

WOLF CREEK NUCLEAR OPERATING CORPORATION

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September 27, 2007

ET 07-0042

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

- Reference:
- 1) Letter ET 06-0038, dated September 27, 2006, from T.J. Garrett, WCNOG, to USNRC
 - 2) Letter ET 07-0033, dated July 26, 2007, from T.J. Garrett, WCNOG, to USNRC
 - 3) Telephone Conference Summary dated August 28, 2007, from V. Rodriguez, USNRC (ML072320452)

Subject: Docket No. 50-482: Followup Response to NRC Requests for Additional Information Related to Wolf Creek Generating Station License Renewal Application

Gentlemen:

Reference 1 provided Wolf Creek Nuclear Operating Corporation's (WCNOG) License Renewal Application for the Wolf Creek Generating Station (WCGS). Reference 2 provided WCNOG responses to NRC requests for additional information (RAIs) regarding the License Renewal Application. Reference 3 documented a telephone conference call held on August 17, 2007 to discuss and clarify the WCNOG responses. Attachment I provides follow-up responses to the RAIs discussed on the conference call.

Attachment II provides a summary of the commitments made in this response. License renewal commitment number 30 has been revised.

Enclosure 1 provides an updated table of Alloy 600 locations and examinations previously provided in RAI B.2.1.34-6 Followup Response in Reference 2.

A121
NRR

If you have any questions concerning this matter, please contact me at (620) 364-4084, or Mr. Kevin Moles at (620) 364-4126.

Sincerely,



Terry J. Garrett

TJG/rt

Attachments I - WCNOC Followup Response to NRC Requests for Additional Information
II - List of Commitments

Enclosure 1 Alloy 600 Locations and Examinations

cc: J. N. Donohew (NRC), w/a, w/e
E. E. Collins (NRC), w/a, w/e
V. G. Gaddy (NRC), w/a, w/e
V. Rodriguez (NRC), w/a, w/e
Senior Resident Inspector (NRC), wo/a, wo/e

Attachment I

WCNOC Followup Response to NRC Requests for Additional Information

RAI B.2.1.34-1

Nickel Alloy Aging Management Program (AMP)

RAI B.2.1.34-1 Followup Discussion

During a telephone conference call on August 17, 2007, the staff indicated that the response to this RAI requires clarification. The staff requested that the applicant address the following:

(1) The staff indicated that the applicant's response did not address the steam generator primary nozzle and safe ends. The staff requested that the applicant address this Aging Management Review (AMR) line item.

The applicant indicated that the steam generator primary nozzle and safe ends AMR line items will be modified to provide a clarification.

(2) The staff requested that the applicant clarify if WCGS has Alloy 600 components in the instrumentation nozzles.

The applicant indicated that WCGS only has Alloy 600 in the control rod drive mechanism. The applicant indicated that a footnote will be added to the RAI response to provide a clarification.

(3) The staff requested that the applicant clarify the term "generator maintenance" provided in the table for this RAI response.

The applicant indicated that WCGS performs generator maintenance every refueling outage.

The applicant indicated that a footnote will be added to the RAI response to provide a clarification and details about the generator maintenance frequency.

(4) The staff indicated that the applicant's response did not include the USAR supplement for the Nickel Alloy AMP as requested in the RAI. The staff clarified that the USAR supplement should make reference to the AMP commitment (Commitment No. 30). In addition, the staff indicated that Commitment No. 30 should be supplemented to reflect the same language established in the commitment for pressure boundary nickel alloy components (Commitment No. 19).

RAI B.2.1.34-1 Followup Response

(1) The steam generator primary nozzle and safe ends AMR line items were modified in letter ET 07-0038, "Wolf Creek Generating Station License Renewal Application, Amendment 3," dated August 31, 2007. See Table 3.1.2-3, "Reactor Vessel, Internals, and Reactor Coolant System – Summary of Aging Management Evaluation – Steam Generators," Component Type "SG Primary Nozzles and Safe Ends." Plant specific Note 4 was added to provide clarification.

(2) and (3) Footnotes 3 and 4 have been added to the table provided in Enclosure 1. This table was provided in the Followup Response to RAI B.2.1.34-6 in letter ET 07-0033, "Followup Response to NRC Requests for Additional Information Related to Wolf Creek Generating Station License Renewal Application," dated July 26, 2007.

(4) The USAR supplement for the Nickel Alloy AMP, A1.34, was provided in letter ET 07-0038, "Wolf Creek Generating Station License Renewal Application, Amendment 3," dated August 31, 2007. Commitment No. 30 has been revised in Attachment II to reflect the same language established in the commitment for pressure boundary nickel alloy components (Commitment No. 19.)

LIST OF COMMITMENTS

The following table identifies those actions committed to by Wolf Creek Nuclear Operating Corporation in this document. Any other statements in this letter are provided for information purposes and are not considered regulatory commitments. Please direct questions regarding these commitments to Mr. Kevin Moles, Manager Regulatory Affairs at Wolf Creek Generating Station, (620) 364-4126.

	COMMITMENT SUBJECT	LRA, Appendix A, Section	COMMITMENT DESCRIPTION
30	Nickel Alloy Aging Management Program (RCMS 2007-251)	A1.34	<p>The WCNOC Nickel Alloy Aging Management Program will be supplemented with implementation of applicable (1) NRC Orders, Bulletins and Generic Letters associated with nickel alloys and (2) staff-accepted industry guidelines, (3) participate in the industry initiatives, such as owners group programs and the EPRI Materials Reliability Program, for managing aging effects associated with nickel alloys, (4) upon completion of these programs, but not less than 24 months before entering the period of extended operation, WCNOC will submit an inspection plan for reactor coolant system nickel alloy pressure boundary components to the NRC for review and approval.</p> <p>Upon completion of these supplemental requirements, the WCGS Nickel Alloy Aging Management inspection plan will be submitted for NRC review and approval at least 24 months prior to entering the period of extended operation.</p> <p>Reference: ET 07-0016</p> <p>Due: March 11, 2023</p> <p>Revised ET 07-0042</p>

Enclosure 1 to ET 07-0042

Alloy 600 Locations and Examinations
(Provided in Letter ET 07-0033, RAI B.2.1.34-6 Followup Response)

Rank	Location	Type Examination	Frequency
REACTOR VESSEL COMPONENTS (RV)			
12	RV Outlet Nozzle Safe-End-Hot Leg	Bare Metal Visual Volumetric	Each Refueling (Bare Metal Visual), Every 5 Years (Volumetric)
15	RV Head Vent Nozzle	Bare Metal Visual	Lesser of 3rd Refueling or 5 Years
17	RV Bottom Mounted Nozzle (BMN)	Bare Metal Visual Volumetric	Every Other Refueling (Bare Metal Visual), 10-year ISI Exam (Volumetric)
28	RV BMN Weld	Volumetric	10-year ISI Exam
29	RV BMN to Guide Tube Weld	VT-2	Each Refueling
30	RV Inlet Nozzle Safe-End (Cold Leg) Weld	Bare Metal Visual Volumetric	Every 3rd Refueling (Bare Metal Visual), Every 6 Years (Volumetric)
31	RV Core Support Block at Weld	Visual	Once per Interval
32	RV Core Support Block Weld	Visual	Once per Interval
34	RV Core Support Block	Visual	Once per Interval
35	RV Head Vent to Elbow Weld	VT-2	Each Refueling
36	RV Head Vent Elbow to Piping Weld	VT-2	Each Refueling
37	RV Head Vent Pipe to SS Elbow	VT-2	Each Refueling
39	RV Head Vent Nozzle Elbow	VT-2	Each Refueling
40	RV Head Vent Horizontal Pipe	VT-2	Each Refueling
21	Head Vent Penetration Weld	Volumetric/Surface	Lesser of 4th Refueling or 7 Years
Control Rod Drive Mechanism (CRDM) Note: 3			
13 (CRDM Nozzle Weld)	CRDM Nozzle and Nozzle Weld	Volumetric/Surface	Lesser of 4th Refueling or 7 Years
22	CRDM Nozzle	Bare Metal Visual	Lesser of 3rd Refueling or 5 Years
38	CRDM to Flange Weld	VT-2	Each Refueling
PRESSURIZER COMPONENTS (PZR) Note: 1			
Mitigated	PZR Safety and Relief Nozzle Safe-End Weld	Volumetric	25% sampling in ISI interval
Mitigated	PZR Surge Line Nozzle Safe-End Weld	Volumetric	25% sampling in ISI interval
Mitigated	PZR Spray Nozzle Safe-End Weld	Volumetric	25% sampling in ISI interval

Rank	Location	Type Examination	Frequency
STEAM GENERATOR COMPONENTS (S/G) Note: 4			
2	SG Partition Plate-Hot Leg	Visual	Generator Maintenance
4	SG Partition Stub-Hot Leg	Visual	Generator Maintenance
5	SG Partition Stub/Tubesheet Weld-Hot Leg	Visual	Generator Maintenance
6	SG Partition Plate/Stub Weld-Hot Leg	Visual	Generator Maintenance
8	SG Closure Ring-Hot Leg	Visual	Generator Maintenance
9	SG Cladding on CS Shell-Hot Leg	Visual	Generator Maintenance
10	SG Partition Plate/Lower Bowl Weld-Hot Leg	Visual	Generator Maintenance
11	SG Closure Ring Weld-Hot Leg	Visual	Generator Maintenance
14	SG Partition Plate-Cold Leg	Visual	Generator Maintenance
16	SG Partition Stub-Cold Leg	Visual	Generator Maintenance
18	SG Tubesheet and Radius Cladding-Hot Leg	Visual	Generator Maintenance
19	SG Partition Stub/Tubesheet Weld-Cold Leg	Visual	Generator Maintenance
20	SG Partition Plate/Stub Weld-Cold Leg	Visual	Generator Maintenance
23	SG Closure Ring-Cold Leg	Visual	Generator Maintenance
24	SG Closure Ring Weld-Cold Leg	Visual	Generator Maintenance
25	SG Drain Pipe (Tube)	Visual	Generator Maintenance
26	SG Cladding on CS Shell-Cold Leg	Visual	Generator Maintenance
27	SG Partition Plate/Lower Bowl Weld-Cold Leg	Visual	Generator Maintenance
33	SG Tubesheet and Radius Cladding-Cold Leg	Visual	Generator Maintenance
REACTOR COOLANT PIPING COMPONENTS (RCS)			
Unranked	RCS Hot Leg Thermowells	VT-2	Each Refueling
Unranked	RCS Cold Leg Thermowells	VT-2	Each Refueling
ENGINEERED SAFETY FEATURES COMPONENTS (ESF) Note: 2			
NR	Accumulator Nozzles (All Alloy 82/182 Welds)	VT-2	ISI Period

Note: 1) The Pressurizer Surge, Safety, Relief and Spray Nozzles have been overlaid with Alloy 690. The pressure boundary in these locations is now the Alloy 690 overlay. The original Alloy 600 is no longer credited as the pressure boundary. Preemptive structural weld overlays immediately go into a sampling pool where 25% of this group must be volumetrically inspected each ISI interval.

Note: 2) As the system/piping temperature is ambient containment temperature (approximately 100 °F), this location is not considered susceptible to Primary Water Stress Corrosion Cracking (PWSCC).

Note: 3) The CRDM nozzles include 5 penetrations used for incore thermocouple instrumentation. The materials and general configuration for the instrumentation nozzles is the same as for the CRDM penetrations, and therefore have the same examination requirements as the CRDM.

Note: 4) Generator maintenance includes a generic visual examination of the general condition of non-pressure boundary Alloy 600/82/182 material included in the cladding, divider plate, and other locations in the generator primary side. This examination is performed when the generator primary side is opened for Steam Generator eddy current testing of the Steam Generator U- tubes.