

September 2, 2008

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

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

SUBJECT: SUMMARY OF AUGUST 28, 2008, MEETING WITH CENTURY
INDUSTRIES REGARDING THE MODEL NO. VERSA-PAC
TRANSPORTATION PACKAGE

Background. On August 28, 2008, a meeting was held in Rockville, Maryland, at the request of Century Industries, to discuss a new Type A fissile material transportation package design, the Model No. VERSA-PAC. The meeting was held to discuss the design and the package evaluation that is being prepared. No regulatory decisions were requested nor made at the meeting. The list of meeting attendees is Enclosure 1. The meeting handout is Enclosure 2.

Discussion. The discussion followed the meeting handout. The following items were discussed.

- **Packaging Design.** The packaging consists of a reinforced drum configuration. The drum will be either a 55-gallon or 110-gallon drum. Packaging internals consist of a steel framework with ceramic fiber insulation around the sides, and a rigid foam top and bottom plug. The containment vessel sits within the framework. Contents may be direct-loaded or, for the 110-gallon design, may be packaged within a 30-gallon drum.
- **Package Contents.** Contents are limited to a Type A quantity, with a maximum fissile load of 350 grams U-235. The uranium may be of any enrichment, and in essentially any chemical form. Pyrophoric materials will be defined and excluded. Other waste materials, e.g., paper, wood, graphite, may be present.
- **Structural Evaluation.** The structural evaluation will be primarily by test. Analyses will be used to evaluate different impact orientations. Preliminary results of engineering tests were discussed. The application will include an evaluation of impact at hot and cold temperatures.
- **Thermal Evaluation.** Century Industries does not plan to fire test the package, but will rely on analyses. The analytical method may be benchmarked against similar package designs that were fire-tested.
- **Criticality Evaluation.** Century Industries will consider optimum internal and interspersed moderation, and preferential flooding. The analyses will consider arrays consistent with the damaged condition of the package. Internal packaging (spacers) will not be credited for geometry control of the fissile material or moderator exclusion.

- Quality Assurance (QA). The staff stated that all package design and testing activities must be performed under a QA program that meets Subpart H of 10 CFR Part 71. Century Industries does not currently have an NRC-approved QA program. Century Industries will submit a QA program description for NRC approval in a timely fashion. Since Century Industries intends to be an applicant, NRC will review the QA submittal.
- Schedule. Century Industries presented a tentative schedule. Century Industries expects to submit an application for package approval as early as Fall 2008. Staff advised Century Industries to include sufficient information regarding the need for the package approval that staff may assign an appropriate priority. The justification should include any safety implications if the package is not approved when scheduled.

Docket No. 71-9342

TAC No. L24239

Enclosures: 1. Meeting Attendees
2. Meeting Handout

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Distribution: NRC Attendees CStaab WWheatley

Filename: G:/SFPO/OSGOOD/9342MtgSummary.doc and 9342MtgHandout

OFC	SFST	E	SFST		SFST	
NAME	NLOsgood		MRDeBose		EJBenner	
DATE	8/28/08		8/28/08		9/02/08	

C=Without attachment/enclosure E=With attachment/enclosure N=No copy **OFFICIAL RECORD COPY**

MEETING ATTENDEES
Meeting Between the Nuclear Regulatory Commission
and Century Industries
August 28, 2008

<u>Name</u>	<u>Affiliation</u>
Eric Benner	NRC/SFST
Larry Campbell	NRC/SFST
Matthew Gordon	NRC/SFST
Kim Hardin	NRC/SFST
Geoff Hornseth	NRC/SFST
Charles Interrante	NRC/SFST
Ata Istar	NRC/SFST
Zhian Li	NRC/SFST
Nancy Osgood	NRC/SFST
James Pearson	NRC/SFST
Jason Piotter	NRC/SFST
Mike Arnold	Century Industries
Richard Montgomery	METS
Rose Montgomery	METS