

August 8, 2017

Mr. Gerard P. Van Noordennen
Vice President Regulatory Affairs
EnergySolutions
2105 South Bascom Ave., Suite 230
Campbell, CA 95008

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION FOR THE REVIEW OF THE
MODEL NO. 8-120B PACKAGE

Dear Mr. van Noordennen:

By letter dated April 5, 2017, EnergySolutions (ES) submitted an application to amend the certificate of compliance (CoC) for the Model No. 8-120B package. The amendment request commits to ANSI N14.5 2014, clarifies requirements for leaktight criterion and pre-shipment leak testing, and provides specifications for the seals and the impact limiter foam. ES also requested a timely renewal of the certificate.

In connection with the staff's review of the application, we need the information identified in the enclosure to this letter. We request that you provide this information by September 15, 2017. If you are unable to meet this deadline, you must notify us in writing no later than September 1, 2017, of your submittal date and the reasons for the delay. The staff will then assess the impact of the new submittal date and notify you of a revised schedule.

Please reference Docket No. 71-9168 and CAC No. L25213 in future correspondence related to this request. The staff is available to meet with you to discuss your proposed responses. If you have any questions regarding this matter, I may be contacted at (301) 415-7505.

Sincerely,

/RA/

Pierre Saverot, Project Manager
Spent Fuel Licensing Branch
Division of Spent Fuel Management
Office of Nuclear Material Safety
and Safeguards

Docket No. 71-9168
TAC No. L25213

Enclosure: Request for Additional Information

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION FOR THE REVIEW OF THE MODEL NO. 8-120B PACKAGE, DOCUMENT DATE: AUGUST 8, 2017

DISTRIBUTION: SFST r/f RPowell, RI SWalker, RII MKunowski, RIII JWhitten, RIV

G : \SFST\Saverot\8-120B\RAIletterRev23.doc

ADAMS Accession No. : ML17222A136

OFC:	SFM	E	SFM	E	SFM	E	SFM	E	SFM	E		E
NAME:	PSaverot	JWise		MRahimi		SFiguroa		JMcKirgan				
DATE:	08/01/2017	08/01/2017		08/02/2017		08/03/2017		8/8/17				

OFFICIAL RECORD COPY

Request for Additional Information
for the
Model No. 8-120B Package
Docket No. 71-9168

By letter dated April 5, 2017, EnergySolutions (ES) submitted an application to amend the certificate of compliance (CoC) for the Model No. 8-120B package. The amendment request commits to ANSI N14.5 2014, clarifies requirements for leaktight criterion and pre-shipment leak testing, and provides specifications for the seals and the impact limiter foam.

This request for additional information (RAI) identifies information needed by the staff in connection with its review of the application. The staff reviewed the application using the guidance in NUREG 1609, "Standard Review Plan for Transportation Packages for Radioactive Material."

Chapter 2 MATERIALS EVALUATION

- 2-1 Describe the specific test methods, test conditions, and acceptance criteria that will be used to qualify the vent port seal and lid O-rings. Revise SAR Section 8.2.5.2 or the drawings to include this information.

The drawings for the currently approved CoC reference an EnergySolutions specification (ES-C-038) that states the ASTM test standards and test conditions that must be followed to qualify the seals and O-rings. The proposed amendment to the CoC removed the reference to the ES-C-038 specification and revised the SAR to state that the qualification testing will be performed "using recognized standards." The drawings for the proposed amendment also state that the seal materials are to be constructed of ethylene propylene or butyl rubber.

The staff notes that the properties of ethylene propylene and butyl rubber can vary, depending on their processing and chemical composition (e.g., proportion of ethylene and propylene monomers in the former material). The staff also notes that the use of these materials places a particular importance on well-defined material qualification standards, given that O-ring suppliers generally show the recommended maximum operating temperature of these materials to be below the short-term service temperature limit of the O-rings in the Model 8-120B package (Ref: Parker; ERIKS; Hudson).

The staff requires information on the specific qualification tests or standards used, test conditions, and the acceptance criteria for the test results to complete its review of the capability of the seal and O-rings to meet their containment function under normal conditions of transport and hypothetical accident conditions.

This information is required by the staff to demonstrate compliance with 10 CFR 71.31(c).

References:

Parker O-Ring Handbook, Parker Hannifin Corporation, 2007

ERIKS O-Ring Technical Handbook, ERIKS Seals and Plastics, Inc.

R.L. Hudson O-Ring Design and Materials Guide, R.L. Hudson and Company