



Jamie H. McCoy  
Vice President Engineering

June 15, 2015  
ET 15-0017

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

Subject: Docket No. 50-482: Licensee Event Report 2015-002-00, "Two Control Room Air Conditioning Trains Inoperable Due to Failure to Meet Surveillance Requirement"

Gentlemen:

The enclosed Licensee Event Report (LER) 2015-002-00 is being submitted pursuant to 10 CFR 50.73(a)(2)(i)(B) as an operation or condition prohibited by Technical Specifications and 10 CFR 50.73(a)(2)(v)(A) as an event or condition that could have prevented fulfillment of a safety function needed to shut down the reactor and maintain it in a safe shutdown condition.

This letter contains no regulatory commitments. If you have any questions concerning this matter, please contact me at (620) 364-4156, or Mr. Steven R. Koenig at (620) 364-4041.

Sincerely,

A handwritten signature in black ink that reads "Jamie H. McCoy".

Jamie H. McCoy

JHM/rlt

Enclosure

cc: M. L. Dapas (NRC), w/e  
C. F. Lyon (NRC), w/e  
A. A. Rosebrook (NRC), w/e  
Senior Resident Inspector (NRC), w/e

Handwritten initials in black ink that read "IE22" over "NRR".

**LICENSEE EVENT REPORT (LER)**(See Page 2 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 FOIA, Privacy and Information Collections Branch (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to [Infocollcts.Resource@nrc.gov](mailto:Infocollcts.Resource@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** Two Control Room Air Conditioning Trains Inoperable Due to Failure to Meet Surveillance Requirement**5. EVENT DATE**

MONTH	DAY	YEAR
4	16	2015

**6. LER NUMBER**

YEAR	SEQUENTIAL NUMBER	REV NO.
2015	002	00

**7. REPORT DATE**

MONTH	DAY	YEAR
06	15	2015

**8. OTHER FACILITIES INVOLVED**

FACILITY NAME	DOCKET NUMBER
	05000
FACILITY NAME	DOCKET NUMBER
	05000

**9. OPERATING MODE****11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply)**

5

<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)

**10. POWER LEVEL**

0

<input type="checkbox"/> 20.2203(a)(2)(ii)	<input type="checkbox"/> 50.36(c)(1)(ii)(A)	<input 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 checked="" 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 checked="" 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**

Steven R. Koenig, Manager Regulatory Affairs

**TELEPHONE NUMBER (Include Area Code)**

620-364-4041

**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**☒ YES (If yes, complete 15. EXPECTED SUBMISSION DATE) ☐ NO**15. EXPECTED SUBMISSION DATE**

MONTH	DAY	YEAR
8	26	2015

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

From January 3, 2013, through August 13, 2013, the Conditions and Required Actions of limiting condition for operation (LCO) LCO 3.7.11, LCO 3.0.3 and LCO 3.0.4 were not met.

On April 16, 2015, an apparent cause evaluation on Condition Report (CR) 92274, "Application of TS SR 3.0.1," identified the potential that the acceptance criteria in procedures STS PE-010A/B, "Control Room A/C System Flow Rate Verification [A/B] Train," may not have been met when the acceptance criteria was revised on January 3, 2013 from > 18,360 cfm and < 22,440 cfm to a new value of > 21,012 cfm. Review of information determined that the prior performances of STS PE-010A/B did not meet the new acceptance criteria. Additionally, procedure STS PE-010B was not performed until July 8, 2013 and procedure STS PE-010A was not performed until August 13, 2013.

The apparent cause of this event is being evaluated and actions to prevent recurrence will be developed to address the apparent cause. This information will be provided in a supplement to this Licensee Event Report.

**LICENSEE EVENT REPORT (LER)  
CONTINUATION SHEET**

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 FOIA, Privacy and Information Collections Branch (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to Infocollects.Resource@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	2. DOCKET	6. LER NUMBER		3. PAGE
WOLF CREEK GENERATING STATION	05000 482	YEAR	SEQUENTIAL NUMBER	REV NO.
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**NARRATIVE****PLANT CONDITIONS PRIOR TO THE EVENT****Mode 5**

The plant was in Refueling Outage 20 when this event was identified. At the time of identification, both Control Room Air Conditioning System (CRACS) trains had successfully met the unit air flow capacity of > 21,012 cfm.

**DESCRIPTION**

From January 3, 2013, through August 13, 2013, the Conditions and Required Actions of limiting condition for operation (LCO) LCO 3.7.11, LCO 3.0.3 and LCO 3.0.4 were not met.

On April 16, 2015, an apparent cause evaluation on Condition Report (CR) 92274, "Application of TS SR 3.0.1," identified the potential that the acceptance criteria in procedures STS PE-010A/B, "Control Room A/C System Flow Rate Verification [A/B] Train," may not have been met when the acceptance criteria was revised on January 3, 2013 from > 18,360 cfm and < 22,440 cfm to a new value of > 21,012 cfm.

In December 1999, Wolf Creek Nuclear Operating Corporation (WCNOC) implemented license amendment number 123 that converted the current Technical Specifications to the improved Technical Specifications. The amendment included new specification 3.7.11, "Control Room Air Conditioning System (CRACS)," and new surveillance requirement (SR) SR 3.7.11.1. SR 3.7.11.1 verifies that the heat removal capability of the CRACS air conditioning units (SGK04A and SGK04B) [EIS: VI, ACU] is adequate to remove the heat load assumed in the control room during design basis accidents. This SR consists of verifying the heat removal capability of the condenser heat exchanger, ensuring the proper operation of major components in the refrigeration cycle, verification of unit air flow capacity, and water flow measurement. Procedures STS PE-010A/B, "Control Room A/C System Flow Rate Verification [A/B] Train," were initially issued on December 18, 1999 for verification of unit air flow capacity. An acceptance criteria of > 20,400 cfm was specified.

Procedures STS PE-010A/B were revised on March 11, 2002 and changed the acceptance criteria from > 20,400 cfm to > 18,360 cfm and < 22,440 cfm. This revision was based on Performance Improvement Request (now referred to as Condition Report) 2001-3149 which determined that a +/- 10% flow rate specified in ASME/ANSI N510-1980, "Testing of Nuclear Air-Cleaning Systems," could be utilized in determining the acceptance criteria.

On November 20, 2012, Condition Report (CR) 60099 identified that procedures STS PE-010A/B should be revised to remove the +/- 10% flow rate based on concerns identified in CR 58535 on the use of the +/- 10% flow rate in procedures STS PE-016A/B, "[A/B] Train Class 1E Electrical System A/C Flow Rate Verification." The Operability Screening Review for CR 60099 indicated that SGK04A and SGK04B were operable based on Operability Evaluation OE GK-12-017 which specified a minimum air flow rate of 19,449 cfm (that excluded instrument uncertainty). Procedures STS PE-010A/B were revised on January 3, 2013 and specified a new acceptance criteria of > 21,012 cfm.

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**NARRATIVE**

The prior performances of STS PE-010A/B did not meet the new acceptance criteria. Additionally, procedure STS PE-010B was not performed until July 8, 2013 and procedure STS PE-010A was not performed until August 13, 2013. These performances met the new acceptance criteria. An adjustable sheave was installed in the 'B' CRACS train in July 2013 and in the 'A' CRACS train in March 2015. Technical Specification (TS) SR 3.0.1 specifies that SRs shall be met during the Modes of Applicability and that failure to meet a Surveillance, whether such failure is experienced during the performance of the Surveillance or between performance shall be a failure to meet the LCO. On January 3, 2013 with the revision of STS PE-010A/B, LCO 3.7.11 should have been declared not met and the applicable Conditions/Required Actions entered. Condition E of LCO 3.7.11 specifies to enter LCO 3.0.3 with two CRACS trains inoperable in Modes 1, 2, 3, 4, 5, and 6 and during movement of irradiated fuel assemblies.

The plant was in Mode 1 on January 3, 2013. Refueling Outage 19 was conducted from February 4, 2013 through April 16, 2013. A forced outage occurred from May 6, 2013 through May 13, 2013. As such, the Conditions and Required Actions of LCO 3.7.11, LCO 3.0.3 and LCO 3.0.4 were not met.

**REPORTABILITY**

This event is reportable under 10 CFR 50.73(a)(2)(i)(B) as an operation or condition prohibited by TSs when it was determined that the Conditions and Required Actions of LCO 3.7.11, LCO 3.0.3 and LCO 3.0.4 were not met from January 3, 2013 through August 13, 2013.

Additionally, this event is reportable under 10 CFR 50.73(a)(2)(v)(A) an event or condition that could have prevented the fulfillment of the safety function of structures or systems that are needed to: (A) Shut down the reactor and maintain it in a safe shutdown condition. Updated Safety Analysis Report (USAR) Section 9.4.1.1.1 specifies that the control room air conditioning system is required to function following a design basis accident and to achieve and maintain the plant in a post accident safe shutdown condition. From January 3, 2013 through July 8, 2013, two CRACS trains were inoperable when the acceptance criteria in procedures STS PE-010A/B were not met resulting in a failure to meet SR 3.7.11.1. NUREG-1022, Rev. 3, "Event Report Guidelines 10 CFR 50.72 and 50.73," indicates that for systems, subsystems and components within the scope of this criterion, a report is required when 1) there is a determination that the SSC is inoperable in a required mode or other specified condition in the TS Applicability, 2) the inoperability is due to one or more personnel errors, including procedure violations; equipment failures; inadequate maintenance; or design, analysis, fabrication, equipment qualification, construction, or procedural deficiencies, and 3) no redundant equipment in the same system was operable.

**CAUSE**

The apparent cause of this event is being evaluated and will be provided in a supplement to this Licensee Event Report (LER).

**CORRECTIVE ACTIONS**

Actions to prevent recurrence are being developed to address the apparent cause and will be provided in a supplement to this LER.

**CONTINUATION SHEET**

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**NARRATIVE**

**SAFETY SIGNIFICANCE**

The design basis of the CRACS is to maintain control room temperature for 30 days of continuous occupancy. The CRACS components are arranged in redundant, safety related trains. During normal or emergency operations, the CRACS maintains the temperature  $\leq 84$  degrees F. Total system failure could result in equipment operating temperatures exceeding limits in the event of the accident. During the duration of this event, one CRACS train remained in operation with an air flow rate slightly less than the design specified flow rate. As such, the safety significance of this event is low.

**OPERATING EXPERIENCE/PREVIOUS EVENTS**

Condition Report 92274 identified an event where the 'A' CRACS train failed to meet the acceptance criteria for procedure STS PE-010A. The 'A' CRACS train was not declared inoperable in accordance with SR 3.0.1 when information obtained from an operability evaluation was used to justify that the train was operable but degraded.