

Regulatory Updates

Nuclear safety...

ASN issues a position statement on Orano's decommissioning and waste management strategy

March 2022

The decommissioning of old nuclear facilities is a major challenge for Orano which – over the coming decades – will be required to carry out several large-scale decommissioning projects: the first-generation fuel processing plant at La Hague, called UP2-400 (BNI 33), with its support units (the waste treatment station STE2 and the spent fuels reprocessing plant AT1 (BNI 38), the radioactive sources manufacturing workshop ELAN IIB (BNI 47) and the "oxide high activity" facility, called (BNI 80)), as well as the uranium enrichment and conversion plants at Tricastin (BNI 93 and BNI 105).

The legacy waste retrieval and conditioning operations (referred to as RCD) are among the first steps in decommissioning. These are of particular importance given the inventory of radioactive substances present and the age of the facilities in which they are stored, which do not meet current safety standards. RCD projects are characterised by major safety and radiation protection challenges, as well as by considerable industrial complexity. The general decommissioning of these facilities will also create a large quantity of waste, which will need to be safely managed.

Since 2005, ASN has been regularly evaluating Orano's decommissioning and waste management strategy for the La Hague and Tricastin sites. At ASN's request and given the complexity of these subjects, their interdependence and the delays observed on certain priority projects, the licensee updated its strategy in 2016.

ASN investigated this strategy and, after discussions with the licensee, observed progress in the assimilation of the goals of immediate dismantling, monitoring of the governance of complex projects (creation of a major projects department, a project maturity evaluation procedure and the development of project progress monitoring tools), the progress of the operations on several Tricastin facilities, as well as the definition of final waste conditioning processes for the La Hague site.

However, ASN asks Orano to improve its strategy in the following four areas:

- 1/the implementation of the decommissioning and waste management strategy must be prioritised according to the risks (existing pollution or high potential source term). The construction of new effluent and waste conditioning, storage, transport and treatment capacity will be needed to enable this strategy to be implemented, given the existing weak points (storage facilities that do not meet current safety standards, uncertainties regarding the medium-term saturation of certain storage facilities, etc.);
- 2/the implementation of the clean-up strategy must be based on sufficient knowledge of the current state of the facilities, and more particularly the civil engineering structures and soils. If complete clean-out is not possible, an appropriate clean-out strategy taken as far as is reasonably achievable in acceptable technical and economic conditions shall be deployed;
- 3/the implementation of the RCD strategy must be better managed and the potential source term must be reduced as early as possible. The characterisation of the waste and qualification of the processes envisaged must be actively pursued in order to define the required processes and demonstrate their feasibility within a time-frame compatible with implementation of the RCD projects. The waste currently stored in temporary facilities and for which there is no operational solution or which requires preliminary treatment, shall be transferred as rapidly as possible to storage facilities compliant with current safety requirements;
- 4/the oversight of complex projects must be improved by analysing the causes of delays to the priority projects and by examining the adequacy of the resources devoted to these projects.

ASN also underlines the need for the licensee to inform the public of the progress of its programmes.

It is up to Orano to ensure that this strategy is implemented and to report on it regularly to ASN. Given the safety and radiation protection issues encountered, ASN very regularly checks progress, by means of dedicated investigations, inspections, technical meetings and a project oversight approach.

Thanks to this heightened oversight, ASN adapts its regulatory methods to these high-stakes projects. Its intention is to transition from a "static" approach – in which the project completion deadline is set out in the regulations, often a long time in the future, and with calendar drift that is detected too belatedly – to a "dynamic" approach, focused on a precise analysis of the actions planned by the licensee over the coming 5 years.

In this new approach, having strengthened its RCD projects programming and oversight methods, the licensee submits detailed schedules to ASN, including milestones for which it makes a binding commitment to ASN. This may consist of safety studies or studies to develop certain aspects of the project, placing of industrial contracts or the completion of actual physical steps in the progress of the project, such as the beginning of construction of new equipment. On the basis of this detailed 5-year programme, ASN will specify key milestones for this period and will check that they are reached. This sliding process will continue until the final waste retrieval and conditioning result is achieved.

Read the ASN letter on Orano Decommissioning and Waste Management Strategy (only in French):

<https://www.french-nuclear-safety.fr/content/download/182540/2049734>

ASN oversees the continued operation of basic nuclear installation 148, called Atalante, operated by CEA, further to the conclusions of its periodic safety review

May 2022

ASN analysed the periodic safety review concluding report (RCR) for basic nuclear installation (BNI) 148 called Atalante, operated by CEA on the Marcoule site (Gard département). This facility is devoted to research and development for the reprocessing and recycling of spent nuclear fuels and waste management.

The purpose of the periodic safety review is, on the one hand, to verify the conformity of the facility, to ensure that it correctly follows all rules applicable to it and, on the other, to improve its level of safety taking account of changing requirements, practices and knowledge in terms of nuclear safety and radiation protection, as well as national and international operating experience feedback.



© Y.Audic / CEA / Development of refractory materials dissolution processes. C11/C12 shielded line in Atalante on the CEA Marcoule site

Article L. 593-18 of the Environment Code requires that the licensee conduct such a review every ten years, following which ASN communicates the results of its analysis to the Minister responsible for nuclear safety and may issue a resolution setting binding requirements for continued operation of the facility.

The periodic safety review concluding report for BNI 148 was submitted by CEA in December 2016. These conclusions were examined by ASN, with the support of IRSN. During this examination, CEA undertook to implement improvements notably concerning mitigation of the consequences of any accident, such as deployment of a system automatically shutting down the electricity and water supplies in the event of an earthquake.

Following examination of this report, ASN considers that the provisions proposed by CEA to manage risks and detrimental effects are pertinent. It underlines the licensee's good organisation and its commitment to carrying out the various phases associated with the periodic safety review process, as well as the ambitious action plan adopted by the licensee, the implementation of which has been initiated satisfactorily.

In the light of the potential consequences associated with certain accident scenarios, ASN considers that a strict schedule should apply to some of the provisions, notably those concerning improvements to the post-earthquake fire and flood risk prevention measures, and that the waste stored in the facility should be reprocessed or removed within a reasonable time-frame. Continued operation of BNI 148 is therefore subject to the binding requirements defined in the ASN resolution of 19 April 2022.

The concluding report for the next periodic safety review of BNI 148 shall be submitted before 13 December 2026.

To find out more:

[ASN resolution 2022-DC-0720 of 19 April 2022](#) setting binding requirements on CEA applicable to BNI 148, called Atalante, in the light of the conclusions of its periodic safety review

ASN took part in the 49th INRA plenary meeting

May 2022

This meeting, hosted by Japan as INRA's chair, was an opportunity for INRA's members to discuss current challenges, topics of common interest and various issues related to nuclear safety and radiation protection.

The members of INRA shared their experience regarding internal transformation and initiatives to reinforce their efficiency, improve their regulatory frameworks and adapt their processes to the upcoming challenges. Of these, climate change and its possible consequences on the energy policies of the States were discussed. More particularly, the growing interest in small modular reactors (SMR) of many stakeholders in the nuclear sector was underlined.



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The members of INRA discussed their activities in the field of SMR. The question of the operating lifetime of the NPPs was also tackled, as well the conditions for the long-term management of nuclear waste and the reprocessing of spent fuel.

Among other subjects addressed, the Japanese nuclear safety regulator presented the status of its regulatory review of the TEPPO application to discharge into the sea the treated water currently stored on the Fukushima Daiichi NPS, and which was the subject to an IAEA evaluation mission.

Bernard Doroszczuk emphasised the issues surrounding the construction of new installations, the development of new reactor concepts, the continued operation of reactors beyond 50, or even 60 years, and the major political decisions to be taken in the short and medium terms. He also mentioned the importance of forward planning and maintaining safety margins as well as the need to implement a coherent long-term radioactive waste management policy.

Rumina Velshi, the Chair of the CCSN, the Canadian nuclear safety regulator, was appointed as Chair of INRA for a period of one year.

This meeting was also an opportunity to visit various nuclear sites, including the fuel fabrication and spent fuel reprocessing plant in Rokkasho, and the Onagawa NPP, where major civil engineering work is under way to protect it against tidal wave flooding risks.

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