

UKAEA Intermediate Level WTP

Customer: UKAEA
Project: Intermediate Level Waste Treatment Plant (WTP)
Location: Dounreay
Date: 2001
Services: Concept Studies
Value: £100K

Scope of Work

In 2001 Aker Solutions undertook two funded design studies for a proposed Intermediate Level Waste Treatment Plant for UKAEA at their Dounreay site. The plant was required to process wastes retrieved from the Dounreay Shaft and Silo as well as wastes from Dounreay Cementation Plant and from other decommissioning and Post Operational Clean Out (POCO) operations on the Dounreay site.

The process requirements were very complex and entailed developing feasible solutions to the problems of receipt, sorting, characterisation, pre-treatment and encapsulation of solid, sludge and liquid wastes.

Description

The inventory included materials which were potentially pyrophoric and corrosive and design solutions had to be developed to enable this material to be dealt with in a safe manner. Prior to the proposed encapsulation in cementitious grout, wastes needed to be suitably treated with regard to size reduction and assessed for isotopic and fissile content.

The work was carried out in two phases with a Design Study carried out after Phase 1. The deliverables included a conceptual process design and initial layout to support the work process. A suite of top-level design documentation underpinned the work.

Aker Solutions were invited to present their conceptual design work at a conference held in Thurso in late 2001.

