Thomas G. Mogren Manager - Engineering Services



R.E. GINNA NUCLEAR POWER PLANT R.E. Ginna Nuclear Power Plant, LLC 1503 Lake Road Ontario, New York 14519-9364 585.771.5208 585.771.3392 Fax

June 19, 2013

U.S. Nuclear Regulatory Commission Washington, DC 20555-0001

ATTENTION: Document Control Desk

SUBJECT: R.E. Ginna Nuclear Power Plant Docket No. 50-244

> Thermal Conductivity Degradation Impact on R.E. Ginna Large Break Loss of Coolant Accident Analysis with ASTRUM. Response to Request for Additional Information

REFERENCES: (a) R.E. Ginna Nuclear Power Plant, LLC letter to the NRC, dated August 16, 2012, Subject: ECCS 30-Day Report for the Thermal Conductivity Degradation Impact on R.E. Ginna Large Break Loss of Coolant Accident Analysis with ASTRUM (Agencywide Documents Access and Management System (ADAMS) Accession No. ML12233A621).

> (b) NRC electronic mail to R.E. Ginna Nuclear Power Plant, LLC, dated May 16, 2013, Subject: Request for Additional Information – Evaluation of a Significant ECCS Evaluation Model Error.

R.E. Ginna Nuclear Power Plant, LLC (Ginna) submitted a 30-day report in accordance with 10 CFR 50.46(a)(3)(ii) in Reference (a) regarding an error accounting for thermal conductivity degradation in the approved Westinghouse ASTRUM evaluation methodology used to analyze the large break loss of coolant accident. In Reference (b), the NRC determined that additional information is required for the NRC staff to complete its evaluation of this 30-day report. Enclosure 1 contains Ginna's response to the NRC staff's request for additional information.

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Regulatory commitments associated with this correspondence are listed in Enclosure (2).

Should you have any questions regarding this submittal, please contact Mr. Thomas Harding at (585) 771-5219, or at Thomas.HardingJr@cengllc.com.

Very truly yours,

Thomas G. Mogren

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- Enclosure: (1) Response to Request for Additional Information, Report on Significant Error, 10 CFR 50.46(a)(3)(ii)
 - (2) List of Regulatory Commitments, Response to Request for Additional Information
- cc: W. M. Dean, NRC M. C. Thadani, NRC Resident Inspector, NRC (Ginna LLC)

ENCLOSURE (1)

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Response to Request for Additional Information Report on Significant Error 10 CFR 50.46(a)(3)(ii)

ENCLOSURE (1)

RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION REPORT ON SIGNIFICANT ERROR 10 CFR 50.46(a)(3)(ii)

This letter provides a response to the U. S. Nuclear Regulatory Commission (NRC) request for additional information (RAI) regarding the nuclear fuel thermal conductivity degradation (TCD) evaluation for the R.E. Ginna Nuclear Power Plant, LLC (Ginna) Large Break Loss of Coolant Accident (LBLOCA) analysis using the Automated Statistical Treatment of Uncertainty Method (ASTRUM) Evaluation Methodology. Information on the fuel TCD evaluation error was previously reported in Reference 1. The RAI was transmitted via e-mail (Reference 2) and is also described below. Clarification of the RAI was received verbally from the NRC on June 4, 2013, and, based on that clarification, the following information is provided as Ginna's response.

REQUEST FOR ADDITIONAL INFORMATION

Please supplement the August 16, 2012, report pursuant to 10 CFR 50.46(a)(3)(ii) for R.E. Ginna Nuclear Power Plant, with a proposed schedule for either providing a re-analysis or taking other action as may be needed to show compliance with 10 CFR 50.46 requirements.

RESPONSE

Westinghouse performed the current LBLOCA licensing basis analysis of record (AOR) for R.E. Ginna using a NRC approved evaluation methodology outlined in WCAP-16009-P-A, "Realistic Large-Break LOCA Evaluation Methodology Using the Automated Statistical Treatment of Uncertainty Method (ASTRUM)."

R.E. Ginna Nuclear Power Plant, LLC will perform a LBLOCA re-analysis that applies NRCapproved evaluation methodology, which includes the effects of nuclear fuel thermal conductivity degradation (TCD), within 24 months of the completion of the following three milestones:

- 1) Submittal by Westinghouse to the NRC for review and approval, of revised fuel performance analysis and LBLOCA evaluation model methodologies that include the effects of TCD.
- NRC approval of the revised Westinghouse fuel performance analysis methodology that includes the effects of TCD. The new methodology would replace the current licensing basis methodology described in WCAP-16009-P-A, which is used to develop inputs to the LBLOCA evaluation model.
- NRC approval of the revised Westinghouse LBLOCA evaluation model methodology that includes the effects of TCD. The new methodology would replace the current licensing basis methodology described in WCAP-16009-P-A.

This information supplements the August 16, 2012 report, pursuant to 10 CFR 50.46(a)(3)(ii), with a proposed schedule for re-analysis to show compliance with 10 CFR 50.46 requirements.

REFERENCES

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- 1. R.E. Ginna Nuclear Power Plant, LLC letter to the NRC, dated August 16, 2012, Subject: ECCS 30-Day Report for the Thermal Conductivity Degradation Impact on R.E. Ginna Large Break Loss of Coolant Accident Analysis with ASTRUM (Agencywide Documents Access and Management System (ADAMS) Accession No. ML12233A621).
- NRC electronic mail to R.E. Ginna Nuclear Power Plant, LLC, dated May 16, 2013, Subject: Request for Additional Information – Evaluation of a Significant ECCS Evaluation Model Error.

ENCLOSURE (2)

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List of Regulatory Commitments Response to Request for Additional Information

ENCLOSURE (2)

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LIST OF REGULATORY COMMITMENTS RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION

The following table identifies those actions committed to in this document by R. E. Ginna Nuclear Power Plant, LLC (Ginna). Any other statements in this submittal are provided for informational purposes and are not considered to be regulatory commitments. Direct questions regarding these commitments to Mr. Thomas Harding at (585) 771-5219 or <u>Thomas.HardingJr@cengllc.com</u>.

| REGULATORY COMMITMENT | DUE DATE |
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| R.E. Ginna Nuclear Power Plant, LLC | Within 24 months of the completion of NRC approval |
| (Ginna) will perform a Large Break Loss of | of the revised Westinghouse fuel performance |
| Coolant Accident (LBLOCA) re-analysis | analysis methodology and the revised Westinghouse |
| including explicit thermal conductivity | LBLOCA evaluation model methodology that include |
| degradation (TCD) evaluation methodology. | the effects of TCD. |