

**CH2MHILL®**

Physical Protection Systems  
Training Course

2011-2012



CH2M HILL's Physical Protection Systems Training Course\* presents a comprehensive approach to physical security for fixed sites such as banks, industrial plants, embassies, and corporate offices. For more than 20 years, the course has provided training on the methodology developed for the U.S. Department of Energy (DOE) to protect the sites, materials, and components that make up the DOE weapons complex.

## Who Should Attend

This course is designed for a wide variety of personnel and provides valuable training for those involved in managing, operating, maintaining, designing, analyzing, or testing security systems. Past attendees have included corporate security directors, security system managers, design engineers, guard force members, and maintenance and procurement personnel. All have credited the course with improving their job skills.

## Satisfaction

The following list is a sample of the wide variety of organizations that have sent participants through our training:

- Arizona Public Service Company
- Consolidated Edison of New York
- Defense Advanced Research Projects Agency
- Eastman Kodak Company
- Minnesota Department of Corrections
- New York Power Authority
- Ontario Power Generation
- Sandia National Laboratories
- Texas Department of Criminal Justice
- Bureau of Engraving and Printing
- U.S. Department of Energy
- U.S. Marshals Service
- U.S. Strategic Command
- Underwriters Laboratories
- Westinghouse Savannah River Company

\*Formerly provided by Security Analysis Corporation (SAC)



*"The best course in the industry, and I have attended them all."*

- Manager, Security Inspection Teams,  
DOE Headquarters



*"The Physical Protection Systems course was the best course that I have had the opportunity to attend. I see a lot of potential for your course to expand into the Criminal Justice industry. What I have experienced is that our Agency, like most others, is at the mercy of every security equipment vendor who claims to have the end all answer to their security problems. Your class provided a lot of basic insight into physical protection systems and their applications. If anything, I can tell which vendor is honest and who's blowing smoke."*

- Security Director, Texas  
Department of Criminal Justice

## Why You Should Attend

The Physical Protection Systems Training Course takes a comprehensive approach to the proper design of a physical protection system. The approach involves three major steps: determining system objectives, designing the system, and analyzing system design. Structured with sessions of illustrative lectures, the course is accompanied by hands-on exercises that allow each participant to apply the knowledge gained in preceding lectures. The course covers all major aspects of a physical protection system, and each student will receive copies of the EASI and SAVI computer programs.

The course now incorporates an overview of blast design considerations. While blast design is beyond the scope of this course, our presentation includes numerous videos that provide several salient myth-busting teaching points that are often very eye-opening to the majority of students. For example, limitations of "blast walls"—the new hazards they create are explained. Several pitfalls of the often typical application of film to windows are shown. In this era of vehicle bombs, many of our students, who are learning how to defeat a ground-based adversary who is attempting to gain access to their facility, are also the ones in their facility that will be asked to develop a blast mitigation strategy. This extra session makes them aware that many of their previous assumptions may be seriously flawed, and some mitigation strategies actually worsen the blast effects.

## Course Content

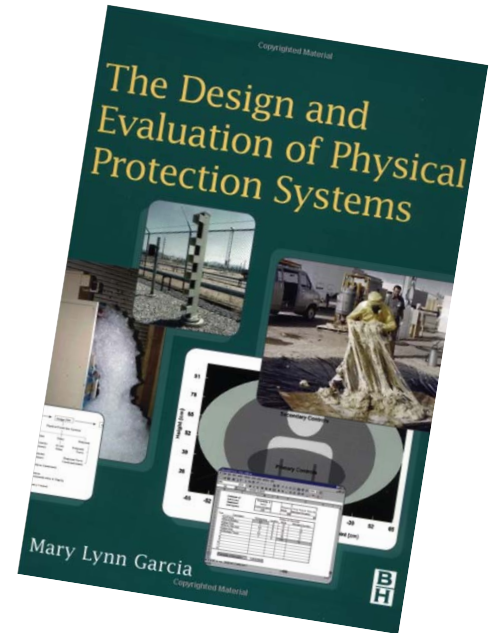
The Physical Protection Systems Training Course is a 40-hour course. Designed for a wide variety of participants, the 5-day course provides interactive training on a proven methodology for determining system objectives and designing integrated security systems that incorporate the latest in security system technologies. Hands-on computer use is also included to train participants in the analysis of existing or proposed security systems using proven computer models, valuable tools for selecting the most cost-effective solution for specific security needs. Subgroup sessions allow participants a hands-on opportunity to apply the material covered in

the preceding lecture and interact with fellow students from diverse backgrounds. We neither endorse nor represent any vendor, but instead offer an unbiased, systematic approach to determining security system objectives, understanding the principles of operation of the various equipment available and selecting the correct device for your application, and analyzing with proven computer models the relative effectiveness of proposed systems before money is spent on new equipment.

The manual used as the basis for the course is "The Design and Evaluation of Physical Protection Systems" by Mary Lynn Garcia, who attended our course in 1995.

### Comments from Student Evaluations

- "This is the best course I've attended anywhere on any subject."
- "The instructors were extremely knowledgeable and professional."
- "The session on CCTV alarm assessment saved me \$2 million on the upgrades we're about to begin."
- "The opportunity to compare experiences with others during the subgroups was invaluable."



## About the Presenters

Mr. Chritton is CH2M HILL's Director of International Security Programs. His security experience ranges from staff intelligence officer to lead designer as well as field design liaison engineer on a \$400-million security upgrade. He co-authored the Nuclear Regulatory Commission's NUREG/CR-5723, "Security System Signal Supervision." Mr. Chritton has instructed for the International Training Course for Physical Protection of Nuclear Materials and Facilities, which is presented by Sandia National Laboratories for the International Atomic Energy Agency. He was an instructor for the Risk Assessment Methodology for Water™ (RAM-W™) Train-the-Trainer course presented by Sandia. Mr. Chritton has coordinated vulnerability assessments for numerous water, wastewater, chemical, and federal facilities. He was lead instructor for the EPA-funded vulnerability assessment and emergency response plan workshops being conducted for medium water systems and was the EPA's lead reviewer for all water system vulnerability assessments submitted per the requirements of the Bioterrorism Act of 2002.

*"Mike Chritton is an acknowledged expert in the 'design and evaluation of physical protection systems.' More than this, he is able to teach the same to both laymen and experienced security professionals with clarity and credibility. His belief in his subject matter and his commitment to the security industry have helped make him a leader in his field."*

- Captain, U.S. Marines, Port Security Officer

Mr. Ebel has been a Course Coordinator and a Lead Instructor for Sandia National Laboratories' International Training Course on Physical Protection since 1977. Other courses which he has been instrumental in developing and teaching are Design Basis Threat Workshops, Risk Analysis and Vulnerability Assessment for Critical Infrastructures, Nuclear Emergency Security Team (NEST) Key Leader Training, NRC Inspector Training Courses, and IAEA Safeguard's Inspector Training. Mr. Ebel is vice president of BE Inc.

*"Your course is a well-designed, expertly presented combination of very relevant information to anyone, anywhere in the world of security services."*

- Nuclear Security Operations Coordinator, Rochester Gas & Electric



Mike Chritton, CPP



Paul Ebel, MBA

**Global Headquarters**  
9191 South Jamaica Street  
Englewood, CO 80112  
USA  
Toll-free: 888.CH2M.HILL  
Tel: +303.771.0900  
Fax: +720.286.9250

# Sample Course Schedule

The course will be conducted from 8:00 a.m. to 5:00 p.m. over 5 days.

	Monday	Tuesday	Wednesday	Thursday	Friday
8:00	Introduction	Physical Protection	Alarm Assessment	Access Delay	EASI Model Subgroup
8:30		Exterior Intrusion Systems			
9:00	System Design and Analysis		Alarm Communication and Display	Response	SAVI Model
9:30	Characterization of a Hypothetical Facility				
10:00		Threat Definition	Exterior Intrusion Systems Subgroup	Response Subgroup	BEASI Subgroup
10:30	Threat Definition Subgroup	Interior Intrusion Systems			
11:00			Target Identification	Entry Control Systems	Analysis and Evaluation Techniques
11:30	Target Identification Subgroup	Entry Control Subgroup	EASI Model		
12:00	Lunch			Interior Intrusion Systems Subgroup	EASI Model
12:30	Lunch	Physical Protection Systems	EASI Model		
1:00	Lunch			Physical Protection Systems	EASI Model
1:30	Lunch	Physical Protection Systems	EASI Model		
2:00	Lunch			Physical Protection Systems	EASI Model
2:30	Lunch	Physical Protection Systems	EASI Model		
3:00	Lunch			Physical Protection Systems	EASI Model
3:30	Lunch	Physical Protection Systems	EASI Model		
4:00	Lunch			Physical Protection Systems	EASI Model
4:30	Lunch	Physical Protection Systems	EASI Model		
5:00	Lunch			Physical Protection Systems	EASI Model
	Adjourn	Adjourn	Adjourn		

© 2011 CH2M HILL  
TRACKING NUMBER