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DOE Packaging Certification Program

**Safety Evaluation Report for
Request to Amend Certificate of Compliance Number 9979
to Authorize a Change to the 55-Gallon Drum Design for
Fabrication**

Docket No. 18-52-9979

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Date:

10/9/18

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SER for Request to Amend Certificate of Compliance Number 9979 to Authorize a Change to the 55-Gallon Drum Design for Fabrication
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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 for the Savannah River Operations Office (SR) to amend DOE Certificate of Compliance (CoC) Number 9979 to authorize a change to the 55-gallon drum design for fabrication.

Evaluation

By letter ^[1] dated August 23, 2018, as superseded ^[2] August 24, 2018, the Savannah River National Laboratory (i.e., the applicant) submitted a request and supporting technical evaluation with a revised drawing ^[3] and page changes ^[4] to the current Safety Analysis Report for Packaging (SARP) ^[5] on behalf of SR to amend DOE CoC 9979 to authorize a change to the 55-gallon drum design for fabrication. The applicant requested the option of using a Gas tungsten arc welding (GTAW) process to butt-weld the 55-gallon drum vertical seam. The drum seam is currently welded by an electric resistance welding process.

The applicant revised SARP pages in Appendix 1.1 and Chapter 9, and Drawing R-R2-G-00057 to implement this design change. The August 24 letter ^[2] included the applicant's evaluation of impact of the proposed change with respect to each chapter of the current SARP. The drawing was revised to add the option to use a GTAW butt weld on the 55-gallon drum seam and specify the welding requirements for compliance with American Welding Society D1.3.

PCP staff reviewed the design change and concluded that using a GTAW process to butt-weld the drum seam will provide equivalent safety as the electric resistance weld process; therefore, this change will not affect the ability of the package to meet the requirements of 10 CFR Part 71.

Condition of Approval

The 9979 certificate revision was changed from Revision 8 to Revision 9, with the following changes:

- Drawings 5.(a)(3) - R-R2-G-00057 revised from Revision 9 to Revision 10.
- Supplement 5.(e)(6) was added "*Safety Analysis Report for Packaging – Model 9979 Type AF-96, S-SARP-G-00006, Revision 5, Pages-changes: Appendix 1.1 - ii, 9-22, and 9-31, August 24, 2018.*"
- Supplement 5.(e)(7) was added "*Model 9979 Type AF 55-Gallon Drum Subassembly and Weldment, Drawing No. R R2 G-00057, Revision 10, August 23, 2018*

Conclusion

Based on the statements and representations in the revised drawing and SARP Revision 5 page-changes, and PCP staff's confirmatory evaluation, staff finds that the changes do not affect the performance of the package and will provide reasonable assurance that the regulatory requirements of 10 CFR Part 71 have been met, subject to the conditions above.

References

- [1] *Application for Welding Specification Amendment to the 9979 Packaging CoC*, SRNL-L4500-2018-00087, Revision 0, Letter from Robert Watkins to James Shuler, August 23, 2018.
- [2] *Application for Welding Specification Amendment to the 9979 Packaging CoC*, SRNL-L4500-2018-00087, Revision 1, Letter from Robert Watkins to James Shuler, August 24, 2018.
- [3] *Model 9979 Type AF 55-Gallon Drum Subassembly and Weldment*, Drawing No. R-R2-G-00057, Revision 10, August 23, 2018.
- [4] *Safety Analysis Report for Packaging – Model 9979 Type AF-96*, S-SARP-G-00006, Revision 5, Pages-changes: Appendix 1.1 - ii, 9-22, and 9-31, August 24, 2018.
- [5] *Safety Analysis Report for Packaging – Model 9979 Type AF-96*, S-SARP-G-00006, Revision 5, January 2018.