

Regulatory Updates

Nuclear safety...

In response to the Covid 19 epidemic, ASN is adapting its method of functioning while maintaining its rigour in the oversight of nuclear installations

March 2020



The consequences of the Covid 19 epidemic on nuclear activities must be identified according to the nature of the operations.

Therefore, ASN is working closely with the nuclear licensees and activity managers to analyse the nuclear safety and radiation protection consequences of the measures taken to deal with the ongoing health emergency. These measures concern: management of the workforce present and their authorisations, management of activities during facility shutdowns, the safeguarding of certain sites, the steps taken in hospitals to guarantee the continuity of treatment for patients and so on.

A large number of nuclear installations whose functioning is not vital for the continued activity of the country, operated in particular by the CEA, Orano, Framatome or Andra, have been shut down and are maintained in safe state. Activities on the majority of work sites, particularly decommissioning sites, have been suspended. Orano has kept up activities necessary for the functioning of the EDF nuclear power plants (NPP) as regards the removal of spent fuel, fuel reprocessing and supplying the NPPs with fresh fuel.

With regard to the NPPs, EDF is giving priority to the operating aspects that are vital for the supply of electricity and is currently examining the conditions for continuation of the reactor maintenance activities during refueling and maintenance outages.

In this context, ASN is maintaining its highly stringent demands with respect to the nuclear licensees.

The examination work conducted by ASN in collaboration with IRSN is continuing as normal, with the exception of certain

specific studies, such as those requiring dedicated computation resources which are not remotely accessible.

ASN is adapting its in-field oversight system by applying three principles:

- the exclusion of face-to-face contacts unless absolutely necessary, in order to limit propagation of the virus;
- giving priority to the oversight of facilities remaining in operation;
- maintaining oversight activities proportionately to the risks.

In this context, inspections involving on-site presence are suspended, save when necessary (such as a significant event requiring on-site inspection in order to gather the initial information).

For the facilities that continue to function, particularly the EDF reactors and the Orano facilities, on-site inspections are replaced by remote verifications, particularly concerning the examination of documents relating to day-to-day operation (periodic test records, operational management documents, etc.), accompanied by audioconferences with the licensee. This type of remote verification will be able to be continued, with adaptations, including in cases where the number of persons on site is drastically reduced due to the implementation of the business continuity plan measures.

For the facilities that are shut down, ASN is discussing with the licensees concerned the practical procedures relating to maintenance and safety of the facilities and the conditions of restarting them in the future. These discussions focus in particular on the possible changes in inspection and test frequencies.

In addition to this, ASN labour inspection, which is competent for inspection in nuclear power plants, has organised itself so that it can fulfil its role of monitoring employee work conditions for both EDF employees and outside contractor employees working on the sites.

Thus, in the current situation of the Covid 19 pandemic, ASN has had to draw EDF's attention to the situation of outside contractors' employees, by asking it to clearly define those maintenance or logistic activities whose continuity is vital, so that there is no ambiguity for these companies and their employees, and to ensure

that the conditions of health and safety for all employees are clearly communicated and correctly implemented on the sites.

The ASN labour inspectors will only go in person to the EDF sites when the urgency or seriousness of the situation necessitates their presence on site.

As part of the post-Fukushima safety improvements, EDF is updating its on-site emergency plans (PUI) to integrate potential difficulties in gaining access to the sites, which could render full deployment of the local emergency response teams more complicated (progressive deployment of the PUI). These changes in the PUI, examined by ASN with the assistance of IRSN, have been tested in hands-on situations during unannounced exercises which provided the opportunity to check that EDF is capable of managing an on-site emergency plan in highly degraded mode, should such a situation arise.

ASN and the licensees hold regular audioconferences at national and local level to discuss the development of the situation and its consequences.

Also, to enable the health professionals to focus on the health response to the epidemic, ASN is, until further notice, suspending its inspections in medical facilities carrying out nuclear activities, barring certain exceptions.

Finally, to contribute to the reduction of risk for its staff as a result of the current situation, ASN has triggered the red level of its business continuity plan: all staff are now teleworking, document exchanges with nuclear activity managers will whenever possible be electronic, and investigations and assessments will be performed remotely, if necessary by means of audio or video-conferencing.

The ASN on-call system, which is activated in the event of an emergency, remains unchanged.

This organisation could be revised according to how the situation develops.

French Nuclear Safety Authority

15, rue Louis Lejeune - CS 70013
92541 Montrouge cedex -France

Tel.: +33 1 46 16 40 00

Email: info@asn.fr

 www.french-nuclear-safety.fr

Recommendations for improving radiation protection in the operating theatre during fluoroscopy-guided interventional procedures

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The number of fluoroscopy-guided interventional procedures is constantly increasing, particularly surgical procedures in operating theatres. They bring considerable benefits for the patient but present significant risks in terms of radiation protection, for the medical staff and patients alike.

Although radiation protection during procedures performed on equipment with fixed C-arm units in interventional imaging services has significantly improved, ASN inspections reveal shortcomings with procedures performed in operating theatres. Exposure to ionising radiation in the operating theatre is perceived as a secondary risk compared with risks relating to anaesthesia or infection and other measures of vigilance expected of the medical staff (haemovigilance, identity monitoring, drug safety monitoring, etc.).

Given these findings, ASN called upon the expertise of the Advisory Committee for Medical Exposure (GPME^[1]). The GPME designated a multidisciplinary group of experts, including health professionals involved in radiation protection in the operating theatre, to put forward recommendations allowing the deployment of practices using radiology C-arm units or mobile computed tomography devices in the operating theatre under satisfactory conditions of radiation protection for the patients and the medical staff.

[The group's recommendations were set out in a report and a GPME opinion in October 2019.](#) The report underlines the generally poor embracing of the radiation protection culture by operating theatre staff. Levers of action have been identified for both the operating theatre medical staff and for the hospital governing bodies to promote this culture.

The recommendations focus on four areas: the quality and the management of radiation risks, the respective responsibilities of the players, radiation protection training and radiation protection tools.

ASN encourages all operating theatre medical staff, hospital decision makers and the general public to read these recommendations.

[ASN recently published a document aiming to promote the setting up, within an operating theatre block,](#) of a pragmatic teaching workshop adapted to professional practices and needs, entitled "the errors block". Its aim is to foster collective awareness of radiation protection in medical professionals.

ASN is working with the Ministry of Health to have the recommendations concerning the involvement of medical physicists and radiographers in the operating theatres, and the development and interoperability of operating theatre information systems, taken into account in the new activity authorisation systems.

^[1] GPME: Advisory Committee for Medical Exposure. The GPME is called upon by ASN to give its opinions and, where applicable, recommendations in the field of radiation protection of professionals and the public for medical and forensic applications of ionising radiation.

Publication of the Order regarding the protection of radioactive sources against malicious acts: ASN will be fully implementing its source security oversight actions

March 2020

The Order of 29th November 2019 concerning the protection of ionising radiation sources and batches of radioactive sources of categories A, B, C and D^[1] against malicious acts, published on 11th December 2019, specifies the conditions surrounding the application of the general objective set out by the Public Health Code.

In its Article R. 1333-147, this latter more particularly requires that "*all appropriate steps are taken by the nuclear activity manager to prevent unauthorised access to ionising radiation sources, their theft, their misappropriation, their deterioration, or any damage of whatsoever nature that they could suffer as a result of malicious acts.*"

This Order clarifies the provisions to be implemented for the protection of ionising radiation sources or batches of radioactive sources against malicious acts, both within the facilities and during transport operations. This Order, which was entered into effect on 1st January 2020:

- is part of the Government's national security strategy, in particular to counter radiological threats;

- is based on recommendations from the International Atomic Energy Agency, which are already in effect in other countries, notably in Europe;
- adopts a graded approach, with the organisational or technical arrangements being reinforced proportionately to the danger represented by the source(s) to be protected;
- comprises interim provisions of up to two years, enabling the facilities or carriers concerned to define, plan and then implement these new requirements.

The 5000 or so radioactive sources of categories A, B or C primarily concerned by this Order are used in the medical and industrial fields, while some of them are also used on worksites, for example to conduct non-destructive examinations on piping or pressurised equipment. About 300 facilities nationwide are concerned by the provisions of this Order.

ASN made an active contribution to the drafting of this Order. On 26th September 2019 it issued a positive opinion on this draft text.

The entry into effect of this Order will enable ASN to fully implement its source security oversight actions.

To find out more:

[Order of 29th November 2019](#)

^[1] Ionising radiation sources and batches of sources are classified in 4 categories (A to D) according to the danger they represent, with category A sources being the most dangerous and those of category D the least dangerous. This classification is set out in the Public Health Code (Appendix 13-8).

ASN published guides in English regarding the decommissioning and remediation of basic nuclear installations

February 2020

ASN issued the following three guides to provide its recommendations for operators of BNIs of what practices for decommissioning and site remediation it considers to satisfy the regulatory objectives. These guides may apply to sites current in operation that are undergoing partial decommissioning or performing remediation activities at a specific location (e.g. soil remediation):

[Guide 6: Final shutdown, decommissioning and delicensing of basic nuclear installations in France;](#)

[Guide 14: Complete post-operational clean out methodologies acceptable in basic nuclear installations in France;](#)

[Guide 24: Management of soils contaminated by the activities of a basic nuclear installations in France.](#)