Table top exercise:

**STATE R**ESPONSE TO A TERRORIST ATTACK AGAINST A NPP.

STAR Contract
SUMMARY

- Context
- STAR contract short overview
- Objectives of STAR project
- Scenario
- Case study management
- Main findings
CONTEXT

- Exercise in the field of safety → Long experience
  - Initiator (natural event, failure, human error)
  - Limited number of agencies involved

- Exercise in the field of security → Limited experience
  - Initiator (malicious, malevolent)
  - Large number of agencies involved
  - Safety responses simulated
  - Allocation of responsibilities (operator, authorities)

- Exercise merging safety/security
  - One national experience on a NPP (malevolent initiator)
  - Response strategy simulated
CONTEXT

- Emergency response demands a perfect cooperation of a large number of local, regional and national agencies (security and safety authorities, operator teams, dedicated response forces, judicial authorities…) to handle the safety & security aspects of the situation.

- Exercises merging the two aspects in realistic conditions are complicated and difficult to carry out,

  IRSN develops a table top exercise in the aim to train all entities involved in such a situation.

- STAR was in partnership with the European Commission.
WHY THE STAR TABLE TOP EXERCISE?

- The management of intentional aggression consequences is complex
  - Response to a severe attack against a nuclear power plant encompasses protection of the public and the environment, maintaining public order… allocation of responsibilities between State and operator
  - Emergency preparedness and response management has to be prepared at operator and State level

- Table top exercise is the best way to encompass all aspects of such a situation

The purpose of the STAR table top exercise: open discussions about key points
OBJECTIVES FOR THE 2 DAY TABLE TOP EXERCISE

- Level of State involvement strongly depends on the intensity of the aggression
- For the purpose of STAR a severe (intentional) aggression has been selected
ALLOCATED OF RESPONSIBILITIES

- Open discussions about issues like
  - Time managing
  - Coherence/complementary of emergency and contingency plans
  - Management of interfaces between on-site and off-site forces
  - Coordination, cooperation and complementarities between safety and security
  - Issues related to the recovery phase

- Identify good practices at European level

- Common understanding

No classified information
A combination of two different problematic issues

- **Safety** of the nuclear facility (aggression of safety functions, accidental situation)
- **Security** (terrorist group on site, impossibility for operator to manage the situation by local actions)

A threat level with the need to overpower adversaries before the situation becomes irreversible

The necessity to get a progressive involvement of the State agencies as the situation on site is worsening
SCENARIO

Adversaries destroy external power supply transformers

Equipped with assault rifles and explosives, they enter the site of the NPP

Destroy the emergency diesels groups

Take possession of the electrical building

Booby trap accesses of the electrical building

Take employees as hostages

One hostage escapes

Has time to call the central alarm station

Is recaptured

Is injured

The adversaries are hidden with their hostages in the electrical building

They control sensitive areas of the NPP and prevent any penetration into the building

They express the threat to blow up essential safety related equipment of the reactor if any response force intervenes
NPP POWER SUPPLIES

SCENARIO

Offsite power auxiliary source 400 kV or 225 kV

Emergency diesel Generator B

Emergency diesel Generator A

Spare emergency diesel generator

Offsite power transformer source 400 kV
SYNOPSIS

4 « R »
covering Safety and security fields

T0 Agression

REFLEX
Procédures

REFLEXION
Emergency management

RESPONSE
Assault

RESTORATION
Safe and Secure conditions

EUROSAFE
REQUIREMENTS FOR THE EXERCISE PERFORMANCE

● STAR does not represent a “model” of emergency situation management

● STAR table top exercise is interactive

● The exercise is dynamic, the discussion and debates are integrated in the progress of the emergency management
REQUIREMENTS FOR THE STAR SCENARIO

1. Screening of a short video telling a part of the story in time-steps

4 voices to give the facts and to outline actions of involved entities

- Operator
- State authority
- Technical support body of authority
- Response forces

2. Coordinator

Participants comments, questions and debates around appropriate measures to be taken to stop the aggression and to restore safety. Chaired by the coordinator

3. Replay of the video

EUROSAFE
CASE STUDY MANAGEMENT
CASE STUDY MANAGEMENT

- Participation of
  - 14 member States and Switzerland
  - All entities involved in the security of nuclear facilities and crisis management

  - Competent authorities for security and safety
  - Responses forces
  - Operators
  - TSO
  - Others (emergency preparedness, judicial, forensics…)

EUROSAFE
DISTRIBUTION OF THE PARTICIPANTS

All entities involved in the security of nuclear facilities and crisis management
MAIN FINDINGS

- **Decision making process**
  - Ex: Need to prioritize the main risk to make a decision (hostage life vs. core melt)
  - The authority responsible for emergency management needs to be able to justify the assault whatever becomes of it

- **Coordination and interfaces**
  - Need to precise in the regulation the responsibility of all involved entities
  - Need for consultation between intervention teams and the operator before the assault to identify the potential consequences and the precautions to be taken

- **Time management**
  - Need to quickly identify for protection equipment becoming vital for safety purpose as a result of damages performed by the adversaries
  - The crisis is not over after the assault

- **Spontaneous topics**
  - Need to develop a global thought at European level for the management of such a crisis
SATISFACTION RATINGS

Relevance of the exercise

- Authority
- Response force
- Emergency planning
- Licensee
- TSO
- Others

- Positive
- Excellent
CONCLUSION

- The first STAR exercise made it possible to validate the efficiency of the way the exercise is presented (the exercise resulted in an active participation of all attendees).

- Mutual awareness of the participants working in the safety and in security field of the necessity to improve coordination integration and interaction based on mutual understanding.

- Human factor and organizational issues became apparent such as: coordination between the involved agencies, the need for a common language, need to simplify the decision channels, the management of contradictory orders, management of the available skills.

- Extra value in terms of training for the management of such extreme situations by expert teams and Authorities.