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

SUBJECT: ANNUAL ASSESSMENT LETTER - D. C. COOK NUCLEAR POWER PLANT,

UNITS 1 AND 2 (05000315/2008001; 05000316/2008001)

Dear Mr. Rencheck:

On February 12, 2008, the NRC staff completed its performance review of D.C. Cook Nuclear Power Plant, Units 1 and 2. Our technical staff reviewed performance indicators (PIs) for the most recent quarter and inspection results for the period from January 1 through December 31, 2007. The purpose of this letter is to inform you of our assessment of your safety performance during this period and our plans for future inspections at your facility.

This performance review and enclosed inspection plan do not include security information. A separate letter designated and marked as "Official Use Only – Security Related Information" will include the security cornerstone review and resultant inspection plan.

Overall, D.C. Cook Nuclear Power Plant, Units 1 and 2 operated in a manner that preserved public health and safety and fully met all cornerstone objectives. Plant performance for the most recent quarter was within the Licensee Response column of the NRC's Action Matrix based on all inspection findings being classified as having very low safety significance (Green) and all Pls indicating performance at a level requiring no additional NRC oversight (Green). Therefore, we plan to conduct reactor oversight process (ROP) baseline inspections at your facility during the remainder of the calendar year.

While plant performance for the most recent quarter is within the Licensee Response column of the Action Matrix, there was a safety significant PI affecting the Emergency Preparedness Cornerstone during the second and third quarters of the assessment cycle. Specifically, the Alert and Notification System PI was Yellow for the second and third quarters of 2007 and D.C. Cook Units 1 and 2 were in the Degraded Cornerstone column of the Action Matrix. On January 14, 2008, we were notified by your staff of your readiness for the NRC to conduct a supplemental inspection to review the actions taken to address the Yellow Alert and Notification System PI. We completed supplemental Inspection Procedure 95002, "Inspection for One Degraded Cornerstone or Any Three White Inputs in a Strategic Performance Area" on February 22, 2008. The results of this inspection will be issued as Inspection Report 05000315/2008502.

The enclosed inspection plan details the inspections, including baseline and other infrequently conducted inspections, less those related to security, scheduled through June 30, 2009. The inspection plan is provided to allow for the resolution of any scheduling conflicts and personnel availability issues well in advance of inspector arrival onsite. Routine resident inspections are not listed due to their ongoing and continuous nature. The inspections in the last nine months of the inspection plan are tentative and may be revised at the mid-cycle review.

In accordance with 10 CFR 2.390 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), accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

If circumstances arise which cause us to change this inspection plan, we will contact you to discuss the change as soon as possible. Please contact Christine Lipa at 630-829-9619 with any questions you may have regarding this letter or the inspection plan.

Sincerely,

/RA/

James L. Caldwell Regional Administrator

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

Enclosure: D.C. Cook Inspection/Activity Plan

DISTRIBUTION: See next page

Letter to M. Renchek from J. Caldwell dated March 3, 2008

SUBJECT: ANNUAL ASSESSMENT LETTER - D. C. COOK NUCLEAR POWER PLANT,

UNITS 1 AND 2 (05000315/2008001; 05000316/2008001)

cc w/encl: M. Peifer, Site Vice President

J. Gebbie, 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

T. Strong, Chief, State Liaison Officer, State of Michigan

Berrien County Board Chairman Berrien County Coordinator Berrien County Sheriff

EMA Coordinator, Berrien County Emergency

Management Agency Mayor of Benton Harbor

City Manager of Benton Harbor

Mayor of St. Joseph

City Manager of St. Joseph

Mayor of Bridgman

City Manager of Bridgman

Mayor of Buchanan

City Manager of Buchanan

President, Village of Stevensville President, Village of Berrien Springs

President, Village of Shoreham

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DATE	2/25/08		2/25/08		2/26/08		2/27/08		2/28/08	

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ROPreports@nrc.gov (inspection reports, final SDP letters, any letter with an IR number)

D.C. Cook

Inspection / Activity Plan 03/01/2008 - 06/30/2009

		No. of Staff	Planned Dates		Inspection
Inspection Activity	Title	on Site	Start	End	Туре
BI ENG - UNIT 1	INSERVICE INSPECTION\TI 172	2			
IP 2515/172	Reactor Coolant System Dissimiliar Metal Butt Welds		03/24/2008	04/11/2008	Generic Safety Inspection
IP 7111108P	Inservice Inspection Activities - PWR		03/24/2008	04/11/2008	Baseline Inspections
BI OL - BIENN	IAL REQUAL. PROGRAM INSPECTION	2			
IP 7111111B	Licensed Operator Requalification Program		03/10/2008	03/14/2008	Baseline Inspections
TI 174 - TI 174	- HYDROGEN IGNITER BACKUP POWER	2			
IP 2515/174	(Hydrogen Igniter Backup Power Verification		03/03/2008	03/31/2008	Generic Safety Inspection
BI RP - RADIA	TION PROTECTION BASELINE INSPECTION	1			
IP 7112101	Access Control to Radiologically Significant Areas		03/31/2008	04/04/2008	Baseline Inspections
IP 71151-OR01	Occupational Exposure Control Effectiveness		03/31/2008	04/04/2008	Baseline Inspections
2515/166 - TI 251	5/166 PWR SUMP INSPECTION	1			
IP 2515/166	Pressurized Water Reactor Containment Sump Blockage [NRC GENERIC LETTER 2004-02]		05/12/2008	05/16/2008	Safety Issues
BI EP - EP RO	UTINE INSPECTION / PI VERIFICATION	1			
IP 7111402	Alert and Notification System Testing		06/02/2008	06/06/2008	EP Baseline Inspection
IP 7111403	Emergency Response Organization Augmentation Testing		06/02/2008	06/06/2008	EP Baseline Inspection
IP 7111405	Correction of Emergency Preparedness Weaknesses and Deficiencies		06/02/2008	06/06/2008	EP Baseline Inspection
IP 71151-EP01	Drill/Exercise Performance		06/02/2008	06/06/2008	Baseline Inspections
IP 71151-EP02	ERO Drill Participation		06/02/2008	06/06/2008	Baseline Inspections
IP 71151-EP03	Alert & Notification System		06/02/2008	06/06/2008	Baseline Inspections
2515/171 - TI 251	5/171 B5B PHASE 2 AND 3	2			
IP 2515/171	VERIFICATION OF SITE SPECIFIC IMPLEMENTATION OF B.5.B PHASE 2 & 3 MITIGATIN	IG	06/23/2008	06/27/2008	Generic Safety Inspection
OL EXAM - DC CC	OOK INITIAL LICENSE EXAM VALIDATION	3			
W90183	OL - INITIAL EXAM - JULY/AUG 2008 - COOK		07/21/2008	07/25/2008	Not Applicable
BI RP - RADIA	TION PROTECTION BASELINE INSPECTION	2			
IP 7112103	Radiation Monitoring Instrumentation and Protective Equipment		07/28/2008	08/01/2008	Baseline Inspections
IP 71151-BI01	Reactor Coolant System Activity		07/28/2008	08/01/2008	Baseline Inspections
BI PI&R - BIENN	IAL PI&R INSPECTION	3			
IP 71152B	Identification and Resolution of Problems		08/11/2008	08/29/2008	Baseline Inspections
OL EXAM - DC CC	OK INITIAL LICENSE EXAMINATION	3			
W90183	OL - INITIAL EXAM - JULY/AUG 2008 - COOK		08/18/2008	08/29/2008	Not Applicable
2515/172 - TI 251	5/172 RCS WELD INSPECTION	1			
IP 2515/172	Reactor Coolant System Dissimiliar Metal Butt Welds		09/15/2008	09/19/2008	Generic Safety Inspection
BI ENG - ENGIN	EERING MODIFICATIONS / 50.59 INSP.	3			
IP 7111117B	Evaluations of Changes, Tests, or Experiments & Permanent Plant Modifications		10/06/2008	10/24/2008	Baseline Inspections

D.C. Cook Inspection / Activity Plan 03/01/2008 - 06/30/2009

		No. of Staff	Planned Dates		Inspection	
Inspection Activity	Title	on Site	Start	End	Туре	
BI RP - RADIA	TION PROTECTION BASELINE INSPECTION	1				
IP 7112202	Radioactive Material Processing and Transportation		11/03/2008	11/07/2008	Baseline Inspections	
IP 71151-PR01	RETS/ODCM Radiological Effluent		11/03/2008	11/07/2008	Baseline Inspections	
BI RP - RADIA	TION PROTECTION BASELINE INSPECTION	1				
IP 7112201	Radioactive Gaseous and Liquid Effluent Treatment and Monitoring Systems		01/05/2009	01/09/2009	Baseline Inspections	
IP 71151-PR01	RETS/ODCM Radiological Effluent		01/05/2009	01/09/2009	Baseline Inspections	
BI ENG - COMP	ONENT DESIGN BASES INSPECTION	6				
IP 7111121	Component Design Bases Inspection		03/09/2009	04/10/2009	Baseline Inspections	
BI ENG - ENGIN	EERING INSERVICE INSPECTION	2				
IP 2515/172	Reactor Coolant System Dissimiliar Metal Butt Welds		04/27/2009	06/05/2009	Generic Safety Inspection	
IP 7111108P	Inservice Inspection Activities - PWR		04/27/2009	06/05/2009	Baseline Inspections	
BI RP - RADIA	TION PROTECTION BASELINE INSPECTION	1				
IP 7112101	Access Control to Radiologically Significant Areas		05/11/2009	05/15/2009	Baseline Inspections	
IP 7112102	ALARA Planning and Controls		05/11/2009	05/15/2009	Baseline Inspections	
IP 71151-OR01	Occupational Exposure Control Effectiveness		05/11/2009	05/15/2009	Baseline Inspections	
7112201 - RADIO	LOGICAL LIQUID AND GAS EFFLUENTS	1				
IP 7112201	Radioactive Gaseous and Liquid Effluent Treatment and Monitoring Systems		05/11/2009	05/15/2009	Baseline Inspections	
BI EP - EP EX	ERCISE INSPECTION / PI VERIFICATION	1				
IP 7111401	Exercise Evaluation		06/01/2009	06/05/2009	EP Baseline Inspection	
IP 71151-EP01	Drill/Exercise Performance		06/01/2009	06/05/2009	Baseline Inspections	
IP 71151-EP02	ERO Drill Participation		06/01/2009	06/05/2009	Baseline Inspections	
IP 71151-EP03	Alert & Notification System		06/01/2009	06/05/2009	Baseline Inspections	
BI RP - RADIA	TION PROTECTION BASELINE INSPECTION	1				
IP 7112203	Radiological Environmental Monitoring Program (REMP) And Radioactive Material Control Program (REMP)	gram	06/22/2009	06/26/2009	Baseline Inspections	
IP 71151-BI01	Reactor Coolant System Activity		06/22/2009	06/26/2009	Baseline Inspections	