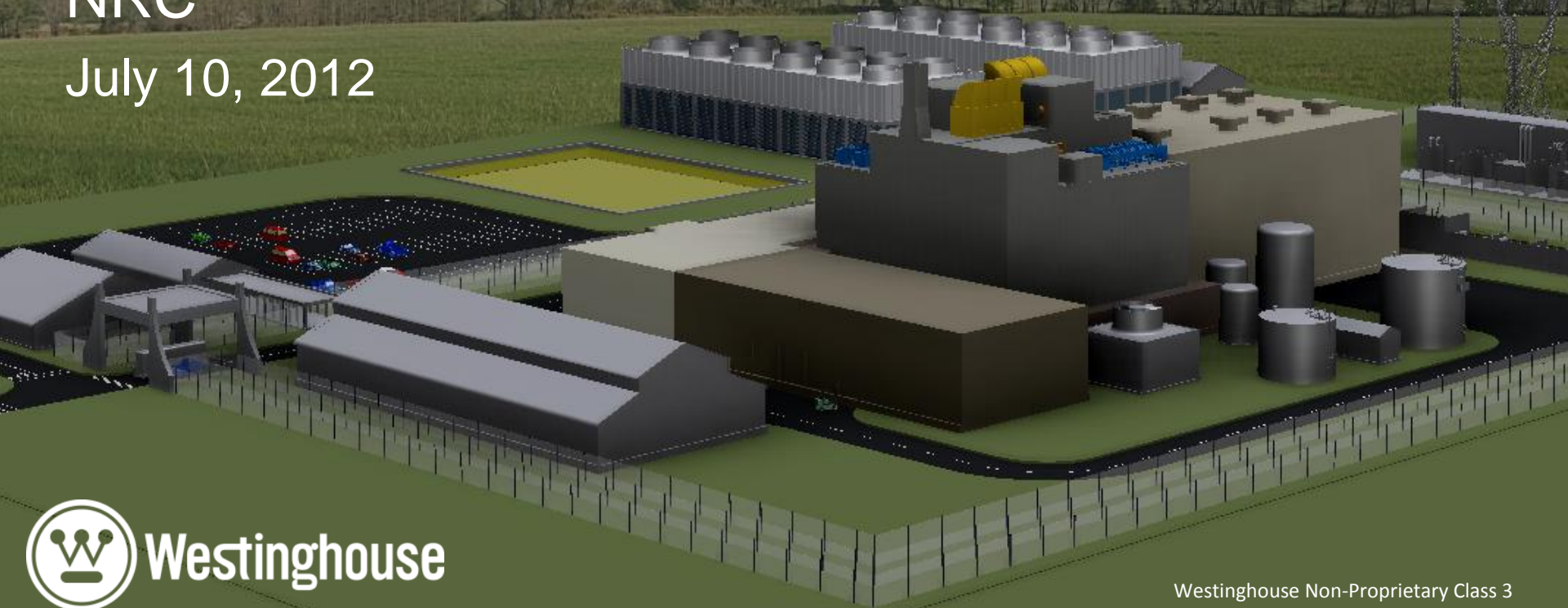


Westinghouse Small Modular Reactor Security Design Overview

NRC

July 10, 2012





AP1000[®] Security Overview

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John Kostelnik

Michael Sleigh, PE

Asset Protection and Compliance

Asset Protection and Compliance

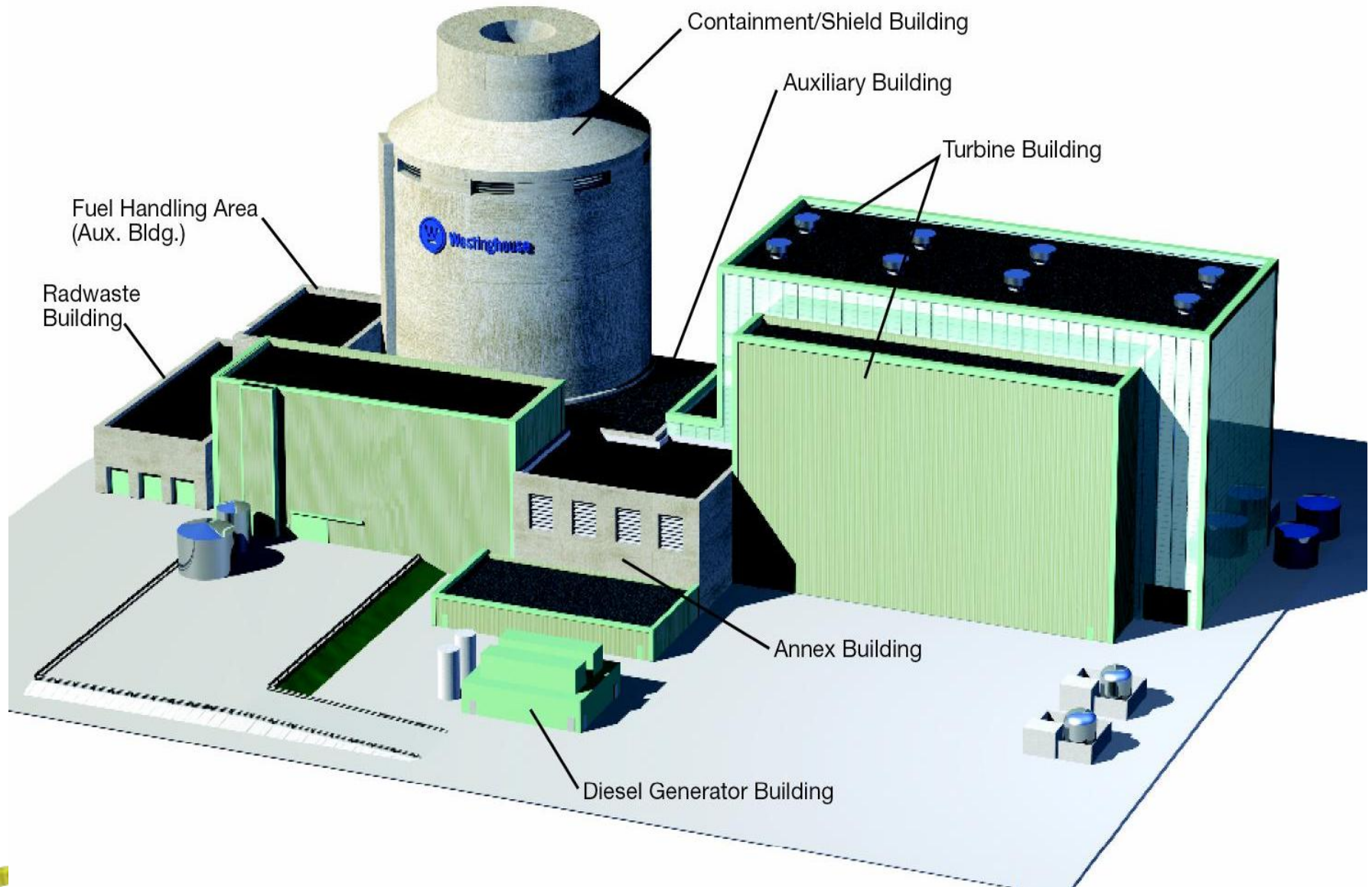
- Group Overview
 - **AP1000**[®] Design Expertise
 - Security Threat Assessment
 - Aircraft Impact
 - Loss of Large Area
 - Risk Assessment (Target Sets)
 - Security Training/Certifications
 - Site Experience:
 - Security Management
 - Development of Target Sets and Protective Strategies
 - Security 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.



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AP1000[®] Security System (SES)

- Generally Described in APP-SES-E8-001, Plant Security System, System Specification Document
- More than a Dozen Functional Specifications and Calculations
- Hundreds of Drawings
- Threat Assessment (APP-GW-GLR-066)
 - Staffing
 - Target Sets

Key Attributes

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Key Attributes

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Questions?



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**Ed Cummins, Vice President & Chief
Technologist
New Plant Technologies**



SMR Plant/Site Layout



Site Layout – General Characteristics

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Site Layout – General Characteristics

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Site Layout – Unit Separation

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Building Layout – General Characteristics

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Nuclear Island Layout

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SMR Plant Layout

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SMR Plant Layout Containment Vessel

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Level 1: Radiological Controlled Area

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Level 2: Radiological Controlled Area

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Level 3: Safety Train IDS & Spent Fuel

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Level 4: Safety Train I&C&E, and Spent Fuel

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Level 5: Safety Trains & Refuel Area

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Level 6

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Level 7: Grade – HVAC, CCS

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Level 7: Grade – Access Routes

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Level 8: Nuclear Island Access

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Level 8: Access Routes

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Level 9

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Level 10: Nuclear Island – VAS AHU

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Level 11: Roof

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Thank You

