

# Emerging Need for Nuclear Security Technical and Scientific Support

International Atomic Energy Agency  
Challenges Faced by TSOs in Enhancing  
Nuclear Safety and Security  
27 October 2010

Michael Layton, Deputy Director  
Division of Security Policy  
Office of Nuclear Security and Incident Response  
U.S. Nuclear Regulatory Commission



# Overview

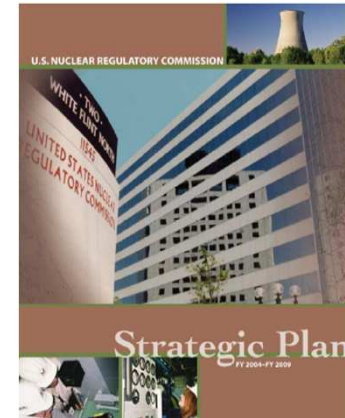


- U.S. Nuclear Regulatory Commission (USNRC) Mission and Goals
- USNRC Physical Protection Framework
- Current Technical Support Organization Activities
- Future Considerations

# USNRC Overview



- Mission and Goals
- USNRC's responsibilities include regulation of:
  - Commercial Nuclear Power Plants
  - Research and Test Reactors
  - Use of Radioactive Materials
  - Nuclear Fuel Cycle Facilities
  - Decommissioning of Facilities and Sites
  - Transport, Storage and Disposal of Radioactive Materials and Waste
- Designed to protect both public and occupational workers from radiation hazards



# Context

- Terrorist Events of 11 September 2001
- Revisions to Physical Protection Regulations
- New Reactors
  - Design Certifications (AP-1000, ABWR, EPR, USAPWR, ESBWR)
  - Applications (27 Units at 18 Sites)
  - Early Site Permits (4 Sites)

# Regulatory Framework

➤ Regulations

➤ Licensing

➤ Oversight

- Inspection
- Enforcement



# Regulation and Guidance



- Revisions to 10 CFR Part 73 – Physical Protection of Plants and Materials
  - 73.54 – Cyber Security
  - 73.55 – Power Reactor Security
  - 73.56 – Personnel Access Authorization
  - 73.58 – Safety/Security Interface

# Cyber Security

➤ High assurance that digital computer and communication systems and networks are adequately protected against cyber attacks

➤ Cyber Security Plan



# Safety Security Interface

- Assess and manage the potential for adverse effects on safety and security, including the site emergency plan
- Communicate potential adverse interactions to appropriate licensee personnel
- Take compensatory and/or mitigative actions to maintain safety and security





# Considerations

- When to consider using a TSO
  - Supplement Technical Capabilities
  - Fill short-term staffing/work load demands

# Considerations

## ➤ Selecting a TSO

- Conflict of interest
- Staff experience
- Facilities, equipment and resources
- Performance
- Security clearances

# Current TSO Activities



- Regulatory Support Improvement
  - Standard Review Plans
  - Safety Evaluation Report Templates
  - Inspection Procedures
  - Regulatory Guides
  - Technical Guidance

# Current TSO Activities



## ➤ Regulatory Development

- Target Set Analysis
- Blast Analysis
- Risk-Informing Security

## ➤ License Review Support

- Physical Security Plan
- Cyber Security Plan
- Hearing Support

# Future Considerations



- Need for Regulator to make regulatory decisions
- Regulator needs technical expertise to select a TSO and review its work
- Importance of Openness and Transparency

# Summary

- USNRC has taken measurable steps to improve security at its regulated facilities in a graded and risk informed way
- Emerging needs for technical support organization support resulted from nuclear renaissance and increased global threat environment

## **Contact Information**

Michael Layton, Deputy Director  
Division of Security Policy  
Office of Nuclear Security and Incident Response  
U.S. Nuclear Regulatory Commission  
*michael.layton@nrc.gov*

**For more information please see our website:**  
<http://www.nrc.gov/security.html>