Legacy (Waste) 3m^3 Waste Container Key Features and Functions

Key
Contributes to Safety.
Operationally Important.

Lid Bolts

Features

- **Strength and number.**
- Interface features and modified thread.
- Coating.

Function

- **Evenly clamps the lid down to box to provide nuclear containment. Provides deflagration and drop load performance.**
- Allows installation by robots and prevents cross threading.
- Prevents seizure.
- Allows finishing for final disposal.

AFP (Anti Flotation Plate)

Features

- Self weight.
- Robot Handling Feature.
- Mesh cut outs.
- Radar zone.

Function

- Retain buoyant objects.
- To be handled by robots.
- To allow free flow of grout and fill level visibility.
- Fill Level detection for grout cut off.

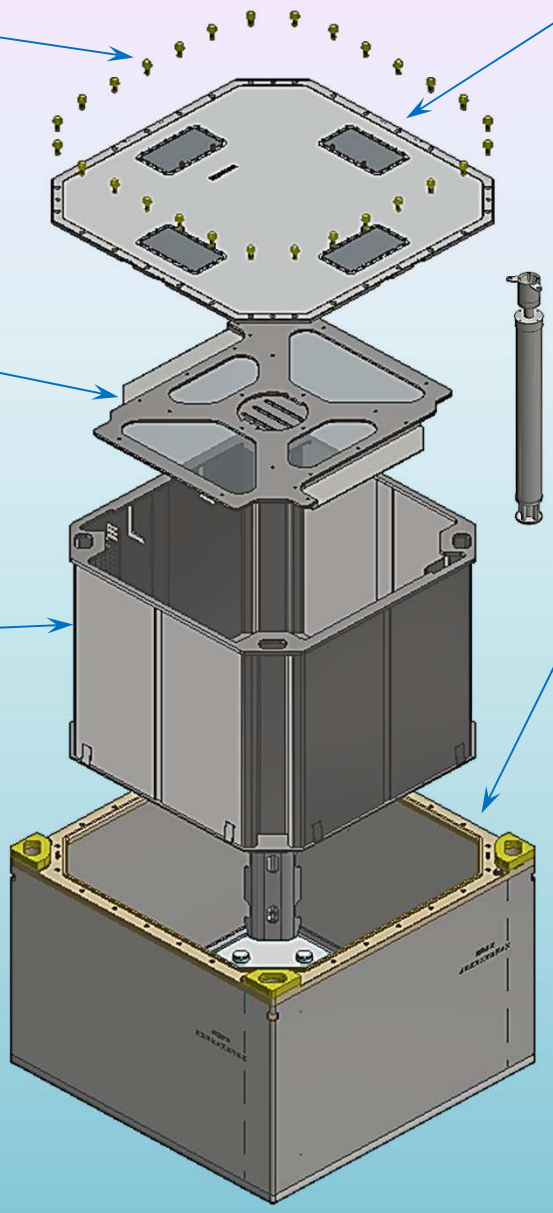
Liner

Features

- **Fill Level Markings.**
- **Lifting features.**
- **High-integrity material and weld seams / no crevices.**
- Orientation specific
- Decant Filter pocket.
- Decant pocket.
- Geometric control of shape.
- ID Markings.

Function

- **Ensures safe quantities of waste are loaded.**
- **Provide safe handling by In-Cell transporter.**
- **Maximise liquor retaining life / minimise corrosion potential.**
- Facilitate Grout encapsulation within WTC within BEP.
- Facilitates Liquor removal by remotely deployed suction nozzle.
- Facilitates Bleed water removal by remotely deployed suction nozzle.
- Ensures that it fits with all interfacing equipment.
- Enables tracking and traceability of nuclear waste.



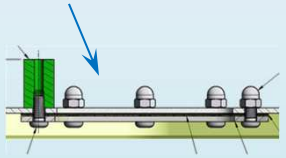
Box Lid

Features

- **Filters**
- **27mm spacers to ensure gap between boxes when stacked (for Hydrogen release).**
- **Lifting features.**
- ID markings.
- Bolt/Dowel holes and flange location step.

Function

- **Retains nuclear waste 'in the Box' (nuclear containment)**
- **Ensures release of Hydrogen for safety.**
- To be handled by robots.
- Can be fitted to any Box flange (controlled tolerances).
- Allows finishing and final disposal.



Box Body

Features

- **Lifting Features.**
- **Machined Flange / dowels.**
- **High-integrity material and weld seams / no crevices.**
- **Stacking posts.**
- Feet.
- Twistlock drainage pockets / holes.
- ID Markings.
- Grout Port.
- Blanking Plug.

Function

- **Safe handling of nuclear waste and matches all other box types**
- **Machined spigot prevents bolt failure if dropped (nuclear containment). Dowels align the lid for remote installation. Flange provides sealing face to lid.**
- **Maximise life / minimise corrosion potential.**
- **Allow boxes to be safely stacked.**
- Ensure that it fits with all interfacing equipment and alignment during stacking.
- Keeps lifting clear of debris.
- Allows tracking / traceability of nuclear waste.
- Allows waste container 'finishing' for compatibility with final placement in Geological Disposal Facility (500 year life).
- Allows finishing without Lid removal.
- Maintains Waste Container Integrity.

Legacy (Waste) 3m^3 Waste Container Configuration Overview

Box Lid
Identical to MSSS Waste Container Lid.

Lid Bolts
Identical to MSSS Waste Container Lid Bolts.

AFP (Anti Flotation Plate)
Bespoke BEP item optionally used to stop buoyant items (in grout) from floating when Pond Skips in Liners are grouted..

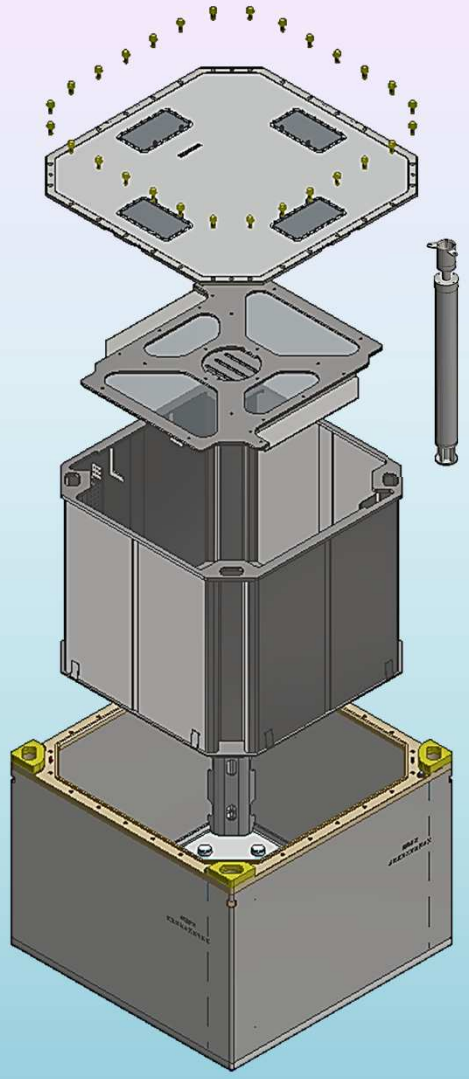
Liner
Bespoke BEP item used to locate Pond Skip and grouted as per BEP normal operations. The liner (fitted with Filter) will be used as an Effluent Collection container which will be dewatered and the sludge heel grouted.

Filter module
Bespoke BEP item used to facilitate liquor removal by means of remotely deployed suction nozzle at Setting Liner Position (SLP) and Setting Liner Decant Position (SLDP).

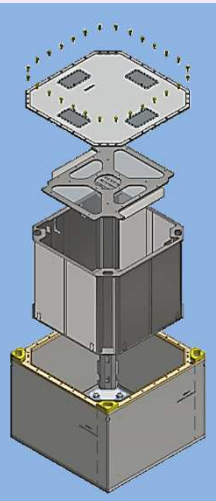
Box Body
Near identical to MSSS Box Body.
Key differences – no Bund, grouting ports to allow finishing without Lid removal, and minor furniture to locate liner and stand it off Box base.

Pond Skip (Not Shown)
Existing Container Waste currently held in Ponds e.g. FGMSP, different types with varying dimensions. The Pond Skip will be considered part of the Waste.

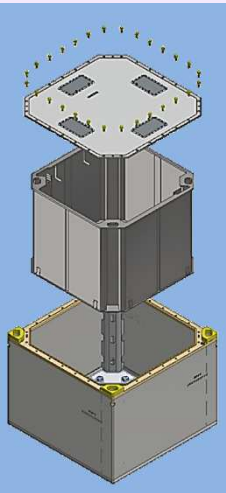
Total Quantities:
Baseline 1344, Max 2034, Min 415
(Ref: DEC-0474B – Author: James De Wolf)



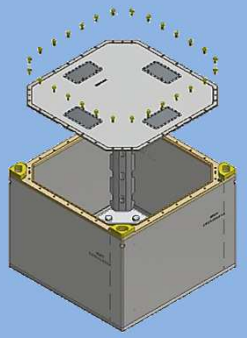
CONFIG L4
Legacy Waste Container with Liner inc.1 x Filter module and AFP (for Pond Skips)



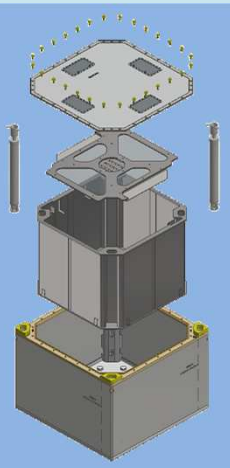
CONFIG L1
Legacy Waste Container with Liner, AFP (for Pond Skips)



CONFIG L2
Legacy Waste Container with Liner (for Zeolite Skips)



CONFIG L3
Legacy Waste Container (for large Maintenance Waste e.g. SEP Package Seal Diaphragm Plate)



CONFIG L5
Legacy Waste Container with Liner (inc.2 x Filter module) and AFP (for effluent vessel returns)