

WOLF CREEK

NUCLEAR OPERATING CORPORATION

May 31, 2006

Stephen E. Hedges
Vice President Operations and Plant Manager

WO 06-0028

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

- Reference:
- 1) Letter ET 05-0018, dated August 31, 2005, from Terry J. Garrett, WCNOG, to USNRC
 - 2) NRC letter dated March 28, 2006, from Catherine Haney, NRC, to Holders of Licenses for Pressurized-Water Reactors

Subject: Docket No. 50-482: Wolf Creek Nuclear Operating Corporation Update Response to Requested Information Part 2 of Generic Letter 2004-02: "Potential Impact of Debris Blockage on Emergency Recirculation during Design Basis Accidents at Pressurized-Water Reactors"

Gentlemen:

This letter provides the Wolf Creek Nuclear Operating Corporation (WCNOG) updated response to Nuclear Regulatory Commission (NRC) Generic Letter 2004-02, "Potential Impact of Debris Blockage on Emergency Recirculation during Design Basis Accidents at Pressurized-Water Reactors."

The NRC issued Generic Letter 2004-02 on September 13, 2004 to i) request that addressees perform an evaluation of the Emergency Core Cooling System (ECCS) and Containment Spray System (CSS) recirculation functions in light of the information provided in the generic letter and, if appropriate, take additional actions to ensure system function, and ii) require addressees to provide the NRC a written response in accordance with 10 CFR 50.54(f).

Reference 2 transmitted the NRC's alternative approach for responding to the NRC request for additional information letter on Generic Letter 2004-02. The agreed alternative to the 60 day response is that for those units completing their strainer modifications in 2006, information needed to fully address Generic Letter 2004-02 will be provided to the staff by December 31, 2006.

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Reference 1 provided the available information requested in Generic Letter 2004-02 as of August 31, 2005 and committed to update that information by June 1, 2006. To address the generic letter and associated commitments, the activities described below have taken place. Specific commitments are addressed in Attachment I. During the week of March 13, 2006, mock up strainer head loss testing was performed. Analysis of the results is ongoing. Activities are proceeding as described in Reference 1 and are outlined in Attachment I of this submittal. Specifically, WCNOG plans to install new containment recirculation sump strainers to increase the available (i.e., submerged) strainer area from less than 400 square feet currently available to an expected area of approximately 6400 square feet. Any additional information needed to fully address the generic letter will be provided to the staff by December 31, 2006 as established in the request for additional information schedule provided in Reference 2.

This letter transmits changes in WCNOG's regulatory commitments contained in Reference 1. The commitment changes are being submitted in accordance with guidance provided by industry document NEI 99-04, "Guidelines for Managing NRC Commitment Changes," as endorsed in Regulatory Issues Summary 00-017, "Managing Regulatory Commitments Made by Power Reactor Licensees to the NRC Staff." Attachment I lists the WCNOG commitments contained in this letter. Commitments contained in this letter supercede those previously contained in Reference 1.

If you have any questions concerning this matter, please contact me at (620) 364-4190, or Mr. Kevin Moles at (620) 364-4126.

Very truly yours,



Stephen E. Hedges

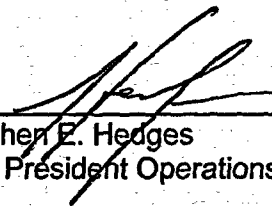
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Attachment I – Updated List of Commitments

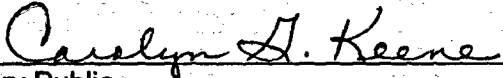
cc: J. N. Donohew (NRC), w/a
W. B. Jones (NRC), w/a
B. S. Mallett (NRC), w/a
Senior Resident Inspector (NRC), w/a

STATE OF KANSAS)
) SS
COUNTY OF COFFEY)

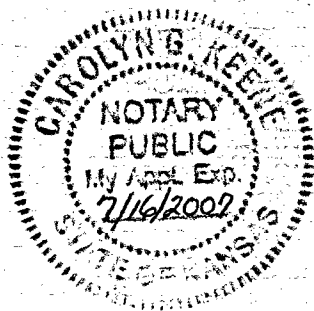
Stephen E. Hedges, of lawful age, being first duly sworn upon oath says that he is Vice President Operations and Plant Manager of Wolf Creek Nuclear Operating Corporation; that he has read the foregoing document and knows the contents thereof; that he has executed the same for and on behalf of said Corporation 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 
Stephen E. Hedges
Vice President Operations and Plant Manager

SUBSCRIBED and sworn to before me this 31st day of May, 2006.


Notary Public

Expiration Date July 16, 2007



UPDATED LIST OF COMMITMENTS

The following table identifies those actions originally committed to by Wolf Creek Nuclear Operating Corporation in Reference 1. The table provides a status update and revised commitment due dates. Any other statements in this letter are provided for information purposes and are not considered to be regulatory commitments. Please direct questions regarding these commitments to Mr. Kevin Moles, Manager Regulatory Affairs at Wolf Creek Generating Station, (620) 364-4126.

<u>Regulatory Commitment</u>	<u>Current Status</u>	<u>Due Date</u>
<p>1. The following corrective action activities will be completed:</p> <ul style="list-style-type: none"> a. Using WCAP-16406-P, evaluate the effects of debris-laden fluid on systems and components downstream of the containment emergency sump strainers during the ECCS recirculation phase of design basis accidents. b. Using NEI 04-07, evaluate the effects of design basis accident conditions on the ability of structures, systems and components upstream of the containment emergency sump strainers to mitigate the consequences of the analyzed accidents. c. Using the results of containment coatings testing, resolve the unverified assumption in the NEI 04-07 debris generation calculation of a 5 pipe diameter zone of influence for qualified containment coatings. 	<ul style="list-style-type: none"> a. Initial downstream evaluations have been performed; however, refinements are being pursued using test data and input from PWROG/NRC discussions concerning nuclear fuel. b. Upstream evaluations have been performed and will be included in the Westinghouse team analysis summary report, Item 4 of this table. c. Zone of influence testing has been performed and a draft report was issued in May 2006. 	December 31, 2006
<p>2. Submit an update to information contained in WCNOG's response to Generic Letter 2004-02 Requested Information Item 2.</p>	<p>The analyses are proceeding and refinements are being pursued. The update of information contained in Requested Information Item 2 will be provided after completion of Item 4 of this table.</p>	December 31, 2006

<u>Regulatory Commitment</u>	<u>Current Status</u>	<u>Due Date</u>
<p>3. The following evaluations and testing will be completed:</p> <ul style="list-style-type: none"> a. Perform industry chemical effects testing on the replacement containment emergency sump strainers. b. Using NEI 04-07, perform a debris generation calculation for the analyzed design basis accidents. c. Using NEI 04-07, perform a debris transport calculation for the analyzed design basis accidents. d. Evaluate the impact of chemical effects on containment emergency sump strainer head loss during design basis accident conditions. e. Complete head loss testing of the replacement containment emergency sump strainer. f. Confirm that the available NPSH of the replacement containment emergency sump strainers during design basis accident conditions is in excess of the required NPSH. g. Perform a structural analysis of the replacement containment emergency sump strainers during design basis accident conditions. 	<ul style="list-style-type: none"> a. Industry chemical effects test have been completed. b. The debris generation calculation has been performed and included in the Westinghouse team analysis summary report, Item 4 of this table. c. The debris transport calculation has been performed and will be included in the Westinghouse team analysis summary report, Item 4 of this table. d. WCAP 16530-NP guidance was used as part of the strainer performance testing performed during the week of March 13, 2006. e. Head loss testing including provisions for chemical effects, were performed during the week of March 13, 2006. f. The strainer performance test report is in progress and will be used in the determination of adequate NPSH. g. The structural analysis of the replacement strainers is proceeding as scheduled. 	<p>December 31, 2006</p>

4. Complete the final site acceptance review of the Westinghouse evaluation team analysis summary report.	Several of the items contained in the final report have been completed but the final report will not be issued until all items are completed.	December 31, 2006
<p>5. The following items will be completed:</p> <ul style="list-style-type: none"> a. Replace the containment emergency recirculation sump strainers. b. Install containment debris barriers and modify containment debris interceptors if required. c. Modify safety injection system components, if required, based on the results of the downstream effects evaluation. 	<ul style="list-style-type: none"> a. Activities are proceeding as scheduled. b. Debris barriers are currently planned for installation during Refueling Outage 15. Use of debris interceptors is dependant on the refinements mentioned in Item 1.a. of this table. c. Implementation of potential modification to the safety injection system is dependant on the refinements mentioned in Item 1.a. of this table. 	Prior to restart from Refueling Outage 15 (Fall 2006)
6. Remove the containment spray system pump cyclone separators, if required, based on the results of the downstream effects evaluation.	Removal of containment spray system (CSS) pump cyclone separators is dependent on the results of the downstream effects evaluation, Item 1.a. of this table	December 31, 2007

<p>7. The following programs and controls will be implemented to control sources of debris.</p> <p>a. Implement changes to programmatic controls for (1) design change process procedures, (2) containment entry and material control procedures, (3) clearance orders procedures, (4) work request procedures, And (5) scaffold construction and use procedures to control the introduction of potential sources of debris into containment.</p> <p>b. Implement a containment coatings assessment program.</p> <p>c. Implement a containment latent debris assessment program.</p>	<p>a. These programmatic controls are established and implemented.</p> <p>b. A preventive maintenance program has been established and implementation will begin in Refueling Outage 15 (Fall 2006).</p> <p>c. A Preventive Maintenance program has been established and implementation will begin in Refueling Outage 15 (Fall 2006).</p>	December 31, 2007
<p>8. Implement changes to inspection processes for the installed sump strainers to ensure they support the associated analyses of design basis accidents.</p>	Activities are proceeding as scheduled.	December 31, 2007
<p>9. Implement all plant modifications and related administrative controls that support the NEI 04-07 analysis package.</p>	Activities are proceeding as scheduled.	December 31, 2007