

Regulatory Updates

Nuclear safety...

Continued operation of the 900 MWe reactors beyond 40 years: ASN consults the public concerning its draft resolution

December 2020

On 3 December, ASN opened a public consultation on its website concerning the conditions for the continued operation of the 900 MWe reactors beyond their fourth periodic safety (PSR) review. This consultation, which will run until 15 January 2021, concerns the draft resolution that ASN envisages issuing following its examination of the generic phase of the fourth PSR of these reactors. This phase concerns the studies and modifications common to all the reactors, which were designed in accordance with a similar model.

In its draft resolution, ASN orders the implementation of the major safety improvements planned by EDF as well as additional measures it considers to be necessary to achieve the objectives of the PSR.

ASN considers that all the provisions planned by EDF and those that it itself orders open up the prospect of continued operation of the 900 MWe reactors for ten years following their fourth PSR. The periodic safety review will then be performed on each 900 MWe reactor, with the process running until 2031.



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Implementation on each reactor will include specific on-site inspections and will take account of the particularities of each installation. The provisions planned by EDF for each reactor will be the subject of a public inquiry.

In France, the authorisation to create a nuclear installation is issued by the Government, further to an ASN opinion. This authorisation is issued with no time limit and an in-depth review of the installation, called the "periodic safety review" is carried out every ten years to assess the conditions for its continued operation for a further ten years.

EDF's thirty-two 900 MWe reactors are the oldest ones in operation in France. Their fourth PSR is of particular significance, because their design was based on the assumption of an operating lifetime of 40 years. Extending their operation beyond this period means that these design studies must be updated or some equipment replaced.

The ASN issues its opinion on the management of high-level (HLW) and intermediate-level long-lived waste (ILW-LL)

December 2020



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In response to a request from the Minister in charge of energy, as required by the French National Radioactive Materials and Waste Management Plan (PNGMDR), ASN issued its opinion on the management of high-level waste (HLW) and intermediate-level long-lived waste (ILW-LL), contributing to the orientations of the 5th edition of this plan.

HLW mainly consists of vitrified packages containing waste produced by the reprocessing of spent fuels. For its part, ILW-LL to a large extent consists of the metal structures of spent fuel assemblies after reprocessing, or resulting from the operation and maintenance of fuel reprocessing plants. The volume of these two categories of waste, once conditioned in primary packages, is estimated at 85 000 m³. In France, the law requires that ultimate radioactive waste which, for nuclear safety or radiation protection reasons, cannot be disposed of in above-ground or near-surface facilities, shall require deep geological disposal. It is the duty of Andra to design a deep geological disposal facility project. It is currently developing a project for such a repository, called Cigéo, which will be a basic nuclear installation (BNI) and, as such, will be subject to regulation by ASN.

For the 4th edition of the PNGMDR, studies were more specifically conducted on:

- the acceptability of the various HL or IL-LL wastes in Cigéo,
- a more detailed examination of safety implications relating to bituminous waste packages management,
- characterisation studies of IL-LL waste produced before 2015 so that the retrieval and conditioning of this waste could begin before the 2030 deadline set by law,
- the repercussions on storage needs of any delay in the Cigéo project.

The public debate held in 2019, with a view to drafting the 5th edition of the PNGMDR, underlined the need for clarification concerning, on the one hand, the essential preconditions for the implementation of deep geological disposal, which are reversibility, safety guarantees or the design of the pilot industrial phase and, on the other, the prospects for research on the transmutation of certain radionuclides.

Faced with the Covid 19 epidemic, ASN adapts its working methods so that it can continue to perform its duties

November 2020

Faced with a constantly changing health situation, ASN continues to adapt its working methods, by limiting physical contact while continuing to provide oversight of nuclear facilities and activities.

• Adaptation to the health situation

As part of its activity continuity plan, ASN is limiting movements by its personnel and opting for home-working, providing everyone with the necessary technical resources. Today, virtually all ASN staff are working from home. When their physical presence is required in the ASN premises or those of the organisations being inspected, this is done in strict compliance with the barrier and social distancing measures defined after consultation with the Committee for Health, Safety and Working Conditions (CHSCT) in order to comply with the health rules in force.

• Maintaining ASN's duties

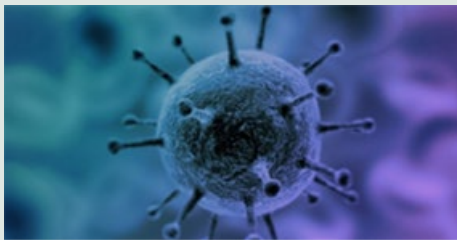
With regard to the nuclear industry, ASN has decided to maintain on-site inspections if they cannot be performed remotely and provided that all health safety measures are adhered to. For their part, the remote inspections primarily entail the examination of documents concerning routine operations (periodic test records, operating documents, etc.), usually accompanied by audio-conferences with the licensee; ASN also uses digital technologies for remote examination of reactor operating parameters.

A significant share of the inspections comprises remote examination of documents and prior discussions with the licensee, followed by on-site inspections. Therefore, of the 53 inspections already performed in the first two weeks of November, 36% were completely performed on site, 14% were completely performed remotely and 50% involved a combination of the two.

With regard to the medical centres, ASN first of all checks with the activity managers that the inspection is compatible with the organisation put into place by these centres, given the context of the health crisis. Consequently, most of the inspections have been postponed to 2021 and a few have had to be cancelled.

Moreover, ASN's investigation work is continuing normally, together with IRSN. This is notably the case for the fourth ten-year periodic safety review of the EDF NPPs.

Finally, ASN has an on-call system enabling it to deal with any emergency situation.



• Summary of the inspections conducted since the beginning of the health emergency

Following the Government's decision to impose a lockdown last March, ASN suspended its on-site inspections, while retaining the possibility of conducting such inspections if needed. Therefore, between 15 March and 15 May 2020, 18 on-site inspections were carried out: twelve on safety and the possible consequences of the epidemic on the working of the facilities and six on labour inspectorate subjects.

26 inspections were conducted remotely during this period. With regard to basic nuclear installations, oversight and inspections targeted operational activities (operation of reactors, periodic tests, etc.), in order to take account of the significant reduction in maintenance work on the facilities.

These inspections have revealed no deterioration of safety or of worker radiation protection. More specifically, both remote and on-site inspections confirmed that EDF and Orano were able to take appropriate steps to deal with the health risk (barrier measures, prevention plans) while maintaining the required level of safety.



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During the period after the lockdown was lifted (mid-May to end of October), ASN continued to prefer home-working for a large share of its personnel. It also reinforced its on-site inspection actions, in addition to its remote-inspections. During this period, the total volume of inspections returned to the level at which it stood prior to lockdown. To date, of the 1 900 inspections initially scheduled, 1 241 have been performed. The decision was taken to cancel certain inspections in the medical sector to avoid exacerbating the pressure the hospitals were already experiencing owing to the health crisis; the postponement to 2021 of certain reactor outages or of certain industrial activities in the BNIs, also related to the health crisis, justifies the cancellation of certain inspections initially scheduled for 2020.

The follow-up letters for the inspections performed remotely are published in the same way as for on-site inspections.



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France submits its 7th report to the IAEA on the implementation of the Joint Convention on the Safety Report under the European Euratom Directive on the Safety of nuclear installations 2014/87/Euratom

November 2020

The seventh review meeting of the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management (called the "Joint Convention") is scheduled from 24th May to 4th of June 2021 at the International Atomic Energy Agency (IAEA) in Vienna. Due to the current global situation of the COVID-19, this review meeting is likely to be postponed to the summer of 2022.

In this context, France submitted to the IAEA its [national report](#) on 27 October 2020. This report presents the state of implementation of the Joint Convention obligations by the French stakeholders. It also details the latest developments and prospects under this Convention, including developments in the regulatory framework, spent fuel and radioactive waste management policies, and the challenges of decommissioning of phased out nuclear installations.

The preparation of the French report, coordinated by ASN, involved many players. Thus contributed to the drafting, in addition to the ASN services, the Directorate-General for Energy and Climate (DGEC) and the Nuclear Safety and Radiation Protection Mission (MSNR) of the Ministry of Ecological Transition, the National Agency for Radioactive Waste Management (Andra), the main operators of nuclear installations (EDF, Orano, CEA, ILL), and the Institute for Radiation Protection and Nuclear Safety (IRSN).

The Joint Convention review meeting will allow each of the 83 Contracting Parties to present their national report and participate in the review of reports submitted by other Contracting Parties, according to the principle of peer review. The national reports are, since October 27, accessible to all the contracting parties for examination on the dedicated site of the IAEA.

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