



EM Environmental Management

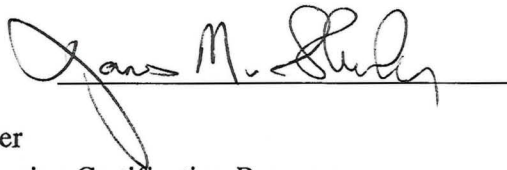
safety ❖ performance ❖ cleanup ❖ closure

DOE Packaging Certification Program

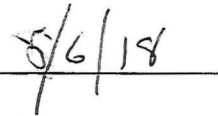
**Safety Evaluation Report for
Request to Amend Certificate of Compliance Number 9516
for Alternative Product-Can Cap Design for the Model 9516
Packaging**

Docket No. 18-38-9516

Prepared by:



Date:

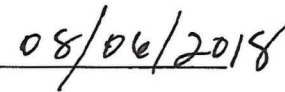


James M. Shuler
Manager, Packaging Certification Program
Office of Packaging and Transportation

Approved by:



Date:



Joanne D. Lorence
Headquarters Certifying Official
Director
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This Safety Evaluation Report (SER) documents the U.S. Department of Energy (DOE) Packaging Certification Program (PCP) independent technical review of the application submitted by the Idaho Operations Office (NE-ID) to amend DOE Certificate of Compliance (CoC) Number 9516 to authorize an alternate Cap design on the *SARP-9516 Cylinder Product Can* (CoC Drawing 756180, Rev. 1).

Evaluation

By email ^[1] dated May 2, 2018, NE-ID concurred and forwarded a request ^[2], with a technical justification ^[3] and Drawing 756180, Rev.2 ^[4] from their contractor, the Idaho National Laboratory (INL), to amend CoC 9516 to authorize use of an alternative Cap design of the *SARP-9516 Cylinder Product Can (CPC)*.

The *Cylinder Product Can (CPC)* is used as a convenience container for handling radioactive contents. The CPC design is defined in CoC Drawing 756180, Rev. 1 and described in Section 1.2.2.1 of the Safety Analysis Report for Packaging.^[5] The CPC is not explicitly identified in the Q-list for the 9516 packaging components (SARP, Table 9-1); however, its safety function is to restrict movement of contents within the containment vessel, and is therefore considered as a Quality Level 3 item (minor importance to safety).

The applicant submitted Revision 2 of Drawing 756180 with an alternate Cap (Drawing Item 11) that omits the magnetic Insert (Drawing Item 9) welded into the current Cap (Drawing Item 8). The purpose of the magnetic Insert is for handling the CPC in a glovebox environment; however, the magnetic Insert is not needed at INL and other user facilities due to current handling tools.

The Cap material and overall thickness is the same for both designs (Drawing Items 11 and 8); therefore, the alternate Cap does not affect the internal or overall dimensions of the CPC. Use of the alternate Cap is a cost savings in materials and fabrication (i.e., machining and welding) since it doesn't use the Insert.

The applicant's technical justification evaluated the impact of the CPC design change with respect to the thermal, containment, shielding, and criticality safety chapters of the SARP and concluded that the alternate Cap design will have no adverse effect on the design, operating characteristics, or safety of the 9516 packaging.

PCP staff reviewed the SARP, Drawing 756180 Rev. 2, and the applicant's technical justification for use of the alternate Cap on the CPC, and concluded that this modification will not prevent the 9516 packaging from satisfying the requirements of 10 CFR Part 71.

Condition of Approval

The following changes to CoC Revision 5 are required to implement the alternate Cap design: all other conditions of the certificate remain the same.

1. Section 5(a)(3) Drawings – Revise Drawing 756180 from Revision 1 to Revision 2.
2. Section 5(d)(13) – Revise to allow the use of Revision 4 until the end of the year, “Revisions 3 or 4 of this certificate may be used until December 31, 2018.” Note – Revision 3 was previously authorized for use under Revision 4 until 12/31/2018.
3. Section 5(e) Supplements:
 - (4) Add “Technical Justification for Minor Modification to the 9516 Package Product Can Lid Design, Idaho National Lab, dated April 9, 2018.”
 - (5) Add “SARP 9516 Cylinder Product Can, Drawing 765180, Revision 2.”

Conclusion

Based on the statements and representations in the SARP, Drawing 756180 Rev. 2 and the applicant’s technical justification, and the PCP staff’s confirmatory evaluation as summarized in this SER and the conditions listed above, staff finds use of the alternate Cap on the CPC acceptable and will not prevent the 9516 packaging from satisfying the requirements of 10 CFR Part 71.

References

- [1] Email, *FW: Product Can Alternative Lid Design*, Carl Friesen (NE-ID) to James Shuler (EM-4.24) and cc: PCP Docket Manager, dated May 2, 2018 4:14 PM.
- [2] *Contract No. DE-AC07-05ID14517 -Request for Revision to Drawing 756180 for alternative 9516 Package Product Can Lid Design*, CCN 242379, Letter from Stephen G. Johnson (INL) to Carl Friesen (NE-ID), dated April 11, 2018.
- [3] G.A. Hula, *Technical Justification for Minor Modification to the 9516 Package Product Can Lid Design*, Idaho National Laboratory, April 9, 2018.
- [4] *SARP-9516 Cylinder Product Can*, Drawing 756180, Rev. 2.
- [5] *Safety Analysis Report for Packaging (SARP) for the 9516 Package*, R1033-0062-ES, Rev. 1, October 2009.