

CONTAINMENT SYSTEMS

CONTAINMENT VENTILATION SYSTEM

LIMITING CONDITION FOR OPERATION

THE CONTAINMENT PURGE SUPPLY AND EXHAUST SYSTEM SHALL BE CLOSED EXCEPT WHEN OPERATION OF THE CONTAINMENT PURGE SYSTEM IS REQUIRED FOR PRESSURE CONTROL, ALARA, AND RESPIRABLE AIR QUALITY CONSIDERATIONS FOR PERSONNEL ENTRY, AND FOR SURVEILLANCE TESTING AND MAINTENANCE ACTIVITIES.

- 3.6.1.7 ~~The containment purge supply and exhaust isolation valves shall be closed except when operation of the containment purge system is required for safety related reasons.~~ No more than one purge supply path and one purge exhaust path shall be open at a time.

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

ACTION:

- a. With one containment purge supply and/or one exhaust isolation valve inoperable, isolate the affected penetration by use of at least one automatic valve secured in the closed position, and, within 72 hours, either:
 - 1) Restore the inoperable valve to OPERABLE status, or,
 - 2) Deactivate the automatic valve secured in the closed position.
- b. Operation may then continue until performance of the next required valve test provided that the automatic valve secured in the closed position is verified to be deactivated in the closed position at least once per 31 days.
- c. Otherwise, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- d. The provisions of Specification 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

- 4.6.1.7.1 The surveillance requirements of Technical Specification 3/4.6.3.1 apply.

CONTAINMENT SYSTEMS

BASES

3/4.6.1.7 CONTAINMENT PURGE AND EXHAUST ISOLATION VALVES**

This specification ensures that the containment purge supply and exhaust isolation valves are closed for the majority of the time during normal operation. ~~It allows for containment purging for safety-related reasons. Safety-related reasons are meant to be the need to improve containment working conditions, e.g. reduce airborne activity, to perform surveillance and/or maintenance on a safety-related system or piece of equipment. The purge/vent system shall not be used to control containment atmosphere temperature and humidity. It is intended that purging and venting times will be as short as possible. Allowing purge operations in Modes 1, 2, 3, and 4 is more beneficial than a cooldown to Mode 5 from the standpoint of (a) imposing unnecessary thermal stress cycles on the reactor coolant system and its components and (b) reducing the potential for causing unnecessary challenges to the reactor trip and safeguards systems. The containment purge system is designed in accordance with the requirements of NRC Branch Technical Position CSB 6-4, Rev. 1. This includes, but is not limited to, an analysis of the impact of purging on ECCS performance, an evaluation of the radiological consequences of a design basis accident while purging, and limiting purge operation to using no more than one supply path and one exhaust path at a time. The purge isolation valves have been demonstrated capable of closing against the dynamic forces associated with a loss-of-coolant accident and are assured of receiving a Containment Ventilation Isolation signal. Reset switches have been protected against inadvertent use in a manner which facilitates the administrative controls governing their use. The use of the pressure relief (vent) line is allowed for containment pressure control. The purge and vent isolation valves do not use resilient seating/sealing material and are not subject to the type of environmental degradation common to resilient materials.~~

IT ALLOWS FOR CONTAINMENT PURGING TO SUPPORT pressure control, ALARA, and RESPIRABLE AIR QUALITY CONSIDERATIONS for personnel entry, and for SURVEILLANCE testing and maintenance activities up to 240 hours each year for each unit.

~~The J. C. Cook purge estimate goal is two hundred (200) hours each year for each unit. This purge estimate is based on a plant capacity factor of 77%, and accounts for two purge operations per week. Each purge operation is assumed to be approximately 2 1/2 hours in duration. The annual 200-hour purge operation time limit amounts to less than 3% of the estimated plant operation time in Modes 1 through 4.~~

~~**The title of the Technical Basis located at the bottom of page 3 3/4 is 2 should read "3/4.6.1.6 CONTAINMENT VESSEL STRUCTURAL INTEGRITY." Due to a typographical error, that Basis was mislabeled "3/4.6.1.7."~~

Therefore
the SITE BOUNDARY dose guidelines of 10 CFR 100 would not be exceeded in the event of an accident during containment purging operations.

CONTAINMENT SYSTEMS

CONTAINMENT VENTILATION SYSTEM

LIMITING CONDITION FOR OPERATION

THE CONTAINMENT PURGE SUPPLY AND EXHAUST SYSTEM SHALL BE CLOSED EXCEPT WHEN OPERATION OF THE CONTAINMENT PURGE SYSTEM IS REQUIRED FOR PRESSURE CONTROL, ALARA, AND RESPIRABLE AIR QUALITY CONSIDERATIONS FOR PERSONNEL ENTRY, and for surveillance testing and maintenance activities.

- 3.6.1.7 ~~The containment purge supply and exhaust isolation valves shall be closed except when operation of the containment purge system is required for safety related reasons.~~ No more than one purge supply path and one purge exhaust path shall be open at a time.

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

ACTION:

- a. With one containment purge supply and/or one exhaust isolation valve inoperable, isolate the affected penetration by use of at least one automatic valve secured in the closed position, and, within 72 hours, either:
 - 1) Restore the inoperable valve to OPERABLE status, or,
 - 2) Deactivate the automatic valve secured in the closed position.
- b. Operation may then continue until performance of the next required valve test provided that the automatic valve secured in the closed position is verified to be deactivated in the closed position at least once per 31 days.
- c. Otherwise, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- d. The provisions of Specification 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

- 4.6.1.7.1 The surveillance requirements of Technical Specification 3/4.6.3.1 apply.

CONTAINMENT SYSTEMS

BASIS

3/4.6.1.7 CONTAINMENT PURGE AND EXHAUST ISOLATION VALVES**

This specification ensures that the containment purge supply and exhaust isolation valves are closed for the majority of the time during normal operation. ~~It allows for containment purging for safety-related reasons. Safety-related reasons are meant to be the need to improve containment working conditions, e.g. reduce airborne activity, to perform surveillance and/or maintenance on a safety-related system or piece of equipment. The purge/vent system shall not be used to control containment atmosphere temperature and humidity. It is intended that purging and venting times will be as short as possible. Allowing purge operations in Modes 1, 2, 3, and 4 is more beneficial than a cooldown to Mode 5 from the standpoint of (a) imposing unnecessary thermal stress cycles on the reactor coolant system and its components and (b) reducing the potential for causing unnecessary challenges to the reactor trip and safeguards systems. The containment purge system is designed in accordance with the requirements of NRC Branch Technical Position CSB 6-4, Rev. 1. This includes, but is not limited to, an analysis of the impact of purging on ECCS performance, an evaluation of the radiological consequences of a design basis accident while purging, and limiting purge operation to using no more than one supply path and one exhaust path at a time. The purge isolation valves have been demonstrated capable of closing against the dynamic forces associated with a loss-of-coolant accident and are assured of receiving a Containment Ventilation Isolation signal. Eject switches have been protected against inadvertent use in a manner which facilitates the administrative controls governing their use. The use of the pressure relief (vent) line is allowed for containment pressure control. The purge and vent isolation valves do not use resilient seating/sealing material and are not subject to the type of environmental degradation common to resilient materials.~~

IT ALLOWS FOR CONTAINMENT PURGE/VENT TO SUPPORT PRESSURE CONTROL, ALARA, AND RESPIRABLE AIR QUALITY CONSIDERATIONS FOR PERSONNEL ENTRY, AND FOR SURVEILLANCE TESTING AND MAINTENANCE ACTIVITIES UP TO 240 HOURS EACH YEAR FOR EACH UNIT.

~~*The D. C. Cook purge estimate goal is two hundred (200) hours each year for each unit. This purge estimate is based on a plant capacity factor of 77%, and accounts for two purge operations per week. Each purge operation is assumed to be approximately 2 1/2 hours in duration. The annual 200-hour purge operation time limit amounts to less than 3% of the estimated plant operation time in Modes 1 through 4.~~

~~**This new Basis section, issued as part of Amendment No. 47, entirely replaces the one with the same name and title located at the top of page 3 3/4 6-3. This fact was discussed with the NRC Project Manager, Mr. D. Wigginton, on January 24, 1983.~~

Therefore, the SITE BOUNDARY dose guidelines of 10 CFR 100 would not be exceeded in the event of an accident during containment PURGE/VENT operations.

ATTACHMENT 3 TO AEP:NRC:1185

PROPOSED REVISED
TECHNICAL SPECIFICATION PAGES

3/4 LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS
3/4.6 CONTAINMENT SYSTEMS

CONTAINMENT VENTILATION SYSTEM

LIMITING CONDITION FOR OPERATION

- 3.6.1.7 The containment purge supply and exhaust system shall be closed except when operation of the containment purge system is required for pressure control, ALARA, and respirable air quality considerations for personnel entry, and for surveillance testing and maintenance activities. No more than one purge supply path and one purge exhaust path shall be open at a time.

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

ACTION:

- a. With one containment purge supply and/or one exhaust isolation valve inoperable, isolate the affected penetration by use of at least one automatic valve secured in the closed position, and, within 72 hours, either:
 - 1) Restore the inoperable valve to OPERABLE status, or,
 - 2) Deactivate the automatic valve secured in the closed position.
- b. Operation may then continue until performance of the next required valve test provided that the automatic valve secured in the closed position is verified to be deactivated in the closed position at least once per 31 days.
- c. Otherwise, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- d. The provisions of Specification 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

- 4.6.1.7.1 The surveillance requirements of Technical Specification 3/4.6.3.1 apply.

3/4 BASES
3/4.6 CONTAINMENT SYSTEMS

3/4.6.1.7 CONTAINMENT PURGE AND EXHAUST ISOLATION VALVES

This specification ensures that the containment purge supply and exhaust isolation valves are closed for the majority of the time during normal operation. It allows for containment PURGING to support pressure control, ALARA, and respirable air quality considerations for personnel entry, and for surveillance testing and maintenance activities up to 240 hours each year for each unit. The containment purge system is designed in accordance with the requirements of NRC Branch Technical Position CSB 6-4, Rev. 1. This includes, but is not limited to, an analysis of the impact of PURGING on ECCS performance, an evaluation of the radiological consequences of a design basis accident while PURGING, and limiting PURGE operation to using no more than one supply path and one exhaust path at a time. The purge isolation valves have been demonstrated capable of closing against the dynamic forces associated with a loss-of-coolant accident and are assured of receiving a Containment Ventilation Isolation signal. Therefore, the SITE BOUNDARY dose guidelines of 10 CFR 100 would not be exceeded in the event of an accident during containment PURGING operations. The use of the pressure relief (vent) line is allowed for containment pressure control.

3/4 LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS
3/4.6 CONTAINMENT SYSTEMS

CONTAINMENT VENTILATION SYSTEM

LIMITING CONDITION FOR OPERATION

- 3.6.1.7 The containment purge supply and exhaust system shall be closed except when operation of the containment purge system is required for pressure control, ALARA, and respirable air quality considerations for personnel entry, and for surveillance testing and maintenance activities. No more than one purge supply path and one purge exhaust path shall be open at a time.

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

ACTION:

- a. With one containment purge supply and/or one exhaust isolation valve inoperable, isolate the affected penetration by use of at least one automatic valve secured in the closed position, and, within 72 hours, either:
 - 1) Restore the inoperable valve to OPERABLE status, or,
 - 2) Deactivate the automatic valve secured in the closed position.
- b. Operation may then continue until performance of the next required valve test provided that the automatic valve secured in the closed position is verified to be deactivated in the closed position at least once per 31 days.
- c. Otherwise, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- d. The provisions of Specification 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

- 4.6.1.7.1 The surveillance requirements of Technical Specification 3/4.6.3.1 apply.

3/4 BASES
3/4.6 CONTAINMENT SYSTEMS

3/4.6.1.7 CONTAINMENT PURGE AND EXHAUST ISOLATION VALVES

This specification ensures that the containment purge supply and exhaust isolation valves are closed for the majority of the time during normal operation. It allows for containment PURGING to support pressure control, ALARA, and respirable air quality considerations for personnel entry, and for surveillance testing and maintenance activities up to 240 hours each year for each unit. The containment purge system is designed in accordance with the requirements of NRC Branch Technical Position CSB 6-4, Rev. 1. This includes, but is not limited to, an analysis of the impact of PURGING on ECCS performance, an evaluation of the radiological consequences of a design basis accident while PURGING, and limiting PURGE operation to using no more than one supply path and one exhaust path at a time. The purge isolation valves have been demonstrated capable of closing against the dynamic forces associated with a loss-of-coolant accident and are assured of receiving a Containment Ventilation Isolation signal. Therefore, the SITE BOUNDARY dose guidelines of 10 CFR 100 would not be exceeded in the event of an accident during containment PURGING operations. The use of the pressure relief (vent) line is allowed for containment pressure control.