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U.S. Nuclear Regulatory Commission
Document Control Desk
Washington, D.C. 20555

Perry Nuclear Power Plant
Docket No. 50-440
Supplement to Technical Specification
Change Request: Containment Air Locks

Gentlemen:

Enclosed is a supplement to the License Amendment Request submitted on September 19, 1990 (letter PY-CEI/NRR-1217L) for the Perry Nuclear Power Plant (PNPP) Unit 1 Facility Operating License NPF-58.

The September 19, 1990 Amendment request proposed two separate changes to Technical Specification 3.6.1.3 "Primary Containment Air Locks." This supplement revises the previously proposed footnote which provides for air lock usage when one or both air locks have one inoperable door; the previously requested footnote to address that situation is superseded by this supplement. The previously requested changes regarding the mechanical interlock mechanism however, remain essentially unchanged by this supplement, other than by a reformatting change to make them more consistent with the remainder of the Specification.

Attachment 1 to this letter contains a Summary, Safety Analysis, and a Description of the Proposed Changes. It also provides a revised Significant Hazards Consideration which addresses the revised Technical Specification change proposal. Attachment 2 contains copies of the marked up Technical Specifications incorporating both the mechanical interlock mechanism changes and the newly proposed air lock entry and exit provisions.

Although reformatting of the previously proposed mechanical interlock mechanism change is occurring as a result of this letter, the Significant Hazards Consideration that was contained within the September 19, 1990 Amendment

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request remains valid for that portion of the request. The Environmental Consideration in the September 19, 1990 letter fully bounds all the changes proposed in that letter and this supplement. Therefore, they are not reproduced herein.

If you have any questions, please feel free to call.

Sincerely,


Robert A. Stratman

RAS:BSF:ss

Attachments

cc: NRC Project Manager
NRC Resident Inspector Office
NRC Region III
State of Ohio

SUMMARY

One of the two changes in a September 19, 1990 amendment request proposed revision of an existing footnote * to Technical Specification 3.6.1.3 "Primary Containment Air Locks", Action a. The footnote currently in the Technical Specifications is overly restrictive and hampers personnel and plant safety, and also may prevent repairs to an inoperable outer door. The September 19, 1990 letter presented detailed discussions on the various reasons for the proposed changes to the footnote. These are not repeated in detail here. In summary, they involve personnel and plant safety concerns, such as allowing for repairs on inoperable air lock doors, performance of required operational/maintenance/surveillance activities necessary to ensure safe plant operations, and for personnel exit from the containment.

However, the footnote proposed in the September 19, 1990 letter did not differentiate between situations where one air lock has an inoperable door and where both air locks have an inoperable door, when it discussed the type of activities which justified opening of an Operable air lock door when the other door in that same air lock was inoperable. It merely listed the types of activities, but did not state that opening of an Operable door was only justified for performance of certain of the activities if both air locks had inoperable doors. Simply put, if only one air lock has an inoperable door, entry and exit through the Operable door on that air lock should only be made to perform repair activities, and that air lock should not be used for other containment entries and exits, since the other air lock is fully Operable. It is only for situations when both air locks have an inoperable door that containment entry and exit should be allowed through the Operable door on an air lock, under administrative controls. This supplement to the previous letter is being submitted to provide this clarification.

SAFETY ANALYSIS

The primary change being proposed by this supplement is to the footnote that applies in situations when one of the doors in an air lock is inoperable. A newly proposed footnote ** is provided to replace the former footnote *:

- ** If one or both air locks have one inoperable door, entry into and exit from the air lock(s) through the OPERABLE door is permitted under administrative controls to perform repairs of the affected air lock components. Also, if both air locks have one inoperable door, entry into and exit from the primary containment is permitted under administrative controls for 7 days.

This footnote enforces the concepts discussed in the Summary above, and the second portion of footnote ** places an appropriate limit on continued air lock use when both contain inoperable doors, by limiting it to seven days. The second portion of footnote ** would permit containment entry and exit to perform activities other than just repairs, such as Technical Specification (TS) surveillances and required Actions, as well as other activities inside containment that are required by TS or that support TS required equipment. This portion of the footnote also allows containment entry and exit to perform non-Technical Specification related activities; however, the administrative controls required by the footnote include provisions that prudent judgment should be used in determining whether to utilize an inoperable air lock to

enter the containment. The administrative controls for both portions of footnote ** also include provisions that after each entry and exit, the Operable door must be promptly closed, and they include a provision that for entries performed using the footnote, that a dedicated individual may be utilized in lieu of locking the Operable door during periods when personnel are to be inside the containment (see the September 19, 1990 change request for discussion of the personnel safety concerns that could result from a requirement to lock doors in such situations). The allowances of footnote ** are acceptable due to the low probability of an event that could pressurize the containment during the short time that the OPERABLE door will be open for entries/exits. Additions to the BASES are proposed to reflect the above guidance.

The seven day limit on use of the airlocks in the second portion of footnote ** applies only to those situations when both airlocks have one inoperable door. The seven day timeframe was chosen based on the judgment that it provides a reasonable period for performance of repairs on at least one of the two airlocks, and balances the need for important containment entries (as described above) against the desire to minimize the number of occasions when one of the remaining Operable doors would have to be opened to permit containment access. This seven day period is consistent with that contained in NUREG-1434 Rev. 0 "Standard Technical Specifications, General Electric Plants, BWR-6."

A clarification being made by this supplement is the explicit inclusion of words to address the situation when an air lock may have both an inoperable door and an inoperable interlock mechanism. The September 19, 1990 letter had requested the addition of an Action for an inoperable interlock mechanism (which remains in this supplement - see proposed Action 3.6.2.3.a.1 and note *) but it was not clear what the appropriate actions would be when a door and an interlock were inoperable in an air lock at the same time. The appropriate actions for that situation are exactly the same as the actions when just a door is inoperable, since the desire to maintain the remaining OPERABLE door in the closed position is the controlling factor, and the interlock mechanism becomes unnecessary when one of the air lock doors is inoperable. This situation is therefore addressed by words added to proposed Action 3.6.1.3.a.2. The use of footnote ** remains unaffected by the consideration that an interlock mechanism is inoperable in addition to the door.

One editorial change worthy of separate note is the deletion of a phrase currently contained in the Action for an inoperable air lock door, and of a similar phrase that was contained in the proposed new Action for an inoperable interlock mechanism (see the Sept. 19, 1990 letter). It is a common understanding that the allowable outage times in Action statements are provided to permit restoration of inoperable equipment prior to requiring more restrictive measures, without the need to explicitly state "either restore the inoperable air lock door to OPERABLE status within 24 hours or ...". The underlined portion of this phrase was simply filler material that added nothing to the Actions, and its inclusion in the revised Actions proposed by this supplement could have led to confusion. See item 2. below in the "Description of Proposed Changes" section for detail on the deleted words.

Several additional editorial/reformatting changes are also being made to provide consistency within the different sections of Specification 3.6.1.3. Some of these involve changes to the words that are currently provided in the Specification, but the majority are changes to the words that were previously proposed in our September 19, 1990 amendment request. The "Description of Proposed Changes" section of this letter (below) lists the differences between the current Specification and the markup provided in Attachment 2 for reasons of completeness. However, the "Significant Hazards Consideration" section of this letter (below) addresses only the newly revised footnote ** and the editorial reformatting of Action a, and does not discuss the acceptability of the proposed Action for an inoperable mechanical interlock mechanism, since the Significant Hazards Consideration in the September 19, 1990 amendment request has been reviewed and been determined to remain valid for that portion of the request, even with the editorial changes made to it by this supplement.

DESCRIPTION OF PROPOSED CHANGES

1. Action 3.6.1.3.a is reformatted in order to allow the addition of provisions which specify the appropriate actions required when a mechanical interlock mechanism becomes inoperable in one or both air locks, including footnote * to be used if a locked door must be unlocked to permit passage through the air lock. These provisions are provided in new Actions a.1.a and a.1.b. At the bottom of the page, new footnote * is added.
2. The current Actions 3.6.1.3.a.1 and a.2 are renumbered as a.2.a and a.2.b, and are revised by replacing the currently referenced footnote * with new footnote **. The words "either restore the inoperable air lock door to OPERABLE status" and the word "or" are deleted from the current Action a.1 (new Action a.2.a). At the bottom of the page, footnote * is replaced with footnote **, which provides the allowances for entry and exit of the air lock or primary containment, when one or both air locks have one inoperable door.
3. The Action for "one inoperable air lock door" (Action a.2) is also modified such that it is the Action to be taken in the situation when there is an interlock inoperable at the same time that an air lock door is inoperable.
4. Actions 3.6.1.3.b and c are revised to include a reference to an inoperable interlock mechanism, due to the addition of the provisions in Action 3.6.1.3.a discussed above in items 1 and 3.
5. Associated Bases changes are proposed.

SIGNIFICANT HAZARDS CONSIDERATION

The standards used to arrive at a determination that a request for amendment involves no significant hazards considerations are included in the Commission's Regulations, 10CFR50.92, which state that the operation of the facility in accordance with the proposed amendment would not (1) involve a significant increase in the probability or consequences of an accident

previously evaluated, (2) create the possibility of a new or different kind of accident from any previously evaluated, or (3) involve a significant reduction in a margin of safety.

The proposed amendment has been reviewed with respect to these three factors and it has been determined that the proposed changes do not involve a significant hazard because:

1. This proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

The probability of occurrence of a previously evaluated accident is not increased because the containment air locks do not affect the initiation of any accident. The proposed revisions do not change the plant design or methods of operation. Therefore the proposed changes to Specification 3.6.1.3 to revise the wording of footnote * and the reformatting of Action a can not increase the probability of an accident previously evaluated.

The consequences of an accident remain bounded by conditions which exist prior to this change, since operation under the provisions of the proposed footnotes to the air lock Actions does not produce potential containment leakage paths beyond those permitted by the currently approved Technical Specifications. The consequences of previously evaluated accidents are based on an assumption for the containment leakage rate. With regard to the containment air locks, that containment leakage rate is maintained provided at least one Operable air lock door is closed during the event. The period of time that an air lock door could have no Operable door closed remains extremely small, as was the case for the current footnote. In the case of having only one air lock with one door inoperable, the Operable door on that air lock may only be used during performance of activities associated with repairs of the affected air lock components. In the case where both air locks have an inoperable door, use of the Operable doors for containment entry and exit (in addition to repair entries) is permissible for only seven days, under administrative controls that limit their use and ensure prompt closure following use for entry and exit through the doors. The use of the air lock for these limited circumstances is acceptable due to the low probability of an event that could pressurize the containment during the short time that the Operable door will be open for entries/exits. Therefore, the proposed changes to the current footnote * and the editorial reformatting of Action 3.6.1.3.a cannot increase the consequences of any accident previously evaluated by the NRC.

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

Containment air locks are designed and assumed to be used for entry and exit. Their operation does not interface with the reactor coolant pressure boundary or any other mechanical or electrical controls which could impact the operations of the reactor or its direct support systems. Therefore a new or different accident cannot be created. The current

footnote permits limited use of the Operable door in an air lock; the proposed changes also permit limited use of the Operable door, they simply change the types of limited circumstances for such use.

The proposed change to the * footnote and the reformatting of Action 3.6.1.3.a do not create the possibility of a new or different kind of accident, since the conditions of the containment and its air locks remain unchanged, and the actual operating modes and procedures for the air lock are unaffected by these Technical Specification changes.

3. This proposed change does not involve a significant reduction in the margin of safety.

The applicable margin of safety consists of maintaining the containment leak rates within the assumptions of the design basis accident analysis. With regard to the containment air locks, these leak rates are maintained provided at least one Operable air lock door is closed during the event. The period of time that an air lock could have no Operable door closed remains extremely small, as was the case for the current footnote. The current footnote was previously evaluated by the NRC and determined to be acceptable since the potential for an event requiring containment integrity occurring during the limited time when no Operable door is closed is sufficiently remote to justify limited access when required. Therefore, the margin of safety is not significantly reduced by the proposed revision of the footnote or by the editorial reformatting of Action 3.6.1.3.a.