

# **NAC-LWT**

CoC No. 9225

Addition of Segmented TPBARs in a  
TPBAR Waste Container as Approved  
Content

July 20, 2006

Enclosure 3

# NAC Amendment Application

Dated May 26, 2006

- **NAC-LWT SAR, Revision LWT-06B**
- **Content Change** – Added up to 32 Segmented TPBARs, incl. Segmentation debris from PIE; Added Procedural Controls to Prevent Spread of Tritium Contamination; Updated Unclassified DOE Reference Documents and Drawings
- **Shipping Configuration Change** – Added TPBAR Waste Container (stainless steel, welded construction); Added Top Insert to TPBAR Consolidation Canister Sketch
- **Non-TPBAR Related Changes** – Drawing Update, Editorial Changes

# TPBAR Content Analyses

- Description – Chapter 1
- Structural – Chapter 2
- Thermal – Chapter 3
- Containment – Chapter 4
- Shielding – Chapter 5
- Loading/Unloading – Chapter 7
- Leak Testing – Chapter 8

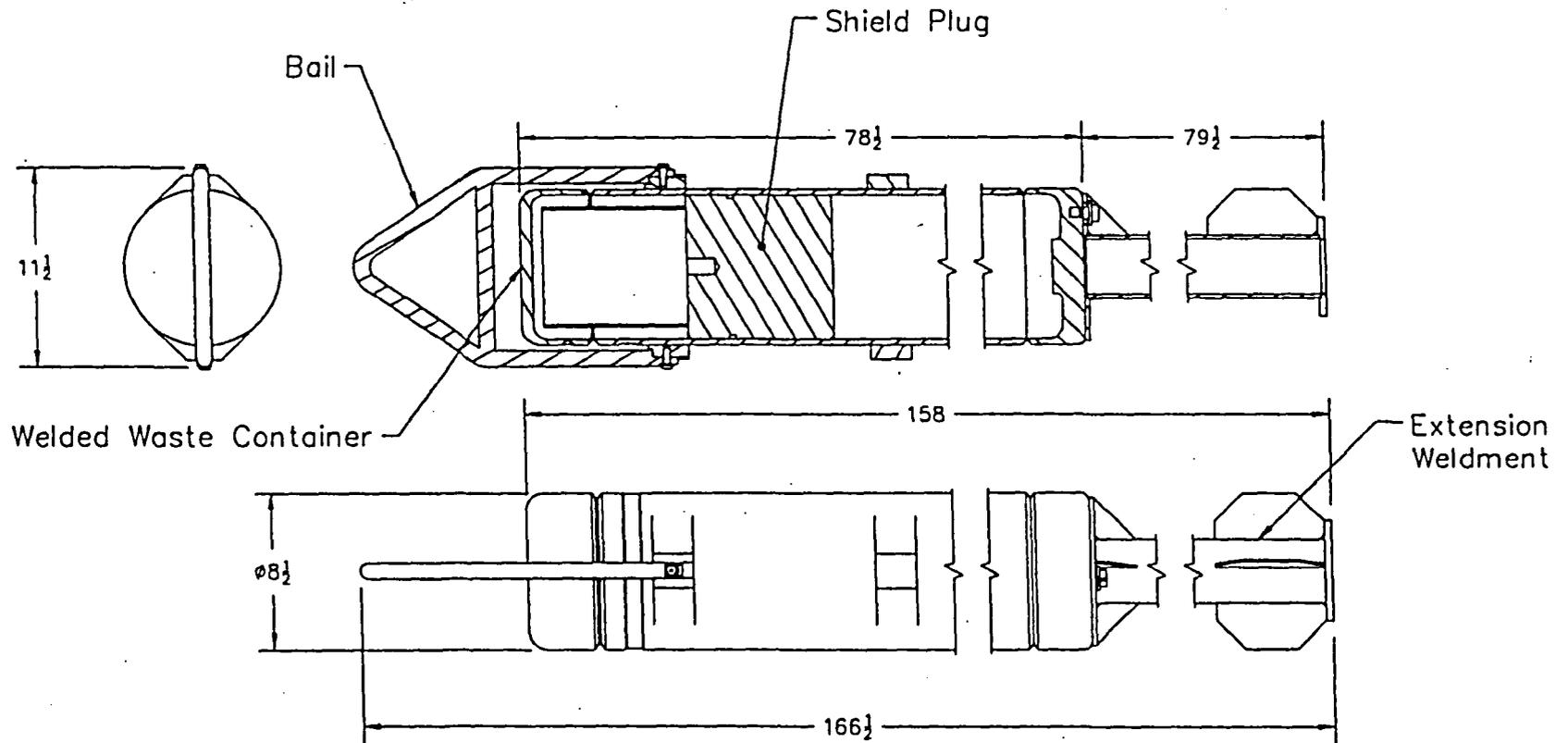
Note: No Criticality Analysis

# TPBAR Segment Characteristics in Waste Container

- Table 1.2-10 in LWT-06B

Parameter/Description	Value
Maximum Number of TPBAR Segments and Debris per Waste Container, equivalent number of TPBARs	32
Number of Waste Containers per Cask	1
Waste Container Material	316L Stainless Steel
Maximum Tritium Content per TPBAR equivalent, gram	1
Maximum Activity per Cask, Ci	$2.85 \times 10^5$
Maximum Heat Load per Waste Container, watts	50
Maximum Loaded Waste Container Weight, pounds	620
Minimum Cooling Time, years	5

Figure 1.2-14 TPBAR Waste Container and Extension Weldment Sketch



Conceptual Layout with Approximate Dimensions

Note: Material of construction is stainless steel.

Figure 1.2-15

NAC-LWT with TPBAR Waste Container Payload

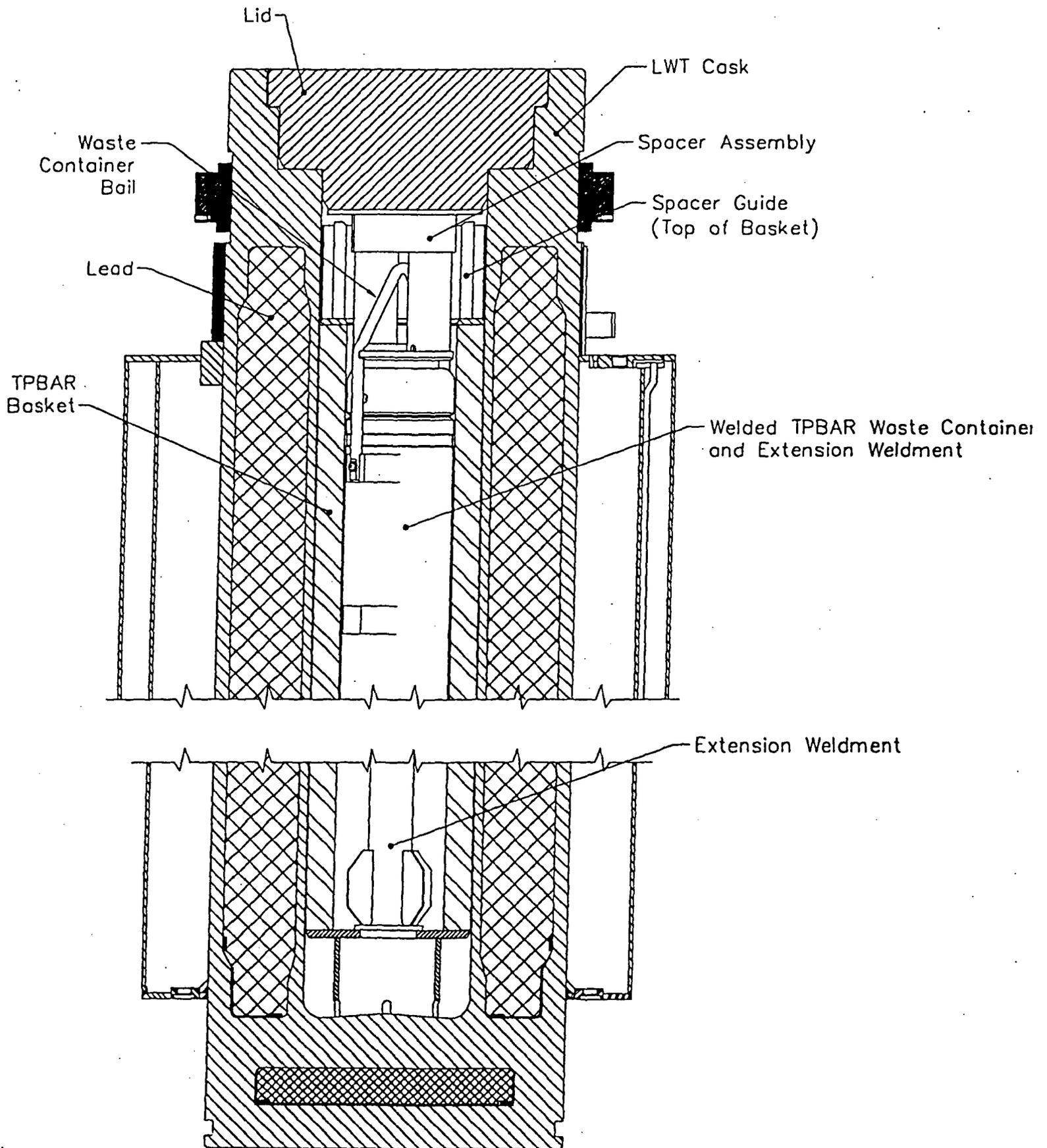
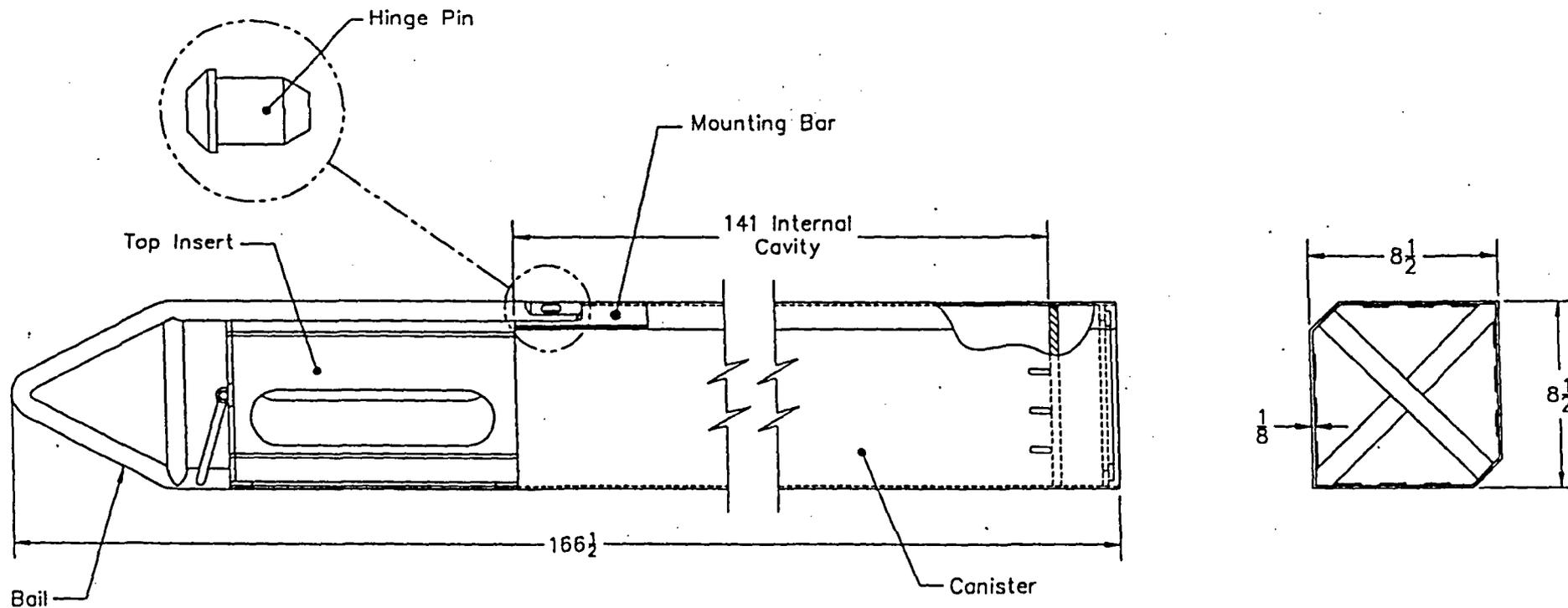


Figure 1.2-10 TPBAR Consolidation Canister Sketch



Conceptual Layout with Approximate Dimensions

**Note:** Material of construction is stainless steel.

# Future LWT Amendments

- TPBAR supplement to increase number of segments in Waste Container – July 2006
- Expand TRIGA Characteristics (length, H/Zr ratio, etc.); Add Unirradiated Fuel – 4<sup>th</sup> Qtr. 2006
- Add Misc. Irradiated Hardware (EPRI) to Authorized Contents; Misc. Editorial Clean Up – 4<sup>th</sup> Qtr. 2006
- Add BWR High Burnup Fuel – 4<sup>th</sup> Qtr 2006
- Add Mixed Oxide Fuel (MOX) – 1<sup>st</sup> Qtr 2007
- Reorganized Automated LWT SAR (Consolidated SAR, Rev. 38) – 1<sup>st</sup> Qtr. 2007