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Docket Number 50-346

License Number NPF-3

Serial Number 2449

February 13, 1997

United States Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555-0001

Subject: Request for Enforcement Discretion Regarding Decay Heat Removal
System Valve Pit Technical Specification Surveillance
Requirements

Ladies and Gentlemen:

The purpose of this letter is to provide written documentation for the enforcement discretion which was verbally granted for the Davis-Besse Nuclear Power Station (DBNPS) by the NRC Office of Nuclear Reactor Regulation (NRR) on February 12, 1997 at 2005 hours. Enforcement discretion had been requested by the DBNPS to avoid an undesirable cooldown transient as a result of forcing compliance with the license conditions, and thus minimize potential safety consequences and operational risks. Enforcement discretion had also been requested to address non-compliance with a Technical Specification (TS) Surveillance Requirement (SR) that is intended to be incorporated by a followup license amendment.

The following provides the details and justification for this request:

1. Requirements for Which Enforcement Discretion is Requested

Decay Heat Removal (DHR) System isolation valves DH-11 and DH-12 are located in a valve pit in the lower elevation of the containment vessel. Since the motor operators for these valves are not qualified for a submerged environment, a watertight enclosure is provided for the valve pit to ensure that the valves will not be flooded for at least 7 days following a Loss-of-Coolant Accident (LOCA). The watertight enclosure consists of the walls of the valve pit and large 1/4-inch deck plates attached to a steel frame, which cover the valve pit.

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Technical Specification (TS) 3.5.2 requires two independent Emergency Core Cooling Systems (ECCS) Subsystems to be operable. Surveillance Requirement (SR) 4.5.2.f requires each ECCS Subsystem to be demonstrated operable by performing a vacuum leakage rate test of the watertight enclosure for valves DH-11 and DH-12 that assures the motor operators on valves DH-11 and DH-12 will not be flooded for at least seven (7) days following a LOCA. The test is required to be performed: (1) At least once per 18 months, (2) After each opening of the watertight enclosure, and (3) After any maintenance on or modification to the watertight enclosure which could affect its integrity. These SRs ensure that, at a minimum, the assumptions used in the safety analyses are met and that subsystem operability is maintained. Surveillance Requirements for the watertight enclosure provide assurance that a circulation flow path will be maintained, as described in Updated Safety Analysis Report (USAR) Section 6.3.3.1.2, "Results of Analysis (Large Break)."

2. Discussion of Circumstances Surrounding the Situation

During 1986 a plant modification was performed to the decay heat valve pit to install level switches and to add an inspection port. The purpose of this modification was to provide the capability to detect and confirm leakage in the valve pit during plant operation.

The inspection port opening is also utilized to insert a camera during performance of American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME) visual inspection requirements for portions of the decay heat piping located within the pit. These inspections must be performed in Mode 3. Use of the inspection port for this purpose avoids the need to disturb the watertight pit access covers.

The plant modification took into account that due to its design features, the opening and closing of the inspection port would not require performance of SR 4.5.2.f.

On February 11, 1997, a Potential Condition Adverse to Quality Report (PCAQR) was initiated by the DBNPS Staff to document a concern regarding whether opening and subsequent closure of the decay heat valve pit inspection port constitutes a breach of the decay heat valve pit "watertight enclosure," hence requiring performance of SR 4.5.2.f. This concern was identified by a design engineer during performance of a conceptual design study for a proposed modification to the decay heat valve pit watertight enclosure. At the time the PCAQR was initiated, it was believed that the inspection port had not been opened since the last performance of SR 4.5.2.f. However, on February 12, 1997, it was discovered that the inspection port had been opened on May 24, 1996, which was following the last performance of SR 4.5.2.f on May 19, 1996.

As a conservative measure, both trains of ECCS were declared inoperable and TS 3.0.3, which requires a plant shutdown to be commenced within one hour, was entered on February 12, 1997 at 0915 hours. However, TS 4.0.3, which allows 24 hours for delaying the actions of TS 3.0.3 in order to provide time for completion of the surveillance, was also entered. It was determined at 1435 hours that SR 4.5.2.f could not be performed at power. TS 4.0.3 was exited, and a plant shutdown was commenced from 100% rated thermal power on February 12, 1997 at 1521 hours in accordance with TS 3.0.3.

While the plant shutdown was proceeding, contacts were made with NRR and Region III Staff to request enforcement discretion to allow suspension of the plant shutdown. As noted above, enforcement discretion was granted on February 12, 1997 at 2005 hours, at which time the plant was in Mode 1 at approximately 10% rated thermal power.

As discussed in the conference call, granting of the enforcement discretion avoids an unnecessary plant cooldown transient. Also, due to the rapid pace required by TS 3.0.3, granting of the enforcement discretion avoids the need to cooldown the secondary system without the benefit of the Steam Generator fill and soak operations which are performed as part of a normal cooldown.

3. Safety Basis for the Request

The decay heat valve pit inspection port consists of a 4-inch (nominal) pipe stub welded to the pit cover and sealed with a 4-inch (nominal) adapter and cap ("Kamlok" coupling) arrangement manufactured by Dover Corporation/OPW Division (see attached drawing). The Kamlok coupling is designed to be removed and reinstalled, and contains an integral viton gasket for sealing. The Kamlok coupling, which is designed for 380 deg-F temperature and 150 psig pressure, inherently precludes leakage under the possible range of conditions, when properly installed.

The sealing capability of the Kamlok coupling is confirmed during performance of the SR 4.5.2.f watertight enclosure vacuum leakage rate test. No problems relative to the sealing performance of the Kamlok coupling have been observed during tests performed since its installation. The SR is typically performed in Mode 5 (Cold Shutdown). As noted above, the vacuum leakage rate test is not repeated following subsequent opening and closure of the inspection port in Mode 3.

During a containment entry made on February 12, 1997, described in further detail below, it was visually confirmed that the Kamlok coupling is properly installed and in good condition.

Based on the above, there is reasonable assurance that the decay heat valve pit inspection port, as designed and installed, is leak-tight and will not adversely affect the decay heat valve pit watertight enclosure sealing capability. Consequently, although the leak-tightness of the

inspection port has not been confirmed via performance of SR 4.5.2.f following opening and subsequent closure of the port while in Mode 3 on May 24, 1996, there will be no adverse effect on plant safety.

Since the ability of the decay heat valve pit watertight enclosure to perform its function is not impacted, there is no impact on any plant initiating events or on the ability of plant systems to mitigate any initiating events. The flow path through valves DH-11 and DH-12 remains fully functional. Therefore there is no impact on the overall core damage frequency (CDF) or large early release frequency (LERF).

4. Basis for Conclusion That Noncompliance Will Not Be of Potential Detriment to the Public Health and Safety

After evaluating the safety significance and potential consequences of the proposed request, it has been concluded that there would be no detrimental effect on public health and safety as a result of granting the enforcement discretion request.

The Nuclear Regulatory Commission has provided standards in 10CFR50.92(c) for determining whether a significant hazard exists due to a proposed action. A proposed action involves no significant hazards consideration if operation of the facility in accordance with the proposed changes would: (1) Not involve a significant increase in the probability or consequences of an accident previously evaluated; (2) Not create the possibility of a new or different kind of accident from any accident previously evaluated; or (3) Not involve a significant reduction in a margin of safety. Toledo Edison has reviewed the proposed action and determined that a significant hazards consideration does not exist because operation of the DBNPS in accordance with this action would:

- 1a. Not involve a significant increase in the probability of an accident previously evaluated because no change is being made to any accident initiator or assumption. Granting of the requested enforcement discretion precludes the need to shutdown the plant to perform an unnecessary surveillance test. Granting of the enforcement discretion does not affect the probability of initiating an accident.
- 1b. Not involve a significant increase in the consequence of an accident previously evaluated because the proposed action does not alter the source term, containment isolation, allowable radiological releases, or invalidate the assumptions used in evaluating radiological releases.
2. Not create the possibility of a new or different kind of accident from any other accident previously evaluated because the station will be operated in the same way as before, and no new failure modes or effects are being introduced. Therefore, no new or different accident scenarios are postulated.
3. Not involve a significant reduction in a margin of safety as defined in the basis for any Technical Specification because the

proposed action does not involve any new changes to the initial conditions contributing to accident severity or consequences. Consequently there are no reductions in a margin of safety.

Toledo Edison has evaluated the requirements of 10 CFR 50.59 regarding whether an unreviewed safety question is involved due to the proposed action, and has determined that an unreviewed safety question does not exist, for the following reasons:

The proposed action does not increase the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the SAR. Granting of the requested enforcement discretion precludes the need to shutdown the plant to perform an unnecessary surveillance test. The functional capability of the inspection port for maintaining leaktightness is maintained, thereby assuring that DHR valves DH-11 and DH-12 remain capable of performing their functions.

Granting of the enforcement discretion does not affect the probability of experiencing an accident or malfunction of equipment important to safety, and does not alter the source term, containment isolation, allowable radiological releases, or invalidate the assumptions used in evaluating radiological releases.

The proposed action does not create the possibility for an accident or malfunction of a different type than any previously evaluated in the SAR. The station will be operated in the same way as before, and no new failure modes or effects are being introduced.

The proposed action does not reduce the margin of safety as defined in the bases for any technical specification. The functional capability of the inspection port for maintaining leaktightness is maintained, thereby assuring that DHR valves DH-11 and DH-12 remain capable of performing their functions.

5. Basis for Conclusion of No Adverse Environmental Consequences

This request does not involve a change in the installation or use of the facilities or components located within the restricted areas as defined in 10 CFR Part 20. Toledo Edison has determined that this request for enforcement discretion involves no significant hazards consideration (as discussed above), involve no change in the types or increase in the amounts of any effluents that may be released offsite, and that there is no increase in individual or cumulative radiation exposure. Accordingly, this request for enforcement discretion is similar to the criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Since this request for enforcement discretion is preceding the submittal of a license amendment request which meets the categorical exclusion of 10 CFR 51.22(c)(9), pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with this enforcement discretion.

6. Proposed Compensatory Measures

Following discovery on February 12, 1997 that the Kamlok coupling had been opened after the vacuum leak rate test had last been performed, the following compensatory measures were taken. A special entry into containment was made at approximately 1420 hours in order to inspect the Kamlok coupling. This entry was made by a three-man team consisting of Quality Control, Mechanical - Maintenance, and Radiation Protection. The team verified the as-found Kamlok coupling was securely in place, removed the Kamlok coupling, inspected the condition of the gasket and fitting's surface area, verified the decay heat removal pit was dry, and restored the Kamlok coupling securely in place. In addition, the team performed a general inspection of the decay heat pit watertight enclosure area.

7. Justification for the Duration of the Enforcement Discretion

Enforcement discretion from the requirements of SR 4.5.2.f was verbally approved until the NRC approves the license amendment request to revise the TS requirements, or until the DBNPS enters Mode 4 in an outage of sufficient duration to perform the vacuum leak rate test for the watertight enclosure, whichever occurs first. Toledo Edison agreed to submit the license amendment request on February 14, 1997 to the NRC. Although the next refueling outage is not scheduled until April, 1998, a mid-cycle outage is tentatively planned for late April, 1997, at which time the vacuum leak rate test could be performed if the license amendment request is not yet approved.

8. Approval by the Station Review Board

The plant onsite review committee responsible for reviewing nuclear safety issues at the DBNPS in accordance with TS 6.5.1.1 is the Station Review Board (SRB). The SRB convened a special meeting on February 12, 1997 at 1700 hours to discuss the Kamlok coupling and vacuum leak rate test issue.

The SRB reviewed and discussed the items which must be addressed in the request for enforcement discretion, including the safety basis for the request, the safety significance, the conclusion that an unreviewed safety question did not exist, the conclusion that no significant hazards consideration was involved, the conclusion that no adverse consequences to the environment were involved, the compensatory measures taken, and a qualitative risk assessment. This meeting was held and SRB approval for the oral request for enforcement discretion was obtained prior to requesting the discretion from the NRC on February 12, 1997.

This written request has also been reviewed and approved by the SRB.

9. Identification of Notice of Enforcement Discretion Criteria Satisfied

Enforcement discretion was requested in order to avoid an undesirable cooldown transient as a result of being forced to shutdown and cooldown under the requirements of TS 3.0.3, due to noncompliance with SR 4.5.2.f.

As previously described, the surveillance test which would demonstrate compliance with SR 4.5.2.f cannot be performed under current plant conditions (Mode 1).

10. Proposed Technical Specification Changes

Toledo Edison plans to submit a license amendment request on February 14, 1997 to propose that the opening of the Kamlok coupling does not require performance of the vacuum leak rate test of TS Surveillance Requirement 4.5.2.f. The technical basis for this change would include a discussion of the Kamlok coupling design, the need to open the Kamlok coupling in Mode 3 in order to perform an Inservice Inspection of the piping welds inside the enclosure, and the demonstrated past performance of the Kamlok coupling seal during the vacuum leakage rate tests. Specifically, the following text would be proposed to be added to SR 4.5.2.f as shown on the attached marked-up TS pages:

The inspection port on the watertight enclosure may be opened without requiring performance of the vacuum leakage rate test, to perform inspections. After use, the inspection port must be verified as closed in its correct position. Provisions of TS 3.0.3 are not applicable during these inspections.

In addition, Toledo Edison plans to propose a change to the TS Bases that would explain the reason for the Surveillance Requirement on the watertight enclosure and the related requirements relative to the inspection port. The attached marked-up TS Bases provide the tentative text.

11. NRC Approved Line-Item TS Improvements to the TS and Improved Standard Technical Specifications

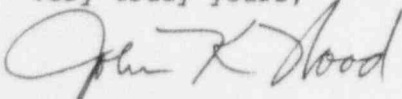
Technical Specification Surveillance Requirement 4.5.2.f is a plant-specific requirement due to the unique design of the decay heat removal pit watertight plates and gasket for ensuring the decay heat removal system valves DH-11 and DH-12 are maintained in an unsubmerged condition for seven days following a Loss-of-Coolant Accident. The NRC's Supplement Number 1 to the Safety Evaluation Report for the issuance of the DBNPS Operating License (NUREG-0136), Subsection 6.3.3.5, "Submerged Valves", discussed that the NRC staff requires a leakage test for this enclosure be performed and that the Technical Specifications would include such a requirement. This requirement was added as SR 4.5.2.f for the watertight enclosure, which pre-dated the addition of the inspection port.

The NRC has not approved any line-item TS improvements which would obviate the need for this particular TS Surveillance Requirement. Regarding conversion to the Improved Standard Technical Specifications (ITS), the DBNPS informed the NRC by letter (Serial Number 2418) dated November 26, 1996 of its plans to convert to the ITS commencing in 1999. Applying the criteria of 10 CFR 50.36(c)(2)(ii) as to the plant-specific items which must be retained in the TS when converting to the ITS indicates that the present

design of the watertightness of the plates and gasket arrangement is a feature which should be reflected in the TS in accordance with Criterion 4. Accordingly, the ITS do not appear to offer any relief from this plant-specific TS requirement.

Should you have any questions or require additional information, please contact Mr. James L. Freels, Manager - Regulatory Affairs, at (419) 321-8466.

Very truly yours,

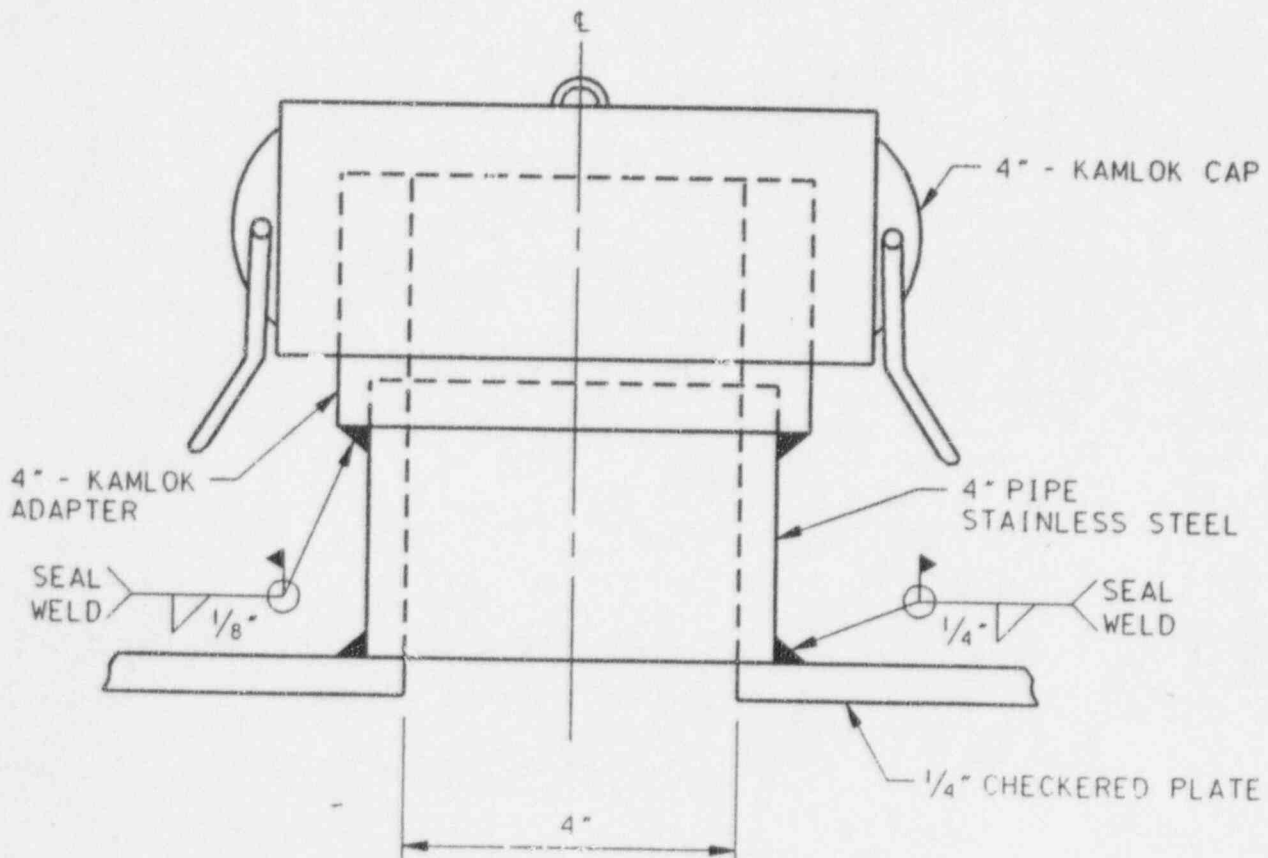
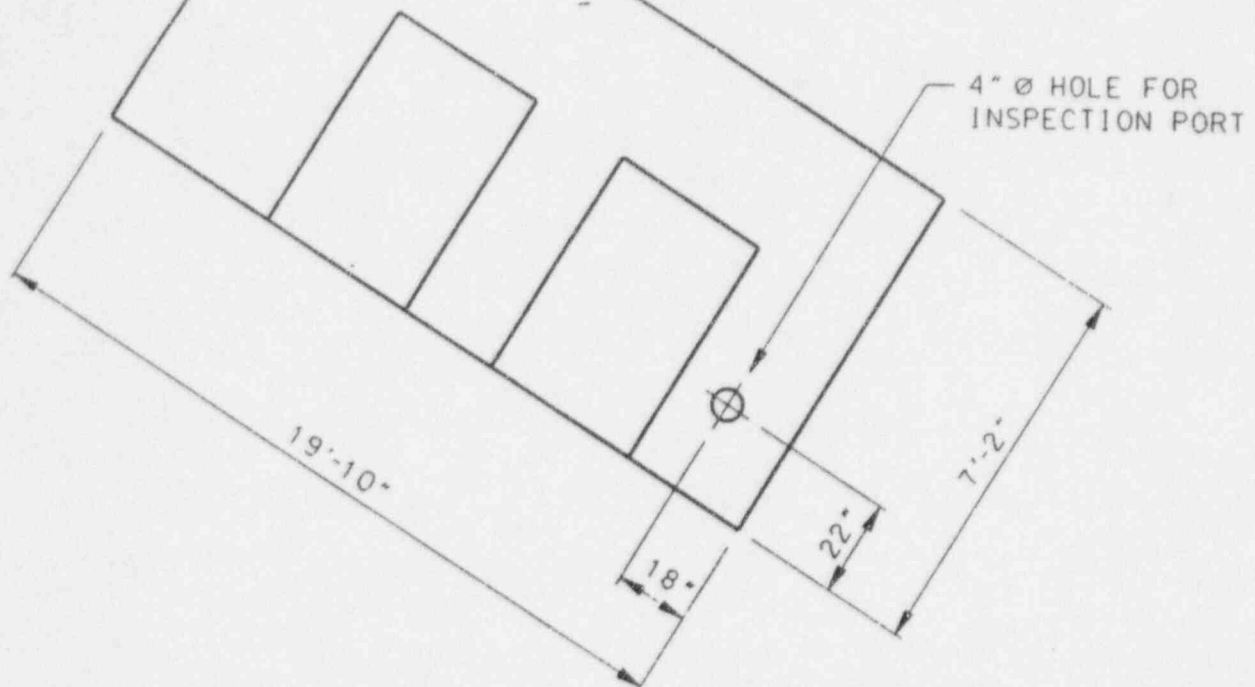


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Enclosure

cc: A. B. Beach, Regional Administrator, NRC Region III
J. L. Caldwell, Director, NRC Region III, Division of Reactor Projects
A. G. Hansen, NRC/NRR Project Manager
J. W. Roe, NRC Project Director
S. Stasek, NRC Region III, DB-1 Senior Resident Inspector
J. R. Williams, Chief of Staff, Ohio Emergency Management Agency,
State of Ohio (NRC Liaison)
Utility Radiological Safety Board

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DECAY HEAT REMOVAL VALVE PIT, COVER,
INSPECTION PORT AND KAMLOK CAP