



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION IV  
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March 3, 2010

Stewart B. Minahan, Vice President-Nuclear  
and Chief Nuclear Officer  
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72676 648A Avenue  
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SUBJECT: ANNUAL ASSESSMENT LETTER–COOPER NUCLEAR STATION  
(NRC INSPECTION REPORT 05000298/2010001)

Dear Mr. Minahan:

On February 18, 2010, the NRC staff completed its performance review of Cooper Nuclear Station. Our technical staff reviewed performance indicators for the most recent quarter and inspection results for the period from January 1 through December 31, 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 Information" will include the security cornerstone review and resultant inspection plan.

Overall, Cooper Nuclear Station 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 performance indicators 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.

While plant performance for the most recent quarter is within the Licensee Response column of the Action Matrix, there was a safety significant performance indicator affecting the first two quarters of the assessment cycle. Performance for the first two quarters of the assessment period was within the Regulatory Response column of the NRC's Action Matrix based on a White performance indicator for Mitigating Systems Performance Index – Emergency AC Power (MSPI-EAC). The performance indicator crossed the Green-White threshold in the fourth quarter of 2008 as a result of a failure of the Division I emergency diesel generator from a fault in the fuel oil transfer system on October 31, 2008. Consistent with the guidance in Inspection Manual Chapter 0305, "Operating Reactor Assessment Program," the NRC conducted a supplemental inspection using Inspection Procedure 95001, "Supplemental Inspection for One

or Two Inputs in a Strategic Performance Area,” on June 30, 2009. The supplemental inspection determined that you performed a thorough evaluation in which specific problems were identified, an adequate root cause evaluation was performed, and corrective actions were taken to prevent recurrence. Based on the staff’s verification of your corrective actions, Cooper Nuclear Station returned to the Licensee Response column of the NRC’s Action Matrix for the third quarter of the assessment period.

In both the 2008 end-of-cycle and 2009 mid-cycle assessment letters, the NRC identified a crosscutting theme associated with the work practices component of the human performance area related to the use of human error prevention techniques [H.4(a)]. Prior to issuance of the 2008 end-of-cycle letter, you recognized this theme and implemented corrective actions to mitigate this theme. Some of your corrective actions included biweekly tailgate meetings with employees on human performance fundamentals, increasing required supervisory oversight of high risk activities, implementation of a dynamic learning flow-loop simulator for all personnel to practice error prevention techniques and creation of a human performance review board to periodically review the status your program. Additionally you had also proposed other corrective actions that were in progress at the end of the assessment period. Since you recognized this theme and developed corrective actions, a crosscutting issue was not identified since a reasonable duration of time had not passed for the staff to determine the effectiveness of your corrective actions.

While preparing for the 2009 mid-cycle assessment, the staff again evaluated your scope of efforts and progress in addressing the crosscutting theme involving the use of human error prevention techniques [H.4(a)]. The staff determined that you continued to appropriately recognize this theme and that your corrective actions appeared to be appropriate to mitigate the theme. The staff also recognized that your corrective actions had not been fully implemented and no crosscutting issue was identified.

Seven findings with the crosscutting aspect related to the use of human error prevention techniques have occurred during this assessment period, five of these occurred following full implementation of your corrective actions. Based on these findings with the repeated common theme, the NRC staff has identified a substantive crosscutting issue in the human performance area associated with work practices related to the use of human error prevention techniques at Cooper Nuclear Station [H.4(a)]. These findings occurred in initiating events, barrier integrity and occupational radiation safety cornerstones. Examples included errors which lead to the loss of spent fuel pool cooling, errors which resulted in the tripping of a recirculation pump that left the core pressurized and without forced flow, and the use of an incorrect o-ring in the digital electro-hydraulic fluid system that required taking the turbine off-line and a manual scram from power. The NRC will clear this substantive crosscutting issue when you demonstrate sustainable performance improvements as evidenced by effective implementation of an appropriate corrective action plan that results in no safety significant inspection findings and a notable reduction in the overall number of inspection findings with the same common theme.

In our 2009 mid-cycle assessment letter, dated September 1, 2009, the NRC staff identified a crosscutting theme associated with the decision making component of the human performance area involving the use of conservative decision making [H.1(b)]. At the time, the NRC did not identify a substantive crosscutting issue because you appropriately recognized this theme and

implemented a range of corrective actions to address it.

During this 12-month assessment period, the staff identified four green findings with documented crosscutting aspects in the area of human performance associated with the same theme involving the use of conservative decision making [H.1(b)]. However, each of the findings occurred in the first half of the current assessment period. Since no additional findings with this theme have occurred since the full implementation of your corrective actions, it appears your corrective actions have been effective in mitigating this theme. As such, we have determined that a substantive crosscutting issue with this theme does not exist at this time.

The enclosed inspection plan details the inspection, less those related to physical protection scheduled through June 30, 2011. 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 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 Vincent Gaddy, Chief, Division of Reactor Projects, at (817) 860-8144 with any questions you may have regarding this letter or the inspection plan.

Sincerely,

**/RA/**

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Docket: 50-298  
License: DPR-46

Enclosure:  
Cooper Nuclear Station Inspection/ Activity Plan

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File located: R:\\_Reactors\EOC2009\CNS.doc

SUNSI Rev Compl.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	ADAMS	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Reviewer Initials	VGG
Publicly Avail	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Sensitive	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Sens. Type Initials	VGG
C:DRP/C	D:DRS	D:DRP			
VGaddy	RJCaniano	DDChamberlain			
<b>/RA/</b>	<b>/RA/</b>	<b>/RA/</b>			
2/25/10	2/26/10	3/1/10			

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**Cooper**  
**Inspection / Activity Plan**  
**04/01/2010 - 06/30/2011**

Unit Number	Planned Dates Start      End	Inspection Activity	Title	No. of Staff on Site
<b>EP-1      - BIENNIAL EP EXERCISE INSPECTION</b>				<b>3</b>
1	07/19/2010    07/23/2010	IP 7111401	Exercise Evaluation	
1	07/19/2010    07/23/2010	IP 7111404	Emergency Action Level and Emergency Plan Changes	
1	07/19/2010    07/23/2010	IP 71151-EP01	Drill/Exercise Performance	
1	07/19/2010    07/23/2010	IP 71151-EP02	ERO Drill Participation	
1	07/19/2010    07/23/2010	IP 71151-EP03	Alert & Notification System	
<b>EB1-21      - COMPONENT DESIGN BASIS INSPECTION</b>				<b>9</b>
1	07/19/2010    07/23/2010	IP 7111121	Component Design Bases Inspection	
1	08/02/2010    08/13/2010	IP 7111121	Component Design Bases Inspection	
<b>RS45      - RADIATION SAFETY</b>				<b>2</b>
1	08/16/2010    08/20/2010	IP 71124.04	Occupational Dose Assessment	
1	08/16/2010    08/20/2010	IP 71124.05	Radiation Monitoring Instrumentation	
1	08/16/2010    08/20/2010	IP 71151-OR01	Occupational Exposure Control Effectiveness	
1	08/16/2010    08/20/2010	IP 71151-PR01	RETS/ODCM Radiological Effluent	
<b>EB2-05T    - TRIENNIAL FIRE PROTECTION</b>				<b>5</b>
1	10/18/2010    10/22/2010	IP 7111105T	Fire Protection [Triennial]	
1	11/01/2010    11/05/2010	IP 7111105T	Fire Protection [Triennial]	
<b>BRQ      - OPERATOR REQUAL INSPECTION</b>				<b>2</b>
1	12/06/2010    12/10/2010	IP 7111111B	Licensed Operator Requalification Program	
<b>PSB2-08G   - INSERVICE INSPECTION</b>				<b>3</b>
1	03/07/2011    04/10/2011	IP 7111108G	Inservice Inspection Activities - BWR	
<b>RP678      - RADIATION SAFETY TEAM</b>				<b>3</b>
1	05/09/2011    05/13/2011	IP 71124.06	Radioactive Gaseous and Liquid Effluent Treatment	
1	05/09/2011    05/13/2011	IP 71124.07	Public Radiation Safety	
1	05/09/2011    05/13/2011	IP 71124.08	Radioactive Solid Waste Processing and Radioactive Material Handling, Storage, and Transportation	
<b>EP1      - BIENNIAL EP PROGRAM INSPECTION</b>				<b>1</b>
1	06/20/2011    06/24/2011	IP 7111402	Radiological Environmental Monitoring Program	
1	06/20/2011    06/24/2011	IP 7111403	Emergency Response Organization Augmentation Testing	
1	06/20/2011    06/24/2011	IP 7111404	Emergency Action Level and Emergency Plan Changes	
1	06/20/2011    06/24/2011	IP 7111405	Correction of Emergency Preparedness Weaknesses and Deficiencies	
1	06/20/2011    06/24/2011	IP 71151-EP01	Drill/Exercise Performance	
1	06/20/2011    06/24/2011	IP 71151-EP02	ERO Drill Participation	
1	06/20/2011    06/24/2011	IP 71151-EP03	Alert & Notification System	
<b>TSB-52B    - BIENNIAL PI&amp;R</b>				<b>1</b>
1	06/06/2011    06/24/2011	IP 71152B	Identification and Resolution of Problems	

This report does not include INPO and OUTAGE activities.  
 This report shows only on-site and announced inspection procedures.