

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

SUBJECT: Application for amend to license DPR-58, revising TS 3/4.7.7,
"Sealed Source Contamination" & associated bases to address
testing requirements for fission detectors.

NOTES:

I. Jung

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December 3, 1998

AEP:NRC:1315

Docket No.: 50-315

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
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Washington, DC 20555-0001

Gentlemen:

Donald C. Cook Nuclear Plant Unit 1
TECHNICAL SPECIFICATIONS CHANGE REQUEST
SEALED SOURCES

Indiana Michigan Power Company, the Licensee for Donald C. Cook Nuclear Plant unit 1, proposes to amend Appendix A, technical specifications (T/S), of facility operating license DPR-58 pursuant to 10 CFR 50.90. The Licensee proposes to revise T/S 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 requirements and NUREG-0452, "Standard Technical Specifications."

Attachment 1 provides a detailed description and safety analysis of the proposed changes. Attachment 2 provides marked up T/S pages; attachment 3 provides the proposed T/S pages with the changes incorporated. Attachment 4 describes the evaluation performed in accordance with 10 CFR 50.92(c), which concludes that no significant hazards consideration is involved. Attachment 5 provides the environmental assessment.


The proposed changes have been reviewed by the plant nuclear safety review committee and by the nuclear safety and design review committee.

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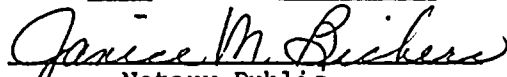
Copies of this letter and its attachments are being transmitted to the Michigan Public Service Commission and Michigan Department of Public Health, in accordance with the requirements of 10 CFR 50.91.

Sincerely,


R. P. Powers
Vice President

SWORN TO AND SUBSCRIBED BEFORE ME

THIS 3rd DAY OF December, 1998


Notary Public

My Commission Expires 2/14/2001

/jmc

Attachments

JANICE M. BICKERS
Notary Public, Berrien County, MI
My Commission Expires Feb. 16, 2001

c: J. A. Abramson, w/attachments
J. L. Caldwell, w/attachments
MDEQ - DW & RPD, w/attachments
NRC Resident Inspector, w/attachments
J. R. Sampson, w/attachments

bc: T. P. Beilman, w/attachments
J. J. Euto
B. J. Hickie
G. Honma
FOLIO, w/attachments
D. F. Kunsemiller/J. B. Kingseed/G. P. Arent/M. J. Gumns
M. W. Rencheck/E. R. Eckstein/D. F. Powell/D. R. Hafer/
K. R. Baker
J. F. Stang, Jr., - NRC Washington, DC, w/attachments

ATTACHMENT 1 TO AEP:NRC:1315

DESCRIPTION AND SAFETY ANALYSIS FOR PROPOSED CHANGES

Description And Safety Analysis For Proposed Changes

A. Summary of Proposed Changes

The Licensee proposes to revise unit 1 technical specification (T/S) 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 T/S requirements and NUREG-0452, "Standard Technical Specifications."

The proposed changes are described in detail in section E of this attachment. T/S pages that are marked to show the proposed changes are provided in attachment 2; the proposed T/S pages with the changes incorporated are provided in attachment 3.

B. Description of the Current Requirements

T/S 3.7.7.1 provides limits for removable contamination for sealed sources containing radioactive material. T/S surveillance requirement 4.7.7.1.2 provides test frequencies for three categories of sealed sources: sources in use (excluding startup sources previously subjected to core flux); stored sources not in use; and startup sources.

C. Bases for the Current Requirements

The limitations on removable contamination for sources requiring leak testing are based on 10 CFR 70.39(c) limits for plutonium. The limitation will ensure that leakage from sources will not exceed allowable intake values. Tests are performed periodically to verify that the limits have not been exceeded.

D. Need for Revision of the Requirement

The Licensee identified inconsistent T/S requirements for unit 1 and unit 2. The unit 2 requirements exclude fission detectors from the testing requirements for sources in use. Instead, the requirements for fission detectors are listed under stored sources not in use and startup sources. Based on the Licensee's review, it is appropriate to revise the unit 1 requirements to match those for unit 2.

E. Description of the Proposed Changes

The Licensee proposes to revise T/S surveillance requirements to specifically address fission detectors. Surveillance requirement 4.7.7.1.2.a, "sources in use," is revised to exclude fission detectors. Surveillance requirements 4.7.7.1.2.b, "stored sources not in use," and 4.7.7.1.2.c, "startup sources," are revised to include fission detectors. These changes would require fission detectors to be tested prior to use or transfer to another licensee unless tested within the previous six months.

Fission detectors would also be tested within 31 days prior to being subjected to core flux and following repair or maintenance.

Surveillance requirement 4.7.7.1.3, "Reports," is revised to change "detection" to "detector."

The bases are also revised to match those in unit 2. Information that reflects previous regulations are deleted and replaced with information that is more generic.

F. Bases of the Proposed Changes

The proposed changes are based on NUREG-0452, "Standard Technical Specifications." However, an editorial change has been made for consistency with the unit 2 requirements, which are not changed by this request. The exclusion for startup sources and fission detectors previously subjected to core flux is included in the specific surveillance requirement (4.7.7.1.2.a), rather than in the general requirement (4.7.7.1.2). This change is not intended to change the meaning.

It should be noted that NUREG-0431, (Improved) "Standard Technical Specifications," does not address sealed sources. Licensees who have converted to this format control sealed sources via an owner-controlled document.

Sealed sources are classified into three groups according to their use, with surveillance requirements commensurate with the probability of damage to a source in that group. Those sources that are frequently handled are required to be tested more often than those that are not. Sealed sources that are continuously enclosed in a shielded mechanism are considered to be stored and need not be tested unless they are removed from the shielding mechanism.

The proposed change to surveillance requirement 4.7.7.1.2.b is consistent with 10 CFR 70.39(c), which requires testing to verify that surface contamination on sources is less than 0.005 microcuries of radioactive material prior to transfer to general licensees. If more than 0.005 microcuries of radioactive material is detected, the source shall not be transferred. The proposed change provides reasonable assurance that a fission detector is not leaking radioactive material prior to use or prior to transfer to another licensee. Testing for surface contamination provides assurance that allowable limits for total body or individual organ dose are not exceeded in the event of ingestion or inhalation of leaking material. The 6-month surveillance interval reflects that leaks would develop slowly when the detector is not in use.

The proposed change to surveillance requirement 4.7.7.1.2.c has little impact on plant activities. Cook Plant no longer needs to use a primary startup source. Fission detectors are subjected to core flux even when the reactor is shut down; therefore, expanding the requirement to include them does not add a new requirement. However, if a new fission chamber detector were used, testing would be required. The requirement to test the

equipment within 31 days is likely based on characteristics of the primary startup source. The interval has no impact on the fission detector because the activity contained is not significantly changed in a 31-day period. It is unlikely that maintenance would be performed on the detectors once they have been used due to radiological concerns. However, if maintenance has been performed, a test would be required prior to use.

Changing "detection" to "detector" is considered an administrative change to be consistent with the unit 2 requirement and NUREG-0452. It is not intended to change the meaning.

The proposed bases for unit 1 are consistent with the bases for unit 2 and NUREG-0452. The text that included terminology used in the previous regulatory requirements is deleted because it is no longer consistent with the current requirements. The text is replaced with information that is more generic and includes other requirements.