

~~OFFICIAL USE ONLY – SECURITY RELATED INFORMATION~~

November 25, 2013

Mr. Troy Hedger
President
Alpha-Omega Services, Inc.
9156 Rose Street
P.O. Box 789
Bellflower, CA 90706

SUBJECT: CERTIFICATE OF COMPLIANCE NO. 9316, REVISION NO. 3 FOR THE
MODEL NOS. AOS-25A, AOS-50A, AOS-100A, AOS-100B, AND AOS-100A-S
PACKAGES

Dear Mr. Hedger:

As requested by your application dated September 26, 2013, supplemented November 18, 2013, enclosed is Certificate of Compliance No. 9316, Revision No. 3, for the Model Nos. AOS-25A, AOS-50A, AOS-100A, AOS-100B, and AOS-100A-S packages. The staff's safety evaluation report is also enclosed.

The approval constitutes authority to use the package for shipment of radioactive material and for the package to be shipped in accordance with the provisions of Title 49 of the *Code of Federal Regulations* (49 CFR) 173.471. Those on the attached list have been registered as users of the package under the general license provisions of 10 CFR 71.17 or 49 CFR 173.471.

If you have any questions regarding this certificate, please contact John Vera of my staff at (301) 287-9165.

Sincerely,

/RA/

Michele Sampson, Chief
Licensing Branch
Division of Spent Fuel Storage and Transportation
Office of Nuclear Material Safety
and Safeguards

Docket No. 71-9316
TAC No. L24799

Enclosures: 1. Certificate of Compliance
No. 9316, Rev. No. 3
2. Safety Evaluation Report
3. Registered Users

Upon removal of Enclosure 3, this
document is uncontrolled

cc w/encls. 1&2: R. Boyle, Department of Transportation
J. Shuler, Department of Energy

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(Closes TAC No. L24799)

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

OFC	SFST	E	SFST	E	SFST	E	SFST	E	SFST	E
NAME	JVera		MDeBose		HLindsay		CAraguas		MSampson	
DATE	11/21/2013		11/22/2013		11/21/2013		11/21/2013		11/25 /2013	

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SAFETY EVALUATION REPORT
Model Nos. AOS-025A, AOS-50A, AOS-100A, AOS-100B, and AOS-100A-S Packages
Certificate of Compliance No. 9316
Revision No. 3

SUMMARY

By application dated September 26, 2013, supplemented November 18, 2013, Alpha-Omega Services, Inc. (AOS) submitted an amendment request to change the pre-shipment leak test procedure when elastomeric seals are used, implement design changes to the shipping cage on the Model Nos. AOS-050 and AOS-100 transport packages, and minor revisions and corrections on the drawings to improve manufacturability and add editorial changes.

NRC staff reviewed the amendment request using the guidance in NUREG-1609, "Standard Review Plan for Transportation Packages for Radioactive Material." Based on the statements and representation in the application, as supplemented, and the conditions listed below, the staff concludes that this change does not affect the ability of the package to meet the requirements of 10 CFR Part 71.

EVALUATION

The amendment request included changes to the pre-shipment leak testing operating procedures. The first of these changes requests the deletion of the statement "A leakage greater than L_R as given by Equation B.14 [ANSI N14.5], constitutes a failure" which previously existed in step (c) of the Gas Pressure Rise Test. The statement is not necessary because Section 7.1.3.3 Test A1: Gas Pressure Rise, step (c) identifies the acceptable leak rate criteria of 1×10^{-3} ref-cm³/s. In addition, the applicant has committed to meet ANSI N14.5 for the Gas Pressure Rise Test. Therefore the staff finds the deletion of this statement to be acceptable.

The second change requests the addition of Test A2, "Gas Pressure Drop," as an optional test to be used for pre-shipment leak testing when elastomeric O-rings are used for the cask lid seal. The staff reviewed the details of the Gas Pressure Drop Test within the SAR, and finds that this test is consistent with the intended uses as specified in ANSI N14.5. In addition, the applicant has committed to follow the requirements of ANSI N14.5 for this test. Therefore, the staff finds the addition of the test within Section 7.1.3.3 to be acceptable.

The applicant also requested changes to the Tracer Gas test within Section 7.1.3.3. Specifically, the applicant requested a change to the sensitivity ranges necessary when using either a thermal conductivity sensing instrument or a mass spectrometer. The staff reviewed the change and confirmed that this change is still within the acceptable range as identified in ANSI N14.5 for the Tracer Gas test. Therefore the staff finds the change of the sensitivities for the thermal sensing instrument or mass spectrometer to be acceptable.

The amendment request included minor design changes to the shipping cage on the Model Nos. AOS-050 and AOS-100. The only structural change is the addition of a lifting bar to the top of the cage. The bar is used to lift the shipping cage only, and is disabled after the cage is installed, and marked with an appropriate warning. As such, there is no effect on package performance.

The amendment request included drawing changes such as typographical errors, corrections to torque values for bolts on the shipping cage, changes to welding on the lid plug circumference, incorporation of design changes to the shipping cages, and general tolerances. The staff reviewed the changes requested and finds that they do not affect the ability of the package to meet the requirements of 10 CFR Part 71.

CONDITIONS

The conditions specified Revision No. 3 to Certificate of Compliance No. 9316 have been revised to incorporate several changes as indicated below:

Condition No. 5.(a)(3) was revised to update the drawings to their current revisions.

Condition No. 15 was revised to authorize use of Revision No. 2 of the certificate for approximately one year.

The expiration date of the certificate was not changed.

The References section of the certificate was updated to include the amendment request and supplement dated September 26, 2013, and November 18, 2013, respectively.

CONCLUSION

Based on the statements and representations contained in the application, as supplemented, and the conditions listed above, the staff concludes that the design of the Model Nos. AOS-25A, AOS-50A, AOS-100A, AOS-100B, and AOS-100A-S packages has been adequately described and evaluated.

The staff concludes that the changes indicated do not affect the ability of the package to meet the requirements of 10 CFR Part 71.

Issued with Certificate of Compliance No. 9316, Revision No. 3,
on November 25, 2013