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ENERGY**

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

Perry Nuclear Power Plant  
Docket No. 50-440  
License Amendment Request:  
Revision to the Radiation Monitoring  
Instrumentation Specification to  
Clarify the Action Requirements

Gentlemen:

Enclosed is a request for amendment of the Facility Operating License NPF-58 Appendix A Technical Specifications, for the Perry Nuclear Power Plant (PNPP), Unit 1. This License Amendment request corrects an inconsistency in the Technical Specification Action statements between the "Radiation Monitoring Instrumentation" Specification (LCO 3.3.7.1) and the "Control Room Emergency Recirculation System" Specification (LCO 3.7.2).

Attachment 1 provides the Summary, Safety Assessment, Description of the Proposed Changes, and the Significant Hazards and Environmental Considerations. Attachment 2 is a copy of the marked-up Technical Specification pages.

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

Sincerely,

*Frank R. Stead for*  
Robert A. Stratman

RAS:RAL:ss

Attachments

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

Operating Companies **170078**  
Cleveland Electric Illuminating  
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### Summary

This License Amendment request corrects an inconsistency between Technical Specification Action statements within the "Radiation Monitoring Instrumentation" Specification (LCO 3.3.7.1, Table 3.3.7.1-1 Item 3) and the "Control Room Emergency Recirculation System" Specification (LCO 3.7.2). This inconsistency, in part, contributed to a recent Licensee Event Report involving the two Specifications, since the action specified for an inoperable radiation monitor (the support function) is in certain instances more restrictive than that specified for the Control Room Emergency Recirculation System (the supported system).

### Safety Assessment

The Technical Specification (TS) Action requirements are inconsistent for Specification 3.7.2, "Control Room Emergency Recirculation System" and for a supporting instrumentation channel, the Control Room Ventilation Radiation Monitor (Noble Gas) which is addressed in Specification 3.3.7.1, "Radiation Monitoring Instrumentation", and in certain cases the requirements for the supporting radiation monitor are more restrictive than those for the supported ventilation system. This situation currently exists despite the fact that inoperability of the support system (the radiation monitor) does not make the supported system (the Control Room Emergency Recirculation System) incapable of performing its specified functions. This inconsistency, in part, contributed to a recent Licensee Event Report (LER) 92-009 involving the two specifications, and has led to proposal of the changes included herein. It is proposed to modify the Action (Action 72) for the Control Room Ventilation Radiation Monitor to be more consistent with the Action requirements for the Control Room Emergency Recirculation System, which is the only system that receives input from this radiation monitor.

### Discussion of the Control Room Emergency Recirculation System and Control Room Ventilation Radiation Monitor Design Bases

The PNPP Control Room Emergency Recirculation System is designed to provide a radiologically controlled environment to ensure the habitability of the control room (CR) for the safety of operators under all radiological release scenarios. The Control Room Emergency Recirculation System is a distinct mode of the control room heating, ventilation and air conditioning (HVAC) system, and involves realignment of the normally operating Control Room HVAC system lineup, and starting of the normally idle emergency recirculation fans. The System is comprised of two subsystems, each of which contains 100 percent capacity fans and is individually capable of fulfilling the stated function. The subject Control Room Ventilation Radiation Monitor serves both subsystems by providing a high-radiation signal to automatically initiate action to isolate the main control room by switching to the emergency recirculation mode. The air is then recirculated through high efficiency particulate air (HEPA) filter banks and charcoal adsorber beds to remove radioactive contaminants and limit the doses to personnel in the Control Room. The design of the System is described in more detail within Sections 6.4 and 6.5 of the PNPP Updated Safety Analysis Report (USAR).

The ability of the Control Room Emergency Recirculation System to maintain the habitability of the CR is explicitly assumed for certain accidents as discussed in the USAR safety analysis. System operation ensures the radiation exposure of control room personnel, through the duration of any one of the postulated accidents, does not exceed the limits set by General Design Criterion (GDC) 19 of 10 CFR 50, Appendix A.

Modification of Action 72 for the Control Room Ventilation Radiation Monitor

The discrepancy between the Action for the Control Room Emergency Recirculation System (Action 3.7.2.b) and the Action for the Control Room Ventilation Radiation Monitor (Noble Gas) function (Action 72) was first identified during the investigation of an LER dealing with the two Specifications. A brief review of the actions and the inconsistency follows. As noted in LER 92-009, personnel incorrectly assumed that the Technical Specification Action requirements for both Specifications were identical since the Control Room Ventilation Radiation Monitor (Noble Gas) serves only a support function for the Control Room Emergency Recirculation System.

Action b of Technical Specification 3.7.2 provides the actions to be taken whenever subsystems of the Control Room Emergency Recirculation System are inoperable during those periods when the plant is handling irradiated fuel in the Fuel Handling Building or Primary Containment and also when the plant is shutdown in Operational Conditions 4 or 5. Action 3.7.2.b.1 requires that:

"With one control room emergency recirculation subsystem inoperable, restore the inoperable subsystem to OPERABLE status within 7 days or initiate and maintain operation of the OPERABLE subsystem in the emergency recirculation mode of operation."

Action 3.7.2.b.2 addresses the next stage of system inoperability, when both subsystems are inoperable; it states:

"With both control room emergency recirculation subsystems inoperable, suspend CORE ALTERATIONS, handling of irradiated fuel in the Fuel Handling Building and the primary containment, and operations with a potential for draining the reactor vessel."

No additional actions are required for Action 3.7.2.b.2, since the specified Action requires suspension of the possible radiation accident initiating activities. However, when the supporting noble gas radiation monitor instrumentation is inoperable, Technical Specification 3.3.7.1.b Action 72 for the Control Room Ventilation Radiation Monitor requires:

"With the required monitor inoperable, assure a portable continuous noble gas monitor or the Control Room Area Radiation Monitor is OPERABLE in the control room within 24 hours. Restore the inoperable monitor to OPERABLE status within 7 days, otherwise, initiate and maintain operation of the control room emergency filtration system in the isolation mode of operation within 1 hour."

Therefore, based on the current actions for the two LCOs, Action 72 of Specification 3.3.7.1 is relatively consistent with Action 3.7.2.b.1, yet does not contain provisions similar to those in Action 3.7.2.b.2, which would direct the operators to suspend performance of Core Alterations, handling of irradiated fuel, etc. in Operational Conditions 4, 5 and \*\*\*.

Currently then, if the Control Room Ventilation Radiation Monitor (Noble Gas) is not restored within 7 days, the Operators are required to initiate and maintain operation of the Control Room Emergency Recirculation System (i.e. emergency filtration system) in the emergency recirculation (i.e. isolation) mode even if both subsystems of the Control Room Emergency Recirculation System are inoperable and/or the possible radiation accident initiating activities have been suspended in Operational Conditions 4, 5 and \*, in accordance with Action 3.7.2.b.2 of the Control Room Emergency Recirculation System Specification (an inconsistency between the two specifications). The Action requirements for this support function (the Control Room Ventilation Radiation Monitor (Noble Gas)) are therefore more restrictive than the requirements for the supported system (the Control Room Emergency Recirculation System). This inconsistency in Technical Specification requirements was considered a contributing factor to the recent Licensee Event Report involving these two Specifications.

It is proposed to remedy this inconsistency within Action 72 for an inoperable Control Room Ventilation Radiation Monitor by incorporating a second compensatory measure that the operators may take after the radiation monitor has been inoperable for more than 7 days. The proposed Action would retain the choice of initiating at least one train of the Control Room Emergency Recirculation System, while providing a second option which would depend on the current Operational Condition; in Operational Conditions 1, 2 and 3 a shutdown provision would be added should the operators choose not to initiate the supported ventilation system, and in Operational Conditions 4, 5 and \*\*\* the operator could choose to suspend CORE ALTERATIONS, handling of irradiated fuel in the Fuel Handling Building and the primary containment, and operations with a potential for draining the reactor vessel. This amendment request is not proposing changes to any of the Specification 3.7.2 Actions.

During preparation of this amendment request to address the problem described above, it was also noted that the current wording of Action 72 is not clear. Therefore, the organization of the first two sentences has been revised to clarify that the compensatory measures specified within the "otherwise" statement should be applied if the requirement cannot be met to "assure a portable continuous noble gas monitor or the Control Room Area Radiation Monitor is OPERABLE in the Control Room" within the specified timeframe. Additional editorial changes are also being made to Action 72 to make it consistent with PNPP-specific terminology and to be more consistent with Action b of Specification 3.7.2. The exact markup of the proposed wording is provided in Attachment 2 and also described below in the "Description of the Proposed Changes" section of this letter.



### Description of the Proposed Changes

Refer to Attachment 2 for a marked-up copy of the subject Technical Specification pages.

#### Table 3.3.7.1-1, Action 72 (page 3/4 3-64)

Revise Action 72 for an inoperable Control Room Ventilation Radiation Monitor (Noble Gas) to add alternative compensatory measures to the currently specified action of initiating the Control Room Emergency Recirculation System. In Operational Conditions 1, 2 and 3 a shutdown requirement would be entered. In Operational Conditions 4, 5 and \*\*\* the operator could choose to suspend CORE ALTERATIONS, handling of irradiated fuel in the Fuel Handling Building and the primary containment, and operations with a potential for draining the reactor vessel. Also, the sentence structure of Action 72 is modified to clarify that the compensatory measures in the "otherwise" statement are applicable if an alternate radiation monitor is not available in the Control Room within 24 hours, and editorial changes are made to be consistent with Action b of Specification 3.7.2, "Control Room Emergency Recirculation System".

### 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, 10 CFR 50.92, 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. The proposed changes do not involve a significant increase in the probability or consequences of an accident previously evaluated.

The proposed change clarifies Technical Specification 3.3.7.1, "Radiation Monitoring Instrumentation" by revising Action 72 (for an inoperable Control Room Ventilation Radiation Monitor) to remove several inconsistencies between it and Action 3.7.2.b.2 of the Control Room Emergency Recirculation System Specification. Revised Action 72 simply makes the two Specifications more consistent by incorporating alternative compensatory measures that the operators may take after the Control Room Ventilation Radiation Monitor has been inoperable for more than seven days. The proposed Action would retain the choice of initiating at least one train of the Control Room Emergency Recirculation System, while providing a second option to take which would depend on the current Operational Condition. In Operational Conditions 4, 5 and \*\*\* the current Specification 3.3.7.1 Action 72 does not contain the provisions of the Control Room Emergency Recirculation System Action 3.7.2.b.2 which directs the Operators to suspend performance of Core Alterations,

handling of irradiated fuel and operations with a potential for draining the reactor vessel instead of initiating the Control Room Emergency Recirculation System. This inconsistency between the two specifications has caused compliance difficulties, therefore, the proposed Action adds this alternative. Also, in Operational Conditions 1, 2 and 3 a shutdown provision is being added. The other changes are editorial, in order to clarify the applicability of the proposed alternative compensatory measures, to be consistent with PNPP-specific terminology, and to be more consistent with Action b of Specification 3.7.2.

In summary, there is no change in the probability or consequences of any accident since the revision of Specification 3.3.7.1 Action 72 is simply proposed in order to achieve consistency with the current Action 3.7.2.b.2. Incorporation of the already approved 3.7.2.b.2 compensatory measures to suspend possible radiation accident initiating activities provides an alternative which would actually reduce the probability of occurrence of a previously analyzed accident, and would have no adverse effect on accident consequences. None of the proposed changes to the clarified action, including the editorial changes, involves a change to the design of the plant, nor the operational characteristics of any plant system, nor the procedures by which the Operators run the plant.

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

No design changes are being made that would create a new type of accident or malfunction, and the methods and manner of plant operation remains unchanged. The proposed revisions to Action 72 will remove several inconsistencies between the two Specifications by providing consistent actions within the Radiation Monitoring Instrumentation Specification with those currently existing in the Control Room Emergency Recirculation System Specification and provide an additional shutdown requirement in Operational Conditions 1, 2 and 3. The other changes to Action 72 are editorial, and therefore cannot affect accident initiation parameters. The instrument to which Action 72 applies (the Control Room Ventilation Radiation Monitor (Noble Gas)) simply serves as a supporting instrumentation channel for the Control Room Emergency Recirculation System, therefore no new or different kind of accident can be created.

3. The proposed changes do not involve a significant reduction in a margin of safety.

The proposed change to Specification 3.3.7.1 Action 72 simply makes the two Specifications more consistent by making the Action for a supporting instrumentation channel, the Control Room Ventilation Radiation Monitor (Noble Gas), more consistent with those of the supported system Specification, the Control Room Emergency Recirculation System. A shutdown requirement is also being added if the operators should choose not to initiate the supported system in Operational Conditions 1, 2 and 3. Since the Actions of the two Specifications will now correspond, the

margin of safety as currently exists today for the governing specification (the Control Room Emergency Recirculation System Specification) is maintained and the proposed changes do not therefore reduce the margin of safety.

#### Environmental Consideration

The proposed Technical Specification change request has been reviewed against the criteria of 10 CFR 51.22 for environmental considerations. As shown above, the proposed change does not involve a significant hazards consideration, nor increase the types and amounts of effluents that may be released offsite, nor significantly increase individual or cumulative occupational radiation exposures. Based on the foregoing, it has been concluded that the proposed Technical Specification change meets the criteria given in 10 CFR 51.22(c)(9) for a categorical exclusion from the requirement for an Environmental Impact Statement.