Y-12 National Security Complex

Performance Testing Workshop

Information Brief
April 13, 2010

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Workshop Description

This workshop will provide managers and testing personnel with the knowledge necessary to understand what is necessary to implement, manage and conduct performance testing activities on safeguards and security systems. It will cover all aspects (or those of interest to the class) of testing a safeguards and security program, including: intrusion detection systems, radiological sensors, communications systems, surveillance systems, access controls, personnel and vehicle searches, and material control and accounting systems.

The goal is to assist site personnel in understanding the role that a quality testing program plays in ensuring that systems are performing to the required level of effectiveness. Lectures and practical exercises will demonstrate processes and methodologies that can be used to implement and manage a program designed to provide decision makers with vital information regarding the effectiveness of the protection program.

Workshop Description

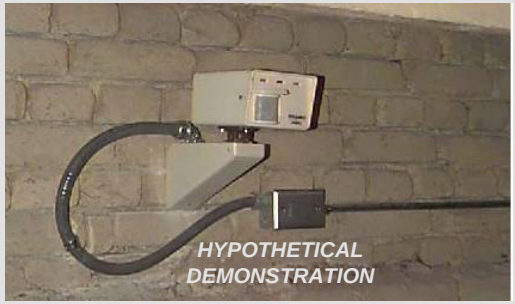
Attendees

- Physical protection professionals and managers, maintenance technicians and managers, and material control and accounting specialists and managers all who have responsibility for oversight or proper operations of protective systems. Attendees should have knowledge of the protective systems, protective forces and the facilities where security technologies are installed.

Workshop Structure

Workshop Structure

- This course will include lecture and practical exercises designed for approximately 15 participants. There are no formal proficiency tests. Participants will review, write and develop performance tests for numerous physical protection and material control and accounting systems/components.



Workshop Prerequisites/Requirements

Workshop Prerequisites

- There are no prerequisites for this course; however, participants should have significant experience with their site's protection program

Completion Requirements

- To attain a completion certificate, a participant must actively participate in all lessons and course activities

Workshop Duration/Location

Workshop Duration

- Approximately 5 days

Workshop Location

- Y-12 National Security Complex
  Oak Ridge, Tennessee

2009 Schedule

- **2009 Workshops**
  - Kurchatov — June 22–26
  - OKBM — September 21–25
  - RIAR — November 9–13
  - A-16 — November 16–19
  - Kurchatov — December 7–18

2010 Schedule

- **2010 Workshops**

– VNIIEF	April 26–30
– Sevmash	May 17 – 21
– VNIIEF	June 28 – June 30
– Country X	July 26 – August 6
– Mayak	October 11 – 15
– Siberia	October 25 - 29
– RISI	November 29 – December 3

2011 Schedule

- **2011 Workshops**
  - China 2011
  - Others TBD

Training Facilities

- Training Areas
  - Mobile training team locations
  - 9201-3, 2nd floor, high bay area
  - Property Protection Area

Purpose

- NA-25 directive to Y-12
- NA-25 has been working for many years to assist our foreign counterparts with Material Control & Accountability
- A significant amount of our effort is working with the Russians to develop capabilities to sustain the effectiveness of their enhanced security systems over the long term
- Our goal is to ensure our foreign colleagues have the tools necessary to continually challenge their security systems and enhance protection strategies as well as validate equipment effectiveness, operability and vulnerability analyses
- To further improvements in non-technological areas such as Performance Assurance, Performance Testing, Vulnerability Analysis, Configuration Control, Statistical Analysis and Reports, and Full Systems Testing

Workshop Modules

- Module 1: Introduction to a Performance Testing Program
  Ken Martin – National Security Analysis & Training
- Module 2: Developing a Performance Testing Program
  KJ Maddux - National Security Analysis & Training
- Module 3: Integration of Performance Testing with the Vulnerability Process
  Jeff Knott - Safeguards, Security, & Emergency Services
- Module 4: Configuration Management in Security: Necessary for the Total Program
  John Woods - Safeguards, Security, & Emergency Services
- Module 5: Statistical Design of a Performance Test
  Jeremy Poling - Nuclear Materials Control & Accountability
- Module 6: Performance Test Development Basics
  Herb Huffstetler - Safeguards, Security, & Emergency Services
- Module 7: Overview of a Full Systems Test
  Herb Huffstetler - Safeguards, Security, & Emergency Services
- Module 8: Workshop Summary
  Ken Martin – National Security Analysis & Training

Workshop Modules

Module 1 - Introduction to a Performance Testing Program

- *Attendee will gain an understanding of the history of testing within the Department of Energy. The benefits of implementing a performance testing program will be discussed. An overview of Y-12 testing activities will be presented to set the stage for the rest of the workshop modules and to provide examples of ways testing is implemented at the site.*

Module 2 - Developing a Performance Testing Program

- *Attendee will gain an understanding of how to develop a Performance Testing Program and how testing helps determine the health of the safeguards and security system. For each critical security element, equipment, procedures, personnel and system integration will be discussed.*

Workshop Modules (cont.)

Module 3 - Integration of Performance Testing with the Vulnerability Process

- *Attendee will receive information about the vulnerability assessment (VA) process and how the performance testing program provides valuable information to validate the accuracy of the analysis. A VA will be presented (for review and understanding of a facility), which is the basis of all workshop discussions. A field exercise will be performed to identify tests that must be performed to validate the VA.*

Module 4 - Configuration Management in Security: Necessary for the Total Program

- *Attendee will gain an understanding of why specifications for certain security features need to be precisely maintained. This module will allow the attendee to better appreciate that when a criterion is established for a system, that system must perform at the specified level; failure to maintain control over the specified criterion could render that system ineffective.*

Workshop Modules (cont.)

Module 5 - Statistical Design of a Performance Test

- *Attendee will gain an understanding of how to develop a Performance Testing Program and how testing helps determine the health of the safeguards and security system. For each critical security element, equipment, procedures, personnel and system integration will be discussed.*

Module 6 - Performance Test Development Basics

- *Attendee will gain an understanding of ways to develop a document for the test controls and evaluation of the participants. Attendees will receive sample performance test program plans, test plans, reports and a sample testing schedule. Each document will be discussed during this module.*

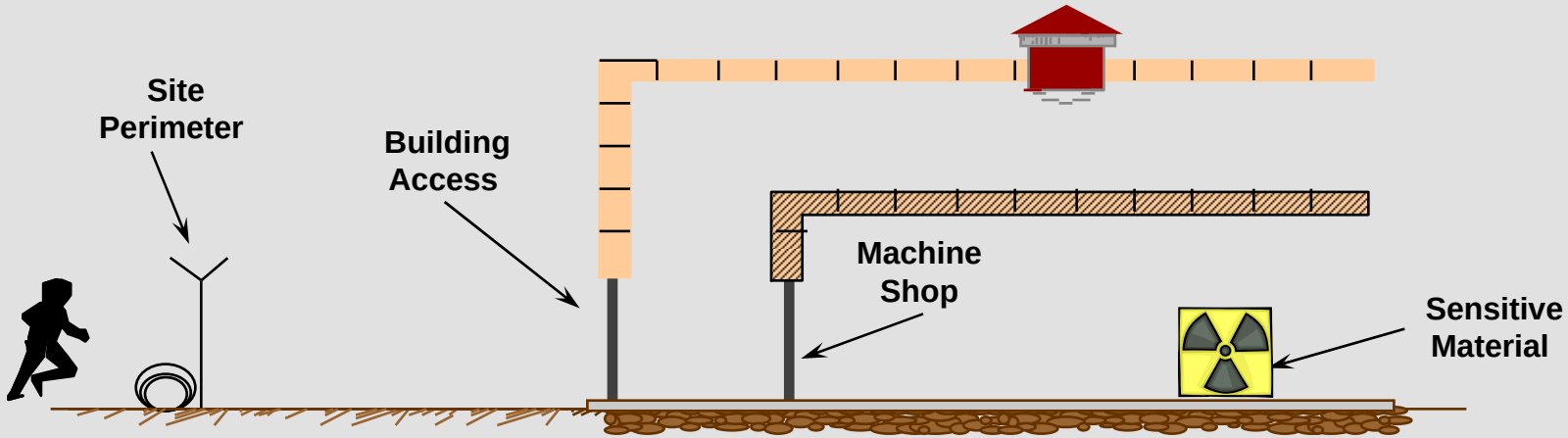
Workshop Modules (cont.)

Module 7 - Overview of a Full Systems Test

- *Attendee will gain an understanding of designing a full systems test (to test critical protection elements within an adversary pathway). A full systems test evaluates system integration as well as subsystems and components.*

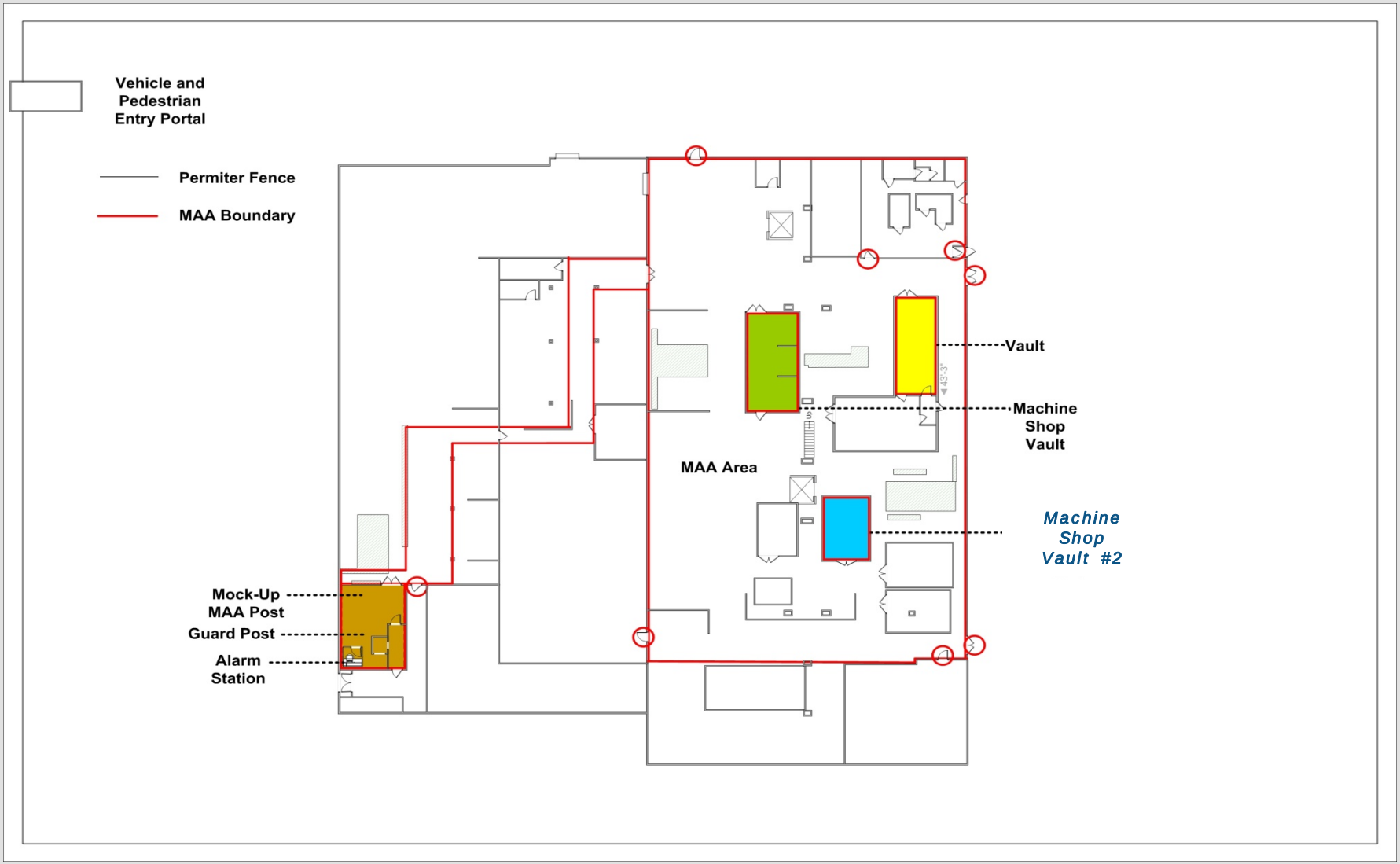
Module 8 - Workshop Summary

- *Summarizes the activities of the workshop for the attendee.*



Y-12 NATIONAL SECURITY COMPLEX

9201-3 Floor Plan



Issues / Concerns

- Identify wireless security system
- Telecommunications approval for use of wireless security system
- Purchase wireless security system
- Craft support (laborers, carpenter, electricians)
- Classroom classification monitor during discussions

Milestones

- Y-12 hosted 12 Russian visitors from Kurchatov
- Secure workshop areas (New Hope Center & 9201-3)
- Construct mock Material Access Area
- Purchased and installed wireless security system
- Prepped for Nancy Peterson's tour (May 26 & 27)
- Conducted dry runs of modules and scenarios
- Made changes as directed by Nancy Peterson
- Conducted additional dry runs as necessary
- Conducted course

Points of Contact

- Physical Security – Cindy Parr
- Risk Management – Ron Parr
- Configuration Management – John Woods
- Classification – Wendell Jones
- Foreign National Visits and Assignments – Christy Gay
- Operations Security Working Group – Ron Wantland
- Protective Force – Larry Garrett
- Security Systems – Robert Sharp
- 9201-3 Building Manager – John May
- Plant Shift Superintendent – Tim Morris
- Fire Department – Scott Hackler
- Fire Protection Engineering – Dane Jackson
- Environmental Safety & Health – Justin Davis

Questions from the Audience