



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**
WASHINGTON, D.C. 20555-0001

March 8, 2018

Mr. Adam C. Heflin
President, Chief Executive Officer,
and Chief Nuclear Officer
Wolf Creek Nuclear Operating Corporation
Post Office Box 411
Burlington, KS 66839

**SUBJECT: WOLF CREEK GENERATING STATION, UNIT 1 – REGULATORY AUDIT PLAN
FOR MARCH 19-21, 2018, AUDIT AT WESTINGHOUSE FACILITY IN
ROCKVILLE, MARYLAND, IN SUPPORT OF THE LICENSE AMENDMENT
REQUEST FOR TRANSITION TO WESTINGHOUSE CORE DESIGN AND
SAFETY ANALYSES INCLUDING ALTERNATIVE SOURCE TERM
(CAC NO. MF9307; EPID L-2017-LLA-0211)**

Dear Mr. Heflin:

By letter dated January 17, 2017 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML17054C103), as supplemented by letters dated March 22, May 4, July 13, October 18, and November 14, 2017; and January 15 and January 29, 2018 (ADAMS Accession Nos. ML17088A635, ML17130A915, ML17200C939, ML17297A478, ML17325A982, ML18024A477, and ML18033B024, respectively), Wolf Creek Nuclear Operating Corporation submitted a license amendment request for transition to Westinghouse Core Design and Safety Analyses including adopting an Alternative Source Term for Wolf Creek Generating Station, Unit 1 (WCGS).

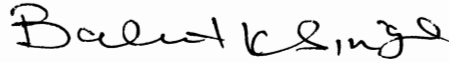
The U. S. Nuclear Regulatory Commission staff has determined the need for a regulatory audit to be conducted in support of the review of the proposed change. The regulatory audit will be conducted from March 19, 2018, to March 21, 2018, at the Westinghouse facility in Rockville, Maryland. The Enclosure to this letter provides an audit plan in support of this audit.

A. Heflin

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If you have any questions, please contact me at 301-415-3016 or via e-mail at Balwant.Singal@nrc.gov.

Sincerely,



Balwant K. Singal, Senior Project Manager
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-482

Enclosure:
Regulatory Audit Plan

cc: Listserv

REGULATORY AUDIT PLAN FOR MARCH 19–21, 2018
TO SUPPORT REVIEW OF THE LICENSE AMENDMENT REQUEST
FOR TRANSITION TO WESTINGHOUSE CORE DESIGN AND SAFETY ANALYSES
INCLUDING ALTERNATIVE SOURCE TERM FOR
WOLF CREEK NUCLEAR GENERATING STATION, UNIT 1
DOCKET NO. 50-482

1.0 BACKGROUND

By letter dated January 17, 2017 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML17054C103), as supplemented by letters dated March 22, May 4, July 13, October 18, and November 14, 2017; and January 15 and January 29, 2018 (ADAMS Accession Nos. ML17088A635, ML17130A915, ML17200C939, ML17297A478, ML17325A982, ML18024A477, and ML18033B024, respectively), Wolf Creek Nuclear Operating Corporation (WCNOC) submitted a license amendment request (LAR) for transition to Westinghouse Core Design and Safety Analyses including adopting an Alternative Source Term (AST) for Wolf Creek Generating Station, Unit 1 (WCGS).

The proposed amendment would revise the WCGS Technical Specifications (TSs) to replace the existing WCNOC methodology for performing core design, non-loss-of-coolant accident (non-LOCA) and LOCA safety analyses with standard Westinghouse developed and U. S. Nuclear Energy Commission (NRC)-approved analysis methodology. The proposed LAR would also change the TSs to revise WCGS licensing basis by adopting the AST radiological analysis methodology in accordance with Title 10 of the *Code of Federal Regulations* Section 50.67, "Accident source term."

The NRC staff reviewed the impact of implementing an AST on currently analyzed design-basis accidents in the WCGS licensing basis and identified the need for additional information in order to complete the review of the LAR. By letters dated January 15 and January 29, 2018, the licensee provided responses to the request for additional information (RAI). The NRC staff has performed a detailed review of the proposed TS changes and supporting calculations and determined that face-to-face interactions with the WCNOC staff can resolve complex technical issues more quickly than multiple rounds of RAIs. Hence, the NRC staff has determined the need for a regulatory audit to be conducted in accordance with the Office of Nuclear Reactor Regulation (NRR) Office Instruction LIC-111, "Regulatory Audits" (ADAMS Accession No. ML082900195), for the NRC staff to gain a better understanding of the licensee's calculations and other aspects of the LAR. The scope of the audit is primarily focused on change to the WCGS licensing basis for adopting the AST radiological analysis methodology.

2.0 REGULATORY AUDIT BASIS

A regulatory audit is a planned license or regulation-related activity that includes the examination and evaluation of primarily non-docketed information. A regulatory audit is conducted with the intent to gain understanding, to verify information and/or to identify information that will require docketing to support the basis for the licensing or regulatory decision.

NRC Regulatory Requirements

The regulatory basis of this audit is NUREG-0800, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants: LWR [Light-Water Reactor] Edition," Section 15.0.1, Revision 0, "Radiological Consequence Analyses Using Alternative Source Terms" (ADAMS Accession No. ML003734190).

The regulatory bases for the RAI to be discussed in this audit are provided in the Enclosure to the NRC letter dated December 4, 2017 (ADAMS Accession No. ML17331A178). This audit will provide information necessary to complete the NRC staff's evaluation of the proposed LAR.

3.0 REGULATORY AUDIT SCOPE

The scope of this regulatory audit will include: (1) the RAI responses provided to the NRC staff by the licensee in the letters dated January 15 and January 29, 2018, and (2) the radiological calculations and all documents which support the LAR and the RAI responses dated January 15, and January 29, 2018.

4.0 INFORMATION NECESSARY FOR THE REGULATORY AUDIT

The licensee is requested to have the following documentation available on site for the audit team. The documentation could be provided electronically or by paper copies. If provided electronically, the licensee is requested to have at least two computers available for the audit team, with a printer attached.

1. The radiological calculations and all documents which support the LAR and the RAI responses dated January 15 and January 29, 2018.
2. The RADTRAD computer code used to perform the calculations supporting the LAR.
3. The RADTRAD computer code input and output decks used to support the LAR.

In addition, the NRC staff recommends that either a hard copy or an electronic copy of the following documents should also be made available:

1. The RAI responses dated January 15 and January 29, 2018.
2. The LAR dated January 17, 2017, and the LAR's supplements dated March 22, May 4, July 13, October 18, and November 14, 2017.
3. Electronic searchable copy of the WCGS Updated Safety Analysis Report.

It should be noted that as part of the audit, there may be a need to review additional data and calculations supporting the basis for the above documents. Need for additional information identified during the audit will be communicated to the designated point of contact.

The NRC staff also requests the licensee to make personnel who are familiar with the LAR (including site staff and contractors, if appropriate), accessible upon request (either in person or by phone). The personnel should be able to respond to NRC staff questions.

5.0 TEAM ASSIGNMENTS/RESOURCE ESTIMATES

The resource estimate for this audit is approximately 48-72 hours of direct audit effort. The following NRC/NRR staff are expected to participate in the audit:

- Mark Blumberg, Lead Technical Reviewer, Division of Risk Assessment (DRA), Radiation Protection and Consequences Branch (ARCB)
- Kristy Bucholtz, Technical Reviewer, DRA/ARCB
- Balwant K. Singal, Senior Project Manager, Division of Operating Reactor Licensing (DORL) (Part Time)
- Siva Lingam, Project Manager, DORL (Part Time)

6.0 LOGISTICS

The audit will be conducted at the Westinghouse facility in Rockville, Maryland¹, from March 19-21, 2018. The estimated length of the audit is 2–3 days. The licensee is requested to provide a conference room for the use by the audit team. Also, the licensee is requested to provide searchable electronic copies of the documents described in Section 4.0 to the NRC staff audit team. Please refer to the table below for the audit agenda. The audit agenda may be adjusted as needed.

¹ 11333 Woodglen Drive, Rockville, MD 20852

Table: Audit Agenda

| Day | Time | Item |
|----------------|-------------------------|---|
| March 19, 2018 | 8:00 a.m. to 8:30 a.m. | Check-in at Westinghouse facility, meet licensee and Westinghouse staff. |
| | 8:30 a.m. to 9:00 a.m. | Introductions, opening remarks, and brief discussion of audit activities, goals, and logistics. |
| | 9:00 a.m. to 12:00 p.m. | Audit activities/discussions between the licensee and NRC staff. |
| | 12:00 p.m. to 1:00 p.m. | Lunch. |
| | 1:00 p.m. to 3:30 p.m. | Audit activities/discussions between the licensee and NRC staff. |
| | 3:30 p.m. to 4:00 p.m. | Audit team caucus. |
| | 4:00 p.m. to 4:30 p.m. | NRC/licensee interim meeting. |
| | 4:30 p.m. | Adjourn for the day. |
| March 20, 2018 | 8:00 a.m. to 12:00 p.m. | Audit activities/discussions between the licensee and NRC staff. |
| | 12:00 p.m. to 1:00 p.m. | Lunch |
| | 1:00 p.m. to 3:30 p.m. | Audit activities/discussions between the licensee and NRC staff. |
| | 3:30 p.m. to 4:00 p.m. | Audit team caucus. |
| | 4:00 p.m. to 4:30 p.m. | NRC/licensee interim meeting. |
| | 4:30 p.m. | Adjourn for the day. |
| March 21, 2018 | 8:00 a.m. to 12:00 p.m. | Audit activities/discussions between the licensee and NRC staff. |
| | 12:00 p.m. to 1:00 p.m. | Lunch. |
| | 1:00 p.m. to 3:00 p.m. | Audit activities/discussions between the licensee and NRC staff. |
| | 3:00 p.m. to 4:00 p.m. | Audit team caucus. |
| | 4:00 p.m. to 4:30 p.m. | NRC/licensee exit meeting and closure of the audit. |

7.0 DELIVERABLES

At the conclusion of the audit, the NRC staff will conduct an exit briefing and will provide a summary of audit results in each subject area defined in the audit scope. An audit report/summary will be issued to the licensee within approximately 90 days from the end of the audit. Additionally, the results of the audit will be utilized to focus the scope of any RAIs issued in the course of this review.

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RidsRgn4MailCenter Resource

MBlumberg, NRR/DRA/ARCB

KBucholtz, NRR/DRA/ARCB

ADAMS Accession No.: ML18066A050

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|--------|---------------------------|------------------|-----------------|
| OFFICE | NRR/DORL/LPL4/PM | NRR/DORL/LPL4/LA | NRR/DRA/ARCB/BC |
| NAME | BSingal | PBlechman | KHsueh |
| DATE | 3/8/18 | 3/8/18 | 3/8/18 |
| OFFICE | NRR/DORL/LPL4/BC | NRR/DORL/LPL4/PM | |
| NAME | RPascarelli (SLingam for) | BSingal | |
| DATE | 3/8/18 | 3/8/18 | |

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