

# WOLF CREEK NUCLEAR OPERATING CORPORATION

Kevin J. Moles  
Manager Regulatory Affairs

January 12, 2006  
RA 06-0001

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

- References:
- 1) Letter ET 95-0112, dated October 31, 1995, from R. C. Hagan, WCNOC, to USNRC
  - 2) Letter WO 95-0189, dated December 27, 1995, from O. L. Maynard, WCNOC, to USNRC
  - 3) NRC Letter dated February 9, 1996, from USNRC to Neil S. Carns, WCNOC

Subject: Docket 50-482: Containment Inservice Inspection Program First Interval, Second Period Owner's Activity Reports

Gentlemen:

This submittal provides the Owner's Activity Reports for the second period of the first interval of the WCNOC Containment Inservice Inspection Program. Code Case N-532, "Alternative Requirements to Repair and Replacement Documentation Requirements and Inservice Summary Report Preparation and Submission as Required by IWA-4000 and IWA-6000," requires that an Owner's Activity Report (Form OAR-1) be prepared and certified upon completion of each refueling outage. Each Form OAR-1 prepared during an inspection period shall be submitted following the end of the inspection period.

In References 1 and 2, Wolf Creek Nuclear Operating Corporation (WCNOC) requested use of ASME Code Case N-532 in lieu of current ASME Section XI reporting requirements. In Reference 3, the USNRC concluded that the proposed alternative to use Code Case N-532 and the clarifications contained within References 1 and 2 provide an acceptable level of quality and safety and approved the use of Code Case N-532 for use at Wolf Creek Generating Station.

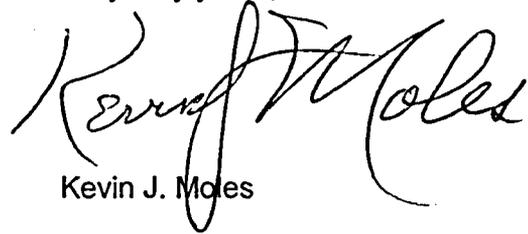
The enclosures provide the Owner's Activity Reports for the period of September 3, 2001 through May 19, 2005. This timeframe constitutes the second period of the first interval of the WCNOC Containment Inservice Inspection Program. Within this period, Refueling Outages 12 (RF12), 13 (RF13) and 14 (RF14) occurred. The enclosed Forms OAR-1 (Reports WCRE-11, I1-P2-RF12; WCRE-11, I1-P2-RF13; and WCRE-11, I1-P2-RF14) correspond to these outages.

The required 5-year frequency for conducting IWL examinations occurs within periods 1 and 3 of the WCNOG Containment Inservice Inspection Program. Therefore, no IWL examinations were performed during this period (period 2).

There are no commitments contained within this letter.

If you have any questions concerning this matter, please contact me at (620) 364-4126 or Ms. Diane Hooper at (620) 364-4041.

Very truly yours,

A handwritten signature in black ink that reads "Kevin J. Moles". The signature is written in a cursive style with a large, looping initial "K".

Kevin J. Moles

KJM/rlt

Enclosures

cc: J. N. Donohew (NRC), w/e  
W. B. Jones (NRC), w/e  
B. S. Mallett (NRC), w/e  
Senior Resident Inspector (NRC), w/e

FORM OAR-I OWNER'S ACTIVITY REPORT

Report Number WCRE-11. 11-P2-RF-12

Owner Wolf Creek Nuclear Operating Corporation  
(Name and Address of Owner)

Plant Wolf Creek Generating Station, 1550 Oxen Lane Northeast, Burlington, Kansas 66839  
(Name and Address of Plant)

Unit No. 1 Commercial service date 9-3-85 Refueling outage no. 12  
(If applicable)

Current inspection interval 1<sup>st</sup> Interval for the Containment Inservice Inspection Program  
(1st, 2nd, 3rd, 4th, other)

Current inspection period 2<sup>nd</sup> period for the Containment Inservice Inspection Program  
(1st, 2nd, 3rd)

Edition and Addenda of Section XI applicable to the inspection plan 1998 edition with no addenda

Date and revision of inspection plan WCRE-11 Rev. 0, dated 10-24-2000

Edition and Addenda of Section XI applicable to repairs and replacements, if different than the inspection plan 1992 edition with 1992 addenda

CERTIFICATE OF CONFORMANCE

I certify that the statements made in this Owner's Activity Report are correct, and that the examinations, tests, repairs, replacements, evaluations, and corrective measures represented by this report conform to the requirements of Section XI.

Certificate of Authorization No. N/A Expiration Date N/A  
(If applicable)

Signed Dennis E. Tougaw Dennis E. Tougaw Engineer Date 2/26/03  
Owner or Owner's Designee, Title

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State of Kansas and employed by Factory Mutual Insurance Company of Johnston, Rhode Island have inspected the items described in this Owner's Activity Report, during the period September 3, 2001 to April 27, 2002, and state that to the best of my knowledge and belief, the Owner has performed all activities represented by this report in accordance with the requirements of Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations, tests, repairs, replacements, evaluations and corrective measures described in this report. Furthermore, neither the inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

[Signature] Commissions KS#299  
Inspector's Signature National Board, State, Province, and Endorsements

Date 2/26/2003

This form (E00127) may be obtained from the Order Dept., ASME, 22 Law Drive, Box 2300, Fairfield, NJ 07007-2300

**TABLE 1**  
**ABSTRACT OF EXAMINATIONS AND TESTS**  
**Completion of RF-12 (I-1, P-2)**

Examination Category *	Total Examinations Required For The Interval	Total Examinations Credited for This Period**	Total Examinations Credited (%) for The Period	Total Examinations Credited (%) to Date for the Interval	Remarks
E-A	826	1.	0.1	33	Note

\* No examinations pertaining to Subsection IWL were performed during this time.

\*\* This column is interpreted to represent the cumulative number of exams performed to date in this period.

Note: 100% of the Accessible Surface Areas of Category E-A are required to be inspected each Inspection Period per Table IWE-2500-1

**TABLE 2**  
**ITEMS WITH FLAWS OR RELEVANT CONDITIONS THAT**  
**REQUIRED EVALUATION FOR CONTINUED SERVICE**

Examination Category	Item Number	Item Description	Flaw Characterization (IWA-3300)	Flaw or Relevant Condition Found During Scheduled Section XI Examination or Test (Yes or No)
E-A	E1.12	Incore Tunnel Sump Liner	Localized pitting in the liner floor. The pits were of various sizes, 3/4 inch to 2 inches in diameter, 1/32 inch to 5/32 inch in depth.	Yes

Attachment 1 provides further information as required by the Containment Inservice Inspection Program.

**TABLE 3**  
**ABSTRACT OF REPAIRS, REPLACEMENTS, OR CORRECTIVE MEASURES**  
**REQUIRED FOR CONTINUED SERVICE**

Code Class	Repair, Replacement, or Corrective Measure	Item Description	Description of Work	Flaw or Relevant Condition Found During Scheduled Section XI Examination or Test (Yes/No)	Date Complete	Repair/ Replacement Plan Number
<p>There were no repairs, replacements, or corrective measures performed on any Class MC or CC items during the period of this report, which were required due to an item containing a flaw or relevant condition that exceeded acceptance criteria.</p>						

**Attachment 1**  
**RF-12 IWE Examination Revealing Flaw or Area**  
**Of Degradation Exceeding Acceptance Standards**

1) *Description of flaw or area, including the extent of degradation, and the conditions that led to the degradation.*  
Localized pitting was found in the liner floor of the Incore tunnel sump. The pits were of various sizes,  $\frac{3}{4}$  to 2 inches in diameter,  $\frac{1}{32}$  to  $\frac{5}{32}$  inch in depth. Holes in the coating on the liner floor had permitted this pitting to initiate. The holes in the coating were caused by inadequate protection of the coating during a welding operation on nearby piping and components. The inadequate protection allowed sparks and slag from the welding to burn holes in the coating, which allowed the pitting to initiate.

2) *The acceptability of each flaw or area.*  
The areas were acceptable for continued service as sufficient thickness of the liner exists at the bottom of the pits to maintain the liner plate function.

3) *A description of necessary corrective actions.*  
The coating on the sump liner was repaired to prevent further pitting or loss of material.

Reference WO 02-235562-000 and CCP 10183

FORM OAR-I OWNER'S ACTIVITY REPORT

Report Number WCRE-11, 11-P2-RF-13

Owner Wolf Creek Nuclear Operating Corporation, 1550 Oxen Lane Northeast, Burlington, Kansas 66839  
(Name and Address of Owner)

Plant Wolf Creek Generating Station, 1550 Oxen Lane Northeast, Burlington, Kansas 66839  
(Name and Address of Plant)

Unit No. 1 Commercial service date 9-3-85 Refueling outage no. 13  
(If applicable)

Current inspection interval 1<sup>st</sup> Interval for the Containment Inservice Inspection Program  
(1st. 2nd. 3rd. 4th. other)

Current inspection period 2<sup>nd</sup> period for the Containment Inservice Inspection Program  
(1st. 2nd. 3rd)

Edition and Addenda of Section XI applicable to the inspection plan 1998 edition with no addenda

Date and revision of inspection plan WCRE-11 Rev. 0, dated 10-24-2000

Edition and Addenda of Section XI applicable to repairs and replacements, if different than the inspection plan 1992 edition with 1992 addenda

CERTIFICATE OF CONFORMANCE

I certify that the statements made in this Owner's Activity Report are correct, and that the examinations, tests, repairs, replacements, evaluations, and corrective measures represented by this report conform to the requirements of Section XI.

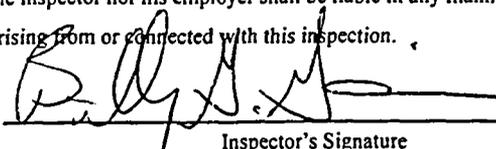
Certificate of Authorization No. N/A Expiration Date N/A  
(If applicable)

Signed Dennis E. Tougaw  Engineer Date 11-1-2005  
Owner or Owner's Designee, Title

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State of Kansas and employed by The Hartford Steam Boiler Inspection and Insurance Company of Connecticut of Hartford, Connecticut have inspected the items described in this Owner's Activity Report, during the period April 28, 2002 to December 2, 2003, and state that to the best of my knowledge and belief, the Owner has performed all activities represented by this report in accordance with the requirements of Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations, tests, repairs, replacements, evaluations and corrective measures described in this report. Furthermore, neither the inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

 Commissions KS#586 A, B, N, I  
Inspector's Signature National Board, State, Province, and Endorsements

Date 11/1/05

This form (E00127) may be obtained from the Order Dept., ASME, 22 Law Drive, Box 2300, Fairfield, NJ 07007-2300

**TABLE 1**  
**ABSTRACT OF EXAMINATIONS AND TESTS**  
**Completion of RF-13 (I-1, P-2)**

Examination Category *	Total Examinations Required For The Interval	Total Examinations Credited for This Period**	Total Examinations Credited (%) for The Period	Total Examinations Credited (%) to Date for the Interval	Remarks
E-A	826	222	27	60	Note

\* No examinations pertaining to Subsection IWL were performed during this time.

\*\* This column is interpreted to represent the cumulative number of exams performed to date in this period.

Note: 100% of the Accessible Surface Areas of Category E-A are required to be inspected each Inspection Period per Table IWE-2500-1

**TABLE 2**  
**ITEMS WITH FLAWS OR RELEVANT CONDITIONS THAT**  
**REQUIRED EVALUATION FOR CONTINUED SERVICE**

Examination Category	Item Number	Item Description	Flaw Characterization (IWA-3300)	Flaw or Relevant Condition Found During Scheduled Section XI Examination or Test (Yes or No)
E-A	E1.12	Liner of the Sump at 270 Degrees	Localized pitting in the liner floor. The pit sizes ranged 1/16 inch diameter to clustered pitting with a single pit major dimension of 3/8 inch in width, and from 3/32 inch to 7/64 inch in depth.	Yes
E-A	E-1.11	Penetration P-16	Pitting at the 11:00 position. The largest pit was measured at 1/16 inch in depth and 1/8 inch in diameter.	Yes

Attachment 1 provides further information as required by the Containment Inservice Inspection Program.

**TABLE 3**  
**ABSTRACT OF REPAIRS, REPLACEMENTS, OR CORRECTIVE MEASURES**  
**REQUIRED FOR CONTINUED SERVICE**

Code Class	Repair, Replacement, or Corrective Measure	Item Description	Description of Work	Flaw or Relevant Condition Found During Scheduled Section XI Examination or Test (Yes/No)	Date Complete	Repair/ Replacement Plan Number
C-C	Corrective Measure	Concrete surface on the East side of the reactor building, at the top of the construction opening	Repair of concrete surface area where small pieces of grout from an earlier construction repair have started to separate and come off the face of the reactor building.	Yes	11/26/02	2002-052

**Attachment 1**  
**RF-13 IWE Examination Revealing Flaw or Area**  
**Of Degradation Exceeding Acceptance Standards**

**Flaws in the Liner of the Sump at 270 Degrees**

1) *Description of flaw or area, including the extent of degradation, and the conditions that led to the degradation.*  
Localized pitting was found in the liner of the sump at 270 degrees. The pits were of various sizes, ranging from isolated 1/16 inch diameter to clustered pitting with a major diameter of 3/8 inch in width, and from 3/32 to 7/64 inch in depth. Degradation of the surface coating by aging and perhaps localized damage, combined with being normally wet, has led to this corrosion.

2) *The acceptability of each flaw or area.*

The areas were acceptable for continued service as sufficient thickness of the liner exists at the bottom of the pits to maintain the liner plate function.

3) *A description of necessary corrective actions.*

The coating on the sump liner was repaired to prevent further pitting or loss of material.

Reference WO 03-257157-000 and CCP 11255

**Flaws located on Containment Penetration P-16**

4) *Description of flaw or area, including the extent of degradation, and the conditions that led to the degradation.*  
Pitting was noted at the 11:00 position (looking DS). The largest pits measured were 1/16 inch in depth and 1/8 inch in diameter. Degradation of the surface coating by aging and perhaps localized damage led to this corrosion.

5) *The acceptability of each flaw or area.*

The areas were acceptable for continued service as sufficient thickness of the liner exists at the bottom of the pits to maintain the liner plate function.

6) *A description of necessary corrective actions.*

The coating on the penetration was repaired to prevent further pitting or loss of material.

Reference WO 03-2571757-000 and CCP 11267

FORM OAR-1 OWNER'S ACTIVITY REPORT

Report Number WCRE-11, 11-P2-RF-14

Owner Wolf Creek Nuclear Operating Corporation, 1550 Oxen Lane Northeast, Burlington, Kansas 66839  
(Name and Address of Owner)

Plant Wolf Creek Generating Station, 1550 Oxen Lane Northeast, Burlington, Kansas 66839  
(Name and Address of Plant)

Unit No. 1 Commercial service date 9-3-85 Refueling outage no. 14  
(If applicable)

Current inspection interval 1<sup>st</sup> Interval for the Containment Inservice Inspection Program  
(1st. 2nd. 3rd. 4th. other)

Current inspection period 2<sup>nd</sup> period for the Containment Inservice Inspection Program  
(1st. 2nd. 3rd)

Edition and Addenda of Section XI applicable to the inspection plan 1998 edition with no addenda

Date and revision of inspection plan WCRE-11 Rev. 2, dated 6-1-2004

Edition and Addenda of Section XI applicable to repairs and replacements, if different than the inspection plan 1992 edition with 1992 addenda

CERTIFICATE OF CONFORMANCE

I certify that the statements made in this Owner's Activity Report are correct, and that the examinations, tests, repairs, replacements, evaluations, and corrective measures represented by this report conform to the requirements of Section XI.

Certificate of Authorization No. N/A Expiration Date N/A  
(If applicable)

Signed Dennis E. Tougaw Dennis E. Tougaw Engineer Date 11-1-2005  
Owner or Owner's Designee, Title

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State of Province of Kansas and employed by The Hartford Steam Boiler Inspection and Insurance Company of Connecticut of Hartford, Connecticut have inspected the items described in this Owner's Activity Report, during the period December 3, 2003 to May 19, 2005, and state that to the best of my knowledge and belief, the Owner has performed all activities represented by this report in accordance with the requirements of Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations, tests, repairs, replacements, evaluations and corrective measures described in this report. Furthermore, neither the inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Billy [Signature] Commissions KS#586 A, B, N, I  
Inspector's Signature National Board, State, Province, and Endorsements

Date 11/1/05

This form (E00127) may be obtained from the Order Dept., ASME, 22 Law Drive, Box 2300, Fairfield, NJ 07007-2300

**TABLE 1**  
**ABSTRACT OF EXAMINATIONS AND TESTS**  
**Completion of RF-14 (I-1, P-2)**

Examination Category *	Total Examinations Required For The Interval	Total Examinations Credited for This Period**	Total Examinations Credited (%) for The Period	Total Examinations Credited (%) to Date for the Interval	Remarks
E-A	823	274	33	67	Note 1
E-C	8	4	50	50	Note 2

\* No examinations pertaining to Subsection IWL were performed during this time.

\*\* This column is interpreted to represent the cumulative number of exams performed to date in this period.

Note 1: 100% of the Accessible Surface Areas of Category E-A are required to be inspected each Inspection Period per Table IWE-2500-1

Note 2: In accordance with IWE-1241, 4 components were reclassified as Category E-C in Period 2 resulting in 8 examinations in this Category being required for the Interval. Three of these components had previously been examined as Category E-A components.

**TABLE 2**  
**ITEMS WITH FLAWS OR RELEVANT CONDITIONS THAT**  
**REQUIRED EVALUATION FOR CONTINUED SERVICE**

Examination Category	Item Number	Item Description	Flaw Characterization (IWA-3300)	Flaw or Relevant Condition Found During Scheduled Section XI Examination or Test (Yes or No)
E-C	E4.11	Liner of the Sump at 90 Degrees	Pitting in the liner. The pit sizes on the bottom were clusters up to 3/4 inch long by 5/8 inch wide, and from 1/32 inch to 3/32 inch in depth. One pit was on the side of the liner measuring 1 inch long by 1/2 inch wide by 3/32 inch deep.	Yes
E-A	E-1.11	Containment Dome Liner	Indentations in the dome liner. The indentations noted in a coated area were characterized as "deformation" and "other signs of distress". Those noted in a non-coated area were characterized as "deformation". The size of the indentations are 1/8 inch in diameter and 1/32 inch in depth.	Yes

Attachment 1 provides further information as required by the Containment Inservice Inspection Program.

**TABLE 3  
 ABSTRACT OF REPAIRS, REPLACEMENTS, OR CORRECTIVE MEASURES  
 REQUIRED FOR CONTINUED SERVICE**

Code Class	Repair, Replacement, or Corrective Measure	Item Description	Description of Work	Flaw or Relevant Condition Found During Scheduled Section XI Examination or Test (Yes/No)	Date Complete	Repair/ Replacement Plan Number
<p align="center">There were no repairs, replacements, or corrective measures performed on any Class MC or CC items during the period of this report, which were required due to an item containing a flaw or relevant condition that exceeded acceptance criteria.</p>						

**Attachment 1**  
**RF-14 IWE Examination Revealing Flaw or Area**  
**Of Degradation Exceeding Acceptance Standards**

**Flaws in the Liner of the Sump at 90 Degrees**

1) *Description of flaw or area, including the extent of degradation, and the conditions that led to the degradation.*  
Pitting was found in the liner of the sump at 90 degrees. The pit sizes on the bottom of the liner were clusters ranging from 1/2 inch long by 1/2 inch wide to a maximum of 3/4 inch long by 5/8 inch wide, and from 1/32 to 3/32 inch in depth. One pit was noted on the south wall of the liner approximately 9 inches up from the bottom, it measured 1 inch long by 1/2 inch wide by 3/32 inch deep. Degradation of the surface coating by aging and perhaps localized damage, combined with being normally wet, has led to this corrosion.

2) *The acceptability of each flaw or area.*

The areas were acceptable for continued service, as sufficient thickness of the liner exists at the bottom of the pits to maintain the liner plate function.

3) *A description of necessary corrective actions.*

The coating on the sump liner was repaired to prevent further pitting or loss of material.

Reference WO 05-271950-001 and CCP 11753

**Flaws located on Containment Dome Liner**

4) *Description of flaw or area, including the extent of degradation, and the conditions that led to the degradation.*  
Indentations were noted on the dome liner at 2201 ft. elevation and 358° azimuth. There were 10 indentations identified, 4 in a coated area that were characterized as "deformation" and "other signs of distress", and the other 6 in a non-coated area that were characterized as "deformation". The size of the indentations were 1/8 inch in diameter by 1/32 inch in depth. The indentations have the appearance of a mark left by a chipping hammer and have an old appearance. Based on this information, the indentations most likely occurred during fabrication of the liner plate or construction and erection.

5) *The acceptability of each flaw or area.*

The areas were acceptable for continued service as sufficient thickness of the liner exists at the bottom of the deformation to maintain the liner plate function.

6) *A description of necessary corrective actions.*

No corrective actions were necessary.

Reference WO 05-272686-001 and CCP 11797