

Safety Evaluation Report for Revision to the 9979 Certificate of Compliance USA/9979/AF- 96 (DOE) for Commercial Grade Dedication Changes

Docket Number: 12-27-9979

Prepared by: James M. Shuler
James M. Shuler
Manager, DOE Packaging Certification Program
Office of Packaging and Transportation

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Approved by: Stephen C. O'Connor
Stephen C. O'Connor
Headquarters Certifying Official
Director, Office of Packaging and Transportation

Date: 11/01/12

SUMMARY

The Savannah River National Laboratory (SRNL) submitted a letter dated October 16, 2012, requesting a revision to Certificate of Compliance (CoC) USA/9979/AF-96(DOE) for the Model 9979 package.¹

The request for revision of the CoC included: 1) revised drawings resulting from the DOE Packaging Certification Program (PCP) Quality Assurance (QA) Audit performed at the fabricator, Paragon Die and Engineering, on August 15-18, 2011; and 2) a Data Sheet, Revision 2, referenced on Drawing R-R5-G-00006, Revision 3, which lists the required Acceptance Criteria for Commercial Items dedicated for use on the 9977. The revised drawings and Data Sheet incorporate Acceptance Criteria for Commercial Items as required from the Audit and include as-built changes documented in the previous procurements that were not included in the 9979 Safety Analysis Report for Packaging (SARP), Revision 2. These changes will be made in the next revision of the SARP.

On the basis of the statements and representations in the request for revision of the CoC, the information provided in the drawings and Data Sheet discussed above, and the DOE PCP staff's confirmatory evaluation as summarized in this Safety Evaluation Report (SER), DOE PCP finds that the request for revision to the CoC regarding commercial grade dedication is acceptable, and will provide reasonable assurance that the regulatory requirements of 10 CFR Part 71 have been met.

DOE PCP has concluded that two (2) conditions of approval need to be added to the CoC pursuant to the approval of the application request, as follows:

- The ARG-US Radiofrequency Identification (RFID) may be used as a Tamper-Indicating Device Seal.
- The engineering drawings listed in Section (3) Drawings of the CoC supersede the engineering drawings listed in Appendix 1.3 of S-SARP-G-00006, Revision 2. The engineering drawings listed in Section (3) Drawings of the CoC, and the Procurement Data Sheet M-DS-G-00060, Revision 2, dated October 10, 2012, shall be used for procurement of Commercial Grade items.

Condition 5(d)(13) from Revision 2 of the DOE CoC, which allowed 9979 packaging with serial numbers from 0100-0599 to be used as-is for shipments following the requirements of that condition to disposal prior to September 30, 2012, was dropped because the condition had expired. In Revision 2 of the CoC Condition 5(d)(12) and 5(d)(13) were the two conditions that addressed 9979 packagings with serial numbers from 0100-0599. For Revision 3 of the CoC the Condition 5(d)(13) of Revision 2 becomes Condition 5(d)(12) of Revision 3 and the wording will be changed because this is now the only option for 9979 packagings with serial numbers from 0100-0599 that were not either shipped for disposal prior to September 30, 2012, and the thirteen 9979 drums that will shipped under the October 22, 2012, authorization memorandum.

1. GENERAL INFORMATION AND DRAWING REVIEW

Detailed packaging descriptions and contents can be found in the SARP. This request for a revision to the SARP is limited to requirements and acceptance criteria for Commercial Grade Dedication of certain items. These items are identified on revised drawings, and the acceptance criteria for commercial items are identified on Procurement Data Sheet M-DS-G-00060, Revision 2, dated October 10, 2012.

The 9979 Packaging design is defined by the following list of drawings (Table 1.1). The drawing revisions listed below supersede the Engineering Drawings listed in Appendix 1.3 of S-SARP-G-00006, Revision 2 and the drawings listed below shall be used for procurements of 9979 packagings. The Data Sheet, M-DS-G-00060 Revision 2, referenced on drawing R-R5-G-00006 Revision 3, lists the required Acceptance Criteria for Commercial Items.

Table 1.1 List of drawings for Model 9979 Packaging

| Drawing No. | Revision | Title |
|--------------|----------|---|
| R-R5-G-00006 | 3 | 9979 Type AF Package Tree (U) |
| R-R1-G-00026 | 4 | 9979 Type AF 30-Gallon Container Split-Ring Assembly (U) |
| R-R1-G-00027 | 4 | 9979 Type AF 55-Gallon Drum Lid Split-Ring Assembly (U) |
| R-R1-G-00028 | 5 | 9979 Type AF 30-Gallon Drum Assembly (U) |
| R-R1-G-00029 | 5 | 9979 Type AF 55-Gallon Drum Assembly (U) |
| R-R1-G-00030 | 3 | 9979 Type AF Packaging Assembly (U) |
| R-R2-G-00057 | 6 | 9979 Type AF 55-Gallon Drum Sub-Assembly and Weldment (U) |
| R-R2-G-00058 | 3 | 9979 Type AF 30-Gallon Drum (U) |
| R-R2-G-00059 | 4 | 9979 Type AF 55-Gallon Drum Lid Sub-Assembly and Weldment (U) |
| R-R2-G-00060 | 4 | 9979 Type AF 30-Gallon Drum Lid with Dual Bung Closures (U) |
| R-R4-G-00062 | 3 | 9979 Type AF 30-Gallon Drum Lid Gasket (U) |
| R-R4-G-00064 | 3 | 9979 Type AF Insulation Bag (U) |
| R-R4-G-00065 | 3 | 9979 Type AF Insulation Cover Assembly for 30-Gallon Drum (U) |
| R-R4-G-00066 | 2 | 9979 Type AF Package Identification Plate (U) |

Note: "U" indicates unclassified.

DOE PCP concluded that a condition of approval needs to be added to the CoC pursuant to the approval of the application request, as follows:

The engineering drawings listed in Section (3) Drawings of the CoC supersede the engineering drawings listed in Appendix 1.3 of S-SARP-G-00006, Revision 2. The engineering drawings listed in Section (3) Drawings of the CoC, and the Procurement Data Sheet M-DS-G-00060, Revision 2, dated October 10, 2012 shall be used for procurement of Commercial Grade items.

On the basis of the review of the information presented in this request for revision to the 9979 SARP, DOE PCP finds there are no other general information and drawing-related issues that need to be addressed relative to this request.

Evaluations of design and performance of the package for safety and regulatory compliance in structural, thermal, containment, shielding, criticality safety, operating procedures, acceptance tests and maintenance, and QA are provided in the remaining sections of this SER.

2. STRUCTURAL REVIEW

On the basis of the review of the information presented in the request for revision to the 9979 CoC, DOE PCP finds there are no structural issues related to Commercial Grade Item Dedication.

3. THERMAL REVIEW

On the basis of the review of the information presented in the request for revision to the 9979 CoC, DOE PCP finds there are no thermal issues related to Commercial Grade Item Dedication.

4. CONTAINMENT REVIEW

On the basis of the review of the information presented in the request for revision to the 9979 CoC, DOE PCP finds there are no containment issues related to Commercial Grade Item Dedication.

5. SHIELDING REVIEW

On the basis of the review of the information presented in the request for revision to the 9979 CoC, DOE PCP finds there are no shielding issues related to Commercial Grade Item Dedication.

6. CRITICALITY REVIEW

On the basis of the review of the information presented in the request for revision to the 9979 CoC, DOE PCP finds that there are no criticality issues related to Commercial Grade Item Dedication.

7. PACKAGE OPERATIONS REVIEW

On the basis of the review of the information presented in the request for revision to the 9979 CoC, DOE PCP finds that there are no package operations issues related to Commercial Grade Item Dedication.

However, DOE PCP has concluded that a condition of approval needs to be added to the CoC pursuant to the approval of the application request, as follows:

“The ARG-US RFID may be used as a Tamper-Indicating Device Seal.”

8. ACCEPTANCE TESTS AND MAINTENANCE PROGRAM REVIEW

On the basis of the review of the information presented in the request for revision to the 9979 CoC, DOE PCP finds that there are no acceptance test and maintenance program issues related to Commercial Grade Item Dedication.

9. QUALITY ASSURANCE REVIEW

On the basis of the review of the information presented in the request for revision to the 9979 CoC, DOE PCP finds that there are no other quality assurance issues related to Commercial Grade Item Dedication.

Reference

[1] Request for Revision to 9979 Certificate of Compliance USA/9979/AF-96(DOE) (Revised), submitted to Dr. James M. Shuler, Manager of Packaging Certification Program, Office of Packaging and Transportation of Department of Energy, by the Savannah River National Laboratory (SRNL), October 16, 2012.