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Security measures for a category 1 research facility

Hanna Holstein

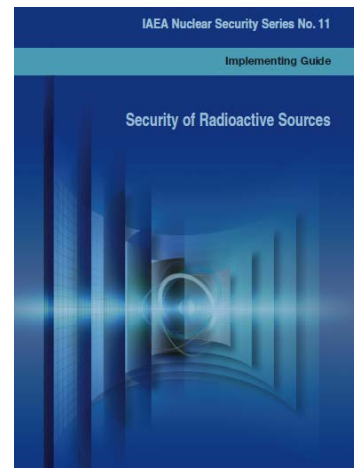
Head of Radiation Safety
Lund University
Lund University Hospital



Background

Requirements

- To strengthen the physical protection of some High Activity Sealed Sources (HASS) Category 1
- New regulatory requirements Swedish Radiation Authority (SSM) for the security of high activity sources
- Increased threats



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Background

Our equipment

- Not used to this level of security measures

Initial decision

- Get rid of HASS
- Not sure that replacement equipment (x-ray) was as good the source

Our final decision

- Decommission four sources
- Keep one source

- Good collaboration with authority



Implementation

Administrative security

- Organisation
 - Independent security organisation (just for this area)
 - The users can't affect the security or the organisation
 - Basic management system
- Documentation
 - Part of management system
 - From the requirements from SSM



Implementation

Information security

- How to handle the information
- Information regarding the physical protection of the radiation source is kept in a safe with an access control system
 - Restricted information about transportation
 - Storage and maintenance of the radiation source only available for authorised personnel – approved by the security organisation
- Specific demands on IT-security
 - Encrypted USB storages
 - Papers in safe
 - Not net/internet connected computers



Implementation

Administrative security

- Only authorised personnel can have information or access to the source perimeters
- Background check of personnel before authorisation
 - Been tricky...
- Yearly revision of physical instalment/localities including the radiation safety
 - » Wipe test
 - » Detectors
 - Calibrations



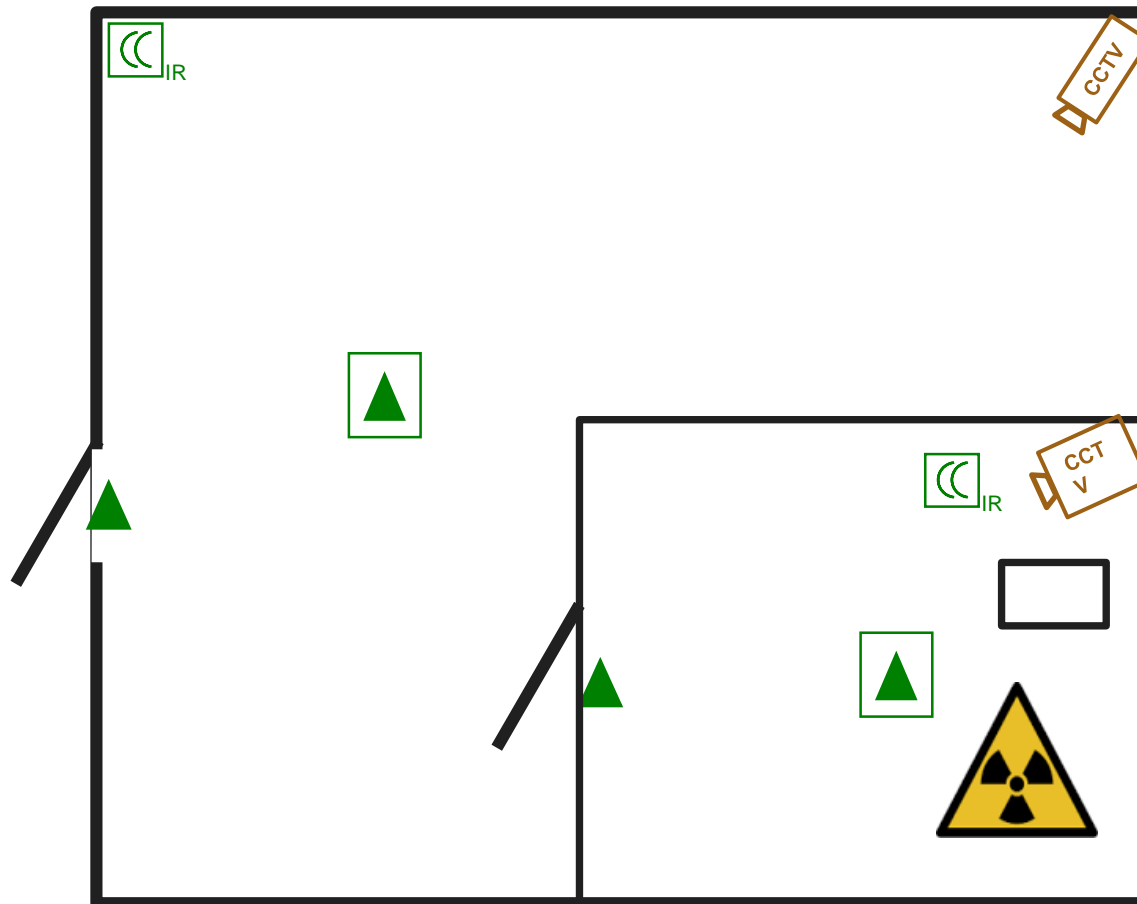
Implementation

Physical protection

- Very hands on- EASY part 😊
- Design demands from SSM
 - Room in room solution
- Quite good physical protection already
 - » Specified demands for walls, floors, ceilings, doors, locks & alarm system
- Hire a company to do the physical protection- takes up to two months
- Alarm class 4 (SSF130:8)
- 2 Barriers (SSF200:4)

Implementation

Room in room solution



Implementation

Information to users and authorities

- Operating procedure for access and usage of the source
- Action plan in case of antagonistic threats
- Response plan and contact with rescue services and local security
- Information to the police, fire department and local security staff



Implementation

The easy part

- Hiring of established security consultants
 - » walls, floors, ceilings, doors, locks & alarm system
- Physical protection expensive but standard
- Use of a standard solutions (physical protection) makes life much easier
 - » walls, floors, ceilings, doors, locks & alarm system
(again...)

- Money, no problem!



Implementation *Challenges*

- Different interpretations between authorities leads to conflicts
 - Main problem
 - » Security check of staff- conflicts between unions, personal integrity laws and associated laws
 - » We are obligated to follow and balance all laws and regulations
 - Users not used to this level of security
 - » Difficulties to understand and use security measures
- Implement the new requirements



Implementation *Challenges*

- Expensive
 - € 300 000 for Construction
 - € 5000/y in operating cost
- Camera surveillance
 - » Placement can be regulated and require permission from county administration
- We must have one person 24/7 to help the researchers with the security system (security cleared staff)
 - » A bit tricky...



Implementation *Challenges*

- Resistance
 - » Sometimes hard to explain to the users why we have to do this
- Limited number of suppliers and products for alarm level 4
- What´s secret and not
 - » What can we tell each other and others...
 - » Secrets makes people curious
 - » Can it be to secret ..?



Summary

- Good way to allow us to keep the source
- Easy to refer to already established standards and norms
- Physical protection was easy to manage
- Different interpretations between authorities leads to conflicts
- Security check of staff- conflicts between unions, personal integrity law and associated laws was difficult but doable
- Will be seeing more of this, so this was a good experience for future challenges



We solved it 😊

Questions?





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