

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Reports No. 50-373/88002(DRS); 50-374/88002(DRS)

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, Illinois

Inspection Conducted: January 11-14 and 20-22, 1988

Inspector: *Rolf A. Westberg*
Rolf A. Westberg

2/4/88
Date

Approved By: *Ronald N. Gardner*
Ronald N. Gardner, Chief
Plant Systems Section

2/4/88
Date

Inspection Summary

Inspection on January 11-14 and 20-22, 1988 (Reports No. 50-373/88002(DRS);
No. 50-374/88002(DRS))

Areas Inspected: Routine, announced inspection of licensee action on previous inspection findings (92702) and implementation of Generic Letter 85-06 relative to ATWS mitigating systems (25020) (92703).

Results: One previous violation, Generic Letter 85-06, and Temporary Instruction (TI) 2500/20 were closed. No violations or deviations were identified.

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DETAILS

1. Persons Contacted

Commonwealth Edison Company (CECo)

- G. J. Diederich, Station Manager
- R. D. Bishop, Services Superintendent
- *P. F. Manning, Assistant Superintendent -
Technical Services
- *D. A. Brown, Quality Assurance Superintendent
- *A. C. Settles, Technical Staff Engineer
- M. H. Richter, Technical Staff Engineer
- W. C. Kirchhoff, Technical Staff Engineer
- *N. W. Jacklin, Technical Staff Engineer
- *W. R. Huntington, Services Superintendent
- *M. J. Harper, Quality Assurance Inspector

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- *M. J. Jordan, Senior Resident Inspector

Other personnel were contacted during the course of the inspection.

*Indicates those attending the exit meeting on January 22, 1988.

2. Licensee Action on Previous Inspection Findings

(Closed) Violation (374/83-36-01): Inadequate final inspection documentation for battery chargers No. 1DC09E and No. 2DC09E. The inspector determined that these battery chargers had been shipped from the manufacturer without documentation of the production tests of the di-electric strength of the electrical cables. Since di-electric tests are used to determine the integrity of the cable insulation, and these battery chargers have been energized and operating for seven years with no insulation failures, this item is considered closed.

3. Licensee Action on Generic Letters

Generic Letter 85-06 required the licensee to submit a schedule for complying with 10 CFR 50.62, the "ATWS Rule," and provide Quality Assurance guidance for ATWS equipment that is not safety related. The licensee submitted the required schedule on October 10, 1985. In addition, the modifications required to comply with the ATWS rule have been or will be accomplished in accordance with the CECo Appendix B Quality Assurance program. This Generic Letter is considered closed.

4. TI 2500/20 - Compliance With ATW Rule, 10 CFR 50.62

The purpose of this inspection was to determine whether ATWS mitigating systems that are not safety related comply with the 10 CFR 50.62 rule, to determine whether the QA controls applied to the design, procurement, installation, and testing for ATWS equipment complied with Generic Letter No. 85-06, "QA Guidance for ATWS Equipment That Is Not Safety Related," and to assess the operational readiness of the ATWS equipment that is not safety related.

Relative to ATWS mitigating systems, the inspector determined the following: (1) The Recirculation Pump Trip (RPT) was installed during the original construction of LaSalle. It is described in Amendment 31 of the LaSalle FSAR and was approved by the LaSalle SER, dated March 1981. (2) The Unit 2 Alternate Rod Injection (ARI) system was installed on Modification No. M-1-2-84-061. (3) The Unit 1 ARI system and the Units 1 and 2 Standby Liquid Control System (SLCS) modifications are scheduled for the Spring 1988 refueling outage.

Although ATWS modifications were not required to be classified as safety related, the ARI and SLCS were classified as safety related due to their interface with existing safety related equipment. Therefore, design, procurement, and installation to date has been performed in accordance with the existing CECO Quality Assurance program.

a. Documents Reviewed

- (1) Schedule for Complying with ATWS Rule, dated October 10, 1985.
- (2) Safety Evaluation in Support of the BWR Owners Group's Topical Response to the ATWS Rule, dated October 26, 1986.
- (3) Response for LaSalle County Station regarding compliance with the requirements of 10 CFR 50.62, dated October 23, 1986.
- (4) Generic Letter 85-06, "Quality Assurance Guidance for ATWS Equipment That Is Not Safety Related."
- (5) Modification Package No. M-1-2-84-061
- (6) Drawings
 - (a) 1E-2-4000FB, Revision J
 - (b) 1E-2-4000FC, Revision K
 - (c) 1E-2-42U7BA-BE, Revision A
 - (d) 1E-2-4207CA-CE, Revision A
 - (e) 1E-2-4207ZB, Revision D

(7) Operating Procedures

- (a) LGA-ATWS-01, "ATWS Power Control," Revision 2.
- (b) LOA-NB-09, "Alternate Rod Insertion," Revision 6.
- (c) LOA-SC-02, "Initiation of Standby Liquid Control," Revision 6.

(8) Surveillance Procedures

- (a) LIS-NB-209, "Unit 2 Reactor Pressure Recirculation Pump Trip Calibration," Revision 1
- (b) LIS-NB-409, "Unit 2 Reactor Pressure Recirculation Pump Trip Functional Test," Revision 1
- (c) LIS-NB-219, "Unit 2 Reactor Vessel Low-Low Water (Level 2) Alternate Rod Insertion Calibration," Revision 0
- (d) LIS-NB-419, "Unit 2 Reactor Vessel Low-Low Water (Level 2) Alternate Rod Insertion Functional Test," Revision 1
- (e) LES-RR-201, "Unit 2 ATWS RR Pump A Trip System Relay Logic Functional Test and Simulated Automatic Operation," Revision 2.
- (f) LES-RD-202, "Unit 2 Alternate Rod Insertion Division 1 Logic Functional Test," Revision 0 Draft

(9) Purchase Orders

- (a) No. 270663, "Rosemount Level and Pressure Transmitters"
- (b) No. 293803, "Valcor Solenoid Valves"
- (c) No. 291762, "ARI Control Panels"

b. Inspection Results

At the time of this inspection, RPT was installed on both units, ARI was installed on Unit 2, and no work was in progress on Unit 1 ARI or Units 1 and 2 SLCS. Therefore, this inspection concentrated on the confirmation of completed work and reviewed the design, procurement, and installation based on a review of the completed Unit 2 ARI modification package and a selective walkdown of ATWS systems. The inspector also reviewed selected portions of the procurement activities for the Unit 1 ARI modification.

(1) Design Engineering

The inspector reviewed the licensee's response to 10 CFR 50.62; the SER accepting the BWR Owner's Group Topical Report, "NEDE-31096-P;" Generic Letter 85-06; and Modification Package No. M-1-2-84-061. This review of selected portions of the licensee's design indicated that it was properly implemented and did not compromise the safety features of the existing Reactor Protection System.

The inspector did not review the design for the RPT system since it was installed prior to the ATWS rule and had previously been accepted in NUREG-0519. Further, it is described in Appendix G of the LSCS FSAR.

(2) Procurement and Installation

Review of the completed Unit 2 ARI modification and the future Unit 1 ARI modification indicated the following:

- (a) The technical requirements in Purchase Order (PO) No. 270663, "Rosemount Level and Pressure Transmitters;" No. 293803, "Valcor Solenoid Valves;" and No. 291762, "ARI Control Panels" were consistent with the licensee's design.
- (b) The above material had been properly receipt inspected and accepted in accordance with the CECQ QA program requirements. Material in storage for the Unit 1 ARI modification was stored in acceptable Level B storage with controlled access.
- (c) The equipment to be installed for the Unit 1 ARI met the configuration specified relative to type, range, and material.
- (d) Walkdown of the Unit 2 ARI produced the following results:
 - 1 Pressure transmitters Nos. 401A through D and level transmitters Nos. N460A through C were located, orientated and supported as specified by the design documents.
 - 2 Inspection of the Division I and II ARI Panels, No. P800 and No. P801, indicated that physical separation and electrical independence criteria were met.

(3) Confirmation of Completed Work

The inspection verified the following aspects of the Unit 2 ARI and RPT:

- (a) Operating procedures had been generated or suitably revised for ARI ATWS operation. Review of Reactor Operator (RO) and Senior Reactor Operator (SRO) training records selected at random indicated that personnel had been trained on the procedures and operation of the system.
- (b) Surveillance procedures for the ARI and RPT calibrations and functional tests were in place and implemented.
- (c) The RPT and ARI systems contain test switches which allow the testing of these systems at power without disabling these systems. The RPT Logic Functional Test, No. LES-1212-201, had been performed as scheduled. The ARI Logic Functional Test Procedure, No. LES-RD-202, was in draft undergoing approval. It has not been performed to date. This was not considered deficient since this procedure has an 18 month time interval and the logic was tested prior to the system being accepted.
- (d) Permanent test switches are installed on each ARI cabinet in the Aux Electric Room. These switches allow maintenance and testing of the solenoid valve coils without opening those valves. Bypass status of the solenoid valves is indicated by a "system in test" indicator light on the P603 control panel in the control room. In addition, the "ARI trouble" annunciator in the control room will sound if the switches are moved to the test position.
- (e) Review of the ATWS schematic control diagrams verified that once the ARI was initiated there was a two minute time delay built in to assure that the system would complete its action (all rods inserted). Once the system times out, the manual reset feature of the system would allow return to normal operation.
- (f) Manual initiation of the ARI system was verified by observation of the manual initiation switches on the P603 panel benchboard of the control room.

(4) Quality Assurance and Qualifications

The inspector verified that the ATWS mitigating systems were being designed, installed, tested, and operated under the CECO Appendix B QA Program. Tech staff and control room personnel contacted during this inspection appeared knowledgeable and capable of implementing the ATWS systems.

5. Exit Interview

The inspector met with licensee representatives denoted in Paragraph 1 during and at the conclusion of the inspection on January 22, 1988. The inspector summarized the scope and results of the inspection and discussed the likely content of this inspection report. The licensee acknowledged the information and did not indicate that any of the information disclosed during the inspection could be considered proprietary in nature.