

Robatel Preliminary Design for Type(B) non-fissile cask

Review of Preliminary Shielding Study
July 30, 2019

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Introduction

- ▶ ROBATEL Company Brief Introduction:
- ▶ ROBATEL is a Type B cask designer and manufacturer established in the USA and in France.
- ▶ We are:
 - Experts in Type B casks design, licensing, manufacturing and servicing,
 - We offer a one-stop shop from concept to delivery and maintenance of fully operational packages for all types of radioactive contents,
 - Our experience started in 1953 with the first of a kind fuel transportation cask in France and we are now licensing our 83rd type B cask design,
- ▶ We provide:
 - International licensing following European and/or American standards,
 - Wherever the contents have to be shipped, we can offer the full licensing services,
- ▶ Recent references:
 - RT100 (spent resins and filters), licensed by the US NRC, 2014
 - R83 (Spent fuels), licensed by the Dutch ANVS, 2019
 - R79 (Legacy wastes), licensed by the Dutch ANVS, 2018
 - R76 (Legacy wastes), licensed by the French ASN, 2016
 - R73 (Activated Metals), licensed by the French ASN, 2015
 - R82 (Spent Fuels), SAR to be submitted to the British ONR in September 2019

Meeting Objectives

- ▶ Robatel is evaluating a new Type (B) cask for non-fissile materials.
- ▶ We have completed a content description document, preliminary concept design, and a preliminary shielding study.
- ▶ Our goal for this meeting is to present our models and gather initial feedback.

Design Description and Contents

- ▶ The proposed design is a Type B (normal form) transportation package with the following general characteristics:
 - Stainless-steel and lead cylindrical body
 - A pair of cylindrical impact limiters
 - A vessel lid with closure bolts and leak test ports
 - Lifting and tie-down devices
- ▶ The proposed contents include:
 - Activated Metal
 - Low Specific Activity (LSA) material
- ▶ The shipment will be considered over weight but less than a “super heavy” load.
- ▶ The design should anticipate the future needs for more general activated metal transportation needs.

► Cask Materials

- Shielding: stainless steel + lead
 - using lead contributes to limiting the total mass
- Thermal protection: PNT7™
 - Robatel compound has been used as neutron and thermal protection in our recent designs:
(R73, R74, R75, R76, R79, R80, R82)
 - Behaves like a fine mortar
 - Moldable and pourable into desired shape
 - This design also limits manufacturing risk
- Shock absorbers: Foam or Wood
 - Choice of material depends on the required densities of the shock absorbing material
(to be evaluated by structural analysis)

Current Status

▶ Project Timeframe

- Following this meeting, and based on the initial feedback received, Robatel will assess the project and make a decision to move forward.
- We anticipate a business decision made in 2019.

▶ Schedule for License Application

- 2019, 4th qtr – Begin the cask final design
- 2020, 1st qtr – Begin the license application
- 2020, 4th qtr – Submit the initial license application

Opportunity for Public Comments



- ▶ Questions?