

YOUR WASTE. OUR CASK.



OPTIMUS™-H
OPTIMUS™-L

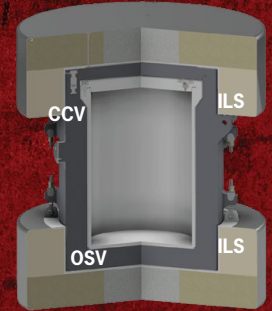
TRANSFORMATIONAL

COMING SOON
SUMMER 2019

Introducing

OPTIMUS™-H and OPTIMUS™-L OPTimal Modular Universal Shipping Cask

Designed with flexibility and cost-efficiency in mind to support shipment of a wide range of wastes with fissile material contents



Packaging Component Description

Cask Containment Vessel (CCV)

- Stainless steel containment vessel
- Innovative bolted closure system to facilitate remote closure operations
- Universal and compatible lifting and anchoring attachments

Outer Shield Vessel (OSV)

- Cost effective shield vessel to protect CCV
- Simplified mechanical closure with weather seal
- Integral trunnions, tie downs and attachment lugs for efficient handling
- Integrated drain and monitoring port

Impact Limiter System (ILS)

- Closed-cell polyurethane foam encased in stainless steel
- Swing-bolt connections for quick installation/removal

Safety by Design

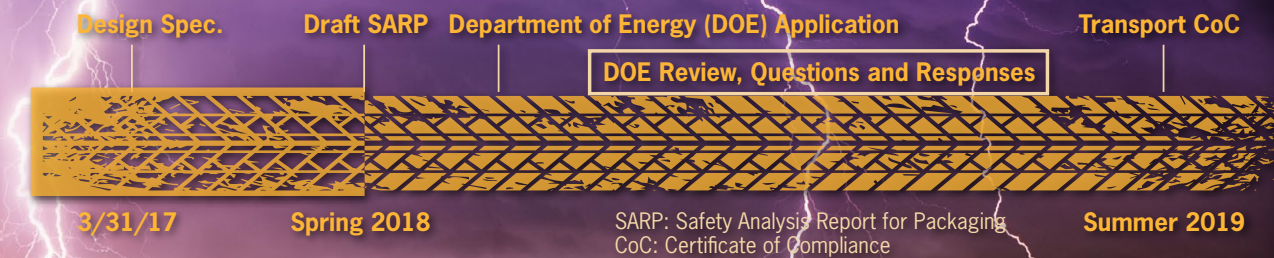
- 10 CFR 71 Type B(UF)
- Designed to ASME Code Section III-NB and NF criteria
- Pressurization analysis, including non-compliant TRU waste
- Contingency combustion analysis, considering possible deflagration and detonation
- Up to 390 fissile grams equivalent (FGE) per drum for plutonium and uranium wastes

OPTIMUS™-H for high activity contents (RH-TRU, fuel)
OPTIMUS™-L for low activity contents (CH-TRU, MLLW)
Contents options for both packages include non-compliant TRU waste

Package Attribute	Value
Package Designation	B(UF-96)
Outer Dimensions	Ø 74.2 in. x 83.2 in. (2 packages fit inside a 20 ft. ISO container)
Cavity Dimensions	Ø 32.5 in. x 47.0 in. (sized for 110 gal drum)
Maximum Contents Weight	8,000 lb.
Gross Package Weight	< 32,000 lb.
Maximum Decay Heat	≤ 200W (TRU waste) ≤ 1,500W (Fuel waste)
Fissile Material Limits and Curie Level	Various, Content-Specific

NAC International is transforming the packaging industry for difficult waste streams with its new OPTIMUS™ cask line. OPTIMUS™ is an adaptable Type B packaging that can be reconfigured to accommodate a variety of waste challenges including high fissile content and non-conforming TRU items. The packaging line will accommodate high activity and low activity contents and provides multiple options for shielding, transport, lift and tie down configurations. The DOT license application for OPTIMUS™-H is in process; first casks are anticipated ready for use in Summer 2019.

Licensing Timeline



Multiple transport configurations

Multiple lift and tie down options

U.S. Patent Pending: SN 62/552,726

OPTIMUS™-H AND OPTIMUS™-L

Safe
Cost Effective
Small
Modular
Multi-purpose
Adaptable
TRANSFORMATIONAL

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Founded in 1968 and with corporate headquarters in Norcross, Georgia, NAC International Inc. has been serving the US and international nuclear industry for five decades. NAC is entrusted with the safe, secure storage and transport of nuclear fuel, nuclear waste, and highly irradiated sources and materials in the US and around the world.

