

December 27, 2007

Mr. Rick A. Muench
President and Chief Executive Officer
Wolf Creek Nuclear Operating Corporation
Post Office Box 411
Burlington, KS 66839

SUBJECT: WOLF CREEK GENERATING STATION - GENERIC LETTER 2004-02
"POTENTIAL IMPACT OF DEBRIS BLOCKAGE ON EMERGENCY
RECIRCULATION DURING DESIGN-BASIS ACCIDENTS AT PRESSURIZED-
WATER REACTORS" EXTENSION REQUEST APPROVAL (TAC NO. MC4731)

Dear Mr. Muench:

By letter dated December 5, 2007 (ET 07-0056), Wolf Creek Nuclear Operating Corporation (the licensee) submitted a request for the extension of the sump clogging corrective actions due date for Generic Letter (GL) 2004-02, "Potential Impact of Debris Blockage on Emergency Recirculation During Design-Basis Accidents at Pressurized-Water Reactors," for Wolf Creek Generating Station (WCGS), Unit 1. The request is to extend the corrective actions due date from December 31, 2007, stated in GL 2004-02, to June 30, 2008.

In its letter, the licensee stated that the schedule to complete certain plant-specific technical and experimental plans in support of GL 2004-02, does not allow these plans to be completed by the December 31, 2007, date. The schedule to complete these plans by the requested June 30, 2008, date were addressed in the letter. The licensee also provided the mitigative measures that have been or will be put in place by December 31, 2007.

The U. S. Nuclear Regulatory Commission (NRC) staff has reviewed the information provided by the licensee and determined that it is acceptable to extend the due date to June 30, 2008, for completion of corrective actions for GL 2004-02 at WCGS. The NRC evaluation supporting acceptance of the licensee's request is enclosed. While accepting this date as reasonable

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allowance regarding completion of the remaining plant-specific technical and experimental plan activities to address GL 2004-02, the NRC staff expects the licensee to place a high priority on completing the remaining actions and updating the WCGS licensing basis as soon as possible.

Sincerely,

/RA/

Jack N. Donohew, Senior Project Manager
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-482

Enclosure: NRC Evaluation

cc w/encl: See next page

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ADAMS Accession Nos.: ML073610147

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OFFICIAL RECORD COPY

Wolf Creek Generating Station

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EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO APPROVAL OF EXTENSION REQUEST FOR GSI-191/GL 2004-02
WOLF CREEK NUCLEAR OPERATING CORPORATION
WOLF CREEK GENERATING STATION, UNIT 1
DOCKET NO. 50-482

1.0 INTRODUCTION

In a letter dated December 5, 2007, as supplemented by an email dated December 19, 2007, (Agencywide Documents Access and Management System Accession No. ML073510405 and ML073540585, respectively), Wolf Creek Nuclear Operating Corporation (the licensee) submitted a request for the extension of the sump clogging corrective actions due date for Generic Letter (GL) 2004-02, "Potential Impact of Debris Blockage on Emergency Recirculation During Design-Basis Accidents at Pressurized-Water Reactors," for Wolf Creek Generating Station (WCGS), Unit 1. The email provided clarifying information with respect to the letter dated December 5, 2007, at the request of the Nuclear Regulatory Commission (NRC) staff in the conference call with the licensee held on December 18, 2007. The licensee's request is to extend the corrective actions due date from December 31, 2007, stated in GL 2004-02, to June 30, 2008, for WCGS.

The licensee stated that it has taken actions at WCGS toward bringing WCGS into compliance with GL 2004-02. It has completed the hardware modifications developed in response to issues identified in GL 2004-02, and described in its May 31, 2006, letter (ADAMS Accession No. ML061580076). The modifications include replacement of sump strainers and installation of debris barriers in the "A" and "D" loop entrances. As stated in the May 31, 2006, letter, and confirmed in the referenced e-mail, the strainer modification replaced strainers of 400 ft² surface area with strainers having a total surface area greater than 6400 ft² (two strainers, each having 3311.5 ft² surface area).

Also, as stated in the May 31, 2006, letter, initial downstream and upstream evaluations, zone-of influence testing, industry chemical effects testing, debris generation and transport calculations, and head-loss testing (including provisions for chemical effects) have been completed. However, as stated in the December 5, 2007, letter, revised industry guidance requires that additional plant-specific testing and analyses be conducted to validate the assumptions and conclusions of these calculations and analyses. Therefore, an extension to the compliance due date of December 31, 2007, was requested by the licensee to allow time for completion of these activities. In its follow-up e-mail, the licensee stated that, based on debris generation tests conducted by the licensee, it has confidence that the planned testing will support the design of the installed strainers.

ENCLOSURE

2.0 REGULATORY EVALUATION

As stated in SECY-06-0078, proposed extensions to permit changes at the next outage of opportunity after December 2007, may be granted if, based on the licensee's request, the NRC staff concludes that:

1. The licensee has a plant-specific technical/experimental plan with milestones and schedules to address outstanding technical issues with enough margin to account for uncertainties, and
2. The licensee identifies mitigative measures to be put in place prior to December 31, 2007, and adequately describes how these mitigative measures will minimize the risk of degraded emergency core cooling system (ECCS) and containment spray system (CSS) functions during the extension period.

The SECY also states that for proposed extensions beyond several months, a licensee's request will more likely be accepted if the proposed mitigative measures include temporary physical improvements to the ECCS sump or materials inside containment to better ensure a high level of ECCS sump performance.

3.0 TECHNICAL EVALUATION

In regard to the first criterion for approving an extension, the licensee has a plant-specific plan, with milestones and schedules, to complete the WCGS GL 2004-02 required corrective actions by June 30, 2008. Specifically, the licensee plans to begin additional plant-specific testing in mid-January 2008, and to have completed the test report by mid-February 2008. The licensee review and acceptance of the test report will be followed by completion of the ECCS pump net positive suction head calculations, downstream effects analyses and GL 2004-02 response by June 30, 2008.

In regard to the second criterion for approving an extension, the licensee has stated that the following modifications, mitigating measures, compensatory measures, and/or favorable conditions are in effect at WCGS, minimizing the risk of degraded ECCS and CSS functions during the extension period:

1. The licensee stated that the GL 2004-02 modifications and analyses communicated to the NRC in the May 31, 2006, letter, have been implemented (as described above).
2. The licensee stated that WCGS has implemented the plant administrative procedures and processes described in their May 31, 2006, letter, including programmatic controls for design change processes and containment material controls, implementation of a containment coating assessment program and a containment latent debris assessment program.
3. The licensee stated that interim compensatory measures implemented in accordance with NRC Bulletin 2003-01 remain in effect to minimize the risk associated with post-accident debris blockage.

4.0 CONCLUSION

The NRC staff believes that the licensee has a reasonable plan for WCGS, as described herein, that should result in demonstration of acceptable strainer function with adequate margin for uncertainties. Further, the NRC has concluded that the licensee has put mitigation measures in place to adequately reduce risk for the 6-month extension period. Therefore, it is acceptable for the licensee to complete its WCGS testing and analyses by June 30, 2008. While the NRC staff accepts this date as reasonable allowance for contingencies regarding completion of remaining plant-specific technical and experimental plan activities to address GL 2004-02, the NRC staff expects the licensee to place a high priority on completing remaining actions and updating the WCGS licensing basis as soon as possible.

Principal Contributor: Evin Geiger

Date: December 27, 2007