure"

- 80A3537, "Installation Procedure Inservice Inspection Vessel Track System"
- 80A7720, "Liquid Penetrant Examination Procedure"
- 80A7717, "Ultrasonic Examination General Requirements"
- 80A9068, "Procedure for Certifying Nondestructive Examination Personnel"
- 80A9069, "Certification of Visual Examination Personnel"
- 80A9032, "Qualification of Inspectors"
- 80A9082, "Preparation of NES Nonconformance Reports"

The inspector identified that the program does not include provisions to hardmark weld identification numbers. The licensee method to verify joint identification during operational phases when insulation covering has been applied to piping systems is an open item. (84-21-08)

9. Corrective Action Systems

a. The inspector reviewed NMPC procedure QAP 16.01, "Corrective Action Requests." The Corrective Action Request (CAR) is used to document and obtain resolution to programmatic deficiencies. The CAR program provides for 10 CFR 50.55(e) review for reportability to the NRC and provides a mechanism for NMPC to stop further processing if necessary. The inspector reviewed the following CARs:

CAR Number	Subject	Potentially Reportable Under 50.55(e)	Stop Further Processing
84.131	JCI Weld Procedures Backing Gas Flow	No	No
84.133	Documentation of Inspection Results	No	No
84.134	JCI Inspector Certification	No	No
84.135	Installation GAPS	No	No
84.138	Installation of HVAC Supports	No	No
84.139	Material Traceability Hardmarking	No	No
84.142	Minimum Wall Violations	Yes	No
84.146	E&DCR for Electrical Separation	No	No
84.147	Raceway QC Inspection Reports	No	No
84.148	JCI Minimum Wall Violations	Yes	No
84.149	Nonconformances Documented on E&DCRs	No	No
84.150	JCI Lead Auditor Certification	No	No
85.151	QA Information not on CMTRs	No	No
84.152	HVAC Inspection Report Did Not List Design Document	No	No
84.155	Installed HVAC Equipment Not Protected	No	No
84.158	Compliance of QA Programs to Codes/Standards	No	No
84.164	Suspected Trend Investigation Report on SWEC Deficiencies	No	No
84.170	JCI Implementation of Stop Work Action	No	No
84.174	RCI Multi Function Welds Undersized	Yes	No
84.175	Primary Containment Coating	No	No
84.176	SWEC review of Graver NDE Procedures	No	No
84.177	Compliance to Regulatory Guides/ Codes/Standards in Site QA	No	No

The items documented as potential 50.55(e) deficiencies have been reported to the NRC. The inspector had no questions on the implementation of the CAR system by NMPC QA.

b. The inspector reviewed Project Procedure (PP)-102, "SWEC Corrective Action Request." SWEC issues CARs to identify and provide corrective action on potentially generic conditions which are adverse to quality. The CAR review provides for identification of potential 50.55 (e) conditions. The inspector reviewed the following SWEC CARs:

CAR Number	Subject	50.55(e) Review Initiated
AA001	Inadequate QC Inspector Performance	No
AA002	Dissimilar Bus Bar Material	Yes
AA003	Inspection Report Closed Without Verification of Corrective Action	No
AA004	Voided Inspection Records	No
AA005	Full Penetration Welds Made Without Backing Material	Yes
AA006	JCI Use of Unapproved Installation Drawings	Yes
AA007	Duplicate Radiography Film	Yes
AA008	Misoperation of Rosemount Master Trip Units	Yes
AA009	Poor Identification of Outstanding Work Items on Equipment Release	Yes
A0010	Class IE Documents Not Properly Marked	No
A0011	IEEE Drawing Noncompliance	No
AA012	Review of Supplier Drawings	No
AA013	Section XI Program Not Prepared/Reviewed by NMPC	No
AA014	Improper Incorporation Vendor PM Requirements	No
AA015	Finger Tight Torqued Bolts	Yes
AA016	Inadequate Review of RCI Procedure for Head Stud Installation	No
AA017	Valve Modification Not Performed Under Section XI Program	Yes

After review of the CAR program, the inspector had no further questions.

10. Quality Performance Management Program (QPMP)

The inspector reviewed QPMP Report number 12 and attended the QPMP review board meeting on January 17, 1985. Licensee senior project/quality personnel participated in the review board meeting. The inspector had no further questions.

11. Unresolved Items

Unresolved items are matters for which more information is required in order to ascertain whether they are acceptable items, or violations or deviations. Three unresolved items were identified within this inspection in paragraph 2, 4, and paragraph 7.

12. 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. Apparent violations of NRC requirements were discussed with licensee plant management during an exit meeting held on February 1, 1985. Based on the NRC Region I review of this report and discussions held with licensee representatives on February 1, 1985, it was determined that this report does not contain information subject to 10 CFR 2.790 restrictions.