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of Proposed Change, Test or Experiment:

AUX. FEED WATER PUMP P-38A AND P-38B MINIMUM FLOW RECIRC LINE FLOW ORIFICE REPLACEMENT.

Reference Document(s) #:

MODIFICATION 99-029\*A AND 99-029\*B, EWR 99-031, CR 99-1391, RCE 99-081. ASME B31.1, EPRI PR 107455, EPRI PR 111188

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SECTION 1 - SCREENING

Describe the proposed change, test, or experiment. Include interim configurations or conditions.

Engineering Work Request (EWR) 99-031 had been written requesting the evaluation of high level noise and vibration present in all Auxiliary Feedwater (AF) pumps recirculation lines during their operation. Based on this evaluation, this high level of noise was attributed to existing pressure reducing orifices (ROs) installed in these lines. The installed ROs are cavitating, therefore, inducing excessive noise and vibration in the pipe line  
In addition, CR 99-1391 had been written to address the issue of pinhole leaks in the socket welds that have developed in pump P-38A and P-38B recirculation lines. The associated root cause evaluation (RCE 99-081) determined that the original ROs are not properly sized.

The proposed modifications will replace the presently installed ROs with new ones  
The presently installed ROs, were designed and constructed by the Byron-Jackson Company (MR 88-099) They were procured to a commercial program (not an Appendix B, QA Program) and dedicated for their application.  
The replacement ROs were designed and constructed by the Flowserve Company under P.O.# 4500291375 They were procured to the requirements of the 10 CFR 50, Appendix B, QA Program This included, a flow calculations to demonstrate that the ROs will perform as specified. A seismic analysis and report, to demonstrate that the orifice will operate during and after a seismic event was determined not to be required for these ROs  
Some of the design features of replacement ROs differ from presently installed ROs. The existing ROs use an inner orifice plates to control the flow and pressure drop across them. The replacement ROs, work in a similar manner except that control of flow and pressure drop is accomplished by directing the flow over the series of close-fitting cylindrical stages, each constructed with expansion holes and intersecting circumferential channels that restrict the flow.

A/D

SECTION 1 - CONTINUATION

This flow path of multiple restriction and enlargements reduces the pressure gradually across each trim cylinder, avoiding the sharp pressure drop typical to conventional, single-throttling orifice.

In addition, some of the piping associated with the replacement ROs will also be replaced. Replaced piping will include the 90 deg elbow upstream of the RO up to and including the upstream weld on the AF pumps recirculation line isolation valve. Valve AF-27 for pump P-38A and valve AF-40 for pump P-38B. The replaced piping will be joined together with oversized socket welds to improve weld's cycle fatigue response over standard ASME Code socket weld in vibration-critical application. The utilization of oversized welds to prevent socket welds fatigue failure is documented in EPRI report PR 107455 and 111188.

The proposed replacement of section of pipe including replacement RO-04004 and RO-04015 will meet design, material and construction standards of the existing installation. The changes that will be implemented by the proposed modification, will not affect the overall performance of the AF system and operation or function of the AF pumps P-38A and P-38B to perform their intended functions

The purpose of the proposed modification is to minimize piping line noise and vibration when operating this line in the pump recirculation mode.

MR 99-029\*A controls the replacement of the RO-04008 and MR 99-029\*B controls the replacement of the RO-04015.

The proposed modifications are scheduled to be installed with Unit 1 and 2 in Power Operation. A seven (7) day LCO will be required for each unit with RCS above 350°F to install each modification. Upon completion of each of the modifications, the new installed ROs will perform the same function as the existing orifices RO-04008 and RO-04015.

Post modification testing will include a visual exam (VT) of all replaced piping socket welds. Piping welds will be examined in accordance with ASME B31.1 – 1992. Performance of this exam is required by both the original piping specification, Bechtel M-78, and the original code of construction, USAS B31.1- 1967. USAS B31.1 – 1967 also requires that post modification testing include an hydrostatic pressure test. This test will be performed at system operating pressure and temperature as outlined in PBF-0042. In addition, a functional test and verification of the pressure drop and flow through replacement ROs will also be performed.

Foreign material exclusion (FME) for open piping and new components during installation of the proposed modification will be controlled per NP 8.4.10 and PBF 9158 FME Checklist.

B. List relevant current licensing basis (CLB) and Independent Spent Fuel Storage Installation (ISFSI) licensing basis documents and sections

1. FSAR Section 1.3, General Design Criteria.
2. FSAR Section 10.1, Steam And Power Conversion System
3. FSAR Section 10.2, Auxiliary Feedwater System.
4. FSAR Section 14 1.9, Loss of External Electric Load.
5. FSAR Section 14.1,10, Loss of Normal Feedwater.
6. FSAR Section 14.1.11, Loss of All AC Power to the Auxiliaries.
7. FSAR Section 14.2.4, Steam Generator Tube Rupture.
8. TS Section 15.3 4, Steam And Power Conversion System
9. TS section 15 4.8, Auxiliary Feedwater System.

SECTION 1 - CONTINUATION

Does the proposed change, test or experiment involve a change to any Technical Specification? (For the ISFSI, does the proposed change, test, or experiment involve a change in the license conditions as contained in the Certificate of Compliance?) If a change is required, briefly describe what the change should be and why it is required. If "Yes," see NP 10.3.1 for guidance.  Yes  No

The proposed change does not affect the Technical Specification (TS) elements and requirements for the Auxiliary Feedwater System. The proposed change also does not affect any system that interface with the ISFSI. Thus no TS change is required

D. Screening for 10 CFR 50.59 and 10 CFR 72.48 Applicability:

*NOTE: If any question in Section 1.D.1 is answered "yes," complete section 2, "10 CFR 50.59 Safety Evaluation." If any question is answered "yes," the "no" answers do not have to be explained.*

1. 10 CFR 50.59 Screening:

- a. Does the proposed activity change the facility as described in the CLB?  Yes  No  
If "No," explain:

The PBNP Licensing Basis does not specifically discuss the design or operation of the AF pumps recirculation line or their ROs. The CLB does state that AF pump P-38A and P-38B is equipped with recirculation line to ensure minimum flow required to dissipate pump heat. The operation and function of the AF pump P-38A and pump P-38B will not change as a result of this modification. The presently installed ROs were supplied by Byron Jackson. They will be replaced with new ROs supplied by Flowserve. The replacement ROs will provide improved flow characteristic in the AF pumps P-38A and P-38B recirculation lines. In addition, replacement ROs will minimize hydrodynamic noise and vibration by eliminating/reducing cavitation. The installation of replacement ROs will not require a revision to FSAR Figure 10.2-1 Sheet 1. However, due to a different than the original ROs design solution, the proposed activity constitutes a change to facility as presently described in the current CLB.

- b. Does the proposed activity change procedures as described in the CLB? If "No," explain:  Yes  No

- c. Could the proposed activity affect the operation, function, or method of performing the function of an SSC as described in the CLB? (This includes interim conditions.) If "No," explain  Yes  No

- d. Will a test or experiment be performed which is not described in the CLB? If "No" explain  Yes  No

*NOTE: If question "a" in Section 1.D.2 below is answered "no," responses to questions "b" through "e" are not required and the 10 CFR 72.48 Screening is finished. If question "a" is answered "yes", then questions "b" through "e" shall be answered.*

SECTION 1 - CONTINUATION

2. 10 CFR 72.48 Screening for the Independent Spent Fuel Storage Installation (ISFSI):

- a. Could the proposed activity affect the design, operation, function or method of performing the function of any ISFSI-related structures, systems, or components identified in Attachment C of NP 10.3.1?  Yes  No

The Auxiliary Feedwater System is not a part of the ISFSI. Therefore the proposed activity does not affect the design, operation, function or method of performing the function of any ISFSI-related structures, systems, or components identified in Attachment C of NP 10.3.1.

The proposed modification affects the AF pump P-38A and P-38B recirculation lines. This recirculation lines supports the operation of these pumps. The AF pumps P-38A and P-38B are not required and do not support any activities associated with the dry cask storage facility. The proposed modification will not affect any system(s) related to the loading/unloading of dry cask fuel assemblies. Therefore, the proposed modification does not change the facility as described in the ISFSI licensing basis.

*NOTE: If any of questions "b" through "e" in Section 1.D.2 is answered "yes," complete Section 3, "10 CFR 72.48 Safety Evaluation." If any question is answered "yes," the "no" answers do not have to be explained.*

- b. Does the proposed activity change the facility as described in the ISFSI licensing basis?  Yes  No  
If "No," explain.

- c. Does the proposed activity change procedures as described in the ISFSI licensing basis?  Yes  No  
If "No," explain

- d. Could the proposed activity affect the operation, function, or method of performing the function of an SSC important to safety as described in the ISFSI licensing basis? (This includes interim conditions )  Yes  No  
If "No," explain

- e. Will a test or experiment be performed which is not described in the ISFSI licensing basis?  Yes  No  
If "No," explain

SECTION 2 - 10 CFR 50.59 SAFETY EVALUATION

1. Could the proposed activity increase the probability of occurrence of an accident or event previously evaluated in the CLB?  Yes  No

The proposed activity to replace existing ROs is located in AF pump P-38A and P-38B recirculation line. These ROs are not discussed in the CLB in any manner as a contributor or initiator to an accident or event scenarios already evaluated. However, they do function to support the operation of the AFW pumps P-38A and P-38B. The accidents "Loss of Normal Feedwater", "Loss of All AC Power to the Auxiliaries", "Loss of External Electric Load", and "Steam Generator Tube Rupture" involve the AF System. The proposed replacement of section of piping including replacement RO-04004 and RO-04015 does not effect the actuation of the AF System or its operation as presently evaluated in the CLB. The proposed modifications will meet design, material and construction standards of the existing installation. The changes that will be implemented by the proposed modification, as discussed in detail throughout this document, will not affect the overall performance of the AF System and operation or function of the AF pumps P-38A and P-38B to perform their intended functions. Based on this premise, there is no increase to the probability of occurrence of an accident or event that has been previously analyzed in the CLB.

The implementation of the proposed modifications will require for one motor-driven AF pump at a time to be taken out of service for a period of seven (7) days. This is allowed by the requirements of the Technical Specification Section 15.3.4 C. This Section allows two (2) unit operation where one motor-driven pump may be out-of-service for up to seven (7) days.

2. Could the proposed activity increase the probability of occurrence of a malfunction of equipment important to safety previously evaluated in the CLB?  Yes  No

The CLB discusses the use of the AF pumps P-38A and P-38B as ones which ensure that adequate feedwater is supplied to the serviced Steam Generators for heat removal.

The proposed modification is replacing the existing orifices RO-04004 and RO-04015 with new orifices that support the operation of the AF pumps P-38A and P-38B. During accident conditions, the safety related functions of each of the AF pump recirculation line orifice is as follows:

1. Provide passive flow resistance in the AF pump recirculation line; thereby establishing the required recirculation flow and pressure drop from AF pump discharge pressure to CST pressure. These ROs must provide adequate flow to prevent low-flow instabilities and excessive fluid temperature rise in the AF pumps.
2. Limit the recirculation flow in the event that the recirculation control valve fails to close during AF pump operation.
3. Passively maintain the AF system pressure boundary integrity.

The replacement piping assemblies will be constructed almost identically to the original assemblies, and the existing piping configuration will not be changed as a result of this modification.

The replacement RO is contained in a 2"- 600# cast stainless steel body (ASME A 351 Grade CF3A) RO's body is designed to the requirements of ASME B31.1 and ASME B16.34 - 1996 Edition. Their working pressure is 1440 psig, thus, meeting the Pipe Class 2"-DB-3 requirements. A hydrostatic pressure test of the replacement ROs shell was performed at the Flowserve facility in accordance with ASME/ANSI B 16.34, except that the test pressure was maintained for at least 30 minutes.

The replacement RO is heavier than existing one, and it will add weight to the existing AF piping system. This difference in weight have been addressed by the Wisconsin Electric Co. (WE) analysis which have demonstrated ASME B 31.1 compliance of the modified piping. Addendum A to Piping System Qualification Report WE-100070, Rev. 1 documents this evaluation.

In addition, the flow characteristic of the replacement ROs and its affect on the associated plant calculations was evaluated. This evaluation was documented in Addendum No. N-91-063-00-A to Calculation No. N-91-063, "P38A & B Recirc Line System Characteristics", Rev.0 and Addendum No. N-91-069-00-A to Calculation No. N-91-069, "Impact of Higher Capacity Recirculation System for the Electric Motor Driven AF Pumps", Rev. 0.

The results of this evaluation found that the slight differences in the flow characteristic between existing and replacement ROs do not significantly alter the affected calculations results and are acceptable.

Section 2 - Continuation

The major differences between the existing and replacement piping assemblies are that the replacement piping assemblies are welded together with oversized socket welds. The purpose of oversized socket weld configuration is to improve the welds cycle fatigue response over standard ASME Code socket welds in vibration-critical application.

A comparison of the mechanical and performance characteristics of the replacement ROs versus the existing ROs indicates that replacement ROs are either identical or better. The replacement ROs will provide improved flow characteristics and will prevent cavitation damage, thus minimize hydrodynamic noise under liquid application.

The ROs presently installed were procured to a commercial program (not an Appendix B, QA Program) and dedicated for this application. The replacement ROs were procured to the requirements of the 10 CFR 50, Appendix B, QA Program. This included, a flow calculations to demonstrate that the ROs will perform as specified. A seismic analysis and report, to demonstrate that the orifice will operate during and after a seismic event was determined not to be required for these ROs. The materials selected are either equivalent or better than presently installed items by a review of the material properties.

Components are passive in nature when the system is operational and will be designed, installed and tested in accordance with existing procedures and controls. Therefore, they do not introduce any new failure mechanisms not already considered for the area.

FME and PMT will be implemented to ensure the proper operation of the system upon completion of the modification. Based on the above, the proposed modification will not increase the probability of occurrence of a malfunction of equipment important to safety previously evaluated in the CLB.

3. Could the proposed activity increase the radiological consequences of an accident, event, or malfunction of equipment important to safety previously evaluated in the CLB?  Yes  No

The design accidents "Loss of Normal Feedwater", "Loss of External Electrical Load", "Loss of All AC Power to the Auxiliaries", and "Steam Generator Tube Rupture" involve the AF system. The proposed modification of the AF pumps recirculation line supports the operation of the pump P-38A and P-38B of AF system. The pumps and AF system will continue to operate as expected. The recirculation path for the pumps P-38A and P-38B in the AF system will still exist thus allowing for dissipation of pumps heat. Closure of AOVs, AF-4007 for pump P-38A and AF-4014 for pump P-38B ensures that there is a high-pressure feedwater supply to the steam generators in order to maintain water inventory for removal of heat energy from the reactor coolant system in the event of inoperability or unavailability of the main feedwater system. The AF system will still function as previously evaluated. No new radiological release mechanisms or path are created. Therefore, proposed changes to the pump P-38A and P-38B recirculation line will have no affect on any radiological releases, release paths or evaluations. Based on the above, the proposed activity does not increase the radiological consequences as previously evaluated in the CLB.

4. Could the proposed activity create the possibility of an accident or event of a different type than any  Yes  No previously evaluated in the CLB?

The proposed modifications will have an identical piping arrangement, installing equivalent or better components. As discussed in Section 2, the replacement ROs will be tested and evaluated to demonstrate suitability for this application. The modified recirculation lines will function identically to the currently installed recirculation lines. A technical evaluation of the replacement ROs indicates that these ROs are more suitable (no cavitation) for this application than the presently installed ROs.

The replacement ROs consists of a globe valve body with anti-cavitation trim. Valve bonnet and stem/plug are not included. The flow passage area dimensions for anti-cavitation trim range from 0.090" to 0.015". The size of a flow passage area in the replaced ROs is not available however, based on a visual inspection it is larger than the size of

Section 2 - Continuation

flow passage of the replacement ROs. This difference in size of the passage flow area could possibly lead to reduced pump recirculation flow during operation of the pumps when SW as a process fluid, were filtered by the RO's trim. To preclude this, the ROs design directs flow through the outside of the trim. The outside cartridge of the trim contains the smallest size flow passages area. The flow passages area then become progressively larger. Therefore, the smallest flow passage areas are located at the zone of highest differential pressure. This design feature reduces the potential of debris accumulation on the RO's trim.

Also, in response to IR 99-013, SW samples in the AF suction piping were obtained to evaluate if processing SW through the AF pumps would have any adverse affects on the pumps. The samples taken at the beginning of the flush showed that less than 15% of SW particles are greater than 0.015". Based on the estimated flow value during this flush, the sample represents approximately the first ten minutes of pump operation. After the flush was completed, the sample showed that there were no particles greater the 0.004". The samples were obtained from the SW suction piping for the AF pumps.

The AF pumps have 9 stages with 0.009" to 0.014" diametrical clearances and a minimum 7/16" impeller vane path. Since the pumps have multiple stages and small clearances, they will reduce larger particles size contained in the SW to less than 0.015".

In summary, based on the large differential pressure across the ROs and the effect of pump design clearances on SW sample particles size, the replacement ROs design will not result in an acute reduction in AF pumps recirculation flow, therefore, causing the pumps to fail. In addition, the body of the replacement ROs contain a bolted blind flange which can be removed to facilitate cleaning of the trim in the event of long term debris accumulation. This long term accumulation can be identified in advance by noticing a changing patterns of recirculation flow values which are recorded during IT-10/10A/10B.

No new credible accidents have been introduced by the proposed modifications.

Therefore, the proposed activity will not create the possibility of an accident or event of a different type than any previously evaluated in the CLB

5. Could the proposed activity create the possibility of a malfunction of equipment important to safety of a  Yes  No different type than any previously evaluated in the CLB?

The proposed modification will replace the existing components with equivalent, replacement components or superior components evaluated and tested for this application. The existing piping trains will be maintained to ensure the operation of the AF system. Once the new equipment is physically installed and modification testing complete, each recirculation line will be functionally tested (PMT) to ensure that the AF pumps P-38A and P-38B function as designed.

The minor dimensional changes in the pipe configuration, oversized socket welds, and replacement ROs do not change the function, method(s) of operation, or introduce any new credible failure mechanisms to the AF pump P-38A and P-38B recirculation line. Implementation of this modification will not change the possibility of a malfunction of any SSC important to safety of a different type than any previously evaluated in the CLB.

NUCLEAR POWER DEPARTMENT  
SAFETY EVALUATION REPORT

Section 2 - Continuation

6. Does the proposed activity reduce the margin of safety defined in the basis for any Technical Specification?

Yes  No

T.S. 15.3.4 Steam and Power Conversion System

This section of the Technical Specifications discusses the operability requirements for the AF pumps to ensure the capability to remove decay heat from the core. The proposed modifications will be performed in accordance with the LCO requirements of this T.S. The proposed modifications have no effect on Condensate Storage Tank (CST) level requirements in this T.S. Therefore, there is no reduction in the margin of safety defined in this section of the Technical Specifications.

T.S. 15.4.8 Auxiliary Feedwater System

This section of the Technical Specification discusses the requirement to verify the operability of the AF system and its ability to respond properly when required. The proposed modification will not alter any testing requirements or periodicity discussed in the basis of this T.S. Therefore, there is no reduction in the margin of safety as defined in this section of the Technical Specification.

Based on the above and recognizing that the AF system's function and operability will not be affected by the proposed modifications, the margin of safety as defined by the Technical Specifications is not reduced.

DOES THE ACTIVITY, CHANGE, TEST, OR EXPERIMENT INVOLVE A 10 CFR 50.59 UNREVIEWED SAFETY QUESTION? (IS THE ANSWER TO ANY OF THE ABOVE QUESTIONS YES?)

Yes  No



SECTION 2 - 10 CFR 50.59 EVALUATION SUMMARY

The summary section should contain three brief paragraphs (no more than one page total), including: 1) Description of the proposed change including interim configurations, 2) Justification logic for the answers to the safety evaluation questions, and 3) Conclusion (i.e., is a USQ or Technical Specification conflict involved?)

The proposed modification will affect AF system, which is designed to supply high-pressure feedwater to the steam generators in order to maintain a water inventory for removal of heat energy from the reactor coolant system.

The proposed modifications 99-029\*A and 99-029\*B will replace the existing orifices RO-04004 and RO-04015 with improved design orifices. In addition, to provide oversized socket welds, portion of piping associated with replacement ROs will also be replaced. These portion of piping will include the 90 deg elbow upstream of the ROs up to and including the upstream weld on the AF pumps recirculation line isolation valve. Valve AF-27 for pump P-38A and valve AF-40 for pump P-38B.

The proposed replacement of section of pipe including replacement RO-04004 and RO-04015 will meet design, material and construction standards of the existing installation. The changes that will be implemented by the proposed modification, will not affect the overall performance of the AF system and operation or function of the AF pumps P-38A and P-38B to perform their intended functions.

The design bases accidents "Loss of Normal Feedwater", "Loss of All AC Power to the Auxiliaries", "Loss of External Electric Load", and "Steam Generator Tube Rupture" involve the AF system. The components that will be replaced by the proposed modifications are part of the AF pump P-38A and P-38B recirculation line. These components are not discussed in the CLB in any manner as a contributor or initiator to an accident or event scenarios already evaluated in the SAR.

During accident conditions, the safety related functions of the AF pump recirculation line orifice is as follows:

1. Provide passive flow resistance in the recirculation line of associated AF pump.
2. Limit the recirculation flow.
3. Passively maintain the AF system pressure boundary integrity.

The ROs being replaced were procured to a commercial program (not an Appendix B, QA Program) and dedicated for their application. The replacement ROs will be procured to the requirements of the 10 CFR 50, Appendix B, QA Program. The components are passive in when the AF system is operational and will be designed, installed, and tested in accordance with existing procedures and controls.

The proposed modification will replace the existing components with equivalent, replacement components or superior components evaluated and tested to demonstrate suitability for this application. The modified system will function identically to the current installed system. The replacement ROs will provide improved flow characteristics and will prevent cavitation damage, thus minimize hydrodynamic noise under liquid application.

The minor dimensional changes in the pipe configuration, oversized socket welds, and replacement ROs do not change the function, method(s) of operation, or introduce any new credible failure mechanisms to the AF pump P-38A and P-38B recirculation line. The proposed modifications will meet design, material and construction standards of the existing installation. The overall performance of the AF system and operation or function of the AF pumps P-38A and P-38B to perform their intended design functions will not change.

Post modification testing will include a visual exam (VT) of all new piping socket welds. Piping welds will be examined in accordance with ASME B31.1 - 1992. Performance of this exam is required by the original code of construction, USAS B31.1-1967. USAS B31.1 - 1967 also requires that post modification testing include an inservice leak test at normal system operating pressure and temperature of the weld joints, and verification of the new ROs flow.

FME and PMT will be implemented to ensure the proper operation of the system upon completion of the modifications.

AF system does not participate in radiological release mechanisms for the PBNP, and no new radiological release mechanisms or path are created.

T.S. 15.3.4, "Steam and Power Conversion System" and T.S. 15.4.8, "Auxiliary Feedwater System" do not the Technical Specification discusses the requirement to verify the operability of the AF system and its ability to respond properly when required. There are no margin of safety discussed in these Sections of the above Technical Specifications.

The proposed modifications will be completed with both Unit 1 and Unit 2 at power. The implementation of the proposed modifications will require for one motor-driven AF pump at a time to be taken out of service for a period of seven (7) days. This is allowed by the requirements of the Technical Specification Section 15.3.4 C. This Section allows two (2) unit operation where one motor-driven pump may be out-of-service for up to seven (7) days.

In conclusion, the proposed modifications 99-029\*A and 99-029\*B does not involve an unreviewed safety question and does not involve a change to the Technical Specifications..

SECTION 3 - 10 CFR 72.48 SAFETY EVALUATION

1. Could the proposed activity increase the probability of occurrence of an accident or off-normal event previously evaluated in the ISFSI licensing basis?  Yes  No
2. Could the proposed activity increase the probability of occurrence of a malfunction of equipment important to safety previously evaluated in the ISFSI licensing basis?  Yes  No
3. Could the proposed activity increase the radiological consequences of an accident, off-normal event, or malfunction of equipment important to safety previously evaluated in the ISFSI licensing basis?  Yes  No
4. Could the proposed activity create the possibility of an accident or off-normal event of a different type than any previously evaluated in the ISFSI licensing basis?  Yes  No
5. Could the proposed activity create the possibility of a malfunction of equipment important to safety of a different type than any previously evaluated in the ISFSI licensing basis?  Yes  No
6. Does the proposed activity reduce the margin of safety defined in the basis for any technical specification contained in the ISFSI Certificate of Compliance?  Yes  No
7. Does the proposed activity create the possibility of a significant increase in occupational radiation exposure than previously evaluated in the ISFSI licensing basis?  Yes  No

SECTION 3 - CONTINUATION



8. Does the proposed activity create the possibility of a significant unreviewed environmental impact other than any previously evaluated in the ISFSI licensing basis?

DOES THE ACTIVITY, CHANGE, TEST, OR EXPERIMENT INVOLVE A 10 CFR 72.48 UNREVIEWED SAFETY QUESTION, SIGNIFICANTLY INCREASE OCCUPATIONAL RADIATION EXPOSURE, OR CREATE A SIGNIFICANT UNREVIEWED ENVIRONMENTAL IMPACT? (IS THE ANSWER TO ANY OF THE ABOVE QUESTIONS YES?)

(2)

SECTION 3 - 10 CFR 72.48 EVALUATION SUMMARY

The summary section should contain three brief paragraphs (no more than one page total), including: 1) Description of the proposed change including interim configurations, 2) Justification logic for the answers to the safety evaluation questions, and 3) Conclusion (i.e., is a USQ, significant increase in occupational radiation exposure, significant unreviewed environmental impact, or conflict with a license condition as contained in the C of C involved?)