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C0501-02
10 CFR 50.90

Docket Nos.: 50-315
50-316

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Mail Stop O-P1-17
Washington, DC 20555-0001

Donald C. Cook Nuclear Plant Units 1 and 2
LICENSE AMENDMENT REQUEST
TECHNICAL SPECIFICATION CHANGE FOR INOPERABLE A.C. OR D.C. DISTRIBUTION SYSTEMS IN MODES 5 & 6 AND FOR CONTAINMENT PENETRATIONS DURING REFUELING

Pursuant to 10 CFR 50.90, Indiana Michigan Power Company (I&M), the licensee for Donald C. Cook Nuclear Plant Units 1 and 2, proposes to amend Appendix A, Technical Specifications (T/S), of Facility Operating Licenses DPR-58 and DPR-74. I&M proposes to change T/S 3/4.8.2.2, "A. C. Distribution Shutdown," T/S 3/4.8.2.4 "D. C. Distribution – Shutdown," and T/S 3/4.9.4, "Containment Building Penetrations" as described below.

I&M proposes to replace the current requirement to establish containment integrity within 8 hours if less than the specified minimum complement of A.C. or D.C. busses and equipment is operable in Modes 5 and 6 with requirements to immediately suspend operations involving core alterations, positive reactivity changes, and movement of irradiated fuel assemblies, to immediately initiate actions to restore the required busses and equipment to operable status, and to immediately declare the associated required residual heat removal loop(s) inoperable. The current Action requirement presents a scheduling and administrative burden during outages and extended shutdowns.

I&M proposes to add options to use containment penetration closure methods that are equivalent to those that are currently required during core alterations or movement of irradiated fuel in containment, and to allow unisolation of some

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penetrations under administrative control. The additional options will allow flexibility in scheduling outage activities.

I&M is also proposing changes to Applicability requirements, Surveillance requirements, and Bases associated with the above identified T/S in support of the proposed changes to the Action and LCO requirements.

Attachment 1 provides a detailed description and safety analysis to support the proposed changes. Attachments 2A and 2B provide marked up T/S pages for Unit 1 and Unit 2, respectively. Attachments 3A and 3B provide the proposed T/S pages with the changes incorporated for Unit 1 and Unit 2, respectively. Attachment 4 describes the evaluation performed in accordance with 10 CFR 50.92(c), which concludes that no significant hazard is involved. Attachment 5 provides the environmental assessment. Attachment 6 provides a listing of new commitments made in this letter.

I&M requests approval of this proposed amendment by October 1, 2001, to support planning for the next Unit 2 refueling outage. I&M requests that 45 days be allowed for implementation of the amendment.

No previous submittals affect T/S pages that are submitted in this request. If any future submittals affect these T/S pages, then I&M will coordinate changes to the pages with the Nuclear Regulatory Commission Project Manager to ensure proper T/S page control when the associated license amendment requests are approved.

Should you have any questions, please contact Mr. Ronald W. Gaston, Manager of Regulatory Affairs, at (616) 697-5020.

Sincerely,

M. W. Rencheck
Vice President, Nuclear Engineering

\dmb

Attachments

c: J. E. Dyer
MDEQ - DW & RPD
NRC Resident Inspector
R. Whale

AFFIRMATION

I, Michael W. Rencheck, being duly sworn, state that I am Vice President of Indiana Michigan Power Company (I&M), that I am authorized to sign and file this request with the Nuclear Regulatory Commission on behalf of I&M, and that the statements made and the matters set forth herein pertaining to I&M are true and correct to the best of my knowledge, information, and belief.

Indiana Michigan Power Company

M. W. Rencheck
Vice President Nuclear Engineering

SWORN TO AND SUBSCRIBED BEFORE ME

THIS 15 DAY OF MAY, 2001

Notary Public

JENNIFER L KERNOSKY
Notary Public, Berrien County, Michigan
My Commission Expires May 26, 2005

My Commission Expires 5/24/2005

ATTACHMENT 1 TO C0501-02

DESCRIPTION AND SAFETY ANALYSIS FOR THE PROPOSED CHANGES

A. Summary of the Proposed Changes

Indiana Michigan Power Company (I&M) proposes to amend Appendix A, Technical Specifications (T/S), of Facility Operating Licenses DPR-58 and DPR-74 for the Donald C. Cook Nuclear Plant (CNP) Units 1 and 2, respectively. I&M proposes to change T/S 3/4.8.2.2, "A. C. Distribution Shutdown," T/S 3/4.8.2.4 "D. C. Distribution – Shutdown," and T/S 3/4.9.4, "Containment Building Penetrations" as described below.

I&M proposes to replace the current requirement to establish containment integrity within 8 hours if less than the specified minimum complement of A.C. or D.C. busses and equipment is operable in Modes 5 and 6 with requirements to immediately suspend operations involving core alterations, positive reactivity changes, and movement of irradiated fuel assemblies, to immediately initiate actions to restore the required busses and equipment to operable status, and to immediately declare the associated required residual heat removal loop(s) inoperable. The current Action requirement presents a scheduling and administrative burden during outages and extended shutdowns.

I&M proposes to add options to use containment penetration closure methods that are equivalent to those that are currently required during core alterations or movement of irradiated fuel in containment, and to allow unisolation of some penetrations under administrative control. The additional options will allow flexibility in scheduling outage activities.

I&M is also proposing changes to Applicability requirements, Surveillance requirements, and Bases associated with the above identified T/S in support of the proposed changes to the Action and LCO requirements.

The proposed changes to T/S 3/4.8.2.2 and T/S 3/4.8.2.4 are described in detail in Section B of this attachment. The proposed changes to T/S 3/4.9.4 are described in detail in Section C of this attachment. T/S pages that are marked to show the proposed changes are provided in Attachments 2A and 2B for Unit 1 and Unit 2, respectively. Note that these changes reflect formatting that differs slightly from the current pages. These format changes are intended to improve appearance and are not intended to introduce other changes. The proposed T/S pages, with the changes incorporated, are provided in Attachments 3A and 3B for Unit 1 and Unit 2, respectively.

B. Proposed Changes to T/S 3/4.8.2.2 and 3/4.8.2.4, A.C. and D.C. Distribution Systems - Shutdown

Description of the Current Requirements

The LCO and Applicability statements of T/S 3/4.8.2.2 require the following minimum complement of A.C. electrical busses to be operable and energized with the unit in Mode 5 or 6:

- One 4160 volt emergency bus, and
- One 600 volt emergency bus, and
- Two 120 volt A.C. vital busses energized from their associated inverter connected to a D.C. bus.

The LCO and Applicability statements of T/S 3/4.8.2.4 require the following minimum complement of D.C. electrical equipment and bus to be energized and operable with the unit in Mode 5 or 6:

- One 250 volt D.C. bus, and
- One 250 volt battery bank and charger associated with the above D.C. bus.

The Action statements for both T/S 3/4.8.2.2 and T/S 3/4.8.2.4 require that containment integrity be established within 8 hours if the requirements of the respective LCOs are not met.

Containment integrity is defined in T/S 1.8 as follows:

- All penetrations required to be closed during accident conditions are either capable of being closed by an operable containment automatic isolation valve system, or closed by manual valves, blind flanges, or deactivated automatic valves secured in their closed positions, except for valves that are open under administrative control.
- All equipment hatches are closed and sealed.
- Each air lock meets specified leakage limits and has both doors closed except for normal entry and exit, during which, at least one door shall be closed.
- The containment leakage rates are within specified limits.
- The sealing mechanism associated with each penetration (e.g., welds, bellows or O-rings) is operable. (Unit 2 Only)

Bases for the Current Requirements

The operability of the minimum compliment of A.C. and D.C. distribution systems and equipment specified in the LCO ensures that: 1) the plant can be maintained in the shutdown or refueling condition for extended time periods, and 2) sufficient instrumentation and control capability is available for monitoring and maintaining the plant status.

The LCOs of T/S 3/4.8.2.2 and T/S 3/4.8.2.4 accomplish this function by establishing a minimum complement of A.C. and D.C. electrical distribution systems and equipment that must be operable. This provides assurance that electrical power is available to support the components needed to mitigate the accidents, events, and malfunctions that are applicable in Modes 5 and 6. These are a fuel handling accident (FHA), a shutdown dilution event, and a RHR system malfunction.

The current T/S 3/4.8.2.2 and 3/4.8.2.4 Action requirements to establish containment integrity if the LCO requirements are not met are based on providing a barrier to prevent release of radioactive material that may escape from the fuel cladding and reactor coolant system (RCS) inside containment if no other action is taken to prevent these accidents and or minimize the effect of the malfunction. The current Action statement is not based on providing measures to prevent the accidents and events or minimize the effect of the malfunction.

The current T/S 3/4.8.2.2 and 3/4.8.2.4 Applicability requirements (Modes 5 and 6) assure that the protection provided by the specifications is available whenever the unit is in cold shutdown or refueling condition with fuel in the reactor vessel. These Applicability requirements are not based on providing protection against a FHA outside containment if the reactor vessel is not in a defined operational mode, i.e., defueled.

Need for Revision of the Requirement

Compliance with the current requirement can present a significant burden with respect to scheduling of maintenance and repair activities during an outage or extended shutdown. These activities may involve disassembly of components in piping that penetrates the containment, breaching of containment penetration piping pressure boundaries, or routing of temporary service hoses and cables through normally sealed penetrations or closed airlocks. Under the current requirements, such activities must either be scheduled for periods in which the reactor is defueled or conducted under strict controls to assure containment integrity can be established within 8 hours. The current requirements can also impose a significant administrative burden, since it is necessary to identify and implement actions necessary to close all open penetrations and hatches, coordinate and track the implementation of those actions, maintain adequate provisions for personnel and equipment safety, and determine if containment leakage rates are within specified limits.

Additionally, restoration of the containment to full pressure capability exceeds the actions needed to mitigate the consequences of accidents that are credible in Modes 5 and 6, since the significant pressure sources associated with the accidents that are credible in Modes 1 through 4 are absent. Finally, restoration of containment integrity does not consider operator actions to prevent a loss of shutdown margin as credited in the Updated Final Safety Analysis (UFSAR) analyses of a dilution event. As described in UFSAR Sections 14.1.5 for both Unit 1 and 2, operator

corrective actions will assure that an erroneous dilution will not result in a loss of shutdown margin.

Therefore, an alternative is needed to the currently specified Action of establishing containment integrity within 8 hours if the minimum complement of A.C. or D.C. busses and equipment cannot be maintained operable.

Description of the Proposed Changes

I&M proposes to revise both T/S 3/4.8.2.2 and T/S 3/4.8.2.4 by replacing their current Action requirement to establish containment integrity within 8 hours, with requirements to:

a. Immediately suspend operations involving core alterations, movement of irradiated fuel assemblies, and positive reactivity changes except 1) heatup or cooldown of the reactor coolant volume provided that shutdown margin sufficient to accommodate the change in temperature is maintained in accordance with T/S 3/4.1.1.2 in Mode 5 or T/S 3/4.9.1 in Mode 6, and the heatup or cooldown rate is restricted to 50°F or less in any one-hour period in Mode 5, or 2) addition of water from the RWST, provided the boron concentration in the RWST is greater than or equal to the minimum required by T/S 3/4.1.2.7.b.2.

b. immediately initiate actions to restore the required busses and equipment to operable status, and

c. immediately declare required RHR loop(s) associated with the inoperable electrical distribution busses and equipment inoperable.

I&M proposes to expand the Applicability requirements for Unit 1 T/S 3/4.8.2.2 and T/S 3/4.8.2.4 to include "during movement of irradiated fuel."

I&M also proposes to change the Bases for T/S 3/4.8.2.2 and T/S 3/4.8.2.4 to reflect the proposed change to the Applicability requirements, and to include additional text describing the basis for the proposed new Action statements

Bases for the Proposed Change

The proposed Action "a," to suspend operations involving core alterations, positive reactivity changes, and movement of irradiated fuel assemblies, replaces accident mitigation measures with accident prevention measures. These accident prevention measures provide assurance that FHAs and shutdown dilution accidents will not occur by requiring cessation of activities that may cause them. By specifically requiring suspension of operations involving positive reactivity changes, the proposed Action is also consistent the with dilution event analyses in UFSAR Sections 14.1.5 for both Unit 1 and 2, which credit operator actions in precluding a loss of shutdown margin.

Proposed Action "a" would allow 1) heatup or cooldown of the reactor coolant volume provided that shutdown margin sufficient to accommodate the change in temperature is maintained in accordance with T/S 3/4.1.1.2 in Mode 5 or T/S 3/4.9.1 in Mode 6, and the heatup or cooldown rate is restricted to 50°F or less in any one-hour period in Mode 5, or 2) addition of water from the RWST, provided the boron concentration in the RWST is greater than or equal to the minimum required by T/S 3/4.1.2.7.b.2. This allowance provides flexibility that may be needed for RCS temperature and inventory control while ensuring that adequate shutdown margin is maintained. This allowance is consistent with that provided by Amendments 230 and 213 to the Unit 1 and 2 licenses, and is reflected in T/S for other systems and components required in Modes 5 and 6.

Additionally, proposed Action "a" can be readily implemented. The proposed Action would require operators to perform tasks that are relatively well defined and uncomplicated. The suspension of core alterations and movement of irradiated fuel assemblies involves manipulation of cranes and fuel handling equipment in accordance with established procedures by personnel trained in their operation. The suspension of operations involving positive reactivity changes may also involve manipulation of fuel handling equipment or may involve changes in RCS temperature or boron concentration. Changes in RCS temperature or boron concentration are accomplished by manipulation of fluid system components such as pumps and valves that are routinely operated during Modes 5 and 6 in accordance with established procedures by personnel trained in their operation.

The proposed Action "b," to immediately initiate actions to restore the required A.C. or D.C. busses and equipment to an operable status, would minimize the time that systems and components needed to mitigate a FHA, a shutdown dilution event, or a RHR system malfunction are unavailable due to a loss of electrical power. Timely restoration of power would minimize the release of radioactive material that may result from a FHA by reducing the unavailability of the mitigating ventilation and filtration systems. Timely restoration of power would also facilitate personnel actions to restore a RHR loop to operation or to identify and correct an erroneous dilution.

The proposed Action "c," to immediately declare associated required RHR loop(s) inoperable, assures safety by requiring implementation of compensatory measures that have been previously reviewed and approved by the NRC. The proposed Action would require implementing the Actions of one of three other specifications. The three other specifications are T/S 3/4.4.1.4 and T/S 3/4.4.1.5, which are the T/S for the RHR system in Mode 5 with the loops filled and not filled, and T/S 3/4.9.8.2, which is the T/S for the RHR system in Mode 6 with the reactor vessel water level greater than or less than 23 feet above the vessel flange.

Additionally, the proposed Action "c" is consistent with and reinforces the definition of operability in T/S 1.6. That definition requires that support equipment needed for a system, subsystem, train, component or device to perform its function also be capable of performing its

related support function. The proposed Action therefore provides added assurance that the operability requirements of T/S 1.6 will be applied to a system having a high level of safety significance with the unit in Mode 5 or 6. Finally, the proposed Action "c" could be readily implemented. The Actions for the three above identified RHR T/S require restoring the RHR system to operability or establishing a specified water level in the steam generators. This would result in actions that personnel would perform in accordance with existing procedures.

The proposed change to expand the Applicability requirements of Unit 1 T/S 3/4.8.2.2 and T/S 3/4.8.2.4 to include "during movement of irradiated fuel" is based on assuring that, regardless of the unit operational mode, adequate electrical power is available to the spent fuel pool ventilation system (SFPVS) to mitigate the consequences of a FHA outside containment, as described in UFSAR Section 14.2.1.4. Although the SFPVS is a common system for both units, it is powered solely from Unit 1. Expanding the Unit 1 Applicability requirements for T/S 3/4.8.2.2 and T/S 3/4.8.2.4 provides assurance that the minimum complement of Unit 1 A.C. and D.C. distribution systems needed to support at least one train of the SFPVS is operable when irradiated fuel is moved in the spent fuel pool, regardless of the operational mode of either unit. The proposed change in applicability requirements is, therefore, consistent with, and reinforces the requirements of existing T/S 3/4.9.12, "Storage Pool Ventilation System" which requires that the SFPVS be operable whenever irradiated fuel is stored in the pool.

The proposed change to the Bases for T/S 3/4.8.2.2 and T/S 3/4.8.2.4 reflects the T/S changes described above.

Licensing Precedents

The proposed changes will make the Action and Applicability statements for T/S 3/4.8.2.2 and T/S 3/4.8.2.4, and their associated Bases, consistent with the applicable portions of NUREG - 1431, Standard Technical Specifications," Revision 1, T/S 3.8.10, "Distribution Systems – Shutdown" and T/S 3.8.5, "D.C. Sources-Shutdown," with two exceptions.

One exception consists of the allowance for limited temperature changes and addition of RWST water provided by proposed Action "a." Although this allowance does not appear in NUREG-1431, it is consistent with T/S Task Force Standard T/S Change Traveler (TSTF)-286, Revision 2, "Operations Involving Positive Reactivity Additions," and with the current CNP licensing basis. The second exception occurs in proposed Action "c." This proposed Action does not require declaring associated RHR subsystems "not in operation" as is required by Action A.2.5 of NUREG – 1431 T/S 3.8.10. The condition of A.C. or D.C. busses and equipment may be such that they are functional, i.e., energized and supporting operation of associated RHR subsystems, even though they do not meet T/S operability requirements. In such cases, it would not be appropriate to declare the RHR subsystem "not in operation." Conversely, if the A.C. or D.C. busses and equipment were in a condition that precluded actual operation of

the RHR subsystem, the existing Action statements of T/S 3/4.4.1.4, T/S 3/4.4.1.5, and T/S 3/4.9.8.1 for no RHR loop in operation would be invoked.

Changes similar to those proposed for CNP were approved for Calvert Cliffs Nuclear Power Plant on June 27, 1991, in Amendment Nos. 155 and 135 to Facility Operating License Nos. DPR-53 and DPR-69, Beaver Valley Power Station on February 7, 1994, in Amendment Nos. 180 and 60 to Facility Operating License Nos. DPR-66 and NPF-73, Salem Generating Station on March 24, 1999 in Amendment Nos. 219 and 201 to Facility Operating License Nos. DPR-70 and DPR-75, and Arkansas Nuclear One on November 28, 2000 in Amendment No. 227 to Facility Operating License Nos. NPF-6. However, none of these amendments incorporated all of the Actions from NUREG – 1431, T/S 3.8.10 and 3.8.5 that are proposed for CNP. None of the other plant amendments incorporated the Action to immediately declare the associated RHR subsystem inoperable. The Salem and Arkansas Nuclear One amendment did not incorporate the Action to immediately initiate actions to restore the required portions of the A.C. or D.C. system to operable status. The Calvert Cliffs and Arkansas Nuclear One amendments did not incorporate the ISTS Applicability of "during movement of irradiated fuel."

C. Proposed Changes to T/S 3/4.9.4, Containment Building Penetrations during Refueling Operations

Description of the Current Requirements

T/S LCO 3.9.4.c requires that, during core alterations or movement of irradiated fuel within containment, each containment building penetration providing direct access from the containment atmosphere to the outside atmosphere be closed by an isolation valve, blind flange, or manual valve.

T/S Surveillance Requirements 4.9.4 and 4.9.4.a require verification that the penetrations are in their closed/isolated condition or are capable of being closed by an operable containment purge and exhaust isolation valve.

Bases for the Current Requirements

The requirements for containment building penetration closure ensure that a release of radioactive material within containment will not escape to the environment.

Need for Revision of the Requirement

Additional options are needed to allow containment building penetration closure methods other than those stated in the T/S and to allow penetrations to be open under administrative control. These options are needed to allow concurrent performance of major activities during outages and extended shutdowns. For example, containment building penetrations CPN-57 and CPN-80 are

blind flanged inside and outside containment during normal operations but are open to support ice condenser maintenance activities normally conducted during refueling outages. Penetration CPN-57 is a 4-inch penetration used for ice blowing operations via a flanged hose connection to both sides of the penetration. Penetration CPN-80 is a 5-inch penetration used to supply plant air for cleaning ice condenser flow passages and other ice condenser related activities, also via a flanged hose connection to both sides of the penetration. By requiring that penetrations CPN-57 and CPN-80 be closed and allowing only an isolation valve, blind flange, or manual valve as the closure method, the current T/S LCO 3.9.4.c requirements preclude conducting major ice condenser related activities during core alterations. This has significantly impacted scheduling of activities during past outages and will limit I&M efforts to shorten future refueling outages.

Description of the Proposed Changes

I&M proposes to change T/S LCO 3.9.4.c to allow methods for closure of containment penetrations that are equivalent to the currently specified isolation valve, blind flange, or manual valve, and to allow containment penetrations providing direct access from the containment atmosphere to the outside atmosphere via the auxiliary building vent to be open under administrative control.

I&M proposes to change T/S Surveillance Requirements 4.9.4 and 4.9.4.a such that they require verification that penetrations are in their required status rather than closed or isolated or capable of being closed by an operable containment purge and exhaust isolation valve.

I&M proposes to change the Bases for T/S 3/4.9.4 to describe the equivalent containment penetrations closure methods and the basis for allowing the specified containment penetrations to be open under administrative control.

Bases for the Proposed Change

Equivalent Containment Penetration Closure Methods

The proposed change to T/S LCO 3.9.4.c allowing equivalent containment penetration closure methods is based on providing equivalent mitigation of radioactivity releases that could result from a FHA in containment through the use of alternative containment penetration isolation methods. A FHA in containment, which is described in UFSAR Sections 14.1.5 for both Unit 1 and 2, does not produce the pressure increase or harsh environment that can result from the accidents that are credible with the plant in Modes 1 through 4. Therefore, the high pressure retaining capability and environmental qualification provisions required for containment penetration closures methods in Modes 1 through 4 are not needed during core alteration or movement of irradiated fuel in containment. This is reflected in the current Bases for T/S 3/4.9.4, which states that closure restrictions are sufficient to restrict radioactive material release from a fuel element rupture based on the lack of containment pressurization potential while in the refueling mode.

Accordingly, it is acceptable to use containment isolation methods other than the currently specified methods (isolation valve, blind flange, or manual valve) if they provide equivalent mitigation of the potential consequences of a FHA. This is recognized by NUREG-1431, T/S 3.9.4, "Containment Penetrations," which allows equivalent closure methods. Additionally, the Bases for NUREG-1431 T/S, 3.9.4, states that equivalent penetration closure methods need only provide a temporary, atmospheric pressure ventilation barrier. Consequently, temporary equipment including hoses, covers, manual valves, and check valves may be used to provide this barrier if approved in accordance with plant procedures.

Unisolation Under Administrative Control

The proposed change to T/S LCO 3.9.4.c allowing containment penetrations to be unisolated under administrative control is based on criteria for granting this allowance as stated in TSTF–312, Revision 1, "Administratively Control Containment Penetrations." These criteria require the following:

1. Confirmatory dose calculations for a FHA, as approved by the NRC Staff, which indicate acceptable radiological consequences, and

2. Commitments to implement acceptable administrative procedures that ensure, in the event of a FHA (even though the containment fission product control function is not required to meet acceptable dose consequences), that the open penetration(s) can and will be promptly closed. The time to close such penetrations is to be included in the confirmatory dose calculations.

Criterion 1 can be met, with respect to offsite doses, by the current Unit 1 and Unit 2 licensing basis accident analyses of a FHA in containment as described in UFSAR Unit 1 Section 14.1.5 and Unit 2 Section 14.1.5. Both the Unit 1 and the Unit 2 analyses are based on the assumption that the FHA occurs 100 hours after shutdown and that all activity released to the containment atmosphere escapes from containment building. Therefore, both analyses bound a postulated FHA in containment with one or more open penetrations. Both the Unit 1 and the Unit 2 analyses determined that the doses from a FHA in containment would be well below the dose limits stated in 10 CFR 100.11(a)(1) of 300 rem thyroid and 25 rem whole body.

The current Unit 1 licensing basis analysis determined that the 0-2 hour dose at the site boundary would be no more than 82.3 rem thyroid and 1.3 rem whole body. This analysis was described in an I&M letter to the NRC, "Fuel Handling Accident Inside Containment Evaluation," dated March 21, 1977. The NRC has not explicitly approved the analysis. However, in an Safety Evaluation Report for Amendments 34 and 58 to the Unit 1 and Unit 2 operating licenses, the NRC stated that they had reviewed I&M's submittal of March 21, 1977, and performed an independent analysis of the FHA in containment. The NRC analysis determined that the 0-2 hour dose at the site boundary would be no more than 56 rem thyroid and 0.2 rem whole body.

The current Unit 2 licensing basis analysis determined that the 0-2 hour dose at the site boundary would be no more than 100 rem thyroid and 1.4 rem whole body. This analysis was documented in Westinghouse WCAP-11902, Supplement 1, "Rerated Power and Revised Temperature and Pressure Operation for Donald C. Cook Nuclear Plant Units 1 and 2 Licensing Report," which was transmitted to the NRC as an Attachment to an I&M letter to the NRC, "Technical Specification Change Request, BIT [boron injection tank] Boron Concentration Reduction," dated March 26, 1991. The NRC has not explicitly approved the analysis. However, the results of this analysis were credited in an I&M amendment application dated March 31, 1995, "Proposed Amendment to Technical Specification Section 3/4.9.4 for Containment Personnel Airlock Requirements," which was subsequently approved as Amendments 197 and 182, respectively, to the Unit 1 and Unit 2 operating licenses.

Criterion 1 can be met, with respect to control room doses for both Unit 1 and Unit 2, by a FHA analysis included in a previously submitted license amendment request to use an alternative source term (AST) for determining post accident doses. The analysis is based on the assumption that the FHA occurs 100 hours after shutdown and that all activity released to the containment escapes from containment building via the purge system through the auxiliary building vent. The analysis determined that the dose to personnel in the control room would be no more than 1.7 rem TEDE. This is below the criterion of 5.0 rem TEDE stated in 10 CFR 50.67(b)(2)(iii). The AST amendment request was transmitted to the NRC by I&M letter C0600-13, "License Amendment Request for Control Room Habitability and Generic Letter 99-02 Requirements," dated June 12, 2000.

Since the FHA analysis submitted with the AST amendment request is based on the assumption that all activity is released through the auxiliary building vent, it may not bound releases from containment penetrations that do not communicate with the auxiliary building, e.g., main steam, blowdown, main feed water. These releases would have different atmospheric dispersion (X/Q) values than releases from the auxiliary building vent. Therefore, the proposed change allowing containment penetrations to be open under administrative control is limited to those penetrations that communicate with the auxiliary building.

To meet Criterion 2, I&M commits to issue administrative controls for penetrations as described in the proposed Bases change. The proposed Bases Change states that administrative controls ensure that 1) appropriate personnel are aware of the open status of the penetration flow path during core alterations or movement of irradiated fuel assemblies within containment, and 2) specified individuals are designated and readily available to isolate the flow path in the event of a fuel handling accident. The Criterion 2 stipulation that dose calculations include the time to close the penetrations is not applicable to this proposed change since, as described above, the CNP dose calculations are based on the assumption that all activity released to the containment atmosphere escapes to the environment. Therefore, the dose calculations bound a condition in which penetrations to the auxiliary building remain open.

The proposed change to Surveillance Requirements 4.9.4 and 4.9.4.a to require verification that penetrations are in their "required status" reflects the proposed change to the LCO. By using the term "required status," the proposed Surveillance Requirement provides assurance that the penetrations are in a condition allowed by the LCO.

The proposed change to the Bases for T/S 3/4.9.4 provides relevant information regarding the additional options proposed for the LCO. The paragraph discussing acceptable methods for isolating containment penetrations is based on a corresponding paragraph in NUREG-1431 Bases 3.9.4, modified to clearly state that equivalent methods must be approved in accordance with plant procedures. The paragraph discussing the unisolation of penetrations under administrative control is based on Bases changes specified by TSTF-312, modified to indicate that the provisions are limited to penetration flow paths from the containment to the outside atmosphere via the auxiliary building vent as previously discussed.

Example of How Proposed Changes May be Applied

The example cited above under "Need for Revision of the Requirement," can be used to illustrate how the proposed changes may be applied. The allowance to use equivalent closure methods may be implemented by installing a temporary manual isolation valve at penetration CPN-57 and installing a check valve in the temporary hose connected to penetration CPN 80. The equivalent penetration closure method would consist of the barrier formed by the temporary hose, the flanged connections, and the closed manual isolation valve or the check valve. The allowance to unisolate containment penetrations under administrative control may be applied to penetration CPN-57 by opening the manual isolation valve under administrative control in accordance with provisions described in the proposed Bases change. It would not be necessary to apply the allowance to unisolate containment penetrations under administrative control to the check valve in the hose connected to penetration CPN 80. As stated in UFSAR Section 5.4.1, a check valve on an incoming line is considered equivalent to an automatic valve. Implementation of the proposed changes in this manner would provide adequate protection from a FHA in containment while allowing core alterations or movement of irradiated fuel in the containment concurrent with major ice condenser maintenance activities.

Licensing Precedents

The proposed changes will make the requirements of T/S LCO 3.9.4.c and T/S Surveillance Requirement 4.9.4.a, and their associated Bases, consistent with the applicable portions of NUREG–1431, T/S 3.9.4, and TSTF–312.

Amendment Nos. 217 and 199 to Salem Generating Station Facility Operating License Nos. DPR-70 and DPR-75 on February 26, 1999 provides a precedent licensing action for the proposed change to allow equivalent containment penetration closure methods. The change approved in the Salem amendments is similar to that proposed for CNP with respect to allowing

equivalent penetration closure methods. The Bases change associated with the Salem amendment included background information from the ISTS that is not included in the proposed CNP amendment. I&M considers inclusion of information from the ISTS Bases that is solely applicable to the proposed LCO change to be adequate and appropriate.

License amendments for other plants implementing TSTF-312 provide precedent licensing actions for the proposed change to allow containment penetrations to be open under administrative control. License amendments implementing TSTF-312 were approved for Wolf Creek Generating Station (Amendment Nos. 135 to Facility Operating License No. NPF-42, dated September 12, 2000), Comanche Peak Steam Electric Station (Amendment Nos. 79 and 79 to Facility Operating License Nos. NPF-87 and NPF-89 dated September 5, 2000), and Callaway Plant (Amendment No. 138 to Facility Operating License No. NPF-130 dated September 26, 2000). Unlike the change proposed for CNP, none of these three amendments limited the allowance to use administrative controls to penetrations communicating with a specific location, such as the auxiliary building. However, I&M considers it appropriate to impose this limitation due to the potentially differing X/Q values for releases from non-auxiliary building penetrations at CNP. The Bases changes associated with these three amendments were similar to those proposed for CNP.

Previous amendments to CNP T/S 3/4.9.4 provide an additional precedent licensing action. Amendments 197 and 182 to Operating Licenses DRP-58 and DPR-74, approved on July 12, 1995, added provisions to T/S LCO 3.9.4.b allowing both containment airlock doors to be open during core alterations or movement of irradiated fuel in containment if designated personnel were available to close the airlock, and cables and hoses passing through the airlock were designed for removal in a timely manner. These amendments were approved based on a determination of acceptable dose consequences, which is consistent with the basis for the proposed change to allow unisolation of containment penetrations under administrative control as discussed above.

ATTACHMENT 2A TO C0501-02

TECHNICAL SPECIFICATIONS PAGES
MARKED TO SHOW PROPOSED CHANGES

REVISED PAGES
UNIT 1

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3/4 8-15
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B 3/4 8-1
B 3/4 8-2
B 3/4 9-1
B 3/4 9-1a

A.C. DISTRIBUTION SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.8.2.2 As a minimum, the following A.C. electrical busses shall be OPERABLE and energized:

1 - 4160-volt Emergency Bus, and

1 - 600-volt Emergency Bus, and

2 - *120 volt A.C. Vital Busses.

APPLICABILITY MODES 5 and 6, and during movement of irradiated fuel.

ACTION:

With less than the above complement of A.C. busses OPERABLE and energized, ~~establish CONTAINMENT INTEGRITY within 8 hours.~~

a. Immediately suspend all operations involving CORE ALTERATIONS, movement of irradiated fuel assemblies, and positive reactivity changes except: 1) heatup or cooldown of the reactor coolant volume provided that SHUTDOWN MARGIN sufficient to accommodate the change in temperature is maintained in accordance with Specification 3.1.1.2 in MODE 5 or Specification 3.9.1 in MODE 6, and the heatup or cooldown rate is restricted to 50°F or less in any one-hour period in MODE 5, or 2) addition of water from the RWST, provided the boron concentration in the RWST is greater than or equal to the minimum required by Specification 3.1.2.7.b.2.

b. Immediately initiate actions to restore the required A.C. electrical busses to OPERABLE status.

c. Immediately declare associated required residual heat removal loop(s) inoperable.

SURVEILLANCE REQUIREMENTS

4.8.2.2 The specified A.C. busses shall be determined OPERABLE and energized at least once per 7 days by verifying correct breaker alignment and indicated power availability.

*Energized from its associated inverter connected to a DC bus.

D.C. DISTRIBUTION - SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.8.2.4 As a minimum, the following D.C. electrical equipment and bus shall be energized and OPERABLE:

1 - 250-volt D.C. bus, and

1 - 250-volt battery bank and charger associated with the above D.C. bus.

APPLICABILITY: MODES 5 and 6, and during movement of irradiated fuel.

ACTION:

With less than the above complement of D.C. equipment and bus OPERABLE, ~~establish CONTAINMENT INTEGRITY within 8 hours.~~

a. Immediately suspend all operations involving CORE ALTERATIONS, movement of irradiated fuel assemblies, and positive reactivity changes except: 1) heatup or cooldown of the reactor coolant volume provided that SHUTDOWN MARGIN sufficient to accommodate the change in temperature is maintained in accordance with Specification 3.1.1.2 in MODE 5 or Specification 3.9.1 in MODE 6, and the heatup or cooldown rate is restricted to 50°F or less in any one-hour period in MODE 5, or 2) addition of water from the RWST, provided the boron concentration in the RWST is greater than or equal to the minimum required by Specification 3.1.2.7.b.2.

b. Immediately initiate actions to restore the required D.C. electrical equipment and bus to OPERABLE status.

c. Immediately declare associated required residual heat removal loop(s) inoperable.

SURVEILLANCE REQUIREMENTS

4.8.2.4.1 The above required 250-volt D.C. bus shall be determined OPERABLE and energized at least once per 7 days by verifying correct breaker alignment and indicated power availability.

4.8.2.4.2 he above required 250-volt battery bank and charger shall be demonstrated OPERABLE per Surveillance Requirement 4.8.2.3.2.

CONTAINMENT BUILDING PENETRATIONS

LIMITING CONDITION FOR OPERATION

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

a. The equipment door closed and held in place by a minimum of four bolts,

b. The airlock doors are controlled in the following manner:

1. A minimum of one door in each airlock is closed, or

2. Both airlock doors may be open provided:

a. One door in each airlock is OPERABLE*,

b. Refueling cavity level is greater than 23 feet above the fuel, and

c. A designated individual is available at all times to close the airlock if required.

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

1. Closed by an isolation valve, blind flange, ~~or~~ manual valve, or equivalent, or

2. Be capable of being closed by an OPERABLE automatic Containment Purge and Exhaust isolation valve.

---NOTE---
Penetration flow path(s) providing direct access from the containment atmosphere to the outside atmosphere via the auxiliary building vent may be unisolated under administrative controls.

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. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.9.4 Each of the above required containment building penetrations shall be determined to be in its required status ~~either in its closed/isolated condition or capable of being closed by an OPERABLE automatic Containment Purge and Exhaust isolation valve~~ within 100 hours prior to the start of and at least once per 7 days during CORE ALTERATIONS or movement of irradiated fuel in the containment building by:

* For the purpose of this Specification, an OPERABLE airlock door is a door that is capable of being closed and secured. Cables or hoses transversing the airlock shall be designed to allow for removal in a timely manner (e.g., quick disconnects).

CONTAINMENT BUILDING PENETRATIONS

SURVEILLANCE REQUIREMENTS (Continued)

a. Verifying the penetrations are in ~~their closed/isolated condition~~ the required status, or

b. Testing the Containment Purge and Exhaust isolation valves per the applicable portions of Specification 4.6.3.1.2.

The OPERABILITY of the A.C. and D.C power sources and associated distribution systems during operation ensures that sufficient power will be available to supply the safety related equipment required for 1) the safe shutdown of the facility and 2) the mitigation and control of accident conditions within the facility. The minimum specified independent and redundant A.C. and D.C. power sources and distribution systems satisfy the requirements of General Design Criteria 17 of Appendix "A" to 10 CFR 50.

The ACTION requirements specified for the levels of degradation of the power sources provide restriction upon continued facility operation commensurate with the level of degradation. The OPERABILITY of the power sources are consistent with the initial condition assumptions of the accident analyses and are based upon maintaining at least one of each of the onsite A.C. and D.C. power sources and associated distribution systems OPERABLE during accident conditions coincident with an assumed loss of offsite power and single failure of the other onsite A.C. source.

Surveillance requirement 4.8.1.1.1.a ensures proper circuit continuity for the offsite A.C. power sources and the associated distribution system by verifying correct breaker alignment and indicated power availability. The 7-day frequency is adequate since information is available to the control room to alert operators, and the offsite transmission network has been analyzed to ensure adequacy with minimum predicted low voltage occurences.

The OPERABILITY of the minimum specified A.C. and D.C. power sources and associated distribution systems during Modes 5 and 6, and during movement of irradiated fuel ~~shutdown and refueling~~ ensures that 1) the facility can be maintained in the shutdown or refueling condition for extended time periods and 2) sufficient instrumentation and control capability is available for monitoring and maintaining the facility status.

If the minimum specified A.C. and D.C. distribution systems and components are not OPERABLE, sufficiently conservative ACTIONS are specified (i.e., to suspend CORE ALTERATIONS, movement of irradiated fuel assemblies, and operations involving positive reactivity additions). Suspension of these activities does not preclude completion of actions to establish a safe conservative condition. These ACTIONS minimize the probability of the occurrence of postulated events. It is further required to immediately initiate action to restore the required A.C. and D.C. electrical power distribution subsystems and to continue this action until restoration is accomplished in order to provide the necessary power to the unit safety systems. Not withstanding performance of the above conservative ACTIONS, a required residual heat removal (RHR) subsystem may be inoperable. In this case, an ACTION is provided to direct declaring RHR inoperable, which results in taking the appropriate RHR actions. The specified completion time of "immediately" is consistent with the required times for actions requiring prompt attention. The restoration of the required distribution subsystems should be completed as quickly as possible in order to minimize the time the unit safety systems may be without power.

Specific surveillance requirements (SRs) of SR 4.8.1.2 may be delayed one time until just prior to the first entry into MODE 4 following the extended outage that commenced in 1997. The delay is permitted to recognize the significant ongoing maintenance to safety systems and components that would be required to be OPERABLE solely to support the referenced surveillances. The delay recognizes the reduced decay heat load and fission product activities resulting from the extended shutdown and consequently the small benefit from performing the surveillances prior to the next entry into MODE 4. It is the intent that these SRs must still be capable of being met, but actual performance is not required until the required safety systems are ready to support entry into MODE 4.

The AB and CD station battery systems provide a reliable source of continuous power for supply and control of plant loads such as switchgear and annunciator control circuits, static inverters, valve control centers, emergency lighting and motor control centers. The design duty cycles of these batteries are composite load profiles resulting from the combination of the three hour Loss Of Coolant Accident/Loss Of Offsite Power battery load profiles and the four hour Station Blackout battery load profiles.

The train N station battery system provides an independent 250 volt DC power supply for power and control of the turbine driven auxiliary feedwater pump train. The limiting conditions of operation for the train N battery are consistent with the requirements of the auxiliary feedwater system. The surveillance requirements for the train N battery system are consistent with the requirements of the AB and CD station batteries. The train N battery loads are derived from equipment in the turbine driven auxiliary feedwater pump train and battery sizing is consistent with the functional requirements of these components. Simulated loads for battery tests are loads equivalent to measured actual loads.

Removal of accumulated water as required by 4.8.1.1.2.b.2 is performed by drawing the contents off the bottom of the tank until acceptable results are obtained for either a tape test or a water and sediment test. An acceptable result for the water and sediment content is a measured value less than 0.05 percent volume.

The "proper color" criterion of Surveillance Requirement 4.8.1.1.2.c.3 ensures the translucence of the fuel oil sample will allow observation of water or sediment when analyzed in accordance with ASTM D4176-82. Fuel oil is considered to have proper color if it measures less than or equal to five per ASTM D1500. The addition of visible dyes to fuel oil may interfere with the ASTM D1500 analysis.

The sample specified in 4.8.1.1.2.c.4 is sent offsite for testing. A serious attempt will be made to meet the 31-day limit on the offsite tests; however, if for some reason this limit is not met (e.g., if the sample is lost or broken or if the results are not received in 31 days), the diesel generators should not be considered inoperable. If the sample is lost, broken, or fails the offsite tests and the new oil has already been put into the storage tank, the offsite tests will be performed on a sample taken from the storage tank. If the results on the subsequent storage tank sample are not within specified limits, the diesel generators should be considered OPERABLE and the out-of-spec properties should be returned to within specification as soon as possible.

If the monthly storage tank sample taken in accordance with Specification 4.8.1.1.2.d fails the particulate contamination test, the diesel generators should be considered OPERABLE and the contamination level should be restored to below 10 mg/liter as soon as possible.

The precision leak-detection test described in Surveillance Requirement 4.8.1.1.2.f.2 should be performed as described in NFPA (National Fire Protection Association) -329. As NFPA-329 is revised, the precision leak-detection test may be modified to incorporate changes to the test as described in the revisions to NFPA-329.

The minimum required diesel fuel oil volume is 43,240 gallons. This volume is consistent with operation of one diesel generator continuously for 7 days at rated load, as recommended in Regulatory Guide 1.137, entitled "Fuel Oil System for Standby Diesel Generators." The Technical Specifications require a minimum of 46,000 gallons of fuel. The 46,000 gallons is an indicated volume. This amount includes margin for characteristics such as location of the tank discharge pipes and slope of the tanks.

3/4.9.1 BORON CONCENTRATION

The limitations on reactivity conditions during REFUELING ensure that: 1) the reactor will remain subcritical during CORE ALTERATIONS, and 2) a uniform boron concentration is maintained for reactivity control in the water volume having direct access to the reactor vessel. These limitations are consistent with the initial conditions assumed for the boron dilution incident in the accident analyses. The value of 0.95 or less for K_{eff} includes a 1 percent delta k/k conservative allowance for uncertainties. Similarly, the boron concentration value of 2000 ppm or greater includes a conservative uncertainty allowance of 50 ppm boron. The boron concentration requirement of specification 3.9.1.b has been conservatively increased to 2400 ppm to agree with the minimum concentration of the RWST.

3/4.9.2 INSTRUMENTATION

The OPERABILITY of the source range neutron flux monitors ensures that redundant monitoring capability is available to detect changes in the reactivity condition of the core.

3/4.9.3 DECAY TIME

The minimum requirement for reactor subcriticality prior to movement of irradiated fuel assemblies in the reactor pressure vessel ensures that sufficient time has elapsed to allow the radioactive decay of the short lived fission products. This decay time is consistent with the assumptions used in the accident analyses.

3/4.9.4 CONTAINMENT BUILDING PENETRATIONS

The requirements on containment building penetration closure and OPERABILITY ensure that a release of radioactive material within containment will be restricted from leakage to the environment. The OPERABILITY and closure restrictions are sufficient to restrict radioactive material release from a fuel element rupture based upon the lack of containment pressurization potential while in the REFUELING MODE.

The specific guidelines to allow both airlock doors to remain open during CORE ALTERATIONS were developed to ensure that the assumptions for restricting radioactive leakage to the environment remained valid. The guidelines established for maintaining both airlock doors open include: 1) one door in each airlock is OPERABLE, 2) refueling cavity level is greater than 23 feet above the fuel, and 3) a designated individual is continuously available to close an airlock door (if required). An OPERABLE airlock door consists of a door capable of being closed and secured. Additionally, cables or hoses transversing the airlock must be designed in a manner that allows timely removal (e.g., quick disconnects). The requirement that the refueling cavity level is greater than 23 feet above the fuel ensures consistency with the assumptions of Specifications 3/4.9.10 and 3/4.9.11.

Containment penetrations that provide direct access from containment atmosphere to the 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, blind flange, or equivalent. Equivalent isolation methods must be approved in accordance with plant procedures and may include use of a material that can provide a temporary, atmospheric pressure, ventilation barrier during fuel movements.

The LCO is modified by a Note allowing penetration flow paths with direct access from the containment atmosphere to the outside atmosphere via the auxiliary building vent to be unisolated under administrative controls. Administrative controls ensure that 1) appropriate personnel are aware of the open status of the penetration flow path during CORE ALTERATIONS or movement of irradiated fuel assemblies within containment, and 2) specified individuals are designated and readily available to isolate the flow path in the event of a fuel handling accident.

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 conditions during CORE ALTERATIONS.

ATTACHMENT 2B TO C0501-02

TECHNICAL SPECIFICATIONS PAGES
MARKED TO SHOW PROPOSED CHANGES

REVISED PAGES
UNIT 2

3/4 8-11
3/4 8-15
3/4 9-4
3/4 9-4a

B 3/4 8-1
B 3/4 8-2
B 3/4 9-1
B 3/4 9-1a

A.C. DISTRIBUTION SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.8.2.2 As a minimum, the following A.C. electrical busses shall be OPERABLE and energized:

1 - 4160-volt Emergency Bus, and

1 - 600-volt Emergency Bus, and

2 - *120-volt A.C. Vital Busses.

APPLICABILITY: MODES 5 and 6.

ACTION:

With less than the above complement of A.C. busses OPERABLE and energized~~, establish CONTAINMENT INTEGRITY within 8 hours~~.

a. Immediately suspend all operations involving CORE ALTERATIONS, movement of irradiated fuel assemblies, and positive reactivity changes except: 1) heatup or cooldown of the reactor coolant volume provided that SHUTDOWN MARGIN sufficient to accommodate the change in temperature is maintained in accordance with Specification 3.1.1.2 in MODE 5 or Specification 3.9.1 in MODE 6, and the heatup or cooldown rate is restricted to 50°F or less in any one-hour period in MODE 5, or 2) addition of water from the RWST, provided the boron concentration in the RWST is greater than or equal to the minimum required by Specification 3.1.2.7.b.2.

b. Immediately initiate actions to restore the required A.C. electrical busses to OPERABLE status.

c. Immediately declare associated required residual heat removal loop(s) inoperable.

SURVEILLANCE REQUIREMENTS

4.8.2.2 The specified A.C. busses shall be determined OPERABLE and energized at least once per 7 days by verifying correct breaker alignment and indicated power availability.

* Engergized from its associated inverter connected to a DC bus.

D.C. DISTRIBUTION - SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.8.2.4 As a minimum, the following D.C. electrical equipment and bus shall be energized and OPERABLE:

1 - 250-volt D.C. bus, and

1 - 250-volt battery bank and charger associated with the above D.C. bus.

APPLICABILITY: MODES 5 and 6.

ACTION:

With less than the above complement of D.C. equipment and bus OPERABLE~~, establish CONTAINMENT INTEGRITY within 8 hours~~.

a. Immediately suspend all operations involving CORE ALTERATIONS, movement of irradiated fuel assemblies, and positive reactivity changes except: 1) heatup or cooldown of the reactor coolant volume provided that SHUTDOWN MARGIN sufficient to accommodate the change in temperature is maintained in accordance with Specification 3.1.1.2 in MODE 5 or Specification 3.9.1 in MODE 6, and the heatup or cooldown rate is restricted to 50°F or less in any one-hour period in MODE 5, or 2) addition of water from the RWST, provided the boron concentration in the RWST is greater than or equal to the minimum required by Specification 3.1.2.7.b.2.

b. Immediately initiate actions to restore the required D.C. electrical equipment and bus to OPERABLE status.

c. Immediately declare associated required residual heat removal loop(s) inoperable.

SURVEILLANCE REQUIREMENTS

4.8.2.4.1 The above required 250-volt D.C. bus shall be determined OPERABLE and energized at least once per 7 days by verifying correct breaker alignment and indicated power availability.

4.8.2.4.2 The above required 250-volt battery bank and charger shall be demonstrated OPERABLE per Surveillance Requirement 4.8.2.3.2.

CONTAINMENT BUILDING PENETRATIONS

LIMITING CONDITION FOR OPERATION

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

a. The equipment door closed and held in place by a minimum of four bolts,

b. The airlock doors are controlled in the following manner:

1. A minimum of one door in each airlock is closed, or

2. Both airlock doors may be open provided:

a. One door in each airlock is OPERABLE*,

b. Refueling cavity level is greater than 23 feet above the fuel, and

c. A designated individual is available at all times to close the airlock if required.

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

1. Closed by an isolation valve, blind flange, ~~or~~ manual valve, or equivalent, or

2. Be capable of being closed by an OPERABLE automatic Containment Purge and Exhaust isolation valve.

NOTE
Penetration flow path(s) providing direct access from the containment atmosphere to the outside atmosphere via the auxiliary building vent may be unisolated under administrative controls.

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. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.9.4 Each of the above required containment building penetrations shall be determined to be in its required status ~~either in its closed/isolated condition or capable of being closed by an OPERABLE automatic Containment Purge and Exhaust isolation valve~~ within 100 hours prior to the start of and at least once per 7 days during CORE ALTERATIONS or movement of irradiated fuel in the containment building by:

* For the purpose of this Specification, an OPERABLE airlock door is a door that is capable of being closed and secured. Cables or hoses transversing the airlock shall be designed to allow for removal in a timely manner (e.g., quick disconnects).

CONTAINMENT PENETRATIONS

SURVEILLANCE REQUIREMENTS (Continued)

a. Verifying the penetrations are in ~~their closed/isolated condition~~the required status, or

b. Testing the Containment Purge and Exhaust isolation valves per the applicable portions of Specification 4.6.3.1.2.

The OPERABILITY of the A.C. and D.C power sources and associated distribution systems during operation ensures that sufficient power will be available to supply the safety related equipment required for 1) the safe shutdown of the facility and 2) the mitigation and control of accident conditions within the facility. The minimum specified independent and redundant A.C. and D.C. power sources and distribution systems satisfy the requirements of General Design Criteria 17 of Appendix "A" to 10 CFR 50.

The ACTION requirements specified for the levels of degradation of the power sources provide restriction upon continued facility operation commensurate with the level of degradation. The OPERABILITY of the power sources are consistent with the initial condition assumptions of the accident analyses and are based upon maintaining at least one of each of the onsite A.C. and D.C. power sources and associated distribution systems OPERABLE during accident conditions coincident with an assumed loss of offsite power and single failure of the other onsite A.C. source.

Surveillance requirement 4.8.1.1.1.a ensures proper circuit continuity for the offsite A.C. power sources and the associated distribution system by verifying correct breaker alignment and indicated power availability. The 7-day frequency is adequate since information is available to the control room to alert operators, and the offsite transmission network has been analyzed to ensure adequacy with minimum predicted low voltage occurrences.

The OPERABILITY of the minimum specified A.C. and D.C. power sources and associated distribution systems during Modes 5 and 6 ~~shutdown and refueling~~ ensures that 1) the facility can be maintained in the shutdown or refueling condition for extended time periods and 2) sufficient instrumentation and control capability is available for monitoring and maintaining the facility status.

If the minimum specified A.C. and D.C. distribution systems and components are not OPERABLE, sufficiently conservative ACTIONS are specified (i.e., to suspend CORE ALTERATIONS, movement of irradiated fuel assemblies, and operations involving positive reactivity additions). Suspension of these activities does not preclude completion of actions to establish a safe conservative condition. These ACTIONS minimize the probability of the occurrence of postulated events. It is further required to immediately initiate action to restore the required A.C. and D.C. electrical power distribution subsystems and to continue this action until restoration is accomplished in order to provide the necessary power to the unit safety systems. Not withstanding performance of the above conservative ACTIONS, a required residual heat removal (RHR) subsystem may be inoperable. In this case, an ACTION is provided to direct declaring RHR inoperable, which results in taking the appropriate RHR actions. The specified completion time of "immediately" is consistent with the required times for actions requiring prompt attention. The restoration of the required distribution subsystems should be completed as quickly as possible in order to minimize the time the unit safety systems may be without power.

Specific surveillance requirements (SRs) of SR 4.8.1.2 may be delayed one time until just prior to the first entry into MODE 4 following the extended outage that commenced in 1997. The delay is permitted to recognize the significant ongoing maintenance to safety systems and components that would be required to be OPERABLE solely to support the referenced surveillances. The delay recognizes the reduced decay heat load and reduced fission product activities resulting from the extended shutdown and consequently the small benefit from performing the surveillances prior to the next entry into MODE 4. It is the intent that these SRs must still be capable of being met, but actual performance is not required until the required safety systems are ready to support entry into MODE 4.

The AB and CD station battery systems provide a reliable source of continuous power for supply and control of plant loads such as switchgear and annunciator control circuits, static inverters, valve control centers, emergency lighting and motor control centers. The design duty cycles of these batteries are composite load profiles resulting from the combination of the three hour Loss Of Coolant Accident/Loss Of Offsite Power battery load profiles and the four hour Station Blackout battery load profiles.

The train N station battery system provides an independent 250 volt DC power supply for power and control of the turbine driven auxiliary feedwater pump train. The limiting conditions of operation for the train N battery are consistent with the requirements of the auxiliary feedwater system. The surveillance requirements for the train N battery system are consistent with the requirements of the AB and CD station batteries. The train N battery loads are derived from equipment in the turbine driven auxiliary feedwater pump train and battery sizing is consistent with the functional requirements of these components. Simulated loads for battery tests are loads equivalent to measured actual loads.

Removal of accumulated water as required by 4.8.1.1.2.b.2 is performed by drawing the contents off the bottom of the tank until acceptable results are obtained for either a tape test or a water and sediment test. An acceptable result for the water and sediment content is a measured value less than 0.05 percent volume.

The "proper color" criterion of Surveillance Requirement 4.8.1.1.2.c.3 ensures the translucence of the fuel oil sample will allow observation of water or sediment when analyzed in accordance with ASTM D4176-82. Fuel oil is considered to have proper color if it measures less than or equal to five per ASTM D1500. The addition of visible dyes to fuel oil may interfere with the ASTM D1500 analysis.

The sample specified in 4.8.1.1.2.c.4 is sent offsite for testing. A serious attempt will be made to meet the 31-day limit on the offsite tests; however, if for some reason this limit is not met (e.g., if the sample is lost or broken or if the results are not received in 31 days), the diesel generators should not be considered inoperable. If the sample is lost, broken, or fails the offsite tests and the new oil has already been put into the storage tank, the offsite tests will be performed on a sample taken from the storage tank. If the results on the subsequent storage tank sample are not within specified limits, the diesel generators should be considered OPERABLE and the out-of-spec properties should be returned to within specification as soon as possible.

If the monthly storage tank sample taken in accordance with Specification 4.8.1.1.2.d fails the particulate contamination test, the diesel generators should be considered OPERABLE and the contamination level should be restored to below 10 mg/liter as soon as possible.

The precision leak-detection test described in Surveillance Requirement 4.8.1.1.2.f.2 should be performed as described in NFPA (National Fire Protection Association) -329. As NFPA-329 is revised, the precision leak-detection test may be modified to incorporate changes to the test as described in the revisions to NFPA-329.

The minimum required diesel fuel oil volume is 43,240 gallons. This volume is consistent with operation of one diesel generator continuously for 7 days at rated load, as recommended in Regulatory Guide 1.137, entitled "Fuel Oil System for Standby Diesel Generators." The Technical Specifications require a minimum of 46,000 gallons of fuel. The 46,000 gallons is an indicated volume. This amount includes margin for characteristics such as location of the tank discharge pipes and slope of the tanks.

3/4.9.1 BORON CONCENTRATION

The limitations on reactivity conditions during REFUELING ensure that: 1) the reactor will remain subcritical during CORE ALTERATIONS, and 2) a uniform boron concentration is maintained for reactivity control in the water volume having direct access to the reactor vessel. These limitations are consistent with the initial conditions assumed for the boron dilution incident in the accident analysis. The value of 0.95 or less for K_{eff} includes a 1 percent delta k/k conservative allowance for uncertainties. Similarly, the boron concentration value of 2000 ppm or greater includes a conservative uncertainty allowance of 50 ppm boron. The boron concentration requirement of specification 3.9.1.b has been conservatively increased to 2400 ppm to agree with the minimum concentration of the RWST.

3/4.9.2 INSTRUMENTATION

The OPERABILITY of the source range neutron flux monitors ensures that redundant monitoring capability is available to detect changes in the reactivity condition of the core.

3/4.9.3 DECAY TIME

The minimum requirement for reactor subcriticality prior to movement of irradiated fuel assemblies in the reactor pressure vessel ensures that sufficient time has elapsed to allow the radioactive decay of the short lived fission products. This decay time is consistent with the assumptions used in the accident analysis.

3/4.9.4 CONTAINMENT BUILDING PENETRATIONS

The requirements on containment building penetration closure and OPERABILITY ensure that a release of radioactive material within containment will be restricted from leakage to the environment. The OPERABILITY and closure restrictions are sufficient to restrict radioactive material release from a fuel element rupture based upon the lack of containment pressurization potential while in the REFUELING MODE.

The specific guidelines to allow both airlock doors to remain open during CORE ALTERATIONS were developed to ensure that the assumptions for restricting radioactive leakage to the environment remained valid. The guidelines established for maintaining both airlock doors open include: 1) one door in each airlock is OPERABLE, 2) refueling cavity level is greater than 23 feet above the fuel, and 3) a designated individual is continuously available to close an airlock door (if required). An OPERABLE airlock door consists of a door capable of being closed and secured. Additionally, cables or hoses transversing the airlock must be designed in a manner that allows timely removal (e.g., quick disconnects). The requirement that the refueling cavity level is greater than 23 feet above the fuel ensures consistency with the assumptions of Specifications 3/4.9.10 and 3/4.9.11.

Containment penetrations that provide direct access from containment atmosphere to the 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, blind flange, or equivalent. Equivalent isolation methods must be approved in accordance with plant procedures and may include use of a material that can provide a temporary, atmospheric pressure, ventilation barrier during fuel movements.

The LCO is modified by a Note allowing penetration flow paths with direct access from the containment atmosphere to the outside atmosphere via the auxiliary building vent to be unisolated under administrative controls. Administrative controls ensure that 1) appropriate personnel are aware of the open status of the penetration flow path during CORE ALTERATIONS or movement of irradiated fuel assemblies within containment, and 2) specified individuals are designated and readily available to isolate the flow path in the event of a fuel handling accident.

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 conditions during CORE ALTERATIONS.

ATTACHMENT 3A TO C0501-02

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A.C. DISTRIBUTION SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.8.2.2 As a minimum, the following A.C. electrical busses shall be OPERABLE and energized:

1 - 4160-volt Emergency Bus, and

1 - 600-volt Emergency Bus, and

2 - *120 volt A.C. Vital Busses.

APPLICABILITY MODES 5 and 6, and during movement of irradiated fuel.

ACTION:

With less than the above complement of A.C. busses OPERABLE and energized,

a. Immediately suspend all operations involving CORE ALTERATIONS, movement of irradiated fuel assemblies, and positive reactivity changes except: 1) heatup or cooldown of the reactor coolant volume provided that SHUTDOWN MARGIN sufficient to accommodate the change in temperature is maintained in accordance with Specification 3.1.1.2 in MODE 5 or Specification 3.9.1 in MODE 6, and the heatup or cooldown rate is restricted to 50°F or less in any one-hour period in MODE 5, or 2) addition of water from the RWST, provided the boron concentration in the RWST is greater than or equal to the minimum required by Specification 3.1.2.7.b.2.

b. Immediately initiate actions to restore the required A.C. electrical busses to OPERABLE status.

c. Immediately declare associated required residual heat removal loop(s) inoperable.

SURVEILLANCE REQUIREMENTS

4.8.2.2 The specified A.C. busses shall be determined OPERABLE and energized at least once per 7 days by verifying correct breaker alignment and indicated power availability.

*Energized from its associated inverter connected to a DC bus.

D.C. DISTRIBUTION - SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.8.2.4 As a minimum, the following D.C. electrical equipment and bus shall be energized and OPERABLE:

1 - 250-volt D.C. bus, and

1 - 250-volt battery bank and charger associated with the above D.C. bus.

APPLICABILITY: MODES 5 and 6, and during movement of irradiated fuel.

ACTION:

With less than the above complement of D.C. equipment and bus OPERABLE

a. Immediately suspend all operations involving CORE ALTERATIONS, movement of irradiated fuel assemblies, and positive reactivity changes except: 1) heatup or cooldown of the reactor coolant volume provided that SHUTDOWN MARGIN sufficient to accommodate the change in temperature is maintained in accordance with Specification 3.1.1.2 in MODE 5 or Specification 3.9.1 in MODE 6, and the heatup or cooldown rate is restricted to 50°F or less in any one-hour period in MODE 5, or 2) addition of water from the RWST, provided the boron concentration in the RWST is greater than or equal to the minimum required by Specification 3.1.2.7.b.2.

b. Immediately initiate actions to restore the required D.C. electrical equipment and bus to OPERABLE status.

c. Immediately declare associated required residual heat removal loop(s) inoperable.

SURVEILLANCE REQUIREMENTS

4.8.2.4.1 The above required 250-volt D.C. bus shall be determined OPERABLE and energized at least once per 7 days by verifying correct breaker alignment and indicated power availability.

4.8.2.4.2 The above required 250-volt battery bank and charger shall be demonstrated OPERABLE per Surveillance Requirement 4.8.2.3.2.

CONTAINMENT BUILDING PENETRATIONS

LIMITING CONDITION FOR OPERATION

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

a. The equipment door closed and held in place by a minimum of four bolts,

b. The airlock doors are controlled in the following manner:

1. A minimum of one door in each airlock is closed, or

2. Both airlock doors may be open provided:

a. One door in each airlock is OPERABLE*,

b. Refueling cavity level is greater than 23 feet above the fuel, and

c. A designated individual is available at all times to close the airlock if required.

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

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

2. Be capable of being closed by an OPERABLE automatic Containment Purge and Exhaust isolation valve.

----------NOTE----------
Penetration flow path(s) providing direct access from the containment atmosphere to the outside atmosphere via the auxiliary building vent may be unisolated under administrative controls.

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. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.9.4 Each of the above required containment building penetrations shall be determined to be in its required status within 100 hours prior to the start of and at least once per 7 days during CORE ALTERATIONS or movement of irradiated fuel in the containment building by:

* For the purpose of this Specification, an OPERABLE airlock door is a door that is capable of being closed and secured. Cables or hoses transversing the airlock shall be designed to allow for removal in a timely manner (e.g., quick disconnects).

CONTAINMENT BUILDING PENETRATIONS

SURVEILLANCE REQUIREMENTS (Continued)

a. Verifying the penetrations are in the required status, or

b. Testing the Containment Purge and Exhaust isolation valves per the applicable portions of Specification 4.6.3.1.2.

The OPERABILITY of the A.C. and D.C power sources and associated distribution systems during operation ensures that sufficient power will be available to supply the safety related equipment required for 1) the safe shutdown of the facility and 2) the mitigation and control of accident conditions within the facility. The minimum specified independent and redundant A.C. and D.C. power sources and distribution systems satisfy the requirements of General Design Criteria 17 of Appendix "A" to 10 CFR 50.

The ACTION requirements specified for the levels of degradation of the power sources provide restriction upon continued facility operation commensurate with the level of degradation. The OPERABILITY of the power sources are consistent with the initial condition assumptions of the accident analyses and are based upon maintaining at least one of each of the onsite A.C. and D.C. power sources and associated distribution systems OPERABLE during accident conditions coincident with an assumed loss of offsite power and single failure of the other onsite A.C. source.

Surveillance requirement 4.8.1.1.1.a ensures proper circuit continuity for the offsite A.C. power sources and the associated distribution system by verifying correct breaker alignment and indicated power availability. The 7-day frequency is adequate since information is available to the control room to alert operators, and the offsite transmission network has been analyzed to ensure adequacy with minimum predicted low voltage occurences.

The OPERABILITY of the minimum specified A.C. and D.C. power sources and associated distribution systems during Modes 5 and 6, and during movement of irradiated fuel ensures that 1) the facility can be maintained in the shutdown or refueling condition for extended time periods and 2) sufficient instrumentation and control capability is available for monitoring and maintaining the facility status.

If the minimum specified A.C. and D.C. distribution systems and components are not OPERABLE, sufficiently conservative ACTIONS are specified (i.e., to suspend CORE ALTERATIONS, movement of irradiated fuel assemblies, and operations involving positive reactivity additions). Suspension of these activities does not preclude completion of actions to establish a safe conservative condition. These ACTIONS minimize the probability of the occurrence of postulated events. It is further required to immediately initiate action to restore the required A.C. and D.C. electrical power distribution subsystems and to continue this action until restoration is accomplished in order to provide the necessary power to the unit safety systems. Not withstanding performance of the above conservative ACTIONS, a required residual heat removal (RHR) subsystem may be inoperable. In this case, an ACTION is provided to direct declaring RHR inoperable, which results in taking the appropriate RHR actions. The specified completion time of "immediately" is consistent with the required times for actions requiring prompt attention. The restoration of the required distribution subsystems should be completed as quickly as possible in order to minimize the time the unit safety systems may be without power.

Specific surveillance requirements (SRs) of SR 4.8.1.2 may be delayed one time until just prior to the first entry into MODE 4 following the extended outage that commenced in 1997. The delay is permitted to recognize the significant ongoing maintenance to safety systems and components that would be required to be OPERABLE solely to support the referenced surveillances. The delay recognizes the reduced decay heat load and fission product activities resulting from the extended shutdown and consequently the small benefit from performing the surveillances prior to the next entry into MODE 4. It is the intent that these SRs must still be capable of being met, but actual performance is not required until the required safety systems are ready to support entry into MODE 4.

The AB and CD station battery systems provide a reliable source of continuous power for supply and control of plant loads such as switchgear and annunciator control circuits, static inverters, valve control centers, emergency lighting and motor control centers. The design duty cycles of these batteries are composite load profiles resulting from the combination of the three hour Loss Of Coolant Accident/Loss Of Offsite Power battery load profiles and the four hour Station Blackout battery load profiles.

The train N station battery system provides an independent 250 volt DC power supply for power and control of the turbine driven auxiliary feedwater pump train. The limiting conditions of operation for the train N battery are consistent with the requirements of the auxiliary feedwater system. The surveillance requirements for the train N battery system are consistent with the requirements of the AB and CD station batteries. The train N battery loads are derived from equipment in the turbine driven auxiliary feedwater pump train and battery sizing is consistent with the functional requirements of these components. Simulated loads for battery tests are loads equivalent to measured actual loads.

Removal of accumulated water as required by 4.8.1.1.2.b.2 is performed by drawing the contents off the bottom of the tank until acceptable results are obtained for either a tape test or a water and sediment test. An acceptable result for the water and sediment content is a measured value less than 0.05 percent volume.

The "proper color" criterion of Surveillance Requirement 4.8.1.1.2.c.3 ensures the translucence of the fuel oil sample will allow observation of water or sediment when analyzed in accordance with ASTM D4176-82. Fuel oil is considered to have proper color if it measures less than or equal to five per ASTM D1500. The addition of visible dyes to fuel oil may interfere with the ASTM D1500 analysis.

The sample specified in 4.8.1.1.2.c.4 is sent offsite for testing. A serious attempt will be made to meet the 31-day limit on the offsite tests; however, if for some reason this limit is not met (e.g., if the sample is lost or broken or if the results are not received in 31 days), the diesel generators should not be considered inoperable. If the sample is lost, broken, or fails the offsite tests and the new oil has already been put into the storage tank, the offsite tests will be performed on a sample taken from the storage tank. If the results on the subsequent storage tank sample are not within specified limits, the diesel generators should be considered OPERABLE and the out-of-spec properties should be returned to within specification as soon as possible.

If the monthly storage tank sample taken in accordance with Specification 4.8.1.1.2.d fails the particulate contamination test, the diesel generators should be considered OPERABLE and the contamination level should be restored to below 10 mg/liter as soon as possible.

The precision leak-detection test described in Surveillance Requirement 4.8.1.1.2.f.2 should be performed as described in NFPA (National Fire Protection Association) -329. As NFPA-329 is revised, the precision leak-detection test may be modified to incorporate changes to the test as described in the revisions to NFPA-329.

The minimum required diesel fuel oil volume is 43,240 gallons. This volume is consistent with operation of one diesel generator continuously for 7 days at rated load, as recommended in Regulatory Guide 1.137, entitled "Fuel Oil System for Standby Diesel Generators." The Technical Specifications require a minimum of 46,000 gallons of fuel. The 46,000 gallons is an indicated volume. This amount includes margin for characteristics such as location of the tank discharge pipes and slope of the tanks.

3/4.9.1 BORON CONCENTRATION

The limitations on reactivity conditions during REFUELING ensure that: 1) the reactor will remain subcritical during CORE ALTERATIONS, and 2) a uniform boron concentration is maintained for reactivity control in the water volume having direct access to the reactor vessel. These limitations are consistent with the initial conditions assumed for the boron dilution incident in the accident analyses. The value of 0.95 or less for K_{eff} includes a 1 percent delta k/k conservative allowance for uncertainties. Similarly, the boron concentration value of 2000 ppm or greater includes a conservative uncertainty allowance of 50 ppm boron. The boron concentration requirement of specification 3.9.1.b has been conservatively increased to 2400 ppm to agree with the minimum concentration of the RWST.

3/4.9.2 INSTRUMENTATION

The OPERABILITY of the source range neutron flux monitors ensures that redundant monitoring capability is available to detect changes in the reactivity condition of the core.

3/4.9.3 DECAY TIME

The minimum requirement for reactor subcriticality prior to movement of irradiated fuel assemblies in the reactor pressure vessel ensures that sufficient time has elapsed to allow the radioactive decay of the short lived fission products. This decay time is consistent with the assumptions used in the accident analyses.

3/4.9.4 CONTAINMENT BUILDING PENETRATIONS

The requirements on containment building penetration closure and OPERABILITY ensure that a release of radioactive material within containment will be restricted from leakage to the environment. The OPERABILITY and closure restrictions are sufficient to restrict radioactive material release from a fuel element rupture based upon the lack of containment pressurization potential while in the REFUELING MODE.

The specific guidelines to allow both airlock doors to remain open during CORE ALTERATIONS were developed to ensure that the assumptions for restricting radioactive leakage to the environment remained valid. The guidelines established for maintaining both airlock doors open include: 1) one door in each airlock is OPERABLE, 2) refueling cavity level is greater than 23 feet above the fuel, and 3) a designated individual is continuously available to close an airlock door (if required). An OPERABLE airlock door consists of a door capable of being closed and secured. Additionally, cables or hoses transversing the airlock must be designed in a manner that allows timely removal (e.g., quick disconnects). The requirement that the refueling cavity level is greater than 23 feet above the fuel ensures consistency with the assumptions of Specifications 3/4.9.10 and 3/4.9.11.

Containment penetrations that provide direct access from containment atmosphere to the 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, blind flange, or equivalent. Equivalent isolation methods must be approved in accordance with plant procedures and may include use of a material that can provide a temporary, atmospheric pressure, ventilation barrier during fuel movements.

The LCO is modified by a Note allowing penetration flow paths with direct access from the containment atmosphere to the outside atmosphere via the auxiliary building vent to be unisolated under administrative controls. Administrative controls ensure that 1) appropriate personnel are aware of the open status of the penetration flow path during CORE ALTERATIONS or movement of irradiated fuel assemblies within containment, and 2) specified individuals are designated and readily available to isolate the flow path in the event of a fuel handling accident.

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 conditions during CORE ALTERATIONS.

ATTACHMENT 3B TO C0501-02

PROPOSED TECHNICAL SPECIFICATIONS PAGES

REVISED PAGES
UNIT 2

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B 3/4 8-2
B 3/4 9-1
B 3/4 9-1a

A.C. DISTRIBUTION SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.8.2.2 As a minimum, the following A.C. electrical busses shall be OPERABLE and energized:

1 - 4160-volt Emergency Bus, and

1 - 600-volt Emergency Bus, and

2 - *120-volt A.C. Vital Busses.

APPLICABILITY: MODES 5 and 6.

ACTION:

With less than the above complement of A.C. busses OPERABLE and energized.

a. Immediately suspend all operations involving CORE ALTERATIONS, movement of irradiated fuel assemblies, and positive reactivity changes except: 1) heatup or cooldown of the reactor coolant volume provided that SHUTDOWN MARGIN sufficient to accommodate the change in temperature is maintained in accordance with Specification 3.1.1.2 in MODE 5 or Specification 3.9.1 in MODE 6, and the heatup or cooldown rate is restricted to 50°F or less in any one-hour period in MODE 5, or 2) addition of water from the RWST, provided the boron concentration in the RWST is greater than or equal to the minimum required by Specification 3.1.2.7.b.2.

b. Immediately initiate actions to restore the required A.C. electrical busses to OPERABLE status.

c. Immediately declare associated required residual heat removal loop(s) inoperable.

SURVEILLANCE REQUIREMENTS

4.8.2.2 The specified A.C. busses shall be determined OPERABLE and energized at least once per 7 days by verifying correct breaker alignment and indicated power availability.

* Engergized from its associated inverter connected to a DC bus.

D.C. DISTRIBUTION - SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.8.2.4 As a minimum, the following D.C. electrical equipment and bus shall be energized and OPERABLE:

1 - 250-volt D.C. bus, and

1 - 250-volt battery bank and charger associated with the above D.C. bus.

APPLICABILITY: MODES 5 and 6.

ACTION:

With less than the above complement of D.C. equipment and bus OPERABLE.

a. Immediately suspend all operations involving CORE ALTERATIONS, movement of irradiated fuel assemblies, and positive reactivity changes except: 1) heatup or cooldown of the reactor coolant volume provided that SHUTDOWN MARGIN sufficient to accommodate the change in temperature is maintained in accordance with Specification 3.1.1.2 in MODE 5 or Specification 3.9.1 in MODE 6, and the heatup or cooldown rate is restricted to 50°F or less in any one-hour period in MODE 5, or 2) addition of water from the RWST, provided the boron concentration in the RWST is greater than or equal to the minimum required by Specification 3.1.2.7.b.2.

b. Immediately initiate actions to restore the required D.C. electrical equipment and bus to OPERABLE status.

c. Immediately declare associated required residual heat removal loop(s) inoperable.

SURVEILLANCE REQUIREMENTS

4.8.2.4.1 The above required 250-volt D.C. bus shall be determined OPERABLE and energized at least once per 7 days by verifying correct breaker alignment and indicated power availability.

4.8.2.4.2 The above required 250-volt battery bank and charger shall be demonstrated OPERABLE per Surveillance Requirement 4.8.2.3.2.

CONTAINMENT BUILDING PENETRATIONS

LIMITING CONDITION FOR OPERATION

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

a. The equipment door closed and held in place by a minimum of four bolts,

b. The airlock doors are controlled in the following manner:

1. A minimum of one door in each airlock is closed, or

2. Both airlock doors may be open provided:

a. One door in each airlock is OPERABLE*,

b. Refueling cavity level is greater than 23 feet above the fuel, and

c. A designated individual is available at all times to close the airlock if required.

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

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

2. Be capable of being closed by an OPERABLE automatic Containment Purge and Exhaust isolation valve.

----------NOTE----------
Penetration flow path(s) providing direct access from the containment atmosphere to the outside atmosphere via the auxiliary building vent may be unisolated under administrative controls.

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. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.9.4 Each of the above required containment building penetrations shall be determined to be in its required status within 100 hours prior to the start of and at least once per 7 days during CORE ALTERATIONS or movement of irradiated fuel in the containment building by:

* For the purpose of this Specification, an OPERABLE airlock door is a door that is capable of being closed and secured. Cables or hoses transversing the airlock shall be designed to allow for removal in a timely manner (e.g., quick disconnects).

CONTAINMENT PENETRATIONS

SURVEILLANCE REQUIREMENTS (Continued)

a. Verifying the penetrations are in the required status, or

b. Testing the Containment Purge and Exhaust isolation valves per the applicable portions of Specification 4.6.3.1.2.

The OPERABILITY of the A.C. and D.C power sources and associated distribution systems during operation ensures that sufficient power will be available to supply the safety related equipment required for 1) the safe shutdown of the facility and 2) the mitigation and control of accident conditions within the facility. The minimum specified independent and redundant A.C. and D.C. power sources and distribution systems satisfy the requirements of General Design Criteria 17 of Appendix "A" to 10 CFR 50.

The ACTION requirements specified for the levels of degradation of the power sources provide restriction upon continued facility operation commensurate with the level of degradation. The OPERABILITY of the power sources are consistent with the initial condition assumptions of the accident analyses and are based upon maintaining at least one of each of the onsite A.C. and D.C. power sources and associated distribution systems OPERABLE during accident conditions coincident with an assumed loss of offsite power and single failure of the other onsite A.C. source.

Surveillance requirement 4.8.1.1.1.a ensures proper circuit continuity for the offsite A.C. power sources and the associated distribution system by verifying correct breaker alignment and indicated power availability. The 7-day frequency is adequate since information is available to the control room to alert operators, and the offsite transmission network has been analyzed to ensure adequacy with minimum predicted low voltage occurrences.

The OPERABILITY of the minimum specified A.C. and D.C. power sources and associated distribution systems during Modes 5 and 6 ensures that 1) the facility can be maintained in the shutdown or refueling condition for extended time periods and 2) sufficient instrumentation and control capability is available for monitoring and maintaining the facility status.

If the minimum specified A.C. and D.C. distribution systems and components are not OPERABLE, sufficiently conservative ACTIONS are specified (i.e., to suspend CORE ALTERATIONS, movement of irradiated fuel assemblies, and operations involving positive reactivity additions). Suspension of these activities does not preclude completion of actions to establish a safe conservative condition. These ACTIONS minimize the probability of the occurrence of postulated events. It is further required to immediately initiate action to restore the required A.C. and D.C. electrical power distribution subsystems and to continue this action until restoration is accomplished in order to provide the necessary power to the unit safety systems. Not withstanding performance of the above conservative ACTIONS, a required residual heat removal (RHR) subsystem may be inoperable. In this case, an ACTION is provided to direct declaring RHR inoperable, which results in taking the appropriate RHR actions. The specified completion time of "immediately" is consistent with the required times for actions requiring prompt attention. The restoration of the required distribution subsystems should be completed as quickly as possible in order to minimize the time the unit safety systems may be without power.

Specific surveillance requirements (SRs) of SR 4.8.1.2 may be delayed one time until just prior to the first entry into MODE 4 following the extended outage that commenced in 1997. The delay is permitted to recognize the significant ongoing maintenance to safety systems and components that would be required to be OPERABLE solely to support the referenced surveillances. The delay recognizes the reduced decay heat load and reduced fission product activities resulting from the extended shutdown and consequently the small benefit from performing the surveillances prior to the next entry into MODE 4. It is the intent that these SRs must still be capable of being met, but actual performance is not required until the required safety systems are ready to support entry into MODE 4.

The AB and CD station battery systems provide a reliable source of continuous power for supply and control of plant loads such as switchgear and annunciator control circuits, static inverters, valve control centers, emergency lighting and motor control centers. The design duty cycles of these batteries are composite load profiles resulting from the combination of the three hour Loss Of Coolant Accident/Loss Of Offsite Power battery load profiles and the four hour Station Blackout battery load profiles.

The train N station battery system provides an independent 250 volt DC power supply for power and control of the turbine driven auxiliary feedwater pump train. The limiting conditions of operation for the train N battery are consistent with the requirements of the auxiliary feedwater system. The surveillance requirements for the train N battery system are consistent with the requirements of the AB and CD station batteries. The train N battery loads are derived from equipment in the turbine driven auxiliary feedwater pump train and battery sizing is consistent with the functional requirements of these components. Simulated loads for battery tests are loads equivalent to measured actual loads.

The "proper color" criterion of Surveillance Requirement 4.8.1.1.2.c.3 ensures the translucence of the fuel oil sample will allow observation of water or sediment when analyzed in accordance with ASTM D4176-82. Fuel oil is considered to have proper color if it measures less than or equal to five per ASTM D1500. The addition of visible dyes to fuel oil may interfere with the ASTM D1500 analysis.

Removal of accumulated water as required by 4.8.1.1.2.b.2 is performed by drawing the contents off the bottom of the tank until acceptable results are obtained for either a tape test or a water and sediment test. An acceptable result for the water and sediment content is a measured value less than 0.05 percent volume.

The sample specified in 4.8.1.1.2.c.4 is sent offsite for testing. A serious attempt will be made to meet the 31-day limit on the offsite tests; however, if for some reason this limit is not met (e.g., if the sample is lost or broken or if the results are not received in 31 days), the diesel generators should not be considered inoperable. If the sample is lost, broken, or fails the offsite tests and the new oil has already been put into the storage tank, the offsite tests will be performed on a sample taken from the storage tank. If the results on the subsequent storage tank sample are not within specified limits, the diesel generators should be considered OPERABLE and the out-of-spec properties should be returned to within specification as soon as possible.

If the monthly storage tank sample taken in accordance with Specification 4.8.1.1.2.d fails the particulate contamination test, the diesel generators should be considered OPERABLE and the contamination level should be restored to below 10 mg/liter as soon as possible.

The precision leak-detection test described in Surveillance Requirement 4.8.1.1.2.f.2 should be performed as described in NFPA (National Fire Protection Association) -329. As NFPA-329 is revised, the precision leak-detection test may be modified to incorporate changes to the test as described in the revisions to NFPA-329.

The minimum required diesel fuel oil volume is 43,240 gallons. This volume is consistent with operation of one diesel generator continuously for 7 days at rated load, as recommended in Regulatory Guide 1.137, entitled "Fuel Oil System for Standby Diesel Generators." The Technical Specifications require a minimum of 46,000 gallons of fuel. The 46,000 gallons is an indicated volume. This amount includes margin for characteristics such as location of the tank discharge pipes and slope of the tanks.

3/4.9.1 BORON CONCENTRATION

The limitations on reactivity conditions during REFUELING ensure that: 1) the reactor will remain subcritical during CORE ALTERATIONS, and 2) a uniform boron concentration is maintained for reactivity control in the water volume having direct access to the reactor vessel. These limitations are consistent with the initial conditions assumed for the boron dilution incident in the accident analysis. The value of 0.95 or less for K_{eff} includes a 1 percent delta k/k conservative allowance for uncertainties. Similarly, the boron concentration value of 2000 ppm or greater includes a conservative uncertainty allowance of 50 ppm boron. The boron concentration requirement of specification 3.9.1.b has been conservatively increased to 2400 ppm to agree with the minimum concentration of the RWST.

3/4.9.2 INSTRUMENTATION

The OPERABILITY of the source range neutron flux monitors ensures that redundant monitoring capability is available to detect changes in the reactivity condition of the core.

3/4.9.3 DECAY TIME

The minimum requirement for reactor subcriticality prior to movement of irradiated fuel assemblies in the reactor pressure vessel ensures that sufficient time has elapsed to allow the radioactive decay of the short lived fission products. This decay time is consistent with the assumptions used in the accident analysis.

3/4.9.4 CONTAINMENT BUILDING PENETRATIONS

The requirements on containment building penetration closure and OPERABILITY ensure that a release of radioactive material within containment will be restricted from leakage to the environment. The OPERABILITY and closure restrictions are sufficient to restrict radioactive material release from a fuel element rupture based upon the lack of containment pressurization potential while in the REFUELING MODE.

The specific guidelines to allow both airlock doors to remain open during CORE ALTERATIONS were developed to ensure that the assumptions for restricting radioactive leakage to the environment remained valid. The guidelines established for maintaining both airlock doors open include: 1) one door in each airlock is OPERABLE, 2) refueling cavity level is greater than 23 feet above the fuel, and 3) a designated individual is continuously available to close an airlock door (if required). An OPERABLE airlock door consists of a door capable of being closed and secured. Additionally, cables or hoses transversing the airlock must be designed in a manner that allows timely removal (e.g., quick disconnects). The requirement that the refueling cavity level is greater than 23 feet above the fuel ensures consistency with the assumptions of Specifications 3/4.9.10 and 3/4.9.11.

Containment penetrations that provide direct access from containment atmosphere to the 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, blind flange, or equivalent. Equivalent isolation methods must be approved in accordance with plant procedures and may include use of a material that can provide a temporary, atmospheric pressure, ventilation barrier during fuel movements.

The LCO is modified by a Note allowing penetration flow paths with direct access from the containment atmosphere to the outside atmosphere via the auxiliary building vent to be unisolated under administrative controls. Administrative controls ensure that 1) appropriate personnel are aware of the open status of the penetration flow path during CORE ALTERATIONS or movement of irradiated fuel assemblies within containment, and 2) specified individuals are designated and readily available to isolate the flow path in the event of a fuel handling accident.

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 conditions during CORE ALTERATIONS.

ATTACHMENT 4 TO C0501-02

NO SIGNIFICANT HAZARDS CONSIDERATION EVALUATION

Indiana Michigan Power Company (I&M) has evaluated this proposed amendment and determined that it does not involve a significant hazard. According to 10 CFR 50.92(c), a proposed amendment to an operating license involves no significant hazards consideration if operation of the facility in accordance with the proposed amendment would not:

1. involve a significant increase in the probability of occurrence or consequences of an accident previously evaluated;

2. create the possibility of a new or different kind of accident from any previously analyzed; or

3. involve a significant reduction in a margin of safety.

The proposed changes would revise Technical Specifications (T/S) 3/4.8.2.2, "A. C. Distribution Shutdown," T/S 3/4.8.2.4 "D. C. Distribution – Shutdown," and T/S 3/4.9.4, "Containment Building Penetrations."

I&M proposes to replace the current requirement to establish containment integrity if less than the specified minimum complement of A.C. or D.C. busses and equipment is operable in Modes 5 and 6 with requirements to immediately suspend operations involving core alterations, positive reactivity changes, and movement of irradiated fuel assemblies, to immediately initiate actions to restore the required busses and equipment to operable status, and to immediately declare the associated required residual heat removal loop(s) inoperable.

I&M proposes to add options to use containment penetration closure methods that are equivalent to those that are currently required during core alterations or movement of irradiated fuel in containment, and to allow unisolation of some penetrations under administrative control.

I&M is also proposing changes to Applicability requirements, Surveillance requirements, and Bases associated with the above identified T/S in support of the proposed changes to the Action and LCO requirements.

The determination that the criteria set forth in 10 CFR 50.92 are met for this amendment request is indicated below.

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

Probability of Occurrence of an Accident Previously Evaluated

The proposed changes to Action statements for T/S 3/4.8.2.2 and T/S 3/4.8.2.4 will eliminate current compensatory requirements that can only mitigate the consequences of accidents. The current requirements will be replaced with requirements that include measures to reduce the likelihood of accidents and assist in responding to malfunctions. The proposed requirements to immediately suspend operations involving core alterations, positive reactivity changes, and movement of irradiated fuel assemblies provide assurance that the applicable accidents, fuel handling and shutdown dilution accidents, will not occur by requiring cessation of activities that may cause them. The proposed requirements to immediately initiate actions to restore the required busses and equipment to operable status and to immediately declare associated required RHR loop(s) inoperable provide assurance operators can take timely corrective action for malfunctions that may lead to a dilution accident, and will take appropriate corrective actions for RHR malfunctions. Therefore, there is no adverse effect on accident initiators or precursors.

The proposed change to the Applicability requirements for T/S 3/4.8.2.2 and T/S 3/4.8.2.4 expands the conditions under which the T/S are invoked. The proposed change will assure that the electrical power is available for mitigation of a fuel handling accident, regardless of the operational mode of the plant. The proposed change only involves accident mitigation capabilities and does not affect any accident initiators or precursors.

The proposed changes to the LCO for T/S 3/4.9.4 will provide additional options for assuring closure of containment penetrations during core alterations or movement of irradiated fuel in containment. Containment closure provides only mitigation for the consequences of a fuel handling accident and does not affect the initiators or precursors of the accident.

The proposed change to the Surveillance requirements for T/S 3/4.9.4 allows the LCO to define the penetration status that is to be periodically verified. The effect of the proposed Surveillance change is bounded by the effect of the proposed LCO change as described above. Therefore, the proposed Surveillance change does not adversely affect any accident initiators or precursors.

Consequences of an Accident Previously Evaluated

The proposed changes to the Action requirements for T/S 3/4.8.2.2 and T/S 3/4.8.2.4 provide assurance that that fuel handling and dilution accidents will not occur and that timely and appropriate responses can and will be taken for malfunctions, thereby reducing the likelihood that radioactive material will be released.

The proposed change to the Applicability requirements for Unit 1 T/S 3/4.8.2.2 and T/S 3/4.8.2.4 provides assurance that electrical power is available for mitigation of a fuel handling accident (FHA), regardless of the operational mode of the plant. Since the current Applicability

requirement only provides this assurance in Modes 5 and 6, the proposed change will not increase the consequences of the accident.

The additional options provided by the proposed changes to the LCO for T/S 3/4.9.4 will mitigate the consequences of a fuel handling accident in containment as effectively as those specified by the current LCO. Additionally, the consequences of a FHA in containment determined by the accident analyses will not increase since the analyses do not credit mitigation by closure of containment penetrations.

The proposed change to the Surveillance requirements for T/S 3/4.9.4 only reflects the change proposed for the LCO. The effect of the proposed Surveillance change is bounded by the effect of the proposed LCO change as described above. Therefore, the proposed Surveillance change does not adversely affect the consequences of an accident.

The proposed changes to the Bases for the above identified T/S only provide explanatory information regarding the intent of the specifications and how they are to be implemented. The proposed Bases changes do not alter requirements of the associated T/S. Therefore, the effect of the Bases changes on accident initiators and precursors and on the consequences of an accident is bounded by the effect of the associated Action or LCO change as described above. The format changes do not alter any requirements.

Therefore, the probability of occurrence or the consequences of accidents previously evaluated are not increased.

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

The proposed changes to Action statements for T/S 3/4.8.2.2 and T/S 3/4.8.2.4 to eliminate requirements to establish containment integrity does not affect existing, or create new, accident initiators or precursors because only existing passive accident mitigation features are involved. Implementation of the proposed new requirements to suspend operations involving core alterations, positive reactivity changes, and movement of irradiated fuel assemblies does not affect existing, or create new, accident initiators or precursors because these activities do not require the operation of existing equipment in a new or different manner, or involve the operation of new or different equipment. Implementation of the proposed new requirements to initiate actions to restore the required busses and equipment to operable status and to declare associated required RHR loop(s) inoperable does not affect or create new accident initiators or precursors because these activities are currently required by existing procedures and other T/S.

The proposed change to the Applicability requirements for T/S 3/4.8.2.2 and T/S 3/4.8.2.4 does not affect or create new accident initiators or precursors because it only expands the conditions under which the T/S are invoked.

The proposed changes to the LCO for T/S 3/4.9.4 to provide additional options for assuring closure of containment penetrations during core alterations or movement of irradiated fuel in containment does not affect or create new accident initiators or precursors because the changes involve only containment penetrations which are passive accident mitigation measures.

The proposed change to the Surveillance requirements for T/S 3/4.9.4 allows the LCO to define the penetration status that is to be periodically verified. The effect of the proposed Surveillance change is bounded by the effect of the proposed LCO change as described above. Therefore, the proposed Surveillance change does not affect or create new accident initiators or precursors.

The proposed changes to the Bases for the above identified T/S only provide explanatory information regarding the intent of the specifications and how they are to be implemented. The proposed Bases changes do not alter requirements of the associated T/S. Therefore, the effect of the Bases changes on accident initiators or precursors is bounded by the effect of the associated Action or LCO change as described above. The format changes do not alter any requirements.

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

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

The margins of safety pertinent to the proposed changes to Action statements for T/S 3/4.8.2.2 and T/S 3/4.8.2.4 are those associated with a FHA, a shutdown dilution event, and a RHR system malfunction. The applicable margin of safety for a FHA is that defined by the off site dose analyses for the accident. Since the analyses do not credit mitigation by the containment, the margin of safety is unaffected. The applicable margin of safety for a shutdown dilution event is the time available for operators to take action to preclude violating shutdown margin requirements. The proposed new Action requirements to immediately suspend operations involving positive reactivity changes, and to immediately initiate actions to restore the required electrical busses and equipment to operable status, would not decrease the margin of safety for a shutdown dilution event. The applicable margin of safety for a RHR system malfunction is the time available for operators to take action to restore decay heat removal capabilities. The proposed new actions requirements to immediately initiate actions to restore the required electrical busses and equipment to operable status and to immediately declare associated required RHR loop(s) inoperable would not decrease the margin of safety for a RHR system malfunction.

The margin of safety pertinent to the proposed changes to LCO for T/S 3/4.9.4 is that associated with a FHA. The applicable margin of safety for a FHA is that defined by the off site dose analyses for the accident. Since the analyses do not credit mitigation by the containment, the margin of safety is unaffected.

There is no margin of safety pertinent to the proposed changes to associated Applicability requirements, Surveillance requirements, and Bases for the above identified T/S. The format changes do not alter any requirements.

Therefore, the proposed changes do not involve a significant reduction in a margin of safety.

In summary, based upon the above evaluation, I&M has concluded that the proposed amendment involves no significant hazards consideration.

ATTACHMENT 5 TO C0501-02

ENVIRONMENTAL ASSESSMENT

Indiana Michigan Power Company (I&M) has evaluated this license amendment request (LAR) against the criteria for identification of licensing and regulatory actions requiring environmental assessment in accordance with 10 CFR 51.21. I&M has determined that this LAR meets the criteria for a categorical exclusion set forth in 10 CFR 51.22(c)(9). This determination is based on the fact that this change is being proposed as an amendment to a license issued pursuant to 10 CFR 50 that changes a requirement with respect to installation or use of a facility component located within the restricted area, as defined in 10 CFR 20, or that changes an inspection or a surveillance requirement, and the amendment meets the following specific criteria.

(i) The amendment involves no significant hazards consideration.

As demonstrated in Attachment 4, this proposed amendment does not involve significant hazards consideration.

(ii) There is no significant change in the types or significant increase in the amounts of any effluent that may be released offsite.

The proposed changes do not affect any systems or components involved in the release of effluents or the requirements governing their operation. Therefore, there will be no significant change in the types or significant increase in the amounts of any effluents released offsite.

(iii) There is no significant increase in individual or cumulative occupational radiation exposure.

The proposed changes will not result in significant changes in the operation or configuration of the facility. There will be no change in the level of controls or methodology used for processing of radioactive effluents or handling of solid radioactive waste, nor will the proposal result in any change in the normal radiation levels within the plant. Therefore, there will be no significant increase in individual or cumulative occupational radiation exposure resulting from this change.

ATTACHMENT 6 TO C0501-02

COMMITMENTS

The following table identifies those actions committed to by Indiana Michigan Power Company (I&M) in this document. Any other actions discussed in this submittal represent intended or planned actions by I&M. They are described to the Nuclear Regulatory Commission (NRC) for the NRC's information and are not regulatory commitments.

Commitment	Date
I&M commits to issue administrative controls for penetrations as described in the proposed Bases change, which states: "Administrative controls ensure that 1) appropriate personnel are aware of the open status of the penetration flow path during CORE ALTERATIONS or movement of irradiated fuel assemblies within containment, and 2) specified individuals and isolation methods are designated and readily available to isolate the flow path in the event of a fuel handling accident."	As part of implementation of the proposed amendment following approval by the NRC