



Letterbook No.: ES/NRC 13-014  
Docket No. 71-9204  
July 18, 2013

ATTN: Document Control Desk  
Director, Division of Spent Fuel Storage and Transportation  
Office of Nuclear Material Safety and Safeguards  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

**Subject: Amendment Request for Certificate of Compliance No. 9204 for the EnergySolutions 10-160B Type B Shipping Cask**

- References:
- (1) Certificate of Compliance No. 9204, Revision 20, Docket No. 71-9204, Package Identification No. USA/9204/B(U)F-96, Dated August 23, 2012.
  - (2) Consolidated Safety Analysis Report for Model 10-160B Radwaste Shipping Cask, Revision 4, July 2012.

Dear Sir or Madam:

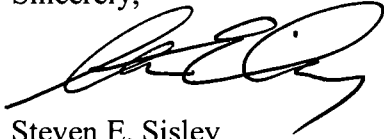
EnergySolutions hereby submits an application to amend Certificate of Compliance (CoC) for the Model 10-160B Type B Shipping Cask (Reference 1). The application adds a new SAR Addendum for a new variant of the existing 10-160B <sup>60</sup>Co shield insert, designated as Shield Insert B, which is used for shipping dry-loaded sources. The application also requests the changes to the existing SAR Addendum for the 10-160B <sup>60</sup>Co shield insert (now re-designated as Shield Insert A). These include revisions to the insert and cribbing drawings, revisions to permit insert reuse, revision of the shielding analysis to correct the drain configuration, and other editorial corrections. In addition, the application includes editorial corrections to the 10-160B SAR (Reference 2). A summary of the specific proposed changes to the 10-160B SAR is provided in Attachment 1 of this letter.

Enclosure 1 contains one (1) paper copy of the non-public version of the revised SAR that contains security-related sensitive information that should be withheld under 10 CFR 2.390. Enclosure 2 contains one (1) paper copy of the public version of the revised SAR in which all proprietary information and security-related sensitive information is redacted. Enclosures 3 and 4 each contain one (1) paper copy of the calculation packages for the shielding evaluation of the 10-160B Shield Insert A and Shield Insert B, respectively, which both contain proprietary information. An affidavit containing a full statement of the reasons that the proprietary information should be withheld from the public, pursuant to the requirements of 10 CFR 2.390, is included in Attachment 2 of this letter.

AM5524

Should you or your staff have questions, please contact the undersigned.

Sincerely,



Steven E. Sisley  
Cask Licensing Manager  
EnergySolutions Products and Technology Group  
(408) 558-3509  
E-Mail: [ssisley@energysolutions.com](mailto:ssisley@energysolutions.com)

Attachments:

- (1) Summary of Changes, 10-160B Consolidated SAR, Revision 5 (5 pages)
- (2) Affidavit pursuant to 10 CFR 2.390

Enclosures:

- (1) Consolidated Safety Analysis Report for the Model 10-160B Type B Radwaste Shipping Cask, Revision 5, July 2013, Non-Public Version (1 paper copy), **(Security-Related Information – Withhold Under 10 CFR 2.390)**,
- (2) Consolidated Safety Analysis Report for the Model 10-160B Type B Radwaste Shipping Cask, Consolidated Revision 5, July 2013, Public Version (1 paper copy).
- (3) EnergySolutions Calculation Package, “Shielding Evaluation of 10-160B Shield Insert A,” Document No. CALC-CSK-145103-EG-002, Revision 0 (1 paper copy), **(Proprietary–Withhold Under 10 CFR 2.390)**.
- (4) EnergySolutions Calculation Package, “Shielding Evaluation of 10-160B Shield Insert B,” Document No. CALC-CSK-145103-EG-001, Revision 0 (1 paper copy), **(Proprietary–Withhold Under 10 CFR 2.390)**.

cc: Mr. Pierre Saverot, Division of Spent Fuel Storage and Transportation

### Summary of Changes<sup>(1)</sup>, 10-160B Consolidated SAR, Revision 5

Section	Page(s)	Change	Purpose
Figure 1-1	1-22	Added parenthetical note.	Editorial clarification.
1.3	1-23	Added list of drawings.	Editorial improvement.
Figure 3-1	3-4	Added parenthetical note.	Editorial clarification.
4.10	4-24	Moved references before Appendices and renumbered section.	Editorial (not marked with revision indicator).
Appendix 4.11.2, Section 11.0	Appendix 4.11.2, Page 16	Changed payload weight limit to 14,250 pounds.	Editorial correction for internal consistency.
Appendix 4.11.3, Section 11.1	Appendix 4.11.3, Page 18	Changed payload weight limit to 14,250 pounds.	Editorial correction for internal consistency.
Appendix 4.11.4, Section 11.1	Appendix 4.11.4, Page 9	Changed payload weight limit to 14,250 pounds.	Editorial correction for internal consistency.
Appendix 4.11.5, Section 11.1	Appendix 4.11.5, Page 13	Changed payload weight limit to 14,250 pounds.	Editorial correction for internal consistency.
Appendix 4.11.6, Section 11.1	Appendix 4.11.6, Page 14	Changed payload weight limit to 14,250 pounds.	Editorial correction for internal consistency.
Appendix 4.11.7, Section 11.1	Appendix 4.11.7, Page 15	Changed payload weight limit to 14,250 pounds.	Editorial correction for internal consistency.
5.1.1	5-1	Changed referenced procedure step number.	Editorial correction for consistency with Chapter 7.
5.5	5-9	Added footnote.	Editorial clarification of basis for shielding calculation.
7.	7-1	Changed payload weight limit to 14,250 pounds.	Editorial correction for internal consistency.
7.	7-1	Deleted last sentence.	Editorial.

**Summary of Changes<sup>(1)</sup>, 10-160B Consolidated SAR, Revision 5**

<b>Section</b>	<b>Page(s)</b>	<b>Change</b>	<b>Purpose</b>
7.1.9 (new)	7-3 and 7-4	Added new Step 7.9 to perform pressure drop leak test (previously a note following 7.1.8.A). Added note to clarify when required.	Editorial clarification.
7.1.9 (previous)	7-4	Deleted previous Step 7.1.9 (and all associated sub-steps) that provided option to not remove upper impact limiter.	Upper impact limiter must be removed to perform pressure drop leak test of primary lid O-rings.
7.1.11	7-4	Deleted text regarding option to remove of upper impact limiter since the option to not remove it has been deleted.	Upper impact limiter must be removed to perform pressure drop leak test of primary lid O-rings.
8.2.2.2	8-4	Deleted "(if applicable)" and first note.	Pre-shipment leak test of containment boundary seals required for all shipments, except LSA material and SCO objects that meet 71.14(b)(3)(i) exemption standards.
8.2.6	8-5	Added section.	Allow threaded inserts to be used to repair bolt holes on 10-160B cask.
Addendum A	Throughout	Changed name of source insert to Shield Insert A	Editorial change to distinguish from new Shield Insert B included in Addendum B.
Addendum A, 1.2.1.	1-9	Added sentence at end of 1 <sup>st</sup> paragraph.	Identify insert designation.
Addendum A, 1.2.1.	1-9	Changed size designations of pipes used to form insert inner and outer shells.	Editorial correction.
Addendum A, 1.2.1.	1-9	Changed gasket material from "silicon rubber" to "elastomeric".	Design change.

### Summary of Changes<sup>(1)</sup>, 10-160B Consolidated SAR, Revision 5

Section	Page(s)	Change	Purpose
Addendum A, 1.2.3.1	1-10	Revise Item 1 to replace reference to drawing number with reference to drawing in Section 1.3 of Addendum.	Editorial improvement.
Addendum A, 1.2.3.1	1-10	Revise Item 4 to reduce maximum weight of contents, shoring, and Insert to 14,250 pounds.	Editorial correction.
Addendum A, 1.3	1-10	Added list of 10-160B Shield Insert A drawings.	Editorial improvement.
Addendum A, 1.3	Dwg. No. C-038-145083-004	Revised Quality Levels in B.O.M.	Updated in accordance EnergySolutions QA procedure for Quality Levels.
Addendum A, 1.3	Dwg. No. C-038-145083-004	Add option for larger hole size in Insert body lift lug.	To accommodate standard shackle size.
Addendum A, 1.3	Dwg. No. C-038-145083-004	Change distance from bottom of Insert to centerline of drain to minimum.	To allow shorter drain line.
Addendum A, 1.3	Dwg. No. C-038-145083-004	Modify acorn nuts to include plunger.	To facilitate underwater handling.
Addendum A, 1.3	Dwg. No. C-038-145083-004	Change gasket design and specification.	To facilitate operations.
Addendum A, 1.3	Dwg. No. C-038-145083-004	Change Insert Lid weld backing detail.	To facilitate fabrication.
Addendum A, 1.3	Dwg. No. C-038-145083-004	Revise stenciling.	Correction to drawing.
Addendum A, 1.3	Dwg. No. C-038-145083-004	Delete notes 14 and 15.	Eliminate conflicting tolerance requirements and allowance for ES approval equal materials.

### Summary of Changes<sup>(1)</sup>, 10-160B Consolidated SAR, Revision 5

Section	Page(s)	Change	Purpose
Addendum A, 1.3	Dwg. No. C-038-145083-005	Deleted duplicate dimensions and unnecessary tolerances. Added notes 6 and 7 to specify maximum allowable axial and radial gaps between the cribbing and cask cavity and permit shimming to achieve required gaps.	Changed to facilitate fabrication for proper fit up with the cask cavity.
Addendum A, 1.3	Dwg. No. C-038-145083-005	Revise Note 2.	To permit features and modifications required for interface with the Insert and to facilitate operations.
Addendum A, 1.3	Dwg. No. C-038-145083-005	Delete Note 4 and add Quality Level to B.O.M. title block.	Updated in accordance EnergySolutions QA procedure for Quality Levels.
Addendum A, 2.2.	2-1	Revise maximum weight of 10-160B cask payload to 14,250 pounds and changed the combined maximum load of [the 10-160B Shield Insert A with payload and cribbing] to 13,000 lbs.	Editorial corrections for internal consistency.
Addendum A, 2.3.	2-1	Added ASTM designations to steel and lead material specifications.	Editorial change for consistency with drawing.
Addendum A, 2.4.3.	2-2	Deleted word "package" from 1 <sup>st</sup> sentence.	Editorial.
Addendum A, 2.6.1.	2-2	Added words "of this" to 1 <sup>st</sup> sentence.	Editorial.
Addendum A, 2.7.1.	2-4	Deleted word "package" from 1 <sup>st</sup> sentence.	Editorial.
Addendum A, 2.7.1.	2-4	Changed "comprising" to "comprised" in 2 <sup>nd</sup> sentence.	Editorial.

## Summary of Changes<sup>(1)</sup>, 10-160B Consolidated SAR, Revision 5

Section	Page(s)	Change	Purpose
Addendum A, 2.7.1.1.3.	2-4	Expanded discussion of lead slump in Shield Insert A.	Address issue identified by NRC staff in pre-submittal meeting.
Addendum A, 2.10.4.	2-6	Corrected revision number of Reference 26.	Editorial correction.
Addendum A, 3.1.	3-1	Changed "Watts" to "watts" (3 places).	Editorial correction.
Addendum A, 3.6.	3-4	Corrected revision number of Reference 12.	Editorial correction.
Addendum A, 5.0.	All	Shielding chapter replaced.	Revised shielding analysis for drain configuration and to model Insert in center region of the 10-160B cask cavity for HAC.
Addendum A, 7.0.	7-1	Deleted last sentence.	To allow reuse of Shield Insert A.
Addendum A, 7.2.4.	7-2	Replaced reference to drawing number with reference to "drawing in Section 1.3 of this Addendum".	Editorial.
Addendum A, 7.2.7.	7-3	Added step to confirm and independently verify closure of Shield Insert A.	To address and replace previous condition in CoC.
Addendum A, 8.2 (and all subsections).	8-2 and 8-3	Added maintenance requirements for reuse of Shield Insert A.	To allow reuse of Shield Insert A.
Addendum B	All	New addendum added (not marked with revision indicators.)	Added new 10-160B Shield Insert B.

**Notes:**

- <sup>(1)</sup> Consolidated Revision 5 of the 10-160B SAR includes general reformatting and editorial changes that are not identified by revision indicators in the margins. Examples include changes to character case or script, line spacing or font sizes, updating section cross-references to changed section heading numbers, deletion of "CNS" from the 10-160B cask designation, etc. All substantive changes are indicated by revision bars in the margin and described above.

AFFIDAVIT PURSUANT TO 10 CFR 2.390

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State of California )  
 ) SS.  
County of Santa Clara )

I, Steven E. Sisley, depose and say as follows:

- (1) I am Cask Licensing Manager of EnergySolutions Products and Technology Group, and have been delegated the function of reviewing the information described in paragraph (2) which is sought to be withheld, and have been duly authorized to apply for its withholding.
- (2) The information sought to be withheld is contained in the document listed in Table 1. This document has been appropriately designated as proprietary.

**TABLE 1**

<b>Document No.</b>	<b>Document Title</b>	<b>Rev/Date</b>
CALC-CSK-145103-EG-002	Shielding Evaluation of 10-160B Shield Insert A	0
CALC-CSK-145103-EG-001	Shielding Evaluation of 10-160B Shield Insert B	0

- (3) I have personal knowledge of the criteria and procedures used by EnergySolutions in designating information as trade secret, privileged, or as confidential commercial or financial information.
- (4) Pursuant to the provisions of paragraph (b)(4) of 10 CFR 2.390, the following is furnished for consideration by the Commission in determining whether the information sought to be withheld from public disclosure, including the information as designated in paragraph (2) above, should be withheld.



- (i) The information sought to be withheld from public disclosure is included in the report documenting information which is owned and has been held in confidence by *EnergySolutions*.
  
- (ii) The information is of a type customarily held in confidence by *EnergySolutions* and not customarily disclosed to the public. *EnergySolutions* has a rational basis for determining the types of information customarily held in confidence by it and, in that connection, utilizes a system to determine when and whether to hold certain types of information in confidence. The application of that system and the substance of that system constitute *EnergySolutions* policy and provide the rational basis required.

Under that system, information is held in confidence if it falls in one or more of several types, the release of which might result in the loss of an existing or potential competitive advantage, as follows:

- (a) The information reveals the distinguishing aspects of a process or component, structure, tool, method, etc., and the prevention of its use by *EnergySolutions*' competitors, without license from *EnergySolutions*, gives *EnergySolutions* a competitive economic advantage.
  
- (b) The information consists of supporting data (including test data) relative to a process or component, structure, tool, method, etc. and gives *EnergySolutions* a competitive economic advantage, e.g., by optimization or improved marketability.
  
- (c) The information, if used by a competitor, would reduce the competitor's expenditure of resources or improve the competitor's advantage in the design, manufacture, shipment, installation, assurance of quality, or licensing of a similar product.

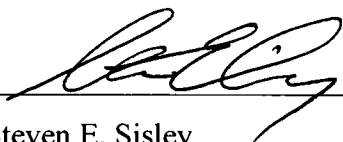
- (d) The information reveals cost or price information, production capacities, budget levels, or commercial strategies of *EnergySolutions*, its customers or suppliers.
  - (e) The information reveals aspects of past, present, or future *EnergySolutions* or customer funded development plans and programs of potential commercial value to *EnergySolutions*.
  - (f) The information contains patentable ideas, for which patent protection may be desirable.
  - (g) The information is third-party Proprietary Information.
- (iii) The information is being transmitted to the Commission in confidence and, under the provisions of 10 CFR Section 2.390, it is to be received in confidence by the Commission.
  - (iv) The information sought to be protected is not available in public sources or available information has not been previously employed in the same original manner or method to the best of our knowledge and belief.
  - (v) The proprietary information sought to be withheld in this submittal is that which is appropriately marked and being transmitted by *EnergySolutions* to the Document Control Desk. The proprietary information has been presented to the Nuclear Regulatory Commission and is being voluntarily provided by *EnergySolutions*.
  - (vi) Public disclosure of the information is likely to cause substantial harm to the competitive position of *EnergySolutions* because:
    - (a) Similar products are manufactured and sold by competitors of *EnergySolutions*.

- (b) The development of this information by *EnergySolutions* is the result of a significant expenditure of staff effort and a considerable sum of money. To the best of my knowledge and belief, a competitor would have to undergo similar effort and expense in generating equivalent information.
- (c) In order to acquire such information, a competitor would also require considerable time and inconvenience.
- (d) The information consists of detailed descriptions, properties and test data. The availability of such information to competitors would enable them to modify their product to better compete with *EnergySolutions*, take marketing or other actions to improve their product's position or impair the position of *EnergySolutions*' product, and avoid developing fabrication data in support of their processes, methods, and/or apparatus.
- (e) In pricing *EnergySolutions*' products and services, significant research, development, engineering, analytical, licensing, fabrication, quality assurance and other costs must be included. The ability of *EnergySolutions*' competitors to utilize such information without similar expenditure of resources may enable them to sell their product at prices reflecting significantly lower costs.

Further the deponent sayeth not.

I declare under penalty of perjury that the forgoing is true and correct.

Executed on July 18, 2013  
Date

  
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Steven E. Sisley  
Cask Licensing Manager  
*EnergySolutions* Products and Technology Group