



May 17, 2012

CD12-0118

Bernard White, Senior Project Manager  
Division of Spent Fuel Storage and Transportation  
Office of Nuclear Material Safety and Safeguards  
U.S. Nuclear Regulatory Commission  
Washington, D.C., 20555

**Subject:** Additional Information re Cask Shipments, Docket Nos. 71-9168 and 71-9204  
**Reference:** Letter, T.E. Magette-B. Poole, Request for Continued Use of EnergySolutions 8-120B and 10-160B Type B Casks, March 15, 2012

Dear Mr. White:

Thank you for your prompt response to the reference letter regarding the continued use of EnergySolutions Type B casks. This letter provides the additional information you requested regarding shipments that would be affected by our request for continued use of the Type B casks.

In your email, you indicate that the NRC would likely propose a time limit on this authorization, the number of shipments or both if it decides to authorize continued operation. EnergySolutions has no objection to the imposition of a limit, and we have no objection to the limit being included in the modified certificate. We propose that the most suitable limit on interim relief would be for a specified period of time. We further propose that this time period be from the date the relief is granted through August 31, 2012 or 90 days following the granting of the requested relief, whichever comes later. We originally proposed a date of August 3 in the May 15, 2012 letter, which was based on the projected schedule for the NRC review of our application regarding the physical modification of the casks. However, as we discussed yesterday, that date offers no margin for error and would be insufficient if NRC reviewers have any questions regarding our submittal. Thus we believe it prudent for the interim relief to account for the possibility of a longer review period.

We believe that limiting the interim relief to a specified duration should be sufficient, and that a specific limitation on the number of shipments is unnecessary. From a risk-based perspective, a time limit achieves the objective of bounding any increase in risk to public health and safety, which we have shown previously to be very low, for the following reasons:

- The number of shipments that can be made in any given period of time is constrained by physical limitations related to loading and transport time. As discussed in our meeting of May 10, 2012, this constraint is roughly one shipment per cask per week.
- The number of shipments made in the 10-160B casks is further constrained by generator need. Historically, this need has equal to or less than one shipment per month per cask.

UM 5501  
NM 5524

- The number of shipments expected to be made is less than that which is physically possible, as shown in the attachment. This number is expected to be less than or equal to 65, as compared to 75 as discussed at the meeting on May 10, 2102.

A time-based constraint provides some flexibility to accommodate changes in the scheduled shipments without measurably increasing the risk to public health and safety. The *EnergySolutions* Type B Casks are the sole packages available to support various radioactive material generators, including the nuclear power utilities, the U.S. Department of Energy Global Threat Reduction Initiative (GTRI), the U.S. Navy, and a variety of industrial and medical generators. The demands on each sector vary, and specific information regarding each is given in the attachment.

One example of a time sensitive need with both public health and safety and national security implications is the disposal of sealed sources. There has been no disposal pathway for sealed sources outside of the member states of the Northwest Compact since the closure of the Barnwell site to out-of-compact waste. *EnergySolutions* has been working with our Utah regulator to put in place a variance to our license at the Clive Disposal Facility that would permit the disposal of sealed sources. This variance was just granted on April 11, 2012. The Conference of Radiation Control Program Directors is working closely with the National Nuclear Security Administration to identify, collect, and dispose of the maximum number of sealed sources possible while this window is open. Shipment of sealed sources for disposal is expected to begin in the near future.

*EnergySolutions* continues to believe that granting interim relief is in the public interest. We believe that the additional detail regarding shipments contained in the attachment justifies this position.

Should you have any questions on this request or need additional information, please call me at (240) 565-6148 or [temagette@energysolutions.com](mailto:temagette@energysolutions.com).

Sincerely,



Thomas E. Magette, P.E.  
Senior Vice President  
Nuclear Regulatory Strategy

cc: Document Control Desk

## Shipments Requiring the Use of Type B Casks

The EnergySolutions Type B Casks are the sole packages available to support various sectors of the nuclear industry that transport radioactive material. These sectors include the nuclear power utilities for transport of radioactive ion-exchange resins and irradiated hardware; the U.S. Department of Energy (DOE) Global Threat Reduction Initiative (GTRI) for sealed source transport; the U.S. Navy for transport of radioactive ion-exchange resins from the nuclear fleet; and industrial and medical generators for movement of special form articles and sources. Our assessment of their current needs for transportation and the urgency of continued use is provided below by service sector. Also provided when available is the number of shipments currently scheduled and the maximum number of shipments feasible by August 31, 2012. These data are summarized in the table at the bottom.

**Commercial Nuclear Power** – The Type B Packages are used to transport radioactive ion-exchange resins, many of which are generated during or immediately following outages. Reactor outages are scheduled by the utilities 12 to 20 weeks prior to the start of the outage, with all supporting equipment confirmed prior to startup. By not having the casks available to the utilities in support of the outages alternative plans will need to be made to store the wastes prior to shipment causing unplanned occupational doses, potential compliance issues if no storage exists, and schedule delays. Further justification of immediate shipment is the NRC’s stated policy that the disposal of wastes is preferable to storage for a variety of reasons, including reduction of occupational dose. All of these shipments are critical for the safe and effective operations of these licensees.

Currently scheduled shipments – 35

Maximum number of shipments – 53

**U.S. DOE** – Several planned DOE Type B shipments are scheduled to move sources from national laboratories to either central storage or disposal. These sources are the last significant source term at those facilities. Delay of shipment will cause the facilities to delay facility closure, miss regulatory commitments, and continue to store sources in facilities that provide inadequate security. Additionally, the DOE GTRI program plans to increase use of the Type B casks to accelerate consolidation of domestic sources given the recent opening of the Clive Disposal Facility for their disposal. These shipments are important for public health and safety, national security, and satisfying the tri-party agreements with host states that govern the clean-up of these facilities.

Currently scheduled shipments – 4

Maximum number of shipments – 8

**U.S. Navy** – The Type B Packages are the sole package to transport radioactive ion-exchange resins from the Naval Nuclear program to waste processing and disposal vendors. Although there are no current Type B shipments planned for the next 90 days (all scheduled shipments in

the 10-160B casks are for Type A quantities), providing the Navy the operational flexibility to ship wastes as needed is important to dry dock operations. Type B Shipments, when scheduled, are critical to national security.

Currently scheduled shipments – 0  
 Maximum number of shipments – 2

**Industrial** – Although no shipments are currently planned, industrial clients periodically use the Type B cask to transport special form devices and articles to either terminate a radiological license or from a defunct business during remediation. Consolidation of these items to facilities with security programs that comply with Quantities of Concern security programs is the basis for immediate shipment.

Currently scheduled shipments – 0  
 Maximum number of shipments – 2

<b>Summary of Shipments and Impacts</b>					
<b>User</b>	<b>Number of Critical Shipments</b>	<b>Public health and safety</b>	<b>Safe and effective operations</b>	<b>National Security Interests</b>	<b>Basis for shipment being critical</b>
Commercial Nuclear Power	35	NA	<ul style="list-style-type: none"> <li>• Unplanned occupational dose</li> <li>• Schedule impacts</li> </ul>	NA	<ul style="list-style-type: none"> <li>• Consistent with NRC policy</li> <li>• ALARA</li> </ul>
US DOE	4	Missed regulatory commitments	DOE GTRI program goal to accelerate source removal for safe and effective operation	<ul style="list-style-type: none"> <li>• DOE Global Threat Reduction Initiative</li> <li>• Inadequately secure site storage</li> </ul>	<ul style="list-style-type: none"> <li>• Sealed sources vulnerable to loss or diversion</li> <li>• Shipments will remove last significant source term at affected facilities</li> <li>• Delay of facility closures</li> </ul>
US Navy	0	Potential for resin storage to exceed dry dock inventory limits	Provide dry dock flexibility to ship wastes as needed	Ensure efficiency of operations for nuclear navy	No critical shipments planned, but need may be emergent
Industrial	0	Quantities of concern	Support license termination actions	NA	No critical shipments planned