

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

REGION III

Report Nos. 50-295/80-06; 50-304/80-05

Docket Nos. 50-295; 50-304

License Nos. DPR-39, DPR-48

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

Facility Name: Zion Nuclear Power Station, Units 1 and 2

Inspection At: Zion, Illinois

Inspection Conducted: March 10-11, 1980; April 17-18, 1980

Inspectors: *W.S. Little*
Joel Kohler

RFW
RFWannick for
Robert Nelson

4/25/80

4-25-80

Approved By: *W.S. Little*
W. S. Little, Chief
Nuclear Support Section 1-2

4/25/80

Inspection Summary

Inspection on March 10-11, 1980; April 17-18, 1980 (Report Nos. 50-295/80-06
50-304/80-05)

Areas Inspected: Small Break Loca Procedure

Results: Inspection involved 30 hours onsite by two NRC inspectors.
Of the areas inspected, no items of noncompliance were identified.

8006170 295

DETAILS

1. Persons Contacted

- * N. Wandke, Plant Superintendent
- C. Schultz, Training Supervisor
- S. Bass, Training Instructor
- F. Lentine, Technical Staff Engineer
- T. Rieck, Technical Staff Engineer
- E. Fuerst, Unit 1 Operating Engineer
- R. Budowle, Shift Foreman
- R. Landrum, Nuclear Station Operator
- G. Rowe, Nuclear Station Operator
- M. Carnahan, Shift Technical Advisor
- E. Gutke, Nuclear Station Operator

*Denotes present at exit interview.

2. Procedure Review

- a. The following approved procedures were reviewed:

Emergency Operating Procedure - Accident Diagnostics,
January 18, 1980; Emergency Operating Procedure - Loss of Reactor
Coolant, January 18, 1980

- b. The inspector found that the procedures conform to the guidelines contained in 412 Standard Plant E-0, Rev. 1 except as noted below:

(1) Licensee trips reactor coolant pumps at \leq 1815 PSIG.

The licensee's justification for this deviation is:

The only instrument which will indicate in the range used by The Standard Plant is wide range pressure. At Zion, wide range pressure is not environmentally qualified in a post LOCA environment. A trip point of 1815 PSIG was used because it is within the narrow range pressure which is environmentally qualified and is the same as was used prior to January 1, 1980.

This exception is satisfactory.

- c. The procedures are concise and do not require numerous cross references which could lead to operator confusion.
- d. Proper precautions are provided in the procedure. Where appropriate they are repeated in the procedure.

- e. Procedural protection is provided against deadheading ECCS pumps where system pressure may be above pump shutoff head. Guidance is also provided on maintaining coolant inventory in these cases. (EOP-9, Rev. 1 Page 4)
- f. The use of loop isolation valves for break isolation is not addressed and is not included in the procedure.
- g. Reactor coolant pump trip criteria is consistent with guidelines provided by the Westinghouse owners group.
- h. The licensee's procedure cautions the operator that the safety valves and PORV's may be the source of the SBLOCA. Reference is made to the position indicators. (EOP-9, Rev. 1, Page 3)

3. Resetting SIS and Reloading ECCS Equipment on Diesels

Procedure EOP-9, Loss of Reactor Coolant, Rev. (1), January 18, 1980 was reviewed to determine that the procedure adequately describe the actions required to ensure that vital equipment is loaded on the emergency buses and that needed instrumentation is available if a loss of offsite power occurs subsequent to the event. The injection phase and the recirculation phase were considered.

4. Manual Switchover from Injection to Recirculation

Procedure EOP-9, Loss of Reactor Coolant, Rev. 1, January 18, 1980 was reviewed to ensure that there will be sufficient water in the RWST at all times to assure supply to the pumps. The licensee's time sequence showing procedure steps and water remaining in the RWST as a function of time during switchover, assuming maximum ECCS and containment spray flow, was also reviewed. RWST water requirements account for realistic operator action times, instrument errors, uncertainty in RWST water volume, and maximum usable volume in RWST.

5. Operator Interviews

The inspectors interviewed five licensed operators. The operators interviewed were one staff SRO, one SRO who stands shift work and three shift RO's.

The operators interviewed:

- a. Knowledgeably discussed the symptoms and transient response characteristics of the plant with respect to a SBLOCA.
- b. Demonstrated a knowledge of the procedures to be used for a SBLOCA, including the immediate actions required.

- c. Were knowledgeable in the importance of heat sink, recognition of adequate subcooling and core voiding, importance of subcooled versus saturated conditions, indications of inadequate core cooling, and implementation of natural circulation.

6. Training

The licensee provided the following training regarding the SBLOCA and procedures: EOP-9, EOP-0, EOP-10.

The training records were reviewed. The licensee has provided the above training to all active licensed operators and will insure the remaining licensed operators have received the training prior to fulfilling license responsibilities.

7. Exit Interview

The inspector conducted an exit interview at the conclusion of the inspection and summarized the results of the inspection. No items of noncompliance were identified.