

December 18, 2015

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
One White Flint North
11555 Rockville Pike
Rockville, MD 20852-2738

**Subject: Studsvik Scandpower Inc.
Request for Approval of Topical Report SSP-14-P01/028 (NRC Project No. 0816)
Generic Application of the Studsvik Scandpower Core Management System to
Pressurized Water Reactors**

Hello Sir or Madam:

As part of Studsvik Scandpower Inc's commitment to providing our customers with the most modern production core analysis tools, the CMS5 system of codes has been applied generically to the modeling and analysis of PWR cores. The CMS5 code system consists of CASMO5, CMSLINK5 and SIMULATE5. The accuracy of the CMS5 code system is demonstrated through an extensive set of benchmarks including validation to critical experiments and higher-order codes and a 7 unit / 63 cycle comparison of predictions to PWR plant data. A rigorous methodology is presented to calculate Nuclear Uncertainty Factors for physics parameters for which CMS5 predictions can be compared against measurements or higher-order codes. Based on the extensive nature of the 63 cycle benchmark that includes a wide array of PWR design and operating data, a set of conservative generic Nuclear Reliability Factors were determined to account for model predictive bias and uncertainty.

Therefore, Studsvik Scandpower Inc. is submitting Topical Report SSP-14-P01/028-TR, "Generic Application of the Studsvik Scandpower Core Management System to Pressurized Water Reactors," provided in Attachment 1 for NRC Review and approval. NRC acceptance for review is requested by February 12th, 2016. NRC approval is requested by spring of 2017 to permit the use of the Topical Report and its results for our lead customers reload scheduled at that time.

Studsvik Scandpower Inc. considers a portion of Topical Report SSP-14-P01/028-TR-P proprietary. To conform with the requirements of 10 CFR 2.790 concerning the protection of proprietary information, the proprietary information provided in the Topical Report in Attachment 1 is contained within brackets. Where the proprietary information has been deleted in the non-proprietary version, only the brackets remain (i.e., the information that was contained within the brackets in the proprietary version has been redacted).

Attachment 2 has been redacted to provide a non-proprietary version of Topical Report SSP-14-P01/028-TR-NP. The basis for redacting certain information as proprietary is

provided in the application for withholding and affidavit provided in Attachment 3 pursuant to 10 CFR 2.790(b)(1).

Attachment 4 is a supporting reference for the Topical Report titled CASMO5 PWR Methods and Validation Report, SSP-14-P01/012-R-R1-P and contains proprietary information. Attachment 5 has been redacted to provide a non-proprietary version of report, SSP-14-P01/012-R-R1-NP, as per Attachment 3.

For any questions or comments, please contact me at telephone: 910-777-2564, or email: brandon.haugh@studsvik.com.

Best regards,



Brandon Haugh

Attachment

cc: Jason Drake, NRC Project Manager (jason.drake@nrc.gov), 301-415-8378, Location O12-H20