



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**  
REGION III  
2443 WARRENVILLE ROAD, SUITE 210  
LISLE, IL 60532-4352

September 1, 2009

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

**SUBJECT: MID-CYCLE PERFORMANCE REVIEW AND INSPECTION PLAN –  
D. C. COOK NUCLEAR POWER PLANT, UNITS 1 AND 2**

Dear Mr. Jensen:

On August 19, 2009, 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 July 1, 2008 through June 30, 2009. 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.

Plant performance for the most recent quarter at D.C. Cook Nuclear Power Plant, Units 1 and 2, 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 PIs 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.

The enclosed inspection plan details the inspections, less those related to physical protection scheduled through December 31, 2010. The inspection schedule includes a triennial CDBI in mid 2010. 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 9 months of the inspection plan are tentative and may be revised at the End-of-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 made 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).

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 me at 630-829-9833 with any questions you may have regarding this letter or the inspection plan.

Sincerely,

**/RA/**

Jamnes L. Cameron, Chief  
Branch 6  
Division of Reactor Projects

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

Enclosure: D.C. Cook Inspection/Activity Plan

DISTRIBUTION:  
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Letter to J. Jensen from J. Cameron dated September 1, 2009

SUBJECT: MID-CYCLE PERFORMANCE REVIEW AND INSPECTION PLAN –  
D. C. COOK NUCLEAR POWER PLANT, UNITS 1 AND 2

cc w/encl: L Weber, Site Vice President  
J. Gebbie, Plant Manager  
J. Lark, 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  
G. Mortensen, INPO

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Letter to J. Jensen from J. Cameron dated September 1, 2009.

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D. C. COOK NUCLEAR POWER PLANT, UNITS 1 AND 2

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**D.C. Cook**  
**Inspection / Activity Plan**  
**09/01/2009 - 12/31/2010**

Planned Dates		Inspection Activity	Title	No. of Staff on Site
Start	End			
		<b>BI EP - EP EXERCISE INSPECTION / PI VERIFICATION</b>		<b>3</b>
09/14/2009	09/18/2009	IP 2515/175	Emergency Response Organization, Drill/Exercise Performance Indicator, Program Review	
09/14/2009	09/18/2009	IP 7111401	Exercise Evaluation	
09/14/2009	09/18/2009	IP 71151-EP01	Drill/Exercise Performance	
09/14/2009	09/18/2009	IP 71151-EP02	ERO Drill Participation	
09/14/2009	09/18/2009	IP 71151-EP03	Alert & Notification System	
		<b>BI RP - RADIATION PROTECTION BASELINE INSPECTION</b>		<b>1</b>
09/28/2009	10/02/2009	IP 7112201	Radioactive Gaseous and Liquid Effluent Treatment and Monitoring Systems	
09/28/2009	10/02/2009	IP 71151-BI01	Reactor Coolant System Activity	
09/28/2009	10/02/2009	IP 71151-PR01	RETS/ODCM Radiological Effluent	
		<b>BI ENG - TRIENNIAL FIRE PROT. INFO GATHERING TRIP</b>		<b>3</b>
10/05/2009	10/09/2009	IP 7111105T	Fire Protection [Triennial]	
		<b>BI ENG - TRIENNIAL FIRE PROTECTION INSPECTION</b>		<b>3</b>
11/02/2009	11/20/2009	IP 7111105T	Fire Protection [Triennial]	
		<b>BI RP - RADIATION PROTECTION BASELINE INSPECTION</b>		<b>1</b>
11/02/2009	11/06/2009	IP 7112101	Access Control to Radiologically Significant Areas	
11/02/2009	11/06/2009	IP 7112102	ALARA Planning and Controls	
		<b>ISFSI - ISFSI INSPECTION</b>		<b>2</b>
02/01/2010	09/30/2010	IP 60853	On-Site Fabrication Of Components And Construction On An ISFSI	
02/01/2010	09/30/2010	IP 60856	Review of 10 CFR 72.212(b) Evaluations	
		<b>BI RP - RADIATION PROTECTION BASELINE INSPECTION</b>		<b>1</b>
01/25/2010	01/29/2010	IP 7112103	Radiation Monitoring Instrumentation and Protective Equipment	
		<b>BI ENG - TRIENNIAL HEAT SINK INSPECTION</b>		<b>1</b>
02/08/2010	02/12/2010	IP 7111107T	Heat Sink Performance	
		<b>BI RP - RADIATION PROTECTION BASELINE INSPECTION</b>		<b>1</b>
03/15/2010	03/19/2010	IP 7112102	ALARA Planning and Controls	
		<b>BI OL - LIC. OPERATOR REQUAL. PROGRAM EVALUATION</b>		<b>2</b>
03/08/2010	03/12/2010	IP 7111111B	Licensed Operator Requalification Program	
		<b>BI ENG - INSERVICE INSPECTION &amp; TI-172 REVISION 1</b>		<b>1</b>
03/15/2010	03/26/2010	IP 2515/172	Reactor Coolant System Dissimilar Metal Butt Welds	
03/15/2010	03/26/2010	IP 7111108P	Inservice Inspection Activities - PWR	
		<b>BI RP - RADIATION PROTECTION BASELINE INSPECTION</b>		<b>1</b>
05/17/2010	05/21/2010	IP 2515/173	Review of the Implementation of the Industry Ground Water Protection Voluntary Initiative	
05/17/2010	05/21/2010	IP 71151-BI01	Reactor Coolant System Activity	
05/17/2010	05/21/2010	IP 71151-PR01	RETS/ODCM Radiological Effluent	

**D.C. Cook**  
**Inspection / Activity Plan**  
**09/01/2009 - 12/31/2010**

Planned Dates		Inspection Activity	Title	No. of Staff on Site
Start	End			
		<b>OL EXAM - D. C. COOK INIT EXAM 06/2010</b>		<b>3</b>
06/21/2010	07/02/2010	W90217	OL - INITIAL EXAM - JUNE 2010 - COOK	
		<b>BI RP - RADIATION PROTECTION BASELINE INSPECTION</b>		<b>1</b>
08/09/2010	08/13/2010	IP 7112202	Radioactive Material Processing and Transportation	
		<b>BI ENG - COMPONENT DESIGN BASES INSPECTION</b>		<b>5</b>
08/16/2010	09/17/2010	IP 7111121	Component Design Bases Inspection	
		<b>BI EP - EP ROUTINE INSPECTION / PI VERIFICATION</b>		<b>2</b>
09/13/2010	09/17/2010	IP 7111402	Alert and Notification System Testing	
09/13/2010	09/17/2010	IP 7111403	Emergency Response Organization Augmentation Testing	
09/13/2010	09/17/2010	IP 7111405	Correction of Emergency Preparedness Weaknesses and Deficiencies	
09/13/2010	09/17/2010	IP 71151-EP01	Drill/Exercise Performance	
09/13/2010	09/17/2010	IP 71151-EP02	ERO Drill Participation	
09/13/2010	09/17/2010	IP 71151-EP03	Alert & Notification System	
		<b>BI RP - RADIATION PROTECTION BASELINE INSPECTION</b>		<b>1</b>
09/27/2010	10/01/2010	IP 7112101	Access Control to Radiologically Significant Areas	
09/27/2010	10/01/2010	IP 7112102	ALARA Planning and Controls	
09/27/2010	10/01/2010	IP 71151-OR01	Occupational Exposure Control Effectiveness	
		<b>BI ENG - ENGINEERING INSERVICE INSPECTION</b>		<b>1</b>
10/04/2010	10/22/2010	IP 2515/172	Reactor Coolant System Dissimilar Metal Butt Welds	
10/04/2010	10/22/2010	IP 7111108P	Inservice Inspection Activities - PWR	