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February 23, 2021

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

Subject: REVISION 25 OF THE TRUPACT-II SHIPPING PACKAGE APPLICATION,  
DOCKET NO. 71-9218, AND REVISION 8 OF THE HalfPACT SHIPPING  
PACKAGE APPLICATION, DOCKET NO. 71-9279

Dear Sir or Madam:

Nuclear Waste Partnership LLC, on behalf of the U.S. Department of Energy (DOE), hereby submits Revision 25 of the application for a Certificate of Compliance (CoC) for the TRUPACT-II Packaging, U.S. Nuclear Regulatory Commission (NRC) Docket No. 71-9218, and Revision 8 to the application for a CoC for the HalfPACT Packaging, NRC Docket No. 71-9279.

The primary purpose of the application is to propose the addition of four new shielded container designs as authorized payload containers for the HalfPACT packaging – SC-30G2 shielded container, SC-30G3 shielded container, SC-55G1 shielded container, and SC-55G2 shielded container. Along with the currently authorized SC-30G1 shielded container, these new shielded container designs will allow WIPP emplacement of a portion of the DOE remote-handled transuranic (RH-TRU) waste inventory in stackable configurations instead of in RH-TRU removable lid canisters<sup>1</sup> in excavated boreholes underground. Borehole emplacement of waste was halted following the accident at the WIPP on February 14, 2014, and cannot resume until the underground facility ventilation system is upgraded as part of the recovery operations. Currently, WIPP is able to accept for disposal only the subset of the DOE RH-TRU waste inventory that meets the requirements for HalfPACT shipment in the currently authorized SC-30G1 shielded container. The new shielded container designs will enable HalfPACT shipments of a larger portion of the RH-TRU inventory, relieving the currently strained storage capacity at DOE sites while affording safe ALARA practices for the employees prior to transport.

In addition to providing the structural, thermal, shielding, and criticality design basis for the SC-30G2, SC-30G3, SC-55G1, and SC-55G2 shielded containers, this application also includes minor revisions to drawings, administrative revisions to facilitate anticipated electronic documentation management, and technical changes outlined in Attachment A – Summary of Revisions. Technical changes are indicated by right-bars in the margin of the submittal documents summarized below.

This submission contains files, one or more of which contains hyperlinks to other files or to Internet websites. These hyperlinks are either inoperable or are not essential to the use of the

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<sup>1</sup> The RH-TRU removable lid canister is the authorized payload container for the RH-TRU 72-B Cask.

filing. Any material referenced by hyperlinks to Internet websites that was essential for use of this filing has been submitted as part of the filing. Any material referenced by a hyperlink to another file that was essential for the use of this filing has either been included by reference or submitted as part of this filing.

To facilitate implementation, it is requested that the current package CoCs be valid for use one year from the date of issuance of the revised CoCs.

If you have any questions regarding this submittal, please contact Scott Burns of my staff at (575) 706-7920.

Sincerely,

**TODD SELLMER**  
(Affiliate)

Digitally signed by TODD  
SELLMER (Affiliate)  
Date: 2021.02.22 13:17:02 -07'00'

T. E. Sellmer, Manager  
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The following table summarizes the components of this submittal. No deviations occur from the NRC-prescribed PDF formatting for the submitted files. Please contact Ms. C. L. Morrison at (505) 350-3693 or cindy.morrison@wipp.ws to resolve any discrepancies in this submittal.

<b>File Name</b>	<b>File Size (MB)</b>	<b>Release Level</b>	<b>Submittal Type</b>
001 Transmittal Letter – February 2021.pdf	.5	Publicly Available	EIE
002 TRUPACT-II SAR R25 – February 2021.pdf	39.2	Publicly Available	EIE
003 HalfPACT SAR R8 – February 2021.pdf	40.9	Publicly Available	EIE
004 CH-TRAMPAC R6 – February 2021.pdf	6.2	Publicly Available	EIE
005 CH-TRU Payload Appendices R5 – February 2021.pdf	50.6	Publicly Available	EIE
006 SCA-CAL-0001 R0	2.4	Publicly Available	EIE
007 SCA-CAL-0002 R0	8.5	Publicly Available	EIE
008 HPT-REP-0001 R0	58.5	Publicly Available	EIE

## ATTACHMENT A – Summary of Revisions

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## ATTACHMENT A – Summary of Revisions

TRUPACT-II SAR, Revision 25, February 2021			
Section	Page	Change Description	Justification
<p>Administrative SAR changes are grouped into the following categories, which are used in this summary without additional change justification:</p> <p>❶ = revisions to rename the currently authorized shielded container assembly design to “SC-30G1” and to present the approved SC-30G1 analysis consistent with the new shielded container model numbers</p> <p>❷ = addition of four (4) new shielded container models (SC-30G2, SC-30G3, SC-55G1, and SC-55G2) as authorized payload containers.</p> <p>❸ = addition or revision of section heading, table or figure caption, and/or reference footnote</p>			
General		Revised header for revision and date.	Administrative change. No impact to safety basis.
1.1, 2.0, 2.4.1, 2.6, 2.7, 2.10.1.1.1, 2.10.3, 3.0, 3.4, 3.5, 4.2.1, 4.3-2, 4.4.1, 5.0, 6.0, 6.2, 6.3.3, 6.4.3.2.5, 7.1.7, 8.1, 9.2.1, 9.3.2	1.1-2, 2.1-1, 2.4-1, 2.6-1, 2.7-1, 2.10.1-2, 2.10.3-1, 3.1-1, 3.4-1, 3.5-1, 4.2-1, 4.3-1, 4.4-1, 5.1-1, 6.1-1, 6.2-1, 6.3-4, 6.4-7, 7.1-6, 8.1-1, 9.2-1, 9.3-1	Updated 10 CFR 71 citation. ❸	Administrative change. No impact to safety basis.
1.1	1.1-3	Replaced Figure 1.1-1 with a color, rendered version.	Administrative change. No impact to safety basis.
1.2.1.1, 1.3.2, 5.2.1.2	1.2-1, 1.3.2-4, 5.3-2	Revised to use singular version of ten drum overpack (TDOP).	Administrative change. No impact to safety basis.
2.2.1, 2.2.2	2.2-1 thru 2.2-3	Revised to clarify that weights listed for the 55-gallon drum, 100-gallon drum, standard waste box (SWB), and TDOP are approximate.	Administrative change. No impact to safety basis.

**ATTACHMENT A – Summary of Revisions**

<b>TRUPACT-II SAR, Revision 25, February 2021</b>			
<b>Section</b>	<b>Page</b>	<b>Change Description</b>	<b>Justification</b>
5.0, 5.1.1.6, 5.1.2, 5.3.1.6, 5.4.1, 5.4.2, 5.4.4.5, 5.4.4.10, 5.5.5, 5.7, 5.7.1.7	5.1-1, 5.1-4, 5.1-10, 5.1- 18, 5.3-4, 5.3-16, 5.3- 17, 5.4-1, 5.4-2, 5.4-7, 5.4-11, 5.5- 25 thru 5.5- 28, 5.5-49, 5.7-1, 5.7.1- 31	① ③	Administrative change. No impact to safety basis.

**ATTACHMENT A – Summary of Revisions**

<b>TRUPACT-II SAR, Revision 25, February 2021</b>			
<b>Section</b>	<b>Page</b>	<b>Change Description</b>	<b>Justification</b>
5.0, 5.1.1.7, 5.1.1.8, 5.1.1.9, 5.1.1.10, 5.3.1.7, 5.3.1.8, 5.3.1.9, 5.3.1.10, 5.4.1, 5.4.2, 5.4.4.6, 5.4.4.7, 5.4.4.8, 5.4.4.9, 5.4.4.10, 5.5.6, 5.5.7, 5.5.8, 5.5.9, 5.5.10, 5.7.1.8, 5.7.1.9, 5.7.1.10, 5.7.1.11	5.1-1, 5.1-4 thru 5.1-6, 5.1-11 thru 5.1-15, 5.1- 18 thru 5.1- 20, 5.3-4 thru 5.3-7, 5.3-18 thru 5.3-25, 5.4- 1, 5.4-2, 5.4-8 thru 5.4-10, 5.4- 12, 5.5-29 thru 5.5-50, 5.7.1-35 thru 5.7.1- 72	Revised to reflect shielding analyses performed for the new shielded container designs (SC-30G2, SC-30G3, SC-55G1, SC-55G2). ② ③	The shielding analyses performed for the new shielded container designs were performed using the approved methodology documented in Section 5.0.
5.2.2, 5.4.4	5.2-2, 5.4-4	Updated <sup>252</sup> Cf specific activity for consistency with Table 3.1-2 in CH-TRAMPAC. Updated corresponding total source strength calculation for <sup>252</sup> Cf.	The use of the updated <sup>252</sup> Cf specific activity value does not result in changes to the energy-based activity limits. No impact to safety basis.

## ATTACHMENT A – Summary of Revisions

TRUPACT-II SAR, Revision 25, February 2021			
Section	Page	Change Description	Justification
Tables 5.1-3 thru 5.1-7; Tables 5.4-5 thru 5.4-11; Section 5.5.10.1.2	5.1-16 thru 5.1-18, 5.4-4 thru 5.4-7, 5.5-51 thru 5.5-54	Revised table values and example results to use the updated <sup>252</sup> Cf specific activity value.	The use of the updated <sup>252</sup> Cf specific activity value does not result in changes to the energy-based activity limits. No impact to safety basis.
5.5.10	5.5-49	Revised to reassign the currently approved SC-30G1 payload from Case A to Case B for distributed source eligibility.	Eligibility for all shielded container payloads will be determined as Case B. Using the Case B NUREG-1608 definition of “distributed throughout” is more appropriate for these payload comprised of a maximum of three payload containers than using a limited number of surface dose rate measurements for determination as Case A.
6.1, 6.4.3.4, 6.4.3.5	6.1-4, 6.4-8, 6.4-10	Revised to change payload container FGE limits to the allowed FGE per package for Cases A and C.	For drum payload configurations evaluated under Cases A and C, all fissile material within the package is assumed to consolidate into a single fissile region within the package such that no credit is taken for individual payload container confinement or material absorption. The historically-implemented 200 FGE limit on individual drums is not related to or consistent with the Case A and Case C analysis assumptions. Therefore, the FGE limit for the package is appropriately equal to the FGE limit for an individual drum payload container (e.g., a drum at 325 FGE under Case A is allowable provided none of the other drums contain fissile material).
9.2.1, 9.3.1	9.2-1, 9.3-1	Revised to update NRC Regulatory Guide 7.10 to Version 3, June 2015. ③	Administrative change. No impact to safety basis.



## ATTACHMENT A – Summary of Revisions

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TRUPACT-II SAR, Revision 25, February 2021			
Section	Page	Change Description	Justification
9.2.2	9.2-1	Revised reference from DOE Order 460.1B to DOE Order 460.1D. ③	Administrative change. No impact to safety basis.

## ATTACHMENT A – Summary of Revisions

HalfPACT SAR, Revision 8, February 2021			
Section	Page	Change Description	Justification
<p>Administrative SAR changes are grouped into the following categories, which are used in this summary without additional change justification:</p> <p>❶ = revisions to rename the currently authorized shielded container assembly design to “SC-30G1” and to present the approved SC-30G1 analysis consistent with the new shielded container model numbers</p> <p>❷ = addition of four (4) new shielded container models (SC-30G2, SC-30G3, SC-55G1, and SC-55G2) as authorized payload containers.</p> <p>❸ = addition or revision of section heading, table or figure caption, and/or reference footnote</p>			
General		Revised header for revision and date.	Administrative change. No impact to safety basis.
1.0	1.1-1	Revised to reference the design basis evaluations for new shielded container designs (SC-30G2, SC-30G3, SC-55G1, and SC-55G2). ❷	The structural, thermal, shielding, and criticality design bases are established in CH-TRU Payload Appendices 4.7 – 4.10 for the SC-30G2, SC-30G3, SC-55G1, and SC-55G2, respectively.
1.1	1.1-2	Revised to accommodate new shielded container payload configurations.	Administrative change. No impact to safety basis.
1.1, 2.0, 2.4.1, 2.6, 2.7, 2.10.1.1.1, 2.10.3, 3.0, 3.4, 3.5, 4.2.1, 4.3.2, 4.4.1, 5.0, 6.0, 6.2, 6.3.3, 6.4.3.2.5, 7.1.7, 8.1, 9.2.1, 9.3.2	1.1-2, 2.1-1, 2.4-1, 2.6-1, 2.7-1, 2.10.1-2, 2.10.3-1, 3.1-1, 3.4-1, 3.5-1, 4.2-1, 4.3-1, 4.4-1, 5-1, 6.1-1, 6.2-1, 6.3-4, 6.4-7, 7.1-6, 8.1-1, 9.2-1, 9.3-1	Updated 10 CFR 71 citation. ❸	Administrative change. No impact to safety basis.
1.1	1.1-3	Replaced Figure 1.1-1 with a color, rendered version.	Administrative change. No impact to safety basis.

## ATTACHMENT A – Summary of Revisions

<b>HalfPACT SAR, Revision 8, February 2021</b>			
<b>Section</b>	<b>Page</b>	<b>Change Description</b>	<b>Justification</b>
1.3.1	1.3.1-1	Updated to reference SAR drawings for new shielded container payload configurations. <b>1 2</b>	Administrative change. No impact to safety basis.
1.3.2	1.3.2-4	Revised shielded container definition to include new shielded container designs (SC-30G2, SC-30G3, SC-55G1 and SC-55G2). <b>1 2</b>	Administrative change. No impact to safety basis.
2.2, 2.2.1, 2.2.2	2.2-1, 2.2-3, 2.2-7, 2.2-14	<b>1 3</b>	Administrative change. No impact to safety basis.
2.2, 2.2.1	2.2-1, 2.2-3 thru 2.2-5, 2.2-7, 2.2-8, 2.2-15 thru 2.2-18	Revised to reflect center of gravity calculations for the new shielded container designs (SC-30G2, SC-30G3, SC-55G1, and SC-55G2). <b>2 3</b>	The center of gravity calculations for new shielded container payload configurations were performed using the approved methodology documented in Section 2.0.
2.2.1, 2.2.2	2.2-1 thru 2.2-3, 2.2-5	Revised to clarify that weights listed for the 55-gallon drum, standard waste box (SWB), and 100-gallon drum are approximate.	Administrative change. No impact to safety basis.
2.10.3.4	2.10.3-3 and 2.10.3-4	Revised to include the new shielded container designs (SC-30G2, SC-30G3, SC-55G1 and SC-55G2), and associated payload weights and configurations. <b>1 2</b>	Administrative change. No impact to safety basis.
3.1.2	3.1-2 and 3.1-3	Revised to include the new shielded container designs (SC-30G2, SC-30G3, SC-55G1, and SC-55G2). <b>1 2</b>	Administrative change. No impact to safety basis.
3.4.4.2.1	3.4-8, 3.4-16 thru 3.4-18	Revised to include pressure calculations for the new shielded container payloads (SC-30G2, SC-30G3, SC-55G1, and SC-55G2). <b>1 2 3</b>	MNOP calculations for the new shielded container payloads were performed using the approved methodology documented in Section 3.4.4.
5.0	5-1	Revised to reflect shielding analyses performed for the new shielded container designs (SC-30G2, SC-30G3, SC-55G1, and SC-55G2). <b>1 2</b>	Shielding analyses for the four new shielded container payload configurations are presented in TRUPACT-II SAR Section 5.0.

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HalfPACT SAR, Revision 8, February 2021			
Section	Page	Change Description	Justification
6.0, 6.2.7, 6.2.8, 6.3, 6.4.3.4	6.1-1, 6.1-2, 6.2-5, 6.3-1, 6.4-8	Revised descriptions of Case G and Case H to include new shielded containers (SC-30G2, SC-30G3, SC-55G1 and SC-55G2). ① ②	Criticality safety analyses for the new shielded container payload configurations are presented in CH-TRU Payload Appendices 4.7, 4.8, 4.9, and 4.10.
6.1, 6.4.3.4, 6.4.3.5	6.1-4, 6.4-8, 6.4-10	Revised to change payload container FGE limits to the allowed FGE per package for Cases A, C, G, and H.	<p>For drum payload configurations evaluated under Cases A and C, all fissile material within the package is assumed to consolidate into a single fissile region within the package such that no credit is taken for individual payload container confinement or material absorption. The historically-implemented 200 FGE limit on individual drums is not related to or consistent with the Case A and Case C analysis assumptions. Therefore, the FGE limit for the package is appropriately equal to the FGE limit for an individual drum payload container (e.g., a drum at 325 FGE under Case A is allowable provided none of the other drums contain fissile material).</p> <p>For Cases G and H, the thick lead and/or steel walls of the shielded containers are evaluated explicitly in the criticality safety analyses to determine their impact as a neutron reflector. However, the fissile material at the package FGE limit is modeled as a single sphere both inside and outside of the shielded containers. Thus, even for shielded container designs that allow up to three containers per HalfPACT, the analysis is not predicated on a FGE limit per container basis, thus the package limit is bounding.</p>

## ATTACHMENT A – Summary of Revisions

HalfPACT SAR, Revision 8, February 2021			
Section	Page	Change Description	Justification
7.1.4, 7.2.4	7.1-3, 7.2-2	Revised to clarify dunnage requirements for SC-30G1 and SC-30G2 payload configurations. <b>1 2</b>	Administrative change. No impact to safety basis.
9.2.1, 9.3.1	9.2-1, 9.3-1	Revised to update NRC Regulatory Guide 7.10 to Version 3, June 2015. <b>3</b>	Administrative change. No impact to safety basis.
9.2.2	9.2-1	Revised reference from DOE Order 460.1B to DOE Order 460.1D. <b>3</b>	Administrative change. No impact to safety basis.

## ATTACHMENT A – Summary of Revisions

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<b>TRUPACT-II SAR Drawing, 2077-500SNP, Revision AA</b>			
<b>Sheet</b>	<b>Zone</b>	<b>Change Description</b>	<b>Justification</b>
1	A1	Updated Revision History block to include the previous Approved Revision Date for historical purposes	Administrative change. No impact to safety basis.
8	C4	Removed an unintentional CAD artifact displayed.	Administrative change. No impact to safety basis.

**ATTACHMENT A – Summary of Revisions**

<b>Standard Pipe Overpack SAR Drawing, 163-001, Revision 9</b>			
<b>Sheet</b>	<b>Zone</b>	<b>Change Description</b>	<b>Justification</b>
	General	Revised title block.	Administrative change. No impact to safety basis.
1	D3	G/N 4: Removed "EACH PIPE COMPONENT SHALL BE LEAK TESTED PRIOR TO USE PER ANSI N14.5, ACCEPTANCE CRITERIA IS "LEAKTIGHT"."	Leak test is not required because a filter vent that meets the requirements specified in Section 2.5.1 of the CH-TRAMPAC is installed on each pipe component upon assembly for shipment. Rather than being confirmed by a leak test, weld integrity is affirmed via inspection per the ASME Code with proper filter vent and pipe component lid installation and o-ring sealing affirmed via procedural controls.
1	C3	F/N 9: Deleted "TYPE AC"	Exterior grade plywood meets the structural requirements needed. The cosmetic grade defined by "TYPE AC" is not relevant to the structural requirements. No impact to safety basis.
2	D6	Removed "LEAK TEST/"	Administrative clarification of the lid feature name as "FILTER VENT PORT". No impact to safety basis.
2	D6	Added "(OPTIONAL)"	The Part Identification No. on the lid is not critical to the fabrication or performance of the pipe component. No impact to safety basis.
3	D6	Added "(OPTIONAL)"	The Part Identification No. on the lid is not critical to the fabrication or performance of the pipe component. No impact to safety basis.
3	D6	Removed "LEAK TEST/"	Administrative clarification of the lid feature name as "FILTER VENT PORT". No impact to safety basis.

## ATTACHMENT A – Summary of Revisions

Standard Pipe Overpack SAR Drawing, 163-001, Revision 9			
Sheet	Zone	Change Description	Justification
3	B7	Revised pipe component max diameter from " $\varnothing$ 12.8 MAX" to " $\varnothing$ 12.9 MAX"	Per ASTM A312/A999, for a NPS of 12", the maximum permissible outside diameter is 12.843". This small increase in maximum pipe component diameter allows for fabrication of the 12" pipe component using standard pipe. No impact to safety basis.



**ATTACHMENT A – Summary of Revisions**

<b>SC-30G1 Shielded Container SAR Drawing, 163-008, Revision 4</b>			
<b>Sheet</b>	<b>Zone</b>	<b>Change Description</b>	<b>Justification</b>
General		Added "SC-30G1" designator in title and throughout drawing.	Administrative change. No impact to safety basis.
1	D3	G/N 3: Deleted "SHOWN" where it follows "ALL WELDS" and deleted "SHELL" where it is used to describe materials.	Some welds may be optional and, therefore, not shown. Clarified to note that some dunnage materials and not only "shell" materials may be joined via CJP welding. No impact to safety basis.
1	D3	F/N 7: "LEAD MEETING THE MINIMUM STRUCTURAL REQUIREMENTS OF ASTM B29." revised to "LEAD THAT IS MECHANICALLY EQUIVALENT TO LEAD MEETING THE CHEMICAL REQUIREMENTS OF ASTM B29."	Revised to clarify that the optional use of radioactively contaminated lead shall be required to be "mechanically equivalent" to lead meeting the chemical requirements of ASTM B29 since specific "structural requirements" are not defined in ASTM B29. No impact to safety basis.

**ATTACHMENT A – Summary of Revisions**

<b>SC-30G1 Shielded Container SAR Drawing, 163-008, Revision 4</b>			
<b>Sheet</b>	<b>Zone</b>	<b>Change Description</b>	<b>Justification</b>
1	C3	F/N 15: “, WHERE CLEARANCE BETWEEN THE FOAM CORE AND ALL OUTER SKIN MATERIALS IS MAINTAINED TO LESS THAN 1/8 IN. IN ANY DIRECTION. OPTIONALLY, FOAM MAY BE Poured-IN-PLACE THROUGH ACCESS PORTS IN THE OUTER SKINS (NOT SHOWN). MATERIAL SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH AT 10% STRAIN AND 75°F OF 430 PSI IN THE AS-INSTALLED RADIAL DIRECTION.” revised to “CLEARANCE BETWEEN THE FOAM CORES AND ALL OUTER SKIN MATERIALS SHALL BE 1/8 IN. OR LESS IN ANY DIRECTION AS DETERMINED NEAR INSIDE/OUTSIDE EDGES AS APPLICABLE. OPTIONALLY, FOAM MAY BE Poured-IN-PLACE THROUGH ACCESS PORTS IN THE OUTER SKINS (NOT SHOWN). MATERIAL SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH AT 10% STRAIN AND 75° ±5°F OF 430 PSI IN THE AS-INSTALLED RADIAL DIRECTION.”	Revised to be consistent with new shielded container drawings. No impact to safety basis.
1	C2	F/N 16: “MATERIAL: ASTM B-209/221, 6061-T6 ALUM” revised to “MATERIAL: ASTM B209, 6061-T6/T651 ALUM.”	Revised to add additional acceptable aluminum alloy. No impact to safety basis.
1	C2	F/N 17. “MATERIAL: ASTM B-221, 6061-T6 ALUM” revised to “MATERIAL: ASTM B210/221/241, 6061-T6/T6510/T6511 ALUM.”	Revised to add additional acceptable aluminum material shapes and alloys. No impact to safety basis.

**ATTACHMENT A – Summary of Revisions**

<b>SC-30G1 Shielded Container SAR Drawing, 163-008, Revision 4</b>			
<b>Sheet</b>	<b>Zone</b>	<b>Change Description</b>	<b>Justification</b>
1	B3	F/N 18. ", WHERE CLEARANCE BETWEEN THE FOAM CORE AND ALL OUTER SKIN MATERIALS IS MAINTAINED TO LESS THAN 1/8 IN. IN ANY DIRECTION. OPTIONALLY, FOAM MAY BE Poured-IN-PLACE THROUGH ACCESS PORTS IN THE OUTER SKINS (NOT SHOWN). MATERIAL SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH AT 10% STRAIN AND 75°F OF 430 PSI IN THE AS-INSTALLED RADIAL DIRECTION." revised to "CLEARANCE BETWEEN THE FOAM CORES AND ALL OUTER SKIN MATERIALS SHALL BE 1/8 IN. OR LESS IN ANY DIRECTION AS DETERMINED NEAR INSIDE/OUTSIDE EDGES AS APPLICABLE. OPTIONALLY, FOAM MAY BE Poured-IN-PLACE THROUGH ACCESS PORTS IN THE OUTER SKINS (NOT SHOWN). MATERIAL SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH AT 10% STRAIN AND 75° ±5°F OF 430 PSI IN THE AS-INSTALLED RADIAL DIRECTION."	Revised to be consistent with new shielded container drawings. No impact to safety basis.

**ATTACHMENT A – Summary of Revisions**

<b>SC-30G1 Shielded Container SAR Drawing, 163-008, Revision 4</b>			
<b>Sheet</b>	<b>Zone</b>	<b>Change Description</b>	<b>Justification</b>
1	B3	F/N 22: "WELD JOINTS MAY OPTIONALLY INCORPORATE BACKING BARS, 1/16 IN. THICK ANGLES, OR OTHER SIMILAR REINFORCEMENT. INNER AND OUTER PLATES MAY OPTIONALLY INCLUDE ROLLED EDGE(S) WHICH OVERLAP AND ARE ATTACHED TO THE INNER AND OUTER SHELLS USING 1/16 IN. FILLET WELDS. INDEPENDENT OF CORNER JOINT DETAIL, FOAM EDGES MAY INCLUDE UP TO 3/8 IN. CHAMFERS AND/OR BE COVERED BY ALUMINUM TAPE OR EQUIVALENT TO PROTECT THE FOAM DURING WELD OUT." revised to "WELD JOINTS MAY OPTIONALLY INCORPORATE BACKING BARS, ANGLES, OR OTHER SIMILAR REINFORCEMENT. CORNER CONNECTING COMPONENTS MAY OPTIONALLY INCLUDE ROLLED EDGE(S) WHICH OVERLAP USING 1/16-IN. FILLET WELDS. INDEPENDENT OF CORNER JOINT DETAIL, FOAM EDGES MAY INCLUDE UP TO 1 IN. CHAMFERS AND/OR BE COVERED BY ALUMINUM TAPE OR EQUIVALENT TO PROTECT FOAM DURING WELDING."	Revised to be consistent with new shielded container drawings. No impact to safety basis.
1	A3	Added F/N 23 and F/N 24	Revised to be consistent with new shielded container drawings. No impact to safety basis.
2	D6	Removed "on 21.81 H.C." and "2X, 144° APART"	Detail relocated (sheet 3 D8 and D7) and revised to be consistent with new shielded container drawings. No impact to safety basis.

**ATTACHMENT A – Summary of Revisions**

<b>SC-30G1 Shielded Container SAR Drawing, 163-008, Revision 4</b>			
<b>Sheet</b>	<b>Zone</b>	<b>Change Description</b>	<b>Justification</b>
2	D5	Added reference to F/N 24	To clarify that alternate weld joints are acceptable as long as CJP is achieved to be consistent with new shielded container drawings. No impact to safety basis.
2	D5	Included Optional seal weld	To facilitate option to add a non-structural seal weld to eliminate potential contamination crevice.
2	D4	Removed “ON 21.81 H.C.” and “3X, EQ. SP. @ 120°”	Detail relocated (sheet 3 B6 and B5) and shown differently on drawing to be consistent with new shielded container drawings. No impact to safety basis.
2	D2	Added reference to F/N 24	To clarify that alternate weld joints are acceptable as long as CJP is achieved to be consistent with new shielded container drawings. No impact to safety basis.
2	D1	Added reference to F/N 24	To clarify that alternate weld joints are acceptable as long as CJP is achieved to be consistent with new shielded container drawings. No impact to safety basis.
2	D1	Added reference to F/N 24	To clarify that alternate weld joints are acceptable as long as CJP is achieved to be consistent with new shielded container drawings. No impact to safety basis.
2	C4	Added “LID ASSEMBLY SHT 3”	Revised to be consistent with new shielded container drawings. No impact to safety basis.
2	C3	Added reference to F/N 24	To clarify that alternate weld joints are acceptable as long as CJP is achieved to be consistent with new shielded container drawings. No impact to safety basis.
2	C2	Added “3X MAX”	Revised to clarify that there may be up to 3 plugs. No impact to safety basis.

**ATTACHMENT A – Summary of Revisions**

<b>SC-30G1 Shielded Container SAR Drawing, 163-008, Revision 4</b>			
<b>Sheet</b>	<b>Zone</b>	<b>Change Description</b>	<b>Justification</b>
2	B4	Added "BODY ASSEMBLY SHT 3"	Revised to be consistent with new shielded container drawings. No impact to safety basis.
2	B4	Added reference to F/N 24	To clarify that alternate weld joints are acceptable as long as CJP is achieved to be consistent with new shielded container drawings. No impact to safety basis.
2	B4	Added reference to F/N 23	Revised to clarify material of filter shield plug lead. No impact to safety basis.
2	B1	Revised from "Material: BLK AS SAE J429, GR 8 15X" to "STEEL, GR 8"	Revised to clarify that steel and grade 8 material is sufficient for required material properties. No impact to safety basis.
3	D8	Added "144°"	Revised to be consistent with new shielded container drawings. No impact to safety basis.
3	D7	Revised 18° to hard dimension	Revised to be consistent with new shielded container drawings. No impact to safety basis.
3	D7	Added "21.81 B.C."	Revised to be consistent with new shielded container drawings. No impact to safety basis.
3	D6	Revised 24° to hard dimension	Revised to be consistent with new shielded container drawings. No impact to safety basis.
3	D5	Added "(DO NOT BREAK THRU)"	Revised to be consistent with new shielded container drawings. No impact to safety basis.
3	D5	Removed tolerance	Redundant to tolerance block. No impact to safety basis.
3	D3	Added "(LID BOLT HOLE)"	Revised to be consistent with new shielded container drawings. No impact to safety basis.

**ATTACHMENT A – Summary of Revisions**

<b>SC-30G1 Shielded Container SAR Drawing, 163-008, Revision 4</b>			
<b>Sheet</b>	<b>Zone</b>	<b>Change Description</b>	<b>Justification</b>
3	D1	Removed “∇.94 DRILL ON 21.81 H.C. 15X, EQ. SP. @ 24°”	“∇.94 drill information removed from SAR drawing because the ½ -13UNC depth symbol .88 provides adequate detail. The location and spacing details are relocated (sheet 3 D7 and D6) and shown differently on drawing to be consistent with new shielded container drawings. No impact to safety basis.
3	C8	Body Assembly moved from A8 and deleted “SHIELDED CONTAINER”	Revised to be consistent with new shielded container drawings. No impact to safety basis.
3	C6	Removed “LIFT ATTACHMENT HOLE 3X”	Detail relocated (sheet 3 B4) on drawing to be consistent with new shielded container drawings. No impact to safety basis.
3	C5	Added 18°	Revised to be consistent with new shielded container drawings. No impact to safety basis.
3	C4	Removed tolerance	Redundant to tolerance block. No impact to safety basis.
3	C4	Clarified chamfer call out	Revised to be consistent with new shielded container drawings. No impact to safety basis.
3	C4	Added “GROOVE”	Revised to be consistent with new shielded container drawings. No impact to safety basis.
3	C3	Revised the dimensioning of the hole and removed “2X, 144° APART”	Revised dimensioning to be consistent with ANSI-Y14.5. Removed detail relocated (sheet 3 B6) on drawing to be consistent with new shielded container drawings. No impact to safety basis.
3	B8	Revised to use fractional dimension	Revised to be consistent with new shielded container drawings. No impact to safety basis.
3	B6	Added 144° to note location of features	Revised to be consistent with new shielded container drawings. No impact to safety basis.

**ATTACHMENT A – Summary of Revisions**

<b>SC-30G1 Shielded Container SAR Drawing, 163-008, Revision 4</b>			
<b>Sheet</b>	<b>Zone</b>	<b>Change Description</b>	<b>Justification</b>
3	B5	Added 14 B.C. and 21.81 B.C. to note location of features	Revised to be consistent with new shielded container drawings. No impact to safety basis.
3	B4	Removed "LID BOLT HOLE 15X"	Detail relocated (sheet 3 D3) on drawing to be consistent with new shielded container drawings. No impact to safety basis.
3	B4	Detail 13 added to show clarifications	Revised to be consistent with new shielded container drawings. No impact to safety basis.
3	B1	Added "3X MAX"	Revised to be consistent with new shielded container drawings. No impact to safety basis.
3	A6	Deleted "SHIELDED CONTAINER"	Revised to be consistent with new shielded container drawings. No impact to safety basis.
3	A5	Relocated spring pin information	Detail relocated (sheet 3 A3, new Section R-R) on drawing to be consistent with new shielded container drawings. No impact to safety basis.
3	A5	Added "SEAL & SLOTTED SPRING PIN REMOVED FOR CLARITY"	Revised to be consistent with new shielded container drawings. No impact to safety basis.
3	A3	Added Section R-R	Revised to be consistent with new shielded container drawings. No impact to safety basis.
4	D4	Revised material call out to reference F/N 16	The note better defines the aluminum material. Revised to be consistent with new shielded container drawings. No impact to safety basis.
4	D3	Revised material call out to reference F/N 16	The note better defines the aluminum material. Revised to be consistent with new shielded container drawings. No impact to safety basis.
4	C4	Revised material call out to reference F/N 17	The note better defines the aluminum material. Revised to be consistent with new shielded container drawings. No impact to safety basis.



**ATTACHMENT A – Summary of Revisions**

<b>SC-30G1 Shielded Container SAR Drawing, 163-008, Revision 4</b>			
<b>Sheet</b>	<b>Zone</b>	<b>Change Description</b>	<b>Justification</b>
4	C4	Revised material call out to reference F/N 17	The note better defines the aluminum material. Revised to be consistent with new shielded container drawings. No impact to safety basis.
4	C3	Revised material call out to reference F/N 17	The note better defines the aluminum material. Revised to be consistent with new shielded container drawings. No impact to safety basis.
4	C1	Added chamfer description to new Section L-L	Revised to be consistent with new shielded container drawings. No impact to safety basis.
4	B1	View L-L revised to new Section L-L	Revised to be consistent with new shielded container drawings. No impact to safety basis.
5	C2	Removed F/N 22 from detail 9	Detail relocated (sheet 5 B7) on drawing to be consistent with new shielded container drawings. No impact to safety basis.
5	B8	Added "(SLOT FOAM AS REQUIRED FOR LIFT PIN CLEARANCE)"	Revised to be consistent with new shielded container drawings. No impact to safety basis.
5	B7	Relocated F/N 22 to assembly and added "SC-30G1"	Revised to be consistent with new shielded container drawings. No impact to safety basis.
5	B4	Removed F/N 22 from detail 7	Detail relocated (sheet 5 B7) on drawing to be consistent with new shielded container drawings. No impact to safety basis.
5	A4	Removed F/N 22 from detail 8	Detail relocated (sheet 5 B7) on drawing to be consistent with new shielded container drawings. No impact to safety basis.
5	A2	Removed F/N 22 from detail 10	Detail relocated (sheet 5 B7) on drawing to be consistent with new shielded container drawings. No impact to safety basis.
6	B7	Added F/N 22 to assembly and added "SC-30G1"	Revised to be consistent with new shielded container drawings. No impact to safety basis.

**ATTACHMENT A – Summary of Revisions**

<b>Criticality Control Overpack SAR Drawing, 163-009, Revision 2</b>			
<b>Sheet</b>	<b>Zone</b>	<b>Change Description</b>	<b>Justification</b>
1	C3	Added the following language to the end of Flag Note 8: "IF USED, THE LIFTING ATTACHMENT SHALL PROTRUDE NO MORE THAN 5/8-INCH ABOVE THE TOP OF THE CCC LID WHEN ASSEMBLED IN THE CCO."	This change is part of an effort to accommodate alternate lift attachment designs. The implemented height restriction on lift attachments ensures compliance with the original HAC drop testing of the CCO. No impact to safety basis.
2	D4	Updated the heavy hex head bolt leader note to remove "STAINLESS" from the material description and add the following to the material specification: "...OR SAE J429, GRADE 2 MIN."	This change is part of an effort to accommodate robotic handling of the CCCs. By allowing ferritic bolt materials to be utilized, magnetics can be used to remotely grapple the CCC lid closure bolts. The mechanical properties of SAE J429 Grade 2 material are superior to those of ASTM A193 Grade 8, Class 1 with regard to yield and tensile minimum strengths. With regard to fracture toughness, NUREG/CR-1815 Section 5 excludes bolts from consideration as fracture-critical components. No impact to safety basis.
2	C4	Added to the lift attachment leader note the following: "(HOIST RING DEPICTED FOR VISUAL REFERENCE ONLY)"	This change is intended to clarify the intent of depicting a hoist ring on the CCO SAR drawing. Lift attachments are optional and a hoist ring is depicted for visual reference only as a representative lift attachment. No impact to safety basis.
2	A2	Revised the parenthetical of the blind flange (base) leader note to the following: "(HOLES AND RAISED FACE ARE OPTIONAL)"	The blind flange utilized as the base of the CCC is an off-the-shelf, industry standard component that acts as a base plate for the CCC confinement boundary. Features like the through holes and the raised face, which are intended for forming a bolted, pressure tight joint with other ASME flanged components, and are not necessary for the function of the CCC base. No impact to safety basis.

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<b>SC-30G2 Shielded Container SAR Drawing, 163-010, Revision 0</b>			
<b>Sheet</b>	<b>Zone</b>	<b>Change Description</b>	<b>Justification</b>
General		New drawing	New drawing

<b>SC-30G3 Shielded Container SAR Drawing, 163-011, Revision 0</b>			
<b>Sheet</b>	<b>Zone</b>	<b>Change Description</b>	<b>Justification</b>
General		New drawing	New drawing

<b>SC-55G1 Shielded Container SAR Drawing, 163-012, Revision 0</b>			
<b>Sheet</b>	<b>Zone</b>	<b>Change Description</b>	<b>Justification</b>
General		New drawing	New drawing

<b>SC-55G2 Shielded Container SAR Drawing, 163-013, Revision 0</b>			
<b>Sheet</b>	<b>Zone</b>	<b>Change Description</b>	<b>Justification</b>
General		New drawing.	New drawing

**ATTACHMENT A – Summary of Revisions**

<b>CH-TRAMPAC, Revision 6, February 2021</b>			
<b>Section</b>	<b>Page</b>	<b>Change Description</b>	<b>Justification</b>
General		Revised header for date.	Administrative change. No impact to safety basis.
	xiii, xiv	Revised to update the List of CH-TRU Payload Appendices	Administrative change. No impact to safety basis.
1.5, 1.5.1, 1.5.2, 4.2, 5.1.2.1, 5.1.2.2, 5.2.4.2, 6.2.1.1.1, 6.2.1.1.2	xi, 1.5-1 thru 1.5-3, 4.2-1, 5.1-4, 5.1-5, 5.2-25, 5.2-26, 6.2-2, 6.2-9	Revised to delete references to the hardcopy document version of the CH-TRUCON (DOE/WIPP 01-3194), to rephrase steps requiring the completion of CH-TRUCON development steps “in writing”, and to edit outdated descriptions of the CH-TRUCON content.	Revision required to reflect the anticipated electronic management of the CH-TRUCON content, which will replace the current hardcopy document. CH-TRUCON required elements are unchanged. No impact to safety basis.
2.1.1, 2.3.1.1, 3.2.1, 3.3.1.1, 5.2.5.3.3, 6.2.1.1.1	2.1-1, 2.3-1, 3.2-1, 3.3-1, 5.2-38, 5.2-40, 6.2-2	Revised to rename the currently authorized shielded container assembly design to “SC-30G1”	Revision required to differentiate currently authorized shielded container assembly from the new shielded container designs. No impact to safety basis.
2.1.1, 2.3.1.1, 2.9.12, 2.9.13, 2.9.14, 2.9.15, 3.2.1, 3.3.1.1, 3.3.2.1, 5.1, 5.2.5.3.3, 6.2.1.1.1	2.1-1, 2.3-1, 2.9-47 thru 2.9-62, 3.2-1, 3.3-1, 3.3-2, 5.1-3, 5.2-38, 6.2-2	Revised to add new authorized payload containers (SC-30G2, SC-30G3, SC-55G1, and SC-55G2) for shipment in the HalfPACT packaging.	Revisions define the payload controls necessary for the new payload containers.

## ATTACHMENT A – Summary of Revisions

<b>CH-TRAMPAC, Revision 6, February 2021</b>			
<b>Section</b>	<b>Page</b>	<b>Change Description</b>	<b>Justification</b>
2.1.2	2.1-2	Revised to use a more general reference for “dunnage” associated with shielded container shipments.	The dunnage assemblies differ for the five shielded container designs in terms of using radial, axial, and lateral dunnage as detailed in CH-TRAMPAC Section 2.9.
2.9.10	2.9-40 thru 2.9-43	Revised to rename the currently authorized shielded container assembly design to “SC-30G1” and to present the approved SC-30G1 specifications consistent with the new authorized payload container specifications.	Revision required to differentiate currently authorized shielded container assembly from the new shielded container designs and for consistency with new Sections 2.9.12, 2.9.13, 2.9.14 and 2.9.15 added for the SC-30G2, SC-30G3, SC-55G1, and SC-55G2 shielded containers, respectively. No impact to safety basis.
2.9.11	2.9-44	Revised to replace "stainless steel" to “steel” in the description of the CCC lid ¾-inch heavy hex head bolts.	Text revision required for consistency with revised CCO SAR drawing, 163-009 Revision 2.
3.1.1	3.1-2	Revised to change payload container FGE limits to match allowed FGE per package for drums and shielded containers with ≤1% by weight Be/BeO, to allow full credit for Pu-240 poisoning credit to be realized, and to allow Pu-240 poisoning credit to be extended to a TDOP containing non-machine compacted waste with ≤1% by weight Be/BeO.	Payload container FGE limits are not needed in some cases for waste ≤1% by weight Be/BeO and/or not machine compacted because the structure of or containment within a payload container is not credited in the current TRUPACT-II and HalfPACT criticality analyses. No impact to safety basis.
3.1.2	3.1-3, 3.1-11 thru 3.1-13	Revised to cite current references and to update the Pu-239 fissile gram equivalent values in Table 3.1-2 consistent with these references.	Revisions reflect current references. No impact to safety basis.

## ATTACHMENT A – Summary of Revisions

<b>CH-TRAMPAC, Revision 6, February 2021</b>			
<b>Section</b>	<b>Page</b>	<b>Change Description</b>	<b>Justification</b>
5.1.1	5.1-4	Revised to clarify that the 20-day close proximity shipping period is an option for shipment distances within a 1,000-mile radius regardless of destination (rather than a required shipping period).	Revision ensures that sites that are shipping within a 1,000-mile radius may also opt to use the more conservative 60-day default shipping period.
5.1.1	5.1-4	Revised to allow the use of an actual hydrogen release rate determined for a confinement layer in the shipping category determination rather than the use of a bounding value.	Revision required to reflect the anticipated electronic management of the CH-TRUCON content, which will allow determination of CH-TRUCON code shipping categories without the current simplifying approach that assigns other confinement layers to one of the confinement layers listed in CH-TRU Payload Appendix 2.2. CH-TRUCON code shipping category methodology is unchanged. No impact to safety basis.
5.2.4.2	5.2-26, 5.2-29 thru 5.2-32	Revised to consolidate Option 2 DAC values previously calculated according to governing equations and methodology defined by CH-TRAMPAC Section 5.2.4.2. Revised to clarify the packaging configuration descriptions in Table 5.2-3.	Packaging configurations and DAC values added to Tables 5.2-3, 5.2-7, and 5.2-8 were determined per CH-TRAMPAC Section 5.2.4.2, but to date have been published in the CH-TRUCON document (DOE/WIPP 01-3194) for implementation purposes. Revision combines all Option 2 DAC values in a single document location. No impact to safety basis.
5.2.5.3	5.2-53	Revised Table 5.2-12 to replace the checkbox options for individual authorized payload containers with a blank field allowing for the input of an authorized payload container type.	Revision simplifies compliance evaluation documentation format. No impact to safety basis.
6.2.1.1.1, 6.2.2, Tables 6.2-1, 6.2-3, and 6.2-5	6.2-7, 6.2-19, 6.2-23, 6.2-30, 6.2-34	Revised to clarify the activity limits to satisfy Normal Conditions of Transport and Hypothetical Accident Condition dose rate requirements in the compliance evaluation documentation.	Revision clarifies currently approved activity limits. No impact to safety basis.

**ATTACHMENT A – Summary of Revisions**

<b>CH-TRAMPAC, Revision 6, February 2021</b>			
<b>Section</b>	<b>Page</b>	<b>Change Description</b>	<b>Justification</b>
Tables 6.2-1, 6.2-3, and 6.2-5	6.2-19, 6.2-23, 6.2-33	Revised to replace the checkbox options for individual authorized payload containers with a blank field allowing for the input of an authorized payload container type (Section 6.2.1.1.1) or an authorized payload (Section 6.2.2) configuration.	Revision simplifies compliance evaluation documentation format. No impact to safety basis.
6.2.2, Tables 6.2-1, 6.2-3, and 6.2-5	6.2-19, 6.2-23, 6.2-30, 6.2-34	Revised to clarify design decay heat limits per CCO and for TRUPACT-II and HalfPACT payloads.	Revision clarifies currently approved design decay heat limits. No impact to safety basis.
Table 6.2-5	6.2-34	Revised to provide space to document the evaluation of compliance with the payload total gas release rate limit.	Revision clarifies required compliance evaluation documentation. No impact to safety basis.

## ATTACHMENT A – Summary of Revisions

<b>CH-TRU Payload Appendices, Revision 5, February 2021</b>			
<b>Section</b>	<b>Page</b>	<b>Change Description</b>	<b>Justification</b>
General		Revised header for date.	Administrative change. No impact to safety basis.
2.1, 2.2, 3.8, 6.13	2.1-4, 2.2-2, 2.2-6, 3.8-1, 3.8-2, 6.13-2, 6.13-5	Revised to allow the use of an actual hydrogen release rate determined for a confinement layer in the shipping category determination rather than the use of a bounding value.	Revision required to reflect the anticipated electronic management of the CH-TRUCON content, which will allow determination of CH-TRUCON code shipping categories without the current simplifying approach that assigns other confinement layers to one of the confinement layers listed in CH-TRU Payload Appendix 2.2. CH-TRUCON code shipping category methodology is unchanged. No impact to safety basis.
2.2, 2.4	2.2-6, 2.2-8, 2.2-10, 2.4-3	Revised to rename the currently authorized shielded container assembly (SCA) design to “SC-30G1”	Revision required to differentiate currently authorized SCA from the new shielded container designs. No impact to safety basis.
2.1, 2.2, 2.4	2.1-3, 2.2-6, 2.2-8, 2.2-10, 2.4-3	Revised to add new authorized payload containers (SC-30G2, SC-30G3, SC-55G1, and SC-55G2) for shipment in the HalfPACT packaging.	Revisions establish values required to apply current compliance evaluation methodologies to the new payload containers.
2.2, 3.5	2.2-5, 3.5-1, 3.5-5	Revised to clarify that the 20-day close proximity shipping period is an option for shipment distances within a 1,000-mile radius regardless of destination (rather than a required shipping period).	Revisions ensure that sites that are shipping within a 1,000-mile radius may also opt to use the more conservative 60-day default shipping period.



## ATTACHMENT A – Summary of Revisions

<b>CH-TRU Payload Appendices, Revision 5, February 2021</b>			
<b>Section</b>	<b>Page</b>	<b>Change Description</b>	<b>Justification</b>
3.9, 5.3, 6.7, 6.11, 6.13	3.9-4, 3.9-5, 5.3-4, 5.3-6, 6.7-2, 6.11-1, 6.13-1	Revised to delete references to the hardcopy document version of the CH-TRUCON (DOE/WIPP 01-3194), to rephrase steps requiring the completion of CH-TRUCON development steps “in writing”, and to edit dated descriptions of the CH-TRUCON content.	Revision required to reflect the anticipated electronic management of the CH-TRUCON content, which will replace the current hardcopy document. CH-TRUCON required elements are unchanged. No impact to safety basis.
3.9	3.9-5, 3.9-8 thru 3.9-11	Revised to consolidate Option 2 DAC <sub>3</sub> values previously calculated according to governing equations and methodology defined by CH-TRU Payload Appendix Section 3.9.2.2. Revised to clarify the packaging configuration descriptions in Table 3.9-2.	Packaging configurations and DAC values added to Tables 3.9-2, 3.9-6, and 3.9-7 were determined per CH-TRU Payload Appendix Section 3.9.2.2, but to date have been published in the CH-TRUCON document (DOE/WIPP 01-3194) for implementation purposes. Revision combines all Option 2 DAC <sub>3</sub> values in a single document location. No impact to safety basis.
4.2, 4.3, 4.4	4.2-1, 4.3-1, 4.4-1	Revised to clarify the use of “fiberboard” dunnage in lieu of “cane fiberboard” dunnage consistent with the approved SAR drawings.	Revisions for text consistency with approved drawings. No impact to safety basis.
4.5	All	Revised to rename the currently authorized shielded container assembly design to “SC-30G1” and to present the approved SC-30G1 documentation consistent with the new authorized payload container safety bases.	Revision required to differentiate currently authorized shielded container assembly from the new shielded container designs and for consistency with new Appendices 4.7, 4.8, 4.9, and 4.10 added for the SC-30G2, SC-30G3, SC-55G1, and SC-55G2 shielded containers, respectively. No impact to safety basis.
4.6	4.6-1	Revised to replace “stainless steel” with “steel” in description of the CCC lid ¾-inch heavy hex head bolts.	Text revision required for consistency with revised CCO SAR drawing, 163-009 Revision 2.
4.7	All	Added new appendix to define the safety basis for the SC-30G2.	Structural, thermal, shielding, and criticality design basis for the SC-30G2 is summarized and demonstrated in the appendix.

## ATTACHMENT A – Summary of Revisions

<b>CH-TRU Payload Appendices, Revision 5, February 2021</b>			
<b>Section</b>	<b>Page</b>	<b>Change Description</b>	<b>Justification</b>
4.8	All	Added new appendix to define the safety basis for the SC-30G3.	Structural, thermal, shielding, and criticality design basis for the SC-30G3 is summarized and demonstrated in the appendix.
4.9	All	Added new appendix to define the safety basis for the SC-55G1.	Structural, thermal, shielding, and criticality design basis for the SC-55G1 is summarized and demonstrated in the appendix.
4.10	All	Added new appendix to define the safety basis for the SC-55G2.	Structural, thermal, shielding, and criticality design basis for the SC-55G2 is summarized and demonstrated in the appendix.