

August 7, 2006

EA-06-177

Mr. M. Nazar
Senior Vice President and
Chief Nuclear Officer
Indiana Michigan Power Company
Nuclear Generation Group
One Cook Place
Bridgman, MI 49106

SUBJECT: D. C. COOK NUCLEAR POWER PLANT, UNITS 1 AND 2 - NRC EMERGENCY
PREPAREDNESS INSPECTION REPORT 05000315/2006501(DRS);
05000316/2006501(DRS)

Dear Mr. Nazar:

This refers to the inspection conducted May 1 through August 1, 2006, at the D. C. Cook Nuclear Power Plant (D. C. Cook) facility and in the NRC Region III offices. The purpose of the inspection was to review emergency action level and emergency plan changes, and to follow up on the Unresolved Item No. 05000316/2004006-04, "Potential Decrease in Effectiveness of the Steam Generator Secondary Side Release Emergency Action Level." The enclosed report presents the results of this inspection.

This inspection was an examination of activities conducted under your license as they relate to safety and compliance, with the Commission's rules and regulations, and with the conditions of your license. Within these areas, the inspection consisted of selected examination of procedures and representative records, observations of activities, and interviews with personnel.

Based on the results of this inspection, an apparent violation was identified and is being considered for escalated enforcement action, in accordance with the NRC Enforcement Policy. The current Enforcement Policy is included on the NRC's Web site at www.nrc.gov; select **What We Do**, **Enforcement**, then **Enforcement Policy**. The apparent violation of 10 CFR 50.54(q) and 10 CFR 50.47(b)(4), involved changes made to a D. C. Cook emergency plan emergency action level (EAL), which appeared to have resulted in a decrease in the effectiveness of the plan.

Specifically, on April 16, 2003, D. C. Cook changed the previously NRC approved EAL scheme. The change was associated with the Fission Product Barrier Matrix EAL for a loss of containment barrier due to a steam generator secondary side release, and involved the inclusion of a non-conservative criteria for a release to the environment to occur for at least 30 minutes before meeting this EAL. As changed, the EAL appeared to reduce the number of classifiable events (General Emergency, Site Area Emergency, and Unusual Event) by

excluding those events which resulted in release durations to the environment for events of 30 minutes or less. This addition of the time criteria could also delay the declaration of an event until the 30 minutes had been reached. The NRC regulations in 10 CFR 50.54(q) permit a licensee to make emergency plan changes without NRC approval only if the changes do not decrease the effectiveness of the plan.

The circumstances surrounding this apparent violation, the significance of the issue, and the need for lasting and effective corrective actions, were discussed with members of your staff during a telephone exit on August 1, 2006. As a result, it may not be necessary to conduct a predecisional enforcement conference in order to enable the NRC to make an enforcement decision.

Before the NRC makes its enforcement decision, we are providing you an opportunity to either: (1) respond to the apparent violation addressed in this inspection report within 30 days of the date of this letter, or (2) request a predecisional enforcement conference. If a conference is held, it will be open for public observation. The NRC will also issue a press release to announce the conference. Please contact Kenneth Riemer at 630-829-9757 within 7 days of the date of this letter to notify the NRC of your intended response.

If you choose to provide a written response, it should be clearly marked as a "Response to An Apparent Violation in Inspection Report Nos. 05000315/2006501; 05000316/2006501; EA-06-177" and should include for the apparent violation: (1) the reason for the apparent violation, or, if contested, the basis for disputing the apparent violation, (2) the corrective steps that have been taken and the results achieved, (3) the corrective steps that will be taken to avoid further violations, and (4) the date when full compliance will be achieved. Your response may reference or include previously docketed correspondence, if the correspondence adequately addresses the required response. If an adequate response is not received within the time specified or an extension of time has not been granted by the NRC, the NRC will proceed with its enforcement decision.

In addition, please be advised that the characterization of the apparent violation described in the enclosed inspection report may change as a result of further NRC review. You will be advised by separate correspondence of the results of our deliberations on this matter.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response (if you choose to provide one) will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's

document system (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>. To the extent possible, your response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the Public without redaction.

Sincerely,

/RA/

Cynthia D. Pederson, Director
Division of Reactor Safety

Docket Nos. 50-315; 50-316
License Nos. DPR-58; DPR-74

Enclosure: Inspection Report 05000315/2006501; 05000316/2006501
w/Attachments: Supplemental Information

cc w/encl: J. Jensen, Site Vice President
L. Weber, Plant Manager
G. White, Michigan Public Service Commission
L. Brandon, Michigan Department of Environmental Quality -
Waste and Hazardous Materials Division
Emergency Management Division
MI Department of State Police
D. Lochbaum, Union of Concerned Scientists
S. Stewart, Training Manager

document system (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>. To the extent possible, your response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the Public without redaction.

Sincerely,

/RA/

Cynthia D. Pederson, Director
Division of Reactor Safety

Docket Nos. 50-315; 50-316
License Nos. DPR-58; DPR-74

Enclosure: Inspection Report 05000315/2006501; 05000316/2006501
w/Attachments: Supplemental Information

cc w/encl: J. Jensen, Site Vice President
L. Weber, Plant Manager
G. White, Michigan Public Service Commission
L. Brandon, Michigan Department of Environmental Quality -
Waste and Hazardous Materials Division
Emergency Management Division
MI Department of State Police
D. Lochbaum, Union of Concerned Scientists
S. Stewart, Training Manager

DOCUMENT NAME:E:\Filenet\ML062210277.wpd

☐ Publicly Available ☐ Non-Publicly Available ☐ Sensitive ☐ Non-Sensitive

To receive a copy of this document, indicate in the concurrence box "C" = Copy without attach/encl "E" = Copy with attach/encl "N" = No copy

OFFICE	RIII	RIII	RIII	RIII	RIII
NAME	RJickling	KRiemer	KO'Brien	CLipa	CPederson
DATE	08/03/06	08/07/06	08/03/06	08/03/06	08/07/06

OFFICIAL RECORD COPY

ADAMS Distribution:

SECY

OCA

M. Johnson, OE

D. Solorio, OE

D. Starkey

J. Caldwell, RIII

G. Grant, RIII

B. Jones, OGC

J. Dyer, NRR

R. Zimmerman, Director, NSIR

G. Tracy, Director, Division of Security, NSIR

S. Richards, Chief, IIPB, NRR

M. Tschiltz, Chief, SPSB, NRR

D. Merzke, NRR

J. Stang, NRR

D. Holody, Enforcement Officer, RI

C. Evans, Enforcement Officer, RII

K. O'Brien, Enforcement Officer, RIII

K. Fuller, Enforcement Officer, RIV

R. Pascarelli, Enforcement Coordinator, NRR

R. Barnes, Enforcement Contact, NSIR

J. Schlueter, OSTP

C. Weil

J. Strasma, RIII:PA

R. Lickus, RIII

J. Lynch, RIII

OEWEB

OEMAIL

JLD

PST

RidsNrrDirslrib

GEG

BJK1

CAA1

LSL

C. Pederson,

DRPIII

DRSIII

PLB1

TXN

JAL3

RXJ1

ROPreports@nrc.gov

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket Nos.: 50-315; 50-316
License Nos.: DPR-58; DPR-74

Report No.: 05000315/2006501 and 05000316/2006501

Licensee: Indiana Michigan Power Company

Facility: D. C. Cook Nuclear Power Plant, Units 1 and 2

Location: Bridgman, MI 49106

Dates: May 1 through August 1, 2006

Inspector: R. Jickling, Emergency Preparedness Analyst

Approved by: K. Riemer, Chief
Plant Support Branch
Division of Reactor Safety

SUMMARY OF FINDINGS

IR 05000315/2006-501, IR 05000316/2006-501; 05/01/2006-07/20/2006; D. C. Cook Nuclear Power Plant, Units 1 and 2, Emergency Preparedness Inspection.

This report covers on-site and in-office followup for an Unresolved Item (05000316/2004006-04, "Potential Decrease in Effectiveness of the Steam Generator Secondary Side Release EAL"). The inspection was conducted by a regional inspector. One apparent violation was identified during the inspection. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process" (SDP). Findings for which the SDP does not apply may be "Green" or be assigned a severity level after NRC management review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 3, dated July 2000.

A. Inspector-Identified and Self-Revealed Findings

Cornerstone: Emergency Preparedness

- The inspectors identified an apparent violation of 10 CFR 50.54(q) involving 10 CFR 50.47(b)(4). Title 10, Part 50, Section 54(q) of the Code of Federal Regulations states in-part, "the nuclear power reactor licensee may make changes to these plans without Commission approval only if the changes do not decrease the effectiveness of the plans and the plans, as changed, continue to meet the standards of 10 CFR 50.47(b) and the requirements of Appendix E to this part." Title 10, Part 50, Section 47(b)(4) of the Code of Federal Regulations states in part, "a standard emergency classification and action level scheme, the bases of which include facility system and effluent parameters, is in use by the nuclear facility licensee." The licensee made and implemented a change to its emergency plan emergency action level (EAL) scheme on April 16, 2003, which appeared to decreased the effectiveness of the emergency plan without prior NRC approval.

Specifically, the licensee changed the EAL to remove the condition, "release of secondary coolant from the associated steam generator to the environment is occurring," from the Fission Product Barrier Matrix EAL for a loss of containment barrier due to a steam generator secondary side release. The revised emergency action level, "secondary line break outside containment results in release (greater than 30 minutes) to the environment," added a non-conservative 30 minutes before meeting this emergency action level. There is a potential that a release condition could have existed which would not have been declared, resulting in either no action or delayed action by off-site authorities when measures to protect the health and safety of the public were warranted. In a previous 1995 correspondence between the NRC and the licensee concerning a proposal to revise the licensee's EALs, the licensee proposed to implement a similar change to its EALs; however, the NRC specifically provided a written response to the licensee which indicated that a revision to the EAL which included a 30 minute criteria was unacceptable.

The apparent violation was considered to be more than minor because the licensee made changes to the emergency plan and procedures that decreased the effectiveness of the plan without prior approval of the NRC. Because this apparent violation affected the NRC's ability to perform its regulatory function, it was evaluated using the traditional enforcement process. There were no actual emergency events associated with this EAL during the time the change was in effect; however, the failure of the licensee to meet an emergency planning standard involving assessment does have regulatory significance. (Section 1EP4)

B. Licensee Identified Violations

None.

REPORT DETAILS

1. REACTOR SAFETY

Cornerstone: Emergency Preparedness

1EP4 Emergency Action Level and Emergency Plan Changes (71114.04)

1.1 (Closed) Unresolved Item (URI) 50-316/2004006-04

a. Inspection Scope

The inspectors reviewed Revisions 17, 18, 19, and 20 of the D. C. Cook Nuclear Power Plant Emergency Plan (Plan) to determine if changes identified in these revisions reduced the Plan's effectiveness. The inspectors reviewed a sample of licensee evaluations of the changes in the Plan revisions, to determine if the reviews were performed in accordance with 10 CFR 50.54(q) and if the reviews were adequate. The screening review of Revisions 17, 18, 19, and 20 does not constitute approval of the changes and, as such, the changes are subject to future NRC inspection to ensure that the emergency plan continues to meet NRC regulations.

During this inspection, the inspectors also reviewed licensee actions to address URI 50-316/2004006-04 that was identified for a potential decrease in effectiveness for a change made to the Loss of Containment Fission Product Barrier emergency action level (EAL) regarding the Steam Generator Secondary Side Release.

These activities completed one inspection sample.

b. Findings

Introduction: The inspectors identified an apparent violation of 10 CFR 50.54(q) involving 10 CFR 50.47(b)(4) for failure to maintain a standard scheme of EALs.

Description: The NRC's requirements related to changes made to the emergency plans and EAL schemes are contained in 10 CFR 50.54(q) and 10 CFR 50.47(b)(4). Specifically, 10 CFR 50.54(q) states, in part, "A licensee authorized to possess and operate a nuclear power reactor shall follow and maintain in effect emergency plans which meet the standards in 10 CFR 50.47(b) and the requirements in Appendix E of this part. The nuclear power reactor licensee may make changes to these plans without Commission approval only if the changes do not decrease the effectiveness of the plans and the plans, as changed, continue to meet the standards of 10 CFR 50.47(b) and the requirements of Appendix E to this part." Title 10 CFR Part 50, Section 47(b)(4) of the Code of Federal Regulations states, in part, "A standard emergency classification and action level scheme, the bases of which include facility system and effluent parameters, is in use by the nuclear facility licensee..." The licensee must determine if the change is a decrease in effectiveness and if it is, the licensee must obtain prior approval from the NRC before implementing the change.

During a routine baseline EAL and emergency plan change inspection conducted May 12 through 16, 2004, an Unresolved Item (05000316/2004006-04), was identified when the regional inspectors determined that on April 16, 2003, D. C. Cook changed the previously NRC approved EAL scheme. The change involved the Fission Product Barrier Matrix EAL for a loss of containment barrier due to a steam generator secondary side release. This revision changed the EAL from:

3.4L Steam Generator Secondary Side Release

“Primary to secondary leak rate greater than Tech. Spec. limit -AND- release of secondary coolant from the associated steam generator to the environment is occurring...”

to:

3.3L Steam Generator Secondary Side Release

“1a. Primary to secondary leak rate greater than Tech. Spec. limit -AND- 1b. secondary line break outside containment results in release (greater than 30 minutes) to the environment -OR- Release of secondary coolant from the affected steam generator to the environment with an alert alarm on any pressure operated relief valve (PORV) radiation monitor...”

The licensee made changes to this EAL in Revision 18 of the Emergency Plan, dated April 16, 2003. Revision 3 of the emergency plan implementing procedure PMP-2080-EPP-101, “Emergency Classification,” dated May 26, 2000, also included the changes made to this EAL. In this procedure, the licensee had modified the procedure to add a statement indicating the basis pages in Attachment 3 of the procedure must be reviewed to insure the full description of the EAL was considered when making a classification.

The inspectors also reviewed a previous October 6, 1995 correspondence between the NRC and the licensee associated with proposed changes to the licensee’s emergency plan EALs. In this correspondence, the inspectors noted that the licensee proposed a revision with a similar wording in its EAL; however, the NRC specifically provided a written response to the licensee which indicated that a revision to the EAL which included a 30 minute criteria was unacceptable.

During the NRC’s after-the-fact review of this change, the licensee was unable to locate the 10 CFR 50.54(q) review that it performed which demonstrated the licensee’s bases for concluding that the EAL change did not decrease the effectiveness of the emergency plan and that the plan, as changed, continued to meet the standards of 10 CFR 50.47(b) and the requirements of 10 CFR Appendix E. The licensee did locate a 10 CFR 50.59 safety evaluation of the changes made to PMP-2080-EPP-101, dated May 3, 2000. This 10 CFR 50.59 safety review concluded that adding criteria for secondary side release based on steam generator pressure operated relief valve radiation monitor reading deviated from Nuclear Management and Resource Council (NUMARC) guidance, but was added to simplify and streamline the procedure to allow for faster classification.

The 10 CFR 50.59 review did not include any discussion of the added 30 minute release criteria.

When the licensee could not locate its previous 10 CFR 50.54(q) review of the emergency plan change, the licensee performed a re-evaluation of the change made, under 10 CFR 50.54(q), dated September 10, 2004, which concluded that the change did not decrease the effectiveness of the emergency plan without further justification.

Analysis: The inspectors determined that D. C. Cook failed to maintain the emergency plan's scheme of EALs such that all initiating conditions, which had been assumed in the licensee's approved EALs would result in emergency classifications at appropriate levels. Specifically, the Fission Product Barrier Matrix EAL for a loss of containment barrier due to a steam generator secondary side release, for declaring General Emergencies, Site Area Emergencies, and Unusual Events, was changed, resulting in a decrease in effectiveness of the emergency plan without prior NRC approval. As a result, the licensee may not have classified events (General Emergency, Site Area Emergency, or Unusual Event) or delayed classification for events with release durations to the environment of 30 minutes or less. A decrease in the General Emergency level of classification would result in decreased protective action recommendations for the off-site authorities, and potentially a reduction in the level of protective action decisions forwarded to the public by off-site authorities. A decrease in the Site Area Emergency and Unusual Event levels of classification could also have resulted in a reduced level of response by off-site authorities if their level of response was based to some extent on which of the three emergency classes was associated with the licensee's emergency declaration.

Enforcement: Title 10 Part 50, Section 54(q) of the Code of Federal Regulations provides, in part, that "a licensee shall follow and maintain in effect emergency plans which meet the standards in 10 CFR 50.47(b) and the requirements of Appendix E of 10 CFR Part 50. The licensee may make changes to the emergency plans without NRC approval only if the changes do not decrease the effectiveness of the plans and the plans, as changed, continue to meet the standards of 10 CFR 50.47(b)." Proposed changes that decrease the effectiveness of the approved emergency plans may not be implemented without application to and approval by the NRC.

Title 10, Part 50, Section 47(b) of the Code of Federal Regulations requires that the on-site emergency response plans for nuclear power reactors meet each of 16 planning standards, of which, Planning Standard 4 states, in part, "that a standard emergency classification and action level scheme is in use."

Title 10, Part 50, Appendix E, Section IV.B of the Code of Federal Regulations states, in part, "The means to be used for determining the magnitude of and for continually assessing the impact of the release of radioactive materials shall be described, including emergency action levels that are to be used as criteria for determining the need for notification and participation of local and State agencies..." Findings related to the classification of emergencies are findings involving assessment.

On April 16, 2003, the licensee made changes without NRC approval to the EALs in its Emergency Plan that decreased the effectiveness of the plan and resulted in use of a

non-standard scheme of EALs. Specifically, the licensee changed the EAL to remove the condition, "release of secondary coolant from the associated steam generator to the environment is occurring," from the Fission Product Barrier Matrix EAL for a loss of containment barrier due to a steam generator secondary side release. The revised emergency action level, "secondary line break outside containment results in release (greater than 30 minutes) to the environment," added a non-conservative 30 minutes before meeting this emergency action level. The failure to receive NRC approval prior to changing the EAL scheme is an Apparent Violation of 10 CFR 50.54(q), associated with emergency planning standard 10 CFR 50.47(b)(4) (AV 50-315/06-501-01; 50-316/06-501-01). The licensee's initial corrective actions were completed on May 18, 2006, when the licensee restored the Emergency Plan EAL back to the original NRC approved wording. Training on the restored EAL was completed on May 30, 2006.

4. OTHER ACTIVITIES

4OA6 Meetings

.1 Exit Meeting

The inspectors presented the inspection results to Mr. J. Jensen on August 1, 2006, and other members of licensee management by telephone. The inspectors asked the licensee whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified. The purpose of the exit was to convey to the licensee the inspection findings and the NRC's initial enforcement assessment of the finding.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee

P. Carteaux, Emergency Preparedness Manager
H. Etheridge, Compliance Specialist
C. Graffenius, Emergency Preparedness Coordinator
J. Newmiller, Compliance Specialist
M. Peifer, Vice President of Services
A. Rodriguez, Security
M. Scarpello, Regulatory Affairs Supervisor
D. Schroeder, Emergency Preparedness Coordinator
S. Simpson, Safety Assurance Director
L. Weber, Plant Manager
V. Woods, Performance Assurance Manager

Nuclear Regulatory Commission

B. Kemker, Senior Resident Inspector
J. Lennartz, Resident Inspector

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

05000315/2006501-01; AV	Failure to Provide Complete and Accurate Information to the NRC Which Impacted A Licensing Decision. (Section 1R11)
05000316/2006501-01	

Closed

05000316/2004006-04	URI	Potential Decrease in Effectiveness of the Steam Generator Secondary Side Release EAL
---------------------	-----	---

LIST OF DOCUMENTS REVIEWED

The following is a list of documents reviewed during the inspection. Inclusion on this list does not imply that the NRC inspectors reviewed the documents in their entirety but rather selected sections of portions of the documents were evaluated as part of the overall inspection effort. Inclusion of a document on this list does not imply NRC acceptance of the document or any part of it, unless this is stated in the body of the inspection report.

1EP4 Emergency Action Level and Emergency Plan Changes

D. C. Cook Nuclear Plant Emergency Plan; Revisions 15, 16, 17, 18, 19, 20, and 22

PMP-2080-EPP-101; Emergency Classifications; Revisions 2, 3, 6, and 7

CR 04037038; Discovered 50.54(q) Evaluation Paperwork Missing For Revision 3 to PMP-2080-101, Emergency Classifications; dated February 6, 2004

CR 04314050; Condition Report to Track NRC Unresolved Item From Inspection Report IR 2004-006; dated November 9, 2004

LIST OF ACRONYMS USED

ADAMS	Agency Document Administrative Management System
CFR	Code of Federal Regulations
CR	Condition Report
DRS	Division of Reactor Safety
EAL	Emergency Action Level
IMC	Inspection Manual Chapter
NRC	Nuclear Regulatory Commission
PARS	Publicly Available Records
PORV	Pressure Operated Relief Valve
SDP	Significance Determination Process
URI	Unresolved Item