

New Directions in Industrial Base Critical Infrastructure Protection: Reconciling Protection and Resiliency

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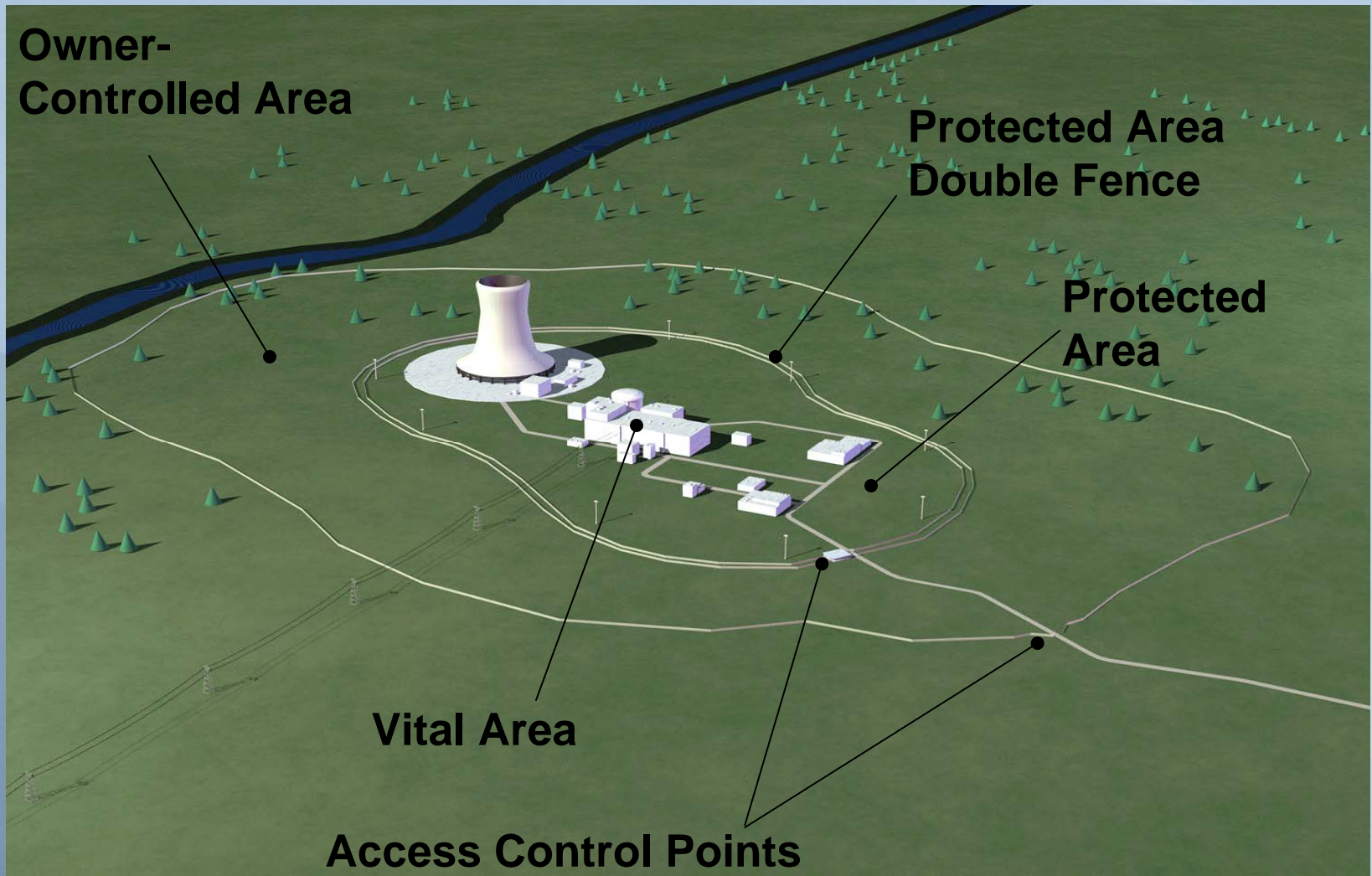
Nuclear Plant Security

NRC REQUIREMENTS AND INDUSTRY PROGRAMS ARE PREDICATED ON THE NEED TO PROTECT THE PUBLIC FROM THE POSSIBILITY OF EXPOSURE TO RADIOACTIVE RELEASE CAUSED BY ACTS OF SABOTAGE BY THE DESIGN BASIS THREAT

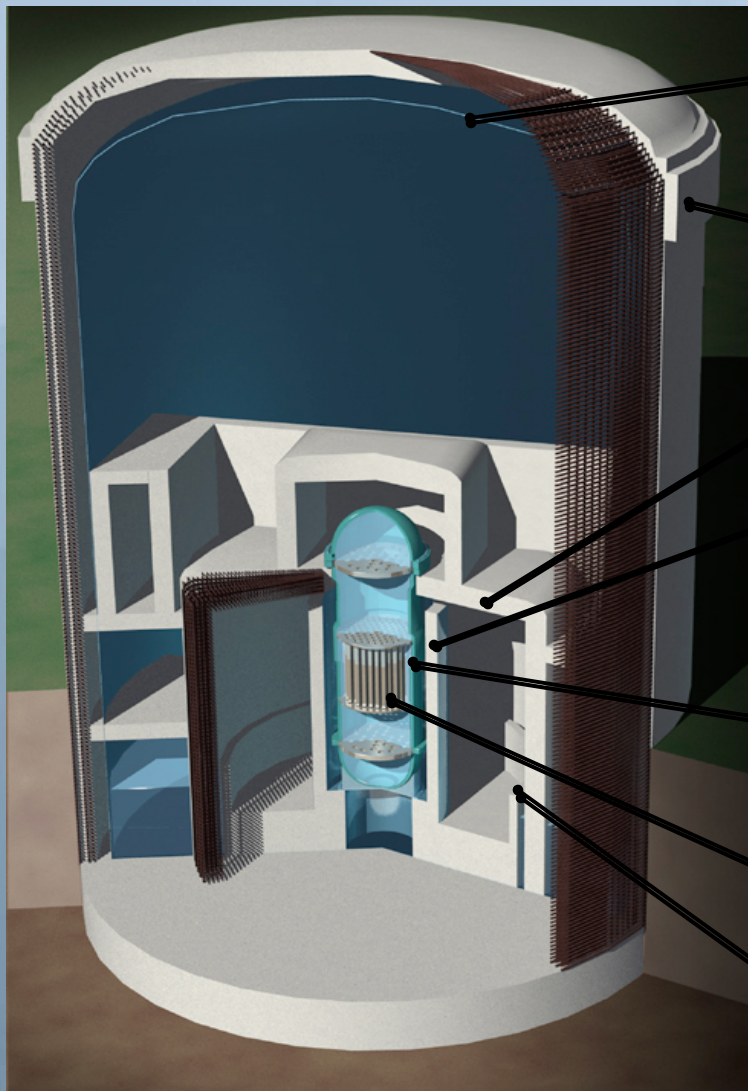
Design Basis Threat

- **Several well trained dedicated adversaries**
- **Determined violent assault**
- **Hand held automatic weapons with silencers and with long range accuracy**
- **Insider assistance**
- **Incapacitating agents**
- **Explosives**
- **Vehicle bombs**
- **Vehicles as means of entry**
- **Cyber attacks**

Concentric Circles of Security



Multiple Layers of Protection in a Robust Physical Structure



Containment Vessel

1.5-inch thick steel

Shield Building Wall

3 foot thick reinforced concrete

Dry Well Wall

5 foot thick reinforced concrete

Bio Shield

4 foot thick leaded concrete with
1.5-inch thick steel lining inside and out

Reactor Vessel

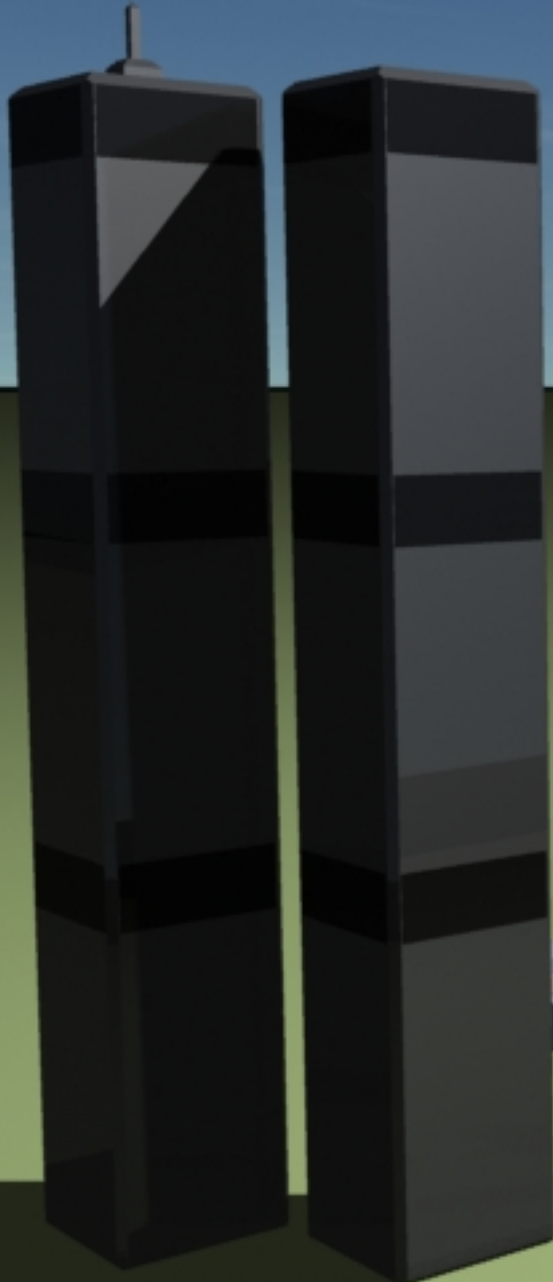
4 to 8 inches thick steel

Reactor Fuel

Weir Wall

1.5 foot thick concrete

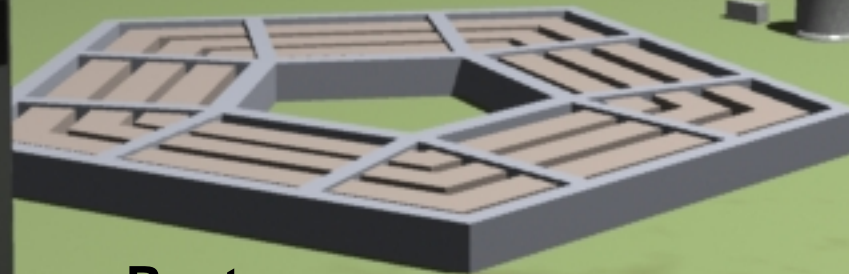
Comparative Size of Targets



WTC
208' wide
1,353' tall

Containment Building
130' wide
160' tall

Spent Fuel Pool
80' wide
40' tall



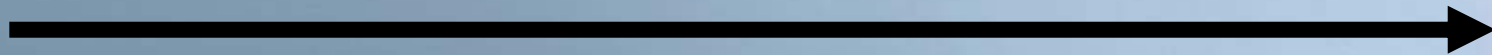
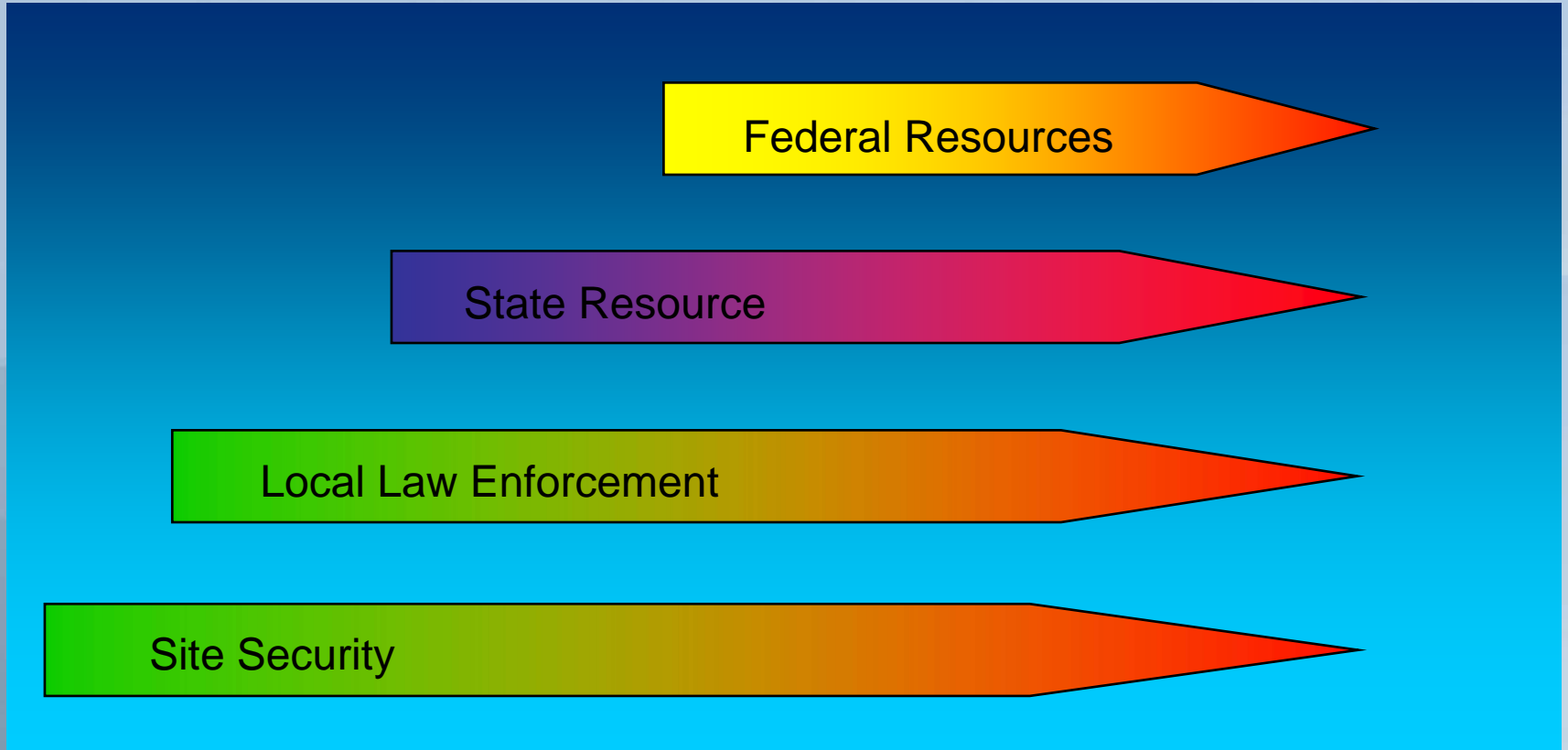
Pentagon
1,489' wide (921' per side)
71' tall



Fuel Storage containers

10' wide
20' tall

Integrated Threat Response



THREAT

Preparedness

- **A 60% increase in number of officers**
- **Expenditures in excess of \$1.2 billion**
- **Additional protection against vehicle and waterborne bombs**
- **Improved operational readiness**

Preparedness

- **Added and upgraded armament**
- **Revised Security and Emergency Plans**
- **Enhanced officer training**
- **Coordination with state and local officials**
- **Enhanced mitigation strategies for catastrophic events**

Nuclear Sector Coordinating Council

- **Represents nuclear sector to federal government agencies**
- **Corresponding Government Council – DHS, NRC, DOE, FBI**
- **Establishes “Seat at the Table” for Security and Homeland Defense Issues**

Initiatives

- **Risk Analysis and Management for Critical Asset Protection**
- **Comprehensive Reviews**
- **Post attack communications**
- **Routine threat briefings**
- **Pandemic Influenza preparation**

Conclusions

- **Nuclear power plants are the most secure industrial facilities in the National infrastructure**
- **Industry has been extremely responsive and has significantly improved its ability to prepare for a significant terrorist attack**
- **Partnering through DHS is the way to integrate and leverage onsite and offsite resources in a meaningful and cooperative way**