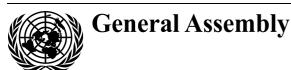
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Use of nuclear power sources in outer space

## Workshop on the Use of Nuclear Power Sources in Outer Space: current and planned applications, and challenges

Paper submitted by France\*\*

#### Summary

Since 2005, France has hosted the International Thermonuclear Experimental Reactor (ITER) research project, which is aimed at demonstrating the scientific and technical viability of using nuclear fusion as a new source of energy for peaceful purposes. Following the establishment of large toroidal chambers with magnetic coils (tokamaks), such as the JT-60 in Japan, the Tokamak Fusion Test Reactor in the United States of America, the Joint European Torus in the United Kingdom of Great Britain and Northern Ireland and the Tore Supra in France, the ITER project is in its final research phase preceding the construction of an industrial prototype, the Demonstration Power Plant reactor, which will use fusion to produce electricity by 2050. The ITER project is the result of international collaboration among major global powers, China, India, Japan, the Republic of Korea, the Russian Federation and the United States, and the European Atomic Energy Community. On 21 November 2006, the seven partners signed the Agreement on the Establishment of the ITER International Fusion Energy Organization for the Joint Implementation of the ITER Project. The ITER Agreement establishes the ITER International Fusion Energy Organization and sets out the legal and financial framework for cooperation

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<sup>\*</sup> A/AC.105/C.1/L.310.

<sup>\*\*</sup> Letter from Marc Léger, Director for Legal Affairs and Litigation of the Alternative Energies and Atomic Energy Commission of France, in relation to the issue of liability in the specific case of the ITER International Fusion Energy Organization.

between the partners, notably the distribution of their contributions. Each partner makes its contribution — either financial or in-kind — to the ITER Organization via an ad hoc legal entity called a domestic agency. According to article 3 of the ITER Agreement, the ITER Organization is responsible, in particular, for constructing, operating, exploiting and deactivating the ITER facilities, encouraging the exploitation of the ITER facilities by the laboratories, other institutions and personnel participating in the fusion energy research and development programmes of the partners and promoting public understanding and acceptance of fusion energy.

In France, the implementation of this international project has raised a number of questions relating to the international organization tasked with managing the project on behalf of all the partners, its rights and obligations and associated liability (see Laetitia Grammatico-Vidal, "The International Thermonuclear Experimental Reactor (ITER) International Organisation: which laws apply to this international nuclear operator?", *Nuclear Law Bulletin*, No. 17, vol. 2009 (2)).

# I. Obligations arising from coordination of the International Thermonuclear Experimental Reactor project in France

- The construction site for the International Thermonuclear Experimental Reactor (ITER) installation was agreed upon in 2005. Extensive research was carried out to determine which country should host the project. Given the considerable economic benefits generated by a project of such scope, there was a significant political dimension to the decision-making process. Two sites were rapidly identified — Rokkasho in northern Japan and Cadarache in south-western France. The Japanese site proposal was supported by the Republic of Korea and the United States of America and the French site proposal by China and the Russian Federation. After long negotiations, an agreement was signed in Geneva on 5 May 2005 by the European Union and Japan setting out the conditions for selecting the ITER construction site. The agreement stipulated that the host party of the ITER project would bear 40 per cent of the construction costs while the non-host party would benefit from 20 per cent of the industrial contracts associated with the project, 20 per cent of the ITER International Fusion Energy Organization's permanent staff and the host country's support of its candidature for the post of Director-General of the ITER Organization. On 28 June 2005, all of the partners signed a joint statement designating Cadarache as the host site for the ITER project. In accordance with the commitments undertaken by the European Union in Geneva, Kaname Ikeda of Japan became the first Director-General of the ITER Organization in December 2005, taking office in October 2007. He was replaced by Osamu Motojima, also of Japan, in July 2010.
- 2. The ITER Organization is responsible for coordinating the project. It is required to do so in close cooperation with the domestic agencies and the legal entities responsible for representing the partners. The European Atomic Energy Community (EURATOM) and France have specific obligations as host party and host State for the ITER project, respectively; however, France, which hosts the Organization's headquarters and the ITER facilities, is not a party to the ITER Agreement. The complexity of the ITER project lies in particular in the distribution of roles and responsibilities among the stakeholders in the project on the basis of the obligations that they have undertaken or the responsibilities that have been delegated to them.

#### A. The distribution of roles among the stakeholders

#### 1. The role of the ITER Organization and the domestic agencies

- 3. The ITER Organization and all its members are responsible for coordinating the ITER project through their domestic agencies. Each domestic agency contributes to the project, either financially or in-kind. According to article 8 of the ITER Agreement, in-kind contributions can take various forms, including components, equipment, materials, other specific goods and services or seconded staff.
- 4. The various types of member contribution are set out in two documents, entitled "Value estimates for ITER phases of construction, operation, deactivation and decommissioning and form of party contributions" and "Cost-sharing for all

phases of the ITER project". The documents are updated as necessary, on the basis of a decision by the ITER Council. (The ITER Council is the main decision-making body of the ITER Organization. It consists of representatives of each of the seven partners and meets twice a year. It appoints the Director-General and adopts the staff regulations and regulations governing the management of project resources.) Member contributions — in particular in-kind contributions — are determined on the basis of the production capacities and specific technical competencies of the members. Member contributions are therefore diverse but fair. Among the seven domestic agencies of the ITER project, the European domestic agency holds special status owing to the role of EURATOM as host party of the ITER project.

## 2. The special roles of EURATOM and France as host party and host State for the ITER project, respectively

- 5. The European domestic agency, the European Joint Undertaking for ITER and the Development of Fusion Energy (Fusion for Energy), was created by a decision of the Council of the European Union of 27 March 2007. (The agency was established for a period of 35 years by Council of the European Union decision 2007/198/EURATOM of 27 March 2007.) The agency, which constitutes a joint undertaking according to Community law and is based in Barcelona, Spain, is responsible for implementing the commitments of the European Union with regard to the ITER project.
- 6. Its principal task is to provide the ITER Organization with the contribution of EURATOM. Accordingly, it supervises the preparation of the ITER project site and provides the Organization with the necessary equipment, components, materials and human resources. It is also responsible for providing the Organization with site support in implementing the project.
- In that context, article 11 of the ITER Agreement authorizes EURATOM, as host party of the project, to appoint an entity to act on its behalf in order to provide the ITER Organization with the site support necessary for the implementation of the project. Accordingly, the European Commission designated the Atomic Energy Commission (CEA), known since 9 March 2010 as the Alternative Energies and Atomic Energy Commission, of France as host organization for the ITER project at the first session of the Interim ITER Council on 21 November 2006. Since France was not party to the ITER Agreement, it was required to conclude a host agreement with the European domestic agency concerning the site and the support to be provided.1 The Arrangement on Site Support, signed on 18 August 2009 by the European domestic agency (Fusion for Energy), CEA and Agence ITER France (AIF), establishes the distribution of responsibilities and obligations of EURATOM as host party and of France as host State. In accordance with the provisions of the Arrangement, France and the ITER Organization have established the manner in which that support is to be provided in a specific agreement entitled the Site Support Agreement, signed on 19 November 2009 by the ITER Organization, CEA and AIF.

Council decision 2007/198/EURATOM, annex, article 18, of 27 March 2007, establishing the European Joint Undertaking for ITER and the Development of Fusion Energy and conferring advantages upon it.

- 8. This legal framework gives France a special role. In order to successfully fulfil all its functions, France has established various bodies dedicated to the implementation of the ITER project. Firstly, a High Representative for the implementation of the ITER project in France was appointed by the Prime Minister. (Since 2007, the representative has been Bernard Bigot, who has also served as Chairman of CEA since January 2009.) The role of the High Representative is to mobilize central and decentralized French governmental bodies around the ITER project and to coordinate the activities of all French agencies involved in its development. One of those agencies, CEA, the host organization of the project, has created its own autonomous dedicated agency, Agence ITER France, established in 2006. AIF provides a technical and operational interface for European and international authorities, collects funding from the State, regional and local authorities, and CEA, and provides ITER site support, as delegated by the European Union under the Arrangement on Site Support.
- 9. First and foremost, France is required by the ITER Agreement to provide, at its own expense, the ITER site, which will host all the buildings and facilities necessary for the construction and operation of the ITER reactor.<sup>2</sup> The provision of the site was formalized on 6 July 2010 through the signing by CEA and the ITER Organization of an emphyteutic lease. The lease, which is valid for 32 years and six months, grants the Organization ownership of existing and future buildings constructed on the ITER site for the duration of the lease. On expiry of the lease, the site and all its facilities will be returned to CEA, which will be responsible for arranging and overseeing the dismantling of the ITER installation on behalf of France, on the basis of specific contributions by all the partners. In that regard, AIF is responsible for overseeing the Organization's evaluation of dismantling costs, establishment of procedures for the management of radioactive waste and generation of the necessary resources and funds.
- 10. In accordance with the provisions of the Arrangement on Site Support, France is required to implement some of the obligations undertaken by the European Union. Accordingly, it has undertaken all activities relating to the preparation of the site provided to the ITER Organization and has arranged the construction of the buildings of the future ITER headquarters and connection of the power supply for the ITER installation. The European domestic agency, for its part, remains responsible for constructing certain buildings on the ITER site, notably the 12,000-square metre poloidal field (PF) coil building, which will be used for assembling PF coils for the ITER reactor.
- 11. France has also undertaken to provide, through CEA and AIF, certain services on behalf of EURATOM in order to facilitate the coordination of the project by the ITER Organization. Those services may include the provision of staff, medical services, catering services, safety management support or electricity and water supply. Site support may also take the form of language classes or assistance in the completion of administrative formalities in order to facilitate the integration of the Organization's staff in France. (ITER staff benefit from special residence permits issued by the Ministry of Foreign Affairs of France, which facilitate their entry into

<sup>&</sup>lt;sup>2</sup> ITER Agreement, annex on site support, article 4. The ITER site provided by France is required to meet the reference conditions set out by the ITER Site Requirements and Site Design Assumptions, adopted by the Interim ITER Council in 2000.

and residence in France.) For example, France has undertaken to establish, at its own expense, an international school for the children of those staff.<sup>3</sup> The school, which is funded by the Provence-Alpes-Côte-d'Azur region, was opened on 24 January 2011.

- 12. Lastly, France is playing a vital role in organizing the transportation of components for the ITER installation. All equipment and components contributed by member countries must be transported to the ITER site to be assembled. Their particularly large dimensions have necessitated the construction of new roads and the adaptation of existing roads and infrastructure. France is responsible for the adaptation and construction of the roads, paths and bridges that comprise the 100-kilometre route from the Port autonome de Marseille to the ITER site.4 The route must permit access to the boundary of the site for the maximum size and weights of equipment to be delivered for the ITER project and for staff or visitors. All work to adapt existing infrastructure or construct new infrastructure has now been completed. However, France remains responsible for transport coordination. That task has been delegated to a dedicated AIF unit that will coordinate transport along the ITER route. (The task of coordinating the transport along the ITER route was delegated to AIF in a letter dated 22 February 2011 from the Minister for Industry, Energy and the Digital Economy and the Minister for Ecology, Sustainable Development, Transport and Housing.)
- 13. The choice of Cadarache as host site for the ITER project represents a significant opportunity for France, but also entails numerous operational and financial responsibilities. In addition to the commitments undertaken by France in its capacity as host State for the ITER project and representative of the host party, France must also ensure the smooth implementation of the project and its compliance with relevant regulations.

#### B. Obligation to adhere to French law

- 14. Although the ITER installation is operated by an international organization that enjoys certain privileges and immunities,<sup>5</sup> it is subject to French law within the limits set out in the ITER Agreement. Taking into account the objectives of the ITER Organization, the project partners have accepted this exception to the privileges and immunities granted to the Organization in order to ensure the safety of the ITER installation.
- 15. The conformity of the design, construction and operation of the ITER installation is the result of close cooperation between the ITER Organization and the French authorities.

<sup>&</sup>lt;sup>3</sup> ITER Agreement, annex on site support, article 6.

<sup>&</sup>lt;sup>4</sup> Ibid., article 4(c)

<sup>5</sup> All privileges and immunities granted to the ITER Organization are detailed in the Agreement on the Privileges and Immunities of the ITER International Fusion Energy Organization for the Joint Implementation of the ITER Project, concluded by six of the seven ITER project partners on 21 November 2006.

#### 1. Exception to the privileges and immunities granted to the ITER Organization

16. As an international organization, the ITER Organization is granted certain privileges and immunities. In particular, its buildings and premises, archives and documents are inviolable. Its privileges and immunities arise from the provisions of the ITER Agreement and its implementing texts.<sup>6</sup>

#### 17. However, restrictions apply to those rights:

- (a) Firstly, the ITER Agreement provides for the possibility of waiving immunities granted to the ITER Organization, the Director-General and staff in any case where the authority competent to waive the immunity considers that such immunity would impede the course of justice and that waiver would not prejudice the purposes for which it was accorded and where, in the case of the ITER Organization, the Director-General and the staff, the Council determines that such a waiver would not be contrary to the interests of the ITER Organization and its members;
- (b) Secondly, the ITER Agreement establishes that the privileges and immunities granted shall neither diminish nor affect the duty of the ITER Organization, the Director-General and members of staff to comply with the regulations set out in article 14 of the ITER Agreement, namely, applicable national laws and regulations of the host State in the fields of public and occupational health and safety, nuclear safety, radiation protection, licensing, nuclear substances, environmental protection and protection from acts of malevolence.
- 18. The procedures relating to the hosting of the ITER project in France, including in relation to application of the privileges and immunities granted to the ITER Organization and the application of national law, are governed by the Agreement between the Government of the French Republic and the ITER International Fusion Energy Organization regarding the Headquarters of the ITER Organization and the Privileges and Immunities of the ITER Organization on French Territory, concluded by the ITER Organization and France. The Headquarters Agreement sets out the conditions governing the application of national law to the ITER Organization as an international organization holding the status of a nuclear operator and the procedures for implementing those conditions in close cooperation with the French authorities.

#### 2. Implementation ensured by close cooperation with the host State

19. In accordance with the privileges and immunities granted to the ITER Organization, article 17 of the Headquarters Agreement provides for cooperation between the ITER Organization and the competent French authorities in order to facilitate the proper administration of justice, to ensure the observance of police regulations and regulations concerning public health and safety, licensing, environmental protection, labour inspection or other similar national legislation, and to prevent any abuse of the aforementioned privileges and immunities.

<sup>&</sup>lt;sup>6</sup> The Agreement on Privileges and Immunities (see footnote 5), the Agreement between the Government of the French Republic and the ITER International Fusion Energy Organization regarding the Headquarters of the ITER Organization and the Privileges and Immunities of the ITER Organization on French Territory of 7 November 2007 and the Staff Regulations of the ITER Organization.

- 20. The Headquarters Agreement also specifies the procedures for applying French law in the fields of nuclear security, waste management, transportation of radioactive substances, decommissioning of nuclear installations and radiation protection. It also provides for the conclusion by the ITER Organization and the French authorities of additional protocols in order to clarify the procedures for application of the Headquarters Agreement.
- 21. The ITER Organization and France have provided for two cases in which such protocols should be concluded protection against the dissemination of classified information relating to measures aimed at the protection of ITER facilities and the carrying out of on-site labour inspections in matters relating to public and occupational health and safety. The close involvement of France, as host State, in activities conducted in cooperation with the ITER Organization illustrates its will to comply with all its commitments. Moreover, France is strict in enforcing its laws and regulations in the fields specified in the ITER Agreement. For example, in the field of occupational health and safety in particular, the French authorities responsible for monitoring compliance with the applicable laws are authorized to carry out inspections on the ITER site in order to ensure the compliance of the Organization's activities with French labour laws. However, taking into account the inviolability of the buildings and premises of the ITER site, the procedures for such monitoring have been adapted and are set out in an additional protocol to the Headquarters Agreement signed in January 2009.
- 22. Further protocols are under negotiation in order to determine the conditions applicable to operations conducted on the ITER site by law enforcement services (the gendarmerie or national police) or authorities responsible for combating malicious acts. The Headquarters Agreement allows the ITER Organization to conclude additional protocols with the French authorities in any fields in which such a protocol proves necessary for the application of that Agreement.
- 23. This close cooperation between the French authorities and the ITER Organization is the result of a shared desire to contribute to the smooth implementation of the ITER project. Although certain privileges and immunities may be waived or limited, certain provisions of French law may also be adapted to the specific case of the ITER Organization. The joint application of the Organization's privileges and immunities and the provisions of French law is the result of negotiations and mutual concessions. Those negotiations ensure that the interests of the two parties are balanced and treated fairly.
- 24. Although all the commitments and responsibilities of the parties relating to the ITER project are clearly defined by the relevant instruments governing that project, the liability regime applicable to the ITER Organization warrants examination in order to clarify the conditions governing its application, and its limitations.

#### II. The liability regime applicable to the ITER Organization

## A. Liability of the ITER Organization as an international organization

25. The ITER Organization has the conventional status of an international organization as regards liability.

#### 1. Immunity from jurisdiction and execution granted to the ITER Organization

- 26. As an international organization, the ITER Organization is subject to international law. It has international legal personality (see article 5 of the ITER Agreement), which gives it the capacity to conclude agreements with States and/or international organizations and, more broadly, to enjoy rights and undertake obligations. In the territory of its members, it has the legal capacity to conclude contracts, acquire or dispose of movable and immovable property, obtain licences and institute legal proceedings.
- 27. Like any international organization, it enjoys certain privileges and immunities, as indicated above. The members of its staff enjoy immunity from judicial process, inviolability of their official documents and papers, and services relating to immigration and registration as foreign nationals. It should also be noted that the Director-General and the Principal Deputy Director-General of the ITER Organization hold the status of head of a diplomatic mission and the privileges associated therewith under the Vienna Convention on Diplomatic Relations.<sup>7</sup>
- 28. In accordance with the provisions of the Headquarters Agreement, the ITER Organization is granted immunity from jurisdiction and execution with respect to any activity it undertakes in the exercise of its duties, and also immunity from any form of administrative or provisional judicial constraint. Moreover, the property and assets of the Organization, wherever situated, are immune from any form of requisition, confiscation, expropriation or sequestration. However, those immunities may be lifted in cases in which they are expressly waived by the Organization. They may also be lifted in the event of civil action brought by a third party for damage arising from an accident caused by a vehicle belonging to, or operated on behalf of, the Organization, or in respect of a motor traffic offence involving such a vehicle, or in the event of an attachment of salary enforced for a debt of a staff member in application of a legal decision.
- 29. Compliance with those provisions requires close cooperation between the ITER Organization and the French authorities. The Ministry of Foreign Affairs of France plays an essential role in that regard, notably by developing specific administrative procedures aimed at improving the conditions governing the entry into and residence in France of permanent or seconded staff members of the ITER Organization. Other relevant ministries are also involved in the hosting of the ITER project in France. Accordingly, a guide designed to assist foreign enterprises wishing to loan their staff to the ITER Organization or its domestic agencies was published in May 2011 with the support of several French ministries.

<sup>&</sup>lt;sup>7</sup> United Nations, Treaty Series, vol. 500, No. 7310.

30. With regard to liability, the ITER Agreement remains the reference framework that governs the Organization's activities.

#### 2. Contractual and non-contractual liability of the ITER Organization

- 31. Only article 15 of the ITER Agreement provides expressly for the liability regime applicable to the ITER Organization. It defines the contractual and non-contractual liability of the Organization and establishes the provisions applicable to each.
- 32. Article 15, paragraph 1, of the ITER Agreement provides that contractual liability is governed by the relevant contractual provisions, which shall be construed in accordance with the law applicable to the contract.
- 33. The contractual liability of the ITER Organization therefore depends on the contract in question, insofar as no particular liability regime is otherwise provided for. The provisions of the ITER Agreement are very general and therefore allow for case-by-case interpretation.
- 34. Although the provisions relating to the non-contractual liability of the ITER Organization are much more detailed, they only loosely outline the activities of the Organization. They provide (article 15, paragraph 2) for appropriate compensation for any damage caused by the ITER Organization to such extent as the Organization is subject to a legal liability under the relevant law. The ITER Council is responsible for dealing with cases in which the non-contractual liability of the ITER Organization is incurred in that it approves arrangements for compensation for the damage caused. The non-contractual liability of the Organization may in no case be construed as a waiver of the aforementioned privileges and immunities.
- 35. With regard to the general nature of the provisions, particular attention should be paid to the liability clauses of contracts concluded by the ITER Organization. To date, one of the most important contracts relates to the transportation of installation components. The contract was concluded by the ITER Organization and a "logistic and service provider", a group of enterprises providing all services relating to transportation. In view of the importance of the contract, the domestic agencies were involved in the procurement proceedings, giving their opinion regarding the bidders and subsequently supporting the successful bidder.
- 36. Like any international organization, the ITER Organization is subject to the provisions of public international law applicable to its status. The liability regime is no exception to that principle. However, since the Organization is responsible for operating a nuclear installation, it assumes increased liability.

# B. Liability of the ITER Organization as operator of a basic nuclear installation, employer of personnel exposed to ionizing radiation, contracting organization, operator of a sensitive installation and entity holding stocks of nuclear material

37. Pursuant to the provisions of the ITER Agreement, the ITER Organization is responsible for operating the ITER reactor, which is considered a basic nuclear

installation according to French law.<sup>8</sup> That role includes the design, construction, operation and decommissioning of the installation. It is the only basic nuclear installation in France that is operated by an international organization. Since the ITER reactor is located in French territory, the ITER Organization is required to comply with French law as applicable to certain areas, namely public and occupational health and safety, nuclear safety, radiation protection, licensing, nuclear substances, environmental protection and protection from acts of malevolence (ITER Agreement, article 14). Such compliance is exceptional in the case of an international organization, insofar as the organization may be required to answer to the French authorities, in particular the Nuclear Safety Authority and the Labour Inspectorate.

### 1. Obligation of the ITER Organization to comply with regulations applicable to basic nuclear installations

- 38. In conformity with its obligations, the ITER Organization is required to comply with all regulations applicable to basic nuclear installations located in French territory. Those regulations, which include the Act on Transparency and Safety in the Nuclear Field (see footnote 8) and its implementing texts, apply not only to the operation of the installation but also to its design, construction and decommissioning.
- 39. CEA, as host organization, is required to contribute, through AIF, to the implementation of the necessary procedures for constructing the ITER basic nuclear installation in France.
- 40. The regime applicable to basic nuclear installations in French territory involves several compulsory procedures at various stages of the life of the installation. Prior to the start of construction work, French law requires the preparation of a safety options file and the submission of a construction licence application. If granted, the licence confers on the applicant the status of nuclear operator. The ITER Organization was granted that status on 31 January 2008.
- 41. The ITER Organization is also required to comply with the requirements of French law pertaining to public information. A local information commission was established in December 2009 in accordance with the above-mentioned Act No. 2006-686. The commission is an independent body that monitors information and offers advice on matters relating to nuclear safety, radiation protection and impacts on the environment and people. The ITER Organization and the Nuclear Safety Authority, which is an independent administrative body responsible for monitoring basic nuclear installations located in French territory, provide the commission with any information that may assist in the exercise of its functions, and help with its work. The construction licence application for the basic nuclear

<sup>8</sup> Article 28 of Act No. 2006-686 of 13 June 2006 on Transparency and Safety in the Nuclear Field defines a basic nuclear installation as a nuclear reactor, an installation having specific characteristics relating to the preparation, enrichment, production, processing and storage of nuclear fuels or the treatment, storage or disposal of radioactive wastes, an installation containing radioactive or fissile substances, or a particle accelerator.

<sup>9</sup> In particular, Decree No. 2007-1557 of 2 November 2007 on basic nuclear installations and on the regulation of the nuclear safety aspects of the radioactive material transports, which sets out the applicable licensing procedures.

installation was submitted for public examination in mid-2011, after additional information was provided by the ITER Organization upon the request of the Nuclear Safety Authority.

- 42. It was possible for construction work on the ITER installation to begin only after a construction permit had been granted pursuant to French regulations on urban planning licences. Before the installation enters into operation, an operating licence must be obtained from the Nuclear Safety Authority, which, once an inter-ministerial decree approving the construction has been published, may decide to establish technical requirements with which the installation must comply.
- 43. Article 2 of the annex to the Headquarters Agreement on the procedures for cooperation between the French authorities and the ITER Organization, requires the ITER Organization to undergo checks by the Nuclear Safety Authority. According to article 12 of that annex, the Authority may notify the Organization of any corrective actions it deems necessary and may even, in the event of an emergency, order that the operation of the ITER facilities be suspended. Decisions to take such measures are generally made as a result of thematic inspections, which are conducted on a regular basis by inspectors from the Nuclear Safety Authority. Following the accident at the Fukushima Daiichi nuclear power plant in Japan in March 2011, the Prime Minister of France tasked the Nuclear Safety Authority with carrying out additional safety assessments of basic nuclear installations. Since the ITER Organization is subject to the legal regime applicable to such installations in France, it too will undergo such an assessment. 10

#### 2. Obligation of the ITER Organization to comply with French labour laws

- 44. The ITER Organization is required to comply with French law as applicable to certain areas set out in article 14 of the ITER Agreement. Those areas include radiation protection and occupational health and safety (referred to as "health and safety in the workplace" since the amendment of the Labour Code in 2008). As a nuclear operator, the ITER Organization must ensure not only the safety of its installations but also that of its personnel. The Organization's Director-General is responsible for ensuring that regulations relating to protection from ionizing radiation and to occupational health and safety in general are properly implemented.
- 45. With regard to radiation protection, the Labour Code of France sets out a single regime applicable to all salaried and non-salaried personnel who may be exposed to ionizing radiation while at work. Working areas exposed to such radiation must be demarcated and a radiation protection officer designated. Technical inspections to verify adequate radiation protection must be conducted on a regular basis. They involve checks of sources of ionizing radiation, protective and warning systems, and the management of waste and effluents. The inspections are conducted by the operator of the nuclear installation and by approved external entities.
- 46. Labour inspectors and controllers and radiation protection inspectors working for the Nuclear Safety Authority are responsible for monitoring compliance with

<sup>&</sup>lt;sup>10</sup> See decision No. 2011-DC-0215 of 5 May 2011 of the Nuclear Safety Authority, requiring the basic nuclear installation of the ITER Organization to undergo a safety assessment in the light of the accident at the Fukushima Daiichi nuclear plant.

French labour regulations relating to radiation protection. They may take samples, seize objects or documents and request certain information. As indicated previously, requirements relating to the protection of personnel from radiation take precedence over the privileges and immunities accorded to the ITER Organization.

- 47. That is also the case in the broader area of occupational health and safety, in relation to which an additional protocol to the Headquarters Agreement was signed in January 2009, as mentioned previously. The protocol sets out the conditions governing access to the ITER site by officials of the Labour Inspectorate. Article 14 of the ITER Agreement thus provides scope for partially limiting the privilege of inviolability of the site. The protocol establishes the conditions governing access by labour inspectors in relation specifically to the ITER Organization.
- 48. Moreover, as a contracting organization, the ITER Organization is required to play its part in ensuring the safety of all personnel present on the construction site. In order to contribute to management of the risks that may result from the involvement of a large number of businesses in on-site activities, a health and safety coordinator is appointed to ensure compliance with safety regulations on the ITER site. The coordinator's responsibilities include devising a general plan for coordination in relation to health and safety, maintaining a written record of coordination activities and carrying out inspections if necessary.
- 49. It is important to note that the ITER Organization and the French authorities have agreed that occupational health and safety should be ensured through close collaboration among the various parties working on the ITER site and, in particular, with the Labour Inspectorate. Pursuant to the above-mentioned protocol, the role of the Labour Inspectorate, in collaboration with the Director-General of the ITER Organization, is to ensure that provisions relating to radiation protection and health and safety in the workplace are duly implemented on the ITER site. Article 2 of the protocol also gives the Inspectorate an advisory role with regard to the application of French legislation on health and safety in the workplace.

#### 3. Obligation of the ITER Organization to comply with the Defence Code of France

- 50. Article 14 of the ITER Agreement stipulates that the ITER Organization must comply with the provisions of French law relating to nuclear substances and protection from acts of malevolence. The Organization must therefore adhere to the provisions of the Defence Code of France relating to the protection and control of nuclear material (which, under article R.1333-1.II of the Code, includes deuterium and tritium) and the protection of installations and sites of vital importance.
- 51. Compliance with those provisions is monitored by the Office of the Senior Defence and Security Official, a special administrative authority whose inspectors are responsible for monitoring the application of relevant regulations.

<sup>11</sup> Act No. 93-1418 of 31 December 1993 establishes safety provisions for building and civil engineering sites.

#### **III.** Conclusion

- 52. In conclusion, the ITER project is the first of its kind with respect to liability in that it involves an international organization tasked with operating a nuclear installation in the same way that other operators of such installations in France are authorized to do so.
- 53. While the ITER Organization has international legal personality, it is also required to comply with the provisions of national law applicable to the operation of such installations and, in particular, with any corrective and control measures that may be taken by the Nuclear Safety Authority.