



**INDIANA
MICHIGAN
POWER**

A unit of American Electric Power

Indiana Michigan Power
Cook Nuclear Plant
One Cook Place
Bridgman, MI 49106
AEP.com

March 24, 2005

AEP:NRC:5034-02
10 CFR 54

Docket Nos. 50-315
50-316

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Mail Stop O-P1-17
Washington, DC 20555-0001

Donald C. Cook Nuclear Plant, Units 1 and 2
License Renewal Application - Response to Request for Additional Information and
Advisory Committee for Reactor Safeguards License Renewal Subcommittee Comment
(TAC Nos. MC1202 and MC1203)

- References:
1. Letter from M. K. Nazar, Indiana Michigan Power Company (I&M), to U. S. Nuclear Regulatory Commission (NRC) Document Control Desk, "Donald C. Cook Nuclear Plant Units 1 and 2, Application for Renewed Operating Licenses," AEP:NRC:3034, dated October 31, 2003 [ML033070177].
 2. Letter from J. Rowley, NRC, to M. K. Nazar, I&M, "Request for Additional Information (RAI) for the Review of the Donald C. Cook Nuclear Plant, Units 1 and 2, License Renewal Application," dated February 17, 2005 [ML050490312].
 3. NRC Memorandum from J. Rowley, "Summary of Telephone Conference Call Held on March 1, 2005, Between the U.S. Nuclear Regulatory Commission and Indiana Michigan Power Company, Concerning Comments made by the Advisory Committee for Reactor Safeguards during the Subcommittee Meeting Pertaining to the Donald C. Cook Nuclear Plant, Units 1 and 2, License Renewal Application," dated March 9, 2005 [ML050690376].

Dear Sir or Madam:

By letter dated October 31, 2003 (Reference 1), Indiana Michigan Power Company (I&M) submitted an application pursuant to Title 10 of the *Code of Federal Regulations* Part 54 (10 CFR 54), to renew the operating licenses for Donald C. Cook Nuclear Plant (CNP), Units 1 and 2, for review by the U. S. Nuclear Regulatory Commission (NRC). During the development and review of the safety evaluation report for the CNP license renewal application, the NRC staff and members of the Advisory Committee for Reactor Safeguards (ACRS) License Renewal Subcommittee identified areas where additional information is needed to complete the review. The staff's request for additional information (RAI), identified as RAI B.1.29-1, was provided to I&M by a letter dated

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February 17, 2005 (Reference 2). The ACRS License Renewal Subcommittee's comment was discussed in a conference call on March 1, 2005, as documented in an NRC memorandum dated March 9, 2005 (Reference 3). This letter provides I&M's response to RAI B.1.29-1, regarding testing for selective leaching, and the ACRS License Renewal Subcommittee comment, regarding buried piping inspections.

Attachment 1 to this letter provides I&M's responses to the NRC staff's RAI and the ACRS License Renewal Subcommittee comment. Attachment 2 provides enhanced regulatory commitments associated with these responses.

Should you have any questions, please contact Mr. Richard J. Grumbir, Project Manager, License Renewal, at (269) 697-5141.

Sincerely,



Joseph N. Jensen
Site Vice President

NH/rdw

Enclosure: Affirmation

- Attachments: 1. Donald C. Cook Nuclear Plant, Units 1 and 2, License Renewal Application - Response to Request for Additional Information and Advisory Committee for Reactor Safeguards License Renewal Subcommittee Comment
2. List of Regulatory Commitments

- c: J. L. Caldwell, NRC Region III
K. D. Curry, AEP Ft. Wayne, w/o attachments
J. T. King, MPSC, w/o attachments
C. F. Lyon, NRC Washington DC
MDEQ - WHMD/HWRPS, w/o attachments
NRC Resident Inspector
J. G. Rowley, NRC Washington DC

Enclosure to AEP:NRC:5034-02

AFFIRMATION

I, Joseph N. Jensen, being duly sworn, state that I am Site Vice President of Indiana Michigan Power Company (I&M), that I am authorized to sign and file this request with the Nuclear Regulatory Commission on behalf of I&M, and that the statements made and the matters set forth herein pertaining to I&M are true and correct to the best of my knowledge, information, and belief.

Indiana Michigan Power Company



Joseph N. Jensen
Site Vice President

SWORN TO AND SUBSCRIBED BEFORE ME

THIS 2th DAY OF March, 2005



Notary Public

My Commission Expires 6/10/2007



**Donald C. Cook Nuclear Plant, Units 1 and 2
License Renewal Application
Response to Request for Additional Information and
Advisory Committee for Reactor Safeguards License Renewal Subcommittee Comment**

During the development and review of the safety evaluation report for the Donald C. Cook Nuclear Plant license renewal application, the U. S. Nuclear Regulatory Commission (NRC) staff and members of the Advisory Committee for Reactor Safeguards (ACRS) License Renewal Subcommittee identified areas where additional information is needed to complete the review. The NRC staff's request for additional information (RAI), identified as RAI B.1.29-1, was provided to Indiana Michigan Power Company (I&M) by a letter dated February 17, 2005 (Reference 1). The ACRS License Renewal Subcommittee's comment was discussed in a conference call on March 1, 2005, as documented in an NRC memorandum dated March 9, 2005 (Reference 2). This attachment provides I&M's response to RAI B.1.29-1, regarding testing for selective leaching, and the ACRS License Renewal Subcommittee comment, regarding buried piping inspections.

RAI B.1.29-1:

Regarding detecting aging effects for selective leaching, GALL [NUREG-1801, Generic Aging Lessons Learned (GALL) Report] XI.M33, SELECTIVE LEACHING OF MATERIALS, states:

Detection of Aging Effects: The one-time visual inspection and hardness measurement includes close examination of a select set of components to determine whether selective leaching has occurred and whether the resulting loss of strength and/or material will affect the intended functions of these components during the period of extended operation. Selective leaching generally does not cause changes in dimensions and is difficult to detect. One acceptable procedure is to visually inspect the susceptible components closely and conduct Brinell Hardness testing on the inside surfaces of the selected set of components to determine if selective leaching has occurred. If it is occurring, an engineering evaluation is initiated to determine acceptability of the affected components for further service.

In your commitment regarding the method you will use for selective leaching you stated:

"The Service Water System Reliability Program will be enhanced to check for selective leaching during visual inspections."

To be consistent with GALL, hardness testing or other acceptable physical test is required.

Your commitment does not indicate that the checking you do during visual inspections will include hardness testing or equivalent physical testing as required by GALL.

Please clearly state if hardness testing, or an acceptable equivalent test, will be part of your program. If not, identify, for NRC staff evaluation, the exception you are taking to GALL and the basis for that exception.

I&M's Response to RAI B.1.29-1:

I&M's response to RAI 3.3.2-2, provided in a letter dated June 8, 2004 (Reference 3), indicated that implementation of the enhancement to inspect for the presence of selective leaching will include using industry best practices at the time of implementation. Current industry practices include visual inspections and either hardness testing, as stated in NUREG-1801, Section XI.M33, or other inspection methods. Additionally, in the future, more effective techniques for the detection of selective leaching may become available.

This response is hereby clarified to include the following commitment:

I&M will enhance the Service Water System Reliability Program to manage loss of material due to selective leaching of susceptible materials by visual inspections and hardness testing or an equivalent physical test.

This commitment will be reflected in Section A.2.1.32 of the Updated Final Safety Analysis Report (UFSAR) Supplement, as follows (new text is shown in *italics*):

A.2.1.32 **SERVICE WATER SYSTEM RELIABILITY PROGRAM**

The Service Water System Reliability Program relies on implementation of the recommendations of NRC Generic Letter 89-13 to ensure that the effects of aging on the essential service water (ESW) system will be managed. The program includes surveillance and control techniques to manage aging effects caused by biofouling, corrosion, erosion, protective coating failures, and silting in the ESW system or structures and components serviced by the ESW system. This program requires enhancements that will be implemented prior to the period of extended operation. *Included in these enhancements is the requirement to visually inspect susceptible materials for the presence of selective leaching and conduct physical testing, such as hardness testing or an equivalent physical test to determine if selective leaching has occurred.*

ACRS Subcommittee Comment on Buried Piping Inspection Program (B.1.6)

As documented in the NRC memorandum dated March 9, 2005 (Reference 2):

- 1. In the Buried Piping Inspection aging management program (AMP), there was an exception to the Generic Aging Lessons Learned (GALL) Report that allowed for opportunistic inspection of these components instead of inspection based on a scheduled frequency. In the*

proposed update to GALL, this AMP was changed such that this exception would no longer be acceptable. The revised AMP states that the licensee is to perform an inspection, which may be opportunistic, within ten years of entering the period of extended operation.

A member raised a question as to whether Donald C. Cook Nuclear Plant would commit to performing an inspection within ten years if an opportunistic inspection has not occurred.

I&M Response to ACRS Subcommittee Comment:

In response to the ACRS License Renewal Subcommittee comment regarding scheduling of buried piping inspections, I&M commits to enhance the new Buried Piping Inspection Program to require performance of an inspection of a sample of buried piping included in the scope of this program within ten years after entering the period of extended operation, unless an opportunistic inspection of similar underground piping has occurred within this ten-year period. Before the end of the tenth year of extended operation, I&M will perform an engineering evaluation to determine if sufficient inspections have been conducted to draw a conclusion regarding the ability of the underground coatings to protect the underground piping from degradation. If not, I&M will conduct an inspection of a sample of buried piping to allow that conclusion to be reached.

This commitment will be reflected in Section A.2.1.6 of the UFSAR Supplement, as follows (New text is shown in *italics* and deleted text is shown in ~~strikeout~~):

A.2.1.6 BURIED PIPING INSPECTION PROGRAM

The Buried Piping Inspection Program will manage the effects of corrosion on the pressure-retaining capability of buried carbon steel piping and tanks. This program will include periodic inspections and preventive measures to mitigate corrosion. Preventive measures will be in accordance with standard industry practice for maintaining external coatings and wrappings. *An inspection of a sample of buried piping included in the scope of this program will be performed within ten years after entering the period of extended operation, unless an opportunistic inspection of similar underground piping has occurred within this ten-year period. Before the end of the tenth year of extended operation, an engineering evaluation will be performed to determine if sufficient inspections have been conducted to draw a conclusion regarding the ability of the underground coatings to protect the underground piping from degradation. If not, a sample of buried piping will be inspected to allow that conclusion to be reached.* ~~Buried piping and tanks will be inspected when they are excavated during maintenance.~~ The Buried Piping Inspection Program will be implemented prior to the period of extended operation.

References

1. Letter from J. Rowley, NRC, to M. K. Nazar, I&M, "Request for Additional Information (RAI) for the Review of the Donald C. Cook Nuclear Plant, Units 1 and 2, License Renewal Application," dated February 17, 2005 [ML050490312].
2. NRC Memorandum from J. Rowley, "Summary of Telephone Conference Call Held on March 1, 2005, Between the U.S. Nuclear Regulatory Commission and Indiana Michigan Power Company, Concerning Comments made by the Advisory Committee for Reactor Safeguards during the Subcommittee Meeting Pertaining to the Donald C. Cook Nuclear Plant, Units 1 and 2, License Renewal Application," dated March 9, 2005 [ML050690376].
3. Letter from M. K. Nazar, I&M, to NRC Document Control Desk, "Donald C. Cook Nuclear Plant, Units 1 and 2, Docket Nos. 50-315 and 50-316, License Renewal Application - Response to Requests for Additional Information on Electrical and Auxiliary Systems (TAC Nos. MC1202 and MC1203)," AEP:NRC:4034-06, dated June 8, 2004 [ML041680255].

LIST OF REGULATORY COMMITMENTS

The following table summarizes the actions committed to by Indiana Michigan Power Company (I&M) in this document. Any other actions discussed in this submittal represent intended or planned actions by I&M. They are described to the Nuclear Regulatory Commission (NRC) for information and are not regulatory commitments.

Commitment	Date
<p><u>I&M Response to RAI B.1.29-1:</u></p> <p>As an enhancement to the Service Water Reliability Program described in License Renewal Application Section B.1.29:</p> <p>I&M will enhance the Service Water System Reliability Program to manage loss of material due to selective leaching of susceptible materials by visual inspections and hardness testing or an equivalent physical test.</p>	<p>Unit 1: October 25, 2014</p> <p>Unit 2: December 23, 2017</p>
<p><u>I&M Response to Comment on Buried Piping Inspection Program (B.1.6):</u></p> <p>In response to the ACRS License Renewal Subcommittee comment regarding scheduling of buried piping inspections, I&M commits to enhance the new Buried Piping Inspection Program to require performance of an inspection of a sample of buried piping included in the scope of this program within ten years after entering the period of extended operation, unless an opportunistic inspection of similar underground piping has occurred within this ten-year period. Before the end of the tenth year of extended operation, I&M will perform an engineering evaluation to determine if sufficient inspections have been conducted to draw a conclusion regarding the ability of the underground coatings to protect the underground piping from degradation. If not, I&M will conduct an inspection of a sample of buried piping to allow that conclusion to be reached.</p>	<p>Unit 1: October 25, 2014</p> <p>Unit 2: December 23, 2017</p>