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March 29, 2010

AEP-NRC-2010-30
10 CFR 50.90

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

SUBJECT: Donald C. Cook Nuclear Plant Unit 1 and Unit 2
Docket Nos. 50-315 and 50-316
Schedule for Submittal of Revised Unit 1 and Unit 2 Small Break Loss of Coolant
Accident Analyses Addressing Residual Heat Removal System Spray Issue

Dear Sir or Madam:

This letter informs the U. S. Nuclear Regulatory Commission (NRC) of Indiana Michigan Power Company's (I&M's) schedule for transmittal of revised Unit 1 and Unit 2 Small Break Loss-of-Coolant Accident (SBLOCA) analyses that will address an issue involving potential diversion of Residual Heat Removal (RHR) system flow. As described below, I&M previously informed the NRC that this schedule would be provided by March 15, 2010. However, as discussed with the NRC Licensing Project Manager, additional time was needed to assure all impacts of the analysis revision schedule were considered. Additionally, this letter informs the NRC that, until the revised analyses are completed and incorporated into the Updated Final safety Analysis Report (UFSAR), I&M will consider the Unit 1 and Unit 2 SBLOCA analyses-of-record to be the analyses currently identified in the UFSAR.

Background

The documents referenced in this letter are identified in Attachment 1. There are additional documents pertaining to the Unit 1 and Unit 2 SBLOCA analyses that are not referenced because they are not directly relevant to the matters addressed by this letter.

In Reference 1, I&M committed to provide a new analysis of a Unit 1 SBLOCA pursuant to 10 CFR 50.46(a)(3)(ii). The new analysis was transmitted to the NRC for information by Reference 2. The NRC reviewed the new Unit 1 analysis as documented in Reference 3.

In Reference 4, I&M committed to provide a new analysis of a Unit 2 SBLOCA pursuant to 10 CFR 50.46(a)(3)(ii). The new analysis was transmitted to the NRC for information by Reference 5. Reference 6 transmitted an NRC request for additional information (RAI) regarding the new Unit 2 analysis.

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The new Unit 1 and Unit 2 SBLOCA analyses transmitted by References 2 and 5 were performed by Westinghouse Electric Corporation LLC (Westinghouse). In Reference 7, I&M informed the NRC that Westinghouse had determined that the new Unit 1 and Unit 2 SBLOCA analyses included an assumption that was inconsistent with the Donald C. Cook Nuclear Plant (CNP) Emergency Operation Procedures (EOPs). In the new analyses, it was assumed that all RHR system flow is directed to the reactor coolant system for the entire duration of the cold leg recirculation phase of the event. However, the CNP EOPs contain provisions to realign the RHR pump discharge to provide containment spray under certain conditions. I&M informed the NRC, in Reference 7, that submittal of a response to the RAI would be deferred and that, by March 15, 2010, I&M will provide the NRC with a schedule for resolution of the RHR flow diversion issue. I&M also informed the NRC that, following submittal of the RHR flow diversion issue resolution, I&M would coordinate with the NRC staff to establish which of the RAI questions remain applicable, and establish a schedule for submittal of responses to the applicable RAI questions.

I&M has received the results of scoping studies performed by Westinghouse. These studies indicate that, with the RHR flow diversion modeled and all other inputs, assumptions, and modeling unchanged, unacceptable results are obtained. However, Westinghouse has also documented that reasonable assurance of safe operation is provided by known conservatisms in the operating conditions assumed in the SBLOCA analyses, such as those associated with core peaking factors, emergency core cooling pump performance, and containment spray modeling, and by known conservatisms in the NOTRUMP-EM computer model, such as those associated with the assumed decay heat, the zirconium reaction model, the condensation-of-safety-injection model, the top-skewed power shape assumption, and vertical entrainment of coolant.

Current Status and Schedule Commitment

Given the potential impact of the RHR flow diversion issue on the new Unit 1 and Unit 2 SBLOCA analyses, I&M has elected not to incorporate these analyses into the CNP UFSAR as the analyses of record. I&M intends to have these SBLOCA analyses completely revised. Until the revised analyses are completed and incorporated into the UFSAR, I&M will consider the Unit 1 and Unit 2 SBLOCA analyses-of-record to be those identified in a 10 CFR 50.46 annual report (Reference 8) that preceded submittal of the new Unit 1 and Unit 2 analyses by References 2 and 5.

The revised analysis resolving the RHR flow diversion issue for Unit 2 will be submitted no later than August 12, 2011. The revised analysis resolving the RHR flow diversion issue for Unit 1 will be submitted no later than August 31, 2012. Consistent with Reference 7, following submittal of the revised analysis resolving the RHR flow diversion issue for Unit 2, I&M will coordinate with the NRC staff to establish which of the RAI questions transmitted by Reference 6 remain applicable, and establish a schedule for submittal of responses to the applicable questions.

Attachment 2 to this letter provides the preceding commitments in tabular format. Should you have any questions, please contact Mr. James Petro, Jr., Regulatory Affairs Manager, at (269) 466-2489.

Sincerely,



Raymond A Hruby, Jr.
Vice President - Site Support Services

JRW/rdw

Attachments:

1. References.
2. Regulatory Commitments.

c: T. A. Beltz – NRC Washington DC,
J. T. King, MPSC
S. M. Krawec, Ft. Wayne AEP, w/o attachments
MDNRE – WHMD/RPS
NRC Resident Inspector
M. A. Satorius, NRC Region III

Attachment 1 to AEP-NRC-2010-30

REFERENCES

1. Letter from S. A. Greenlee, Indiana Michigan Power Company (I&M), to Nuclear Regulatory Commission (NRC) Document Control Desk, "Donald C. Cook Nuclear Plant Units 1 and 2, Annual Report of Loss-Of-Coolant Accident Evaluation Model Changes," C0801-19, dated August 31, 2001 (ADAMS Accession Number ML012490022).
2. Letter from J. N. Jensen, I&M, to NRC Document Control Desk, "Donald C. Cook Nuclear Plant Unit 1, Small Break Loss-of-Coolant Accident Evaluation Model Reanalysis," AEP:NRC:7046, dated March 29, 2007 (ADAMS Accession Number ML071000431).
3. Letter from T. A. Beltz, NRC, to J. N. Jensen, I&M, "Donald C. Cook Nuclear Plant, Unit 1 (CNP-1); Review of the Small Break Loss-of-Coolant Accident (LOCA) Evaluation Model Reanalysis Submittal (TAC NO. MD5297)," dated March 27, 2009 (ADAMS Accession Number ML090780023).
4. Letter from E. E. Fitzpatrick, I&M, to NRC Document Control Desk, "Donald C. Cook Nuclear Plant Units 1 and 2, Annual Report of LOCA Evaluation Model Changes," AEP:NRC:1118I, dated March 24, 1995 (ADAMS Accession Number ML021060010).
5. Letter from R. A. Hruby, I&M, to NRC Document Control Desk, "Donald C. Cook Nuclear Plant Unit 2, Small Break Loss-Of-Coolant Accident Evaluation Model Reanalysis," AEP-NRC-2009-25, dated March 30, 2009 (ADAMS Accession Number ML091100153).
6. Letter from T. A. Beltz, NRC, to J. N. Jensen, I&M, "Donald C. Cook Nuclear Plant, Unit 2 - Request for Additional Information Regarding the Small-Break Loss-of-Coolant Accident Evaluation Model Reanalysis (TAC No. ME1147)," dated September 22, 2009 (ADAMS Accession Number ML092610017).
7. Letter from R. A. Hruby, I&M, to NRC Document Control Desk, "Donald C. Cook Nuclear Plant Unit 1 and Unit 2, Docket Nos. 50-315 and 50-316, Schedule for Submittal of Response to Request for Additional Information Regarding New Small Break Loss-of-Coolant Accident Analysis for Donald C. Cook Nuclear Plant Unit 2, and Submittal of New Unit 1 and Unit 2 SBLOCA Analyses (TAC No. ME1 147)," AEP-NRC-2010-1, dated January 15, 2010 (ADAMS Accession Number ML100260298).
8. Letter from J. N. Jensen, I&M, to NRC Document Control Desk, "Donald C. Cook Nuclear Plant Unit 1 and Unit 2, Annual Report and Thirty-Day Report of Loss of Coolant Accident Evaluation Model Changes," AEP:NRC:6046, dated August 11, 2006 (ADAMS Accession Number ML062340193).

ATTACHMENT 2 TO AEP-NRC-2010-30

REGULATORY 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	Date
I&M will submit a revised Small Break Loss-of-Coolant-Accident (SBLOCA) analysis for Unit 2 resolving the Residual Heat Removal (RHR) flow diversion issue.	No later than August 12, 2011
I&M will submit a revised SBLOCA analysis for Unit 1 resolving the RHR flow diversion issue.	No later than August 31, 2012
I&M will coordinate with the NRC staff to establish which of the questions transmitted by NRC letter dated September 22, 2009 (ADAMS Accession Number ML092610017), remain applicable, and establish a schedule for submittal of responses to the applicable questions.	Following submittal of the revised SBLOCA analysis for Unit 2