

WOLF CREEK

NUCLEAR OPERATING CORPORATION

Jaime H. McCoy
Vice President Engineering

May 4, 2015

ET 15-0010

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

- Reference:
- 1) Letter ET 14-0034, dated November 20, 2014, from J. H. McCoy, WCNOC, to USNRC
 - 2) Letter dated February 10, 2015, from C. F. Lyon, USNRC, to A.C. Heflin, WCNOC, "Wolf Creek Generating Station – Request for Additional Information Re: License Amendment Request to Adopt TSTF-523, Revision 2, "Generic Letter 2008-01, Managing Gas Accumulation" (TAC NO. MF5280)"
 - 3) Letter ET 15-0008, dated March 18, 2015, from J. H. McCoy, WCNOC, to USNRC
 - 4) Letter dated March 27, 2015, from C. F. Lyon, USNRC, to A.C. Heflin, WCNOC, "Wolf Creek Generating Station – Request for Additional Information Re: License Amendment Request to Adopt TSTF-523, Revision 2, "Generic Letter 2008-01, Managing Gas Accumulation" (TAC NO. MF5280)"

Subject: Docket No. 50-482: Response to Second Request for Additional Information Regarding License Amendment Request to Revise Technical Specifications to Adopt TSTF-523, Revision 2, "Generic Letter 2008-01, Managing Gas Accumulation"

Gentlemen:

Reference 1 provided the Wolf Creek Nuclear Operating Corporation (WCNOC) application to revise the Wolf Creek Generating Station (WCGS) Technical Specifications (TS). The proposed amendment would modify the WCGS TS requirements to address Nuclear Regulatory Commission (NRC) Generic Letter 2008-01, "Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems," as described in Technical Specification Task Force (TSTF) Traveler TSTF-523, Revision 2, "Generic Letter 2008-01, Managing Gas Accumulation." Reference 2 provided a request for additional information (RAI) related to the application. Reference 3 provided WCNOC's response to the RAI. Reference 4 provided a second RAI related to the application. The Attachment provides WCNOC's response to the second RAI.

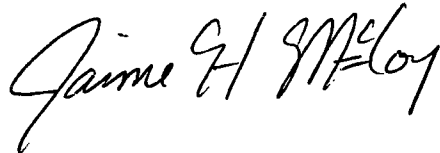
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The additional information does not expand the scope of the application and does not impact the no significant hazards consideration determination presented in Reference 1.

In accordance with 10 CFR 50.91, "Notice for public comment; State consultation," a copy of this submittal is being provided to the designated Kansas State official.

This letter contains no 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 "Jaime H. McCoy". The signature is written in a cursive style with a large initial "J" and "M".

Jaime H. McCoy

JHM/rit

Attachment

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

STATE OF KANSAS)
) SS
COUNTY OF COFFEY)

Jaime H. McCoy, of lawful age, being first duly sworn upon oath says that he is Vice President Engineering of Wolf Creek Nuclear Operating Corporation; that he has read the foregoing document and knows the contents thereof; that he has executed the same for and on behalf of said Corporation with full power and authority to do so; and that the facts therein stated are true and correct to the best of his knowledge, information and belief.

By Jaime H. McCoy
Jaime H. McCoy
Vice President Engineering

SUBSCRIBED and sworn to before me this 4th day of May, 2015.



Gayle Shephard
Notary Public

Expiration Date 7/24/2015

Response to Request for Additional Information

Reference 1 provided the Wolf Creek Nuclear Operating Corporation (WCNOC) application to revise the Wolf Creek Generating Station (WCGS) Technical Specifications (TS). The proposed change revises or adds Surveillance Requirements to verify that the system locations susceptible to gas accumulation are sufficiently filled with water and to provide allowances which permit performance of the verification. The changes are being made to address the concerns discussed in Generic Letter 2008-01, "Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems," (Reference 1). Reference 2 provided a request for additional information (RAI) related to the application. Reference 3 provided WCNOC's response to the RAI. Reference 4 provided a second RAI related to the application. The specific NRC question is provided in italics.

1. *Please provide the surveillance frequency applied at the time each void was identified.*

Response: Please see the response to Question 4 below.

2. *Please provide the initial surveillance date following attaining Mode 1 for each of the Cycles 17 through 20.*

Response: Please see the response to Question 5 below.

3. *If a void is not identified, please clarify if this means the surveillance determined that there was no void.*

Response: The plant procedures utilized for monitoring and venting the locations susceptible to gas accumulation require documenting if the location is "water solid" or "not water solid." As such, if a void is not identified, the surveillance determined that no void was detected (i.e., water solid).

4. *For each identified void, please explain what initiated conducting the surveillance.*

Response: The tables provided in Reference 3 are revised to include two additional columns to address Question 1 and Question 4. For each identified void, the surveillance frequency applied at the time the void was detected (Question 1) and what initiated conducting the surveillance (Question 4) are provided in the tables below.

The historic void volumes found that are applicable to the performance of Surveillance Requirement (SR) 3.5.2.3 are as follows. Note that the Allowable Volume (Allowable Vol.) is the acceptance criteria at the time the void was discovered.

Cycle 20

Date	Location	Void Vol. (ft ³)	Allowable Vol. (ft ³)	Notes	Surveillance Frequency	Reason for Conducting Surveillance
3/22/2013	EMV0257	2	0.25	MODE 6 post fill and vent during Refueling Outage 19. Emergency Core Cooling System (ECCS) not required to be OPERABLE in this mode. Void vented to water solid.	N/A in MODE 6	Post fill and vent

Cycle 19

Date	Location	Void Vol. (ft ³)	Allowable Vol. (ft ³)	Notes	Surveillance Frequency	Reason for Conducting Surveillance
12/18/2012	EMV0058	0.011	0.25	MODE 1. Void could not be vented. Location was water solid at next performance of ultrasonic testing (UT) 1 month later.	31 days	Post fill and vent - restoration from online maintenance
10/4/2012	EMV0259	0.005	0.25	MODE 1. Void vented to water solid.	31 days	Normal monthly surveillance
8/15/2012	EJV0088	0.003	0.59	MODE 1. Void vented to water solid.	31 days	Increased surveillance frequency because of continuous Residual Heat Removal (RHR) depressurization due to Reactor Coolant System (RCS) inleakage
8/8/2012	EJV0088	0.11	0.59	MODE 1. Gas sample taken. Approx. 50% hydrogen and 50% nitrogen. Void vented to water solid.	31 days	Increased surveillance frequency because of continuous RHR depressurization due to RCS inleakage

Cycle 19

Date	Location	Void Vol. (ft³)	Allowable Vol. (ft³)	Notes	Surveillance Frequency	Reason for Conducting Surveillance
7/24/2012	EJV0088	1.12 (est.)	0.59	MODE 1. Volume estimated using Henry's Law. Void evaluated using GOTHIC. Peak pressure from water hammer less than relief valve setting, and unbalanced load from water hammer 34% of pipe weight. RHR System would have been capable of performing its safety function if required. Void vented to water solid.	31 days	Increased surveillance frequency because of continuous RHR depressurization due to RCS inleakage
7/23/2012	EJV0088	0.01	0.59	MODE 1. Void vented to water solid.	31 days	Increased surveillance frequency because of continuous RHR depressurization due to RCS inleakage
7/19/2012	EJV0088	0.41	0.59	MODE 1. Gas sample taken. Sample was contaminated with air during testing, but had high hydrogen content. Void vented to water solid.	31 days	Increased surveillance frequency because of continuous RHR depressurization due to RCS inleakage
3/26/2012	EJV0088	>0.59	0.59	MODE 3. Formed from accumulator leakage into RHR. Present for no greater than 5.87 hours. Void vented to water solid.	31 days	Checked because of accumulator level loss into RHR System

Cycle 18

Date	Location	Void Vol. (ft³)	Allowable Vol. (ft³)	Notes	Surveillance Frequency	Reason for Conducting Surveillance
11/22/2010	BGV0496	0.01	0.25	MODE 1. Void vented to water solid.	31 days	Normal monthly surveillance
11/10/2010	EJV0223	<0.001	0	MODE 1. Void vented to water solid.	31 days	Normal monthly surveillance

Cycle 18

Date	Location	Void Vol. (ft ³)	Allowable Vol. (ft ³)	Notes	Surveillance Frequency	Reason for Conducting Surveillance
10/22/2010	EJV0088	0.29	0.59	MODE 1. UT performed due to leakage from accumulator. Void vented to water solid.	31 days	Checked because of accumulator level loss into RHR System
8/24/2010	EJV0221	Unknown (vented 1/4 turn open for 9 sec)	0	MODE 1. Post vacuum fill and vent of RHR A Heat Exchanger. RHR train A was out of service for vacuum fill and vent. Void vented to water solid.	31 days	Post vacuum fill and vent of RHR A Heat Exchanger
8/23/2010	EEJ01A	4.1	No allowable volume calculated	MODE 1. Volume of void in RHR A Heat Exchanger after vacuum fill and vent performed. Bounded by void found on 7/2/10. Was completely removed from RHR A Heat Exchanger during dynamic vent on 10/6/10 during a forced outage.	31 days	Post vacuum fill and vent of RHR A Heat Exchanger
8/23/2010	EJV0221	~0.001	0	MODE 1. Post vacuum fill and vent of RHR A Heat Exchanger. Void vented to water solid.	31 days	Post vacuum fill and vent of RHR A Heat Exchanger
8/23/2010	EJV0238	0.01	0.25	MODE 1. Post vacuum fill and vent of RHR A Heat Exchanger. Void vented to volume of <0.001 cubic feet. Location was water solid at next performance of UT 1 day later.	31 days	Post vacuum fill and vent of RHR A Heat Exchanger
7/4/2010	EJV0059	0.09	0.1	MODE 1. Void is gas from the RHR A Heat Exchanger which has been transported back to the pump suction through the miniflow line and collected at the recirculation sump isolation valve. Void vented to water solid.	31 days	Troubleshooting of large void in RHR A Heat Exchanger

Cycle 18

Date	Location	Void Vol. (ft ³)	Allowable Vol. (ft ³)	Notes	Surveillance Frequency	Reason for Conducting Surveillance
7/4/2010	EJV0221	0.03	0	MODE 1. Void is gas from the RHR A Heat Exchanger which has been transported back to the pump suction through the miniflow line and collected at the check valve. Void vented to water solid.	31 days	Troubleshooting of large void in RHR A Heat Exchanger
7/3/2010	EJV0059	1.35	0.1	MODE 1. Gas sample taken. Void was determined to be 91.7% nitrogen, 7.3% oxygen, and 0.9% hydrogen. Void is gas from the RHR A Heat Exchanger which has been transported back to the pump suction through the miniflow line and collected at the recirculation sump isolation valve. Void vented but small volume remained.	31 days	Troubleshooting of large void in RHR A Heat Exchanger
7/2/2010	EEJ01A	9.8	No allowable volume calculated	MODE 1. Maximum calculated initial volume in the tube side of RHR A Heat Exchanger of 9.8 ft ³ present since Refueling Outage 17. Detailed evaluation showed that there was reasonable assurance that RHR System, SIPs, and CCPs would have been able to perform safety functions. Void could not be completely flushed from RHR Heat Exchanger since 3500 gpm flow required for dynamic venting. A volume of 6.2 cubic feet of gas remained in the RHR A Heat Exchanger after 7/4/10.	31 days	Abnormal behavior of RHR Train A during pump run. Troubleshooting identified large void in RHR A Heat Exchanger. Subsequent pump runs transported portions of void throughout RHR Train A to be vented.

Cycle 18

Date	Location	Void Vol. (ft ³)	Allowable Vol. (ft ³)	Notes	Surveillance Frequency	Reason for Conducting Surveillance
7/2/2010	EJV0059	0.64	0.1	MODE 1. Gas sample taken. Void was determined to be 94% nitrogen. Void is gas from the RHR A Heat Exchanger which has been transported back to the pump suction through the miniflow line and collected at the recirculation sump isolation valve. Void vented but small volume remained.	31 days	Troubleshooting of large void in RHR A Heat Exchanger
7/2/2010	EJV0059	0.02	0.1	MODE 1. Void is gas from the RHR A Heat Exchanger which has been transported back to the pump suction through the miniflow line and collected at the recirculation sump isolation valve. Void vented but small volume remained.	31 days	Troubleshooting of large void in RHR A Heat Exchanger
7/2/2010	EJV0134	0.01	0.25	MODE 1. Void is likely a result of running the RHR A pump with a large void in the RHR A Heat Exchanger. Void was located in containment, and was not vented due to high local temperatures. When location was checked again on 7/4/2010, void had dissolved.	31 days	Troubleshooting of large void in RHR A Heat Exchanger
4/29/2010	EJV0088	0.006	0.25	MODE 1. Void vented to water solid.	31 days	Follow-up to Void detected on 4/14/2010
4/22/2010	EJV0088	0.008	0.25	MODE 1. Void vented to water solid.	31 days	Follow-up to Void detected on 4/14/2010

Cycle 18

Date	Location	Void Vol. (ft ³)	Allowable Vol. (ft ³)	Notes	Surveillance Frequency	Reason for Conducting Surveillance
4/14/2010	EJV0088	0.59	0.25	MODE 1. Gas sample taken. Void was determined to be >98% nitrogen. Void evaluated using GOTHIC. Peak pressure from water hammer less than relief valve setting, and pressure rise due to pressure pulsations from water hammer was determined to be insignificant. RHR system would have been capable of performing its safety function if required. Void vented to water solid.	31 days	Normal monthly surveillance
11/8/2009	EJV0221	~0.001	0	MODE 6 post fill and vent. ECCS not required to be OPERABLE in this mode. Void vented to water solid.	N/A in MODE 6	Post fill and vent
11/8/2009	EJV0241	Unknown (20 - 30 sec. vent)	0.25	MODE 6 post fill and vent. ECCS not required to be OPERABLE in this mode. Void vented to water solid.	N/A in MODE 6	Post fill and vent

Cycle 17

Date	Location	Void Vol. (ft ³)	Allowable Vol. (ft ³)	Notes	Surveillance Frequency	Reason for Conducting Surveillance
8/5/2008	EMV0257	Small (<<0.25)	0.25	MODE 1. Gas sample taken and determined to be 0.2% hydrogen, 25.6% oxygen, and 75.2% nitrogen. Source was leftover air from fill and vent during Refueling Outage 16. Void vented to water solid.	31 days	Normal monthly surveillance
6/4/2008	EJV0203	Small (<<0.25)	0.25	MODE 1. Gas sample taken and determined to be 2% helium, 66.1% hydrogen, 5.75% oxygen, and 26.2% nitrogen. Source was degassing after securing from shutdown cooling in Refueling Outage 16. Void vented to water solid.	31 days	Increased surveillance frequency after exit from Refueling Outage 16

Cycle 17

Date	Location	Void Vol. (ft ³)	Allowable Vol. (ft ³)	Notes	Surveillance Frequency	Reason for Conducting Surveillance
5/27/2008	EJV0128	Small (<<0.25)	0.25	MODE 1. Source was degassing after securing from shutdown cooling in Refueling Outage 16. Void vented to water solid.	31 days	Increased surveillance frequency after exit from Refueling Outage 16
5/23/2008	EJV0128	Small (<<0.25)	0.25	MODE 1. Gas sample taken and determined to be 19.1% hydrogen, 15.3% oxygen, and 65.6% nitrogen. Source was degassing after securing from shutdown cooling in Refueling Outage 16. Void vented to water solid.	31 days	Increased surveillance frequency after exit from Refueling Outage 16
5/22/2008	EJV0223	0.13	0	MODE 1. RHR B pump out of service for scheduled maintenance. Gas sample taken and determined to be 45.6% hydrogen, 8% oxygen, and 46.3% nitrogen. Source was degassing after securing from shutdown cooling in Refueling Outage 16. Void vented to water solid.	31 days	Increased surveillance frequency after exit from Refueling Outage 16
5/11/2008	EJV0128	Small (<<0.25)	0.25	MODE 4 during Refueling Outage 16. Void vented to water solid.	31 days	Increased surveillance frequency after exit from Refueling Outage 16
5/6/2008	EMV0002	<0.001	0.25	MODE 5 post fill and vent during Refueling Outage 16. ECCS not required to be OPERABLE in this mode. Void was not vented.	N/A in MODE 5	Post fill and vent
5/5/2008	EJV0122	Unknown	0.25	MODE 5 post fill and vent during Refueling Outage 16. ECCS not required to be OPERABLE in this mode. Void vented to water solid.	N/A in MODE 5	Post fill and vent
5/5/2008	EJV0128	<0.1	0.25	MODE 5 post fill and vent during Refueling Outage 16. ECCS not required to be OPERABLE in this mode. Void vented to water solid.	N/A in MODE 5	Post fill and vent

Cycle 17

Date	Location	Void Vol. (ft ³)	Allowable Vol. (ft ³)	Notes	Surveillance Frequency	Reason for Conducting Surveillance
5/5/2008	EJV0198	Unknown (1 minute vent)	0	MODE 5 post fill and vent during Refueling Outage 16. ECCS not required to be OPERABLE in this mode. Void vented to water solid.	N/A in MODE 5	Post fill and vent
5/5/2008	EJV0223	Unknown (1 minute vent)	0	MODE 5 post fill and vent during Refueling Outage 16. ECCS not required to be OPERABLE in this mode. Void vented to water solid.	N/A in MODE 5	Post fill and vent
5/5/2008	EMV0078	Small (<<0.25)	0.25	MODE 5 post fill and vent during Refueling Outage 16. ECCS not required to be OPERABLE in this mode. Void vented to water solid.	N/A in MODE 5	Post fill and vent
5/5/2008	EMV0156	Small (<<0.25)	0.25	MODE 5 post fill and vent during Refueling Outage 16. ECCS not required to be OPERABLE in this mode. Void vented but small volume remained.	N/A in MODE 5	Post fill and vent
5/5/2008	EMV0185	0.021	0.25	MODE 5 post fill and vent during Refueling Outage 16. ECCS not required to be OPERABLE in this mode. Void vented to water solid.	N/A in MODE 5	Post fill and vent
5/5/2008	EMV0242	Small (<<0.25)	0.25	MODE 5 post fill and vent during Refueling Outage 16. ECCS not required to be OPERABLE in this mode. Void vented to water solid.	N/A in MODE 5	Post fill and vent

The historic void volumes found that are applicable to the performance of proposed SR 3.6.6.9 are as follows. Note that the Allowable Volume (Allowable Vol.) is the acceptance criteria at the time the void was discovered.

Cycle 20

Date	Location	Void Vol. (ft ³)	Allowable Vol. (ft ³)	Notes	Surveillance Frequency	Reason for Conducting Surveillance
3/26/2013	ENV0117	0.005	2.75	MODE 6 post fill and vent during Refueling Outage 19. CS System not required to be OPERBLE in this mode. Void vented to water solid.	N/A in MODE 6	Post fill and vent

Cycle 19

Date	Location	Void Vol. (ft ³)	Allowable Vol. (ft ³)	Notes	Surveillance Frequency	Reason for Conducting Surveillance
1/16/2013	ENV0120	0.69	2.47	MODE 1. Gas sample taken and determined to be 0.1% hydrogen, 18.9% oxygen, and 81.1% nitrogen. Void vented to water solid.	92 days	Post B pump run on 1/15/2013. Additional surveillance performed after pump run because of void detected on 12/3/2012.
12/3/2012	ENV0120	2.75	2.47	MODE 1. Gas sample taken and determined to be 20.3% oxygen, and 84.1% nitrogen. Void was evaluated using GOTHIC. GOTHIC predicted that average void fraction at pump would be 2.25% for 20 seconds, giving a factor of 2.2 below the allowable void fraction from NEI 09-10, Rev. 1a. Conditions on use from draft Final Safety Evaluation were satisfied. CS System would have been able to perform its safety function if required. Void vented to water solid.	92 days	Normal quarterly surveillance

Cycle 18

Date	Location	Void Vol. (ft³)	Allowable Vol. (ft³)	Notes	Surveillance Frequency	Reason for Conducting Surveillance
8/2/2010	ENV0093	<0.001	0.25	MODE 1. Void could not be vented. Location water solid on 9/7/2010.	92 days	Follow-up from voids detected on 7/6/2010
7/6/2010	ENV0093	0.004	0.25	MODE 1. Gas sample taken and determined to be 22% oxygen and 78% nitrogen. Void vented but small volume remained. Location water solid on 7/10/2010.	92 days	Normal quarterly surveillance
7/6/2010	ENV0117	0.9	0.15	MODE 1. Gas sample taken and determined to be 19% oxygen and 81% nitrogen. RELAP model with bounding void size of 4.8 cubic feet used to show that void fraction at pump would be less than 5%; however, this would not satisfy the conditions on use from the Final Safety Evaluation if used today. Void vented to 0.073 cubic feet. Location water solid on 7/7/2010.	92 days	Normal quarterly surveillance

Cycle 17

Date	Location	Void Vol. (ft³)	Allowable Vol. (ft³)	Notes	Surveillance Frequency	Reason for Conducting Surveillance
7/11/2008	ENV0117	~0.001	0.15	MODE 1. Gas sample taken and determined to be 20.2% oxygen and 79.8% nitrogen. Void vented but small volume remained. Location water solid on 7/17/2008.	31 days	Normal monthly surveillance

5. Please provide the MODE 1 entry and exits (entry into MODE 2) associated with each Cycle for Cycles 17 through 20.

Response: Reference 1 provided data tables for the total number of Emergency Core Cooling System (ECCS) locations monitored and the Containment Spray System locations monitored. These tables have been revised to include the MODE 1 entry and exit dates and times. The information request in Question 2 to provide the initial surveillance date following attaining MODE 1 for each cycle is provided in the below tables.

ECCS Locations Monitored

Cycle ¹	Starting Date for Trending	Total Number of Locations Monitored	MODE 1 Entry	MODE 1 exit (Entry into MODE 2)	Surveillance Date (A – Train A; B – Train B)
20	3/18/2013	2,250 (through 8/5/2014)	5/13/2014 0849 (startup from MC20)		A 5/28/2014 B 6/11/2014
			10/27/2013 2007	3/8/2014 1213 (for MC 20)	A 11/26/2013 B 11/4/2013
			9/29/2013 1632	10/18/2013 1722 (SGK05A failure)	A 11/26/2013 B 11/4/2013
			5/13/2013 0832	9/11/2013 2255 (SGK05A failure)	A 5/29/2013 B 6/11/2013
			4/14/2013 0336	5/6/2013 2341 (SGK05A failure)	A 4/30/2013 B 5/6/2013
19	4/16/2011	2,618	3/27/2012 0040	2/4/2013 0026 (RFO 19)	A 4/4/2012 B 4/10/2012
			6/29/2011 1139	1/13/2012 1403 (Rx Trip/LOOP)	A 7/5/2011 B 7/12/2011
			6/23/2011 0316	6/26/2011 1609 (Manual Rx Trip)	A 7/5/2011 B 7/12/2011

Cycle ¹	Starting Date for Trending	Total Number of Locations Monitored	MODE 1 Entry	MODE 1 exit (Entry into MODE 2)	Surveillance Date (A – Train A; B – Train B)
18	11/14/2009	2,195	12/8/2010 1848	3/19/11 (RFO 18)	A 12/28/2010 B 1/5/2011
			10/18/2010 1804	12/6/2010 0943 ('A' DG not restored)	A 11/3/2010 B 11/10/2010
			3/9/2010 1558	10/5/2010 0921 (leak on 'A' ESW)	A 4/7/2010 B 3/17/2010
			3/7/2010 1811	3/8/2010 0333 (Manual Rx Trip/'A' MFP)	A 4/7/2010 B 3/17/2010
			11/21/2009 0322	3/2/2010 1458 (Rx Trip/SG water lvl)	A 12/1/2009 B 12/15/2009
17	5/5/2008	1,501	8/23/2009 1556	10/10/2009 (RFO17)	A 8/31/2009 B 9/16/2009
			5/1/2009 0603	8/19/2009 1549 (Rx Trip/LOOP)	A 5/6/2009 B 5/13/2009
			5/14/2008 0553	4/28/2009 1527 (Rx Trip/SG water lvl)	A 6/6/2008 B 6/6/2008

¹ For the purposes of this license amendment request, the cycle is typically from the transition out of a defueled condition until transition into a defueled condition at the next refueling outage.

Containment Spray System Locations Monitored

Cycle¹	Starting Date for Trending	Total Number of Locations Monitored	MODE 1 Entry	MODE 1 exit (Entry into MODE 2)	Surveillance Date (A – Train A; B – Train B)
20	3/11/2013	78 (through 8/5/2014)	5/13/2014 0849 (startup from MC20)		A 7/29/2014 B 7/8/2014
			10/27/2013 2007	3/8/2014 1213 (for MC 20)	A 10/28/2013 B 10/31/2013
			9/29/2013 1632	10/18/2013 1722 (SGK05A failure)	A 10/28/2013 B 10/31/2013
			5/13/2013 0832	9/11/2013 2255 (SGK05A failure)	A 7/30/2013 B 7/9/2013
			4/14/2013 0336	5/6/2013 2341 (SGK05A failure)	A 4/22/2013 B 4/18/2013
19	4/21/2011	166	3/27/2012 0040	2/4/2013 0026 (RFO 19)	A 4/23/2012 B 4/19/2012
			6/29/2011 1139	1/13/2012 1403 (Rx Trip/LOOP)	A 7/5/2011 B 7/13/2011
			6/23/2011 0316	6/26/2011 1609 (Manual Rx Trip)	A 7/5/2011 B 7/13/2011

Cycle¹	Starting Date for Trending	Total Number of Locations Monitored	MODE 1 Entry	MODE 1 exit (Entry into MODE 2)	Surveillance Date (A – Train A; B – Train B)	
18	10/28/2009	136	12/8/2010 1848	3/19/11 (RFO 18)	A	1/5/2011
					B	1/10/2011
			10/18/2010 1804	12/6/2010 0943 ('A' DG not restored)	A	1/5/2011
					B	1/10/2011
			3/9/2010 1558	10/5/2010 0921 (leak on 'A' ESW)	A	4/7/2010
		B	4/13/2010			
			3/7/2010 1811	3/8/2010 0333 (Manual Rx Trip/'A' MFP)	A	4/7/2010
					B	4/13/2010
			11/21/2009 0322	3/2/2010 1458 (Rx Trip/SG water lvl)	A	12/1/2009
					B	12/15/2009
17	6/5/2008	179	8/23/2009 1556	10/10/2009 (RFO17)	A	8/31/2009
					B	9/16/2009
			5/1/2009 0603	8/19/2009 1549 (Rx Trip/LOOP)	A	5/5/2009
					B	5/15/2009
			5/14/2008 0553	4/28/2009 1527 (Rx Trip/SG water lvl)	A	6/5/2008
					B	6/17/2008

¹ For the purposes of this license amendment request, the cycle is typically from the transition out of a defueled condition until transition into a defueled condition at the next refueling outage.

References:

1. WCNOC letter ET 14-0034, "Application to Revise Technical Specifications to Adopt TSTF-523, Revision 2, "Generic Letter 2008-01, Managing Gas Accumulation," Using the Consolidated Line Item Improvement Process," November 20, 2014. ADAMS Accession No. ML14330A247.
2. Letter from C. F. Lyon, USNRC, to A. C. Heflin, WCNOC, "Wolf Creek Generating Station – Request for Additional Information Re: License Amendment Request to Adopt TSTF-523, Revision 2, "Generic Letter 2008-01, Managing Gas Accumulation" (TAC NO. MF5280)," February 10, 2015. ADAMS Accession No. ML15040A625.
3. WCNOC letter ET 15-0008, "Response to Request for Additional Information Regarding License Amendment Request to Revise Technical Specifications to Adopt TSTF-523, Revision 2, "Generic Letter 2008-01, Managing Gas Accumulation," March 18, 2015. ADAMS Accession No. ML15084A104.
4. Letter from C. F. Lyon, USNRC, to A.C. Heflin, WCNOC, "Wolf Creek Generating Station – Request for Additional Information Re: License Amendment Request to Adopt TSTF-523, Revision 2, "Generic Letter 2008-01, Managing Gas Accumulation" (TAC NO. MF5280)," March 27, 2015. ADAMS Accession No. ML15082A005.