

ATTACHMENT TO AEP:NRC:0584C  
DONALD C. COOK NUCLEAR PLANT UNIT NOS 1 AND 2  
REACTOR COOLANT SYSTEM VENTS  
TECHNICAL SPECIFICATIONS

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REACTOR COOLANT SYSTEM

REACTOR COOLANT VENT SYSTEM

REACTOR VESSEL HEAD VENTS

LIMITING CONDITIONS FOR OPERATION

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3.4.12.1 At least one of the Reactor Vessel head vent paths, consisting of two remotely operated valves in series, powered from Class 1E DC busses, shall be OPERABLE and closed.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

- a. With both of the Reactor Vessel head vent paths inoperable, and at least one of the Pressurizer steam space vent paths OPERABLE (see Specification 3.4.12.2), operation in MODES 1, 2, 3 or 4 may continue, provided the inoperable vent paths are maintained closed with power removed from the valve actuators of all the remotely operated valves in all of the inoperable vent paths; restore at least one of the Reactor Vessel head vent paths within 30 days or be in HOT STANDBY within 6 hours and in COLD SHUTDOWN within the following 30 hours.
- b. With both of the Reactor Vessel head vent paths and both of the Pressurizer steam space vent paths inoperable; maintain the inoperable vent paths closed with power removed from the valve actuators of all of the remotely operated valves in all of the inoperable vent paths; restore one of the inoperable vent paths from either the Reactor Vessel head vent or the Pressurizer steam space within 72 hours or be in HOT STANDBY within 6 hours and in COLD SHUTDOWN within the following 30 hours.
- c. The provision of Specification 3.0.4 are not applicable.

REACTOR COOLANT SYSTEM

REACTOR COOLANT VENT SYSTEM

PRESSURIZER STEAM SPACE VENTS

LIMITING CONDITION FOR OPERATION

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3.4.12.2 At least one of the Pressurizer steam space vent paths, each consisting of two remotely operated valves in series, powered from Class 1E DC busses, shall be OPERABLE and closed.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

- a. With both of the Pressurizer steam space vent paths inoperable, and at least one of the Reactor Vessel head vent paths OPERABLE (see Specification 3.4.12.1), operation in MODES 1, 2, 3 or 4 may continue, provided the inoperable vent paths are maintained closed with the power removed from the valve actuators of all the remotely operated valves in all of the inoperable vent paths; restore at least one of the Pressurizer steam space vent paths within 30 days or be in HOT STANDBY within 6 hours and in COLD SHUTDOWN in the following 30 hours.
- b. With both of the Pressurizer steam space vent paths and both of the Reactor Vessel head vent paths inoperable; maintain the inoperable vent paths closed with power removed from the valve actuators of all of the remotely operated valves in all of the inoperable vent paths; restore one of the inoperable vent paths from either the Reactor Vessel head vent or the Pressurizer steam space within 72 hours or be in HOT STANDBY within 6 hours and in COLD SHUTDOWN within the following 30 hours.
- c. The provisions of Specification 3.0.4 are not applicable.

## REACTOR COOLANT SYSTEM

### BASES

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#### 3.4.4.11 RELIEF VALVES

The power operated relief valves (PORVs) operate to relieve RCS pressure below the setting of the pressurizer code safety valves. These relief valves have remotely operated block valves to provide a positive shutoff capability should the relief valve become inoperable. The electrical power for both the relief valves and the block valves is supplied from an emergency power source to ensure the ability to seal this possible RCS leakage path.

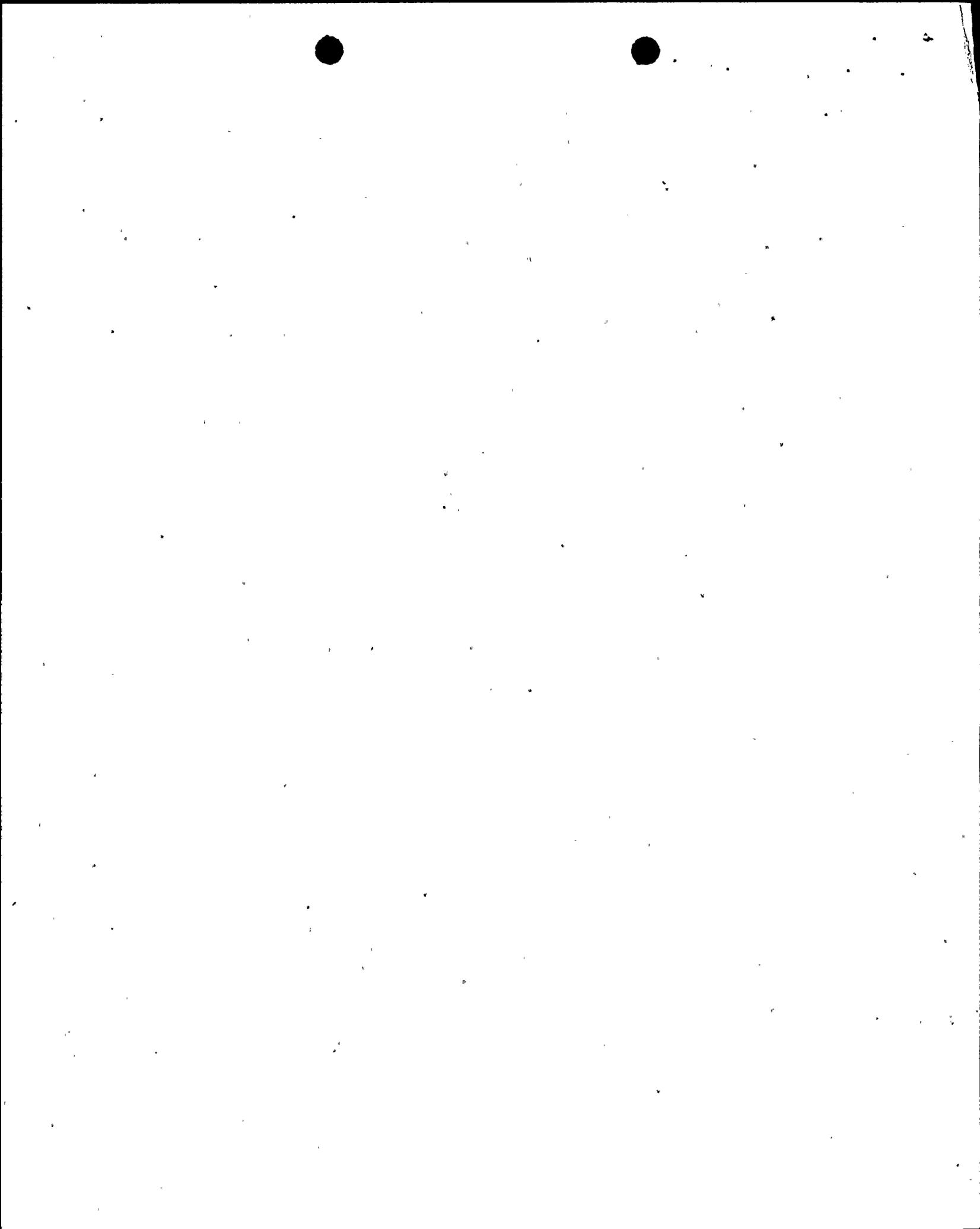
#### 3.4.4.12 REACTOR COOLANT VENT SYSTEM

The Reactor Coolant Vent System is provided to exhaust noncondensable gases and/or steam from the primary system that could inhibit natural circulation core cooling. It has been designed to vent a volume of Hydrogen approximately equal to one-half of the Reactor Coolant System volume in one hour at system design pressure and temperature.

The Reactor Coolant Vent System is comprised of the Reactor Vessel head vent system and the pressurizer steam space vent system. Each of these subsystems consists of a single line containing a common manual isolation valve inside containment, splitting into two parallel flow paths. Each flow path provides the design basis venting capacity and contains two 1E DC powered solenoid isolation valves, which will fail closed. This valve configuration/redundancy serves to minimize the probability of inadvertent or irreversible actuation while ensuring that a single failure of a remotely-operated vent valve, power supply, or control system does not prevent isolation of the vent path. The pressurizer steam space vent is independent of the PORVs and safety valves and is specifically designed to exhaust gases from the pressurizer in a very high radiation environment. In addition, the OPERABILITY of one Reactor Vessel head vent path and one Pressurizer steam space vent path will ensure that the capability exists to perform this venting function.

The function, capabilities, and testing requirements of the Reactor Coolant Vent System are consistent with the requirements of Item II.B.1 of NUREG-0737, "Clarification of TMI Action Plan Requirement," November 1980.

The minimum required systems to meet the Specification and not enter into an action statement are one vent path from the Reactor Vessel head and one vent path from the Pressurizer steam space.



REACTOR COOLANT SYSTEM

REACTOR COOLANT VENT SYSTEM

REACTOR VESSEL HEAD VENTS

LIMITING CONDITIONS FOR OPERATION

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3.4.12.1 At least one of the Reactor Vessel head vent paths, consisting of two remotely operated valves in series, powered from Class 1E DC busses, shall be OPERABLE and closed.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

- a. With both of the Reactor Vessel head vent paths inoperable, and at least one of the Pressurizer steam space vent paths OPERABLE (see Specification 3.4.12.2), operation in MODES 1, 2, 3 or 4 may continue, provided the inoperable vent paths are maintained closed with power removed from the valve actuators of all the remotely operated valves in all of the inoperable vent paths; restore at least one of the Reactor Vessel head vent paths within 30 days or be in HOT STANDBY within 6 hours and in COLD SHUTDOWN within the following 30 hours.
- b. With both of the Reactor Vessel head vent paths and both of the Pressurizer steam space vent paths inoperable; maintain the inoperable vent paths closed with power removed from the valve actuators of all of the remotely operated valves in all of the inoperable vent paths; restore one of the inoperable vent paths from either the Reactor Vessel head vent or the Pressurizer steam space within 72 hours or be in HOT STANDBY within 6 hours and in COLD SHUTDOWN within the following 30 hours.
- c. The provision of Specification 3.0.4 are not applicable.

REACTOR COOLANT SYSTEM

REACTOR COOLANT VENT SYSTEM

PRESSURIZER STEAM SPACE VENTS

LIMITING CONDITION FOR OPERATION

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3.4.12.2 At least one of the Pressurizer steam-space vent paths, each consisting of two remotely operated valves in series, powered from Class 1E DC busses, shall be OPERABLE and closed.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

- a. With both of the Pressurizer steam space vent paths inoperable, and at least one of the Reactor Vessel head vent paths OPERABLE (see Specification 3.4.12.1), operation in MODES 1, 2, 3 or 4 may continue, provided the inoperable vent paths are maintained closed with the power removed from the valve actuators of all the remotely operated valves in all of the inoperable vent paths; restore at least one of the Pressurizer steam space vent paths within 30 days or be in HOT STANDBY within 6 hours and in COLD SHUTDOWN in the following 30 hours.
- b. With both of the Pressurizer steam space vent paths and both of the Reactor Vessel head vent paths inoperable; maintain the inoperable vent paths closed with power removed from the valve actuators of all of the remotely operated valves in all of the inoperable vent paths; restore one of the inoperable vent paths from either the Reactor Vessel head vent or the Pressurizer steam space within 72 hours or be in HOT STANDBY within 6 hours and in COLD SHUTDOWN within the following 30 hours.
- c. The provisions of Specification 3.0.4 are not applicable.

## REACTOR COOLANT SYSTEM

### BASES

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#### 3.4.4.12 REACTOR COOLANT VENT SYSTEM

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The Reactor Coolant Vent System is comprised of the Reactor Vessel head vent system and the pressurizer steam space vent system. Each of these subsystems consists of a single line containing a common manual isolation valve inside containment, splitting into two parallel flow paths. Each flow path provides the design basis venting capacity and contains two 1E DC powered solenoid isolation valves, which will fail closed. This valve configuration/redundancy serves to minimize the probability of inadvertent or irreversible actuation while ensuring that a single failure of a remotely-operated vent valve, power supply, or control system does not prevent isolation of the vent path. The pressurizer steam space vent is independent of the PORVs and safety valves and is specifically designed to exhaust gases from the pressurizer in a very high radiation environment. In addition, the OPERABILITY of one Reactor Vessel head vent path and one Pressurizer steam space vent path will ensure that the capability exists to perform this venting function.

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The minimum required systems to meet the Specification and not enter into an action statement are one vent path from the Reactor Vessel head and one vent path from the Pressurizer steam space.



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