



## Orano and the CEA provide demonstration of an innovative waste vitrification technology for Fukushima nuclear site

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Headquarters: Tour Areva  
1 place Jean Millier  
92400 Courbevoie - France  
Tel.: +33 (0)1 34 96 00 00  
Fax: +33 (0)1 34 96 00 01

**Vitrification proven technology may be part of the solution for waste treatment on the Fukushima nuclear site. Since April 27<sup>th</sup> 2018, ANADEC, the CEA and Orano are working on a project to evaluate the compatibility of the In-can vitrification process developed by the CEA, to treat nuclear waste from Fukushima Dai-ichi water treatment, such as sludge and mineral adsorbents.**

This project is divided in two main parts:

- Durable waste form conditioning matrix formulations and studies, laboratory scale (100 gr), bench scale (1kg) and near-industrial scale (100 kg) tests are led in France at the CEA Marcoule laboratories and technological platforms,
- Feasibility studies for process implementation, operation and maintenance principles and waste disposal are led by Orano teams.

Laboratory tests and part of bench scale tests have already been performed with success and near-industrial scale tests are under way. Feasibility studies will follow, in order to deliver complete results before end march 2019.

In this project, technical and commercial interfaces in Japan are ensured by ANADEC, a joint venture between Orano and ATOX, a Japanese company specialized in nuclear services and maintenance.

The CEA and Orano have developed vitrification processes and operated industrial vitrification facilities in France and abroad for more than 40 years, with rare expertise on formulation and long-term behavior of glasses for encapsulation of nuclear waste.

### About Orano

Orano transforms nuclear materials so that they can be used to support the development of society, first and foremost in the field of energy.

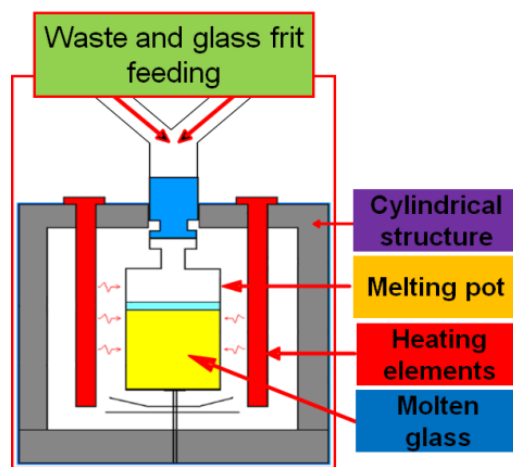
The group offers products and services with high added value throughout the entire nuclear fuel cycle, from raw materials to waste treatment. Its activities, from mining to dismantling, as well as in conversion, enrichment, recycling, logistics and engineering, contribute to the production of low carbon electricity.

Orano and its 16,000 employees bring to bear their expertise and their mastery of cutting-edge technology, as well as their permanent search for innovation and unwavering dedication to safety, to serve their customers in France and abroad.

Orano, giving nuclear energy its full value.



In-can prototype developed at the CEA Marcoule (France). © CEA/DR



In-can melting principle