



April 25, 2002

AEP:NRC:2055  
10 CFR 50.55a

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  
PROPOSED ALTERNATIVES TO THE REQUIREMENTS OF  
SECTION XI OF THE AMERICAN SOCIETY OF  
MECHANICAL ENGINEERS CODE – REQUEST FOR  
ADDITIONAL INFORMATION (TAC Nos. MB3551 AND MB3552)

- References:
1. Letter from S. A. Greenlee, Indiana Michigan Power Company, to Nuclear Regulatory Commission Document Control Desk, "Donald C. Cook Nuclear Plant Units 1 and 2, Proposed Alternatives to the Requirements of Section XI of the American Society of Mechanical Engineers Code," submittal C1201-02, dated December 6, 2001.
  2. Letter from J. F. Stang, Nuclear Regulatory Commission, to A. Christopher Bakken III, Indiana Michigan Power Company, "Donald C. Cook Nuclear Plant, Units 1 and 2 – Request for Additional Information, 'Proposed Alternatives to the Requirements of Section XI of the American Society of Mechanical Engineers Code' (TAC Nos. MB3551 and MB3552)," dated March 1, 2002.

Indiana Michigan Power Company (I&M), the licensee for Donald C. Cook Nuclear Plant Units 1 and 2, submitted proposed alternatives to the requirements of Section XI of the American Society of Mechanical Engineers (ASME) Code (Reference 1). The first proposed alternative, submitted under the provisions of 10 CFR 50.55a(a)(3)(ii), would allow the use of an ambient temperature automatic or machine gas tungsten arc weld temper bead process for

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certain repairs to J-groove welds on vessel head penetrations (VHP). This process would be used as an alternative to the requirements in ASME Code, Section XI, that manual shielded metal arc welding be used, that the crown of the first weld layer be removed by grinding or machining, and that the completed weld be heat treated and undergo liquid penetrant inspection and radiography. The second proposed alternative, which was submitted under the provisions of 10 CFR 50.55a(a)(3)(i), would allow the use of the embedded flaw technique for repairs to J-groove welds on VHPs. This technique would be used as an alternative to the requirements in ASME Code, Section XI, that preclude welding over or embedding an existing flaw.

During the review of I&M's proposed alternatives, the Nuclear Regulatory Commission (NRC) determined that more information was required and a request for additional information was issued to allow completion of the review (Reference 2). Additional supplemental questions were discussed and further clarified in an April 3, 2002, telephone conference between I&M and NRC personnel. I&M's response to all of the questions is contained in Attachment 1 to this letter.

As noted in Attachment 1, I&M is withdrawing item 4 of relief request ISI 2001-02. A revised relief request is provided in Attachment 2. This revised relief request supercedes that provided in Reference 1, Attachment 2.

Attachment 3 to this letter provides three copies of a proprietary report, WCAP-14118, "Structural Integrity Evaluation of Reactor Vessel Upper Head Penetrations to Support Continued Operation: D. C. Cook Units 1 and 2." Attachment 4 provides a letter for withholding proprietary information and an accompanying affidavit.

As the Attachment 3 report contains information proprietary to Westinghouse Electric Company, LLC (Westinghouse), it is supported by an affidavit signed by Westinghouse, the owner of the information. The affidavit sets forth the basis on which the Westinghouse proprietary information contained in Attachment 3 may be withheld from public disclosure by the NRC and addresses, with specificity, the consideration listed in paragraph (b)(4) of 10 CFR 2.790.

Correspondence with respect to the copyright or proprietary aspects of the item listed above or the supporting Westinghouse affidavit should reference CAW-02-1517 and should be addressed to H. A. Sepp, Manager of Regulatory and Licensing Engineering, Westinghouse Electric Company, LLC, P.O. Box 355, Pittsburgh, Pennsylvania 15230-0355.

A non-proprietary version of WCAP-14118, Revision 5, is not presently available. I&M will provide the NRC a copy of the non-proprietary version of WCAP-14118 by May 31, 2002.

Attachment 5 provides the commitments made in this submittal.

Should you have any questions, please contact Mr. Gordon P. Arent, Manager of Regulatory Affairs, at (616) 697-5553.

Sincerely,

A handwritten signature in black ink, appearing to read "S. A. Greenlee". The signature is fluid and cursive, with a large loop at the end.

S. A. Greenlee  
Director, Nuclear Technical Services

/jen

Attachments

- c: K. D. Curry, w/o attachments
- J. E. Dyer
- MDEQ – DW & RPD, w/o attachments
- NRC Resident Inspector
- R. Whale, w/o attachments

## ATTACHMENT 1 TO AEP:NRC:2055

### RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION

In a letter from S. A. Greenlee, Indiana Michigan Power Company (I&M), to Nuclear Regulatory Commission (NRC) Document Control Desk, dated December 6, 2001, (submittal C1201-02), I&M proposed two alternatives to the requirements of Section XI of the American Society of Mechanical Engineers (ASME) Code. The first proposed alternative, submitted under the provisions of 10 CFR 50.55a(a)(3)(ii), would allow the use of an ambient temperature automatic or machine gas tungsten arc weld temper bead process for certain repairs to J-groove welds on vessel head penetrations (VHPs). This process would be used as an alternative to the requirements in ASME Code, Section XI, that manual shielded metal arc welding be used, that the crown of the first weld layer be removed by grinding or machining, and that the completed weld be heat treated and undergo liquid penetrant inspection and radiography. The second proposed alternative, which was submitted under the provisions of 10 CFR 50.55a(a)(3)(i), would allow the use of the embedded flaw technique for repairs to J-groove welds on VHPs. This technique would be used as an alternative to the requirements in ASME Code, Section XI, that preclude welding over or embedding an existing flaw.

The NRC, in a letter from J. F. Stang to A. C. Bakken III, dated March 1, 2002, requested additional information to enable the NRC's review of the proposed alternatives. Additional supplemental questions were discussed and further clarified in an April 3, 2002, telephone conference between I&M and NRC personnel. The I&M response to all of the questions is provided below.

#### **C1201-02 Attachment 1 Questions (Relief Request ISI-2001-01)**

##### NRC Question 1

Paragraph 4.0(b) – “Define when it would be impractical to use ultrasonic methods.”

##### I&M Response

There are a number of scenarios that would make an ultrasonic examination impractical. The most limiting would be the access to the examination area with a transducer, and the geometry of either the excavation or the surface with which the transducer would be coupled. A small area may not allow contact with the transducer. Additionally, the geometry of the excavation or the surface with which the transducer would be coupled may not allow the ultrasonic beam to pass through the area of interest.

The thickness of the weld layer may also prohibit the use of an ultrasonic examination. If the weld layer is shallow, a transducer may not be capable of being focused in the area of interest.

Another item that may prohibit the use of ultrasonic examination is the surface condition of the as-welded repair. The roughness of the surface may not allow the transducer to be coupled to the surface without extensive removal of the original weld metal as well as the repaired weld metal.

#### NRC Question 2

Paragraph 4.0(d) – “Since the basis for the relief is designed around performing austenitic repairs, why was NB-5340, Magnetic Particle Acceptance Standards, referenced?”

#### I&M Response

If the repair excavation extends into the ferritic vessel head material, then performing a magnetic particle examination in lieu of a liquid penetrant examination may be more practical. This would be true if the entire J-groove weld required removal down to the ferritic vessel head material. Magnetic particle examination of such a large area would require less time to perform, resulting in lower radiation exposure to the personnel performing the examination.

#### NRC Question 3

Paragraph 4.0(d) – “Explain why ultrasonic inspection acceptance standard Table IWB-3514-2 was used versus NB-5330 ultrasonic acceptance standards.”

#### I&M Response

Since ASME Code, Section XI, allows either the original construction code or ASME Code, Section XI, to be used for the repair, ASME Code, Section XI, was chosen. ASME Code, Section III, Article NB-5330, prohibits any crack or linear indication from remaining in the weld. Since Relief Request ISI-2001-01 may be used in conjunction with Relief Request ISI-2001-02 (embedded flaw repair technique), ASME Code, Section III, would be incompatible with the desire to leave a flaw that may be linear or crack-like in the weld and then overlay it with weld material.

#### **C1201-02 Attachment 2 Question (Relief Request ISI-2001-02)**

#### NRC Question 1

“Under proposed alternative, item 4, page 3, please explain how an unacceptable OD circumferential flaw above the attachment weld will be repaired.”

I&M Response

I&M is withdrawing item 4, and will follow the current code requirements. By following current code requirements, I&M would remove the VHP tube at a point above the flaw and install a new VHP tube section. No attempt to embed an outside diameter circumferential flaw above the J-groove weld will be used.

**Supplemental Questions**NRC Supplemental Question 1

The licensee referenced verbal approval given to North Anna as part of the basis for the relief requests. This is not specific to DC Cook. (North Anna provided a topical report and safety evaluation pertinent to North Anna as part of the justification).

I&M Response

The reference to the North Anna relief request was provided as information for the reviewer. The NRC has previously approved the use of the alternative weld repair method for Donald C. Cook Nuclear Plant (CNP) Units 1 and 2 VHP inside diameter (ID) repairs using the methodology outlined in WCAP-14159, "RV Closure Head Penetration Tube ID Weld Overlay Repair." WCAP-14159 is a non-proprietary version of WCAP-13998, "RV Closure Head Penetration Tube ID Weld Overlay Repair." The NRC safety evaluation report was provided in a letter from M. Reinhart, NRC, to E. E. Fitzpatrick, I&M, dated April 9, 1996.

The North Anna request to use the embedded flaw repair technique on the J-groove weld references WCAP-13998 and WCAP-15269, "Aging Management Review and Time Limited Aging Analysis for the North Anna Units 1 and 2." WCAP-15269 contains information regarding an aging management review for their facility. Among the items in WCAP-15269 was a value for North Anna's penetration tubes' cumulative fatigue usage factor (CUF). In a follow-up telephone conversation with NRC personnel, CNP was asked to provide a CUF.

CNP has not performed an aging management review for either Unit 1 or Unit 2. However, a CUF of 0.06 has been calculated for Unit 1, and a CUF of 0.11762 has been calculated for Unit 2.

NRC Supplemental Question 2

The licensee's justification references a March 12, 1996, letter from E. E. Fitzpatrick, I&M, to NRC Document Control Desk. This letter only addresses repairs to the inside diameter (ID) of CRDM nozzles.

I&M Response

The reference to the March 12, 1996, letter was provided as information for the reviewer. At that time, I&M requested relief to perform repairs on the control rod drive mechanism (CRDM) nozzle ID. I&M now plans to apply the techniques in WCAP-13998 to outside diameter (OD) repairs of CRDM penetration tubes and J-groove welds.

NRC Supplemental Question 3

The licensee did not provide plant specific failure/stress analysis to justify repairs to OD flaws on nozzles or seal welds on J-groove welds.

I&M Response

WCAP-14118, Revision 5, Attachment 3, provides plant-specific failure/stress analysis to justify repairs to OD flaws and J-groove welds.

NRC Supplemental Question 4

The proposed alternative discusses repairs to OD circumferential and J-groove weld flaws, but does not discuss NRC notification. This is contrary to the previous relief granted by the NRC where the licensee committed to notify the NRC whenever a circumferential flaw or J-groove weld repair is performed.

I&M Response

I&M will notify the NRC prior to making repairs utilizing this relief.

NRC Supplemental Question 5

Since D. C. Cook Unit 2 is operational, what acceptance criteria or surface conditioning was done to disposition the PT indications for relevance on penetration #32?

I&M Response

The results of the penetration #32 inspection were provided in a letter from Michael W. Rencheck, I&M, to NRC Document Control Desk, dated March 28, 2002, submittal AEP:NRC:2054.

NRC Supplemental Question 6

Does the licensee's action with respect to Unit 2 penetration #32 fully take into consideration recent lessons learned at another plant where surface conditioning exposed a much larger flaw?

I&M Response

The eddy current test performed on penetration #32 confirmed the presence of the indications identified by liquid penetrant testing, but no linear extent was seen. Since the indications were not aligned, they did not suggest the possibility of an underlying linear flaw. Therefore, surface conditioning was not necessary to address a recent occurrence at another plant in which minor surface conditioning of indications exposed a much larger linear flaw. The details of the inspection of penetration #32 are provided in the letter referenced in response to supplemental question 5.

ATTACHMENT 2 TO AEP:NRC:2055

Relief Request ISI-2001-02 (Revised)  
PROPOSED ALTERNATIVE FOR FLAW REPAIR

COMPONENT IDENTIFICATION

Code Class: 1

References: 1989 American Society of Mechanical Engineers (ASME) Code,  
Section III, NB-4622.9  
1989 ASME Code, Section XI, IWA-4120, IWA-4500

Examination Category: B-E

Item Numbers: B4.12

Description: Alternative repair techniques for reactor pressure vessel head penetration (VHP) J-groove attachment welds and the outer diameter of VHPs utilizing embedded flaw repair techniques.

Component Numbers: 1-OME-1, Donald C. Cook Nuclear Plant (CNP) Unit 1 Reactor Pressure Vessel (79 penetrations)  
2-OME-1, CNP Unit 2 Reactor Pressure Vessel (78 penetrations)

**CODE REQUIREMENT**

CNP Units 1 and 2 are in the third ten-year inservice inspection interval using the 1989 Edition of ASME Code, Section XI.

ASME Section XI, IWA-4120, “Rules and Requirements,” states:

- (a) “Repairs shall be performed in accordance with the Owner’s Design Specification and the original Construction Code of the component or system. Later Editions and Addenda of the Construction Code or of Section III either in their entirety or portions thereof, and Code Cases may be used. If repair welding cannot be performed in accordance with these requirements, the applicable alternative requirements of IWA 4500 and the following may be used...”

ASME Section XI, IWA-4310, “Repair Program,” states:

“Defects shall be removed or reduced in size in accordance with this Article....”

Neither ASME Code, Section XI, IWA-4120 nor ASME Code, Section XI, IWA-4310 allow welding over or embedding an existing flaw.

**PROPOSED ALTERNATIVE**

Any flaws requiring repair that are identified on reactor VHPs and on the J-groove attachment welds will be embedded with a weld overlay which will prevent further growth of the defects by isolating them from the reactor coolant which might cause them to propagate by primary water stress corrosion cracking (PWSCC).

For an inside diameter (ID) repair, an unacceptable axial flaw will be first excavated (or partially excavated) to a depth no greater than 0.125 inches. The excavation will be performed using an electric discharge machining process to minimize penetration tube distortion. After the excavation is complete, either an ultrasonic test (UT) or eddy current test (ECT) will be performed to ensure the entire flaw length is captured. Then an Alloy 52 weldment will be applied to fill the excavation. Finally, the finished weld will be examined by dye penetrant test (PT), UT or ECT to ensure acceptability. If an unacceptable ID circumferential flaw is detected, the flaw will either be repaired in accordance with existing code requirements, or will be partially excavated to reduce the flaw to an acceptable size, examined by UT or ECT, overlaid with Alloy 52, and examined by PT, UT or ECT as described above.

Outside diameter (OD) repairs will be addressed as follows:

1. An unacceptable OD axial or circumferential flaw in a tube below a J-groove attachment weld will be sealed off with Alloy 52 weldment. Excavation or partial excavation of such flaws will not be required, since clearance is not a concern on the outside of a tube.
2. Unacceptable radial OD flaws on the J-groove attachment weld will be sealed off with a 360 degree overlay of Alloy 52 covering the entire weld. No excavation will be required.
3. Unacceptable axial tube flaws extending into the J-groove attachment weld will be sealed with Alloy 52 as in Item 1 above. In addition, the entire J-groove attachment weld will be overlaid with Alloy 52 to embed the axial crack in the seal weld on the VHP penetration.
4. For all of the above flaw configurations, the finished weld will be examined by PT, UT, or ECT to ensure acceptability.

#### **BASIS FOR PROPOSED ALTERNATIVE**

Pursuant to 10 CFR 50.55a(a)(3)(i), the alternative is proposed on the basis that it provides an acceptable level of quality and safety.

The embedded flaw repair technique is considered a permanent repair for the following reasons:

1. As long as a PWSCC flaw remains isolated from the primary water (PW) environment, it is prevented from propagating. Since Alloy 52 weldment is considered highly resistant to PWSCC, a new PWSCC crack is not expected to initiate and grow through the Alloy 52 overlay to reconnect the PW environment with the embedded flaw. Structural integrity of the affected VHP J-groove attachment weld will be maintained by the remaining unflawed portion of the weld.
2. The residual stresses produced by the embedded flaw technique have been measured and found to be relatively low. This was documented in the attachment to a letter from E. E. Fitzpatrick, Indiana Michigan Power Company (I&M), to the Nuclear Regulatory Commission (NRC) Document Control Desk, "Reactor Vessel Head Penetration Alternate Repair Techniques," letter AEP:NRC:1218A, dated March 12, 1996. The low residual stresses indicate that no new cracks will initiate and grow in the area adjacent to the repair weld.
3. There are no other known mechanisms for significant crack propagation in this region since cyclic fatigue loading is negligible.

I&M understands that the NRC has verbally approved a similar alternative for North Anna Power Station Unit 2 (Docket 50-339). The alternative for North Anna Power Station Unit 2 was

transmitted and supplemented by Virginia Electric and Power Company letters dated October 18, November 9, and November 16, 2001. Additionally, the NRC previously approved a similar alternative for CNP Units 1 and 2. The previous CNP approval was documented in an NRC letter dated April 9, 1996. Although the alternative was applied to the VHP tube base metal rather than VHP welds, both alternatives use an embedded flaw repair technique.

### **CONCLUSION**

I&M considers the embedded flaw repair technique to be an alternative to Code requirements that provides an acceptable level of quality and safety, as required.

ATTACHMENT 3 TO AEP:NRC:2055

WCAP-14118, Revision 5

“Structural Integrity Evaluation of Reactor Vessel Upper Head Penetrations to  
Support Continued Operation: D. C Cook Units 1 and 2”

(Proprietary)

ATTACHMENT 4 TO AEP:NRC:2055

WESTINGHOUSE APPLICATION FOR WITHHOLDING  
AND AFFIDAVIT



Westinghouse Electric Company LLC

Box 355  
Pittsburgh Pennsylvania 15230-0355

April 11, 2002

CAW-02-1517

Document Control Desk  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555

Attention: Mr. Samuel J. Collins

APPLICATION FOR WITHHOLDING PROPRIETARY  
INFORMATION FROM PUBLIC DISCLOSURE

Subject: WCAP-14118, Revision 5, "Structural Integrity Evaluation of Reactor Vessel Upper Head Penetrations to Support Continued Operation: D. C. Cook Units 1 and 2", January 2002.

Dear Mr. Collins:

The proprietary information for which withholding is being requested in the above-referenced report is further identified in Affidavit CAW-02-1517 signed by the owner of the proprietary information, Westinghouse Electric Company LLC. The affidavit, which accompanies this letter, sets forth the basis on which the information may be withheld from public disclosure by the Commission and addresses with specificity the considerations listed in paragraph (b)(4) of 10 CFR Section 2.790 of the Commission's regulations.

Accordingly, this letter authorizes the utilization of the accompanying Affidavit by American Electric Power Company.

Correspondence with respect to the proprietary aspects of the application for withholding or the Westinghouse affidavit should reference this letter, CAW-02-1517 and should be addressed to the undersigned.

Very truly yours,

H. A. Sepp, Manager  
Regulatory and Licensing Engineering

Enclosures

cc: M. Scott, NRR/OWFN/DRPW/PDIV2 (Rockville, MD) 1L

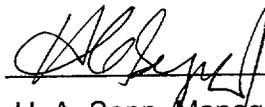
AFFIDAVIT

COMMONWEALTH OF PENNSYLVANIA:

SS

COUNTY OF ALLEGHENY:

Before me, the undersigned authority, personally appeared H. A. Sepp, who, being by me duly sworn according to law, deposes and says that he is authorized to execute this Affidavit on behalf of Westinghouse Electric Company LLC ("Westinghouse"), and that the averments of fact set forth in this Affidavit are true and correct to the best of his knowledge, information, and belief:

  
\_\_\_\_\_  
H. A. Sepp, Manager  
Regulatory and Licensing Engineering

Sworn to and subscribed  
before me this 12<sup>th</sup> day  
of April, 2007

  
\_\_\_\_\_  
Notary Public

Notarial Seal  
Kay E. Gongaware, Notary Public  
Monroeville Boro, Allegheny County  
My Commission Expires Feb. 7, 2005  
Member, Pennsylvania Association of Notaries



- (1) I am Manager, Regulatory and Licensing Engineering, in Nuclear Services, Westinghouse Electric Company LLC ("Westinghouse"), and as such, I have been specifically delegated the function of reviewing the proprietary information sought to be withheld from public disclosure in connection with nuclear power plant licensing and rule making proceedings, and am authorized to apply for its withholding on behalf of the Westinghouse Electric Company LLC.
- (2) I am making this Affidavit in conformance with the provisions of 10CFR Section 2.790 of the Commission's regulations and in conjunction with the Westinghouse application for withholding accompanying this Affidavit.
- (3) I have personal knowledge of the criteria and procedures utilized by the Westinghouse Electric Company LLC in designating information as a trade secret, privileged or as confidential commercial or financial information.
- (4) Pursuant to the provisions of paragraph (b)(4) of Section 2.790 of the Commission's regulations, the following is furnished for consideration by the Commission in determining whether the information sought to be withheld from public disclosure should be withheld.
  - (i) The information sought to be withheld from public disclosure is owned and has been held in confidence by Westinghouse.
  - (ii) The information is of a type customarily held in confidence by Westinghouse and not customarily disclosed to the public. Westinghouse has a rational basis for determining the types of information customarily held in confidence by it and, in that connection, utilizes a system to determine when and whether to hold certain types of information in confidence. The application of that system and the substance of that system constitutes Westinghouse policy and provides the rational basis required.

Under that system, information is held in confidence if it falls in one or more of several types, the release of which might result in the loss of an existing or potential competitive advantage, as follows:

- (a) The information reveals the distinguishing aspects of a process (or component, structure, tool, method, etc.) where prevention of its use by any of Westinghouse's competitors without license from Westinghouse constitutes a competitive economic advantage over other companies.
- (b) It consists of supporting data, including test data, relative to a process (or component, structure, tool, method, etc.), the application of which data secures a competitive economic advantage, e.g., by optimization or improved marketability.
- (c) Its use by a competitor would reduce his expenditure of resources or improve his competitive position in the design, manufacture, shipment, installation, assurance of quality, or licensing a similar product.
- (d) It reveals cost or price information, production capacities, budget levels, or commercial strategies of Westinghouse, its customers or suppliers.
- (e) It reveals aspects of past, present, or future Westinghouse or customer funded development plans and programs of potential commercial value to Westinghouse.
- (f) It contains patentable ideas, for which patent protection may be desirable.

There are sound policy reasons behind the Westinghouse system which include the following:

- (a) The use of such information by Westinghouse gives Westinghouse a competitive advantage over its competitors. It is, therefore, withheld from disclosure to protect the Westinghouse competitive position.

- (b) It is information which is marketable in many ways. The extent to which such information is available to competitors diminishes the Westinghouse ability to sell products and services involving the use of the information.
  - (c) Use by our competitor would put Westinghouse at a competitive disadvantage by reducing his expenditure of resources at our expense.
  - (d) Each component of proprietary information pertinent to a particular competitive advantage is potentially as valuable as the total competitive advantage. If competitors acquire components of proprietary information, any one component may be the key to the entire puzzle, thereby depriving Westinghouse of a competitive advantage.
  - (e) Unrestricted disclosure would jeopardize the position of prominence of Westinghouse in the world market, and thereby give a market advantage to the competition of those countries.
  - (f) The Westinghouse capacity to invest corporate assets in research and development depends upon the success in obtaining and maintaining a competitive advantage.
- (iii) The information is being transmitted to the Commission in confidence and, under the provisions of 10CFR Section 2.790, it is to be received in confidence by the Commission.
- (iv) The information sought to be protected is not available in public sources or available information has not been previously employed in the same original manner or method to the best of our knowledge and belief.
- (v) The proprietary information sought to be withheld in this submittal is that which is appropriately marked in WCAP-14118, Revision 5 (Proprietary), January 2002 for D. C. Cook Units 1 and 2 being transmitted by the American Electric Company letter and Application for Withholding Proprietary Information from Public Disclosure, to the Document Control Desk, Attention Mr. Samuel J.

Collins. The proprietary information as submitted for use by American Electric Company for D. C. Cook Units 1 and 2 is expected to be applicable in other licensee submittals in response to certain NRC requirements for justification of the use of fracture mechanics analyses to support continued safe operation of D. C. Cook Unit 1 or 2 with the presence of a crack in a control rod drive head penetration.

This information is part of that which will enable Westinghouse to:

- (a) Determine the allowable time of safe operation if cracks are found.
- (b) Assist the customer to obtain NRC approval.

Further this information has substantial commercial value as follows:

- (a) Westinghouse plans to sell the use of similar information to its customers for purposes of meeting NRC requirements for licensing documentation.
- (b) Westinghouse can sell support and defense of continued safe operation with the presence of cracks in a control rod drive head penetration.

Public disclosure of this proprietary information is likely to cause substantial harm to the competitive position of Westinghouse because it would enhance the ability of competitors to provide similar support documentation and licensing defense services for commercial power reactors without commensurate expenses. Also, public disclosure of the information would enable others to use the information to meet NRC requirements for licensing documentation without purchasing the right to use the information.

The development of the technology described in part by the information is the result of applying the results of many years of experience in an intensive Westinghouse effort and the expenditure of a considerable sum of money.

In order for competitors of Westinghouse to duplicate this information, similar technical programs would have to be performed and a significant manpower effort, having the requisite talent and experience, would have to be expended for developing testing and analytical methods and performing tests.

Further the deponent sayeth not.

## PROPRIETARY INFORMATION NOTICE

Transmitted herewith are proprietary and/or non-proprietary versions of documents furnished to the NRC in connection with requests for generic and/or plant-specific review and approval.

In order to conform to the requirements of 10 CFR 2.790 of the Commission's regulations concerning the protection of proprietary information so submitted to the NRC, the information which is proprietary in the proprietary versions is contained within brackets, and where the proprietary information has been deleted in the non-proprietary versions, only the brackets remain (the information that was contained within the brackets in the proprietary versions having been deleted). The justification for claiming the information so designated as proprietary is indicated in both versions by means of lower case letters (a) through (f) contained within parentheses located as a superscript immediately following the brackets enclosing each item of information being identified as proprietary or in the margin opposite such information. These lower case letters refer to the types of information Westinghouse customarily holds in confidence identified in Sections (4)(ii)(a) through (4)(ii)(f) of the affidavit accompanying this transmittal pursuant to 10 CFR 2.790(b)(1).

## COPYRIGHT NOTICE

The reports transmitted herewith each bear a Westinghouse copyright notice. The NRC is permitted to make the number of copies of the information contained in these reports which are necessary for its internal use in connection with generic and plant-specific reviews and approvals as well as the issuance, denial, amendment, transfer, renewal, modification, suspension, revocation, or violation of a license, permit, order, or regulation subject to the requirements of 10 CFR 2.790 regarding restrictions on public disclosure to the extent such information has been identified as proprietary by Westinghouse, copyright protection notwithstanding. With respect to the non-proprietary versions of these reports, the NRC is permitted to make the number of copies beyond those necessary for its internal use which are necessary in order to have one copy available for public viewing in the appropriate docket files in the public document room in Washington, DC and in local public document rooms as may be required by NRC regulations if the number of copies submitted is insufficient for this purpose. Copies made by the NRC must include the copyright notice in all instances and the proprietary notice if the original was identified as proprietary.

ATTACHMENT 5 TO AEP:NRC:2055

COMMITMENTS

The following table identifies those 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 the NRC's information and are not regulatory commitments.

Commitment	Due Date
I&M will notify the NRC prior to making repairs utilizing relief ISI-2001-02.	Whenever the embedded flaw technique is used to repair vessel penetrations.
I&M will provide the NRC a non-proprietary version of WCAP-14117.	May 31, 2002