



NUCLEAR SAFETY

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Compact nuclear reactors

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TechnicAtome

Nuclear safety has always been TechnicAtome's top priority.

In all of its activities, in every phase of the lifecycle of the facilities in which it works, and for all of the operations it carries out, achieving and maintaining nuclear safety is a top concern for TechnicAtome.

TechnicAtome aims for the highest possible level of safety:

- > The nuclear safety of its products, operations and related shipments
- > The health and safety of all of its employees and subcontractors
- > Protection of its employees, service providers and the public from ionizing radiation
- > Protection of the environment through sampling and monitoring of the environmental footprint
- > Protection from acts of malfeasance.

This Nuclear Safety Charter spells out TechnicAtome's commitments in these fields. Its partner companies are aware of it and have committed to applying its principles to their activities and in their organizations.

This Charter is the common reference and the basis of commitment to this top priority, for the individual, for the company and for all our stakeholders.

It is the written translation of the company's nuclear safety culture and is broken down into organizational principles, actions principles and information sharing, and is regularly reviewed and updated.

TechnicAtome goes beyond its compliance with applicable regulation in its continuous performance improvement initiative, in line with its management system.

To achieve the highest possible level of nuclear safety, the managements of TechnicAtome and of each of its partner companies have jointly committed to:

> Setting up an organization:

- Which takes into account the Nuclear Operator's prime responsibility as a designer of compact nuclear reactors and an industrial operator of facilities
- With a clearly defined and well-known system of responsibilities which is rolled out with available means
- Which includes independent controls contributing to the reliability of operations
- For crisis management, including interfaces with the different stakeholders.

> Complying in all actions with the principles for:

- Applying fundamental safety rules throughout the facility lifecycle
- Advance risk analysis and a questioning attitude, the bases for nuclear safety culture
- A proactive approach to radiation protection, even beyond regulatory requirements
- Continuous efforts to reduce waste production and environmental impacts
- Employee involvement in nuclear safety improvement
- Identical consideration of service providers and their involvement in meeting nuclear safety objectives
- The necessary training, skills maintenance and instruction.

> Sharing information related to nuclear safety:

- By reporting events, including those constituting weak signals to be taken into account
- By maintaining nuclear safety conditions following existing indicators
- By providing formal annual reports analysing operations
- By promoting audits and inspections of organizations, operations and performance results.

Company	Function	Name	Date	Visa
TechnicAtome	President CEO	Loïc ROCARD	20/10/2017	
Stakeholders:				

ORGANIZATIONAL PRINCIPLES

**RESPONSIBILITY
SKILLS
CONTROL**



Management's responsibility

TechnicAtome's management has set up an organization which meets applicable legal requirements and is based on the principles described hereunder, which have been formalized in the Organizational Note MOGN106 as concerns nuclear safety.

Operator's prime responsibility, designer's responsibility

The fundamental principle of nuclear safety is the prime responsibility of the operator.

TechnicAtome is committed to achieving the highest level of nuclear safety in connection with its activities as an industrial operator of facilities for its nuclear facility owner customers and with its design of equipment and facilities.

In this regard, the company has a duty to alert its own management and that of its customer of anomalies, including those observed at the customer's site. In that case, if TechnicAtome deems that the safety of its personnel is not sufficiently assured under applicable regulatory requirements, the person responsible for the service has a duty to refuse to execute it.

The provisions of this Charter apply, in accordance with the rules and values explained in TechnicAtome's Code of Ethics.

Each entity manager is committed to following them.

A system of clearly defined responsibilities

At TechnicAtome, delegations of power in matters of nuclear safety are defined at the line management level: responsibility assumed at level (n) is the result of explicit delegation of power by level (n+1), within the limits of its own authority. The operator documents delegations of powers to the various levels of the organization and makes sure that each person thus delegated has the necessary skills, means and authority to exercise those powers.

Each site director is responsible for nuclear safety at his or her site. He or she sets up the appropriate organization to ensure that all of the regulatory requirements are followed for all aspects of nuclear safety, radiation protection, transportation safety, worker health and safety, environmental protection and protection from acts of malfeasance.

Independent controls

Each site director has the means of control necessary to the exercise of his or her delegated powers in matters of nuclear safety. He or she ensures that verification and assessment activities are carried out independently of the teams exercising this delegation.

A Safety, Health and Sustainable Development Department reporting to the Quality, Safety and Operations Support Department coordinates regulatory monitoring in these fields; provides leadership operating units; and contributes to the harvesting and sharing of operating experience.

Committees of experts from the different engineering areas (CEDIM*, CTI**, CESP***) review the various nuclear safety reports. They exercise regular or occasional control over engineering and operating activities related to nuclear safety in the projects carried out and the facilities in which TechnicAtome works.

A crisis management organization

TechnicAtome has set up its own crisis management organization, including in particular emergency management required under the CEA's crisis organization as owner-operator of the nuclear propulsion defence regulated facility at Cadarache, as well as that of the French Navy.

* Committee which reviews incident and modification documents

** Internal technical committee

*** Committee which reviews nuclear safety in the projects

ACTION PRINCIPLES

**ADVANCE ANALYSIS
PROACTIVE APPROACH
INVOLVEMENT OF ALL PLAYERS
CONTINUOUS IMPROVEMENT**

Nuclear safety applies to every stage in the facility lifecycle

Nuclear safety applies at every stage of design, construction, operation, shut-down and dismantling. Periodic reviews are carried out to assess compliance with regulatory requirements. Operating experience and the operational conditions characterizing the different stages of the facility lifecycle are taken into account.

Advance risk analysis and a questioning attitude, the bases for nuclear safety culture

Any change in operating conditions or in the execution of work in nuclear facilities is preceded by an analysis of the related risks. Workers receive awareness training to detect signs of an off-normal situation, to adopt a questioning attitude, to alert management when necessary and to be able to respond to it.

A proactive approach to radiation protection

TechnicAtome is committed to limited worker exposure to ionizing radiation to as low as reasonably achievable. This is known as the ALARA principle. Every year, objectives that go beyond the regulatory requirements are defined, and exposure is monitored on a monthly basis so that appropriate measures can be taken if necessary.

Continuous efforts to reduce waste production during operations and environmental impacts

TechnicAtome encourages the continuous reduction of the waste produced by operations. The same continuous improvement approach is applied to the management of liquid and gaseous effluents to control them and to lessen the environmental footprint.

Objectives are set annually and performance is monitored monthly.

Employee involvement in nuclear safety improvement

Each TechnicAtome employee carries with him or her an objective of exemplary in nuclear safety as part of the job.

The departments concerned create the conditions for employee participation in the practical implementation of preventive actions by making sure that:

- they are fully informed of the risks associated with their work,
- their supervisor listens to their suggestions for improving nuclear and occupational safety in work-related situations.

Anyone who observes an obvious malfunction or a breach of a regulatory requirement has a duty to alert his or her direct supervisor or the next level of management without fear of harassment.

Subcontractors receive the same consideration and are strongly involved in meeting nuclear safety objectives

Site managers or delegated persons must ensure that any person working in the facilities is informed of the risks he or she incurs and of the measures taken to prevent and manage those risks, and that he or she has received the necessary training.

They must also ensure that subcontractor personnel receive the same protection as regards those risks as do employees of TechnicAtome.

Subcontracting choices made by TechnicAtome include commitments in the field of nuclear safety.

Subcontractors must adhere to the principles of this Charter. TechnicAtome requires subcontractors to apply the same nuclear safety rules it applies to itself, and verifies their application.

A high level of know-how consolidated in skills development and maintenance and in training in emergency management

Suitable training is defined and regularly dispensed to achieve, maintain and improve this level of performance. Management practices include verification that the required level of skill has been achieved.

INFORMATION SHARING

EVENT REPORTING ANNUAL ASSESSMENTS



TechnicAtome is committed to providing reliable, relevant information to his oversight and control authorities enabling an objective appreciation of nuclear safety conditions as part of its activities.

Event reporting

In all of the facilities in which TechnicAtome works, nuclear events are ranked on the International Nuclear Event Scale (INES).

They are analysed together with the nuclear operator and stakeholders.

Every event in the various fields of nuclear safety, including those consisting of weak signals, are identified, shared and analysed.

Internal reporting

Management is briefed each month on indicators related to nuclear and occupational safety.

Indicators related to radiation protection and to the environment are also reported to Management each month.

Annual assessment of nuclear safety during nuclear facility operations

Every year, all nuclear sites in France prepare and publish a report on nuclear safety and radiation protection under article 21 of the law on Transparency and Safety in Nuclear Matters (TSN Law of June 13, 2006). This report is provided to the Local Information Commission established near the site as well as to the employee representation bodies.

TechnicAtome helps draw up this report on behalf of the CEA for activities relating to the nuclear propulsion defence regulated facility at Cadarache.

TechnicAtome publishes a nuclear safety report, events assessments, results and ways of progress. It shares the content of this report with its governance bodies.

Societal and Environmental Report

Every year, TechnicAtome draws up a Societal and Environmental Report based on indicators which have been reported, consolidated and demonstrated.

The reliability of the content of this report and the relevance of the demonstrations provided are systematically audited by an independent body.

Audited and inspected activities

Every year, audits and inspections are carried out internally as well as by the competent authorities to ensure compliance with Nuclear Safety fundamentals.

TechnicAtome is specialized in the design, construction, operation and maintenance of compact nuclear reactors.

TechnicAtome employs about 1,500 people and operates for naval propulsion, research, nuclear medicine and energy.

For more than 45 years, the company has been offering its nuclear engineering expertise on reactors, fuel and related facilities. TechnicAtome propose its customers solutions and products that meet the highest safety and availability standards.

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