

September 20, 2002

Mr. A. C. Bakken III
Senior Vice President
Nuclear Generation Group
American Electric Power Company
500 Circle Drive
Buchanan, MI 49107

SUBJECT: D. C. COOK NUCLEAR POWER PLANT, UNITS 1 AND 2
NRC INSPECTION REPORT 50-315/02-08(DRS); 50-316/02-08(DRS)

Dear Mr. Bakken:

On August 30, 2002, the NRC completed an inspection at your D. C. Cook Nuclear Power Plant, Units 1 and 2. The enclosed report documents the inspection findings which were discussed on August 30 and September 6, 2002, with yourself and/or other members of your staff.

The inspection examined 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. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel. Specifically, the inspection focused on permanent plant modifications and changes, tests, and experiments done in accordance with 10 CFR 50.59.

Based on the results of this inspection, no findings of significance were identified

In accordance with 10 CFR Part 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

/RA by A. Dunlop Acting For/

David E. Hills, Chief
Mechanical Engineering Branch
Division of Reactor Safety

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

Enclosure: Inspection Report 50-315/02-08(DRS);
50-316/02-08(DRS)

See Attached Distribution

A. Bakken

-2-

cc w/encl: J. Pollock, Site Vice President
M. Finissi, Plant Manager
R. Whale, Michigan Public Service Commission
Michigan Department of Environmental Quality
Emergency Management Division
MI Department of State Police

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DATE	09/20/02		09/20/02		09/20/02			

OFFICIAL RECORD COPY

cc w/encl: J. Pollock, Site Vice President
M. Finissi, Plant Manager
R. Whale, Michigan Public Service Commission
Michigan Department of Environmental Quality
Emergency Management Division
MI Department of State Police

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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

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

Report No: 50-315/02-08(DRS); 50-316/02-08(DRS)

Licensee: American Electric Power Company

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

Location: 1 Cook Place
Bridgman, MI 49106

Dates: August 26 - 30, 2002

Inspectors: K. G. O'Brien, Senior Reactor Inspector
R. A. Winter, Reactor Inspector
J. J. Panchinson, NRC Contractor

Approved by: David E. Hills, Chief
Mechanical Engineering Branch
Division of Reactor Safety

SUMMARY OF FINDINGS

IR 05000315/02-08(DRS), IR 05000316/02-08(DRS); Indiana Michigan Power Company; on 08/26-30/2002; D. C. Cook Nuclear Power Plant, Units 1 and 2. Permanent plant modification and changes, tests, and experiments.

This report covers a five day announced inspection conducted by two regional engineering specialist inspectors and an NRC contractor. No findings of significance were identified. 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, and can be found on the NRC website at: <http://www.nrc.gov/NRR/OVERSIGHT/ASSESS/index.html>

A. Inspector Identified Findings

Cornerstone: Mitigating Systems

None

Report Details

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity

1R02 Evaluations of Changes, Tests, or Experiments (71111.02)

Review of Evaluations and Screenings for Changes, Tests, or Experiments

a. Inspection Scope

The inspectors reviewed ten 10 CFR 50.59 evaluations and twenty screenings performed under the 10 CFR 50.59 process. These documents were reviewed to ensure consistency with the requirements of 10 CFR 50.59. The inspectors used, in part, Nuclear Energy Institute (NEI) 96-07, "Guidelines of 50.59 Evaluations," Revision 1, to determine acceptability of the completed evaluations, and screenings. The NEI document was endorsed by the NRC in Regulatory Guide 1.187, "Guidance for Implementation of 10 CFR 50.59, Changes, Tests, and Experiments," November 2000. The inspectors also consulted Inspection Manual, Part 9900, "10 CFR GUIDANCE: 50.59." Documents reviewed during the inspection are listed at the end of the report.

b. Findings

No findings of significance were identified.

1R17 Permanent Plant Modifications (71111.17)

Review of Recent Permanent Plant Modifications

a. Inspection Scope

The inspectors reviewed seven permanent plant modifications that were performed by the licensee's engineering staff during the last two years. These were divided among the various programs that the licensee used to make changes to the plant. All the modifications were chosen based upon their effect on systems that had high probabilistic risk significance in the licensee's individual plant evaluation or high maintenance rule safety significance. The modifications were reviewed to verify that the completed design changes were in accordance with specified design requirements and the licensing bases and to confirm that the changes did not affect the modified system or other systems' safety function. Calculations, which were performed or revised to support modifications, were also reviewed. As applicable to the status of the modification, post-modification testing was reviewed to verify that the system, and associated support systems functioned properly and that the modification accomplished its intended function. The inspectors also verified that the completed modifications did not place the plant in an increased risk configuration. The inspectors evaluated the modifications against the licensee's design basis documents and the updated safety analysis report. The inspectors also used applicable industry standards, such as the

American Society of Mechanical Engineers Code, to evaluate acceptability of the modifications.

b. Findings

No findings of significance were identified.

4. **OTHER ACTIVITIES (OA)**

4OA2 Identification and Resolution of Problems

a. Inspection Scope

The inspectors reviewed a selected sample of condition assessment resolution documents associated with D.C. Cook's permanent plant modifications and 10 CFR 50.59 program to verify that the licensee had an appropriate threshold for identifying issues and to verify the effectiveness of corrective actions for the identified issues.

b. Findings

No findings of significance were identified.

4OA5 Management Meetings

Exit Meeting Summary

The inspectors presented the inspection results to Mr. A. Bakken and other members of licensee management at the conclusion of the inspection on August 30, 2002. A followup telephone exit meeting was held on September 6, 2002, to clarify a previous inspection result. The licensee acknowledged the information presented during both meetings. No proprietary information was identified.

KEY POINTS OF CONTACT

Licensee

A. Bakken, Senior Vice President
K. Foote, System Engr (HVAC)
J. Kingseed, Asst Director, Nuclear Safety
R. Kohrt, Supervisor, Accident Analysis
R. Meister, Regulatory Affairs
J. Phelan, Engineering
J. Pollock, Site Vice President
K. Steinmetz, Regulatory Affairs
E. Wagner, Engineering
W. Wah. Design Engineering Modifications
W. Zimmermann, Accident Analyst

NRC

B. Kemker, Senior Resident Inspector

LIST OF ACRONYMS USED

ADAMS	Agency-wide Document Access and Management System
CFR	Code of Federal Regulations
DRS	Division of Reactor Safety
NEI	Nuclear Energy Institute Conduct Manual
PARS	Publicly Available Records System

LIST OF DOCUMENTS REVIEWED

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

CALCULATIONS

<u>Number</u>	<u>Description</u>	<u>Revision/Date</u>
99-061	Containment Spray System Time to Fill Transient	Rev B/Sept 13, 1999
MD-12-HV-034-N	Determine Maximum ESW Supply Temperature to the Control Room Ventilation Air Handling Units to Meet or Exceed the Original Design Heat Removal Capability of 300,000 Btu	Rev 1/Mar 29, 2001

CONDITION REPORTS (CRs) GENERATED DURING THE INSPECTION

<u>Number</u>	<u>Description</u>	<u>Revision/Date</u>
02242032	Two 50.59 Reviews Should Have Included Additional Information	August 30, 2002
02242029	Potentially Unresolved NRC Questions Concerning Information in Safety Screening/Safety Evaluation 2001-1197	August 30, 2002
02240066	NRC Document Request Identified One 50.59 Review That Could Not Be Located	August 28, 2002

CONDITION REPORTS (CRs) REVIEWED DURING THE INSPECTION

<u>Number</u>	<u>Description</u>	<u>Revision/Date</u>
P-00-05097	Maintenance to Remove QC Peer Inspection Requirements for Torquing of Fasteners Except as Described With Concurrence of Production Engineering	April 3, 2000
1039036	Potential 50.59 Bypass in PMP-7030-OPR-001, Operability Determination	February 8, 2001
1172026	Failure to Complete 10CFR50.59 Screenings in 90 Days for Abnormal Position Control	June 21, 2001
1293011	Procedural Violation of time Limit for Temp Mod	October 20, 2001

CONDITION REPORTS (CRs) REVIEWED DURING THE INSPECTION

<u>Number</u>	<u>Description</u>	<u>Revision/Date</u>
2108068	Repairs Made to the Flood-up Tube (FUT) for Electrical Penetration	April 18, 2002
2141049	This Ar Is Being Generated for Failure to Appropriately Address 50.59 Requirements	May 21, 2002
2060016	Instrument and Control Technicians Do Not Have the Necessary Materials	March 1, 2002
2169054	Unit 2 Foxboro Tave Configuration Control Module 2-DC-R6N1S1	June 18, 2002
2211020	Temp Mod was Created that had MTI Procedure Impact. Procedure Section not notified	July 30, 2002
307077	U1 CD Diesel Starting Air Compressor #1 discharge pipe in contact with support	November 2, 2000
1223007	Field Condition does not match that as shown on approved description	August 11, 2001
01242013	Silt/Mud Intrusion into U1 and U2 ESW Systems Renders CCW and EDG Inoperable	August 29, 2001
P-00-09439	Calculation 1-E-N-ELCP-4KV-001, Rev.0	June 30, 2000
02057005	Actual Overspeed Test and the Oil Overspeed Trip Test of the 112% Trip System of the Main Turbine Cannot be Performed	February 26, 2002
00322006	Control Room Ventilation Flow Balance	November 17, 2000
P-98-05356	Auxiliary Feedwater - No Analysis or Documentation to Show that AFW Suction Strainers Can Support ESW Backup Flow	October 2, 1998
01242013	Silt/Mud Intrusion into U1 and U2 ESW Systems Rendering CCW and EDG Inoperable	August 29, 2001

MODIFICATIONS (DCPs):

<u>Number</u>	<u>Description</u>	<u>Revision/Date</u>
12-DCP-168	Replacement of Emergency Diesel Generator (EDG) Aftercoolers	August 26, 1999
1-DCP-5173	U1 Provide ESW Min Flow Path Via CTS Heat Exchangers	November 1, 2001
1-DCP-5152	Remove Auto-Open of Back-up ESW Inlet Motor Operated Valves to EDG Coolers on EDG Running	September 12, 2001

MODIFICATIONS (DCPs):

<u>Number</u>	<u>Description</u>	<u>Revision/Date</u>
1-DCP-4692	MOV Modifications to The Essential Service Water System (1-WMO-701,-717,721,-727,-744,-733,-737,-723)	Revision 0
1-DCP-4504	Replace the Reserve Auxiliary Transformers 101AB And 101CD With Load Tap Changing Transformers.	Revision 0b
1-DCP-4698	MOV Modifications to the Auxiliary Feedwater System	Revision 0
1-DCP-4559	Install Additional Compressed Air Bottles to Increase Back-Up Air Volume to Pressurizer Power Operated Relief Valves	Revision 0

PROCEDURES

<u>Number</u>	<u>Description</u>	<u>Revision/Date</u>
PMP-2350-SES-001	10CFR50.59 Reviews	Revision 1
PMP-2350-SAR-001	UFSAR Update Process	Revision 0
PMP-5040.SES.001	10 CFR 50.59 Reviews	Revision 1a
12-EHP-5040.MOD-006	Design Change Packages	Revision 5b
12-EHP-040.MOD.009	Design Change Reference Guide	Revision 2
PMP-5040.SAR.001	UFSAR Update Process	Revision 0
PMP-5040.ISP.001	Plant Instrument Setpoint Control Program	Revision 1
PMI-7090	Plant Quality Control Inspection Program	Revision 7a
12-EHP-5040.MOD.014	Design Change Modification Testing	Revision 02

10 CFR 50.59 EVALUATIONS

<u>Number</u>	<u>Description</u>	<u>Revision/Date</u>
2000-1573-01	Unit 1 MOV Modifications - ECCS (1-DCP-4705)	August 28, 2000
2001-0124-00	Evaluation of Use of Manual Bypass for Hydrogen Regulator to VCT	May 10, 2001
2001-1008-00	Changes to Preclude Debris Intrusion Through an ESW Strainer and into all Four EDG Cooling Lines	September 12, 2001
1999-0476-00	2-DCP-604, ABB 4kV Circuit Breaker Refurbishment	June 10, 1999
2000-1573-01	1-DCP-4705, MOV Modifications ECCS	August 28, 2000

10 CFR 50.59 EVALUATIONS

<u>Number</u>	<u>Description</u>	<u>Revision/Date</u>
1999-1372-04	2-DCP-0487, Upgrade Diesel Generator Starting Air Compressor Discharge Piping to Safety Related	February 26, 2001
2000-2234-02	1-DCP-4894, Modify "Standby Readiness" Position of TDAFP Discharge Valves (1-FMO-211,-221,-231,-241)	November 17, 2000
2001-0079-00	PMP-2270-EVL-002, Revision 0, Issuance and Fire Protection Program Section 3 Update	March 8, 2001
2001-0119-00	Various UFSAR Updates per UCR-1500	April 5, 2001
2000-2359-02	Containment Penetration Flood-up Tube Repair	November 28, 2000

10 CFR 50.59 SCREENINGS

<u>Number</u>	<u>Description</u>	<u>Revision/Date</u>
2002-0728-00	Loss of RHR Cooling	April 25, 2002
2002-0674-00	UAI Determination for Dented Safety Injection Piping	April 23, 2002
2001-1150-00	Operation of the Control Room Air Conditioning and Pressurization/Cleanup Filter System	October 7, 2001
2001-0475-00	Heat Exchanger Tube Plugging	June 21, 2001
2002-0103-00	02-EHP-4030-208-001, Rev 3, Unit 2, ECCS Flow Balance Safety Injection System	January 18, 2002
2000-1674-00	1 IHP 6030.IMP.521, West ESW Pump Headers Pressure & Flow Alarm & Indication Calibration	August 14, 2000
2002-0247-00	02-OHP-4021-082-008, Operation Of CRID Power Supplies	February 5, 2002
2002-0333-00	02-OHP-4021-016-003, Title: Operation of the CCW System During System Startup and Power Operation	February 13, 2002
2002-0638-00	01-OHP-4021-082013 and 02-OHP-4021-082-013, Battery Crosstie Operations	April 17, 2002
2001-1354-00	12-OHP-4021-082-009, Racking In And Out 4KV, 600V, and 480V Breakers	April 29, 2002
2002-0941-00	01-OHP-4023-SUP-002, Rev 4, and 02-OHP-4023-SUP-002, Rev 5, Restoration of Reserve Power to 4KV Buses	May 31, 2002
2002-0506-00	12-IHP-4030-082-003, AB, CD and N-Train Battery Service/Performance Discharge Test and 18 Month Surveillance Requirements	April 8, 2002

10 CFR 50.59 SCREENINGS

<u>Number</u>	<u>Description</u>	<u>Revision/Date</u>
2000-1768-00	CS-1 tp Revision 0 of **2IHP6030.IMP.485. Residual Heat Removal Exchanger 2E Flow Alarm and Indication Calibration	September 5, 2000
2001-0704-00	PMP-5030.001.001, Boric Acid Corrosion of Ferric Steel Component and Materials Revision	August 8, 2001
2002-1082-00	Volume Control Tank Instrument Malfunction	June 27, 2002
2002-0531-01	Replace 1-ICM-111, RHR Gate Valve With a Control Valve	April 15, 2002
2001-0486-00	Use-As-Is for Condition Report P-003258, Updated Final Safety Analysis Report Question States Cable Depth on Cable Vault Floor is 12 Inches. Cable Depth Has Reached 27 Inches in One Area.	August 17, 2001
2000-1635-00	Change 7 to Revision 9 of **12MHP5021.019.001, Essential Service Water Pump	August 5, 2000
2001-1341-00	UCR-99-UFSAR-1613, Revision of UFSAR Section 8.6, Testing of Molded Case Circuit Breakers	July 18, 2002
2002-0430-00	Use-As-Is Associated with Failure of the Turbine Overspeed Trip Test	April 26, 2002
2002-0177-00	1-QRV-200-PU Safety Classification Downgrade from Nuclear Safety Related to Standard Grade	March 8, 2002
2001-0478-00	Feedwater Flow Instrument Malfunction	June 21, 2001

REFERENCES

<u>Number</u>	<u>Description</u>	<u>Revision/Date</u>
MDS-607	Mechanical Design Standard - Heat Exchanger Tube Plugging	Rev 4/May 30, 2002
DIT-B-01740-05	Design Information Transmittal - ECCS Flow Balance Instrumentation	December 19, 2001
1-E-N-ELCP-4KV-001	Unit 1 4kV/600V Load Control Calculation	Revision 1
UFSAR Chapter 8	Electrical Systems	Revision 17.2
Guideline N17.1	Criteria for Power Cable Sizing	Revision 1
1-DCP-4505-TP-1	Reserve Auxiliary Transformer TR101AB Functional Test	Revision 0
1-DCP-4505-TP-2	Reserve Auxiliary Transformer TR101CD Functional Test	Revision 0
1-2-EDS-642-2	Cable Tray Allowable Fill	October 22, 1998

DC Cook

MODIFICATION AND 50.59 INSPECTION DOCUMENT REQUEST

The following information was provided electronically to the licensee prior to the inspection:
E-mailed on July 16, 2002

Lead Inspector: Kenneth G. O'Brien

Team Members: Bob Winter and an NRC Contractor

I Information Needed for In-Office Preparation Week (August 19 - 23, 2002)

The following information is needed by August 16, 2002, or sooner, to facilitate the selection of specific items that will be reviewed during the onsite inspection week. The team will select specific items from the information requested below and submit a list to your staff by August 21, 2002. We request that the specific items selected from the lists be available and ready for review on the first day of onsite inspection (August 26, 2002). If you have any questions regarding this information, please contact me at (630) 829-9821 or e-mail KGO@NRC.GOV soon as possible. All lists requested should cover the time frame August 2000 until present. All information should be sent electronically if at all possible.

Permanent Plant Modifications

1. List of permanent plant modifications/ design changes. In addition to the list, please provide a brief (one paragraph) description of each modification (e.g., copy of modification description from DCP or safety evaluation.)
2. List of setpoint changes (Identify system and instrument).
3. List of equivalency evaluations or suitability analysis.
4. List of commercial grade dedications.
5. List of condition reports (open or closed) issued to address permanent plant modification issues, concerns, or process.
6. Copy of procedures for the following: modifications, design changes, set point changes, equivalency evaluations or suitability analyses, commercial grade dedications, and post-modification testing.

Changes, Tests, or Experiments (10 CFR 50.59)

1. List of all 10 CFR 50.59 completed evaluations involving: (A) changes to facility (modifications); (B) procedure revisions; (C) tests or non-routine operating configurations; (D) changes to the UFSAR; or (E) calculations
2. List of all 10 CFR 50.59 screenings that have been screened out as not requiring a full evaluation involving: (A) changes to facility (modifications); (B) procedure revisions;

DC Cook

MODIFICATION AND 50.59 INSPECTION DOCUMENT REQUEST

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E-mailed on July 16, 2002

- (C) tests or non-routine operating configurations; (D) changes to the UFSAR; or (E) calculations
3. List of condition reports (open or closed) issued to address problems associated with 10 CFR 50.59 evaluations, screenings, or process.
 4. Copy of procedures that specify how 10 CFR 50.59 evaluations and screenings are performed.
 5. Copy of procedures that delineate how 10 CFR 50.59 FSAR updates are prepared by engineers or staff and how the licensee submits 10 CFR 50.59 FSAR updates.
 6. List of special tests or experiments and non-routine operating configurations in the last two years (if any.)

General Information

1. Latest engineering organization chart
2. Site phone list
3. System and Design Engineering lists
4. List of maintenance rule high safety significant systems
5. List of maintenance rule (a)(1) systems. (Those systems presently in (a)(1) and systems that were (a)(1) in 2001 or 2002 and returned to (a)(2) [List date system went to (a)(1) and date system returned to (a)(2)])

II Information to be Available on First Day of Onsite Inspection

We request that the following information be available to the inspectors once they arrive onsite. (Copies of the updated final safety analysis report, independent plant evaluation probabilistic safety analysis, vendor manuals, or technical specifications do not need to be solely available to the team as long as the inspectors have ready access to them.)

- The latest 10 CFR 50.59 Final Safety Analysis Report Update Submittal
- Updated Final Safety Analysis Report
- Technical Specifications

DC Cook

MODIFICATION AND 50.59 INSPECTION DOCUMENT REQUEST

The following information was provided electronically to the licensee prior to the inspection:
E-mailed on July 16, 2002

- Independent Plant Evaluation Probabilistic Safety Analysis Report
- Vendor Manuals
- Equipment Qualification Binders
- Relevant Calculations And Analyses (for selected modifications and 50.59s)
- Copies of previously selected modifications, permanent plant changes, design changes, setpoint changes, procedure changes, equivalency evaluations, suitability analyses, calculations, commercial grade dedications, 10 CFR 50.59 evaluations and screenings and condition reports.