



ONDRAF/NIRAS

Green light for radioactive waste surface disposal facility in Dessel

On 16 May 2023, the Royal Decree issuing the nuclear establishment and operating licence needed to realise the surface repository in Dessel was published. ONDRAF/NIRAS, responsible for radioactive waste management in Belgium, will safely and permanently dispose of low and medium-level short-lived waste there.

The future surface disposal facility in Dessel offers a safe and final solution for Belgium's low and medium-level short-lived waste. This type of waste loses most of its radioactivity after three hundred years and also has lower radioactive activity than high-level waste. Therefore, it is eligible for surface disposal.

The repository will be built in the nuclear zone on the territory of Dessel, near the border with the municipality of Mol. It is the first time a radioactive waste repository will be built in our country. Earlier this year, the selection process for the contractor(s) was launched, with the aim of starting construction works in 2024. The first radioactive waste will then be disposed of within a few years.

Marc Demarche, Director General of ONDRAF/NIRAS: "The issuance of the nuclear licence is an important milestone for long-term radioactive waste management. The surface repository in Dessel will provide a safe solution for low and medium-level short-lived waste from all over the country."

The nuclear licence

A nuclear establishment and operation licence is required to build and operate such a repository. It was issued by the Royal Decree of 16 May 2023, after review and assessment of the licence application by the Scientific Council, an independent body of experts at the Federal Agency for Nuclear Control (FANC). The nuclear licence lays down the conditions that must be met in order to build and operate the repository in Dessel.

To obtain that licence, ONDRAF/NIRAS first had to demonstrate the safety of the disposal. To this end, ONDRAF/NIRAS has compiled all the necessary technical and scientific arguments in a safety report. This report is also accompanied by many supporting documents such as studies and plans, which together form the safety file. This is a bulky piece of work of more than twenty thousand pages in which ONDRAF/NIRAS demonstrates in great detail how the safety of the disposal will be ensured and how people and the environment will be adequately protected, both in the short and long term.

The peripheral infrastructure

Besides the work on the safety file, ONDRAF/NIRAS also realised the peripheral infrastructure at the disposal site. Specifically, it involves three facilities that serve to prepare and transfer the waste to the repository. Concrete boxes (caissons) are produced at the caisson plant. These caissons are then filled with the waste in the monolith production facility (MPF), after which they are sealed and filled with mortar. This results in the monoliths intended for the repository. The last element is the access cluster, from where operators control the trolleys that will take these monoliths one by one from the MPF to the repository.

Tinne Van der Straeten, Minister of Energy: "This is an important step for the construction of the surface disposal facility for low and medium-level and short-lived radioactive waste, and an acknowledgement of the work done by ONDRAF/NIRAS and FANC. The participatory process currently being organised by the King Baudouin Foundation for the disposal of high-level and/or long-lived radioactive waste is a large-scale replica of the participatory process for the surface disposal of low and medium-level short-lived radioactive waste that eventually led to the choice of site on the Mol-Dessel border, and which continues today, with the Tabloo visitors' and meeting centre being a good example. A project that shows how important it is to involve citizens in such decisions."

Pierre-Yves Dermagne, Deputy Prime Minister and Minister of the Economy and Employment: "First of all, I want to praise the quality of the work done by ONDRAF/NIRAS, which is responsible for radioactive waste management in Belgium. It is thanks to their input that the nuclear licence was obtained, paving the way for a solution for Belgium's low and medium-level short-lived waste. In addition, I appreciate the effectiveness of the local partnerships that contributed to the success of this project."

A participatory project

In 1998, the federal government decided that research into a suitable disposal site for low and medium-level short-lived waste should be done through a participatory process. Among others, the neighbouring municipalities of Dessel and Mol were willing to explore a possible disposal project with ONDRAF/NIRAS. Both municipalities expressed a positive opinion after about five years of research and set their societal conditions. In 2006, the federal government made a decision: the surface disposal would be located in Dessel, on land adjacent to the municipality of Mol. The government also stated that the societal conditions of both partnerships had to be realised.

Marc Demarche, Director General of ONDRAF/NIRAS: *“For more than two decades, residents of Dessel and Mol – through their respective partnerships STORA and MONA – have invested their free time and energy in the disposal project. They immersed themselves in the subject matter, built up expertise and consulted with our specialists. That commitment has made all the difference. For instance, residents helped design and improve the disposal project. They also determined the value-added projects to accept the repository, including the innovative Tabloo visitor centre.”*

About ONDRAF/NIRAS

ONDRAF/NIRAS, the Belgian Agency for Radioactive Waste and Enriched Fissile Materials, has been responsible for the safe management of radioactive waste in Belgium since its inception in 1980. Its mission is to effectively protect the population and the environment from the potential hazards of radioactive waste. For more information: www.ondraf.be

Press contact:

Sigrid Eeckhout - ONDRAF/NIRAS spokesperson

E-mail: S.Eeckhout@nirond.be

Phone: +32 (0) 475 75 52 71