French Nuclear Safety Authority

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Regulatory Updates

Nuclear safety...

ASN New Year's greetings to the press

January 2022

ASN presents its initial findings concerning the safety of facilities in 2021; it recalls subjects requiring particular attention and underlines the need to position safety concerns at the heart of the energy policy debate.

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On 19 January, its Chairman, Mr. Bernard Doroszczuk, presented ASN's New Year's greetings to the press. The ASN Chairman underlined the fact that the safety of nuclear facilities and radiation protection in the industrial sector and in the transport of radioactive materials was sustained at a satisfactory level in 2021, following on from similar results last year.

In the medical field, no major deficiency was detected in the radiation protection of medical professionals, patients, the public or the environment.

Finally, in the field of nuclear facilities, Mr. Doroszczuk mentioned the satisfactory performance of the fourth ten-yearly outages of EDF's reactors, but did highlight a few points requiring particular attention, notably with respect to operational rigour and project management.

For the ASN Chairman, the year 2021 above all revealed industrial weaknesses in the NPP fleet and fuel cycle facilities and underlined the need for greater inclusion of safety requirements in the debates to define energy policy.

He took this opportunity to deliver four key messages:

1. The French electrical system is today faced with a two-fold fragility, primarily owing to the lack of margins and of sufficient forward planning.

- **The first fragility concerns EDF's nuclear reactors.**

An accumulation of events (both scheduled and unscheduled) led to reduced availability of the nuclear production fleet, illustrating the absolute need - as underlined by ASN on several occasions in recent years - to maintain margins in the sizing of the French electrical system, in order to prevent any conflict between safety and electricity supply issues.

- **The second fragility concerns the "fuel cycle" industry.**

A series of events (delay in the construction of the EDF centralised spent fuel pool; difficulties with the operation of Orano's Melox plant; faster than expected corrosion of the evaporators in Orano's La Hague plant), indicate a lack of forward planning and precaution, which weakens the entire "fuel cycle" chain and which could therefore undermine the operation of the NPPs if spent fuel storage capacity were to become saturated.

2. ASN asks that nuclear safety problems, notably with respect to forward planning and maintaining margins, be addressed immediately in energy policy choices, in the same way as the concerns surrounding the production of decarbonised electricity by the 2050 time-frame.

ASN considers that energy policy choices for the 2050 time-frame must be based on robust hypotheses that are justified in terms of safety, with sufficient margins to deal with major contingencies (notably generic anomalies). It thus considers that, in the light of the foreseeable development of electrical usage, the decision to carry out the programmed final shutdown of a further 12 reactors by 2035 should be carefully weighed, barring imperative safety considerations, given the need to maintain margins for safety.

At the same time, EDF shall within the coming 5 years demonstrate the ability of its oldest reactors to continue to function beyond 50 years. Moreover, if the continued operation of certain reactors beyond 60 years were to be envisaged, this would entail an in-depth examination of this option no later than 2025, in order to have enough time to address the conclusions of this examination.

ASN considers that the continued operation of the nuclear reactors should in no case be the result of a decision that is imposed simply on the basis of electricity demand, or one that entails safety risks.

3. It is essential that the prospect of an energy policy comprising a long-term nuclear component be accompanied by an exemplary management policy for waste and legacy nuclear facilities.

ASN considers that the entire sector must mobilise to implement concrete and safe management solutions for the waste from the current fleet or that inherited from past situations.

4. The new potential energy policies, whatever they are, imply a considerable industrial effort in order to tackle the industrial and safety challenges.

ASN considers that the skills enhancement goals, notably in professions under stress such as the engineering or mechanical sectors, as well as the objectives of increased rigorousness in project management and monitoring of activities, are steps in the right direction.

These objectives will nonetheless have to be rescaled to reflect the final policy decisions. The technical capabilities of the licensees, their subcontractors and the contractors working across the sector will be one of ASN's concerns.

ASN is developing a new approach to more effectively regulate shut-down nuclear facilities

January 2022

According to French policy, shut-down nuclear facilities must be decommissioned as soon as possible at an acceptable cost.

Before this principle became a statutory requirement in France, several facilities had been shut down for an extended period of time. Knowledge of their operating histories has been partially lost and, in some cases, large quantities of radioactive waste are still present in ageing structures and buildings. As more nuclear fuel cycle facilities and nuclear power plants are being shut down, the decommissioning projects are becoming more complex and more numerous. The correct progress of decommissioning projects and legacy waste retrieval and conditioning projects is thus a major safety issue.

Over the last few years, ASN has set a number of project milestones, as a way of enforcing this principle of "immediate dismantling". It should nevertheless be noted that the majority of the decommissioning projects are experiencing significant technical difficulties, and thus falling behind schedule.

To address this situation, ASN has been developing a new regulatory approach to complex decommissioning projects for a few years now. Its objective is to hold the licensees to account for the delivery of these safety outcomes. This regulatory approach consists mainly in:

- delivering inspections of complex decommissioning projects in order to assess the maturity of the project and the licensee's ability to deliver their project in the shortest time-frame,
- engaging with the licensees in a more transparent and flexible manner, to monitor their progress, support solutions compatible with the most important priorities and build trust between stakeholders.

As for the inspections of complex decommissioning projects, ASN delivered an in-depth inspection at EDF in November 2020 regarding the management of two key projects for the gas-cooled reactor (GCR) decommissioning programme:

- the decommissioning of the Chinon A2 reactor, which will be the first to be decommissioned and is therefore a key driver in programme performance,
- and the graphite industrial demonstrator project, which will host key mock-up tests to reduce the technical risks of this decommissioning programme.

Previously, in 2019, ASN delivered another in-depth inspection of a complex project at Orano La Hague concerning legacy waste retrieval and conditioning. These two inspections were a good opportunity to more precisely understand the organization of these licensees with regard to large project management. They revealed good practices and areas for improvement. Regarding EDF inspection, ASN underlined the expertise and commitment of the project teams, the soundness of its industrial strategy and technical choices regarding GCR decommissioning, and found that project management processes were on the whole well implemented. ASN asked EDF to improve their schedule management arrangements. The improvements required by ASN are being progressively implemented by EDF. ASN intends to deliver new in-depth inspections on project management in 2022 at CEA and Andra.

As for the new approach to technical dialog with licensees, ASN has been engaging with Orano La Hague in order to improve:

- safety case development and assessment,
- project progress reporting,
- issues escalation and resolution through key stakeholder meetings,
- consideration of strategic factors and a holistic ALARP argument to accelerate high hazard risk reduction.

These efforts are expected to facilitate the transition from a prescriptive regulatory approach to a more enabling one. EDF is also willing to support improvements and engage differently with ASN in order to secure its decommissioning strategy. For instance, an ASN/EDF task force is working to optimize the regulatory process leading to Dismantling Decrees for the GCR plants.

28th HERCA Board Meeting in Prague
The HERCA Board of Heads approved the new HERCA Strategy

December 2021

The HERCA Board of Heads (BoH) meeting, held on 1-2 December 2021 in Prague, was the opportunity to endorse the new HERCA Strategy and to have fruitful discussions with the ICRP Chair, Dr. Werner Rühm, about the interaction between the two organisations and HERCA's involvement in ICRP's project of updating its recommendations.

©HERCA/Board Meeting in Prague

On this occasion, the chairmanship was renewed with Nina Cromnier (SSM, Sweden) as HERCA Chair and Jean-Luc Lachaume (ASN, France) and Patrick Majerus (Ministry of Health, Luxembourg) as HERCA Vice-Chairs.

HERCA, as a voluntary association in which the European Heads of Radiation Protection Authorities work together in order to identify common issues and propose practical solutions for these issues, has developed its strategy. The aim of this document is to share both internally and with HERCA's counterparts its vision, mission and main objectives for the years to come.

It focusses on three General Objectives:

- Cooperation
- Efficiency
- Stakeholders

To find out more:

https://www.herca.org/download/8528/

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