



May 4, 1999

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington DC, 20555-0001

Dresden Nuclear Power Station, Unit 3
Facility Operating License No. DPR-25
NRC Docket No. 50-249

Subject: Request for Notice of Enforcement Discretion Concerning Main Steam
Safety Valve Technical Specification Actions

The purpose of this letter is to provide the written follow-up of our request for a Notice of Enforcement Discretion (NOED) from compliance with Dresden Nuclear Power Station, Unit 3, Technical Specifications (TS), Section 3.6.E, "Safety Valves." The TS conservatively requires all nine main steam safety valves to be operable. With one or more safety valves inoperable, the TS Action statement requires the plant to transition to at least Hot Shutdown within the next 12 hours, and be in Cold Shutdown within the following 24 hours.

At 1951 hours on May 3, 1999, an alarm in the Dresden Nuclear Power Station, Unit 3, Control Room indicated that a bellows on the three-stage Target Rock Safety Relief Valve (SRV) had failed rendering the safety valve function inoperable, thereby requiring the plant to enter TS Section 3.6.E Action Statement. At approximately 0751 hours on May 4, 1999, Dresden Nuclear Power Station, Unit 3, would have been required to be in at least Hot Shutdown, and in Cold Shutdown within the next 24 hours.

Using the guidance provided in NRC Administrative Letter (AL) 95-05, "Revisions to Staff Guidance for Implementing NRC Policy on Notices of Enforcement Discretion," Revision 1, an NOED was requested during a teleconference between representatives of Commonwealth Edison (ComEd) Company and the NRC on May 4, 1999. The NOED was subsequently approved by the NRC at approximately 0215 on May 4, 1999. The NOED addresses non-compliance with the TS Section 3.6.E required shut down, and allows continued operation of Dresden Nuclear Power Station, Unit 3, until an exigent License Amendment Request (LAR) is submitted and approved. As committed to during the May 4, 1999, teleconference and as provided in AL 95-05, the LAR will be submitted by May 5, 1999.

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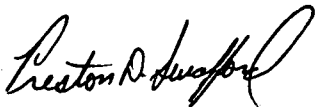
May 4, 1999
U.S. Nuclear Regulatory Commission
Page 2

The enclosure provides the following information in accordance with AL 95-05 and as discussed during the May 4, 1999 teleconference:

- Description of the TS requirement for which enforcement discretion is sought;
- Circumstances surrounding the situation, including apparent root causes, the need for prompt action, and relevant historical background;
- The safety basis for the request, including an evaluation of the safety significance, and potential consequences, including a qualitative risk assessment, of the proposed action;
- Basis for determining that the noncompliance will not be of potential detriment to the public health and safety, and that no significant hazards consideration is involved;
- Basis for concluding that the request does not involve adverse consequences to the environment;
- Proposed compensatory actions;
- Justification for the duration of the request;
- Acknowledgement of Plant Operations Review Committee approval; and
- Basis for concluding that Notice of Enforcement Discretion (NOED) criteria of NUREG-1600, "General Statement of Policy and Procedures for NRC Enforcement Actions," are satisfied.

Should you have any questions concerning this letter, please contact Mr. Dale Ambler at (815) 942-2920, extension 3800.

Respectfully,



P. D. Swafford
Station Manager
Dresden Nuclear Power Station

Enclosure: Written Follow-up of Request for Notice of Enforcement Discretion
Concerning Main Steam Safety Valve Technical Specification Actions

May 4, 1999
U.S. Nuclear Regulatory Commission
Page 3

cc: Regional Administrator - NRC Region III
Senior Resident Inspector - Dresden Nuclear Power Station

ENCLOSURE

DRESDEN NUCLEAR POWER STATION

**WRITTEN FOLLOW-UP OF REQUEST FOR NOTICE OF ENFORCEMENT DISCRETION
CONCERNING MAIN STEAM SAFETY VALVE
TECHNICAL SPECIFICATION ACTIONS**

FACILITY OPERATING LICENSE DPR-25

ENCLOSURE

**Written Follow-up of Request for Notice of Enforcement Discretion Concerning
Main Steam Safety Valve Technical Specification Actions**

Page 1 of 6

**1. DESCRIPTION OF THE TECHNICAL SPECIFICATION REQUIREMENT OR LICENSE
CONDITION FOR WHICH ENFORCEMENT DISCRETION IS SOUGHT**

Technical Specifications (TS) Section 3.6.E, "Safety Valves," Action Statement 1 states:

"With the safety valve function of one or more of the above required safety valves inoperable, be in at least HOT SHUTDOWN within 12 hours and in COLD SHUTDOWN within the next 24 hours."

Additionally, the Bases for TS 3.6.E identifies that the size and number of safety valves are selected such that peak pressure in the nuclear system will not exceed the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel (B&PV) Code limits for the reactor coolant pressure boundary. Siemens Power Corporation (i.e., the Dresden fuel vendor) methodology determines the most limiting pressurization transient for each cycle. Evaluations have determined that the most severe transient is the closure of all the main steam line isolation valves followed by a reactor scram on high neutron flux.

The basis for the TS requirement is to insure the appropriate number of safety valves are available to protect the reactor vessel from overpressure during upset conditions as required by the ASME B&PV Code.

**2. CIRCUMSTANCES SURROUNDING THE SITUATION, INCLUDING ROOT CAUSES, THE
NEED FOR PROMPT ACTION AND RELEVANT HISTORICAL BACKGROUND**

Dresden Nuclear Power Station, Unit 3, has 13 safety and relief valves. One of the 13 valves is a combined safety and relief valve, manufactured by Target Rock. The remaining 12 valves are dedicated to either an electromatic relief mode of operation (i.e., four relief valves), or a mechanical pilot-actuated safety mode of operation (i.e., eight safety valves). There are separate TS requirements associated with the safety valves and the relief valves, the relief valves requirement is TS Section 3.6.F, and the safety valves requirement is TS Section 3.6.E. The Target Rock Safety Relief Valve (SRV) is specified in both the relief valve and the safety valve TS requirements.

At the time of the event, Unit 3 was operating in Mode 1 (i.e., Power Operations) at approximately 100% power. At 1951 hours on May 3, 1999, a Unit 3 Control Room alarm indicated a possible bellows failure of the pilot valve on the Target Rock SRV. Failure of the bellows will prevent the Target Rock SRV from operating in the safety valve mode, but would not affect the relief valve mode. The most probable failure mechanisms, none of which affect the relief valve mode, include the bellows, the seal weld, the o-ring seal, or the pressure sensor. However, because the unit is still operating, the root cause determination cannot be completed at this time and will be addressed by our Corrective Action Program.

ENCLOSURE

Written Follow-up of Request for Notice of Enforcement Discretion Concerning Main Steam Safety Valve Technical Specification Actions

Page 2 of 6

3. EVALUATION OF THE SAFETY SIGNIFICANCE AND POTENTIAL CONSEQUENCES INCLUDING RISK ASSESSMENT OF THE PROPOSED ACTION

A review of the design basis for Unit 3 indicates that the Target Rock SRV is not credited in either the safety or relief mode in any of the ASME transient analyses. The relief function is credited in other accident and transient events; the relief function remains available. Therefore, there is no risk associated with having the Target Rock SRV safety mode function out of service. The number of safety valves required is determined by the ASME B&PV code overpressure analysis which assumes Main Steam Isolation Valve (MSIV) closure, with no credit for direct scram from MSIV closure. No credit is given for either the safety or relief function of the Target Rock SRV. In addition, other conservative assumptions used in the transient analyses, such as 103 percent of the set point value, the fastest MSIV closure time allowed by TSs, and reduced safety valve flow rates, provide additional assurance that the loss of the safety mode function of the Target Rock SRV does not impact the results of the ASME B&PV Code overpressure analysis.

Therefore, ComEd requested a Notice of Enforcement Discretion (NOED) from compliance with TS Section 3.6.E be approved to avoid placing Dresden Nuclear Power Station, Unit 3, in a shutdown condition, and thereby causing the plant to go through an unnecessary transient.

Dresden Nuclear Power Station, Unit 3, is currently operating in Mode 1 (i.e., Power Operations). An NOED from the TS shut down requirements is requested to allow for submittal and approval of an exigent License Amendment Request (LAR) that will clearly define the minimum number of safety valves needed to provide the ASME B&PV overpressure safety function.

Given the high reliability of the safety valves to perform their safety function as evidenced by testing performed during each outage, the fact that no credit for the safety mode function of the Target Rock SRV is considered in the transient analyses, the large margin relative to the minimum required number of safety valves, and the large margin in safety valve capacity, there is no change in safety due to operation with the safety valve mode of the Target Rock SRV inoperable.

ENCLOSURE

**Written Follow-up of Request for Notice of Enforcement Discretion Concerning
Main Steam Safety Valve Technical Specification Actions**

Page 3 of 6

**4. BASIS FOR DETERMINING THAT THE NONCOMPLIANCE WILL NOT BE OF
POTENTIAL DETRIMENT TO THE PUBLIC HEALTH AND SAFETY AND THAT NO
SIGNIFICANT HAZARDS CONSIDERATION IS INVOLVED**

We have evaluated this request for an NOED and determined that it involves no significant hazards consideration. According to 10CFR50.92(c), an NOED is determined to involve no significant hazards consideration if operation of the facility in accordance with the NOED would not:

- (1) Involve a significant increase in the probability of occurrence or the consequences of an accident previously evaluated; or
- (2) Create the possibility of a new or different kind of accident from any accident previously evaluated; or
- (3) Involve a significant reduction in a margin of safety.

The proposed Enforcement Discretion does not involve a significant increase in the probability of occurrence or consequences of an accident previously evaluated.

The probability of an evaluated accident is derived from the probabilities of the individual precursors to that accident. The consequences of an evaluated accident are determined by the operability of plant systems designed to mitigate those consequences. Limits have been established consistent with NRC-approved methods to ensure that fuel performance during normal, transient, and accident conditions is acceptable. This NOED does not affect the ability of plant systems to mitigate the consequences of an accident previously evaluated.

Specifically, the Dresden ASME B&PV Code over-pressurization analysis does not credit the safety or relief function of the Target Rock SRV. The four power-actuated relief valves (i.e., electromatic valves) were also not credited in accordance with the ASME B&PV Code. Additional conservatism was included by increasing the TS valve set point pressures in the analysis by 3% (i.e., to allow for set point drift), decreasing the rated flows of the valves by 4%, and assuming MSIV closure time at the fastest TS allowable time of 3 seconds. Failure of the most critical active component, direct scram on valve (i.e., MSIV) position, was also assumed in the analysis. The analysis for Unit 3 (including coastdown operation) results in a maximum pressure below the TS steam dome pressure limit of 1345 psig which is equivalent to 110% of the design pressure in the lower reactor vessel plenum. Therefore, there is no increase in the probability or consequences of an accident previously evaluated because the analysis does not credit the Target Rock SRV safety and relief functions to mitigate the evaluated accident.

ENCLOSURE

Written Follow-up of Request for Notice of Enforcement Discretion Concerning Main Steam Safety Valve Technical Specification Actions

Page 4 of 6

The proposed Enforcement Discretion does not create the possibility of a new or different kind of accident from any accident previously evaluated.

Creation of the possibility of a new or different kind of accident would require the creation of one or more new precursors of that accident. New accident precursors may be created by modifications to the plant configuration, including changes in allowable modes of operation. This NOED does not involve any modifications to the plant configuration. No new precursors of an accident are created and no new or different kinds of accidents are created. Therefore, the proposed changes do not create the possibility of a new or different kind of accident from any accident previously evaluated.

This NOED allows Unit 3 operation with the Target Rock SRV safety function out of service. The ASME over-pressurization analysis does not credit the Target Rock SRV safety or relief function. Therefore, allowed operation with the Target Rock SRV out of service is supported by the current Unit 3 analysis. The ASME analysis results for Unit 3 shows that if a pressure transient occurred, up to two of the highest pressure set point safety valves would not need to actuate in order to handle sufficient flow to protect the fuel and reactor vessel safety limits. These results are based on the assumptions listed above and do not credit the four power-actuated relief valves (i.e., electromatic). Thus there are no new precursors to any accident previously evaluated.

The proposed Enforcement Discretion does not involve a significant reduction in a margin of safety.

Allowing Unit 3 operation with the Target Rock SRV safety function out of service will not involve any reduction in margin of safety. The ASME over-pressurization analysis does not credit the Target Rock SRV safety or relief function. Therefore, operation with the Target Rock SRV out of service is already supported by the current Unit 3 analysis. The ASME analysis results for Unit 3 shows that if a pressure transient occurred, up to two of the highest pressure set point safety valves would not need to actuate in order to pass sufficient flow to protect the fuel and vessel safety limits. These results are based on the assumptions listed above and do not credit the four power actuated relief valves. Thus there is no reduction in the margin of safety.

5. BASIS FOR CONCLUDING THAT THE REQUEST DOES NOT INVOLVE ADVERSE CONSEQUENCES TO THE ENVIRONMENT

We have evaluated this NOED against the criteria for identification of licensing and regulatory actions requiring environmental assessment in accordance with 10 CFR 51.21. We have determined that this requested action meets the criteria for a categorical exclusion set forth in 10 CFR 51.22(c)(9) and, as such, have determined that no irreversible consequences exist in accordance with 10 CFR 50.92(b). This determination is based on

ENCLOSURE

Written Follow-up of Request for Notice of Enforcement Discretion Concerning Main Steam Safety Valve Technical Specification Actions

Page 5 of 6

the fact that this is an NOED relative to a license issued pursuant to 10 CFR 50, that reflects a requirement with respect to the use of a facility component located within the restricted area, as defined in 10 CFR 20, and the action meets the following specific criteria.

- (i) The proposed action involves no significant hazards consideration. As demonstrated in Section 4 of this enclosure, this NOED does not involve any significant hazards consideration.
- (ii) There is no significant change in the types or significant increase in the amounts of any effluent that may be released offsite. The NOED does not affect the generation of any radioactive effluent. The NOED would allow the operation of Unit 3 for a longer period of time with the Target Rock SRV inoperable than allowed by TS. However, the resulting overall increase in risk is minimal. It is anticipated that plant equipment would operate as expected in the event of an accident to minimize the potential for any leakage of radioactive effluents.
- (iii) There is no significant increase in individual or cumulative occupational radiation exposure. The proposed action will not change the level of controls or methodology used for processing of radioactive effluents or handling of solid radioactive waste, nor will the proposed action result in any change in the normal radiation levels within the plant. Therefore, there will be no increase in individual or cumulative occupational radiation exposure resulting from this change.

6. PROPOSED COMPENSATORY ACTIONS

No compensatory measures are being established since the NOED is already supported by analysis as described above.

7. JUSTIFICATION FOR THE DURATION OF THE REQUEST

We have determined that there is minimal safety consequence associated with leaving the Target Rock SRV inoperable. This determination is based on the subjective consideration of the low probability of the combination of events that would lead to the need to open the safety valves, and the fact that less than nine safety valves are needed and credited in the ASME over-pressurization analysis. Given the low risk significance of the NOED and the inherent risk introduced by imposing the operational transient of unnecessarily shutting down the unit, the short duration of the NOED is justified.

ENCLOSURE

**Written Follow-up of Request for Notice of Enforcement Discretion Concerning
Main Steam Safety Valve Technical Specification Actions**

Page 6 of 6

8. ACKNOWLEDGEMENT OF PLANT OPERATIONS REVIEW COMMITTEE APPROVAL

This request has been reviewed and approved by the Dresden Nuclear Power Station Plant Operations Review Committee (PORC) to meet the requirements of station administrative procedures.

9. BASIS FOR CONCLUDING THAT THE NOTICE OF ENFORCEMENT DISCRETION (NOED) CRITERIA OF NUREG-1600, "GENERAL STATEMENT OF POLICY AND PROCEDURES FOR NRC ENFORCEMENT ACTIONS," ARE SATISFIED

We have evaluated the NOED against the criteria specified in NUREG-1600. We have determined that the NOED meet the criteria for an operating plant. This determination is based on the avoidance of an undesirable transient caused by the shutdown of the reactor as a result of forcing compliance with the TS and, thus, minimizes potential operational risks associated with a plant shutdown.

10. MARKED-UP TECHNICAL SPECIFICATION PAGES IDENTIFYING PROPOSED CHANGES (IF APPLICABLE)

Marked up Technical Specification pages will be included as a part of the exigent License Amendment Request, which will be submitted by May 5, 1999.

11. OTHER SUPPORTING INFORMATION.

No other supporting information is provided for this NOED.