Westinghouse Small Modular Reactor Security Design Overview

NRC
July 10, 2012
Asset Protection and Compliance

- Group Overview
  - **AP1000®** Design Expertise
    - Security Threat Assessment
    - Aircraft Impact
    - Loss of Large Area
    - Risk Assessment (Target Sets)
  - Security Training/Certifications
  - Site Experience:
    - Security Management
    - Development of Target Sets and Protective Strategies
    - Security System Installation and Support
    - Overall Plant Operations
Asset Protection and Compliance

• Thorough understanding of 73.55 rule requirements and of RG’s 5.76 and 5.69 and other key rule areas including:
  – Fitness for Duty and Work Hours
  – Cyber Security
  – Safety-Security Interface
  – Large Area Fires
  – Aircraft Impact
  – Design Basis Threat
Asset Protection and Compliance

• Thorough understanding of performance requirements including the Force on Force program:
  – NRC Requirements
  – Significant Changes in the Program
  – Expectations for Licensees
  – MILES and other Equipment Issues
  – Detailed Level of Control Required
  – Adversary Team Operations
    – Weapons, Explosives, Tactics, etc.
AP1000® Security System (SES)

- More than a Dozen Functional Specifications and Calculations
- Hundreds of Drawings
- Threat Assessment (APP-GW-GLR-066)
  - Staffing
  - Target Sets
Key Attributes
Key Attributes
Questions?
SMR Plant/Site Layout
Site Layout – General Characteristics
Site Layout – General Characteristics
Site Layout – Unit Separation
Building Layout – General Characteristics
Nuclear Island Layout
SMR Plant Layout
SMR Plant Layout
Containment Vessel
Level 1: Radiological Controlled Area
Level 2: Radiological Controlled Area
Level 3: Safety Train IDS & Spent Fuel
Level 4: Safety Train I&C&E, and Spent Fuel
Level 5: Safety Trains & Refuel Area
Level 7: Grade – HVAC, CCS
Level 7: Grade – Access Routes
Level 8: Nuclear Island Access
Level 8: Access Routes
Level 9
Level 10: Nuclear Island – VAS AHU
Level 11: Roof
Thank You