



September 9, 2011

Matthew W. Sunseri  
President and Chief Executive Officer

WM 11-0009

U. S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, DC 20555-0001

Reference: Letter dated August 12, 2011, from G. B. Miller, USNRC, to  
M. W. Sunseri, WCNOC

Subject: Docket No. 50-482: Reply to Notice of Violation EA-11-149

Gentlemen:

Attachment I provides Wolf Creek Nuclear Operating Corporation's (WCNOC) reply to Notice of Violation (NOV) EA-11-149 as contained in the reference and described in Inspection Report 05000482/2011003. This letter contains no commitments.

If you have any questions concerning this matter, please contact me at (620) 364-4008, or Mr. Gautam Sen, Manager Regulatory Affairs, at (620) 364-4175.

Sincerely,

A handwritten signature in black ink that reads "M W Sunseri". The signature is written in a cursive, flowing style.

Matthew W. Sunseri

MWS/rlt

Attachment – Reply to Notice of Violation EA-11-149

cc: E. E. Collins (NRC), w/a  
J. R. Hall (NRC), w/a  
G. B. Miller (NRC), w/a  
Senior Resident Inspector (NRC), w/a

Handwritten in the bottom right corner. It appears to be "IEO1" written above "12/6/11". The "12/6/11" is written in a stylized, slanted manner.

## **Reply to Notice of Violation (NOV) EA-11-149**

### **Description of Violation EA-11-149**

"Technical Specification 5.4.1.a requires that procedures be established, implemented and maintained covering the activities described in Regulatory Guide 1.33, Revision 2, Appendix A. Regulatory Guide 1.33, Revision 2, Appendix A, Section 3.i requires procedures for the startup, operations and shutdown of the main steam system. Wolf Creek procedure SYS AB-120, "Main Steam and Steam Dump Startup and Operation," Revision 27, implements these requirements for the main steam system.

"Contrary to the above, from March 5, 2010, to March 19, 2011, Wolf Creek procedure SYS AB-120 had not been maintained to cover activities for the startup, operation and shutdown of the main steam system. Specifically, procedure SYS AB-120 contained inadequate steps necessary to open a main steam isolation valve without causing a safety injection signal."

### **Reason for the Violation**

The reason for this violation is that Wolf Creek Nuclear Operating Corporation (WCNOC) did not provide adequate instruction in procedure SYS AB-120 for opening main steam isolation valves (MSIVs) at normal operating pressure and normal operating temperature (NOP/NOT). At 1700 on March 18, 2011, control room operators initiated an orderly plant shutdown in preparation for Refueling Outage 18. An excessive cooldown occurred as the plant was moved to Mode 3 and operators closed the MSIVs to terminate the cooldown.

Control Room operators decided to continue cooling down the plant from NOP/NOT using the steam dump valves and the shift manager implemented use of procedure SYS AB-120 to open the MSIVs. Step 4.5 in revision 27 of procedure SYS AB-120 provided a precaution that the MSIVs shall not be opened when the differential pressure across the valves is greater than 20 pounds-per-square inch differential (psid). Step 6.1.14.2 in revision 27 of procedure SYS AB-120 instructed operators to measure system pressure upstream and downstream of an MSIV with temporary gauges to ensure that differential pressure across an MSIV is less than 20 psid.

Prerequisite step 5.2 in revision 27 of procedure SYS AB-120 specified that the temporary gauges indicate a range of system pressures between zero and 300 psig. The operating crew consequently marked step 6.1.14.2 as not applicable because this range of indication would not work at NOP/NOT. The operating crew used control room instrumentation to erroneously conclude that a differential pressure of less than 20 psid existed across the MSIVs.

When the "C" MSIV was opened at 0403 on March 19, 2011, an estimated differential pressure of 200 psid existed across this valve and a momentary pressure drop of 50 to 100 psi was measured in the "C" steam generator. The pressure drop was rapid enough to result in a safety injection signal.

The requirement to use temporary gauges to measure system pressure upstream and downstream of the MSIVs from zero to 300 psig was added to procedure SYS AB-120 on May 12, 2010. This revision was made in response to a feedwater isolation signal (FWIS) caused by

opening the "A" MSIV on March 5, 2010. This event is associated with Noncited Violation (NCV) 2010004-01, which was issued on November 10, 2010. The pressure gauge range of zero to 300 psig in procedure SYS AB-120 was not sufficient to measure system pressure and calculate differential pressure across the MSIVs at NOP/NOT. Cited Violation NOV EA-11-149 resulted from WCNO's failure to provide adequate instructions in procedure SYS AB-120 for opening an MSIV without causing engineered safety feature actuations within a reasonable amount of time from the issuance of NCV 2010004-01.

#### **Corrective Steps That Have Been Taken and Results Achieved**

Procedure SYS AB-120 was revised to provide instructions for plant operators to open an MSIV without causing engineered safety feature actuations. Two new sections were added to provide instructions for opening the MSIVs when steam pressure is greater than 30 psig but less than 615 psig and when the reactor coolant system is at NOP/NOT. Additional changes made to procedure SYS AB-120 required adequately warming the main steam lines, stabilizing system temperature, removing condensate and determining differential pressure with temporary 0-2000 psig steam pressure gauges before opening an MSIV.

Procedure SYS AB-120 has been used to open MSIVs two times since May 24, 2011 and no engineered safety feature actuations occurred. To address the extent of this condition, additional operational, testing and off-normal procedures were revised to provide precautions and limitations in order to prevent engineered safety feature actuations.

#### **Corrective Steps That Will Be Taken to Avoid Future Violations**

No additional corrective actions are necessary to address NOV EA-11-149.

#### **Date When Full Compliance Will Be Achieved**

For the violation of Technical Specification 5.4.1.a described in NOV EA-11-149, full compliance was achieved with the release of revision 28 of procedure SYS AB-120 on May 23, 2011 and the issuance of OTSC 11-0146 to revision 28 of procedure SYS AB-120 on May 24, 2011.