



# REGULATION OF SECURITY DURING THE LIFETIME OF A NUCLEAR POWER STATION (NPP)

**Mr. Chris Price**

**Office for Nuclear Regulation (ONR) ,UK**

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# Define “Unacceptable Radiological Consequences” and Design Basis Threat

Graded approach to define appropriate levels of protection

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# Generic Design Assessment (GDA)

Ensure appropriate protection of sensitive nuclear information by all involved

Validate potential sabotage targets (equipment, systems, devices or nuclear material)

Validate computer systems important to safety

Define credible sabotage scenarios

Approve physical protection system to be incorporated into overall design of reactor and associated infrastructure, ensuring it does not adversely affect safety

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# Strategic Siting Assessment

Assess size of proposed site sufficient to accommodate secure operation of NPP

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# Justification

Benefits outweigh the risks of  
sabotage/theft

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# Planning Approval

Ensure licensee can exercise exclusive control over whole site, including any high ground

Ensure plans provide adequate defence in depth around reactor and associated infrastructure

Provision for off-site parking etc

Provision of two separate access routes

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# Licensing – Security Plan Approval -Construction

Approve arrangements to protect construction site/minimize the risk to adjacent NPPs

Ensure implementation of State's trustworthiness policy

Investigate reported security events as necessary

Approve physical protection system to be progressively installed prior to NPP becoming operational, including those measures identified necessary during GDA, viz

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# Licensing – Security Plan Approval -Construction

- Limited access area, Protected Area and Vital Area clear/sterile zones, barriers, entry/exit points, detection and assessment
- Routing of essential services under barriers and access points secured
- Hostile vehicle mitigation measures and vehicle locks
- Secure access control points and searching arrangements
- Access control arrangements between adjacent reactors
- Central Alarm Station and backup alarm station (including interface with Emergency Control Centre)
- Protection of computer based systems used for physical protection
- Electrical distribution lines including uninterrupted (emergency) power supply
- Security Management, Guarding and Response arrangements

Inspection/investigation/enforcement

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# Security Plan Amendment – Radioactive Sources

Approve security arrangements prior to introduction onto facility

Inspection/investigation/enforcement

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# Security Plan Amendment – Receipt and Storage of Fresh fuel

Approve security arrangements prior to transport of fuel to facility

Inspection/investigation/enforcement

Inspection/investigation/enforcement

# Security Plan Amendment – Loading of fuel into reactor core

Evaluate all physical protection measures

Exercises to test physical protection system, including guards/response force

Approve security arrangements for operational NPP

Inspection/investigation/enforcement

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## **Security Plan Amendments – Interim spent fuel storage etc**

As above, whenever significant change takes place

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## Security Plan Amendment – Decommissioning

Approve reduction in security arrangements when NPP de-fuelled, spent fuel removed from facility, ILW removed from facility etc, taking into account continuing need to protect any adjacent operating NPP

Inspection/investigation/enforcement until all radioactive material removed from facility

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