



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 235 TO FACILITY OPERATING LICENSE NO. DPR-58

INDIANA MICHIGAN POWER COMPANY  
DONALD C. COOK NUCLEAR PLANT, UNIT 1

DOCKET NO. 50-315

1.0 INTRODUCTION

By letter dated December 3, 1998, the Indiana Michigan Power Company (the licensee) requested an amendment to the Technical Specifications (TSs) appended to Facility Operating License No. DPR-58 for the Donald C. Cook Nuclear Plant, Unit 1. The proposed amendment would revise TS 3/4.7.7, "Sealed Source Contamination," and its associated bases to address testing requirements for fission detectors. The proposed changes would provide consistency with the Unit 2 TS requirements and NUREG-0452, "Standard Technical Specifications." The purpose of the requirement for leak testing is to limit the amount of removable contamination that is available for intake and to ensure that occupational dose limits are not exceeded.

2.0 EVALUATION

The licensee proposes to revise Unit 1 TS 3/4.7.7 related to sealed source contamination testing. The TS change would specifically address testing requirements for fission detectors to make them consistent with the Unit 2 TS requirements and with NUREG-0452, "Standard Technical Specifications." Specifically, Surveillance Requirement 4.7.7.1.2.a, "Sources in Use," is revised to exclude fission detectors previously subjected to core flux. Sections 4.7.7.1.2.b and c, "Stored sources not in use," and "Startup sources," would be revised to specifically include fission detectors. These changes would require fission detectors to be tested prior to use or transfer to another licensee unless the detector was tested during the previous 6 months. Similar to startup sources, testing of fission detectors would be required 31 days prior to being subjected to core flux and following repair or maintenance of a source. Since fission detectors currently in use are subjected to a core flux even when the reactor is shut down, the TS changes do not introduce any new requirements for testing unless a new fission detector is used. Section 4.7.7.1.3 would be revised to replace the word "detection" with "detector." In addition, Bases pages B 3/4 7-5 and 7-5a would be revised to delete wording related to obsolete regulations and to use more generic wording.

Identification of inconsistencies between the language found in the TSs for Units 1 and 2 regarding testing of fission detectors prompted the licensee to propose changes to the Unit 1 TSs based on NUREG-0452, "Standard Technical Specifications." Although the Unit 1 TSs do not specifically address testing of fission detectors, testing of fission detectors for both

units is currently in conformance with 10 CFR 70.39c, utilizing an activity limit of .005  $\mu\text{Ci}$  of removable contamination detected from a dry wipe test. Although 10 CFR 70.39c is based on transfer of sealed sources containing plutonium, there are no specific sealed source leakage limits for uranium. Plutonium and uranium are both alpha emitters that pose an inhalation and ingestion hazard. The activity limit for sealed source leakage based on plutonium will ensure that total body and individual organ dose limits will not be exceeded for uranium intake. Since uranium-235 has a half-life of  $7.13 \times 10^8$  years and uranium-238 has a half-life of  $4.5 \times 10^9$  years, the activities of these long-lived radionuclides will not change significantly within 6 months. Therefore, the proposed changes to the Unit 1 TSs provide assurance that leakage of fission detectors will be discovered prior to exposure of a worker and that removable surface contamination will not pose a radiological health hazard due to leaking of uranium from the detector. The proposed changes to the TS are acceptable.

### 3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Michigan State official was notified of the proposed issuance of the amendment. The State official had no comments.

### 4.0 ENVIRONMENTAL CONSIDERATION

This amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 or changes a surveillance requirement. The staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluent 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 the amendment involves no significant hazards consideration and there has been no public comment on such finding (64 FR 43773). Accordingly, this amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 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.

### 5.0 CONCLUSION

The staff has 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, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) 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 Contributor: C. Sochor

Date: December 20, 1999

December 20, 1999

Mr. Robert P. Powers, Senior Vice President  
Indiana Michigan Power Company  
Nuclear Generation Group  
500 Circle Drive  
Buchanan, MI 49107

SUBJECT: DONALD C. COOK NUCLEAR PLANT, UNIT 1 - ISSUANCE OF AMENDMENT  
RE: TECHNICAL SPECIFICATION CHANGE, "SEALED SOURCE  
CONTAMINATION," AND ITS ASSOCIATED BASES TO ADDRESS TESTING  
REQUIREMENTS FOR FISSION DETECTORS (TAC NO. MA4920)

Dear Mr. Powers:

The U.S. Nuclear Regulatory Commission has issued the enclosed Amendment No. 235 to Facility Operating License No. DPR-58 for the Donald C. Cook Nuclear Plant, Unit 1. The amendment consists of changes to the Technical Specification (TS) 3/4.7.7 in response to your application dated December 3, 1998.

The amendment would revise TS 3/4.7.7, "Sealed Source Contamination," and its associated bases to address testing requirements for fission detectors.

A copy of our related Safety Evaluation is also enclosed. Notice of Issuance will be included in the Commission's next biweekly Federal Register notice.

Sincerely,

Original signed by:

John F. Stang, Sr. Project Manager, Section 1  
Project Directorate III  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Docket No. 50-315

Enclosures: 1. Amendment No. 235 to DPR-58  
2. Safety Evaluation

cc w/encls: See next page

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