

WOLF CREEK NUCLEAR OPERATING CORPORATION

Matthew W. Sunseri
Vice President Operations and Plant Manager

October 18, 2009

WO 09-0036

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D. C. 20555

Subject: Docket No. 50-482: Licensee Event Report 2009-004-00,
Feedwater Isolation on High Water Level in 'A' Steam Generator

Gentlemen,

The enclosed Licensee Event Report (LER) 2009-004-00 is being submitted pursuant to 10 CFR 50.73(a)(2)(iv)(A) regarding a high Steam Generator water level that resulted in a turbine trip signal and feedwater isolation signal being generated. At the time of this event, Wolf Creek Generating Station was in a tripped condition and the main feedwater isolation valves were closed. This event had no impact on plant equipment or conditions.

This letter contains no commitments. If you have any questions concerning this matter, please contact me at (620) 364-4008, or Mr. Richard D. Flannigan, Manager Regulatory Affairs at (620) 364-4117.

Sincerely,



Matthew W. Sunseri

MWS/rlt

Enclosure

cc: E. E. Collins (NRC), w/e
V. G. Gaddy (NRC), w/e
B. K. Singal (NRC), w/e
Senior Resident Inspector (NRC), w/e

IE 22

NR 2

LICENSEE EVENT REPORT (LER)

(See reverse for required number of digits/characters for each block)

Estimated burden per response to comply with this mandatory collection request: 80 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the Records and FOIA/Privacy Service Branch (T-5 F52), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to infocollects@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

1. FACILITY NAME WOLF CREEK GENERATING STATION	2. DOCKET NUMBER 05000 482	3. PAGE 1 OF 4
--	--------------------------------------	--------------------------

4. TITLE
Feedwater Isolation on High Water Level in 'A' Steam Generator

5. EVENT DATE			6. LER NUMBER			7. REPORT DATE			8. OTHER FACILITIES INVOLVED	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO.	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
08	21	2009	2009	004	00	10	18	2009	FACILITY NAME	DOCKET NUMBER
										05000
										05000

9. OPERATING MODE 3	11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR§: (Check all that apply)									
10. POWER LEVEL 0	<input type="checkbox"/> 20.2201(b)	<input type="checkbox"/> 20.2203(a)(3)(i)	<input type="checkbox"/> 50.73(a)(2)(i)(C)	<input type="checkbox"/> 50.73(a)(2)(vii)						
	<input type="checkbox"/> 20.2201(d)	<input type="checkbox"/> 20.2203(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)						
	<input type="checkbox"/> 20.2203(a)(1)	<input type="checkbox"/> 20.2203(a)(4)	<input type="checkbox"/> 50.73(a)(2)(ii)(B)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)						
	<input type="checkbox"/> 20.2203(a)(2)(i)	<input type="checkbox"/> 50.36(c)(1)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(ix)(A)						
	<input type="checkbox"/> 20.2203(a)(2)(ii)	<input type="checkbox"/> 50.36(c)(1)(ii)(A)	<input checked="" type="checkbox"/> 50.73(a)(2)(iv)(A)	<input type="checkbox"/> 50.73(a)(2)(x)						
	<input type="checkbox"/> 20.2203(a)(2)(iii)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(v)(A)	<input type="checkbox"/> 73.71(a)(4)						
	<input type="checkbox"/> 20.2203(a)(2)(iv)	<input type="checkbox"/> 50.46(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(v)(B)	<input type="checkbox"/> 73.71(a)(5)						
	<input type="checkbox"/> 20.2203(a)(2)(v)	<input type="checkbox"/> 50.73(a)(2)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(v)(C)	<input type="checkbox"/> OTHER						
	<input type="checkbox"/> 20.2203(a)(2)(vi)	<input type="checkbox"/> 50.73(a)(2)(i)(B)	<input type="checkbox"/> 50.73(a)(2)(v)(D)	Specify in Abstract below or in NRC Form 366A						

12. LICENSEE CONTACT FOR THIS LER

FACILITY NAME Richard D. Flannigan, Manager Regulatory Affairs	TELEPHONE NUMBER (Include Area Code) (620) 364-4117
---	--

13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT

CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX

14. SUPPLEMENTAL REPORT EXPECTED <input type="checkbox"/> YES (If yes, complete 15. EXPECTED SUBMISSION DATE) <input checked="" type="checkbox"/> NO	15. EXPECTED SUBMISSION DATE MONTH: DAY: YEAR:
--	--

ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines)

On 8/21/2009, at approximately 0648 CDT, Wolf Creek Generating Station experienced a turbine trip and Feedwater Isolation Signal (FWIS) generated as result of high water level in 'A' Steam Generator. The water level in the 'A' Steam Generator exceeded the initiation setpoint of 78%. Steam generator water level returned below the initiation setpoint at approximately 0656 CDT. (EN # 45281)

At the time of the event, the turbine was in the tripped condition and main feedwater Isolation valves, feedwater regulating valves and feedwater regulating bypass valves were closed due to a plant trip that occurred at 1549 CDT on 8/19/2009 (Reference LER 2009-002-00). The event had no impact on plant conditions.

The cause of the event was a human performance error due to inadequate monitoring of critical operating parameters by the on-duty operating crew. There were no component failures or functional failures of equipment.

The safety significance of the event was very low. All systems functioned as designed. Plant conditions and configuration were such that the turbine trip and FWIS had no effect other than alarm annunciation and signal generation.

LICENSEE EVENT REPORT (LER)

1. FACILITY NAME	2. DOCKET	6. LER NUMBER			3. PAGE		
WOLF CREEK GENERATING STATION	05000 482	YEAR	SEQUENTIAL NUMBER	REV NO.	2	OF	4
		2009	- 004 -	00			

NARRATIVE

BACKGROUND:

On 08/19/2009 Wolf Creek Generating Station experienced an unplanned automatic shutdown due to the momentary loss of offsite power to the onsite buses (Reference LER 2009-002-00 submitted by letter WO 09-0034). While recovering from the reactor trip, maintaining steam generator water level required close operator attention due to swell. Actions were taken to control steam generator water level by manually opening and closing the auxiliary feedwater supply valves. However, these methods required continual monitoring of critical operating parameters. Contrary to the need to monitor, the operating crew failed to do so.

PLANT CONDITIONS PRIOR TO EVENT:

Mode -- 3
 Power Level -- 0
 Normal Operating Temperature and Pressure

EVENT DESCRIPTION:

On 8/20/2009, Wolf Creek Generating Station was recovering from a reactor trip that occurred on 8/19/2009. The plant was in Mode 3 with two reactor coolant pumps [EIS: AB, P] in operation and four steam generators in service. The steam generators were steaming, with the atmospheric relief valves (ARV)[EIS: RV] controlling pressure. Steam Generator 'A' was steaming at the greatest rate.

Due to swell, maintaining steam generator water level below 70% required close operator attention. Direction was given by the Control Room Supervisor to secure auxiliary feedwater immediately when 65% water level was reached. Operator Selected Alarm (OSA) was set at 65% water level. Feedwater [EIS: SJ] was quickly secured when the 65% water level was reached. This method of control allowed for 5% water swell and also accounted for an additional 5% level increase if an ARV opened during this time frame. The method being used to control steam generator water level was passed to the oncoming night shift operating crew.

The night shift operating crew maintained steam generator water levels initially between 45% and 65%, with OSA for high steam generator water level set at 65%. An expected swell of approximately 5% would occur following securing of feedwater flow. Later in the shift, steam generator water levels were allowed to reach 70% prior to securing auxiliary feedwater flow in order to reduce the number of valve manipulations required and to reduce alarm annunciation. The OSA was disabled late in the shift due to the extreme distraction of the alarms annunciating.

During turnover to the day shift operating crew, both the Reactor Operator and the Balance of Plant operator became involved in shift turnover and walk down of the control boards. The Control Room Supervisor was also occupied by shift turnover. At 0648 CDT, on 8/21/2009, a turbine trip and FWIS was generated when the "A" Steam Generator water level exceeded 78%.

LICENSEE EVENT REPORT (LER)

1. FACILITY NAME	2. DOCKET	6. LER NUMBER			3. PAGE		
WOLF CREEK GENERATING STATION	05000 482	YEAR	SEQUENTIAL NUMBER	REV NO.	3	OF	4
		2009	- 004 -	00			

NARRATIVE

BASIS FOR REPORTABILITY:

10 CFR 50.73(a)(2)(IV)(A) requires any event or condition that resulted in manual or automatic actuation of any of the systems listed in paragraph (a)(2)(IV)(B) of the section with exceptions. This event does not meet any of the exceptions.

50.73(a)(2)(IV)(B) does identify valid actuation of the reactor protection system. In this case, it could be argued that the feedwater isolation (FWIS) and turbine trip signals are part of Engineered Safety Features Actuation System (ESFAS) which is included in the WCGS RPS.

NUREG 1022, Rev. 2 defines a valid actuation as signals that are initiated due to actual plant conditions. Although no actions were required as a result of the signal, plant conditions were such that the water level in Steam Generator 'A' resulted in a turbine trip signal and FWIS on high water level.

In this case the actuation of the FWIS and turbine trip did not lead to an auxiliary feedwater (AFW) actuation because the plant had already experienced an AFW actuation. AFW was being used to feed the steam generators. WCGS was not in the mode of applicability for the actuation signals (Reference WCGS Technical Specification Table 3.3.2-1, functions 5.c and 6.g). If WCGS had been in a different configuration and mode, the event could have lead to an actuation of AFW. Therefore, WCNOG believes this is a condition the NRC would consider indicative of an unplanned event that they would want to evaluate.

Further insight into the NRC's intent for reporting can be extracted from the statements of consideration published in the Federal Register with the final 10 CFR 50.72 and 10 CFR 50.73 rules, dated October 25, 2000. Specifically; "The principal reason for reporting an actuation of one of these systems is that it is indicative of an unplanned plant transient that the NRC needs to evaluate to determine if action is necessary to address a safety problem in this context, the NRC's need to evaluate the event is independent of the classification of the system." Additionally, although the NRC made an effort in the rule revision to reduce the systems included by this regulation, it clearly stated that the list of systems is not all-inclusive.

WCNOG believes that the actuation was valid, did not result in an actuation of any of the systems listed in 50.73(a)(2)(IV)(B), but is an event of interest to the NRC. Therefore, WCNOG is reporting this event in accordance with 10 CFR 50.73(a)(2)(IV)(A).

CAUSE:

The cause of the turbine trip and FWIS was a human performance error due to inadequate monitoring of critical operating parameters. The inadequate monitoring resulted from a failure to ensure a dedicated individual maintained the responsibility to monitor steam generator water levels and disabling of the OSA.

Contributing causes were imprecise communication, simultaneous tasks being performed, high workload, and personnel habit patterns associated with turnover.

LICENSEE EVENT REPORT (LER)

1. FACILITY NAME	2. DOCKET	6. LER NUMBER			3. PAGE		
WOLF CREEK GENERATING STATION	05000 482	YEAR	SEQUENTIAL NUMBER	REV NO.	4	OF	4
		2009	- 004 -	00			

NARRATIVE

CORRECTIVE ACTIONS:

The water level of Steam Generator 'A' was immediately lowered.

Procedure AP 21-001, "Conduct of Operations," was revised to include a directive that prior to shift turnover the Control Room Supervisor is expected to review all ongoing activities and ensure personnel are specifically assigned to ongoing tasks that require monitoring and control through shift turnover. This procedural requirement was communicated to all Shift Managers and Control Room Supervisors to ensure understanding.

SAFETY SIGNIFICANCE:

The safety significance of the steam generator high water level transient was very low. Steam generator inventory remained above the low water level trip throughout the event and its restoration. All systems functioned as designed. Plant conditions and configuration were such that the turbine trip and FWIS had no effect other than alarm annunciation and signal generation. No physical equipment actuations occurred due to plant conditions at the time of the event. Systems and components required to shut down the reactor, maintain safe shutdown conditions, remove residual heat, control the release of radioactive materials, or mitigate the consequences of an accident were not affected by this event.

A review of this event determined that a Safety System Functional Failure as defined in NEI 99-02 did not occur.

PREVIOUS OCCURRENCES:

None