FRENCH APPROACH TO PROTECTION OF CRITICAL SERVICES:
THE NUCLEAR FIELD

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APRIL 2009
PREAMBLE

• The physical protection of the nuclear sector is included in the French global approach of State protection and security.
SUMMARY

A STATE SECURITY ORGANIZATION BASED ON A DOUBLE STRUCTURE

• The national warning system called “Vigipirate” Plan

• The security of activities of critical importance and vital areas
  Application to protection of the nuclear sector
  ➢ The Nuclear Sector National Security Directive
  ➢ The Nuclear Operator Security Plan
  ➢ The way ahead
VIGIPIRATE’S APPLICATION PRINCIPLES

• Threat assessment results in activating a warning level and setting up flexible measures of vigilance, prevention and protection, adapted to the threats (RNBC, cyber, on the ground, in the air or at sea).

• Principle of shared responsibility for security, implying a permanent security posture and graded measures, which ensure a collective response to terrorist threats.
VIGIPIRATE’S ARCHITECTURE

Vigilance and Protection:

Protection Measures

Intervention plans:

RNBC plans

(and also Piratair-Intrusair Pirate-mer, Piranet, Pirate-ext)

Security Goals

Threat Levels

Prime Minister’s Decisions

Threat Assessment

Premier ministre

APRIL 2009
# THREAT ASSESSMENT

Assessing Threat…

1. No threat indication

2. Imprecise threat

3. Plausible threat

4. Highly probable threat

5. Certain threat

… Leads to warning levels …
SECURITY GOALS

... To which security goals are associated:

- Raising awareness (local measures)
  With minimum perturbations in normal activity

- Preventing a risk of a plausible terrorist action,
  At the cost of low constraints in normal activity

- Preventing an established risk of serious attack(s), by
  putting in place the needed means, with constraints on
  national activity

- Preventing a risk of major attacks, simultaneous or not,
  with possibly very restricting measures

... Then sector specific protection measures ...
VIGIPIRATE’S ARTICULATION

From security goals to security measures

- Modular measures
- Empowerment of actors
- Shared responsibility for security

Operators

Public Authorities

Warning Levels
SUMMARY

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• A 2006 decree aims at protecting activities of critical importance and is applicable to operators as well as to public authorities.

• It requires operators to participate in protecting their installations of critical importance by establishing special protection plans.

• The essential sectors are related to:
  - State activities
  - Citizen needs
  - Economic and social life (nuclear field)
PROTECTION OF CRITICAL SERVICES

KEY PRINCIPLES

• This is a “risk managed” and “threat driven” approach

• A risk analysis methodology allows efficient use of resources

• There is a strong collaborative process between Government and operators

• Build a logic of protection of vital areas within a coherent approach (nation, sector, operator, vital area)
PROTECTION OF CRITICAL SERVICES
GENERAL SCOPE

• The aim is to:

  ➢ Ensure better application by the operators of the “Vigipirate” plan
  ➢ Involve operators in protecting their vital areas
  ➢ Limit and rationalize the number of vital areas to be protected
  ➢ Have at disposal clear and homogeneous procedures and definitions
PROTECTION OF CRITICAL SERVICES

GENERAL PROCESS

• Four types of plans are required, each of them addressing a different layer:

  ➢ A National Security Directive for every sector of activities of critical importance (e.g. a Sector Specific Plan)

  ➢ An Operator’s Security Plan (OSP) established by each operator of critical importance

  ➢ A Special Protection Plan (SPP) developed by the operator for each point of critical importance (e.g. vital area)

  ➢ An External Protection Plan (EPP) established by local public authorities together with the operator for each vital area
DUTIES OF OPERATORS OF CRITICAL IMPORTANCE

- To appoint their defence and security delegates (i.e. security liaison officers) (central and local)

- After a risk analysis, to establish their operator’s security plan (OSP) taking into account the SSP

- To locate their vital areas, each of them being the subject of a special protection plan (SPP) and an external protection plan (EPP)
THE NUCLEAR SECTOR

• Like any other sector, the nuclear field is concerned by the warning “Vigipirate” Plan and the specific measures taken regarding the current threats.

• As a sector a critical importance, it is submitted to a more dedicated risk analysis and to a protection system consistent with threats of reference, including a control process.
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APPLICATION TO THE SECURITY OF THE NUCLEAR SECTOR

THE NUCLEAR SECTOR
NATIONAL SECURITY DIRECTIVE

• Established by the ministry of energy – security authority for the nuclear sector;

• Set the security framework and objective resulting from threat scenarios of reference (Design Basis Threat – DBT) related to nuclear facilities;

• In full compliance with the amendment of the CPPNM of the IAEA.
NUCLEAR SECTOR NATIONAL SECURITY DIRECTIVE

• ASSIGNNS NUCLEAR OPERATORS OF VITAL IMPORTANCE

• APPLIES TO NUCLEAR FACILITIES WHICH:

- are essential for the sustainability of the nation activity;
- could lead to significant damages to the population or the environment (radioactive releases).

• ⇒ NUCLEAR POWER PLANTS
• ⇒ FUEL CYCLE FACILITIES
NUCLEAR SECTOR NATIONAL SECURITY DIRECTIVE

From two sets of threat scenarios (DBT)
- Theft of nuclear material
- Sabotage of nuclear material or facilities
  both including internal and external threat

• Through a risk analysis

• To the definition of security measures
  - based on the principles of graded approach and defence in depth;
  - Taking into account a shared responsibility between public authorities and the nuclear operators.
THE NUCLEAR OPERATOR SECURITY PLAN

• Established by EACH nuclear operator of vital importance (Strategic document);
• Sets the list of the VITAL AREAS (Sites of critical importance);
• Defines security measures

FOR EACH VITAL AREA

SPECIAL PROTECTION PLAN by the operator

EXTERNAL PROTECTION PLAN by the local public authority and the operator

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SECURITY OF THE NUCLEAR SECTOR
THE STEP AHEAD

STILL SOME WORK TO ACHIEVE:

• Finalization of the integration of the nuclear transportation field in the Nuclear Sector National Security Directive

• Current work on a regulation for the physical protection of radioactive sources under the authority of the ministry of energy
THANK YOU FOR YOUR ATTENTION

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