

TECHNICAL SPECIFICATION CHANGE REQUEST NO. 137

I. Technical Specification Change Request No. 137

The Licensee requests that attached revised pages replace the following pages of the existing Technical Specifications.

Replace: ii, iv, 4-54, and insert new pages: 3-18f, 3-18g.

II. Reasons for Change

In accordance with the NRC staff request (Generic Letter 83-37) dated November 1, 1983 we are providing technical specifications for the Reactor Coolant System vents. The NRC sample technical specifications were used as a basis for this technical specification change request. The vent paths which have been included in this change request are:

- 1) Reactor Vessel Head Vent
- 2) Reactor Coolant High Point Vent
- 3) Pressurizer Steam Space Vent

Provisions have been made, in the attached technical specification pages, for the fact that the reactor vessel head vent is not currently fully operational.

III. Safety Evaluation and Justification of Change

Persuant to the NRC TMI-2 Lessons Learned Action Plan (NUREG-0737 Item II.B.1) TMI-1 has installed Reactor Coolant System vents. The NRC staff requested by Generic Letter 83-37 (and also NUREG-0737) that these modifications be included in the plant technical specifications. These specifications will help ensure that the Reactor Coolant System vents will be able to perform their intended function, by requiring that they be operable during plant operation and that periodic testing be performed.

IV. No Significant Hazard Considerations

Operation of TMI-1 in accordance with this Technical Specification Change Request adds surveillance and operability requirements beyond the scope of the current Technical Specification and does not:

- 1) involve a significant increase in the probability or consequences of an accident previously evaluated since this change is administrative in nature;
- 2) create the possibility of a new or different kind of accident from any accident previously evaluated; it provides additional assurance that the plant (i.e. Reactor Coolant Vents) will respond to an accident as designed;

- 3) involve a significant reduction in a margin of safety since it increases the margin of safety by providing additional assurance of operability of the Reactor Coolant System Vents.

V. Implementation

It is requested that the implementation of this amendment be six weeks after issuance.

VI. Amendment Classification (10 CFR 170.22)

This change request is administrative in nature and is, therefore, considered a class II amendment. A check for \$1,200.00 is enclosed.

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### 3.1.13 Reactor Coolant System Vents

#### Applicability

Provides the limiting conditions for operation of the Reactor Coolant System Vents. These limiting conditions for operation, (LCO) are applicable only when Reactor is critical.

#### Objective

To ensure that sufficient vent flow paths are operable during the plant operating modes mentioned above.

#### Specification

3.1.13.1 At least one reactor coolant system vent path consisting of at least two power operated valves in series, powered from emergency busses shall be OPERABLE and closed at each of the following locations:

- a. Reactor Vessel head\* (RC-V42 & RC-V43)
- b. Pressurizer steam space (RC-V28 & RC-V44)
- c. Reactor coolant system high point (either RC-V40A and 41A)  
or (RC-V40B and 41B)

#### Action

- 3.1.13.2
- a. With one of the above reactor coolant system vent paths inoperable, the inoperable vent path shall be maintained closed, with power removed from the valve actuators in the inoperable vent path. The inoperable vent path shall be restored to OPERABLE status within 30 days, or the plant shall be in HOT SHUTDOWN within an additional 6 hours and in COLD SHUTDOWN within the following 30 hours.
  - b. With two or more of the above reactor coolant system vent paths inoperable; maintain the inoperable vent path closed, with power removed from the valve actuators in the inoperable vent paths, and restore at least two of the vent paths to OPERABLE status within 72 hours or be in HOT SHUTDOWN within an additional 6 hours and in COLD SHUTDOWN within the following 30 hours.

\* This specification becomes binding after installation and initially being declared operable.

## Bases

The safety function enhanced by this venting capability is core cooling. For events beyond the present design basis, this venting capability will substantially increase the plants ability to deal with large quantities of noncondensable gas which could interfere with natural circulation (i.e., core cooling).

The reactor vessel head vent (RC-V42 & RC-V43 in series) provides the capability of venting noncondensable gases from the majority of the reactor vessel head as well as the Reactor Coolant hot legs (to the elevation of the top of the outlet nozzles) and cold legs (through vessel internals leakage paths, to the elevation of the top of the inlet nozzles). This vent is routed to containment atmosphere.

Venting for the pressurizer steam space (RC-V28 and RC-V44 in series) has been provided to assure that the pressurizer is available for Reactor Coolant System pressure and volume control. This vent is routed to the Reactor Coolant Drain Tank.

Additional venting capability has been provided for the Reactor Coolant hot leg high points (RC-V40A,B, RC-V41A,B), which normally can not be vented through the Reactor Vessel head vent or pressurizer steam-space vent. These vents relieve to containment atmosphere through a rupture disk (set at low pressure).

The above vent systems are seismically designed, environmentally qualified and the power operated valves (2 in series in each flow path) which are powered from emergency buses fail closed on loss of power. All vent valves for the reactor vessel head vent, pressurizer vent and loop B high point vent are powered from the class 1E "B" bus. The vent valves for the loop A high point vent are powered from the class 1E "A" bus. The power operated valves are controlled in the Control Room. The individual vent path lines are sized so that an inadvertent valve opening will not constitute a LOCA as defined in 10 CFR 50.46(c)(1). These design features provide a high degree of assurance that these vent paths will be available when needed, and that inadvertent operation or failures will not significantly hamper the safe operation of the plant.

#### 4.11 REACTOR COOLANT SYSTEM VENTS

##### Applicability

Applies to Reactor Coolant System Vents.

##### Objective

To ensure that Reactor Coolant System vents are able to perform their design function.

##### Specification

- 4.11.1 Each reactor coolant system vent path shall be demonstrated OPERABLE once per refueling interval by cycling each power operated valve in the vent path through at least one complete cycle of full travel from the control room during COLD SHUTDOWN or REFUELING.

##### BASES

Frequency of tests specified above are necessary to ensure that the individual Reactor Coolant System Vents will perform their functions. It is not advisable to perform these tests during Plant Power Operation, or when there is significant pressure in the Reactor Coolant System. Tests are, therefore, to be performed during either Cold Shutdown or Refueling.