Decision following the public debate on drawing up the fifth National Radioactive Materials and Waste Management Plan (PNGMDR)

The French Minister for the Ecological and Inclusive Transition and the Chairman of the French Nuclear Safety Authority,

Having regard to the French Environment Code, in particular Articles L. 121-1 through L. 121-15, L. 542-1 and following, L. 594-1 and following, and R. 121-1 through R. 121-16;

Having regard to French Decree 2017-231 of 23 February 2017, implementing Article L. 542-1-2 of the French Environment Code and setting out the provisions relative to the National Radioactive Materials and Waste Management Plan;

Having regard to the Order of 23 February 2017 implementing Decree 2017-231 of 23 February 2017 implementing Article L. 542-1-2 of the French Environment Code and setting out the provisions relative to the National Radioactive Materials and Waste Management Plan;

Having regard to Decision No. 2018/25/PNGMDR/1 of 4 April 2018 of the French National Commission for Public Debate (CNDP) relative to organising a public debate on the fifth National Radioactive Materials and Waste Management Plan;

Having regard to the fourth National Radioactive Materials and Waste Management Plan, covering the period 2016-2018;

Having regard to the report drawn up by the Chair of the French National Commission for Public Debate (CNDP) and the minutes drawn up by Chair and the members of the French Special Commission for Public Debate (CNDP), published on 25 November 2019;

Whereas the debate highlighted the following points:

- A consensus of opinion on the need for the public authorities, the producers responsible for the radioactive waste that they produce, and all the stakeholders to pursue their efforts to improve management of this waste and render management solutions for each category of such waste operational;

- The fundamental need to coordinate energy policy and strategy with the choices made with regard to the management of radioactive materials and waste;

- The need to improve the ways in which cross-industry issues are taken into account in managing radioactive materials and waste: including issues relative to waste transportation, health, the economy and to the impact of waste management decisions on the local area;

- Expectations relative to improving strategic governance of the radioactive materials and waste management policy, by clarifying the roles of the institutions involved and deploying a continuous improvement procedure for ensuring public involvement and input in decision-making;

- A need to improve the way in which the impact of the PNGMDR on the local area is taken into consideration from the stage of identifying management solutions;

- Regarding the management of radioactive materials, questions relative to the possible options for reprocessing and recycling certain materials, and the need for greater transparency regarding the classification process, and regulation of these options;

- Regarding the policy on spent fuel storage, a consensus of opinion regarding the need for new spent fuel storage capacity by 2030, together with the specific context in France, which confirms the appropriateness of underwater storage facilities by 2030;

- Regarding very low-level waste and the general public's extreme sensitivity to any changes in the regulations relative to the principle on which management of this type of waste is managed, and the need to ensure that any changes in the matter are implemented in line with suitable traceability processes, effective control by independent bodies, and the involvement of civil society;

- Regarding low-level long-lived waste. the difficulty that has been identified in finding a single management solution given the heterogeneous nature of this category of waste, and the need for further technical assessment in order to decide on the most suitable management solutions for taking account of local issues;

- Regarding the management of high-level waste and intermediate-level long-lived waste, the demand on the part of the general public for greater clarification, on the one hand regarding the fundamental issues on which the development of a deep geological disposal facility depends, namely reversibility, guarantees regarding safety and the design of the industrial pilot phase and, on the other hand, regarding the prospect of research on transmutation;

- The identification of particularly long-term needs implied in the management of high-level waste and intermediate-level long-lived waste, in the case of both deep geological disposal and long-term storage pending more advanced research on a disposal solution, which led to milestones being set for the development of the Cigeo Project as a key factor in the public decision-making process;

- Regarding the management of special categories of waste (such as waste from uranium conversion, legacy waste and mining waste), strong local demand regarding the management of such waste, that needs to be aligned with management principles set out under a national strategy.

Whereas there is an interdisciplinary PNGMDR Working Group, bringing together the producers and managers of radioactive waste, the authorities tasked with assessment and regulation, and environmental protection non-profits, which meets three to five times every year since 2003; whose actions are considered relevant by all the stakeholders and whose existence has been found to be good practice as a result of the review conducted by an international group of experts in 2018,

Have decided that:

Article 1

The National Radioactive Materials and Waste Management Plan (PNGMDR) provided for under Article L. 542-1-2 of the French Environment Code will be updated to its fifth edition, in close liaison with the PNGMDR Working Group, with a view to holding a public consultation before the end of the year 2020.

Article 2

Aligning the National Radioactive Materials and Waste Management Plan with the strategic directions of France's energy policy

The National Radioactive Materials and Waste Management Plan will be aligned more closely with the strategic directions of France's energy policy, by clarifying how it interacts with energy policy and with nuclear facility decommissioning and dismantling strategies.

A proposal will be made to extend the period covered by the National Radioactive Materials and Waste Management Plan (PNGMDR) from three years to five years in order to align with the Multi-Year Energy Plan (PPE) mentioned in Article L. 141-1 of the French Energy Code.

Article 3

Governance over radioactive materials and waste management

A proposal will be made to extend the governance body that oversees the PNGMDR to include elected members of the French government and civil society and local authority representatives, in addition to representatives of environmental protection non-profit organisations;

When drawing up subsequent PNGMDR plans, a process designed to ensure greater involvement on the part of the stakeholders will be implemented, entailing, in particular, the appointment of a figure from outside the Government and the French Nuclear Safety Authority (ASN) to coordinate the preparatory work on strategic directions.

The PNGMDR Working Group will pursue its work on the operational implementation and regular analysis of the results of studies relating to the Plan, jointly chaired by the French Energy Ministry and ASN.

Within the framework of implementing the next PNGMDR, regular communication, easily accessed by the general public, on assessments of the performance of waste management solutions will be sought. This will be designed to inform the public of factual, consolidated data that can be used to understand the issues.

Article 4

Radioactive materials management

Regulation of the reprocessing and recycling of radioactive materials will be tightened, including with regard to the possible solutions envisaged and the volumes involved, setting out action plans including milestones to which the industry partners will be required to commit and which will be subject to review at regular intervals.

Studies on the feasibility of disposing of radioactive substances for which no subsequent use is planned will be pursued.

Article 5

Spent fuel storage

The PNGMDR will provide for the pursuit of studies relating to implementation of new centralised underwater storage facilities, factoring in the lead times required for construction.

The PNGMDR will provide for studies to be carried out to assess in greater detail the possible saturation of spent fuel storage facilities in view of the strategies set out in the PPE.

The PNGMDR will also provide for the identification of long-term storage needs, in light of the amount of time required to build new storage facilities and in line with different scenarios regarding changes in French energy policy.

The French Government will extend the scope of the National Inventory of Radioactive Materials and Waste provided for under Article L. 542-12 of the French Environment Code, to ensure that it allows for the regular monitoring of storage capacity.

The PNGMDR will also examine the lead times for deploying a dry storage solution and the characteristics of the spent fuel that could be stored in such a facility, if such a solution proved necessary to address a major problem affecting the fuel cycle or due to a change in energy policy.

Article 6

Management of very low-level waste

The PNGMDR will provide for the pursuit of research on additional disposal capacity, by identifying the site for a second disposal facility, possibly within the zone of interest studied in the area of Vendeuvre-Soulaines, and comparing the advantages and disadvantages, from the viewpoint of protecting public health, safety and the environment, of decentralised disposal facilities located in proximity to the producers' sites.

The French Government will undertake changes to the regulatory framework applicable to management of very low-level waste, with a view to enabling a new option for targeted exemptions, after fusion and decontamination, for reprocessing and re-using, on a case-by-case basis, very low-level radioactive metal waste.

Recommendations will be made under the PNGMDR with regard to the procedures relating to such exemptions, in terms of safety and radiological protection, citizen participation, transparency, monitoring and traceability, taking into consideration the studies conducted by France’s High Committee for Transparency and Information on Nuclear Security (HCTISN) on this subject.

Article 7

Management of low-level long-lived waste

The PNGMDR will provide for the pursuit of studies conducted under the current PNGMDR, setting out a management strategy that factors in the diversity of low-level long-lived waste.

This strategy will integrate the characterisation of safety issues and of environmental and local issues in relation to different management solutions, setting out the possible role of the zone of interest being studied in Vendeuvre-Soulaines, and providing for the definition of a permanent management solution for the waste, including legacy waste, produced at the Orano Malvési plant.

Article 8

Management of high-level waste and intermediate-level long-lived waste

The PNGMDR will specify the conditions relating to ensuring the reversibility of disposal, and particularly with regard to the retrievability of waste packages, the decision-making milestones in the Cigeo Project, and the governance body to be formed to review the choices made.

The PNGMDR will set out the objectives and criteria for the success of the industrial pilot phase provided for under Article L. 542-10-1 of the French Environment Code, the procedures for keeping the public informed between updates of the Master Plan for Operations (PDE, the *Plan directeur d'exploitation*) provided for under Article L. 542-10-1 of the French Environment Code, together with the procedures for involving the general public in the key development stages of the Cigeo Project.

Based mainly on the report submitted by IRSN for the purposes of the public debate, presenting an overview of international research on alternatives to deep geological disposal, the PNGMDR will provide for the organisation of public support for research on possible treatment solutions, to identify avenues that may be worth pursuing further, drawing on the pooled expertise of various research bodies (the CEA, CNRS, IRSN, among others). It will set out the procedures for keeping the public informed on this subject.

The updated assessment of costs associated with the Cigeo Project as decreed by France's Minister for Energy in accordance with Article L. 542-12 of the French Environment Code, will be published during the process to examine the licence application for the construction of Cigeo.

Article 9

Management of special waste categories

The principles applying to management of legacy uranium conversion treatment residues, legacy disposal facilities and mining waste will be set out under the next PNGMDR. The administrative authorities with competence in the matter will bear the responsibility for implementing these principles, within the regulatory framework applicable to facilities classified for environmental protection (ICPEs) or to basic nuclear installations. An improved system for informing the local community and promoting participation in decisions affecting sites used for the storage and disposal of these special waste substances will be sought.

Article 10

Factoring environmental, public health and economic issues into waste management

Improvements will be made to assessing the impact on the environment, public health and the economy of the choices made under the PNGMDR regarding radioactive materials and waste management.

An inventory of the cross-cutting issues revealed to be highly sensitive in the course of the public debate (transportation, the environment, health, the economy, the hazardous nature of the waste and impact on the region, etc.), will be drawn up by means of a citizen participation process and the procedures for addressing these issues will be set out in the PNGMDR.

Article 11

This Decision will be published in the *Journal officiel* (Official Journal) of the French Republic.