



# Commensurate Regulatory Oversight to the Evolving Hazards and Risks

Maintaining Effective Security during Decommissioning of Nuclear Facilities

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## Presentation to cover:

- ONR CNSS
- History of Security Regulation
- Nuclear Industries Security Regulations
- Security Assessment Principles
- Categorisation of material - theft/sabotage
- Graded Outcomes & Postures
- Approach to security plan detail
- Inspection – frequency & exercising
- Enforcement – graded approach
- Conclusions

## History – ONR Civil Nuclear Security

- Oct 2001- Office for Civil Nuclear Security was independently established within the Department for Trade & Industry
- Shortly thereafter the UK enacted NISR 2003
- 2007 – OCNS was transferred to the Nuclear Installations Inspectorate – Health & Safety Executive with responsibility for nuclear safety
- Now fully integrated within the Office for Nuclear Regulation, which itself was created by The Energy Act 2013

## **The Energy Act 2013:**

- Establishes ONR as the nuclear regulator:
  - Independent Competent Authority
  - Empowered (powers of enforcement, inspection etc.)
  - Adequate resource and capability
- Allows Secretary of State to make nuclear regulations for:
  - Nuclear Security Purposes
  - Nuclear Safety Purposes
  - Nuclear Safeguards Purposes
  - Transport Purposes

## Nuclear Industries Security Regulations 2003 require:

- Licensed sites to have a site security plan approved by ONR
- The arrangements in the security plan to be complied with at all times
- Elements that the security plan arrangements must cover (e.g. security of nuclear material and sensitive nuclear information)

*Importantly, the Regulations **do not** state what those security arrangements should be.*

# Move to Security Assessment Principles - SyAPs

A review of the previous prescriptive regulation regime set the objectives for the next phase in the transition – eventually termed the Security Assessment Principles

## Move from:

- **Prescriptive**
- **Separate safety & security**
- **Assertion**
- **Ensure (Do/Check)**
- **Done to ..**

## Move to:

- **Outcome-focused**
- **Aligned safety & security**
- **Evidence**
- **Assure (Validate/Regulate)**
- **Owned by ...**

### **SyAPs were a radical departure for ONR and the UK Nuclear Industry:**

- Written for ONR inspectors to assess adequacy of security plans – Not a manual for licensees!
- High level and principle based – no model standards
- Greater emphasis on strategic issues (e.g. governance, culture and competence management)
- Forced licensees to understand risks and fully justify adequacy of security arrangements

Available at <http://www.onr.org.uk/syaps/security-assessment-principles-2017.pdf>

# Framework for Protection of NM – Regulatory Approach

**‘Civil Nuclear Industry dutyholders are responsible** for the leadership, design, implementation, operation and maintenance of security arrangements to protect the public from the risks arising from a radiological event caused by the theft or sabotage of NM/ORM and supporting systems or through the compromise of Sensitive Nuclear Information (SNI)’

Strategic Enablers - Objectives focused on creation of the right conditions to support high reliability, disciplined operations.		Disciplined Operations - Objectives focused on the implementation and maintenance of nuclear security.	
I	Leadership and Management for Security	VI	Physical Protection Systems
II	Organisational Culture	VII	Cyber Security & Information Assurance
III	Competence Management	VIII	Workforce Trustworthiness
IV	Nuclear Supply Chain Management	IX	Policing & Guarding
V	Reliability, Resilience and Sustainability	X	Emergency Preparedness and Response Arrangements



### **Theft - Duty Holders should be able to demonstrate:**

- Methodology used to determine Categorisation for theft
- Should be clear on how this shapes the security arrangements in place to deliver the required security outcome/posture
- Analysis of the type and form of material (NM/ORM) to be protected from theft has been conducted
- Planning assumptions that underpin the Categorisation are kept under review
- Process in place to review Categorisation etc.

## **Sabotage - Duty Holders should be able to demonstrate:**

- Vital Area Assessment conducted by SQEP and methodology
- The assessment addresses the overall design of the security system.
- It also addresses how the security outcome is delivered
- Safety systems help deliver the security outcome

### Outcomes and Postures:

- Protection systems should be based on a graded approach
- System applied in a manner commensurate with the risk against theft and sabotage of material
- Likewise the regulatory approach should also be commensurate with the risk to material
- Taking into account novel solutions, uncertainty and compliance history

### **Lifecycle Aspects:**

- Security plan should take into account operational experience – learning from experience
- What can be taken forward into the decommissioning stage
- Take into account the changing aspects of the plant and reduction in material
- Ideally decommissioning would have been considered in all stages of a plan lifecycle

### **Inspections & Exercises:**

- Proportionality based on level of risk, material type and quantities held
- Plan - Standards, procedures and arrangements to deliver security outcomes
- Emergency arrangements to deliver appropriate response
- Internal assurance
- Response and management of Regulatory Issues
- Duty Holder history
- OPEX

### **Enforcement :**

- ONR Enforcement Management Model (EMM) is a logical system which helps inspectors to consider and make enforcement decisions in line with the ONR Enforcement Policy Statement
- Formal Enforcement
- Advice/encourage improvement
- Security Risks
- Compliance and Administrative Arrangements

## Determine Risk Level

- Nominal, Moderate, Substantial & Extreme

Table 1 – Risk Level Matrix



Cat I/II/HCVA/VA/TS -

Cat III/BA/Secret -

Cat IV/O-S -

Consequence

Nominal	Substantial	Extreme
Nominal	Moderate	Substantial
Nominal	Nominal	Moderate

Broadly  
satisfied

Weakened

Absent/  
inadequate

Control measures

- Risk analysis is not appropriate for non-risk based compliance or administrative issues.**

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