French Nuclear Safety Authority

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Regulatory Updates

AUTORITÉ DE SÛRETÉ NUCLÉAIRE

Nuclear safety...

Olivier Gupta, ASN Director General, reappointed Chairman of WENRA

December 2022

At their plenary meeting on 9 and 10 November 2022, WENRA's members reappointed Olivier Gupta, ASN Director General, as Chairman of the association. During its six-monthly plenary meeting, the Western European Nuclear Regulators' Association (WENRA) decided to extend the Chairmanship of Olivier Gupta – who is ASN Director General - to the end of 2023. Olivier Gupta has chaired this association since November 2019.

This six-monthly meeting, hosted in Liverpool by the ONR, the British nuclear safety regulator, was an opportunity for the association to address a number of important topics.

WENRA endorsed the criteria to be used when a country wishes to join the association as an observer or when an observer member wishes to become an associated member.

This endorsement is a key step for WENRA, as it clarifies an important issue regarding its organisation and operation.

WENRA's members discussed the new nuclear context, with the ongoing energy crisis, the war in Ukraine and the need to address climate change. This new context creates a number of challenges for all the stakeholders.

The safety regulators from several countries presented their national situation, their concerns, and safety aspects requiring particularly close attention.

As many of these points are common to several countries, WENRA drew up a declaration highlighting the importance of nuclear safety in the context of the current energy crisis.

This declaration was published on the WENRA and ASN websites.

WENRA's members discussed the growing interest being shown by several stakeholders in small modular reactors (SMR) and the numerous ongoing initiatives in this area, in particular to promote international harmonisation within the industry and between safety regulators.

WENRA confirmed that these initiatives should enable the safety regulators to carry out their national responsibilities in a well-informed manner, and that the largest possible number of safety regulators should take part in the assessment of projects which have reached a sufficient level of maturity, as early as possible. WENRA's members decided to continue their cooperation in order to define the general safety objectives of these types of reactors, on the basis of feedback from SMR assessments conducted at an early stage in their design.

The Ukrainian nuclear safety regulator (SNRIU) presented the safety situation in the nuclear facilities affected by the war. WENRA reaffirmed its commitment to providing SNRIU with full support, notably through the expert group that it set up specifically last March for this purpose.

©WENRA/Mark Foy (ONR, WENRA Vice-Chair), Olivier Gupta (ASN, WENRA Chairman), Petteri Tiippana (STUK, WENRA Vice-Chair)

This group in particular identified the various modelling capacities that could be rapidly activated in Europe in order to predict the consequences of an accident in a Ukrainian facility, and to compare the results on test-cases.

The WENRA working groups presented their activities. Comparison of the implementation of the most representative "safety reference levels" in the NPPs of the various WENRA countries was confirmed as being a priority: in addition to harmonisation of the regulations, this work will contribute to an evaluation of the actual level of safety harmonisation among Europe's NPPs.

Finally, following on from its discussions on the new context, WENRA decided to examine its current strategy with a view to developing a new one, more in line with the new environment and the new challenges the safety regulators will be facing in the coming years.

WENRA statement on the importance of nuclear safety in the context of the current energy crisis

November 2022

On 9 November, during its 2022 Fall Plenary Meeting in Liverpool, chaired by Olivier Gupta, Director General of ASN, the members of WENRA (Western European Nuclear Regulators' Association) discussed the context of the current energy crisis.

They addressed its potential consequences on the oversight activities and recalled the importance of nuclear safety remaining at the center of decision-making. As an outcome of this discussion, WENRA released a statement which highlights the importance of nuclear safety in this new context.

Read the WENRA statement of 9 November 2022 on the importance of nuclear safety in the context of the current energy crisis:

https://www.wenra.eu/sites/default/files/publications/WENRA_Statement_new_context.pdf

Exposure of a worker in excess of the statutory dose limit

December 2022

On 31 October 2022, ASN was informed by Aperam Stainless France of a significant radiation protection event which had occurred on 28 October 2022 on its Gueugnon site, concerning the accidental exposure of a worker to ionising radiation.

The impacted worker was carrying out maintenance work close to an X-ray generator used to measure the thickness of steel sheets.

The X-ray generator was operating while the maintenance work was in progress, whereas it should have been switched off in order to avoid all risk of accidental exposure of the maintenance personnel. The worker was exposed for about twenty minutes, with part of his body being directly within the radiation beam for about five minutes.

This worker was employed by a contractor for activities which do not normally entail any risk of radiological exposure, held no Labour Code classification[1], and was not subject to any individual dosimetric monitoring, which is compatible with his presence in this zone if the X-ray generator had indeed been switched off for the duration of his work.

The dosimetric reconstruction carried out following the incident, as part of the medical care given to the worker, concluded that a whole body effective dose of about 0.2 millisieverts (mSv) had been received, as well as an equivalent dose to the skin of about 2 Sieverts (Sv) on a highly localised surface area, corresponding to that directly exposed to the beam.

Although the whole body effective dose does not exceed the statutory annual limit for a non-classified worker, this equivalent dose to the skin exceeds the statutory annual exposure limit for workers, set by the Labour Code at 500 mSv (average dose on any 1 cm2 surface area of skin, whatever the surface area exposed).

The exposure received by this worker led to no immediate health effect, cutaneous in particular (burn, necrosis, etc.); however, given the highly localised but significant exposure of a part of the body, the need for specific medical follow-up will be examined.

The Aperam Stainless France company has initiated an analysis of the causes of this event in order to implement appropriate corrective measures.

In order to check the investigations being carried out and the ongoing analysis of the event, along with the steps taken or planned by the company to prevent such an event from happening again, ASN will shortly be conducting an inspection on the Gueugnon site.

Furthermore, ASN underlines that the heads of "ordering customer" companies must ensure the overall coordination of the risk prevention actions implemented for their workers, but also for the workers of contracted companies performing work on their site.

In view of the fact that one of the statutory exposure limits for a worker has been exceeded and considering the information currently available, ASN rates this event level 2 on the INES scale (international nuclear and radiological events scale, graded from 0 to 7 in increasing order of severity).

This rating could be reviewed depending on the conclusions of the examinations currently under way.

[1] The exposure limits concerning a member of the public (annual effective dose greater than 1 mSv and average annual equivalent dose on the skin greater than 50 mSv for any 1 cm surface area of skin, whatever the surface area exposed) were therefore applicable to this person.

Stress corrosion: ASN considers that two welds on Cattenom NPP reactor 1 will need to be repaired before it can be restarted

November 2022

During its treatment of the Stress Corrosion (SC) phenomenon affecting several of its reactors, and in accordance with the strategy it had proposed, EDF carried out inspections on the piping of the Cattenom NPP reactor 1 safety injection system. These inspections, which were carried out close to the welds liable to be the most severely affected, revealed indications that could be attributed to SC cracking. Two of them were of significant dimensions, with maximum depths of 4.7 and 6.1 mm.

With the assistance of IRSN, ASN examined the data transmitted by EDF which aimed to justify maintaining these indications as they were and restarting the reactor for a period of eight months.

In the light of the uncertainties surrounding the defect characterisation measurements and the hypotheses and methods used in the mechanical calculations, ASN considers that the strength of the pipes affected by these two indications cannot be guaranteed. The welds concerned will therefore have to be repaired before the reactor can be restarted.

ASN considers that the other welds, on which smaller indications have been detected and for which the mechanical strength has been demonstrated, can be maintained as they are for a limited period of time.

EDF has undertaken to replace all pipe sections of the safety injection system susceptible to SC cracking during the next reactor outage, scheduled for 2023.

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