U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Report Nos. 50-373/85024(DRP); 50-374/85025(DRP)

Docket Nos. 50-373; 50-374 Licenses No. NPF-11; NPF-18

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

Facility Name: LaSalle County Station, Units 1 and 2

Inspection At: LaSalle Site, Marseilles, IL

Inspection Conducted: July 25 through September 6, 1985

Inspectors: M. J. Jordan

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Approved By: G. C. Wright, Chief
Reactor Projects Section 2

9/26/85
Date

Inspection Summary

Inspection on July 25 through September 6, 1985 (Reports No. 50-373/85024(DRP); 50-374/85025(DRP)

Areas Inspected: Routine, unannounced inspection conducted by resident inspectors of licensee actions on previous inspection findings; operational safety; monthly surveillance; monthly maintenance; Licensee Event Reports; unit trips; preparation for refueling; potential strike actions; regional requests; and environmental qualification replacement. The inspection involved a total of 250 inspector-hours onsite by four NRC inspectors including 56 hours onsite during off-shifts.

Results: Of the ten areas inspected, no deviations or violations were identified in eight areas; two violations were identified in the two remaining areas (failure to follow procedures - Paragraph 7; and failure to have adequate document control - Paragraph 11). The violations are considered to have only minor safety significance. They do, however, represent additional examples of areas that need increased management involvement.

DETAILS

1. Persons Contacted

G. J. Diederich, Manager, LaSalle Station
*R. D. Bishop, Services Superintendent
*C. E. Sargent, Production Superintendent
D. Berkman, Assistant Superintendent, Technical Services
*W. Huntington, Assistant Superintendent, Operations
*M. Jeisy, Quality Assurance

The inspectors also talked with and interviewed members of the operations, maintenance, health physics, and instrument and control sections.

*Denotes personnel attending the exit interview on September 6, 1985.

2. Licensee Action on Previous Inspection Findings

(Closed) Violation (373/84023-01; 374/84-30-02(DRP)): Violation of Technical Specification 3.6.1.8, drywell purge butterfly valves LCO violation. The licensee has completed corrective action including revisions to procedures LOP-RP-01, LOP-RP-02 and issuing procedures LOP-RP-03 and LOP-RP-04.

(Closed) Violation (373/84023-02; 374/84030-03(DRP)): Failure to follow administrative procedures. The required corrective actions including training and changes to the administrative procedures LAP-220-2 and LAP-220-3 have been completed.

(Closed) Violation (373/84033-06; 374/84040-05(DRP)): Failure to have adequate procedures for calibration and functional testing of HPCS valve leakage monitors. The licensee has completed revisions to the procedures.

(Closed) Violation (373/84023-04; 374/84-30-05(DRP)): Failure of operator to recognize off normal plant conditions in ventilation system and a safety relief valve. The licensee completed revisions to procedures and operator training as documented in a letter dated November 2, 1984 from D. L. Farrar to James G. Keppler. Subsequent additional action was documented in a letter dated April 19, 1985 from Cordell Reed to James M. Taylor.

(Closed) Violation (373/85009-02(DRP)): Failure to have an adequate procedure for system filling and venting resulting in a Unit 1 scram while valving in ADS low level instrument. The licensee revised the equipment out-of-service procedure and the procedure for conduct of operations to provide additional guidance on proper filling and venting.

No deviations or violations were identified in the review of this program area.

3. Operational Safety Verification

The inspector observed control room operations, reviewed applicable logs and conducted discussions with control room operators during the inspection period. The inspector verified the operability of selected emergency systems, reviewed tagout records, and verified proper return to service of affected components. Tours of Units 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 month of August 1985, the inspector walked down the accessible portions of the following systems to verify operability:

Unit 1 and 2 Standby Gas Treatment Systems
Unit 1 and 2 Standby Liquid Control Systems
Unit 1 and 2 Emergency Diesel Generators
Unit 1 and 2 Division I & III Batteries and Switchgear
Unit 1 and 2 RHR Service Water Pumps

Unit 2 was shutdown on the morning of August 1, 1985 for minor maintenance expected to take approximately three days. Planned maintenance activities included repair of an oil leak on the main turbine No. 6 Combined Intermediate Valve, repair of leaks on the low pressure heaters, and investigation of a high drywell area temperature. Initial drywell entry identified that a small section of insulation for a feedwater line had come loose and some minor ventilation damper adjustments were made. Upon returning the unit to power, the elevated drywell temperature remained a problem. The licensee was continuing to investigate. A region based inspector came to the site to follow the licensee's action. The results of this inspection will be documented in Inspection Report 373/85026; 374/85027.

On August 2 and 9, 1985 the inspector observed the establishment of compensatory measures as a result of the loss of the security computers. On August 2 the disk drives were repaired and returned to service. On August 9 the licensee replaced the disk drives with new designed disk drives. The system was returned to service on August 10, 1985.

The licensee reported on August 8, 1985 that one of the Unit 2 high level trip switches for the Reactor Core Isolation Cooling (RCIC) System was tripping at a lower than normal reactor water level. The normal trip of the RCIC turbine is at 55 inches reactor vessel water level. This switch (2B21-N101-B) was tripping at approximately 28 inches of reactor water level. Investigation by the licensee determined that the switch had been

replaced with an environmentally qualified switch and the calibration required by the modification package had not been accomplished. The modification package had been signed by electrical maintenance personnel, indicating that the calibration had been completed. The individual pulled a data sheet from the file and looked at the top of the sheet which read, "Calibration and Function Testing", and assumed the sheet was for the calibration without looking to see if the calibration portion of the sheet was filled out. The sheet had only been completed for a functional test of the "B" switch. The electrical mechanic then signed off the modification data sheet as calibration testing complete. A Quality Control (QC) inspector had also signed off the work package that the work, including calibration testing, had been accomplished. Since the modification included a large number of Environmentally Qualified (EQ) instrument replacements, the licensee had decided to close out portions of the modifications which were complete and leave a few instruments to be replaced at a later date. The "Incomplete Modification Review Checklist" had been signed by the QC supervisor for release and a Quality Assurance (QA) inspector for approval. Discussions with the QC and QA supervisors indicated the review for an incomplete modification review and a final modification review should be the same. The QC supervisor expects his people to review all the supporting documentation including the calibration test data to ensure the modification was accomplished correctly. The QA supervisor expects his people to randomly select supporting documentation for review. The QC inspector considered that his signature could be based on a review of the package to assure all required signatures were there and performing a partial review of the supporting data.

The inspector attended a training session on August 16 conducted by the QC supervisor with his people to clarify the intent of their signatures which are not just a signature review, but also a review of all supporting documentation. The "B" RCIC switches were calibrated satisfactorily. The "A" switch was not changed during the previous outage and was verified to be set correctly. Because the NRC wants to encourage and support licensee initiative for self-identification and correction of problems, the NRC will not issue a notice of violation for this item because it meets all of the criteria specified in 10 CFR, Part 2, Appendix C.

On August 13 the licensee reported that a test required by a modification package for the RCIC testable check valves had not been accomplished. A modification to the RCIC testable check valves had been accomplished during the outage to assist the check valve closing when there is no flow through the system. Included in this modification was a special test to be accomplished at approximately 150 psi reactor pressure to verify adequate injection flow. The Work Request (WR) had specified testing for adequate injection flow, a Local Leak Rate Test (LLRT), and a functional test (stroke test) of the valve but did not specify procedure numbers for accomplishing the tests. The LLRT and functional tests were performed by the licensee prior to starting the unit. A Shift Engineer had signed for the Operating Engineer on the modification approval sheet (Attachment B to LAP-1300-2) that modification testing was complete when, in fact, only

two of the three tests required by the work request were complete. The injection flow test was accomplished satisfactorily during startup of the unit after the outage on July 23, 1985 at approximately 950 psig. No notice of violation will be issued for this item consistent with the previously stated NRC policy.

The licensee has held tailgate sessions with appropriate personnel on the above events. The inspector reiterated the continuing concern for the licensee's inability to effectively manage activities at the station.

As a result of a high boron concentration in the Standby Liquid Control System (SBLC) the licensee declared an Unusual Event in accordance with the Generating Stations Emergency Plan at 11:00 p.m. on August 22, 1985 and commenced a normal Unit 2 shutdown as required by Technical Specifications. The analysis indicated a boron concentration of 14.26% by weight, the Technical Specifications upper limit is approximately 13.8% by weight. The Unusual Event was terminated at 5:10 a.m. on August 23, 1985 when the solution was returned to the required concentration. The shutdown was terminated at approximately 60% power and a normal power increase was initiated. The Unusual Event was required because an initial sample at 3:00 p.m. on August 22, 1985 found the boron solution to be out of specifications. Technical Specifications allow 8 hours to return the solution to the required concentration or a unit shutdown must be initiated. The licensee corrected the solution concentration on the afternoon of August 22, 1985, but the sample analysis did not confirm the anticipated correct concentration. The sample analysis takes approximately four hours to complete so the Unusual Event was required until additional samples could be analyzed.

4. Monthly Surveillance Observation

The inspector observed the operation of the Unit 2 Standby Gas Treatment System during the performance of the monthly operability test LOS-VG-M1. The inspector checked for any abnormal equipment operation and verified that local and control room flow indication complied with the Technical Specification requirements. The surveillance procedure was also reviewed for compliance with Technical Specification requirements.

The inspector also observed the control room portions of the Unit 1 Residual Heat Removal (RHR) System minimum flow bypass functional test LIS-RH-303, the Unit 1 turbine control monthly surveillance LOS-RP-M4, a test of the Economic Generation Control System LOP-SS-03 on Unit 1, and the functional test of the Unit 2 main steam line high flow MSIV isolation switches 2E31-N008B and 2E31-N009B. The inspector verified the use of technically adequate procedures, the use of appropriate radiological controls, conformance to Technical Specifications, and proper return of equipment to service.

No deviations or violations were identified.

5. Monthly Maintenance Observation

The inspector observed the disassembly and inspection of the Unit 1 High Pressure Core Spray System water leg pump (Work Request L51372). The inspector verified the use of technically adequate procedures, compliance with Technical Specifications and the ASME Code, and the use of appropriate radiological controls. The inspector noted that the pump inspection failed to identify the cause of the reported low pump discharge pressure. Subsequent investigation by the licensee after pump replacement found that the pump was acceptable and the associated pressure gages were out of calibration.

The inspector also observed the replacement of the two sets of air start motors on the 1A diesel generator. Upon replacement, the inspector observed the retest of the generator using the air start motors. The inspector questioned the method of testing each set of air start motors to assure their capability of starting the diesels. One set of air start motors is isolated from its air supply by closing the isolation valve at the compressor tank. The generator is then given a start signal and the other set of air start motors start the generator. However, the air line from the isolated compressor tank to a set of air start motors is not vented and thus is pressurized to 210 psig. When the start signal is given, this line is vented through a set of air start motors. The amount of assistance these motors add to the starting process until the line vents was not known. The tech staff engineer, after being questioned, agreed to evaluate whether the isolated air start motors are adding a significant starting force and whether the isolated line should be vented before starting the generator with the other set of air start motors. This will remain as open item (373/85024-01(DRP)).

No deviations or violations were identified.

6. Licensee Event Reports

Through direct observations, discussions with licensee personnel, and review of records, the following Licensee Event Reports (LERs) 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.

373/85050-00 - Ammonia and Chlorine/Detector ESF Actuations. The cause of the ammonia alarm was a jammed chemcassette tape. The cause of the chlorine alarm was a blocked glass orifice. Both conditions were corrected and the instruments returned to service.

373/85051-00 - Chlorine Detector Actuation. The actuation appears to have been caused by radio-frequency interference. The licensee is developing a special test to confirm this suspicion.

373/85054-00 - Auto-start of Emergency Make-up Train Due to PRM's Spiking. A procedural deficiency that would allow for auto starts of the train has been corrected and should preclude unnecessary starts of the train.

373/85052-00 - Manual Scram Following Loss of Both CRD Pumps. The cause of the CRD pumps failure was a discharge stop check valve that failed to close. Both CRD pumps discharge stop check valves were inspected and repaired. A new procedure for swapping of CRD pumps was written which calls for the closing of the discharge valve on the pump to be stopped (and its reopening upon successful transfer).

374/85022-01 - Reactor Scram While in Cold Shutdown. The cause of IRM's spiking was traced to a loose inboard penetration cable. The connection was repaired and no further problems noted.

374/85033-00 - Partial Group VI Isolation. Work was in progress to repipe the RHR system high flow isolation switches. The switches were isolated mechanically but isolation logic was not bypassed. When pressure was relieved, the system auto isolated. The event has been added to the License Requalification required reading.

374/85037-00 - Missed Surveillance on RCIC. After work was completed on the RCIC casing drain line, a test was performed to check for drain line leaks. QC was not present during this test. Because QC was not present, the test was considered incomplete, and the test was repeated with QC present. Scheduling personnel were counselled on the importance of ensuring that tests performed per work packages are witnessed.

373/85037-00 - Division II ADS Inoperable. Division II Low Low Low Level Permissive differential pressure switches were found wired incorrectly. A violation was issued on this item in Inspection Report 373/85017; 374/85017.

373/85045-00 - Manual Scram Due to Loss of Circulating Water. Flood of Lake Screen House. Circulating Water (CW) pump valve operator failure. This event was documented in Inspection Report 373/85017; 374/85017.

373/85046-00 - Loss of Both Diesel Fire Pumps for 15 Minutes. One was out of service for maintenance. Alternator belt broke during surveillance on the other. Out of service cleared to restore one pump.

373/85047-00 - Missed Off Gas Hydrogen Sample. Personnel error. The Radiation Chemistry Technician (RCT) took samples from the wrong location. Procedures were revised and a sign was posted.

373/85048-00 - "A" RHR Service Water PRM Inoperable, Sample Missed. This was a personnel error. Licensee issued memo to Rad Chem to improve communications.

373/85049-00 - Chlorine Detector Actuation. This was caused by dirt in the sensing line. It was cleaned and reset.

373/85053-00 - RHR S/D Cooling High Suction Flow Switch Inoperable. Switches were found to be piped in reverse. This event is documented in Inspection Report 373/85023; 374/85018.

373/85055-00 - Reactor Scram on False Low Level Signal. Standby Liquid Control (SBLC) valving error. See Paragraph 7 of this report.

374/85014-00 - Spurious Division I Isolation of Shutdown Cooling. Shutdown cooling outboard isolation valve closed while installing an Environmentally Qualified (EQ) relay because the outage had not adequately bypassed another relay which actuated and caused the isolation. This event is documented in Inspection Report 373/85019; 374/85021.

374/85020-00 - Missed Service Water Sample. The Rad Chem Foreman directed the Rad Chem Technician to sample the Unit 2 "A" RHR service water in lieu of Unit 2 service water. Technical Specification required sample frequency was 8 hours. The correct sample was not taken for 12 hours.

374/85023-00 - Spurious Safety Relief Valve Actuation While in Cold Shutdown. The cause could not be determined, the event has not reoccurred, and no safety significance was attributed because the plant was in cold shutdown.

374/85025-00 - Reactor Scrams Received While Shutdown. Inadequate procedure. Violation issued in Inspection Report 373/85017; 374/85017.

374/85026-00 - Diesel Generator 2B Start Failure. The unit was in cold shutdown and the diesel generator tripped while trying to start for the 18 month surveillance. A time delay relay and the 150 RPM speed switch were found defective and repaired. The time delay would have been bypassed if an actuation signal was received. A loose wire on the 150 RPM speed switch may have prevented its automatic start.

374/85027-00 - High Pressure Core Spray (HPCS) - CY Return Line Rupture. This LER was transferred for closure to Division of Reactor Safety by correspondence dated June 28, 1985 from C. E. Norelius to R. L. Spessard.

374/85029-00 - All Three Divisions of ECCS Inoperable. Level switch piped backwards. Escalated enforcement. See Inspection Report 374/85018.

374/85030-00 - Partial Group II Isolation While Performing Planned Test. Procedure problem. A violation was issued. This event was documented in Inspection Report 373/85019; 374/85021.

374/85031-00 - RHR S/D Cooling Switches Piped Backwards. Escalated enforcement. See Inspection Report 374/85018.

374/85032-00 - Unit 2 Leak Detection Division 1 and 2 RHR Differential Temperature Not Operable. The differential temperature sensors had been installed in the plant improperly since construction. See Paragraph 11 of this report for details.

374/85034-00 - Temporary Voltage Drop Due to 237X Transformer Failure. Dirty insulator caused a flashover and a small fire. Repair of the transformer was started.

374/85035-00 - Actuation of E Safety Relief Valve (SRV) and N SRV During Special Test. The special test using the Set Pressure Verification Device (SPVD) caused the SRV's to lift. The test was being conducted with reactor pressure at approximately 955 psig which caused the valves to fully open. Future testing will be done at pressures of 850-905 psig which will prevent opening the SRV's.

373/85036-00 - Shutdown Cooling System Isolation on Suction Line High Flow. A replaced Environmentally Qualified (EQ) flow switch did not include a pressure snubber which was installed on the initially installed switch. The missing snubber was not reflected on the initial construction drawing after they were installed. After installing the new snubbers on the EQ flow switch, no more spurious isolations occurred.

374/85036-00 - Reactor Water Cleanup System (RWCU) Isolation. Personnel valving error.

374/85022-00 - Unit 2 Reactor Scram While in Cold Shutdown. One Reactor Protective System (RPS) channel was tripped because of work on "B" Main Steam Line Process Radiation Monitor when the other channel was tripped by Intermediate Range Monitor (IRM). This item was addressed in Inspection Report 373/85017; 374/85017.

7. Unit Trips

On July 22, 1985 Unit 1 received a low reactor water level scram and a Division II RHR shutdown cooling isolation. The licensee had performed a hydrostatic test and valved the Standby Liquid Control System (SBLCS) back into service. The unit was in Cold Shutdown at the time. The licensee had performed an operational test of the squib valves on the SBLC system and a hydrostatic test of the replacement squib valves. When opening the isolation valve too rapidly, the pressure surge through the injection line to the reactor vessel caused a perturbation to the reactor vessel level instrument line which taps off the SBLC injection line. This gave a false low level signal and caused the scram and isolation on low level. All systems functioned normally. The inspector discussed this event with the licensee as another example of personnel actions that adversely affect plant operation.

Unit 1 scrammed from approximately 94% power at 4:14 p.m. on August 17, 1985 due to a main turbine trip. The turbine trip was caused by a spurious high reactor vessel water level signal on instrument rack 1H22-P027. The spurious signal occurred when an instrument mechanic was completing an instrument surveillance (LIS-NB-304) and returning the instrument to service. The instrument was not prepressurized and was subjected to a pressure spike when the isolation valve was opened. The pressure spike caused the unit to scram.

This event is a repeated occurrence of similar events identified in report 373/85009. In this case, the mechanic failed to follow procedure LIP-GM-09 for returning the instrument to service. Technical Specifications Section 6.2 requires the licensee to adhere to detailed written procedures for instrument operations that can have an effect on the safety of the facility.

Contrary to the above, the licensee failed to follow procedure LIP-GM-09 when returning instrument 1B21N037DB to service which caused the unit to trip. This is a violation (373/85024-02(DRP)).

No other deviations or violations were identified.

8. Preparation for Refueling

The inspector observed the licensee perform inspections on the new fuel and channeling of the new fuel for Unit 1. The licensee followed the procedure (LTP 1600-25) for cleaning and inspection of the new fuel. Quality Control was also present to observe the inspection of the new fuel.

No deviations or violations were identified.

9. Potential Strike Actions

On August 16, 1985 a picket was established in front of the site by a local Teamster union. The picket was against a contractor which was modifying the lake effluent flow to prevent icing and fogging of the access road during winter months. The picketing was over a boundary dispute. The contractor had hired union personnel from a Local and the Local which was picketing felt that they should had been hired instead. The picketing was for only one day and the dispute was resolved. The picketing did not affect the operation of the station.

No deviations or violations were identified.

10. Regional Requests

On August 28-29, 1985 the inspector fulfilled a regional request for assistance on obtaining information on tendon surveillance testing (AITS F03042585). Pursuant to the incident at the Farley Unit 2 facility and the issuance of IE Information Notice No. 85-10, Supplement 1, a request was initiated to obtain the following:

a. Provide the dates surveillance activities were conducted including initial surveillance.

b. Provide the date of the report, if a report was submitted to the NRC.

c. Provide the date(s) of any surveillance activities scheduled for the remainder of 1985.

The information obtained was submitted to the regional office on August 30, 1985. There have been no failures in accordance with the acceptance criteria, there have been no reports issued to the NRC, and there are no surveillance activities planned for either unit in the remainder of calendar year 1985.

11. Environmental Qualification Replacement

On July 1, 1985 the licensee reported that the Unit 2, Division I and II Residual Heat Removal (RHR) equipment area differential temperature isolation sensors were inoperable and have been since initial construction. The sensors were designed to detect, annunciate, and isolate the steam condensing mode and shutdown cooling modes of RHR if a high differential temperature exists in the RHR equipment room. The differential temperature sensors were to be placed in the inlet and outlet ventilation ducts to provide an accurate differential temperature for the RHR equipment area room, according to the Updated Final Analysis Report (UFSAR), Chapter 5, Section 5.2.5.1. The cold leg sensors were located in the RHR equipment area room adjacent to the room inlet ventilation duct. With the cold leg sensor located adjacent to the ventilation duct, the sensor was monitoring RHR equipment room air temperature and not the room ventilation inlet air temperature. In this configuration, if a leak in the RHR equipment area room were to occur, the ventilation differential temperature sensors would not have indicated a difference in the room temperature and, therefore, not isolate the steam condensing and shutdown cooling portions of the RHR system. The licensee became aware of the problem because of a similar miswired Reactor Core Isolation Cooling (RCIC) differential temperature isolation switch. The Sargent and Lundy response to the RCIC switch dated May 19, 1985, identified at that time that the RCIC sensors should have been in the duct work and not adjacent to the duct. This information initiated the licensee to investigate the RHR differential temperature isolation switch locations with the above results.

Unit 1 RHR equipment area room differential temperature sensors were located correctly in the inlet and outlet ventilation ducting. Initially, during construction, the differential temperature sensors were to be installed in the RHR equipment area room adjacent to the inlet air ventilation duct, identical to the Unit 2 configuration. At the time of Unit 1's initial installation, the error was recognized and on October 5, 1981 the licensee issued an Engineering Change Notice (ECN) No. M-586LS for relocating the temperature sensors for the leak detection system. The ECN was applicable for Units 1 and 2 with a note specifying "Change applies to Unit 2 also." The ECN lists the affected design documents by title and/or number and current revision. Drawings for Unit 2 are among the list of affected design documents.

The ECN was completed on Unit 1 and Field Change Requests (FCR) issued to have the appropriate drawings changed. The ECN was cleared on Unit 2 by the construction contractor issuing an FCR that affected the same drawings, but did not incorporate the proper location of the temperature

sensor. The issuance of FCR's to close ECN's was not the normal method of clearing ECN's. The FCR did not get incorporated into the Unit 2 construction drawings.

Title 10 of the Code of Federal Regulations, Part 50, Appendix B, Criterion VI, Document Control states, in part: "Measures shall be established to control the issuance of documents, such as instructions, procedures, and drawings, including changes thereto, which prescribe all activities affecting quality. These measures shall assure that documents, including changes, are reviewed for adequacy and approved for release by authorized personnel and are distributed to and used at the location where the prescribed activity is performed."

Commonwealth Edison Company Quality Assurance Manual, Quality Requirement 6.0, Document Control, states, in part: "...provision to assure as-built drawings are kept updated, properly maintained, and controlled. Such documents will be distributed to and used at the locations where the prescribed activity is performed. Changes to these documents will be handled similarly..."

Contrary to the above, ECN No. M-586LS and subsequent FCRs were not incorporated into permanent drawings or distributed resulting in the Unit 2 leak detection monitors not being properly located. This is considered a violation (374/85025-01(DRP)).

The following Technical Specification violations were identified as a direct result of the mis-positioned thermocouples. As they were resultant items, no citations are being issued.

In accordance with Unit 2 Technical Specification, Section 3/4.3.2, Limiting Condition for Operation (LCO)-Isolation Actuation, the RHR equipment area differential temperature sensors have the following isolation functions:

a. RHR System Steam Condensing Mode initiates the Group 8 isolation.
b. RHR System Shutdown Cooling Mode initiates the Group 6 isolation.

The isolations are to be operational for operating conditions 1, 2, and 3 (power operation, startup, and hot shutdown).

Technical Specification 3.3.2 states, in part: "When the minimal number of operable channels per trip system cannot be met, the following actions will be taken according to Table 3.3.2-1 of Technical Specifications.

a. RHR Steam Condensing Mode - Close the affected system isolation valves within one (1) hour and declare the affected system inoperable.

b. RHR Shutdown Cooling Mode - Lock the affected system isolation valves closed within one (1) hour and declare the affected system inoperable."

These actions were not taken every time Modes 1, 2, or 3 of operations were achieved because the licensee was not aware of the mis-positioned therocouples.

Technical Specification 3.6.3 LCO for Primary Containment Isolation Valves states, in part:

a. "With one or more primary containment isolation valves inoperable

(1) Maintain at least one isolation valve operable in each affected penetration that is open and within 4 hours either

(a) Restore the inoperable valve(s) to operable...

(b) Isolate each affected penetration by deactivating automatically actuated valves

(c) Isolate each affected penetration by closing manual valves

(2) Otherwise, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within following 24 hours."

Since the licensee was not aware of the Groups 6 and 8 isolation system valves being inoperable, due to the differential temperature isolation not being operable, the above action was not taken on those valves.

Section 3.0.4, Limiting Conditions for Operations Applicability states, in part:

"Entry into an operational condition or other specified condition shall not be made unless the conditions for the LCO are met without reliance on provisions contained in the action requirements."

Mode changes were made when the LCO requirements were not met because the licensee was unaware of the requirements.

Technical Specification 3.4.9.1 for RHR when in Condition 3 states, in part:

a. "With less than the required RHR shutdown cooling mode loops operable, immediately initiate corrective actions ..... Be in at least Cold Shutdown within 24 hours.

b. With no RHR shutdown cooling mode loop in operation, immediately initiate corrective action ..... Within one (1) hour establish reactor coolant circulation by an alternate method ....."

The licensee entered Condition 3 for the first time during the later part of March 1984. Unknown to the licensee, each time the unit entered Condition 3, the shutdown cooling loops were technically inoperable according to Technical Specification 3.3.2 above and thus, the action required by Technical Specification 3.4.9.1 was not taken.

The safety significance of the loss of one isolation signal event was reduced because of the number of backup isolation signals which would have also caused the same isolated function. These consist of:

a. For RHR System Steam Condensing Mode Isolation

(1) RHR Area Temperature - High

(2) RHR Heat Exchanger Steam Supply Flow - High

b. For RHR System Shutdown Cooling Mode Isolation

(1) Reactor Vessel Level - Low, Level 3

(2) Reactor Pressure - High

(3) RHR Pump Suction Flow - High

(4) RHR Area Temperature - High

These redundant signals provide the same isolation function as the inoperable differential temperature isolation. This event, however, continues to illustrate breakdown in management controls. When the mislocated temperature sensors became evident on Unit 1, the licensee failed to assure the problem was also resolved on Unit 2. It also illustrates the importance of design change control in that all the above LCO's were violated.

Because the ECN for Unit 2 was cleared without completing the corrective action on locating the thermocouple sensors, a team of three (3) inspectors went to Commonwealth Edison Corporate (CECO) offices and Sargent and Lundy (S&L) to determine if other ECN's were closed using FCR's. Although the review of approximately 150 ECN's, issued during the same time frame, found no additional ECN's closed using FCR's, questions were raised on the handling of ECN M-625-LS.

ECN M-625-LS was issued to install support plates around piping penetrations on the air conditioning units for the Residual Heat Removal (RHR) room coolers. Included in the ECN were reference sketches showing the location of the plates. A review of the drawings which incorporated ECN M-625-LS showed how to manufacture the support plates and how to locate them around the cooling piping. However, no drawings were included to show the location of the plates on each air conditioning unit. Since reference sketches were included with the original ECN on proper location, it appeared that the Design Engineer felt additional information on proper location was needed other than how to manufacture the plates and how to locate them around the cooling piping. It is not understood why these additional sketches, which were included in the original ECN, were not addressed when the ECN was closed. The proper closure of reference sketches for ECN's will remain as an open item (374/85025-02(DRP)).

The inspector verified the plates were installed on both Unit 1 and Unit 2 correctly in accordance with the ECN, updated drawings, and reference sketches. Besides the above ECN problems, additional questions are continuing to be evaluated by a member of the team, and will be addressed in a future report.

No other deviations or violations were identified.

12. Open Items

Open items are matters which have been discussed with the licensee, which will be reviewed further by the inspector, and which involve some action on the part of the NRC or licensee or both. Open items disclosed during the inspection are discussed in Paragraphs 5 and 11.

13. Exit Interview

The inspector met with licensee representatives (denoted in Paragraph 1) throughout the month and at the conclusion of the inspection period and summarized the scope and findings of the inspection activities. The licensee acknowledged these findings. The inspector also discussed the likely informational contents of the inspection report with regard to documents or processes reviewed by the inspector during the inspection.

The licensee did not identify any such documents or processes as proprietary.