

Abstract #442

Packaging, Transportation and Treatment of CEA Legacy Wastes

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Every year, about 400 000 m³ of low activity radwastes coming from dismantling and sanitation projects are produced in France representing 20% of the global nuclear waste volume. These amounts will increase in the next 30 years in the context of the beginning of the decommissioning projects (nuclear power plants...). In France, radwaste repositories are owned and managed by ANDRA (French national agency for radwaste management). ANDRA first repository was designed for low level rad waste (LLW), a second one opened for very low level waste (VLLW).

In 2009, CEA subcontracted to DAHER-NCS the evacuation and treatment of legacy wastes from its 13 storage areas to ANDRA. DAHER-NCS has therefore developed a global offer in the radioactive waste logistical management chain including characterization, conditioning, design and supply adapted packagings, transportation, logistics and waste treatment. The packagings which are provided concern the entire cycle of the process: overpacks for damaged containers before treatment and one-way or reusable packagings after treatment for disposal at ANDRA.

The first step of the process is to make an inventory. Then acceptability of waste in DAHER's treatment facility (STARC) is checked, and also the relevance to send this waste to STARC rather

than treat it locally. For transportation of ISO-containers which are not acceptable for transport, DAHER-NCS designed and patented an IP-2 overpack, in which these containers can be safely transported. All this logistics is planned, followed and optimized thanks to DAHER's flow management tools. After being treated in STARC, the waste is packaged into containers complying with ANDRA specification. The last step before shipping to ANDRA consists in traceability file completion and final radiological characterization.

The main goal for CEA's legacy VLLW treatment was to bring those wastes back to the regular route for VLLW according to

French legal framework of reference. Today, DAHER is successfully providing this solution thanks to its facility, its containers and overpacks, and its transport and logistics skills.