Sandia National Laboratories

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Albuquerque, New Mexico 87185-0101
Livermore, California 94551-0969

*date:* *April 21, 2025*

*to:* *WIPP Records Center*

*from:* *Seth King, 8881*

SETH KING (Affiliate)

Digitally signed by SETH KING (Affiliate)
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*subject:* *Area for RH waste disposal for the interim state CRA-2026 PA calculation*

The Performance Assessment (PA) calculation for the interim state repository for CRA-2026 (CRA26_IS) will use a reduced inventory volume as the full land withdrawal act legislated volume of waste cannot fit in the 12 waste panel repository being modeled. The reduced inventory will have a remote-handled (RH) waste volume of 1,584.80 $m^3$ (Ward 2025). The area for RH waste disposal (REFCON:AREA_RH) used in past WIPP PA calculations was based on an assumption of 8,000 waste canisters each with a projected area of 1.97 $m^2$ (McFadden 1996). Due to the reduced inventory in the CRA26_IS, it is necessary to scale the REFCON:AREA_RH parameter value used in the PA calculation.

The values from McFadden (1996) can be used to establish a volume to emplaced area conversion factor, which can be multiplied by the new RH waste volume for an updated emplaced area value:

$$AREA_{RH} = \frac{AREA_{RH,LWA}}{VOLUME_{RH,LWA}} VOLUME_{RH} = \frac{15{,}760\ m^2}{7{,}080\ m^3}\ 1{,}584.80\ m^3 = 3{,}528\ m^2 \qquad (1)$$

**Table 1 - Recommended Parameter Value for the CRA26_IS Calculation**

| Material | Property | Value | Units |
|---|---|---|---|
| REFCON | AREA_RH | 3,528 | $m^2$ |

## REFERENCES

McFadden, M. 1996. Emplacement Strategy for Remote-Handled Transuranic Waste Canisters. CAO:ORC:GTB 96-0354. ERMS 234618. Carlsbad, NM: U.S. Department of Energy, Carlsbad Area Office.

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Ward, A. 2025. Performance Assessment Inventory for Analysis of a 12-Panel Repository Configuration. Letter to Bill McInroy. March 18, 2025. CBFO:ERCD:AW:RS:25-0197. Carlsbad, NM: Department of Energy Carlsbad Field Office.

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