



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 56 TO FACILITY OPERATING LICENSE NO. DPR-58

INDIANA AND MICHIGAN ELECTRIC COMPANY

DONALD C. COOK NUCLEAR PLANT UNIT NO. 1

DOCKET NO. 50-315

Introduction

On July 21, 1982, in a letter telecopied to the NRC, the Indiana and Michigan Electric Company requested a temporary change to the D. C. Cook Facility Operating License Technical Specification 3.9.9 for Unit 1 regarding the Containment Purge and Exhaust System operable during Mode 6 (refueling). The change would allow the isolation valves to be replaced one at a time with valves qualified to satisfy the leak test requirements of Generic Task B-24, "Containment Purge and Exhaust," and would allow the containment radiation monitors to be upgraded to the requirements of TMI Item II.F.1, "Additional Accident Monitoring Instrumentation."

Discussion and Evaluation

The containment penetrations to be modified are in the lower containment and instrument room. Each of the four penetrations has two isolation valves; either 24 inches and 30 inches in diameter. There is currently one area radiation monitor supplying the signal to both the inner and outer valves for all purge and exhaust penetrations. This monitor will be replaced by two monitors, each to provide a signal to separate trains which supply a closure signal to either the inner valves or outer valves. One of the replacement monitors is already installed. For the Containment Purge and Exhaust System to be operable, both valves on each penetration must be operable and each is to be isolable from a signal from the containment radiation monitors. Technical Specification 3.9.9 requires the Containment Purge and Exhaust System to be operable during refueling.

In order to change the valves and radiation monitors, a temporary change is required to redefine the system for the short time necessary to cut out the old valve and weld in the new valve for the lower containment and instrument room penetration and to replace the containment monitors. As the area radiation monitor is replaced, the signal to both the inner and outer valve will not be available for a short period of time. A signal from the one newly installed monitor will be available to one of the valves in all the penetrations. The modifications will be accomplished within about a three or four week period with the actual down time for a penetration to be considerable less. At least one radiation monitor signal will be available to one of the valves on each purge and exhaust penetration at all times. During this refueling outage, as discussed with the staff, the licensee proposes to modify the Technical Specification as follows:

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PDR ADOCK 05000315
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Add as footnote to page 3/4 9-10 of Unit 1 Technical Specifications.

"During the refueling outage commencing about July 1982, the Containment Purge and Exhaust Isolation System shall be defined to include (1) a radiation signal to either the inner or outer valve or a provision for immediate manual closure of the valve in the event the valve closure may be required, and (2) for the Lower Containment and Instrument Room penetrations, any one penetration out of service to replace a valve with the remaining valve locked or sealed closed or closed by a blind flange. This definition is temporary and it and this footnote shall no longer apply following the refueling outage commencing about July 1982."

This change discussed with the licensee will assure that any penetration being modified by valve replacement will be placed in a safe mode by either the remaining valve being locked or sealed closed so that it cannot open or a blind flange installed which would block the penetration completely until the flange was removed. In this manner, the penetration would not allow the transfer of air between the containment and the atmosphere. The current radiation monitor is set up to provide a signal to all the valves. As the current radiation monitor is changed, the signal will be available to only one of the valves on all the purge and exhaust penetrations for a short period of time. One monitor has already been installed and its signal will be applied to either the outer or inner valves. Other signals on both the inner and outer valves will not be disturbed; the radiation signal supplements those other signals. In the event the radiation signals are not available to either valve, the licensee will station an operator in the control room to manually close the valves if the need arises and to assure they remain closed.

During the refueling mode, the only accident that would significantly affect the containment atmosphere and require the closing of the Containment Purge and Exhaust System is the fuel handling accident where an element was dropped or an object was dropped on the elements in the open reactor vessel. In such an event, the irradiated fuel might release radioactive gasses to the containment.

The provisions to be undertaken by the licensee will assure that any penetration being modified will be unable to release any such radioactive gasses from the containment and that, should the gasses be detected, the existing radiation monitor signals will close the valves or alert the operators to manually close the valves on the other penetrations. The refueling personnel are in contact with the control room and any such accident will be known by the control room operators in sufficient time to close or verify closed all penetration valves. The licensee has determined that there will be adequate assurance of containment of any released radioactive gasses from a fuel handling accident during the modifications with the redefined operation of the Containment Purge and Exhaust System and we agree. We have further determined that the health and safety of the public will not be adversely affected by the modification or operation during the modifications and, therefore, the proposed temporary change to the D. C. Cook Unit No. 1 Technical Specification 3.9.9 is acceptable.

Environmental Consideration

We have determined that the amendment does not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. Having made this determination, we have further concluded that this amendment involves an action which is insignificant from the standpoint of environmental impact and, pursuant to 10 CFR §51.5(d)(4), that an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of this amendment.

Conclusion

We have concluded, based on the considerations discussed above, that: (1) because the amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated, does not create the possibility of an accident of a type different from any evaluated previously, and does not involve a significant reduction in a margin of safety, the amendment does not involve a significant hazards consideration, (2) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (3) such activities will be conducted in compliance with the Commission's regulation and the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Dated: July 23, 1982

Principal Contributors:

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