

APPENDIX DATA

ATTACHMENT H: WIPP WASTE CONTAINERS AND EMPLACEMENT

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1 **DATA-H-1.0 AUTHORIZED WASTE EMPLACEMENT CONTAINERS**

2 **DATA-H-1.1 Container Descriptions**

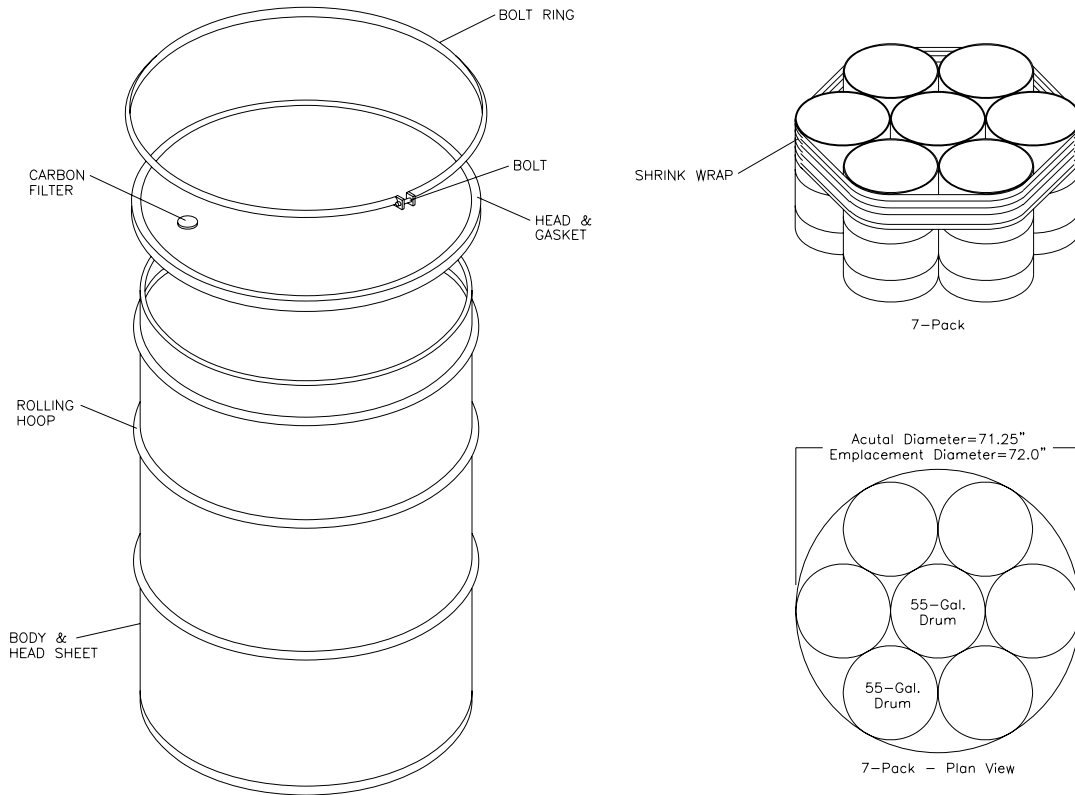
3 The Compliance Certification Application (CCA) to the Environmental Protection Agency
4 (EPA) identified the following containers as outer containment vessels for waste emplacement in
5 the repository:

- 6 • 208-L (55-g) Drum
- 7 • 322-L (85-g) Drum (Short)
- 8 • 322-L (85-g) Drum (Tall)
- 9 • 379-L (100-g) Drum
- 10 • Standard Waste Box (SWB)
- 11 • 10-Drum Overpack (TDOP)
- 12 • RH-TRU Waste Canister

13 **DATA-H-1.2 Dunnage Containers**

14 Dunnage containers are empty containers used to complete a shipping configuration, such as the
15 seven-pack, if too few containers are available that meet transportation requirements. Dunnage
16 containers must clearly be marked “Empty.” The TDOP and the RH-TRU Waste Canister are
17 not used as dunnage containers for shipping purposes. For emplacement purposes in the
18 repository, the 208-, 322-, and 379-L (55-, 85-, and 100-g) drums can be used as dunnage
19 containers and only if they arrive in a shrink-wrapped package assembly such as the seven-pack,
20 four-pack, or three-pack. To date, only 208-L (55-g) drums have been emplaced in the
21 repository as dunnage containers.

1 The 208-L (55-g) drum is shipped in a seven-pack configuration and is normally emplaced in the
 2 repository in the same configuration, but can be emplaced as an individual unit should the need
 3 arise. A single drum can be used for collecting and storing site-derived waste. An illustration of
 4 the 55-gallon drum components and emplacement configuration are provided in Figure DATA-
 5 H-1. The drum's specifications are provided in Table DATA-H-1.



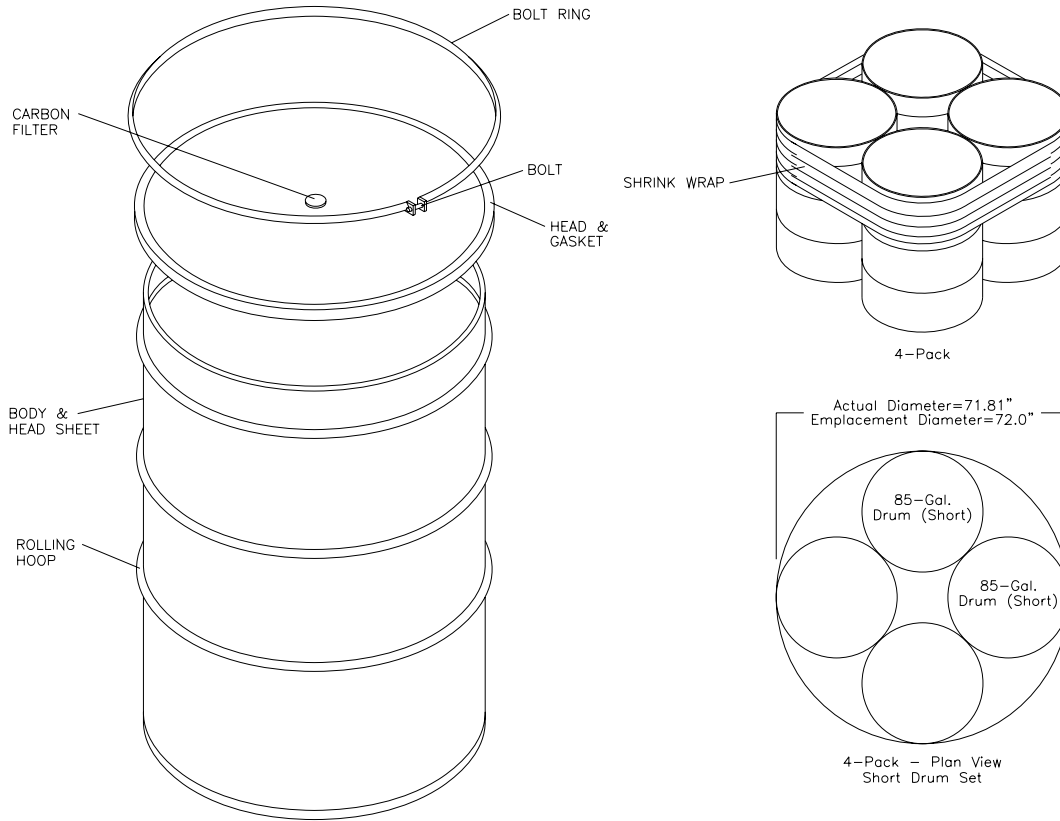
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 7 **Figure DATA-H-1. 55-Gallon Drum Components and Emplacement Configuration.**

8 **Table DATA-H-1. 55-Gallon Drum Specifications**

Dimension	Approximate Measurement				Approximate Volume	
	I.D. (inches)	O.D. (inches)	I.D. (mm)	O.D. (mm)		
Height	32 5/8	34 1/4	830	870	Gallons	55
Diameter	22 1/2	23 3/4	572	603	Liters	208
					Cubic Feet	7.35
					Cubic Meters	0.208

9

1 The 322-L (85-g) drum is shipped in a four-pack configuration and will be emplaced in the
 2 repository in the same configuration but can be emplaced as an individual unit should the need
 3 arise. A single drum can be used for collecting and storing site-derived waste. An illustration of
 4 the 85-gallon drum (short) components and emplacement configuration are provided in Figure
 5 DATA-H-2. The drum's specifications are provided in Table DATA-H-2.



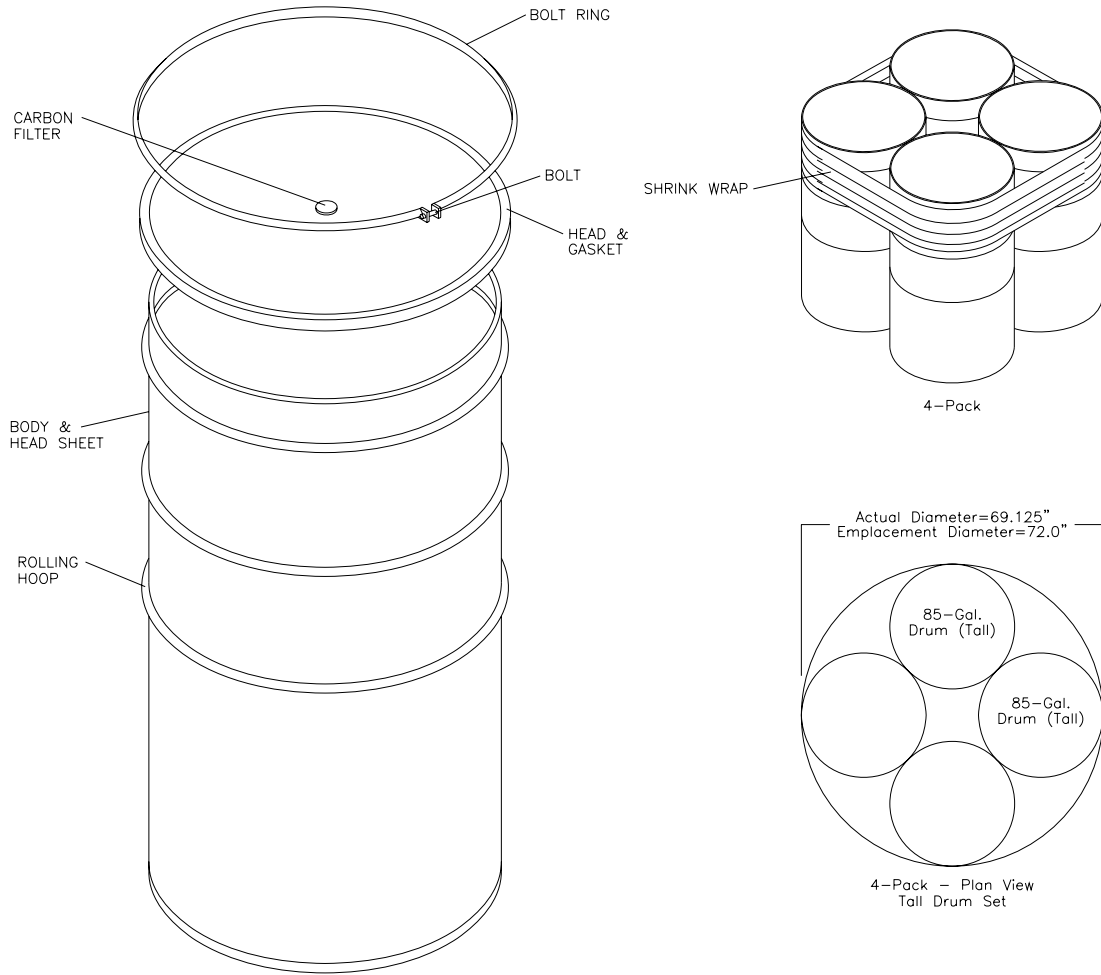
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 7 **Figure DATA-H-2. 85-Gallon Drum (Short) Components and Emplacement Configuration.**

8 **Table DATA-H-2. 85-Gallon Drum (Short) Specifications**

Dimension	Approximate Measurement				Approximate Volume	
	I.D. (inches)	O.D. (inches)	I.D. (mm)	O.D. (mm)		
Height	33 ¼	35	845	889	Gallons	85
Diameter	27 ⅛	29 ¾	689	756	Liters	322
					Cubic Feet	11.3
					Cubic Meters	0.32

9

1 The 322-L (85-g) drum is shipped in a four-pack configuration and will be emplaced in the
 2 repository in the same configuration. It is also used for overpacking 208-L (55-g) drums that are
 3 individually emplaced in the repository. A single drum can be used for collecting and storing
 4 site-derived waste. An illustration of the 85-gallon drum (tall) components and emplacement
 5 configuration are provided in Figure DATA-H-3. The drum's specifications are provided in
 6 Table DATA-H-3.



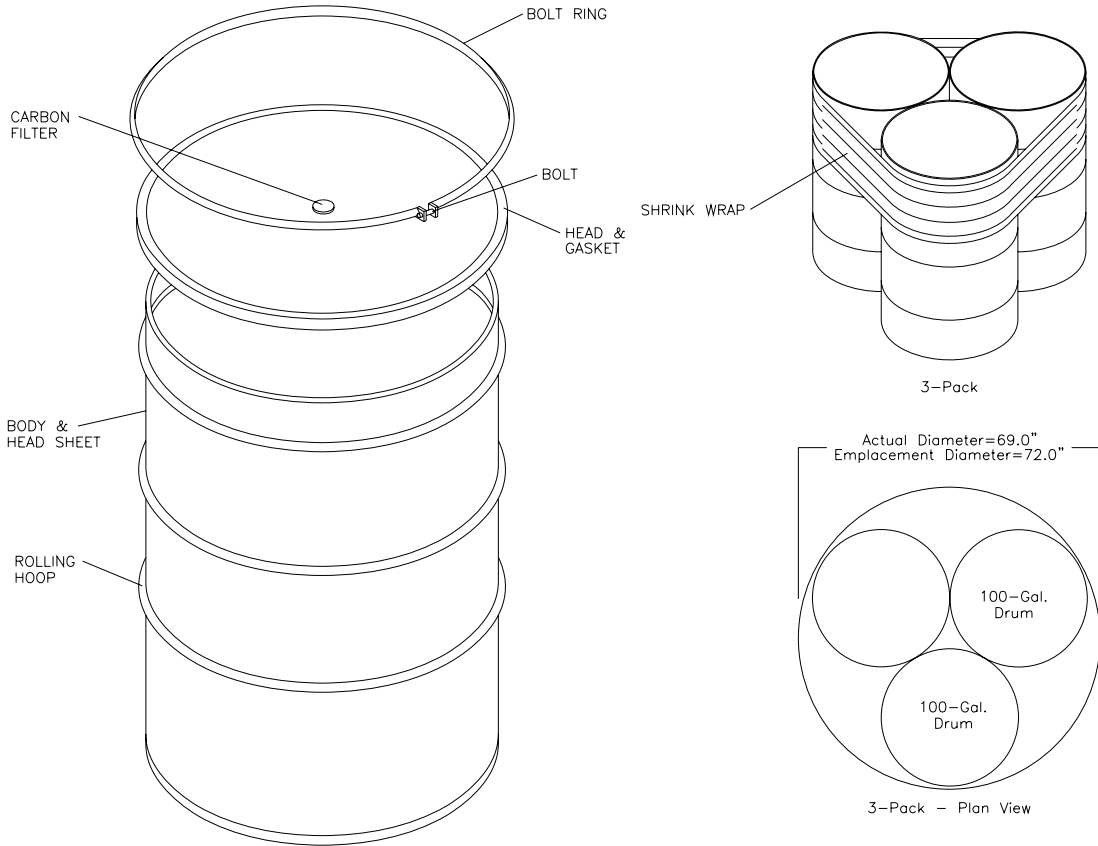
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 8 **Figure DATA-H-3. 85-Gallon Drum (Tall) Components and Emplacement Configuration.**

9 **Table DATA-H-3. 85-Gallon Drum (Tall) Specifications**

Dimension	Approximate Measurement				Approximate Volume	
	I.D. (inches)	O.D. (inches)	I.D. (mm)	O.D. (mm)		
Height	38 ¼	40 ¼	972	1,022	Gallons	85
Diameter	26	28 ⅝	660	728	Liters	322
					Cubic Feet	11.3
					Cubic Meters	0.32

10

1 The 379-L (100-g) drum is shipped in a three-pack configuration and will be emplaced in the
 2 repository in the same configuration. The 379-L (100-g) drum can be emplaced as an individual
 3 unit should the need arise. An illustration of the 100-gallon drum components and emplacement
 4 configuration are provided in Figure DATA-H-4. The drum's specifications are provided in
 5 Table DATA-H-4.



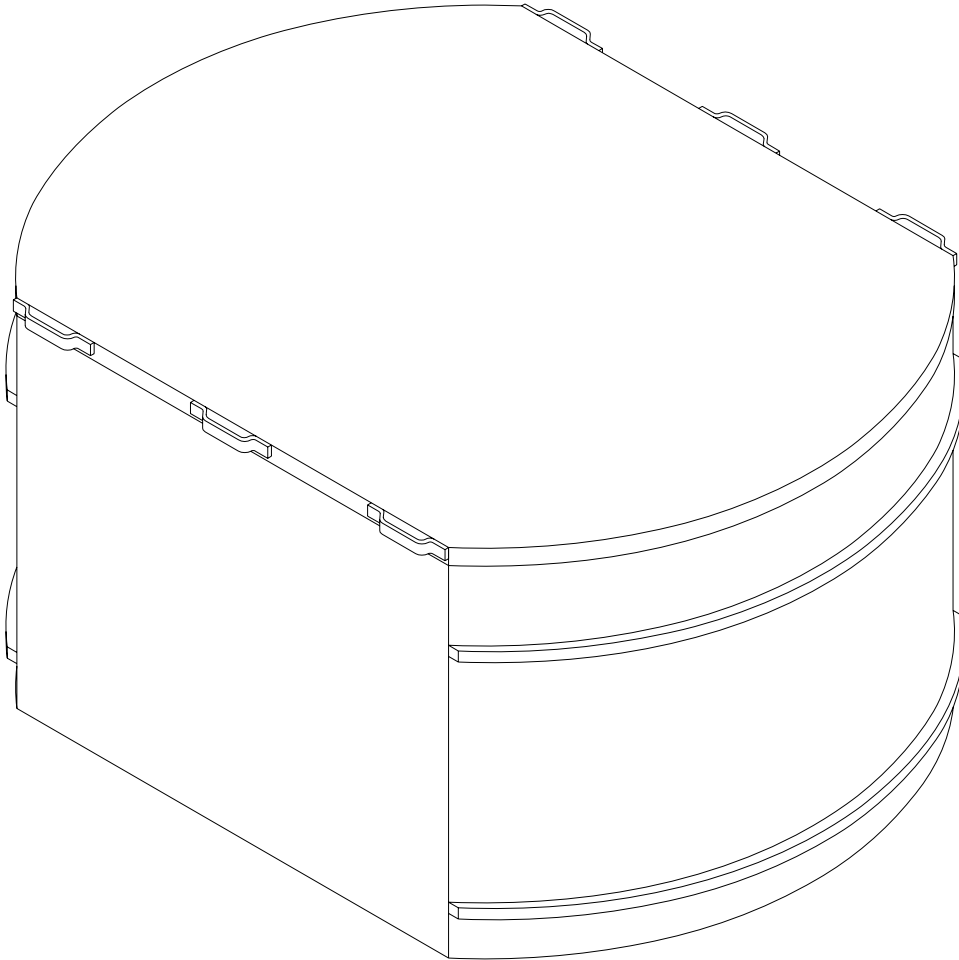
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 7 **Figure DATA-H-4. 100-Gallon Drum Components and Emplacement Configuration.**

8 **Table DATA-H-4. 100-Gallon Drum Specifications**

Dimension	Approximate Measurement				Approximate Volume	
	I.D. (inches)	O.D. (inches)	I.D. (mm)	O.D. (mm)		
Height	33	35	838	889	Gallons	100
Diameter	30	32	762	813	Liters	379
					Cubic Feet	13.4
					Cubic Meters	0.38

9

- 1 The SWB is shipped and emplaced as an individual unit. Normally, two SWBs are shipped in a
- 2 TRUPACT-II shipping container. An illustration of the SWB is provided in Figure DATA-H-5.
- 3 The box's specifications are provided in Table DATA-H-5.



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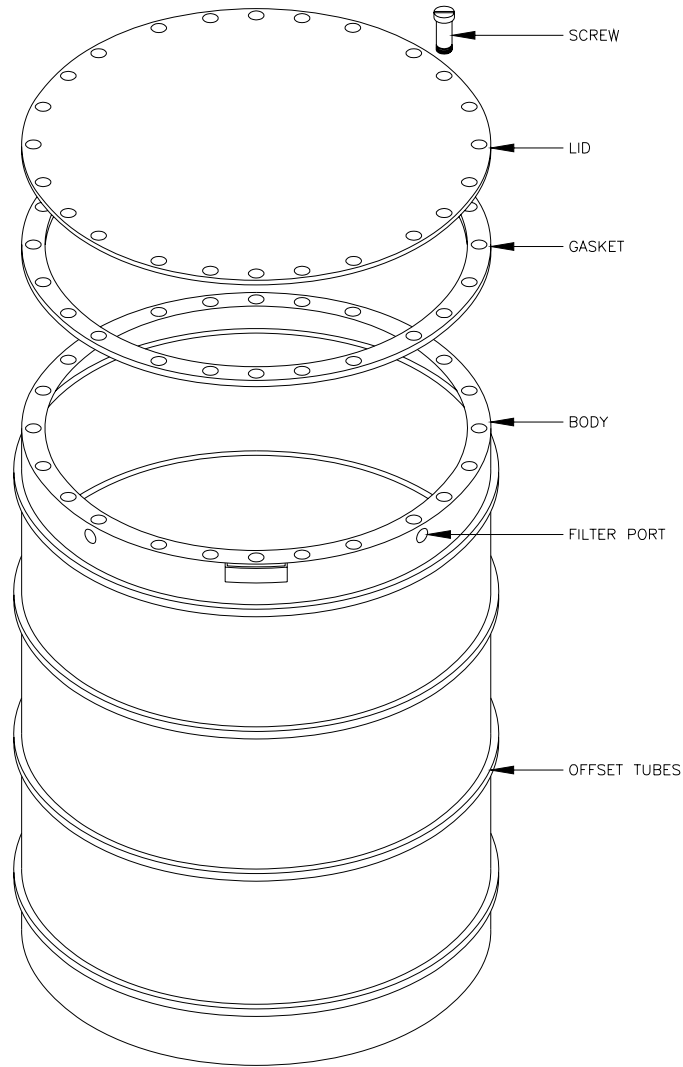
Figure DATA-H-5. Illustration of a Standard Waste Box.

Table DATA-H-5. SWB Specifications

Dimension	Approximate Measurement				Approximate Volume	
	I.D. (inches)	O.D. (inches)	I.D. (mm)	O.D. (mm)		
Height	36 ³ / ₄	37	933	940	Gallons	496
Length	68 ³ / ₄	71	1,746	1,803	Liters	1,877
Width	51 ⁷ / ₈	54	1,318	1,372	Cubic Feet	66.3
					Cubic Meters	1.88

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1 The TDOP is shipped as an individual unit and emplaced as an individual unit. An illustration of
 2 the TDOP's components is provided in Figure DATA-H-6. The overpack's specifications are
 3 provided in Table DATA-H-6.

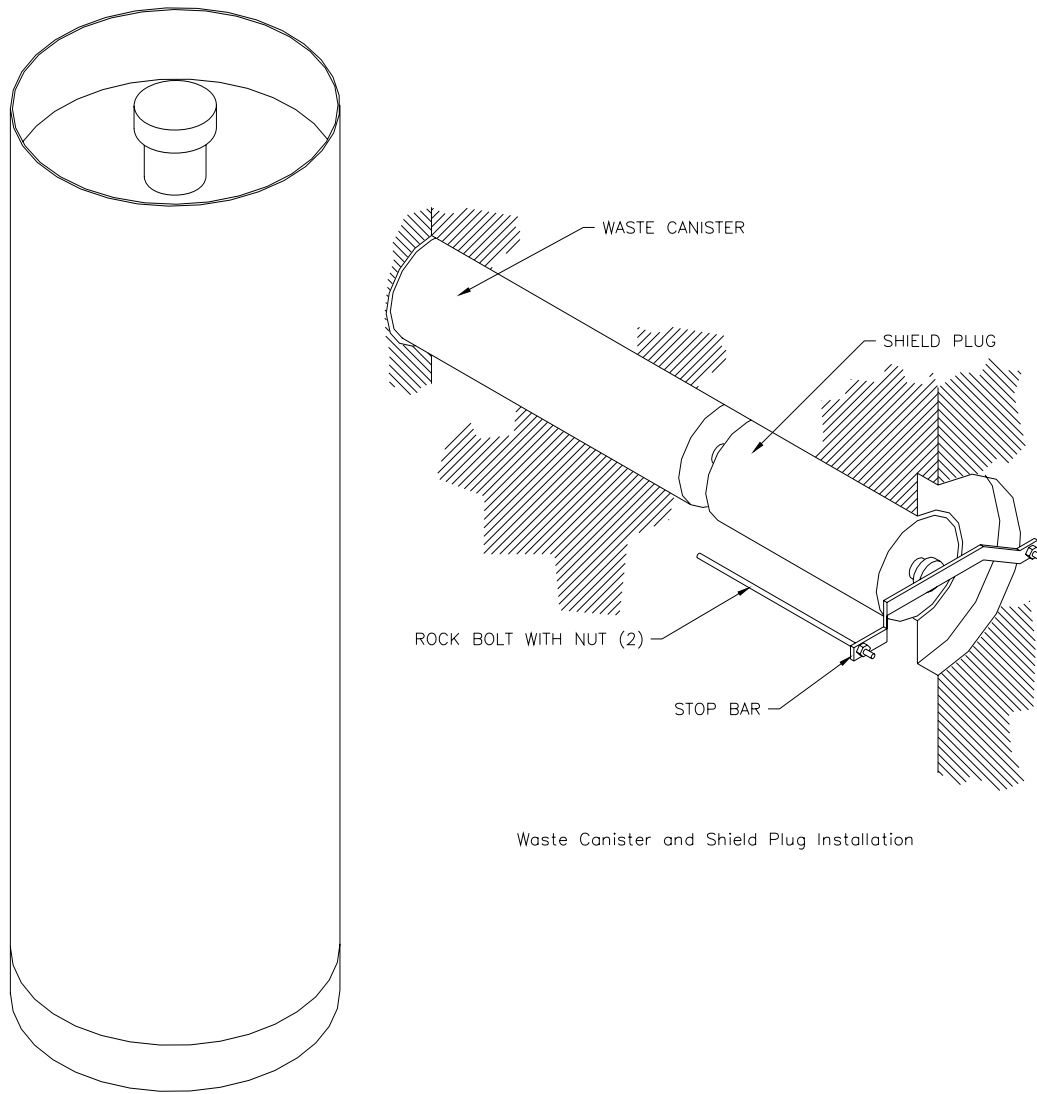


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 5 **Figure DATA-H-6. TDOP Components.**

6 **Table DATA-H-6. TDOP Specifications**

Dimension	Approximate Measurement				Approximate Volume	
	I.D. (inches)	O.D. (inches)	I.D. (mm)	O.D. (mm)		
Height	70 ½	73	1791	1,854	Gallons	1,197
Diameter	71 ½	72	1,816	1,829	Liters	4,531
					Cubic Feet	160
					Cubic Meters	4.5

- 1 The RH-TRU Waste Canister is shipped as a single unit and emplaced as a single unit.
- 2 Illustrations of the canister's components are provided in Figure DATA-H-7. The canister's
- 3 specifications are provided in Table DATA-H-7.

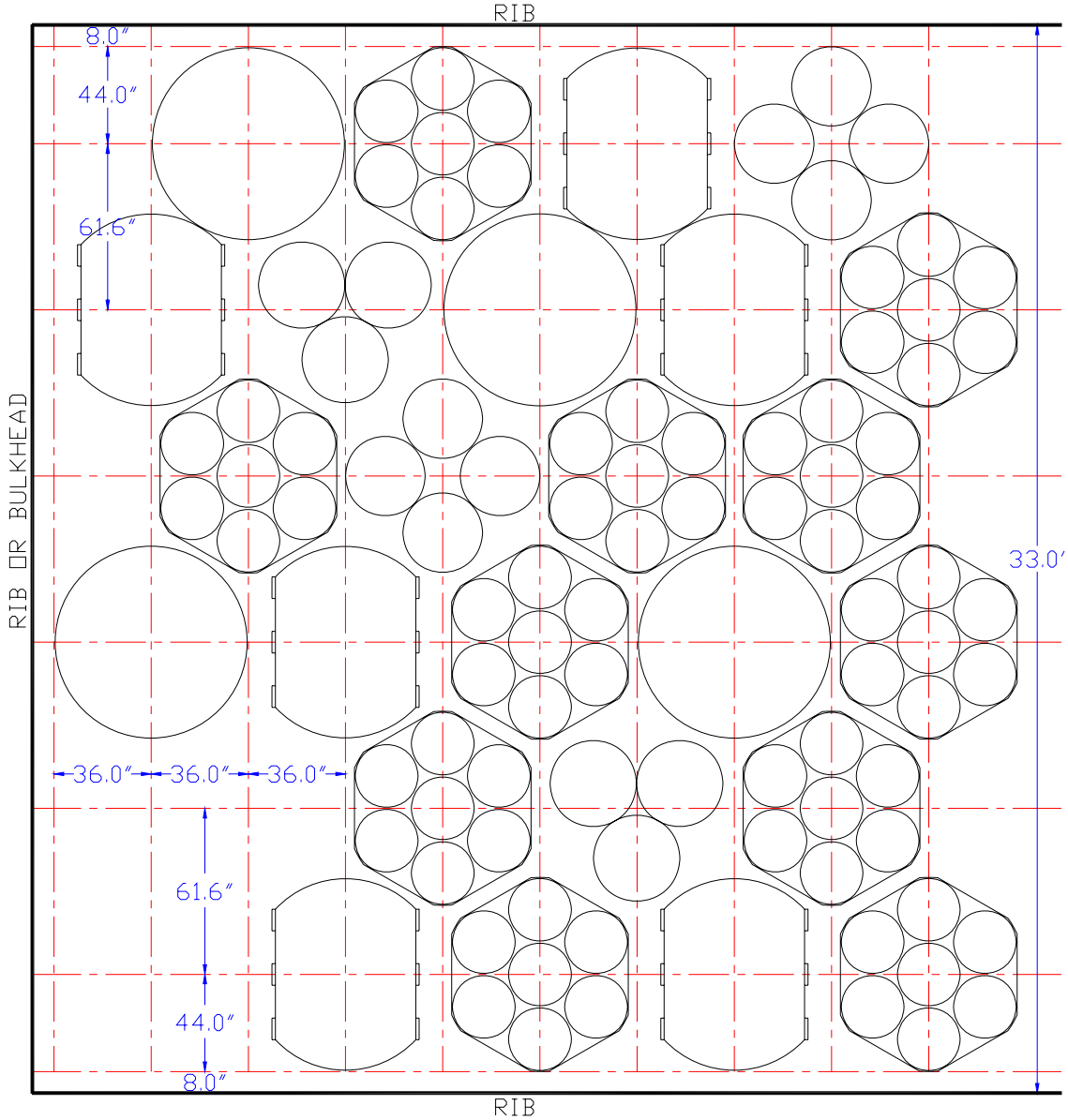


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Figure DATA-H-7. RH-TRU Waste Canister Components.

Table DATA-H-7. RH-TRU Waste Canister Specifications

Dimension	Approximate Measurement				Approximate Volume	
	I.D. (inches)	O.D. (inches)	I.D. (mm)	O.D. (mm)		
Height	108	121	2,743	3,073	Gallons	235
Diameter	25 ½	26	648	660	Liters	890
					Cubic Feet	31.44
					Cubic Meters	0.89



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Figure DATA-H-8. CH-TRU Waste Emplacement Layout.

3

Shown above in Figure DATA-H-8 is the typical position for waste emplacement containers in a room of a panel. TDOPs are only emplaced on the bottom position with another assembly stacked on top. All of the other assemblies can be stacked three high before the MgO supersack is emplaced on the top of the stack. CH-TRU waste emplacement within the repository panels is shown in Figure DATA-H-9. The planned RH-TRU waste emplacement is shown in Figure DATA-H-10.

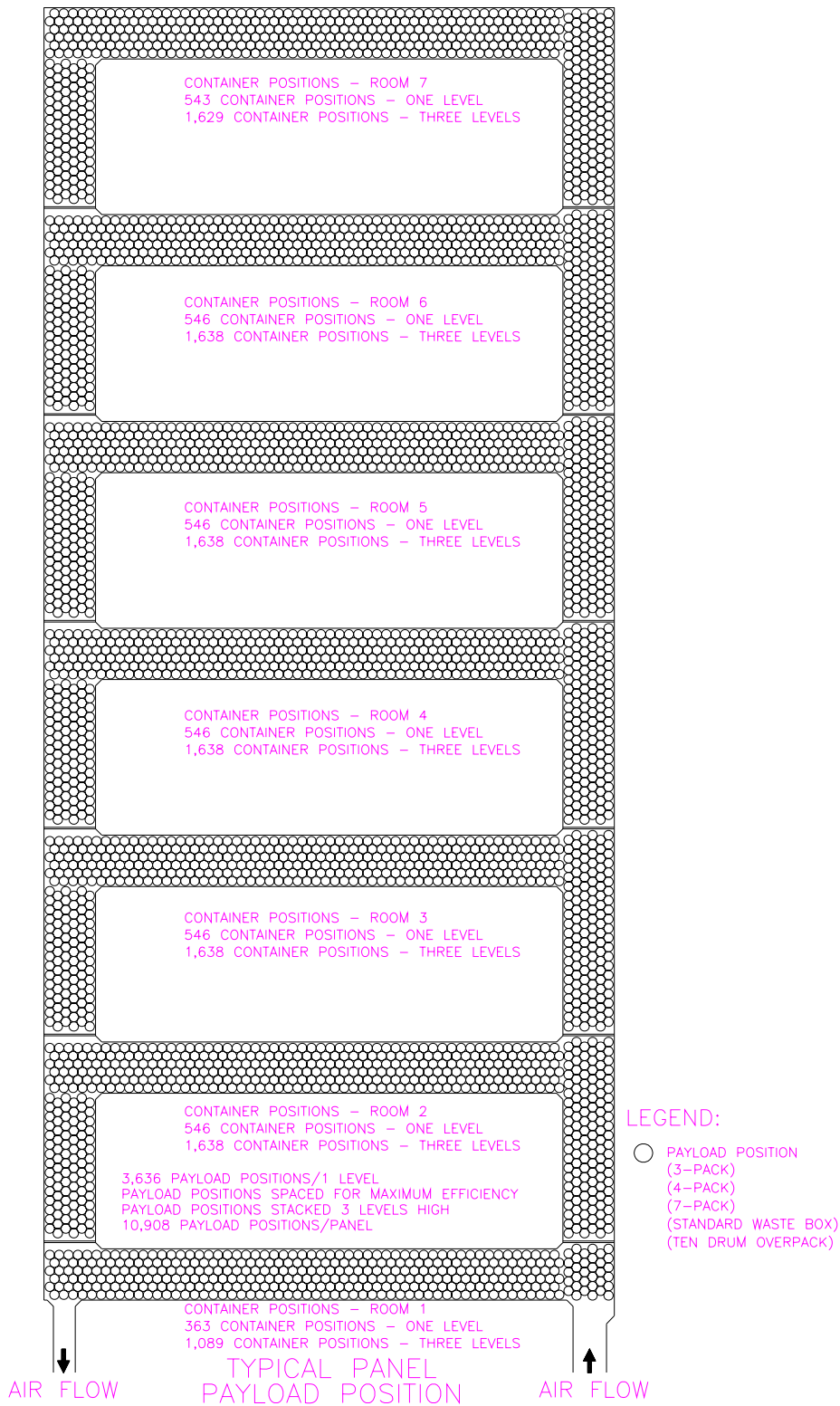
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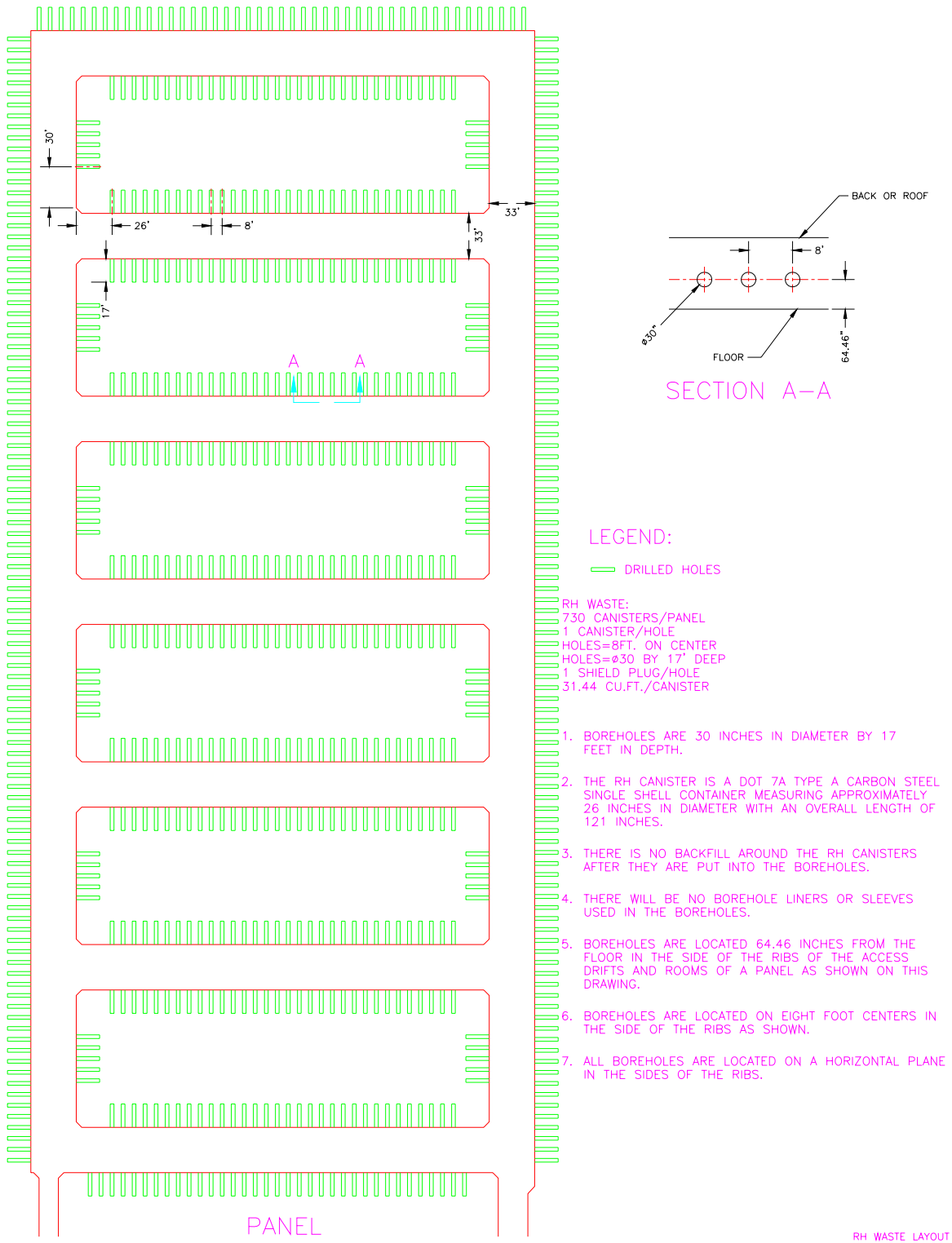
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Figure DATA-H-9. CH-TRU Waste Emplacement.



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Figure DATA-H-10. Planned RH-TRU Waste Emplacement.

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