

February 17, 2016

MEMORANDUM TO: Bo Pham, Acting Deputy Director
Division of Spent Fuel Management, NMSS

FROM: Pierre Saverot, Project Manager /RA/
Spent Fuel Licensing Branch
Division of Spent Fuel Management, NMSS

SUBJECT: SUMMARY OF FEBRUARY 9, 2016, MEETING WITH ALPHA-
OMEGA SERVICES, INC.

PURPOSE

On August 5, 2015, Alpha-Omega Services, Inc. (AOS) self-identified a potential failure of the AOS packages to comply with 10 CFR 71.47 and/or 10 CFR 71.51 because radiation levels on the exterior of the package had not been analyzed in the case of a relocation of a point source in the bottom corner of the cavity of the package. Staff has addressed this potential safety issue by revising the Certificate of Compliance (CoC) for the Model Nos. AOS-025, AOS-050, and AOS-100 packages. This meeting was set up to inform staff of the changes made in the shielding model and analyses prior to submittal of an amendment request.

The meeting was noticed on December 30, 2015 (ML15364A072). The meeting attendance list and the presentation are provided as Enclosure Nos. 1 and 2, respectively.

MEETING SUMMARY

AOS presented proposed changes to mitigate this potential reconfiguration issue, and have a shielding model more realistic for the package design, i.e., with air being now modeled as void, the tungsten shield density being now reduced to a minimum of 17.75 g/cm³, and the density of the stainless steel being increased from 7.8 to 8.0 g/cm³.

New spacer plates, separating the tungsten axial shield plates from the cask lid plugs, will be used for Co-60 shipments in the Model No. AOS-100A package, and a volume source will be used, based on the desired activity limit of 19,000 Ci, a set specific activity limit of 350 Ci/g and the density of cobalt.

AOS will analyze multiple geometries and determine the maximum activity from the most limiting source geometry. Staff noted that no shielding credit is to be taken for the material of the spacer plates (either stainless steel or aluminum). Staff also said that the structural integrity of all the components that are added to the package design must be demonstrated. In response to a question from staff, AOS said that the new spacer plates will have a quality classification of B.

The Model No. AOS-050A package will now include a stainless steel disc, with a screw hole for handling purposes, for shipments of Ir-192 and Ir-194.

Staff said that the amendment request must include a structural analysis of all added components, i.e., Co-60 spacer and Ir-192 plates, with quantifiable results since a “qualitative comparison” will not be accepted. Staff asked the applicant to (i) clarify some terminology, e.g., “grams” in the specific activity limit, and (ii) analyze also all other allowable nuclides for other AOS package models (AOS-025, -050, etc.) in the corner geometry because the spacers are meant to be only for Co-60 in the Model No. AOS-100 package and the Ir-192 plates only for the Model NO. AOS-50 package.

Staff concurred on the proposed review schedule that includes one round of request for additional information and foresees CoC issuance by mid-July, well before the August 31, 2016, expiration date of the CoC.

The staff did not make any regulatory commitments at the meeting.

Docket No. 71-9316
TAC No. L25074

Enclosures: 1. List of Meeting Attendees
2. AOS Presentation

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Distribution: SFM r/f NMSS r/f NRC Attendees

G:/SFST/Saverot/71-9316 AOS/AOS Meeting February 9 2016.doc.
G:/SFST/Saverot/71-9316 AOS/AOS Slides-NRC meeting (Feb 9).pdf

ADAMS Package No.: ML

ADAMS Memo No.: ML

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|-------------|------------|---|------------|---|------------|--|--|--|
| OFC | SFM | E | SFM | C | SFM | | | |
| NAME | PSaverot | | DWalker | | SRuffin | | | |
| DATE | 02/16/2016 | | 02/17/2016 | | 02/17/2016 | | | |

C=Without attachment/enclosure E=With attachment/enclosure N=No copy

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**Meeting Between Alpha-Omega Services, Inc.
And The
Nuclear Regulatory Commission
February 9, 2016
Meeting Attendees**

NRC/NMSS/DSFM

Meraj Rahimi

Pierre Saverot

Veronica Wilson

Jeremy Tapp

AOS

Troy Hedger

Blair Menna

DAHER-TLI

Tanya Sloma

Andy Langston

Philip Sewell

WATTS CONSULTING

Paul Watts