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W3F1-2010-0010

February 22, 2010

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

SUBJECT: License Amendment Request
Technical Specification Change Regarding Containment Building Penetrations During Refueling Operations
Waterford Steam Electric Station, Unit 3
Docket No. 50-382
License No. NPF-38

Dear Sir or Madam:

Pursuant to 10 CFR 50.90, Entergy Operations, Inc. (Entergy) hereby requests a license amendment to the Waterford Steam Electric Station, Unit 3 (Waterford 3) Technical Specifications (TS). The proposed amendment will modify TS 3/4.9.4, "Containment Building Penetrations," to allow alternative means of penetration closure during Core Alterations or irradiated fuel movement while in refueling operations. Additional improvements to this TS are also being proposed, as well as the elimination of TS 3/4.9.9, "Containment Purge Valve Isolation System". The proposed changes are consistent with Revision 3 of NUREG-1432, "Standard Technical Specifications Combustion Engineering Plants."

A description of the proposed change is provided in Attachment 1. A markup of the affected TS pages is contained in Attachment 2. Associated changes to the TS Bases being controlled under the Waterford 3 TS Bases Control Program are provided for information in Attachment 3.

The proposed change has been evaluated in accordance with 10 CFR 50.91(a)(1) using criteria in 10 CFR 50.92(c) and it has been determined that the change involves no significant hazards consideration.

The proposed change involves no new commitments.

Entergy requests approval of the proposed amendment by February 19, 2011. Once approved, the amendment shall be implemented within 90 days.

Please contact Robert Murillo, Manager, Licensing at 504-739-6715 if there are any comments regarding this submittal.

A001
NRR

I declare under penalty of perjury that the foregoing is true and correct. Executed on February 22, 2010.

Sincerely,

JAK/sab

Attachments:
1. Analysis of Proposed Technical Specification Change
2. Proposed Technical Specification Changes (mark-up)
3. Proposed Technical Specification Bases Changes (mark-up for information only)

cc: Mr. Elmo E. Collins, Jr.
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Attachment 1 to

W3F1-2010-0010

Analysis of Proposed Technical Specification Change

1.0 DESCRIPTION

This letter is a request to amend Operating License NPF-38 for the Waterford Steam Electric Station, Unit 3 (Waterford 3). Currently, Technical Specification (TS) 3/4.9.4, "Containment Building Penetrations," includes various means of containment building penetration closure during refueling operations. Specifically, TS 3/4.9.4.c.1 requires that penetrations providing direct access from the containment atmosphere to the outside atmosphere be capable of being closed by an isolation valve, blind flange, or manual valve. However, alternate means of containment closure may be deemed appropriate if they provide a positive means of containment penetration closure. This proposed TS change is being prepared to incorporate the "or equivalent" methods allowed by Revision 3 of NUREG-1432, "Standard Technical Specifications Combustion Engineering Plants" (Reference 1). In addition, TS 3/4.9.9, "Containment Purge Valve Isolation System" is being deleted with the necessary purge valve Surveillance Requirement (SR) being included in the proposed TS 3/4.9.4. Additional TS 3/4.9.4 enhancements are also being proposed consistent with NUREG-1432.

2.0 PROPOSED CHANGE

The proposed modification of TS 3/4.9.4 provides improvements for containment building penetration closure and eliminates TS 3/4.9.9, "Containment Purge Valve Isolation System". These changes are desired to provide additional containment boundary closure flexibility during refueling operations and to exercise improvements allowed by previously NRC approved TS changes under Revision 3 of NUREG-1432. The following changes are being proposed which are contained in Attachment 2 of this submittal:

- Revise TS Index page IX to show that TS 3/4.9.9 "Containment Purge Isolation System" has been deleted.

- Revise Action 25 for TS Table 3.3-6 to comply with Specification 3.9.4 instead of Specification 3.9.9 when the minimum number of Operable channels is less than required by the Action. This change is consistent with the deletion of TS 3/4.9.9.

- Revise TS 3.9.4.a to state that the equipment door is "closed" instead of "capable of being closed."

- Revise TS 3.9.4.b to add "is" between "airlock" and "capable" and delete the asterisk (*) since the associated note is being moved to the Limiting Condition for Operation (LCO). This change is editorial and is not further discussed.

- Revise TS 3.9.4.c.1 to read: "Closed by a manual or automatic isolation valve, blind flange, or equivalent, or".

- Revise TS 3.9.4.c.2 to read: "Capable of being closed by an OPERABLE containment purge and exhaust isolation system."

- Add a new Note under LCO 3.9.4 that states: "Penetration flow path(s) described in a, b, and c above, that provides direct access from the containment atmosphere to the outside atmosphere may be unisolated under administrative controls."

- Revise the existing SR 4.9.4 to become SR 4.9.4.1. The SR will assure that penetrations are in their required status prior to and every 7 days during Core Alterations and movement of irradiated fuel.

- Add a new SR 4.9.4.2 to verify each required containment purge and exhaust valve actuates to the isolation position on an actual or simulated actuation signal 72 hours prior to Core Alterations or movement of irradiated fuel. This SR includes a note stating that this SR is not required to be met if these penetrations are closed to comply with LCO 3.9.4.c.1

- Relocate the current discussion in the asterisked note for LCO 3.9.4 to the TS Bases.

- Eliminate TS 3/4.9.9 in its entirety. A replacement page 3/4 9-10 is being provided that states: "This Page Intentionally Blank."

The following change is being proposed to the TS Bases as reflected in Attachment 3. Since TS Bases changes are controlled by the Waterford 3 TS Bases Control Program, they are provided for information only.

- The current discussion in the asterisked note for LCO 3.9.4 is being incorporated into the Bases. A discussion on what is considered to be "equivalent" from NUREG-1432 is included. The Bases is also being revised for clarity.

- Revise TS Bases Index page XIV to show that TS 3/4.9.9 Bases, "Containment Purge Isolation System" has been deleted (Not shown in Attachment 3).

- The Bases for TS 3/4.9.9 on TS Bases pages B 3/4 9-3 and 3/4 9-4 are being eliminated (Not shown in Attachment 3).

3.0 BACKGROUND

During movement of irradiated fuel assemblies or during Core Alterations, a release of fission product radioactivity within containment will be restricted from escaping to the environment when the LCO requirements are met. In Modes 1 through 4, this is accomplished by maintaining primary containment Operable as required by LCO 3.6.1.1, "Containment Integrity." In Mode 6, the potential for containment pressurization as a result of an accident is not likely; therefore, requirements to isolate the containment from the outside atmosphere can be less stringent. The LCO requirements are referred to as "containment closure" rather than "Containment Integrity." Containment closure means that all potential escape paths are closed or capable of being closed.

The equipment hatch, which is part of the containment pressure boundary, provides a means for moving large equipment and components into and out of containment during outages. During movement of irradiated fuel assemblies within containment, the equipment hatch is to be held in place by at least four equally spaced bolts except when under administrative control. The containment air locks, which are also part of the containment pressure boundary, provide a means for personnel access during Modes 1 through 4 in accordance with LCO 3.6.1.3, "Containment Air Locks." Each air lock has a door at both ends. The doors are normally interlocked to prevent simultaneous opening when Containment Integrity is required. During periods of shutdown when containment closure is not required, the door

interlock mechanism may be disabled, allowing both doors of an air lock to remain open for extended periods when frequent containment entry is necessary.

The Containment Purge and Exhaust Isolation System consists of a containment purge air makeup unit and a containment purge exhaust which is connected to the exhaust portion of the Reactor Auxiliary Building (RAB) Normal Ventilation System. These systems are discussed in Waterford Final Safety Analysis Report (FSAR) Section 9.4. There are two modes of operation, the "Purge" mode and the "Refueling Ventilation" mode. The control switch is located in the main control room and actuation of either mode will properly position the associated valves and dampers. For both modes of operation the air is filtered for removal of radioactive particulates and radioiodines before being exhausted by RAB Normal Ventilation System. Radiation monitors located inside the containment and at the plant stack will generate a Containment Purge Isolation Signal (CPIS) upon detection of radioactivity above their setpoint. The CPIS closes the containment purge isolation valves regardless of plant operating mode. When the selector control switch is placed in its "Refueling Ventilation" position, isolation dampers D-22 and D-23 are repositioned and all other components, valves and dampers act in the same function as that required in the "purge" mode. Damper D-22 actuates to a partially closed-position and damper D-23 actuates to a fully open position. Waterford 3 LCO 3.6.1.7, "Containment Ventilation System", provides the LCO requirements of this system during Modes 1 through 4 and the Containment Purge and Exhaust Isolation radiation monitor setpoints are provided in TS Table 3.3-6, "Radiation Monitoring Instrumentation." The containment purge valve isolation requirements during refueling operations are currently contained in both TS 3/4.9.4 and 3/4.9.9.

The requirements on containment penetration closure ensure that a release of fission product radioactivity within containment will be restricted to within regulatory limits. Revision 3 of NUREG-1432, TS section 3/4.9.3 provides the current NRC accepted requirements for containment penetration closure during refueling operations when performing movement of irradiated fuel.

4.0 TECHNICAL ANALYSIS

Use of Equivalent Means of Penetration Closure for TS 3/4.9.4

Entergy will be replacing the Waterford 3 steam generators (SGs) and reactor vessel closure head (RVCH) during the spring 2011 refueling outage. During original construction of the Steel Containment Vessel (SCV), a construction hatch was installed for transporting major components into and out of containment. This hatch consists of a 32 ft diameter steel barrel which is capped on the inside of containment with a hemispherical hatch cover butt-welded to the barrel. These replacement activities require the opening of the SCV construction hatch to provide access for the removal of the original SGs and RVCH as well as the installation of the replacement SGs and replacement RVCH. Following replacement of these major components, the SCV construction hatch will be restored to its original leak tight design requirements.

Partial weld removal of the SCV construction hatch may be performed during Mode 6 in preparation for erection of the hatch transfer system and component movement. Any openings in the SCV construction hatch prior to complete defueling will require that the SCV retain its structural integrity for missile protection. In opening the SCV construction hatch penetration, the containment and penetration closure requirements of LCO 3.9.4 must be adhered to during Core Alterations or movement of irradiated fuel. LCO 3.9.4.c.1 requires the

capability of closing building penetrations with a valve or blind flange. Since the SCV opening is not a typical opening, closure of the opening with a valve or flange is not applicable. Therefore, alternate means of ensuring penetration closure are required. LCO 3.9.3 of NUREG-1432 allows the use of "equivalent" methods of providing positive penetration closure during movement of irradiated fuel. The TS 3.9.3 Bases for NUREG-1432 states that "equivalent" isolation methods must be approved and may include use of a material that can provide a temporary, atmospheric pressure ventilation barrier for the other containment penetrations. Prior to any cutting of the SCV construction hatch, the unit will be in Mode 6 with at least 23 feet of water above the fuel in the reactor vessel.

If a release of radiation event were to occur, containment closure must be implemented within 30 minutes under Waterford 3 operating procedures. With the allowance of alternate equivalent methods of penetration closure, specified positive closure for the SCV construction hatch (i.e. sealant or qualified tape) will be available or applied over any thru-cut areas. The method used for containment closure must be found acceptable under the conditions applied to ensure compliance with LCO 3.9.4.c.1.

Inclusion of New Surveillance Requirements for TS 3/4.9.4 and Elimination of TS 3/4.9.9, "Containment Purge Valve Isolation System"

The current SR 4.9.4 requires that each of the required containment building penetrations be verified to be either in its closed/isolated condition or capable of being closed prior to the start of and at least once per 7 days during Core Alterations or movement of irradiated fuel in the containment building. Entergy is proposing a new SR 4.9.4.1 that utilizes some of the language of SR 4.9.3.1 in NUREG-1432 but will retain the action to confirm containment penetration status prior to the start of and at least once per 7 days during Core Alterations or movement of irradiated fuel. Therefore, the proposed SR provides an equivalent surveillance to that that is currently approved for Waterford 3.

The current LCO 3.9.9 requires that the Containment Purge Valve Isolation System (a.k.a. Containment Purge and Exhaust Isolation System) be Operable during Core Alterations or irradiated fuel movement. The associated action for this LCO is if the system is inoperable during the mode of applicability, the containment purge penetrations providing direct access from the containment atmosphere to the outside must be closed. The proposed change to LCO 3.9.4.c.2 also requires that the Containment Purge and Exhaust Isolation System be Operable during refueling operations while Core Alterations or irradiated fuel movement is in progress. However, Operability of the containment purge valves during refueling operations is only provided under SR 4.9.9 which requires verification that containment purge valve isolation occurs on a manual initiation and on a containment purge isolation test signal from each of the required radiation monitoring instrumentation channels. This is performed 72 hours prior to the start of and at least once per 7 days during Core Alterations or movement of irradiated fuel.

TS 3/4.9.4 also requires Operability of the containment purge valves, but does not currently contain an SR to assure Operability. A new SR 4.9.4.2 is being proposed that will require performance of the purge and exhaust isolation system prior to Core Alterations or movement of irradiated fuel. This change is consistent with NUREG-1432, SR 4.9.3.2, but instead of every 18 months it is performed prior to performing Core Alterations or movement of irradiated fuel. Since Waterford 3 is on an 18 month refueling cycle, this surveillance frequency is equivalent. Additionally, if the purge valve(s) is closed, this SR would not need to be performed since it is already in the isolated configuration. SR 3.9.3.2 in NUREG-1432

contains a note that allows the SR to not be performed if it is already closed. This note is also being adopted for Waterford 3 SR 4.9.4.2.

The combination of the two new SRs and associated note, assures containment closure capability and purge valve Operability as provided in the currently NRC approved surveillance requirements under NUREG-1432 during refueling operations. Additionally, with the addition of an SR to TS 3/4.9.4 for purge and exhaust valve isolation for system Operability, Entergy believes that TS 3/4.9.9 can be eliminated.

Other Improvements to TS 3/4.9.4 for Containment Building Penetrations

Other changes to TS 3/4.9.4 include:

- The revision to Action 25 for TS Table 3.3-6 to comply with Specification 3.9.4 instead of Specification 3.9.9 (when the minimum number of Operable channels is less than required) is appropriate since the purge valve Operability and Actions are now contained in TS 3/4.9.4.

- Rewording of LCO 3.9.4.c.1 to change the action for penetration closure from "Capable of being closed" to "Closed". Since the inclusion of a new note which allows penetrations to be open under administrative control, this change provides equivalent controls and is considered an administrative change.

- Changing LCO 3.9.4.c.2 to refer to the "containment purge and exhaust isolation system" instead of the "automatic containment purge valve" is an equivalent change. With addition of the new SR 4.9.4.2 for assuring purge valve Operability, this change is considered administrative.

- Relocating the discussion in the currently asterisked note regarding the description of administrative controls to be allowed while penetrations are open during Core Alterations and irradiated fuel movement to the TS 3.9.4 Bases retains the scope of these specific administrative controls in the Bases. A new note under the LCOs to 3.9.4 more simply states that penetration flow path(s) described in a, b, and c above, that provides direct access from the containment atmosphere to the outside atmosphere may be unisolated under administrative controls. This change applies note wording similar to that from NUREG-1432 which accomplishes the same intent of the current TS note. This change is considered to be administrative.

The above proposed changes are consistent with the TS guidance contained in Revision 3 of NUREG-1432 and therefore are not considered to require further justification.

5.0 REGULATORY ANALYSIS

5.1 Applicable Regulatory Requirements/Criteria

Entergy Operations, Inc. (Entergy) proposes to modify Technical Specification (TS) 3/4.9.4, "Containment Building Penetrations," to allow the use of equivalent methods of providing positive penetration closure in addition to manual and automatic isolation valves and blind flanges during refueling operations while performing Core Alterations or movement of irradiated fuel. The use of "equivalent" isolation methods must be approved for its intended function. This may include use of a material that can provide a temporary, atmospheric pressure ventilation barrier for the other containment penetrations. Additionally, the deletion of TS 3.9.9, "Containment Purge Isolation Valve System", and the addition of new Surveillance Requirements for containment penetration closure capability and containment purge and exhaust isolation system Operability in TS 3/4.9.4, maintains the appropriate refueling outage controls within the Waterford 3 TSs. These proposed changes are consistent with current TS requirements and NRC previously approved guidance contained in Revision 3 of NUREG-1432, "Standard Technical Specifications Combustion Engineering Plants."

In conclusion, Entergy has determined that the proposed changes do not require any exemptions or relief from regulatory requirements, other than the TS, and do not affect systems, structures, and components described in the Waterford 3 Final Safety Analysis Report (FSAR).

5.2 No Significant Hazards Consideration

Entergy Operations, Inc. has evaluated whether or not a significant hazards consideration is involved with the proposed amendment by focusing on the three standards set forth in 10CFR50.92, "Issuance of amendment," as discussed below:

1. Does the proposed change involve a significant increase in the probability or consequences of an accident previously evaluated?

   Response: No.

   TS 3/4.9.4 currently allows containment penetration flow paths to be open during Core Alterations or movement of irradiated fuel within containment under specific administrative controls. The proposed change would allow additional approved methods for ensuring positive penetration closure. The fuel handling accident (FHA) radiological analysis does not take credit for containment isolation or filtration. Therefore, the time required to close any open penetrations does not affect the radiological analysis dose calculations and the proposed change does not involve a significant increase in the consequences of an accident previously evaluated. The administrative controls for containment penetration closure are conservative even though not required by the accident analysis.

   The proposed revision only provides alternate methods of penetration closure and does not alter any plant equipment where the probability of an accident would be increased. The incorporation of purge valve isolation surveillance requirements for assuring purge valve Operability has no affect on the probability or consequences of the analyzed accidents.

Therefore, this change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Does the proposed change create the possibility of a new or different kind of accident from any accident previously evaluated?

Response: No.

Alternative methods of providing penetration closure do not create accident initiators and do not represent a significant change in the configuration of the plant. The proposed allowance to secure containment penetrations during refueling operations will not adversely affect plant safety functions or equipment operating practices such that a new or different accident could be created.

Therefore, the proposed change does not create the possibility of a new or different kind of accident from any previously evaluated.

3. Does the proposed change involve a significant reduction in a margin of safety?

Response: No.

TS Limiting Condition for Operation (LCO) 3.9.4 closure requirements for containment penetrations ensure that the consequences of a postulated FHA inside containment during Core Alterations or fuel handling activities are minimized. The LCO establishes containment closure requirements, which limit the potential escape paths for fission products by ensuring that there is at least one barrier to the release of radioactive material. The proposed change to allow alternate methods of reaching containment penetration closure during Core Alterations or fuel movement does not affect the expected dose consequences of a FHA since it does not credit containment building closure. The proposed administrative controls provide assurance that prompt closure of the penetration flow paths will be accomplished in the event of a FHA inside containment thus minimizing the transmission of radioactive material from the containment to the outside environment. The incorporation of purge valve isolation surveillance requirements does not reduce any margins of safety.

Therefore, the proposed change does not involve a significant reduction in a margin of safety.

Based on the above, Entergy concludes that the proposed amendment presents no significant hazards consideration under the standards set forth in 10CFR50.92(c), and, accordingly, a finding of "no significant hazards consideration" is justified.

5.3 Environmental Considerations

The proposed amendment does not involve (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amounts of any effluent that may be released offsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed amendment meets the eligibility criterion for categorical exclusion set forth in 10CFR51.22(c)(9). Therefore, pursuant to 10CFR51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed amendment.

6.0 PRECEDENCE

Other licensee containment building penetration technical specifications for refueling operations include alternate equivalent methods of penetration closure. Even though there is no similar TS license amendment application identified, the change is in accordance with previously NRC approved guidance contained in Revision 3 of NUREG-1432.

7.0 REFERENCES

1. NUREG-1432, Revision 3, "Standard Technical Specifications Combustion Engineering Plants", June 2004.

Attachment 2 to

W3F1-2010-0010

Proposed Technical Specification Changes (mark-up)

→(DRN 05-747, Ch. 40)

INDEX

LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS

←(DRN 05-747, Ch. 40)

TABLE 3.3-6 (Continued)

ACTION STATEMENTS

ACTION 23 - DELETED

ACTION 24 - DELETED

ACTION 25 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, comply with the ACTION requirements of Specification 3.9.8.4

ACTION 26 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, within 1 hour initiate and maintain operation of the control room emergency ventilation system in the recirculation mode of operation.

ACTION 27 - With the number of OPERABLE channels less than required by the Minimum Channels OPERABLE requirement, either restore the inoperable Channel(s) to OPERABLE status within 72 hours, or:

1. Initiate the preplanned alternate method of monitoring the appropriate parameter(s), and

2. If the monitor is not restored to OPERABLE status within 7 days after the failure, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within 14 days following the event outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the system to OPERABLE status.

ACTION 28 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirements, operation of the plant may continue for up to 30 days provided grab samples are taken once per 8 hours and these samples are analyzed for gross activity within 24 hours.

If the monitor is not restored to OPERABLE status within 30 days after the failure, continue sampling and prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within 14 days outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the system to OPERABLE status.

REFUELING OPERATIONS

3/4.9.4 CONTAINMENT BUILDING PENETRATIONS

LIMITING CONDITION FOR OPERATION

3.9.4 The containment building penetrations shall be in the following status:

a. The equipment door is ~~capable* of being~~ closed,

b. A minimum of one door in each airlock is capable of being closed, and

c. Each penetration providing direct access from the containment atmosphere to the outside atmosphere shall be either:

~~1. Capable * of being closed by an isolation valve, blind flange, or manual valve, or~~

~~2. Be capable of being closed by an OPERABLE automatic containment purge valve.~~

INSERT 1

APPLICABILITY: During CORE ALTERATIONS or movement of irradiated fuel within the containment.

ACTION:

With the requirements of the above specification not satisfied, immediately suspend all operations involving CORE ALTERATIONS or movement of irradiated fuel in the containment building.

SURVEILLANCE REQUIREMENTS

~~4.9.4 Each of the above required containment building penetrations shall be verified to be either in its closed/isolated condition or capable of being closed prior to the start of and at least once per 7 days during CORE ALTERATIONS or movement of irradiated fuel in the containment building.~~

INSERT 2

~~*Administrative controls shall ensure that appropriate personnel are aware that equipment door, both personnel airlock doors and/or penetrations are open, a specific individual(s) is designated and available to close the equipment door, an airlock door and the penetrations as part of a required evacuation of containment, and any obstruction(s) (e.g., cables and hoses) that could prevent closure of an airlock door and the equipment door be capable of being quickly removed.~~

INSERT 1

1. Closed by a manual or automatic isolation valve, blind flange, or equivalent, or

2. Capable of being closed by an OPERABLE containment purge and exhaust isolation system.

Note: Penetration flow path(s) described in a, b, and c above, that provides direct access from the containment atmosphere to the outside atmosphere may be unisolated under administrative controls.

INSERT 2

4.9.4.1 Verify each required containment penetration is in the required status prior to the start of and once per 7 days during CORE ALTERATIONS or movement of irradiated fuel within containment.

4.9.4.2 Verify each required containment purge and exhaust valve actuates to the isolation position on an actual or simulated actuation signal 72 hours prior to performing initial CORE ALTERATIONS or movement of irradiated fuel within containment.

NOTE – SR 4.9.4.2 is not required to be met for containment purge and exhaust valve(s) in penetrations closed to comply with LCO 3.9.4.c.1.

REFUELING OPERATIONS

3/4.9.9 CONTAINMENT PURGE VALVE ISOLATION SYSTEM

LIMITING CONDITION FOR OPERATION

3.9.9 The containment purge valve isolation system shall be OPERABLE.

APPLICABILITY: During CORE ALTERATIONS or movement of irradiated fuel within the containment.

ACTION:

With the containment purge valve isolation system inoperable, close each of the containment purge penetrations providing direct access from the containment atmosphere to the outside atmosphere. The provisions of Specification 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.9.9 The containment purge valve isolation system shall be demonstrated OPERABLE within 72 hours prior to the start of and at least once per 7 days during CORE ALTERATIONS by verifying that containment purge valve isolation occurs on manual initiation and on a containment purge isolation test signal from each of the required radiation monitoring instrumentation channels.

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Attachment 3 to

W3F1-2010-0010

Proposed Technical Specification Bases Changes

(Mark-up provided for information only)

3/4.9.4 CONTAINMENT BUILDING PENETRATIONS (Continued)

→(DRN 03-178, Ch. 21)

closure" rather than "containment OPERABILITY." Containment closure means that all potential escape paths are closed or capable of being closed. Since there is no potential for containment pressurization, the Appendix J leakage criteria and tests are not required.

During CORE ALTERATIONS or movement of irradiated fuel within the containment, the escape of radioactivity to the environment is minimized when the LCO requirements are met.

The equipment door, personnel airlock doors, or penetrations may be open during movement of irradiated fuel in the containment and during CORE ALTERATIONS provided the equipment door, a minimum of one door in the airlock, and penetrations are capable of being closed by an isolation valve, blind flange or manual valve, or capable of being closed on a containment purge isolation signal (CPIS) initiated by the required radiation monitors in the event of a fuel handling accident. An OPERABLE containment purge isolation valve consists of a containment purge valve capable of isolating on manual initiation and on a containment purge isolation test signal from each of the required radiation monitoring instrumentation channels. (Note that Technical Specifications 3/4.3.3, Radiation Monitoring, and 3/4.9.9, Containment Purge Isolation System, are also applicable.) Should a fuel handling accident occur inside containment, the equipment door, a minimum of one personnel airlock door and the open penetrations will be closed. For closure, the equipment door will be held in place by a minimum of four symmetrically-placed bolts. The containment purge lines are automatically closed upon a CPIS if the fuel handling accident releases activity above prescribed levels. Closure of at least on of the containment purge isolation valves is sufficient to provide closure of the penetration. Containment penetrations that provide direct access from containment atmosphere to outside atmosphere must be isolated on at least one side. Isolation may be achieved by an OPERABLE automatic isolation valve, or by a manual isolation valve or blind flange.

←(DRN 03-178, Ch. 21)

← INSERT 1

3/4.9.5 COMMUNICATIONS

The requirement for communications capability ensures that refueling station personnel can be promptly informed of significant changes in the facility status or core reactivity condition during CORE ALTERATIONS.

3/4.9.6 REFUELING MACHINE

→ (EC-17724, Ch. 62)

The OPERABILITY requirements for the refueling machine ensure that: (1) the refueling machine will be used for movement of CEAs and fuel assemblies, (2) each hoist has sufficient load capacity to lift a CEA or fuel assembly, and (3) the core internals and pressure vessel are protected from excessive lifting force in the event they are inadvertently engaged during lifting operations. The Technical Specification Actions 'a.' and 'b.' statements allow the movement of a fuel assembly or CEA to safe condition using administrative controls in the event of a refueling machine failure.

← (EC-17724, Ch. 62)

INSERT 1

Containment penetrations, the personnel airlock doors, and/or the equipment door may be open under administrative control during CORE ALTERATIONS or movement of irradiated fuel in the containment provided a minimum of one closure method (manual or automatic valve, blind flange, or equivalent) in each penetration, one door in each airlock, and the equipment door are capable of being closed in the event of a fuel handling accident. For closure, the equipment door will be held in place by a minimum of four symmetrically-placed bolts. Containment penetrations that provide direct access from containment atmosphere to outside atmosphere must be isolated or capable of being isolated on at least one side. Equivalent isolation methods must be approved and may include use of a material that can provide a temporary, atmospheric pressure ventilation barrier for the other containment penetrations during CORE ALTERATIONS or movement of irradiated fuel.

The containment purge and exhaust isolation system must also be OPERABLE during CORE ALTERATIONS or movement of irradiated fuel when open to the outside atmosphere or must be closed under LCO 3.9.4.c.1. An OPERABLE containment purge and exhaust isolation system consists of a containment purge valve capable of isolating on manual initiation and on a containment purge isolation test signal from each of the required radiation monitoring instrumentation channels (Note that Technical Specifications 3/4.3.3, Radiation Monitoring is also applicable). The containment purge lines are automatically closed upon a containment purge isolation signal (CPIS) if the fuel handling accident releases activity above prescribed levels. Closure of at least one of the containment purge isolation valves is sufficient to provide closure of the penetration.

Administrative controls shall ensure that appropriate personnel are aware that when the equipment door, both personnel airlock doors, and/or containment penetrations are open, a specific individual(s) is designated and available to close the equipment door, an airlock door and the penetrations as part of a required evacuation of containment, and any obstruction(s) (e.g., cables and hoses) that could prevent closure of an airlock door and the equipment door be capable of being quickly removed.