

December 19, 2012

MEMORANDUM TO: Anthony Hsia, Deputy Director
Division of Spent Fuel Storage and Transportation
Office of Nuclear Material Safety
and Safeguards

FROM: William Allen, Project Manager **/RA/**
Licensing Branch
Division of Spent Fuel Storage and Transportation
Office of Nuclear Material Safety
and Safeguards

SUBJECT: SUMMARY OF DECEMBER 5, 2012, PRE-APPLICATION MEETING
WITH SIEMPELKAMP NUKLEARTECHNIK GMBH (TAC NO. L24696)

Background. On December 5, 2012, Siempelkamp Nukleartechnik GmbH (SNG) met with the Nuclear Regulatory Commission (NRC) in Rockville, Md., to discuss the Blue Box transportation package. Regulatory decisions were neither requested nor made at the meeting. The list of meeting attendees is Enclosure 1. A detailed agenda provided by SNG for the meeting is Enclosure 2. SNG presentation slides are Enclosure 3.

Discussion. Prior to discussing the Blue Box transportation package, SNG provided an overview of the company with its various nuclear and non-nuclear subsidiaries, products, and manufacturing capabilities. After the presentation, the meeting followed the Agenda shown in Enclosure 2. In their presentation, SNG explained that the Blue Box package can be fabricated in different sizes with a variety of features. They also stated that they manufactured a cylindrical version of the Blue Box named the Blue Barrel. Then, SNG proceeded to discuss the material properties of the ductile cast iron (DCI) used to fabricate the Blue Box and compared them to the material properties of steel. They also discussed the response of DCI to external forces and compared it to steel. Then, they discussed the casting process used to fabricate the package. While discussing the casting process, they emphasized that only low perlite cast iron was used in the fabrication process. They also emphasized that the nominal properties of DCI presented in the meeting could be exceeded by treating the DCI. When asked if information about the material properties of DCI would be included in the application, SNG replied affirmatively. SNG then stated that they were discussing the use of DCI with the American Society of Mechanical Engineers and information from these discussions would also be provided to the NRC. The NRC also requested that a discussion of the effects of aging on DCI be provided when an application was submitted. SNG then described the tests performed to verify that the required manufacturing standards had been achieved. Finally, SNG discussed the ability of the package to withstand various accident conditions. When asked about the availability of data on corrosion resistance, SNG said they were making it available. The NRC inquired if drop tests or analyses would be used to demonstrate conformance to the regulations, SNG replied that conformance could be shown using either method. Finally, SNG discussed their Quality Assurance (QA) program. They stated it fulfilled the requirements in Subpart H of 10 CFR Part 71 and outlined the elements of their QA program, i.e., qualified personnel, equipment, processes, and suppliers. SNG talked about the design processes of their QA program as well as

documentation control, i.e., Series control. They also presented the accreditations and certifications held by the company.

After concluding their presentation, SNG sought comments from the NRC. The NRC identified codes such as American National Standards Institute N14.5 which should be used to develop the application, and encouraged SNG to review the guidance on load combinations in Regulatory Guide 7.7, "Administrative Guide for Verifying Compliance with Packaging Requirements for Shipments of Radioactive Materials." The NRC also encouraged SNG to review Subparts D, E, F, and G of 10 CFR Part 71 when developing their application in order to identify not only the details to include in an application, but also the requirements to which the package must conform. Finally, the NRC outlined what information would be needed to validate SNG's QA program as well as the process utilized to validate their QA program. After this, the meeting was adjourned.

Docket Nos. 71-9369

TAC No. L24696

Enclosures: 1. Attendees
 2. Agenda
 3. SNG Presentation Slides

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Distribution: NRC Attendees

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MEETING ATTENDEES
Pre-Application Meeting Between Siempelkamp
Nukleartechnik GmbH and Nuclear Regulatory Commission
December 5, 2012

NAME	AFFILIATION
Chris Allen	NRC/SFST
Eli Goldfeiz	NRC/SFST
Robert Temps	NRC/SFST
John Vera	NRC/SFST
Sara DePaula	NRC/SFST
JoAnn Ireland	NRC/SFST
Wolfgang Steinwarz	Siempelkamp
Holger Spann	Siempelkamp
Annette Dittgen-Bour	Siempelkamp
Manfred K. Petroll	Freelance Journalist
Jim Pearson	NRC/SFST
Dianne Steel	U.S. citizen

AGENDA

Pre-Application Meeting Between Siempelkamp
Nukleartechnik GmbH and Nuclear Regulatory Commission
December 5, 2012

- Introduction/opening remarks
- Design of Siempelkamp's "Blue Box" for the transport of Type B quantities of radioactive waste
- Main characteristics of the chosen ductile cast iron material
- Manufacturing process
- Relevant safety aspects
- Quality Assurance Program
- Further procedure for the follow-up approval process
- Closing remarks

SNG Presentation Slides