Achievement of an exercise to prepare for a nuclear material inventory in case of emergency

- To test and check the organisation of crisis in the event of suspicion of theft or diversion
- To prepare the various actors involved for complicated and realistic interventions
- To maintain a level of vigilance against malevolent or terrorist threats on nuclear facilities
- To complete procedures assessment and inspections

Component elements

Scenario
- Themes
  - Theft or sabotage
  - One or several operators
  - One or several sites
  - +/- media pressure
- Examples
  - Nuclear item shifting
  - Picture trafficking
  - blackmail
  - Database falsification
  - Use of traps

Basis of elaboration
- Security studies
- Design basis threats
- Identification of nuclear material

Material flows
- Identification of potentially threatening nuclear materials

Experience feedback

Based on 10 exercises with 14 involved nuclear plants
Feedback to achieve that type of exercise

Scenario
- The essential involvement of the operator in the development of the scenario
- Non-proliferation is no longer the only assumption, sabotage could be included

Schedule
- The preparation must imperatively consist of:
  - Pre-briefing of the operators several months in advance
  - The issuing of an exercise agreement settlement
  - Before the exercise, the delivery of relevant documentation
  - A first assessment must be done immediately after the end of the exercise in each emergency committee
  - An assessment of the comprehensive feedback must be carried out approximately one month after the exercise with representatives of all the involved actors

Feedback on the improvements to be brought in case of a real crisis
- The need for defining an indicator allowing us to communicate on the inventory progress
- To have a dedicated Internet site to provide journalists with information in order to avoid network overload
- The deadlines for the validation of the press releases must be compatible with the requirements of media timing
- The need to set up dedicated and protected networks to guarantee the confidentiality of information

Benefits gained
- Confidence of the authorities in the control of crisis situations
- Validation of the written procedures for crisis situations
- Realistic evaluation of the duration in order to achieve a partial inventory
- Skills acquired by the teams working with the media pressure
- Confidence in the reliability of technical communication equipment
- Verification of the nuclear materials data

Reliance on regulations
A regulation on the follow-up and the accountancy of nuclear material with at least a text dealing with the need to carry out inventories. In France-Decree n°81-512 May 12 1981:
- To know all the input-output, localization, use, transformation of nuclear material;
- All these provisions under standard “Management of quality”

Schedule
- D-7 months: Presentation meeting at the operators’
- D-4 months: Meeting of official launching between: Authority, Operators and Technical support (IRSN)
- From D-3 months to D-2 weeks meeting for preparing scenarios:
  - Media pressure preparation
  - Working out an exercise convention
- D: Launching of the exercise and immediate assessment
- D+1 month: Debriefing for evaluation and identification of the improvements

Crisis organization

IRSN - Nuclear Defense Expertise Division
Route du Panorama - BP 17
92262 Fontenay-aux-Roses - France
E-mail: bernard.massendari@irsn.fr
E-mail: flavien.lemoine@irsn.fr