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Security of Nuclear facilities in Belgium in a period of increased threat

Content of this presentation

- Evolution of securing nuclear installations, materials and transport
- Insider Threat at NPPs
 - Ways to analyse the Insider Threat
 - Potential Measures
 - Major Concern
- Recent security measures in response to the increased terrorist threat after the terrorist attacks in Paris and Brussels

What is not the goal of this presentation?

- We do not analyse the incident in Doel 4.
- Due to the confidentiality of the investigation by the Federal Public Prosecutor's Office, not all information may be available to everyone.
- We will not discuss all the additional recent measures that have been taken (confidentiality)

Insider threat

Insider Threat

Sometimes the greatest threat to our organization may be someone you are working with.



Insider threat

Incidents DOEL 4

Timeline: August 2014 in turbine area

- In technical area DOEL 4: internal perimeter
- Consequence: considerable loss of production & severe damage to the turbine
- Impact on reactor operation (emergency shutdown)

5 Aug
2014

Drain valve is only used in case of fire (risk) in turbine area in order to rapidly evacuate the lubricating oil

Opening of the valve
=
Breakdown of turbine

Insider Threat

- This means that the act was most likely committed by a person with legitimate access, who knowingly acts or tries to act, with the intention to harm.

=> Insider threat

Insider threat

Incident Doel 4. Actions undertaken by the FANC related to nuclear security

- Doel : A number of security measures have been imposed (inhibiting effect for insiders)
- Tihange : A number of security measures have been imposed
- Other nuclear installations : Increased (internal) vigilance – Threat Level 2 (CUTA)
- Specific workshop with all nuclear operators on Insider Threat

Insider threat

Incident Doel 4. Actions undertaken by the FANC related to nuclear safety

- Request for verification of operability of safety-related equipment on the Doel & Tihange sites.

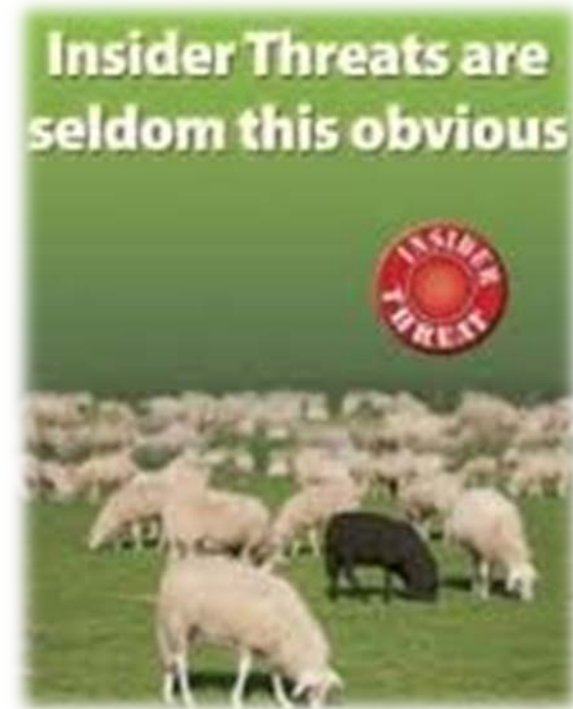
Insider threat

Incident Doel 4. Other actions undertaken by the FANC

- The investigation by the Federal Public Prosecutor's Office was started up
- Action plan for possible start-up
 - Insider Threat Program
 - Applicable to both NPPs
 - Based on NSS 8
 - Include all possible scenario's

Insider threat

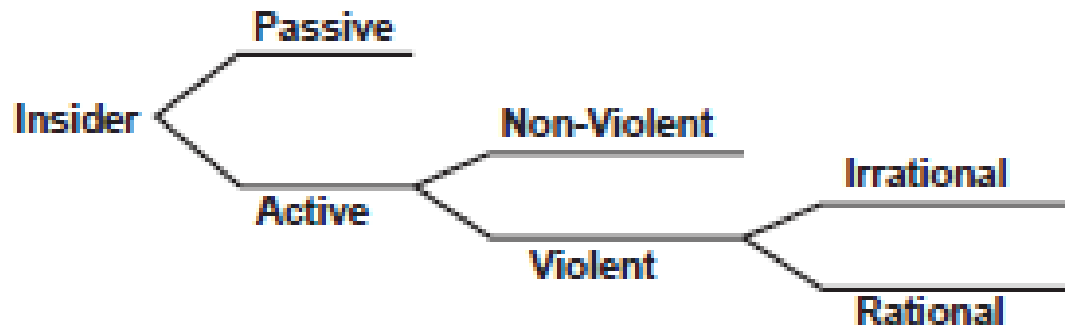
- Analyse
- Identify
- Target Identification



Insider threat

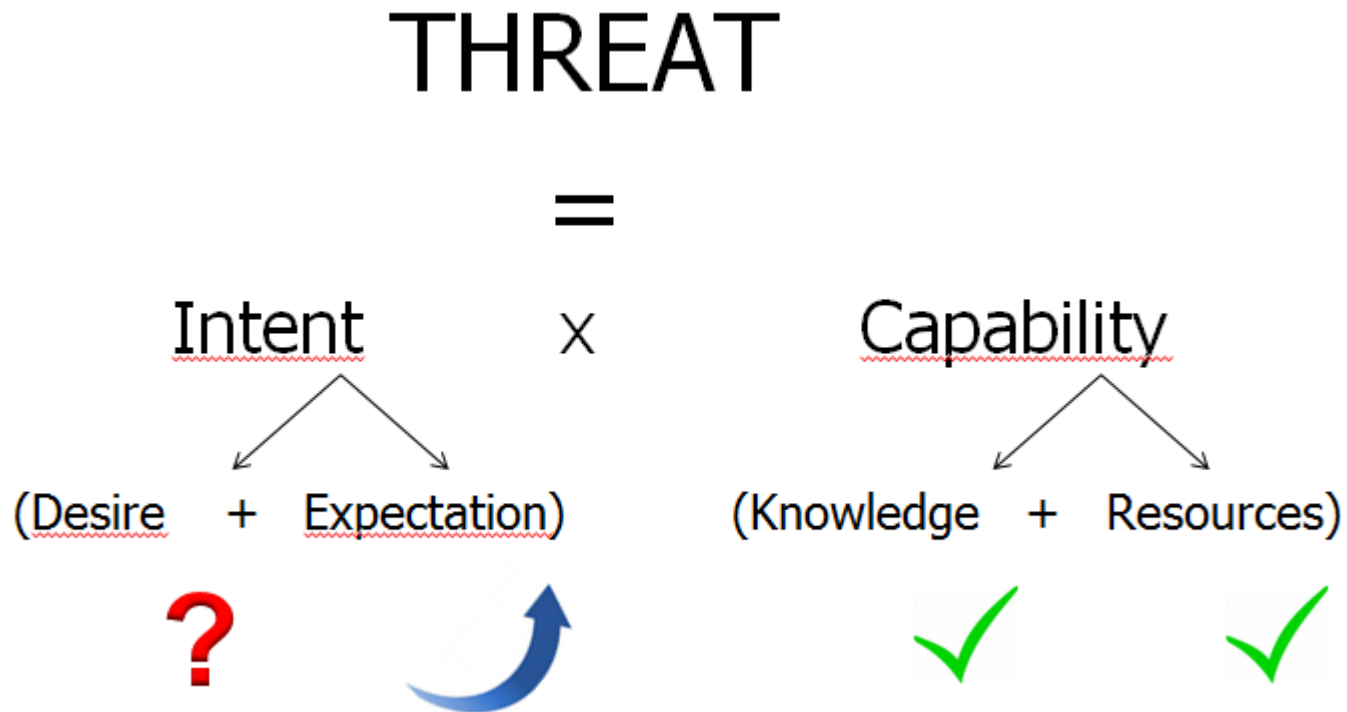
Analysis of the threat : Possible profiles

- Active insider: someone who acts
- Passive insider: someone who provides information to a third party and thereby helps the action



What are the components of the threat?

Analysis of the threat :



Insider threat

Identify the threat :

- Person:
 - Own staff and contractors need to be analysed
 - Who has which knowledge?
 - Who has access, authority (knowledge) ?
 - Conform to 1998 Security Clearance Act or Royal Decree 17 October 2011: Security Clearance, Security Certificate, Access Permit = first threshold.
 - NSA, FANC, OCAD, Intelligence services, Police
 - Follow-up and aftercare in the first line = crucial!
 - Operator: Hierarchy, colleagues, HR, Security Officer, Delegate for Physical Protection, ...
 - Discussions between operators and contractors
 - Communication and feedback between authorities and operators

Insider threat

Target identification

- Targets:
 - The specific parts, equipment, information... that must be protected need to be analysed

Insider threat



Potential measures

Insider threat

Potential measures

- Potential security measures against an insider threat are situated on three axes:
 1. Security Culture
 2. Physical Protection
 3. Trustworthiness

Insider threat

1. Security Culture

- Security culture, also for externals
 - Security awareness, training, ...
 - NSS No. 7
- Strange/suspicious actions need to be reported internally and followed up (consequence management)

Insider threat

2. Physical protection

- Limited access (examples of measures basis NSS8)
 - Access control and identification/verification
 - Accompaniment for unauthorised persons (2 man rule)
 - “Need to go”- principle
 - Closing “gaps”

Insider threat

2. Physical protection

- Information security: “Need-to-know”-principle
- Watch over vital processes, equipment...
- Evaluate and test systems regularly and optimise them:
 - vulnerability analysis
- Adequate response

Insider threat

Major Concerns

- Is this approach sufficient ?
- Fast changing society
- Not technical matter
- Lessons learned from previous incidents (confidentiality)

Recent security measures in response to the increased terrorist threat

Recent measures in response to the increased terrorist threat

- Increased terrorist threat
 - Jewish museum in Brussels, Charlie Hebdo attack, Verviers, Tunisia, Lyon, Paris
 - Evaluation with Belgian Coordination Unit for Threat Assessment (CUTA)
 - Level 2
 - No direct threat to the nuclear industry
 - FANC decides to take additional security measures as part of increased vigilance

Recent measures in response to the increased terrorist threat

- Further events late 2015
 - Event in a in hospital (not radioactive material)
 - Observation of high-ranking nuclear official
 - Evaluation by CUTA
 - Level 2 with increased vigilance
 - Extra measures in nuclear industry and radioactive material industry.
- Additional measures at Xmas & New Year Holidays
 - Less social control

Recent measures in response to the increased terrorist threat

- 22.03.2016: Attack at Brussels airport - Maalbeek metro station
 - Nuclear industry at threat level 4 (1st time in Belgium)
 - Additional measures at nuclear facilities, including transport
 - Additional measures in radioactive material industry, including transport
- Currently: Nuclear industry at threat level 3 (actual situation)
 - Dito level 4 but “less stringent” in some areas

Recent measures in response to the increased terrorist threat

- Events with a lot of media coverage
 - Evacuation at NPP sites 22/03
 - Link terror case -> nuclear sites
 - Murder of G4S security guard
 - Withdrawal of clearance/certificates

Recent measures in response to the increased terrorist threat

Why are military on nuclear sites in Belgium

- Response
 - 23.12.2015: The Federal government decides to set up a special unit within the federal police to protect certain locations including nuclear sites and their personnel, infrastructure, materials and documents
 - 04.03.2016: The Federal government decides to post military personnel to protect nuclear sites, pending the deployment of the response team

Recent measures in response to the increased terrorist threat

- **Ongoing actions**

- FANC has coordinated the on-site deployment of the military
- First feedback meeting has taken place: very positive feedback
- Follow-up of measures threat level 4/3 (inspections)
- First contact with Federal Police/licensees concerning the special unit
- Continuous assessment (triangle FANC – Licensee – CUTA)

General conclusions

Security has evolved :
physical security of installations



individual behaviour



vigilance



security culture

Q & A

