



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION IV  
612 EAST LAMAR BLVD, SUITE 400  
ARLINGTON, TEXAS 76011-4125

March 4, 2011

Matthew Sunseri, President and  
Chief Executive Officer  
Wolf Creek Nuclear Operating Corporation  
P.O. Box 411  
Burlington, KS 66839

SUBJECT: ANNUAL ASSESSMENT LETTER FOR WOLF CREEK GENERATING  
STATION (REPORT 05000482/2011001)

Dear Mr. Sunseri:

On February 3, 2011, the NRC completed its end-of-cycle performance review of Wolf Creek Generating Station. The NRC reviewed the most recent quarterly performance indicators in addition to inspection results and enforcement actions from January 1, 2010 through December 31, 2010. This letter informs you of the NRC's assessment of your facility during this period and its plans for future inspections at your facility. This performance review and enclosed inspection plan do not include security information. A separate letter will include the NRC's assessment of your performance in the Security Cornerstone and its security-related inspection plan.

Overall, Wolf Creek Generating Station operated in a manner that preserved public health and safety and met all cornerstone objectives with moderate degradation in safety performance. The NRC determined the performance at Wolf Creek Generating Station during the most recent quarter was within the Degraded Cornerstone Column of the NRC's Reactor Oversight Process (ROP) Action Matrix based on two White performance indicators for Unplanned Scrams and Unplanned Scrams with Complications in the first quarter of 2010 involving the Initiating Events Cornerstone, a White performance indicator for Safety System Functional Failures involving the Mitigating Systems Cornerstone, and all inspection findings classified as having very low safety significance (Green). The Unplanned Scrams with Complications performance indicator originally crossed the Green-White threshold in the third quarter of 2009. As a result, when the performance indicators for Unplanned Scrams and Safety System Functional Failures crossed the Green-White threshold in the first quarter of 2010, the station entered the Degraded Cornerstone of the Action Matrix as discussed in our follow-up assessment letter dated June 7, 2010 (ML101590249).

Although the performance indicators for Unplanned Scrams and Unplanned Scrams with Complications both returned to Green in the second quarter of 2010, the station will remain in the Degraded Cornerstone Column pending successful completion of a supplemental inspection conducted using Inspection Procedure 95002, "Supplemental Inspection for One Degraded Cornerstone or Any Three White Inputs in a Strategic Performance Area." This inspection

procedure is conducted to provide assurance that the root and contributing causes for the individual and collective risk-significant performance issues are understood, to independently assess the extent of condition, to provide assurance that the corrective actions are sufficient to prevent recurrence, and to independently determine if safety culture components caused or significantly contributed to the individual and collective risk-significant performance issues. On October 29, 2010, your staff notified the NRC of your readiness to conduct a supplemental inspection to review the actions taken to address the performance issues. Therefore, the NRC initiated the supplemental inspection in accordance with Inspection Procedure 95002 on February 7, 2011. The results of this inspection may affect the NRC's assessment of plant performance and the enclosed inspection plan. The NRC will issue a follow-up assessment letter following completion of the supplemental inspection.

Additionally, the NRC previously identified four Severity Level IV traditional enforcement violations at Wolf Creek Generating Station associated with impeding the regulatory process. Therefore, the NRC is conducting Inspection Procedure 92723, "Follow Up Inspection for Three or More Severity Level IV Traditional Enforcement Violations in the Same Area in a 12-Month Period," to follow-up on these violations in conjunction with the Inspection Procedure 95002 supplemental inspection.

In its assessment letter dated September 2, 2008, (ML082460507), the NRC opened a substantive cross-cutting issue in the problem identification and resolution area associated with the aspect of thoroughness of evaluating problems such that resolutions address causes and extent of condition [P.1(c)]. In each of four subsequent assessment letters, we stated that this substantive cross-cutting issue would remain open until we determined that your corrective actions had been effective. During four public meetings with the NRC between October 2008 and November 2010, you described significant changes you had implemented to improve the quality of problem evaluation. Through our inspection process, we noted some improvements in this area at the 2009 mid-cycle assessment; however, we continued to identify findings associated with this theme. In early 2010, Wolf Creek Generating Station completed a nuclear safety culture assessment and implemented corrective actions based on the results of that survey. The NRC reviewed the safety culture survey results as documented in NRC Inspection Report 05000482/2010006 (ML102560258). We noted that the station completed a self assessment in May 2010 identifying that several root cause evaluations, including the root cause evaluation associated with this substantive cross-cutting issue, contained deficiencies that required the evaluations to be re-performed and new corrective actions developed. The revised cause evaluation was completed in September 2010, and corrective actions implemented as part of the Station Recovery Plan. However, we continue to identify findings associated with ineffective problem evaluation, with eight findings identified during this assessment period, indicating the implementation of corrective actions has not demonstrated effectiveness in mitigating this adverse trend. Therefore, the substantive crosscutting issue in problem identification and resolution associated with the thoroughness of problem evaluation [P.1(c)] will remain open.

In its assessment letter dated September 1, 2010, (ML102440351), the NRC added a new cross-cutting theme to the substantive cross-cutting issue in problem identification and resolution associated with the appropriateness of timely corrective actions in the corrective action program component [P.1(d)]. In evaluating the scope of efforts and progress in addressing this theme, we note that your staff appropriately recognized the adverse trend and entered it into the corrective action program. Corrective actions developed were attributed to the Station Recovery Plan. However, the findings we continue to identify in this area do not illustrate that your corrective actions have been fully effective. Therefore, the problem

identification and resolution cross-cutting theme associated with the implementation of timely and appropriate corrective actions [P.1(d)] will remain open.

During this assessment period the NRC identified a new substantive cross-cutting issue in the human performance area associated with the completeness and accuracy of design documentation, procedures, and work packages [H.2(c)]. The theme is comprised of six findings affecting the Mitigating Systems cornerstone. Examples include: incomplete instructions in work orders to repair degraded wiring, inadequate work packages for the emergency diesel generator room and service water pump room tornado damper testing, and the procedure used to create examinations and operating tests for licensed operators did not ensure examination integrity was maintained. In evaluating the scope of efforts and progress in addressing this theme, we note that your staff appropriately recognized the trend and entered it in the corrective action program. However, based on the increasing trend in findings with this theme over the course of the assessment cycle, it is not evident to us that the depth and scope of the apparent cause evaluation were sufficient to ensure the corrective actions would fully address the root causes of the issue.

The NRC plans to conduct additional inspection to evaluate the effectiveness of your performance improvement efforts related to the substantive cross-cutting issues described above, as discussed in Section 13.03 of Inspection Manual Chapter 0305, "Operating Reactor Assessment Program." Accordingly, we request you provide us a letter informing us of Wolf Creek Generating Station's readiness for inspection of your corrective actions in addressing each of the three identified safety culture themes. The NRC will then perform additional focused problem identification and resolution inspection focusing on the station's progress in developing and implementing corrective actions and the metrics and measures used to determine performance improvement effectiveness. The NRC will close each identified theme when we determine through our inspection that your corrective actions have been effective and the station has demonstrated sustained and measurable improvement.

In addition, during this assessment period the NRC identified a cross-cutting theme with six findings in the area of problem identification and resolution associated with the use of a low threshold for identifying issues in the corrective action program [P.1(a)]. In evaluating the scope of efforts and progress in addressing this theme, we determined that your staff appropriately recognized the declining trend, entered the trend into the corrective action program, and developed corrective actions; however, a reasonable duration of time has not passed to determine the effectiveness of your corrective actions. Therefore, the NRC has determined that a substantive cross-cutting issue does not exist at this time. The NRC will continue to monitor your staff's effort and progress in addressing this theme through the baseline inspection program.

The enclosed inspection plan lists the inspections scheduled through June 30, 2012. Routine inspections performed by resident inspectors are not included in the inspection plan. The inspections listed during the last nine months of the inspection plan are tentative and may be revised at the mid-cycle performance review. The NRC provides the inspection plan to allow for the resolution of any scheduling conflicts and personnel availability issues. The NRC will contact you as soon as possible to discuss changes to the inspection plan should circumstances warrant any changes. Temporary Instruction 2515/177 Inspection, "Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems," which remains to be scheduled, will be completed during the 2011 calendar year.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter 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).

Please contact Geoffrey Miller at 817-860-8141 with any questions you have regarding this letter.

Sincerely,

A handwritten signature in black ink that reads "Elmo E. Collins". The signature is written in a cursive style with a large, prominent "E" and "C".

Elmo E. Collins  
Regional Administrator

Docket No. 50-482  
License No. NPF-42

Enclosure: Wolf Creek Generating Station Inspection/Activity Plan

cc: Distribution via ListServ

Wolf Creek  
 Inspection / Activity Plan  
 03/01/2011 - 06/30/2012

Unit Number	Planned Dates Start	Planned Dates End	Inspection Activity	Title	No. of Staff on Site
1	08/01/2011	08/05/2011	<b>EXAM</b>	<b>- INITIAL OPERATOR EXAM</b>	4
			X02451	INITIAL EXAM -WC (11/2010)	
1	08/29/2011	09/02/2011	X02451	INITIAL EXAM -WC (11/2010)	
1	03/21/2011	03/25/2011	<b>RP123</b>	<b>- RADIATION SAFETY</b>	2
			IP 71124.01	Radiological Hazard Assessment and Exposure Controls	
1	03/21/2011	03/25/2011	IP 71124.02	Occupational ALARA Planning and Controls	
1	03/21/2011	03/25/2011	IP 71124.03	In-Plant Airborne Radioactivity Control and Mitigation	
1	03/21/2011	03/25/2011	IP 71151-OR01	Occupational Exposure Control Effectiveness	
1	03/21/2011	03/25/2011	IP 71151-PR01	RETS/ODCM Radiological Effluent	
1	03/28/2011	04/08/2011	<b>PSB2-08P</b>	<b>- INSERVICE INSPECTION</b>	2
			IP 7111108P	Inservice Inspection Activities - PWR	
1	08/22/2011	08/26/2011	<b>RS45</b>	<b>- RADIATION SAFETY</b>	2
			IP 71124.04	Occupational Dose Assessment	
1	08/22/2011	08/26/2011	IP 71124.05	Radiation Monitoring Instrumentation	
1	10/17/2011	10/21/2011	<b>EB2-05T</b>	<b>- TRIENNIAL FIRE PROTECTION</b>	4
			IP 7111105T	Fire Protection [Triennial]	
1	10/31/2011	11/04/2011	IP 7111105T	Fire Protection [Triennial]	
1	11/14/2011	11/18/2011	<b>EP1</b>	<b>- BIENNIAL EP EXERCISE INSPECTION</b>	3
			IP 7111401	Exercise Evaluation	
1	11/14/2011	11/18/2011	IP 7111404	Emergency Action Level and Emergency Plan Changes	
1	11/14/2011	11/18/2011	IP 71151	Performance Indicator Verification	
1	04/23/2012	04/27/2012	<b>RS5678</b>	<b>- RADIATION SAFETY TEAM</b>	4
			IP 71124.05	Radiation Monitoring Instrumentation	
1	04/23/2012	04/27/2012	IP 71124.06	Radioactive Gaseous and Liquid Effluent Treatment	
1	04/23/2012	04/27/2012	IP 71124.07	Radiological Environmental Monitoring Program	
1	04/23/2012	04/27/2012	IP 71124.08	Radioactive Solid Waste Processing and Radioactive Material Handling, Storage, and Transportation	

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