

Wayne H. Jens
Vice President
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October 29, 1984
EF2-69716

Mr. James G. Keppler
Regional Administrator
Region III
U. S. Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, Illinois 60137

Dear Mr. Keppler:

- Reference: (1) Fermi 2
NRC Docket No. 50-341
- (2) NRC IE Bulletin 80-25: Operating Problems
With Target Rock Safety-Relief Valves at
BWRs, December 19, 1980
- (3) Letter, D. A. Wells to J. G. Keppler, March
26, 1981, EF2-49962

Subject: Final Response to NRC IE Bulletin 80-25

This letter provides Detroit Edison's final response to Reference (2). Reference (3) provided Edison's initial report with a commitment that action would be taken and reported upon either prior to or during initial startup of Fermi 2. This letter fulfills that report commitment.

NRC-IE Bulletin 80-25, Operating Problems with Target Rock Safety-Relief Valves at BWRs, identified problems with two-stage pilot operated Target Rock safety-relief valves. Fermi 2 uses the same type/design safety-relief valves as described in the subject Bulletin. The attached report lists the requirements in Bulletin 80-25 and Detroit Edison's response to each.

This is Detroit Edison's final report on this item. If you have questions concerning this matter, please contact Mr. Lewis Bregni, (313) 586-5083.

Sincerely,

Wayne H. Jens

cc: P. M. Byron
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M. D. Lynch
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I, WAYNE H. JENS, do hereby affirm that the foregoing statements are based on facts and circumstances which are true and accurate to the best of my knowledge and belief.

Wayne H. Jens
W. H. Jens, Vice President,
Nuclear Operations

On this 29th day of October, 1984, before me personally appeared Wayne H. Jens, being first duly sworn and says that he executed the foregoing as his free act and deed.

My commission
expires 12-14-86.

Lucina B. White
Notary Public

THE DETROIT EDISON COMPANY

FERMI 2

NUCLEAR OPERATIONS ORGANIZATION

USNRC LICENSING

DOCKET NO. 50-341

FINAL REPORT

OF

RESPONSE TO NRC-IE BULLETIN NO. 80-25

OPERATING PROBLEMS WITH TARGET ROCK
SAFETY-RELIEF VALVES AT BWRs

OCTOBER 1984

I. NRC Requirement:

If your facility has not yet installed or changed or is presently in the process of changing to the two-stage S/R valves, initiate appropriate quality control procedures to assure inspection of the solenoid actuators for excess Loc-tite prior to operation. If the solenoid actuator manufactured by Target Rock Corporation is already installed in your facility, confirm its operability either by its operational performance (i.e., it has functioned as designed following an aging period of about 3 months in the higher temperature environment of power operating conditions) or by functional testing at full pressure during the next refueling shutdown of the facility. Include in your report the results of all attempts to operate the two-stage S/R valve(s).

Detroit Edison Response:

Reference 3 stated that Detroit Edison would meet this requirement by functional testing during the startup test program since the valves were assembled and ready for installation.

In 1983, the solenoid actuators for all installed and spare Target Rock two-stage safety/relief valves were returned to the Target Rock Corporation factory for rework. Detroit Edison has reviewed the procedures used for this rework and has determined that the requirement that these solenoid actuators be inspected for excess Loc-tite has been met.

As added assurance of proper operation of these valves, startup test phase procedures STUT.HUO.026 and STUT.020.026 incorporate provisions for verifying that relief valves are not sticking and reset properly after operation. The results of these tests will be available at the Fermi 2 site after these tests are completed.

To ensure excess Loc-tite in S/R valves does not become a problem in the future, Paragraph 5.2 of the Fermi 2 maintenance procedure 35.000.114, "S/RV Solenoid Valve Disassembly, Reassembly and Inspection" requires an inspection for excess Loc-tite.

II. NRC Requirement:

In the event that a S/R valve, regardless of make or model (e.g., both two or three stage), fails to function as designed, excepting for pressure setpoint requirements, and the cause of the malfunction is not clearly determined, understood, and therefore corrected, standard operating procedures shall require that the entire valve be removed from service, disassembled, inspected, adjusted, and pressure setpoint tested with steam for proper operation prior to returning the valve to service. These overhaul requirements shall be at least equivalent to those applicable to periodic surveillance rehabilitation requirements. Appropriate revisions to your operating procedures shall be made to include these requirements.

Detroit Edison Response:

Plant Abnormal Operation Procedure 20.000.25, "Failed Open Safety Relief Valve," Section B 2.2 states: "If the cause of S/R valve failure cannot be determined, the entire valve must be removed from service, disassembled and inspected."

Removed Safety/Relief valves will be repaired, tested and setpoint certified by a designated vendor assisted by a Target Rock Corporation field service representative. Procedure 35.000.95, "Safety Relief Valve Removal and Installation" requires that contracts written for work on S/R valves ensure that the vendor comply with the requirements and recommendations, when applicable, of IE Circular 79-18, IE Bulletin 80-25 and General Electric Service Information Letter 196.

Plant Maintenance Procedure - Surveillance, 34.000.10, "Main Steam System ASME Section XI - Relief Valve Set Point Test," requires that "...actual setpoint test will be performed by a designated test facility in accordance with their procedures."

Fermi 2 periodic surveillance requirements will ensure that 50% of the S/R valves are overhauled during each refueling outage.

III. NRC Requirement:

A review of your S/R valve pneumatic supply systems shall be performed to determine the potential for and magnitude of an overpressure condition. The determined overpressure potential of the pneumatic supply shall be compared with the maximum operating pressure capabilities of the solenoid actuator valves serving

Detroit Edison Final Response to NRC-IE Bulletin 80-25

the S/R valves, so as to determine whether supply pressure could result in valve malfunction. Protective devices (such as relief valves) shall be installed in the proximity of the S/R valves and set to protect against supply pressure in excess of the operating pressure capabilities of the solenoid actuator device. In addition, consideration should be given to modification or replacement to reduce the sensitivity of the solenoid actuator to pneumatic supply overpressure. Further, the failure, either high or low, of the pneumatic supply system shall be annunciated to the control room operator. The annunciator supply pressure should be measured at a location as close as practical to the S/R valves and downstream of any check valve connecting two or more pneumatic sources. Approximate operating procedures shall be provided to guide operator response to such an occurrence of high or low supply pressure.

Detroit Edison Response:

As detailed in Reference 3, Detroit Edison's review of the S/R valves pneumatic supply system determined that existing overpressure protection for the normal and backup systems was adequate for the solenoid actuator valve's capabilities. As stated in Reference 3, Detroit Edison committed to and has installed overpressure protection for the each of the divisional emergency nitrogen supply bottles. Therefore, no modification or replacement of the existing solenoid valves is being considered.

Safety Relief valve pneumatic supply system high and low pressure annunciator alarms are installed in the control room; sensor locations conform to NRC-IE Bulletin 80-25 requirements.

S/R valve pneumatic supply system inboard and outboard containment isolation valves have control room annunciator alarms to indicate closure.

Alarm response procedure 8D70 provides the control room operator response to high or low S/RV pneumatic supply system pressure.