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

REGION III

Report No. 50-254/82-06; 50-265/82-07(DPRP)

Docket No. 50-254; 50-265 License No. DPR-29; DPR-30

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

Facility Name: Quad-Cities Nuclear Power Station, Units 1 & 2

Inspection at: Quad-Cities Site, Cordova, IL

Inspection Conducted: February 23, 1982, through April 27, 1982

Inspectors: N. J. Chrissotimos 4-27-82

S. G. DuPont 4/27/82

Approved by: Roger D. Walker, Chief 4/28/82
Reactor Projects Section 1C

Inspection Summary

Inspection on February 23, 1982, through April 27, 1982 (Reports No. 50-254/82-06; 50-265/82-07(DPRP)
Areas Inspected: Operational Safety Verification, Monthly Maintenance Observation, Monthly Surveillance Observation, Licensee Event Report Followup, Design Changes and Modifications, Organization and Administration, Calibration, Audit Program, Inservice Inspection Program, Apparent Falsification of Personnel Certification, Reactor Water Cleanup Pipe Repairs, TMI Action Plan, Followup of Headquarters Request, QA Program Review, Spent Fuel Modification, Spent Fuel Pool Activities, and Plant Scrams. The inspection involved a total of 391 inspector-hours onsite by two NRC inspectors including 78 inspector-hours onsite during off-shifts.
Results: No items of noncompliance were identified.

DETAILS

1. Persons Contacted

*N. Kalivianakis, Superintendent
T. Tamlyn, Assistant Superintendent Operations
D. Bax, Assistant Superintendent Maintenance
L. Gerner, Assistant Superintendent for Administration
*J. Heilman, Quality Assurance, Operations
*G. Tietz, Technical Staff Supervisor

The inspector also interviewed several other licensee employees, including shift engineers and foremen, reactor operators, technical staff personnel and quality control personnel.

*Denotes those present at the exit interview on April 27, 1982.

2. Operational Safety Verification

The inspector observed control room operations, reviewed applicable logs and conducted discussions with control room operators during the months of March and April, 1982. The inspector verified the operability of selected emergency systems, reviewed tagout records and verified proper return to service of affected components. Tours of Unit 1 and 2 reactor buildings and turbine buildings were conducted to observe plant equipment conditions, including potential fire hazards, fluid leaks, and excessive vibrations and to verify that maintenance requests had been initiated for equipment in need of maintenance. The inspector by observation and direct interview verified that the physical security plan was being implemented in accordance with the station security plan.

The inspector observed plant housekeeping/cleanliness conditions and verified implementation of radiation protection controls. During the months of March and April, 1982, the inspector walked down the accessible portions of the Unit 1 RHR System and the Unit 2 SBGT Systems to verify operability. The inspector also witnessed portions of the radioactive waste system controls associated with radwaste shipments and barreling.

These reviews and observations were conducted to verify that facility operations were in conformance with the requirements established under technical specifications, 10 CFR, and administrative procedures.

No items of noncompliance were identified.

3. Monthly Maintenance Observation

Station maintenance activities of safety related systems and components listed below were observed/reviewed to ascertain that they were conducted in accordance with approved procedures, regulatory guides and industry codes or standards and in conformance with technical specifications.

The following items were considered during this review: the limiting conditions for operation were met while components or systems were removed from service; approvals were obtained prior to initiating the work; activities were accomplished using approved procedures and were inspected as applicable; functional testing and/or calibrations were performed prior to returning components or systems to service; quality control records were maintained; activities were accomplished by qualified personnel; parts and materials used were properly certified; radiological controls were implemented; and, fire prevention controls were implemented.

Work requests were reviewed to determine status of outstanding jobs and to assure that priority is assigned to safety related equipment maintenance which may affect system performance.

The following maintenance activities were reviewed:

Unit 1

WR 15517	Replace head gasket and valve gasket on Diesel air start compressor
WR 16072	Tightened bolts on cover of Diesel Generator lube oil cooler
WR 17589	Replaced micro-switches to the RCIC 1A and 1B valves
WR 14576	'A' SBGT train discharge damper
WR 14577	'B' SBGT train discharge damper
WR 15004	125 vDC battery ground
WR 16146	Repaired faulty circuit board in the 1B MSL rad monitor
WR 18055	Recalibrated flow switches on the core spray low flow valves

Unit 2

WR 14721	Inboard 'B' feedwater check valve seal ring replacement
WR 14729	Outboard 'B' feedwater check valve seal ring replacement
WR 14530	RCIC steam supply valve repacking
WR 13328	Adjusted high limit on the RCIC flow controller
WR 14942	Adjusted seals and caulked RHR service water vault penetrations

WR 15277	
WR 15275	
WR 15276	24/48 vDC battery cell replacement
WR 16273	
WR 16274	
WR 16275	
WR 16276	24 v battery cell replacement
WR 17735	CRD 42-07 insert/withdrawal line
WR 17244	Clean-up suction piping replacement

Following completion of maintenance on the Unit 1 "A" loop of shutdown cooling mode of RHR, Unit 2 24v battery and the reactor cleanup systems; the inspector verified that these systems had been returned to service properly.

No items of noncompliance were identified.

4. Monthly Surveillance Observation

The inspector observed technical specifications required surveillance testing on the Unit 1 and 2 Diesel Generators and verified that testing was performed in accordance with adequate procedures, that test instrumentation was calibrated, that limiting conditions for operation were met, that removal and restoration of the affected components were accomplished, that test results conformed with technical specifications and procedure requirements and were reviewed by personnel other than the individual directing the test, and that any deficiencies identified during the testing were properly reviewed and resolved by appropriate management personnel.

The inspector also witnessed portions of the following test activities:

Unit 1

QOS 1600-9	Reactor Building to Torus Vacuum Breaker
QOS 1000-2	LPCI Pump Operability
QOS 1000-3	LPCI Valve Operability
QOS 1000-4	RHR Service Water Flow Rate
QOS 1000-5	RHR Service Water Valve Operability
QOS 6600-1	Diesel Generator Load Test
QOS 6600-2	Diesel Starting Air Test
QOS 6600-3	Diesel Fuel Transfer Operability
QIS-8	High Drywell Pressure Auto & Blowdown Initiation
QIS-12	2/3 Core Level RHR Containment Spray Permissive
QIS-14	Low Reactor Pressure 325 psi RHR/Core Spray Permissive
QIS-49	Reactor High Pressure Shutdown Cooling Permissive Isolation
QIS-54	Torus Water Level Indication

Unit 2

QOS 1600-9	Reactor Building to Torus Vacuum Breaker
QOS 1000-4	RHR Service Water Flow Rate
QOS 1000-5	RHR Service Water Valve Operability
QOS 6600-1	Diesel Generator Load Test
QOS 1300-2	RCIC Pump Operability
QOS 1300-3	RCIC Valve Operability
QOS 2300-2	HPCI Pump Operability
QOS 2300-3	HPCI Valve Operability

No items of noncompliance were identified.

5. Licensee Event Reports Followup

Through direct observations, discussions with licensee personnel, and review of records, the following event reports were reviewed to determine that reportability requirements were fulfilled, immediate corrective action was accomplished, and corrective action to prevent recurrence had been accomplished in accordance with technical specifications.

Unit 1

RO 82-01/03L, dated January 13, 1982, ECCS level switch was damaged and made inoperable.

The instrument maintenance department was performing routine calibration adjustments when the level switch actuator shaft was jarred loose, causing the instrument to become inoperable. Instrument personnel were unaware of operability requirements. Thus, the switch was not immediately tripped. This condition lasted approximately two hours. The failed switch assembly is one of four switches involved in initiating the ECCS. The other three switches were operable and would have performed as designed if required. Thus, only the degree of redundancy was compromised for this period.

The inspector discussed the situation with the licensee and indicated that although this occurrence was insignificant in nature that instructions and training of both instrument mechanics and foremen need to be enhanced.

The licensee has reinstructed the foreman with regards to technical specification operability requirements and has initiated steps to increase the scope of instrument mechanic training to include overall plant interactions.

RO 82-02/03L, dated February 2, 1982, failure of the 1/2 Diesel Generator to start and trip following routine maintenance.

The cause of the failure was determined to be a bent insulator card that bound against adjacent relays, preventing the de-energizing of the start failure relay and energizing of the engine control relay which resulted in tripping of the engine. The faulty card was replaced and the diesel generator tested successfully on February 3, 1982.

RO 82-03/03L, dated February 5, 1982, instrument drift resulting in exceeding torus water level Technical Specifications.

RO 82-04/03L, dated March 7, 1982, instrument drift resulting in isolation of RCIC steam line.

A bellows type model 288 Barton instrument's setpoint drifted resulting in an alarm and isolation of the RCIC steam line. Due to the increase tendency of drifting by the high steam flow micro switches, the switches will be replaced.

RO 81-19/03L, dated October 23, 1981, torus water level Technical Specifications limit exceeded during HPCI surveillance.

Concerning 81-19, the report had previously been issued as an equipment failure. Further review concluded that while coordinating final adjustments on the Unit 1 HPCI motor speed changer control linkage, the operating engineer was informed by the unit operator that torus level was approaching its Technical Specification limit. The operating engineer reasoned that to stop the HPCI turbine to pump down the torus would significantly prolong a degraded mode of operation with HPCI inoperative. Thus, the supervisory decision was made to complete the adjustments which returned HPCI to service in 45 minutes. The Technical Specifications for torus level (+2 inch) was exceeded at +3.0 inch. This occurrence has been reviewed thoroughly with the operating engineer, unit operators, and shift engineers, and the inspector has no further concerns in this area.

RO 81-20/03L-2, dated March 8, 1982, supplemental report to 81-20, leak in the underground supply line of the RHR.

Unit 2

RO 82-02/03L, dated January 26, 1982, instrument drift of the main steam line low pressure switch exceeded limits.

RO 82-03/01T, dated February 23, 1982, during surveillance, a crack was found in CRD 42-07 housing flange.

During a reactor vessel hydrostatic pressure test, a leak was found in the control rod drive withdrawal line at the point of inlet to the CRD housing flange. Visual inspection of the withdrawal line revealed pitting on the inside of the line where it penetrated the CRD housing flange.

The senior resident inspector visually inspected another insert and withdrawal line and determined that no excessive pitting existed although oxidation was evident.

To determine the generic applicability of this occurrence, the senior resident also inspected a drive at the Dresden station. It was determined that although oxidation was present no excessive pitting was seen.

Based on visual inspections at both plants, it appears that the excessive pitting found at Quad-Cities in the withdrawal line is an isolated event. The inspector has no further concerns in this area.

RO 82-04/03L, dated February 24, 1982, failure of the RCIC high steam flow switch during surveillance.

Concerning 82-04, the Barton model 288, bellows type, instruments installed in the RCIC system has demonstrated an increased tendency to drift and has been replaced with like-for-like instruments.

RO 81-21/03L, dated October 6, 1981, deterioration of fire retardant material in 9 fire barrier penetrations.

Concerning 81-21, it has been determined that the fire retardant material was replaced prior to January 1, 1982, with approved material.

No items of noncompliance were identified.

6. Design Changes and Modifications

The inspector reviewed design modifications between January, 1981, and April, 1982, to verify that the modifications were approved in accordance with Technical Specifications and established QA/QC controls.

The following procedures were reviewed:

Station QA Manual QP 3-1
Station QA Manual QP 3-2
Station QA Manual QP 3-3
Station QA Manual QP 3-51
Station QA Manual QP 6-1

QAP 300-11 R1
QAP 500-5 R5
QDM - 7
QDM - 11

The following outstanding modifications were verified for compliance with Technical Specifications and approved procedures:

Reactivity Control

Unit 1

M-4-1-81-9	Install a keylock switch to allow calibration of the scram air dump pressure switches.
M-4-1-81-10	Install new design high density fuel racks.
M-4-1-81-17	Install additional supports on CRD insert and withdrawal lines.

Unit 2

M-4-2-76-7	Increase the capacity of the spent fuel storage pool through the 1984 refueling until 1985.
M-4-2-81-9	Install a keylock switch to allow calibration of the scram air dump pressure switches.
M-4-2-81-10	Install new design high density fuel racks.
M-4-2-81-17	Install additional supports on CRD insert and withdrawal lines.

Reactor Coolant System

Unit 1

M-4-1-81-22	Modify feedwater check valve.

Unit 2

M-4-2-81-22	Modify feedwater check valve.

Emergency Core Cooling System

Unit 1

M-4-1-81-2	Install an environmental qualified junction box and high temperature wire for electromatic relief valve inside the drywell.
M-4-1-81-20	Install synchronizing check relay in the permissive logic of the manual close circuit of the diesel generator.

Unit 2

M-4-2-81-2 Install an environmental qualified junction box and high temperature wire for electromatic relief valve inside the drywell.

M-4-2-81-20 Install synchronizing check relay in the permissive logic of the manual close circuit of the diesel generator.

Unit 1/2

M-4-½-81-12 Modify synchronizing check relay in the 1/2 diesel generator.

Containment Systems

Unit 1

M-4-1-81-15 Replace the reactor building sump pump isolation reset buttons with illuminated push buttons.

Unit 2

M-4-2-81-15 Replace the reactor building sump pump isolation reset buttons.

Plant and Electrical System

Unit 1

M-4-1-81-19 Install protective packages between the RPS MG set and the RPS bus.

Unit 2

M-4-2-77-11 Install welding manifolds by the drywell equipment hatch.

M-4-2-81-19 Install protective devices between the RPS MG set and bus.

M-4-2-81-27 Modify the 24/48 vDC bus undervoltage relay and control room meter to be tied directly to the 24/48 vDC busses.

Radwaste Systems

Unit 1

M-4-1-81-14 Replace existing SJAE relief valves with a smaller valve with a higher setpoint to prevent valve chattering.

Unit 2

M-4-2-81-14 Replace existing SJAE relief valves

Unit 1/2

M-4-½-81-4 Install oil removal filter in the river discharge system.

M-4-½-81-5 Modify the Dow Radwaste Solidification System to use new lines.

The following completed modifications were reviewed by the inspector to verify that the modifications were accomplished in accordance with the approved procedures and Technical Specifications and that the completed tests were reviewed and evaluated against established acceptance criteria and that procedures and required procedures were changed to reflect the modifications:

Reactivity Control

Unit 1

M-4-1-80-23 Install a continuous monitoring system detecting water in the scram discharge volumes.

M-4-1-81-3 Install an automatic air dump system to open the backup scram valves on low air header pressure.

Unit 2

M-4-2-81-3 Install an automatic air dump system.

Instrumentation

Unit 1

M-4-1-79-23 Pressure suppression wide-range pressure instrumentation.

M-4-1-79-31 Replace RCIC temperature switch.

M-4-1-80-26 Replace RCIC steam line break protection relays with time delay relays.

M-4-1-80-32 Install pressure transmitter on scram header list.

M-4-1-81-5 Re-route pressure sensing lines for core spray leak detection system.

M-4-1-81-33 Re-wire radiation monitor power supply so that the monitor is continuously energized.

M-4-1-81-34 Rewire to allow low air receiver pressure alarm to be cleared with CAM de-energizer.

Unit 2

M-4-2-81-5	Reroute core spray leak detection system sensing lines.
M-4-2-81-33	Rewire radiation monitor power supply.
M-4-2-81-34	Rewire the low air receiver pressure alarm to clear when the CAM is de-energized.

Reactor Coolant System

Unit 2

M-4-2-82-1	Replace hanger on reactor water cleanup line.
M-4-2-82-4	Modify pipe hanger on reactor water cleanup line.

Containment System

Unit 1

M-4-1-79-28	Install the main steam relief valve positive position device.
M-4-1-80-11	Install control switch and seal-in relays to Group I and II valves.
M-4-1-81-4	Modify containment purge and vent valves.

Unit 2

M-4-2-81-4	Modify containment purge and vent valves.
M-4-2-81-26	Install drain lines on containment spray headers.

Plant and Electrical Systems

Unit 2

M-4-2-81-13	Install a manual disconnect device at the reserve bus end of the 125 vDC distribution bus.
M-4-2-81-18	Install manual shutoff valves and fill lines for the steam seal and gland steam loopseals to the hotwell.

The following modifications were observed by the inspector to verify that the activities were conducted in accordance with appropriate specifications and that acceptance testing was conducted in accordance with approved technically adequate procedures:

Unit 1

M-4-1-80-11	Installation of control switches and seal-in relays to Group I and II isolation valves.
M-4-1-81-3	Installation of an automatic air dump system on the scram headers.

Unit 2

M-4-2-82-1	Replace a hanger on the reactor water cleanup line.
M-4-2-82-4	Modify a pipe hanger on the reactor water cleanup line.

No items of noncompliance were identified.

7. Organization and Administration

The inspector verified that the licensee's onsite organizational structure, personnel responsibilities, and qualification levels were in conformance with Technical Specifications.

The following is a summary of changes in the licensee's organizational structure as reported to the resident inspectors between January 1, 1981, and April 30, 1982:

Lawrence Gerner, Assistant Superintendent, Administration
Gerald Tietz, Technical Staff Supervisor
Richard Robey, Senior Operating Engineer
Fred Geiger, Unit 2 Operating Engineer
Jeffrey Neal, Training Supervisor

No items of noncompliance were identified.

8. Calibration

The inspector verified that the following calibrations were completed in accordance with approved procedures and that two of the individuals performing the calibrations were qualified. Also verified the frequency was as specified in the Technical Specifications for the following calibrations and functional tests:

a. Reactor Protection Systems

Q1S - 1	SRM Upscale Rod Block
Q1S - 2	IRM Rod Block and Scram
Q1S - 3	APRM Rod Block and Scram
Q1S - 4	RBM Rod Block
Q1S - 11	Reactor Low-Low Water Level ECCS Initiation
Q1S - 12	2/3 Core Level RHR Containment Spray Permissive
Q1S - 13	Low Reactor Pressure 900 psi RHR/LPCI Permissive
Q1S - 14	Low Reactor Pressure 325 psi RHR/Core Spray Permissive
Q1S - 22	Low Pressure RHR Pump Discharge
Q1S - 23	Low Pressure Core Spray Pump Discharge

b. Isolation Systems

Q1S - 10	Low Reactor Water Level Scram and Low Low Reactor Water Level Group I Isolation
Q1S - 16	Steam Line High Flow HPCI Isolation
Q1S - 17	Low Reactor Pressure RCIC Isolation
Q1S - 18	Steam Line High Flow RCIC Isolation
Q1S - 20	Main Steam Line Low Pressure Isolation
Q1S - 21	Main Steam Line High Pressure Isolation
Q1S - 31	Main Steam Line High Radiation Scram and Isolation
Q1S - 32	Suppression Chamber Pressure Indication
Q1S - 34	Reactor Building Vent Duct Radiation Monitoring
Q1S - 35	Reactor Building Fuel Pool Radiation Monitoring

The following procedures were reviewed by the inspector to verify that the technical content satisfied applicable Technical Specifications and that considerations were included for appropriate signal compensations, points of signal insertions and that the calibrations are made at selected cardinal points appropriate to the range of instrumentation:

Q1S 1-1 Revision 2, November, 1981. SRM Upscale Calibration
Q1S 3-1 Revision 4, July, 1981. APRM Rod Block and Scram Calibration
Q1S 4-1 Revision 4, August, 1981. RBM Rod Block Calibration
Q1S 5-1 Revision 1, July, 1975. Reactor High Pressure Scram Calibration
Q1S 6-1 Revision 1, July, 1975. High Drywell Pressure Scram Calibration
Q1S 10-1 Revision 2, December, 1979. High, Low, and Low-Low Reactor Water Level Calibration
Q1S 11-1 Revision 2, December, 1979. Low-Low Reactor Water Level Calibration
Q1S 12-1 Revision 4, March, 1982. 2/3 Core Level Calibration
Q1S 13-1 Revision 1, July, 1975. Reactor Low Pressure (RHR/LPCI) Calibration
Q1S 14-1 Revision 1, July, 1975. Reactor Low Pressure 325 psi RHR/Core Spray Permissive Calibration
Q1S 15-1 Revision 1, July, 1975. HPCI Reactor Low Pressure Calibration
Q1S 16-1 Revision 2, October, 1980. HPCI Steam Line High Flow Calibration
Q1S 17-1 Revision 2, October, 1981. RCIC Reactor Low Pressure Calibration
Q1S 18-1 Revision 2, October, 1981. RCIC Steam Line High Flow Calibration
Q1S 19-1 Revision 2, July, 1977. Low Condenser Vacuum Calibration
Q1S 20-1 Revision 1, July, 1975. Main Steam Line Low Pressure Calibration
Q1S 21-1 Revision 1, July, 1975. Main Steam Line High Flow Calibration

Q1S 27-1 Revision 3, January, 1982. HPCI Turbine High Temperature Isolation Calibration
Q1S 31-1 Revision 4, July, 1978. Main Steam Line Radiation Log Rad Monitor Chassis
Q1S 32-1 Revision 2, October, 1980. Suppression Chamber Pressure Calibration
Q1S 34-1 Revision 5, June, 1981. Reactor Building Ventilation Monitoring Calibration

The following measuring instruments used as primary standards were verified as having been controlled in accordance with approved procedures, and that the required calibration frequency and accuracy were met. The inspector also verified the traceability of accuracy to the National Bureau of Standards.

Meriam Model 30 FD 10A well Manometer
Mansfield Green Model TQ-50 Brass Weights
General Radio Model 1340 Pulse Generator

The inspector also witnessed portions of the following calibrations and verified the accuracy of the testing devices used and that the calibration was performed in accordance with approved procedures:

Q1S 16-1 HPCI Steam Line High Flow Calibration
Q1S 19-1 Low Condenser Vacuum Calibration

No items of noncompliance were identified.

9. Audit Program

The inspector witnessed the performance of an audit conducted by QA personnel and verified that it is in conformance with Technical Specifications and approved procedures. The following audit reports were reviewed to verify that the content of the audits clearly defined the scope of the audit, that the audit was conducted by trained personnel not having direct responsibility in the area being audited and that appropriate followup actions and responses were adequately addressed:

a. Operations Audits

QAO 4-82-1	Technical Specifications 6.2.D.1
QAO 4-82-3	Technical Specifications 4.1 and 4.3
QAO 4-82-4	Technical Specifications 4.9.B.1
QAO 4-82-5	Technical Specifications required ISI Program for pump and valves
QAO 4-81-1	Station Procedure Control
QAO 4-81-2	Administrative Procedure Adherence
QAO 4-81-3	Nuclear Fuel Handling and Storage
QAO 4-81-4	Refuel Procedure Adherence
QAO 4-81-5	GSEP Operating Procedure Adherence
QAO 4-81-6	Onsite Review Function

QAO 4-81-8	Nuclear Engineering Activities
QAO 4-81-9	Radwaste Shipments
QAO 4-81-12	Updating of Required Drawings
QAO 4-81-13	Instrument Testing
QAO 4-81-14	Personnel Qualification
QAO 4-81-15	Fire Protection
QAO 4-81-16	QA Manual Compliance for the Training Program
QAO 4-81-17	Records Control
QAO 4-81-18	Surveillance Procedures
QAO 4-81-19	Review of Deviation Reports

b. Maintenance Audits

QAM 4-82-7	Hoisting and Rigging Equipment
QAM 4-82-8	Product Quality of Mechanical, Inc.
QAM 4-82-12	Maintenance activities in the areas of Design and Special Process Control
QAM 4-82-14	Document Control and Material Identification controlled by Station Construction
QAM 4-81-1	Handling, storage, shipping and material control activities
QAM 1-81-3	Implementation of Mechanical, Inc. QA Program
QAM 4-81-4	Product quality audit of feedwater spoolpiece
QAM 4-81-5	Comstock QA Program
QAM 4-81-6	Welding Material Control
QAM 4-81-9	Control of station records and reports
QAM 4-81-12	Training and qualification reports for special process
QAM 4-81-14	Portable test and measurement equipment
QAM 4-81-16	Traceability control of stored material
QAM 4-81-17	Item product quality
QAM 4-81-18	Morrison Construction Company - site personnel security screening
QAM 4-81-20	Item product quality by Continental Machine Company
QAM 4-81-21	Substation construction records
QAM 4-81-22	Hazardous materials control
QAM 4-81-23	On-site contractor activities
QAM 4-81-26	Maintenance training records

The inspector verified that the licensee audit program was adequate in detecting and implementing corrective actions through review of the audit findings.

No items of noncompliance were identified.

10. Inservice Inspection Review of Program

A review of planned ISI inspections to be conducted on Unit 1 during the fall outage was conducted by the inspector. During the review, the inspector questioned Technical Specification Table 4.6.1 Category N as applied to Section XI of the ASME B and PV Code and the licensee's interpretation of their applicability.

Section XI of the ASME B and PV Code in the 1974 Edition through the Summer 1975 Addenda contains Examination Category B-N-2 titled "Integrally - Welded Core Support Structures and Interior Attachments to Reactor Vessels." The requirements of Category B-N-2 are as follows:

Areas Subject to Examinations:

The areas shall include attachments and core-support structures welded to the vessel wall of the direct cycle boiling water type.

Extent and Frequency of Examinations:

The examinations during each inspection interval shall include 100 per cent of the visually accessible attachment welds and visually accessible surfaces of the core-support structure. This examination may be performed at or near the end of the inspection interval.

Examination Category B-N-2 is not to be interpreted to require removal of fuel support pieces, guide tubes, jet pumps, or other components for the express purpose of performing visual examination of the core support structure. Where components such as the preceeding are removed for other reasons during the inspection interval thereby providing access, remote visual examinations should be performed and documented.

The interpretation by the licensee would allow them to exceed the inspection interval (10 years), for attachments and core-support structures welded to the vessel wall, which will be fall, 1982. This apparent discrepancy was questioned by the inspector.

Discussions were held between NRR and the Commonwealth Edison Corporate office to resolve the issue. Commonwealth Edison had previously submitted a Technical Specification change so as to be consistent with ASME Section XI and their understanding of its applicability. NRR agreed with Commonwealth Edison that the intent of the inspection was not to remove components for the express purpose of performing visual examination of the core-support structure and that exceeding the interval for Category B-N-2 is not inconsistent with the intent of this inspection requirement.

The inspector has no further concerns in this area.

No items of noncompliance were identified.

11. Apparent Falsification of Personnel Certifications

On February 17, 1982, the NRC was notified that a subcontractor (NDE Level III examiner) notified the licensee that he had learned his signature had been apparently falsified on ultrasonic inspection certifications of four subcontractor employees. The four had been doing portions of ultrasonic testing on the reactor water cleanup system (IE Report 50-265/82-04).

The licensee immediately re-examined the work of the four individuals with qualified inspectors. The re-examination found no errors and their work was acceptable.

The licensee's immediate positive response to this event demonstrates a positive nuclear safety attitude. The licensee also inquired into the adequacy of the quality assurance program of its direct contractor. The contractor's response to the inquiry was acknowledged by the licensee. The licensee does not plan to take any further actions.

The inspector has no further concerns in regards to this matter.

No items of noncompliance were identified.

12. Reactor Water Cleanup Pipe Repairs

Following meetings and conference calls among representatives of NRR, Region III, IE Headquarters, CECO plant personnel and CECO corporate, the NRC issued a confirmatory action letter. This letter identified actions that had to be completed prior to proceding with the RWCU system repairs and action which must be taken following the repairs.

The senior resident inspector, assisted by a regional specialist, reviewed documentation and witnessed licensee actions and determined that the items identified in the confirmatory action letter had been accomplished.

The inspectors have no further concerns.

No items of noncompliance were identified.

13. TMI Action Plan Followup

Item III.D.3.3 - improved in-plant iodine instrumentation. Based on NRR review of submittal, no technical deviations from stated positions were requested. The licensee's implementation of this item was found to be acceptable.

Based on the results of the review conducted by NRR, item numbers I.A.1.3 (1), I.C.5, and I.C.6 are considered resolved.

No items of noncompliance were identified.

14. Followup on Headquarters Request

The inspector reviewed the instrumentation of Units 1 and 2 to verify that there were no Sigma Lumigraph Indicators, Model 9270, installed. Sigma Instruments, Inc. had identified a potential problem with the Model 9270 Lumigraph indicators. The potential deficiency was described as incorrect specified resistors installed within the indicator circuitry resulting in failure of the indication capability.

The inspector has no other concerns in this area.

No items of noncompliance were identified.

15. QA Program Review

The inspector verified that procedures associated with approved changes to the quality assurance program were implemented by the administrative control program and that licensee personnel having responsibility for regulatory commitments were informed of the significance of the specific changes.

No items of noncompliance were identified.

16. Spent Fuel Modification

The inspector, accompanied by the NRR licensing project manager and staff attorney, met with the intervenors and Commonwealth Edison on April 13, 1982, to discuss the intervenors' contentions. On April 21, 1982, a tour of the plant was conducted with a representative group of intervenors.

On April 23, 1982, a conference call among all parties was conducted. The intervenors formally requested to withdraw all contentions and to withdraw from hearing. This decision was based on the satisfactory resolution of all contentions by the staff and Commonwealth Edison.

The Atomic Safety Licensing Board Judges accepted the request and will act on closing the matter when all documentation requested is available to the board. Issuance of the order to amend the facility license to increase the capacity of the spent fuel pool will be acted on by the Director of Nuclear Reactor Regulation.

17. Spent Fuel Pool Activities

The inspector witnessed transfer of spent fuel from the Unit 1 fuel pool to Unit 2 fuel pool. These transfers are being conducted in preparation for Unit 1 refuel outage. The inspector also witnessed vacuum operations of the pools.

By direct observation, the inspector determined that fuel handling and cleanup operations were in conformance with Technical Specifications and approved procedures.

No items of noncompliance were identified.

18. Plant Scrams

Following the plant scrams on Units 1 and 2, the inspector ascertained the status of the reactor and safety systems by direct observation of the control room indications or by review of the unit logs. The inspector verified the establishment of proper communications between the licensee and the NRC Headquarters via the ENS communications network system.

The following scrams wer observed by the inspector:

Unic 1

On March 29, from 80 per cent power, the unit scrammed from a condenser low vacuum due to the loss of a loop seal.

The inspector observed from the control room the operator's immediate and corrective actions. All systems responded as expected. The licensee evaluated the cause as a spurious loss of a loop seal and returned the unit to service without experiencing any vacuum problems.

On April 17, while performing a backwash operation on a condensate demineralizer, an air-operated check valve on the hotwell return line was mispositioned and became stuck open, causing condenser vacuum to decrease, resulting in a low vacuum scram from 83 per cent power. All systems responded as expected and the condensate line-up was returned to normal.

To prevent recurrence during backwashing operation, the licensee gagged the valve in the closed position. The valve is not used during normal operations or emergency conditions. It is only utilized during precoat operations conducted during refuel outages. The unit was returned to service on April 18, 1982.

On April 19, the unit scrammed from 89 per cent power due to spurious high steam flow on channels A and B, causing a Group I isolation. The inspector verified by direct observation the operator's immediate and corrective actions. The licensee determined that the cause of the spurious high steam flow signals were from a contractor accidently striking an instrument rack containing the A and B channel contacts.

All systems responded as expected and the unit was returned to service the same day.

Unit 2

On March 6, 1982, the unit's master level controller failed to control the reactor vessel water level in the normal operating range, resulting in a main turbine trip at 48 inch vessel level. The reactor scram resulted from the turbine stop valves closure ($\leq$ 10 per cent valve closure). The immediate actions taken were determined to be correct and decisive.

The licensee evaluated the failure of the unit master level controller and returned the unit to service the same day with level control in manual. The master level controller was replaced on March 8, 1982, with an approved like-for-like controller.

No items of noncompliance were identified.

19. Exit Interview

The inspector met with licensee representatives (denoted in Paragraph 1) throughout the month and at the conclusion of the inspection on April 27, 1982, and summarized the scope and findings of the inspection activities. The licensee acknowledged the inspectors comments.