

REACTOR COOLANT SYSTEM
REACTOR COOLANT SYSTEM VENTS
LIMITING CONDITION FOR OPERATION

- 3.4.11 The following reactor coolant system vent paths shall be operable:
- Reactor Coolant System Loop 1 with vent path through valves RC 4608A and RC 4608B.
 - Reactor Coolant System Loop 2 with vent path through valves RC 4610A and RC 4610B.
 - Pressurizer; with vent path through EITHER valves RC11 and RC 2A (PORV) OR valves RC 239A and RC 200.

APPLICABILITY: Modes 1, 2 and 3

ACTION:

See attached new Action a c

- ~~With one of the above vent paths inoperable, restore the inoperable vent path to OPERABLE status within 30 days, or, be in HOT STANDBY within 6 hours and in HOT SHUTDOWN within the following 30 hours.~~
- With two of the above vent paths inoperable, restore at least one of the inoperable vent paths to OPERABLE status within 72 hours or be in HOT STANDBY within 6 hours and in HOT SHUTDOWN within the following 30 hours.
- With three of the above vent paths inoperable, restore at least two of the inoperable vent paths to OPERABLE status within 72 hours or be in HOT STANDBY within 6 hours and in HOT SHUTDOWN within the following 30 hours.
- The provisions of specification 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

- 4.4.11 Each reactor coolant system vent path shall be demonstrated OPERABLE at least once per 18 months by:
- Verifying all manual isolation valves in each vent path are locked in the open position, and
 - Cycling each valve in the vent path through at least one complete cycle of full travel from the control room during COLD SHUTDOWN or REFUELING, and
 - Verifying flow through the reactor coolant system vent paths during COLD SHUTDOWN or REFUELING.

New 3.4.11 Action

- a. With either vent path a or vent path b inoperable (but not both), restore the inoperable vent path to OPERABLE status within 30 days, or prepare and submit a Special Report to the NRC pursuant to Specification 6.9.2 within the next 30 days outlining the action taken, the cause of the inoperability, and the plans and schedule for restoring the vent path to OPERABLE status.

REACTOR COOLANT SYSTEM

INFORMATION ONLY

BASES

3.4.4.10 STRUCTURAL INTEGRITY

The inspection programs for ASME Code Class 1, 2 and 3 components, except steam generator tubes, ensure that the structural integrity of these components will be maintained at an acceptable level throughout the life of the plant. To the extent applicable, the inspection program for these components is in compliance with Section XI of the ASME Boiler and Pressure Vessel Code.

The internals vent valves are provided to relieve the pressure generated by steaming in the core following a LOCA so that the core remains sufficiently covered. Inspection and manual actuation of the internals vent valves 1) ensure OPERABILITY, 2) ensure that the valves are not stuck open during normal operation, and 3) demonstrates that the valves are fully open at the forces equivalent to the differential pressures assumed in the safety analysis.

3.4.4.11 HIGH POINT VENTS

The Reactor Coolant System high point vents are installed per NUREG-0737 item II.B.1 requirements. The operability of the system ensures capability of venting steam or noncondensable gas bubbles in the reactor cooling system to restore natural circulation following a small break loss of coolant accident.

ADDITIONAL CHANGES - PREVIOUS EDITION
PROPOSED BY: GATNER
Serial No. 1789
Date 11/14/84

ADMINISTRATIVE CONTROLS

SPECIAL REPORTS

6.9.2 Special reports shall be submitted to the U.S. Nuclear Regulatory Commission in accordance with 10 CFR 50.4 within the time period specified for each report. These reports shall be submitted covering the activities identified below pursuant to the requirements of the applicable reference specification:

- a. ECCS Actuation, Specifications 3.5.2 and 3.5.3.
- b. Inoperable Seismic Monitoring Instrumentation, Specification 3.3.3.3.
- c. Inoperable Meteorological Monitoring Instrumentation, Specification 3.3.3.4.
- d. Seismic event analysis, Specification 4.3.3.3.2.
- e. Fire Detection Instrumentation, Specification 3.3.3.8.
- f. Fire Suppression Systems, Specifications 3.7.9.1 and 3.7.9.2.
- g. Dose or dose commitment exceedences to a MEMBER OF THE PUBLIC from radioactive materials in liquid effluents released to UNRESTRICTED AREAS (Specification 3.11.1.2).
- h. The discharge of radioactive liquid waste without treatment and in excess of the limits in Specification 3.11.1.3.
- i. The calculated air dose from radioactive gases exceeding the limits in Specification 3.11.2.2.
- j. The calculated dose from the release of iodine-131, tritium, and radionuclides in particulate form with half-lives greater than 8 days, in gaseous effluents exceeding the limits in Specification 3.11.2.3.
- k. The discharge of radioactive gaseous waste without treatment and in excess of the limits in Specification 3.11.2.4.
- l. The calculated doses from the release of radioactive materials in liquid or gaseous effluents exceeding the limits in Specification 3.11.4.
- m. The level of radioactivity as the result of plant effluents in an environmental sampling medium exceeding the reporting levels of Table 3.12-2 (Specification 3.12.1).

n. Reactor Coolant System Vents, Specification 3.4.11.

ENVIRONMENTAL ASSESSMENT

Identification of Proposed Action

This proposed action involves the Davis-Besse Nuclear Power Station (DBNPS), Unit Number 1, Operating License Number NPF-3, Appendix A, Technical Specifications (TS). A license amendment is proposed to revise the Action statements for TS 3.4.11, Reactor Coolant System - Reactor Coolant System Vents. Specifically, the proposed amendment would allow continued plant operation without one of the Reactor Coolant System (RCS) hot leg loop vent paths (either through Loop 1 valves RC 4608A and RC 4608B, or through Loop 2 valves RC 4610A and RC 4610B) for more than 30 days. The current Action statement requires that a vent path be restored to operable status within 30 days, or the plant placed in Hot Standby (Mode 3) within six hours and Hot Shutdown (Mode 4) within the following 30 hours.

The proposed amendment would add a new Action statement requirement that if an RCS loop vent path was not restored within 30 days, a Special Report would be submitted to the Nuclear Regulatory Commission (NRC) pursuant to TS 6.9.2 within the next 30 days describing the action taken, the cause of the inoperability, and the plans and schedule for restoring the loop vent path. Technical Specification 6.9.2 would also be amended to add a requirement for submittal of this Special Report.

Need for the Proposed Action

The changes proposed are needed to allow continued plant operation beyond 30 days and avoid an unwarranted plant shutdown due to the inoperability of one of the two RCS loop vent paths.

Environmental Impact of the Proposed Action

During normal plant operation the two RCS loop vent paths are isolated by two solenoid-operated valves on each of the vent paths. These solenoid-operated valves can be remotely operated from the control room to vent noncondensable gases from the RCS. The loop vent paths are routed to the containment atmosphere in an unobstructed area. A manual valve in each path upstream of these solenoid-operated valves is locked open during Modes 1 through 3 plant operation.

In the event one RCS vent path is inoperable, the present Technical Specifications will only allow continued plant operation under these circumstances for 30 days. At that time the vent path must be restored or the plant shutdown. For example, should the manual valve in one of the RCS vent paths be closed to mitigate RCS leakage past the solenoid-operated valves to the containment atmosphere, the present TS would require either shutting down the plant or re-opening the manual valve within 30 days (provided the leakage requirements of Technical Specification 3/4.4.6.2, RCS - Operational Leakage were met).

The proposed amendment to TS 3.4.11 would remove the requirement of a plant shutdown in the event that either the RCS Loop 1 or the RCS Loop 2 vent path (but not both) is inoperable for longer than 30 days. The RCS vent paths can be used to help restore natural circulation conditions following an event in which natural circulation was lost due to noncondensable gas collection. As stated in the DBNPS Updated Safety Analysis Report (USAR) Section 5.5.10.2, redundancy of one RCS Loop vent path is provided by the other RCS Loop vent path. However, as described in USAR 3.3.3.1.4, design basis events do not generate sufficient noncondensable gases to block natural circulation. The RCS vent paths are, accordingly, not required by the USAR to function to mitigate a Design Basis Accident. Since the RCS Loop vent path's only safety function is to act as part of the RCS pressure boundary, the inability to open the valves or to vent the RCS via these flowpaths will have no adverse effect on safety, therefore the present TS requirement to shutdown the plant with only one of the two RCS Loop vent paths inoperable is overly conservative.

The Continuous Vent Line serves to transport steam and noncondensable gases from the reactor vessel upper head to the inlet plenum of Steam Generator (SG) 1-2 and to improve flow in the reactor vessel upper head region during natural circulation cooldown. Relocation of steam and gases to the RCS loop could cause an interruption of natural circulation to RCS Loop 2 during a small break loss of coolant accident (LOCA). However, the DBNPS small break LOCA analyses have taken credit for reflux cooling (coupled heat transfer from the RCS to the SG secondary side) to keep the reactor cooled. Toledo Edison has previously submitted information to the NRC (Serial No. 1543 dated August 23, 1988) regarding the effectiveness of reflux cooling. Consequently, there is no specific need to be able to remove the steam or noncondensable gases transported from the reactor vessel upper head to the RCS loop high point by the CVL. Therefore, removal of the requirement to shutdown the plant if a RCS Loop vent path becomes inoperable has no adverse effect on safety.

The proposed change will reduce the potential for unduly requiring cooldown and heatup transitions of plant equipment, thus preserving the cycling margin between plant design and actual operating history. The proposed change will also allow repairs to an inoperable RCS vent path to be deferred to a refueling outage when the radiation dose rate associated with the repair can be better planned and scheduled in order to minimize individual and occupational doses in accordance with the As Low As Reasonably Achievable (ALARA) Program.

The proposed amendment involves a change to a requirement with respect to the use of a facility component located within the restricted area as defined in 10CFR Part 20. As discussed in the Significant Hazards Consideration, this proposed amendment does not involve a significant hazards consideration. The proposed change to allow continued plant operation with one RCS vent path inoperable does not alter source terms, containment isolation or allowable releases. Accordingly, changing the Action statement and reporting requirements does not

involve an increase in the amounts, and no change in the types, of any radiological effluents that may be allowed to be released offsite. Furthermore, there is no increase in the individual or cumulative occupational radiation exposure.

With regard to potential non-radiological impacts, the proposed amendment involves no increase in the amounts or change in types of any non-radiological effluents that may be released offsite, and has no other environmental impact.

Based on the above, Toledo Edison concludes that there are no significant radiological or non-radiological environmental impacts associated with the proposed amendment.

Alternatives to the Proposed Action

Since Toledo Edison has concluded that the environmental effects of the proposed action are not significant, any alternatives will have only similar or greater environmental impacts. The principal alternative would be not to amend the TS. This would not reduce the environmental impacts attributable to the facility. Furthermore, it would necessitate that either personnel enter containment with the reactor at power to restore a vent path or, if necessary, force a shutdown of the facility in accordance with the present TS to effect repairs to restore a vent path. Under these circumstances, occupational exposures to plant personnel would be incurred at a higher dose rate than if the repairs were deferred to a refueling outage.

Alternative Use of Resources

This action does not involve the use of resources not previously considered in the Final Environmental Statement Related to the Operation of the Davis-Besse Nuclear Power Station, Unit Number 1 (NUREG 75/097).

Finding of No Significant Impact

Toledo Edison has reviewed the proposed license amendment against the criteria of 10CFR51.30 for an environmental assessment. As demonstrated above, the proposed amendment does not involve a significant hazards consideration, does not increase the types or amounts of effluents that may be released offsite, and does not increase individual or cumulative occupational radiation exposures. Accordingly, Toledo Edison finds that the proposed license amendment, if approved by the Nuclear Regulatory Commission, will have no significant impact on the environment and that no Environmental Impact Statement is required.