

## LICENSEE EVENT REPORT (LER)

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

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MNBB 7714), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1)

WOLF CREEK GENERATING STATION

DOCKET NUMBER (2)

05000482

PAGE (3)

1 OF 6

TITLE (4)

Failure To Comply With Technical Specification Requirement 3.4.9.1

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NUMBER	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
10	23	96	96	016	01	01	31	97	FACILITY NAME	DOCKET NUMBER
OPERATING		1	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5: (Check one or more) (11)							
POWER		100%	20.402(b)			20.405(c)			50.73(a)(2)(iv)	73.71(b)
			20.405(a)(1)(i)			50.36(c)(1)			50.73(a)(2)(v)	73.71(c)
			20.405(a)(1)(ii)			50.36(c)(2)			50.73(a)(2)(vii)	OTHER
			20.405(a)(1)(iii)		X	50.73(a)(2)(i)			50.73(a)(2)(viii)(A)	
			20.405(a)(1)(iv)			50.73(a)(2)(ii)			50.73(a)(2)(viii)(B)	
			20.405(a)(1)(v)			50.73(a)(2)(iii)			50.73(a)(2)(x)	

LICENSEE CONTACT FOR THIS LER (12)

NAME

R. D. Flannigan  
Manager Nuclear Engineering, Safety and  
Licensing

TELEPHONE NUMBER (Include Area Code)

316-364-8831 Extension 4500

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

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS
		N/A							
SUPPLEMENTAL REPORT EXPECTED (14)					EXPECTED				
YES (If yes, completed EXPECTED SUBMISSION DATE)					X NO				

## ABSTRACT:

On October 23, 1996, during the cause and extent evaluation performed as part of the corrective action process for Licensee Event Report (LER) 96-011-00, it was determined that Technical Specification Clarification (TSC) 016-86 was inappropriate to the circumstances. This TSC allowed testing to occur between the first and second isolation valves without correctly monitoring the temperature and pressure limits as described in the Technical Specification Surveillance 4.4.9.1.1.

Review has determined that WCNOB violated Surveillance Requirement 4.4.9.1.1 numerous times. Violations occurred during performance of STS PE-040B, Revision 3, "Reactor Coolant System Pressure Test". Root cause was determined to be a misalignment between the Wolf Creek organization culture and the regulatory environment. Corrective actions include deletion of TSC 016-86, extensive revision of the TSC procedure and process, inclusion of the deletion notice for TSC 016-86 in the Operations Essential Reading Program, and periodic training on verbatim compliance. The failure to comply with Technical Specification Surveillance is reportable per 10 CFR 50.73(a)(2)(i).

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Plant Conditions at the Time of the Event

MODE = 1

Reactor Coolant Pressure = 2234 psig

Reactor Power = 100%

Basis for Reportability

10 CFR 50.73(a)(2)(i)(B) requires each licensee to report any operation or condition prohibited by the plant's Technical Specifications. Reportability is based on failing to adequately perform Technical Specification Surveillance Requirement 4.4.9.1.1 numerous times between 1986 and the present. This surveillance requires that the Reactor Coolant System (RCS) temperature and pressure be determined within limits once each 30 minutes during heatup, cooldown, inservice leak rate testing, and hydrostatic testing of the Reactor Coolant System.

Description of Event

On October 23, 1996, during the cause and extent evaluation performed as part of the corrective action process for Licensee Event Report (LER) 96-011-00, it was determined that Technical Specification Clarification (TSC) 016-86 was inappropriate to the circumstances. The TSC allowed the violation of WCGS Technical Specification 3.4.9.1, "Reactor Coolant System Pressure/Temperature Limits."

Technical Specification 3.4.9.1 requires the Reactor Coolant System (RCS) temperature and pressure (excluding the pressurizer) to be limited during heatup, cooldown, criticality, inservice leak testing and hydrostatic testing. 10 CFR 50.2, and Section 5.1.2 of the WCGS Updated Safety Analysis Report (USAR), define the RCS as including the piping to the second isolation valve (measured from the high pressure side). TSC 016-86, however, incorrectly re-defined the RCS, limiting the definition of the RCS to extend to the first isolation valve only. This incorrect interpretation of the Technical Specification then allowed testing to occur between the first and second isolation valves without the correct monitoring of the temperature and pressure limits, as described in the Technical Specification Surveillance 4.4.9.1.1.

Review has determined that WCNOG did violate Technical Specification Surveillance Requirement 4.4.9.1.1 numerous times. Leak rate testing has been performed by using procedures STS PE-019E, "RCS Isolation Check Valve Leak Test", STS PE-019B, "RHR Suction Valve Leak Test", and STS PE-040B, "Reactor Coolant System Pressure Test".

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When performing the three procedures described above, an additional procedure, STS BB-011, "Reactor Coolant System and Pressurizer Heatup/Cooldown Surveillance" should be used by WCNO Operations to ensure compliance with WCNO Technical Specification Surveillance 4.4.9.1.1 during the RCS in-service leak tests. While reviewing the instances when Reactor Coolant System leak rate testing was performed, it was determined that WCNO procedure STS BB-011 was not performed in conjunction with these procedures on numerous occasions, from 1986 to the present. Failing to perform STS BB-011 resulted in a violation of Technical Specification Surveillance 4.4.9.1.1 on each of these occasions.

Root Cause and Corrective Actions:Root Cause

Root cause was determined to be a misalignment between the Wolf Creek organization culture and the regulatory environment. This misalignment was evidenced in the following three areas:

- Technical Specification Application

Wolf Creek's "mind set" was to assess plant conditions and use operational knowledge in the application of the Technical Specifications. In some cases verbatim Technical Specification compliance was compromised. The regulatory environment requires verbatim compliance while preserving an understanding of how the bases for the Technical Specifications are to be applied.

- Misapplication of the Technical Specification Clarification (TSC) Process

This "mind set" was a key contributor to misapplication of the TSC process. This misapplication resulted in instances where the clarification constituted a change to the Technical Specifications, or their bases, without proper regulatory evaluation or approval.

- Standards

This "mind set" also influenced the standards applied to TSC review and approval, and internal assessments of the health of the TSC process.

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Corrective Actions**Immediate Corrective Actions:**

- The on-duty Shift Supervisor was notified of the concern.
- TSC 016-86 was deleted and removed from the Control Room on November 12, 1996.
- Procedures STS PE-019B, STS PE-019E, and STS PE-040B were revised on November 21, 1996, to ensure compliance to Technical Specification Surveillance 4.4.9.1.1.
- The deletion notice for TSC 016-86 was placed in the Operations Essential Reading Program. This action was taken to assure Licensed Personnel were made aware of the concerns related to this clarification prior to assuming their next watch.
- Operations' staff initiated Performance Improvement Request 96-2605 to document the concern, investigation results, and the implementation of corrective actions.
- Operations' staff performed an internal detailed review of all developed TSCs to determine extent of the concern. This review identified a total of fourteen clarifications which could have potentially caused a violation of the associated Technical Specification. PIRs were written for each occurrence. A total of six Technical Specification violations were identified. LERs were issued for each violation.
- WCNOC established Incident Investigation Team (IIT) 96-004, on October 23, 1996, to evaluate the TSC Process. This IIT determined the root cause for this event and recommended corrective actions to prevent recurrence.

**Corrective Actions to Prevent Recurrence:**

- The Chief Operating Officer will complete follow-up sessions with all departments, communicating management expectations regarding the need for verbatim compliance with Nuclear Regulatory requirements. This activity will be completed by February 28, 1997.
- Periodic training will be provided to ensure the proper alignment between the Wolf Creek culture and the regulatory environment on verbatim compliance.



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- WCGS Administrative Procedure AP 26C-003, Revision 0, "Technical Specification Clarifications" will be enhanced by March 15, 1997, to incorporate additional programmatic improvements.
- Procedures STS PE-019B, STS PE-019E, and STS PE-040B were revised on November 21, 1996, to ensure compliance to Technical Specification Surveillance 4.4.9.1.1.

**Safety Significance:**

The BASES for Technical Specification 3.4.9 denotes that the allowable pressure/temperature relationships for various heatup and cooldown rates are calculated using methods derived from Appendix G in Section III of the ASME Boiler and Pressure Vessel Code as required by Appendix G to 10 CFR Part 50.

10 CFR Part 50, Appendix G, "FRACTURE TOUGHNESS REQUIREMENTS" states the following:

"This appendix specifies fracture toughness requirements for ferretic materials of pressure-retaining components of the Reactor Coolant System Pressure Boundary of light water nuclear power reactors to provide adequate margins of safety during any condition of normal operation."

While pressurizing the portion of the Reactor Coolant System between the first and second isolation valves, the primary area of heat addition would be between these valves. The area between these valves is made up of stainless steel and are not subject to embrittlement. The requirements of 10 CFR 50 Appendix G specifically state that the limits are based on the fracture toughness for ferretic materials (reactor vessel). The pressure/temperature requirements of Technical Specification 3.4.9 were not placed in the Technical Specifications to address this portion of piping, therefore the absence of RCS temperature monitoring as required by the Technical Specification Surveillance does not constitute a safety concern.

The subject test procedures are performed at RCS temperature, and require a test pressure be maintained approximately fifty psig below the RCS pressure. This test pressure is continuously monitored throughout the test. A review was performed for each violation of the Surveillance Requirement 4.4.9.1.1 that was identified. This review confirmed that no pressure limits were exceeded, and no indication existed that the temperature limits were exceeded. Therefore the safety margin was not degraded.

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Other Previous Occurrences:

WCNOC LERs 96-011-00, 96-012-00, 96-013-00, 96-014-00, and 96-015-00 document similar events of inappropriate use of TSCs. The event documented in the original LER (96-016-00) to this supplement (96-016-01) was discovered during the review of the first of these LERs (LER 96-0011-00). Therefore, the root cause and corrective actions to prevent recurrence associated with LER 96-011-00, and subsequent LERs of a similar nature, were still under evaluation, and could not have prevented the occurrence of this event.