



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 78 TO FACILITY OPERATING LICENSE NO. DPR-74

INDIANA AND MICHIGAN ELECTRIC COMPANY

DONALD C. COOK NUCLEAR PLANT UNIT NO. 2

DOCKET NO. 50-316

Introduction

By letter dated December 13, 1985, the Indiana and Michigan Electric Company (IMEC) submitted a proposed license amendment to extend some 18 month surveillance testing requirements by 2 months to allow the Donald C. Cook Nuclear Plant, Unit No. 2 to complete the present fuel cycle and shutdown on or before February 28, 1986. The extension is for specified pieces of equipment and systems which must be tested during an extended outage. By letter dated December 19, 1985, the IMEC supplemented the request with information to further support a no significant hazards consideration. Much of this information also supports our safety review of the extension.

On January 6, 1986, the IMEC submitted a letter related to the proposed amendment in which the licensee requested that the proposed amendment and the notice of no significant hazards consideration be processed as an emergency Technical Specification change. This letter and the circumstances surrounding the need for an emergency change will be discussed later in this Safety Evaluation.

Background

The Technical Specification provision 4.0.2 defines the intervals for surveillance requirements testing as follows:

- "a. A maximum allowable extension not to exceed 25% of the surveillance interval, and
- b. A total maximum combined time for any 3 consecutive surveillance intervals not to exceed 3.25 times the specified surveillance interval."

Within many of the surveillance requirements for systems and components for the D. C. Cook Nuclear Plant, a frequency of 18 months (or sometimes plant refueling) is specified. Both units of the nuclear plant are currently on an 18 month refueling cycle, therefore, the Technical Specifications requirements may not coincide with the plant refueling outages whenever unplanned outages are experienced between refueling outages. Given an intermediate outage of sufficient duration, the licensee may perform the 18 month surveillance and stay within the provisions of 4.0.2. Over a period of time with many short duration outages between refuelings, the licensee may accumulate excessive interval times

8602120764 860128  
PDR ADOCK 05000316  
P PDR

and be required to prematurely shutdown the plant to be in compliance with the Technical Specifications. Such is the case for the D. C. Cook Nuclear Plant, Unit No. 2. The first surveillance test is currently due no later than January 29, 1986, but the refueling outage is not scheduled to begin until about February 28, 1986.

### Evaluation

For each of the systems or components involved in the proposed 2 month extension, the staff has evaluated the operability for the short period of time and any compensatory measures which might also provide an indication of continued operability. Each of these evaluations is as follows:

a) Reactor Trip System Instrumentation, Engineered Safety Feature Instrumentation, and Reactor Coolant System Pressure Relief and Block Valve Instrumentation

The monthly functional tests for these instruments as performed by the IMEC are more stringent than presently required by the Technical Specifications. Any problems identified during these tests are corrected so that the instrumentation may continue to be declared as operable. For most of these instruments, the actual time they will be needed during the proposed extension is for one month beyond their originally scheduled test date. We agree with the licensee that with more stringent monthly testing and the short duration of the extension where operability is required, these instruments are expected to function normally. We find the proposed extension is acceptable.

b) Containment Sump Level and Flow Monitoring Instrumentation

This instrumentation is one of the ways for determining reactor coolant leakage inside containment. Humidity monitor, radiation monitor; and to some degree the on and off operation of the sump pump also provide detection for reactor coolant leakage. The sump level and flow monitoring instrumentation has shown no indication of problems during surveillance required by the Technical Specifications and these instruments are also needed for only one month of the proposed extension. While these instruments are useful for mitigating the effects of accidents as well as detecting excessive leakage inside containment, they are not required to trip the reactor and shut the plant down safely. We, therefore, find the proposed extension for testing these instruments acceptable.

c) Alternate Power Supplies Including Diesel Generator and Batteries

The original scheduled testing for these systems is in early February, therefore, the proposed extension should cover less than a month where more than one train of supply is required and less than two full months where only one train of supply is required. The diesel generators were

run and paralleled to their busses on November 17 and December 2, 1985, which demonstrated their operability. The licensee has examined the batteries to insure there is no significant deterioration which would jeopardize operation for the extension period. The 18 month surveillance test on the batteries establishes confidence of operability for the following 18 month period, however, these batteries are to be replaced this refueling outage and the operability for the extension is all that is required. Due to the operability demonstrated recently on the diesel generators, the condition of the batteries, and the short time for the extension, we find the extension for these systems acceptable.

d) Emergency Core Cooling System

On November 11, 1984, a safety injection actuation occurred and all systems operated properly and all valves were correctly aligned. The surveillance tests originally scheduled for this system were to occur in late February 1986. This system will be required until early March 1986, therefore, the extension will cover about two weeks while the operability is required. The flow balance of the ECCS pumps is accomplished with throttle valves which have been locked in place since the last surveillance assuring that the flow balance has not changed. Therefore, the operability of the ECCS systems including valve lineups has been demonstrated on a more frequent basis than 18 months and the short period (about two weeks) of required operability during the proposed extension makes inoperability of the system unlikely. On this basis, we find the extension for the ECCS surveillance tests to be acceptable.

e) Reactor Coolant Pump Spray Headers, Divider Barrier Seal and Snubbers Accessible Only During Extended Outages

The spray header for the reactor coolant pump area is inside containment. The portion of the system to which the extension applies is entirely passive and is not expected to be subject to deterioration. It was originally scheduled for a surveillance test in mid February, therefore, the extension may cover about a month while operability is required, i.e., whenever equipment in the spray area is required to be operable. The divider barrier seal is also a passive system inside containment and the examination includes visual examination and tests on material coupons removed from the seal. The seal was last tested in March 1984 and showed the seal to be in good condition. We agree with the licensee that there is no reason to believe degradation has occurred.

The snubber surveillance tests were to begin in early February and include snubbers required to be operable in each of the six modes of operation. The extension applies to those snubbers which are inaccessible due to ALARA considerations or that can only be tested during an extended outage. For any snubber where the extension will apply and

the snubber is accessible, the licensee will visually inspect to assure there is no reason to believe the snubber is inoperable. This would include visually determining that oil reservoirs are still filled, snubbers are not binding as aligned, and there is no obvious material deterioration such as rust. For the short period of time the extension will be in effect, the number of snubbers relying on the extension will be small and the number of any undetected failed snubber should be very small if any occur at all. The visual examination should expose any obvious failed snubbers and appropriate action, in accordance with the Technical Specifications, can be taken. Based on the above evaluation of each of these systems and components, we find the proposed extension acceptable.

For all the above surveillance requirements which are affected by the extension, the licensee will use the test dates during the 1986 refueling outage as initiation dates to determine the intervals defined by Technical Specifications section 4.0.2. In discussions with the licensee the continuing problem was brought up covering the D. C. Cook 18 month fuel cycles as they may impact the intervals. That is, with any outages during subsequent fuel cycles, the licensee would be again someday in a similar situation needing an extension of the 18 month intervals. The licensee plans to initiate a program to address the surveillance requirements and request Technical Specification changes to frequency of testing which takes into account their plant specific conditions. We agree with this proposed approach as a means to avoid another extension of the 18 month intervals in the future.

#### Basis for Emergency Technical Specification Change

The licensee's initial submittal on December 13, 1985, was inadequate with regards to the justification of the no significant hazards consideration and a request was made for docketed information to support a notice in the Federal Register. By letter dated December 19, 1985, this additional information was submitted by the licensee, however, this soon proved to be insufficient time to process the application as an individual notice for the full 30 day comment period. Under normal circumstances a notice might have been issued for the full 30 day comment period but, while the notice was in preparation, we learned that the Office of the Federal Register would have difficulty in publishing the notice during the Christmas and New Year holidays due to reduced staff. This was brought to the licensee's attention and on January 6, 1986, the licensee requested by letter that the notice be published as an emergency notice to prevent shutdown on January 29, 1986. Based on our review of the licensee's actions, we do not believe the licensee intentionally delayed their submittals to create an emergency situation and take advantage of a shortened comment period. Our evaluation was sent to the local public docket room in Stevensville, Michigan, and to the State of Michigan on or about January 7, 1986 (Reference memo D. L. Wigginton to Thomas Novak dated January 6, 1986 subject "Request for Emergency Notification of License Amendment for D. C. Cook Unit 2 - Assessment of Timely Submittal").

### Final No Significant Hazards Consideration Determination

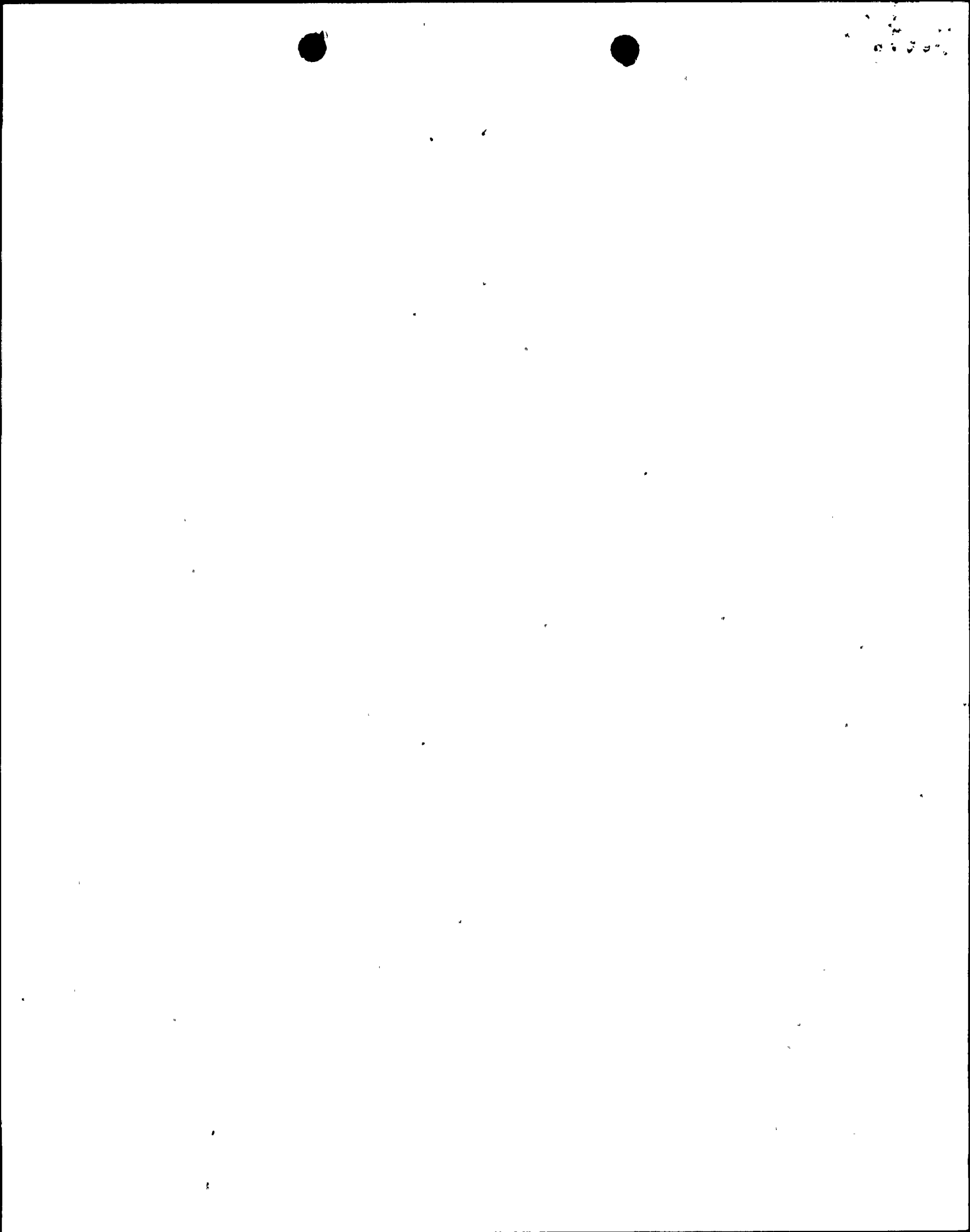
In our review of the proposed extension of the 18 month surveillance requirements, we have considered the possible inoperability of the systems and components for the short period they are required to function during the extension. The surveillance requirements are to determine operability, however, if operability has been demonstrated more frequently than the 18 month requirement, the confidence for operability is quite high for the proposed extension. For the active systems or components, there is no change to equipment, setpoints, or operation for which operability has been sufficiently demonstrated less frequently than 18 months, and therefore, the proposed amendment would not involve a significant increase in the probability or consequences of an accident previously evaluated.

For the passive systems, we agree that any additional deterioration of spray headers or the divider barrier seal for 2 months will be insignificant and the licensee will visually inspect the batteries and most of the snubbers involved. There may be some increase in the probability of non-inspected snubbers to fail, but this increase is not significant and the consequences of previously evaluated accidents are unaffected by the proposed extension.

Since accidents which might be caused by inoperability or the possible failure of a few snubbers during the extended inspection interval are the same as those previously evaluated, the proposed amendment does not create the possibility of a new or different kind of accident from any accident previously evaluated. And lastly, since operability has been sufficiently demonstrated and the licensee will inspect most of the affected snubbers during the remainder of the interval, the reduction in safety margin is considered to be insignificant. Therefore, based on these considerations the Commission has made a final determination that the amendment request involves no significant hazards consideration.

### Environmental Consideration

This amendment involves a change in the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and a change in surveillance requirements. The staff has determined that this amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that this amendment involves no significant hazards consideration and there has been no public comment on such finding. Accordingly, this amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR Section 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of this amendment.



Conclusion

We have concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (2) such activities will be conducted in compliance with the Commission's regulations 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.

Principal Contributors:

D. Wigginton

Dated: January 28, 1986

