
Industrial Applications for Security

Presented to

**University of Tennessee
Technical Exchange Meeting
April 8, 2008**

**International & Homeland Security
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What is Law Enforcement?

- **Law enforcement** is the activity of any law enforcement agency, which is any organization that enforces the laws of one or more governing bodies, or an organization that actively and directly assists in the enforcement of laws.
 - Wikipedia.org



What is Security?

- **Security** is the condition of being protected against danger or loss.
- **Physical security** describes measures that prevent or deter attackers from accessing a facility, resource, or information stored on physical media. It can be as simple as a locked door or as elaborate as multiple layers of armed guard posts.
 - Wikipedia.org



*“Security is always too much until
the day it is not enough.”*

- William H. Webster
Former Director, FBI

International & Homeland Security

- Operational Test & Evaluation
- Risk Mitigation/Management
- Physical Security Design & Integration
- Cyber Security
- Radiological & Nuclear Field Training
- Emergency Management

Technology Applications Center

An independent,
experienced
resource for evaluating the
real-world performance
of security technologies



Testing and Evaluation Capabilities

- Operational testing and evaluation
- Developmental testing
- Reliability, maintainability, availability
- Human factors
- Accelerated lifecycle evaluations
- Total system effectiveness
- Attempt to defeat
- Drills and exercises
 - emergency management
 - force-on-force
- Testing program development



Technology Testing Experience

- Radiation detection technologies
- Explosive detection systems
- Biometric technologies
- Cargo, vehicle, and people screening technologies
- Remote-operated weapon systems
- Intrusion-detection systems
- Radio/wireless communication systems
- Command, control, communications, coordination, intelligence (C⁴I) systems



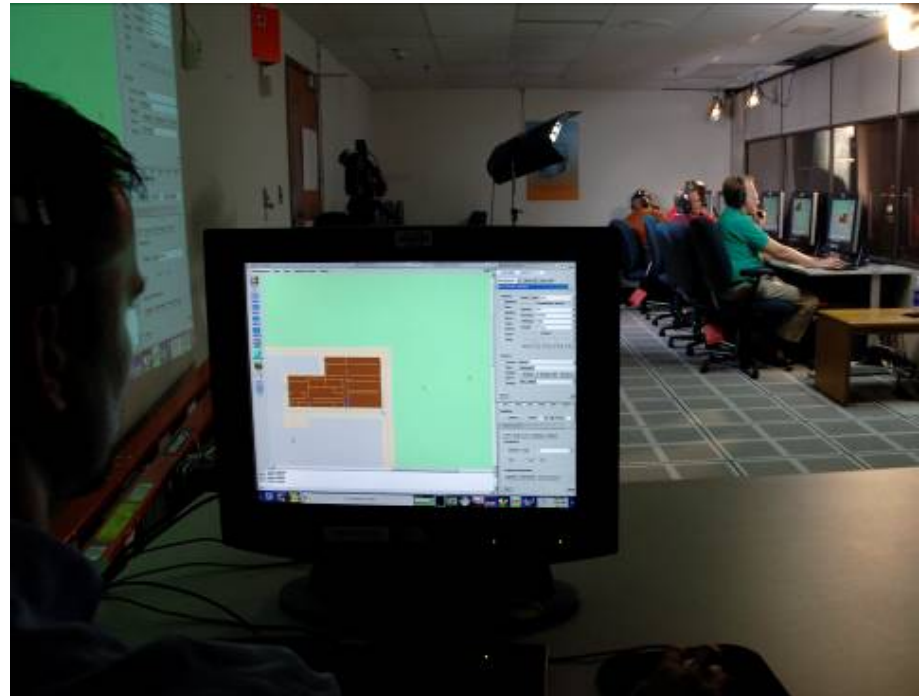
Risk Mitigation/Management Program

Purpose:

Provide state-of-the-art assessments to produce efficient and effective solutions

Capabilities:

- VA/Risk Assessments
- Insider Assessments
- Computer Modeling
- Security Training
- Site/Facility Assessments



Risk Mitigation/Management Program

- Y-12 is a world class provider of:
 - Structured Table Top Analyses
 - Automated Path Modeling
 - Automated Combat Simulations
 - Manned Combat Simulations
 - Hazardous Materials Modeling



Risk Mitigation/Management Tools in Used by Y-12

- Joint Conflict and Tactical Simulation (JCATS)
- AVERT™
- Analytic System and Software for Evaluating Safeguards and Security (ASSESS)
- Vulnerability Integrated Security Analysis (VISA)
- Criticality, Accessibility, Recuperability, Vulnerability Effect, Recognizability (CARVER)
- Simajin®



Y-12 Physical Security Design & Integration

- New Construction
- Existing Facility Retrofit

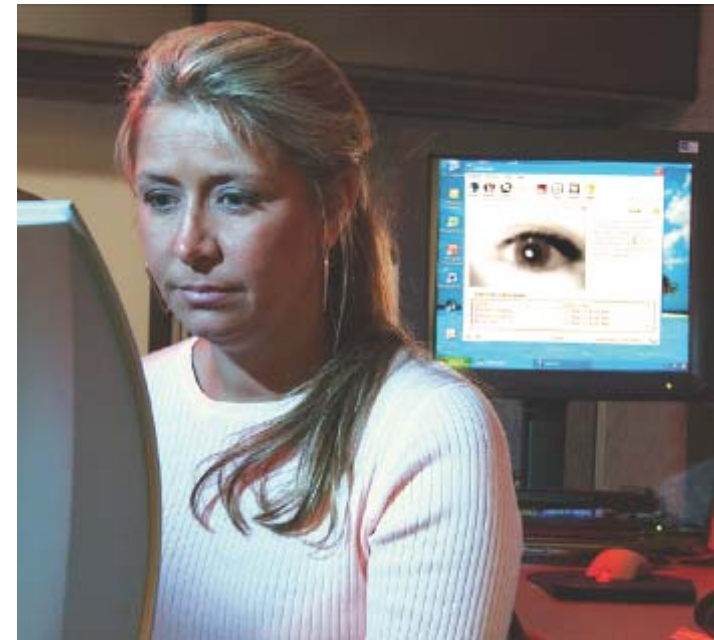


Highly Enriched Uranium Materials Facility

- Technology Implementation Experts
 - Physical barrier design
 - Access Controls including biometrics
 - Insider mitigation
 - Alarm monitoring
 - Protective force requirements
 - Protective lighting
 - Weapon system selection/deployment
 - Personnel, cargo, vehicle screening
 - Explosive detection
 - Perimeter fencing
 - Key & combination control
 - Intrusion detection systems
 - CCTV selection/deployment
 - Communications systems

Cyber Security

- Secure network design
- Security plans and documentation
- Vulnerability and risk assessments
- Security products evaluations
- Security training
- Encryption
- Public key infrastructure
- Security testing
- Advanced Authentication
- Personal Identity Information
- Policy evaluation



Radiological & Nuclear Field Training Center



Nuclear & Radiological Field Training Center

- Developed in 2006
- Address the shortage of training venues
- Providing relevant quantities of nuclear and radiological materials in a realistic scenario driven environment
- Training options include:
 - Material Search, Identify, and Secure
 - Material Packaging and Recovery
 - Site Characterization
 - Consequence Management
 - Contaminated Casualty Extraction
 - New Equipment Testing
 - Decontamination



U.S. Army 20th Support Command conducts training at the NRFTC in September 2006

Nuclear & Radiological Training Center



Laboratory Facilities



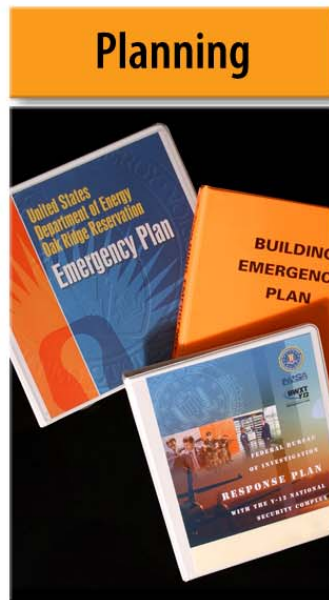
Drum Storage



**Numerous offices, high bays,
and laboratories provide multiple
scenario configurations**

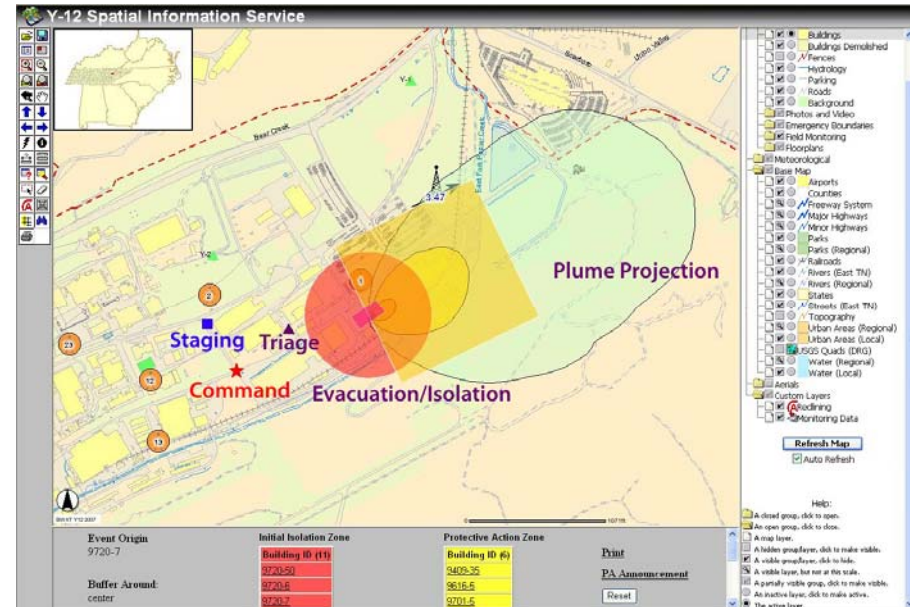
Emergency Management

- EM Excellence exists at Y-12 NSC
 - 20-year history focused on all hazards
 - Comprehensive, robust program
 - Seasoned experts
- Operational nuclear facility
- Strong external partnerships & collaborations
- Key Expertise
 - Rad/Nuclear Drills/Exercises
 - EM Integration & Planning



EM Facilities and Equipment

- Emergency Operation Center
- Technical Support Center
- EOC Information Management System – EMInS
- NARAC I-Client Atmospheric Plume Dispersion Modeling – Real time 3-Dimensional
- Two meteorological towers
- Doppler Sonar
- Tactical Operation Center (FBI Integration)
- Public Warning System (2 mile radius)
- RAP Team first response equipment



Drill and Exercises

- Annual integrated exercises involving 1,000 to 1,500 participants
- Annual integrated drills involving 500 to 1,000 participants
- >100 drills/exercises involving ~ 100 participants
- Annual building evacuation drills
- Cadre members target 2 drill/exercises/year
- Scenarios involve:
 - Emergency medical services, WMD, Hostage, Terrorist, Fire, Natural Disaster, Chemical Hazards, Radiological Hazards, Criticality, Disaster Recovery



Summary

- Y-12 provides the ground truth to security design, technology, implementation, and sustained performance
- Many of Y-12 security programs are best in breed
- Y-12 is the practical application of technologies
- Y-12 has unique expertise in:
 - Security system analytics
 - Security design of facilities and production processes
 - Cyber security programs
- A partner for industry and educational institutions

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