

Regulatory Updates

Nuclear safety...

Eurosafe 2021 - ASN Chairman conveyed key messages to highlight challenges and opportunities in the field of nuclear safety

November 2021



©ASN/B. Doroszczuk Welcome speech

On 22 November 2021, Bernard Doroszczuk, ASN Chairman, conveyed key messages at the 2021 Eurosafe Forum organised by ETSO in Paris. He mentioned the increasing awareness of the risks related to climate change. In this context, he noted that the place of nuclear energy could be reinforced by political decisions. Any decision taken along these lines will have a lasting effect on nuclear community, not only in regulatory terms, but also in the field of expert analysis and research.

Participation of the WENRA Chair in the Eurosafe 2021

November 2021

On 23 November 2021, Olivier Gupta was invited, as WENRA Chair and ASN Director General, to participate in the 2021 Eurosafe Forum. The purpose of the session where the WENRA Chair intervened as a panelist was to exchange on the "upcoming challenges in nuclear safety cooperation in Europe and beyond".

O. Gupta mentioned that the environment in which nuclear safety authorities were regulating was evolving.

He highlighted three main reasons for this change:

- Stakeholders' focus shifting from improving safety after the Fukushima accident to having enough CO₂ free electricity capacities.
- The emergence of a new geopolitical context with a trend of some countries to favor national approaches.
- The decreasing weight of Europe in the nuclear world.

Having said that, he addressed key messages regarding the way regulatory bodies and their technical support organisations should take into consideration this new environment. He mentioned:

- The need to reinforce the implementation of a graded and transparent approach in all the regulatory processes, which requires to concentrate resources on highest safety significant stakes, reinforce predictability of regulatory processes and be able to explain clearly regulatory decisions.
- The need for regulators to express publicly their views on long term policy issues that may have a consequence on safety.
- The need to intensify efforts to promote, internationally, the highest safety levels.

The Forum was an opportunity for the WENRA Chair to remind the role of WENRA in building, over the 20 last years, a European safety doctrine and a concrete harmonization of the national regulatory frameworks.

In the field of harmonization, he added that he expected ETSO to play a key role in the convergence of safety evaluation practices and called for a strengthened relationship between WENRA and ETSO.



©WENRA/Eurosafe 2021 Panel

Monitoring the construction of the Flamanville-3 EPR reactor: ASN notable actions in 2020 and 2021

November 2021



© M. Clemenceau/Flamanville EPR

ASN continued its monitoring of the construction of the Flamanville EPR reactor. In 2020 and 2021, ASN was particularly vigilant regarding the processing of the anomalies detected on the main primary and secondary system welds and the continuation of the reactor start-up tests. ASN authorised partial commissioning of the installation to allow nuclear fuel to enter the site, starting on 26 October 2020 and ending on 24 June 2021.

ASN proposes, in its EPR Reactor Information Letter #23, a look back at these notable events and in particular:

- Anomalies detected in the main secondary system welds.
- Anomaly on three main primary system nozzles.
- Anomaly in the post-weld heat treatment of certain welded assemblies
- Monitoring the start-up tests (examination of the results of the start-up tests and continued validity of the start-up test results.
- Review of the quality of the Flamanville 3 reactor equipment.
- Partial commissioning authorisation of the installation for arrival of the fuel.
- Incident and accident operations (CIA).
- Monitoring of the activities carried out by the suppliers and of surveillance by EDF.
- Continued examination of the commissioning authorisation application file (DMES) for Flamanville 3.
- International experience feedback follow-up.

To find out more: [EPR Newsletter #23](#)

Stress corrosion phenomenon detected on the safety injection system of Civaux NPP reactor 1 – Shutdown of 1450 MWe reactors for inspections

December 2021

On 21 October 2021, following ultrasonic inspections performed during the ten-yearly outage inspection of the Civaux NPP, EDF informed ASN that it had detected indications [1] on welds on the elbows of the pipes connecting the safety injection system [2] to the reactor's main primary system (see image below). In order to identify the origin of these indications, the parts of the pipes concerned were cut for metallurgical analysis in the laboratory.

EDF also decided to shut down Civaux NPP reactor 2 so that these inspections of the areas could be carried out ahead of schedule, as the previous inspections dated from 2012. The preliminary results of these inspections confirmed the presence of indications similar to those of reactor 1.

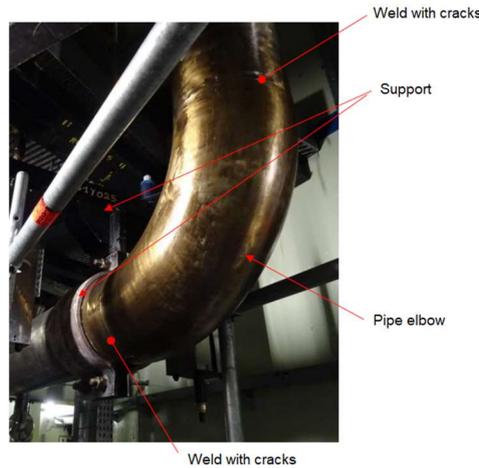
On 15 December 2021, EDF informed ASN that the initial metallurgical analyses conducted on the parts of the pipes removed from Civaux NPP reactor 1 revealed the presence of cracking resulting from a stress corrosion phenomenon. EDF is continuing its investigations in order to characterise the factors that caused this phenomenon and identify the areas potentially concerned.



©ASN/Elbow and adjacent welds which underwent a ten-yearly outage inspection (N4 plant series)

Given the unexpected origin of the cracks detected, EDF decided to shut down reactors of similar design, as rapidly as possible. The B1 and B2 reactors of the Chooz NPP will therefore be shut down shortly for checks in addition to those carried out in 2019 and 2020 during their ten-yearly outage inspection.

ASN considers that given EDF's prime responsibility for safety, its decision is an appropriate one for the situation.



©EDF/Photo showing the welds with cracks

With the technical support of IRSN, ASN is closely following the investigations being carried out by EDF, along with the resulting conclusions, notably with regard to in-service monitoring of this equipment. ASN authorises repair work on the equipment concerned and will issue a decision with regard to its return to service.

[1] An indication is a signal (typically an echo for ultrasound inspections) revealing the possible presence of a defect in the material being inspected.

[2] In the event of an accident causing a major break in the reactor's primary system, the safety injection system (RIS) enables pressurised borated water to be introduced into it in order to stifle the nuclear reaction and cool the core.

HERCA 28 Board Meeting in Prague

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/Chair Nina Cromnier (SSM, Sweden) between her two Vice-Chairs Patrick Majerus (Ministry of Health, Luxembourg) and Jean-Luc Lachaume (ASN, France)

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