

# Hazardous Materials and Terrorist Incident Planning Curriculum Guidelines

## Facility Planning

Planning  
Training  
Considerations

Planning  
Orientation

Planning  
Essentials

Commodity  
Flow Study

Hazard Analysis  
and Threat  
Assessment

Capability  
Assessment

Planning for  
Protective  
Actions

Plan  
Implementation  
& Maintenance

Facility  
Planning

Planning for  
Public Education

Appendix:  
Additional Planning  
Resources

## **Introduction**

Facility Planners develop, validate, and maintain emergency response plans and safety plans for any facility subject to federal contingency planning regulations, as well as other facilities that wish to improve emergency preparedness through planning. They also develop procedures to ensure compliance with federal, state, and local mandates for participation in community planning and right-to-know activities. In this context, the term “facility” is meant to have a wide connotation and may include, but is not limited to, any mobile or fixed onshore or offshore building, structure, installation, equipment, pipe, or pipeline.

The Facility Planning specialty area provides participants with the knowledge and skills they need to develop a basic hazardous materials and terrorist threat emergency plan for a facility. The primary training audience is facility planners and planning team members. Training objectives cover a broad range of generic competencies, including the ability to function effectively in a team environment, assist in or conduct a basic hazards and threat analysis and capability assessment, work with others to analyze options and draft sections of the plan, and participate in plan implementation, evaluation, and maintenance.

The legislative and regulatory basis for this training can be found primarily in the requirements specified in OSHA 1910.120 for development of employers’ emergency response plans, SARA Title III for development of planning jurisdictions’ emergency response plans, and various federal agency regulations for the development of facility and transporter emergency response plans. The competencies defined here incorporate generic concepts and processes derived from various sources in the planning literature. Several of the most important reference documents, and more specific models for planning, are described in the Appendices. The training objectives are intended to be comprehensive, i.e., to address the requirements of all identified audience members; thus, training developers and instructors will need to tailor these objectives to meet local audience interests, needs, and planning processes.

## **Training Audience**

The training audience for Facility Planning includes planning team members who have a defined responsibility in researching, preparing, implementing, and maintaining hazardous materials and terrorist threat facility plans. These persons generally represent an organizational or functional specialty in an integrated planning process for the facility. Audience members may include industry owners and executives, business planners, production/process managers, functional managers (e.g., communications, public information, emergency response, etc.), safety officers, technical experts, and others employed by the facility. Personnel who have responsibilities for reviewing and approving facility plans and/or enforcing compliance with existing community regulations and standards may also benefit by training.

## **Prerequisites or Presumed Prior Knowledge/Skills of Students**

Training covers basic skills, with an emphasis on the ability to interpret and use information provided by various technical specialists in developing the plan. More advanced planning skills are addressed under other Planning Specialties. Audience members are assumed to already possess training competencies covered under Planning Orientation, as well as an expertise in the professional discipline that the student represents on the planning committee. It is further

assumed that managerial, administrative, and logistic requirements for organizing the planning process, including staff recruitment and assignments, have already been met.

### Typical Program Format

Training can typically be accomplished in two to four days of classroom instruction led by an experienced facilitator. Breaking training into modules (e.g., Hazards Analysis and Threat Assessment) that are delivered at different times is also possible, and this approach may be beneficial if timed to coincide with planning team assignments. However, team building is very important in the planning process, so continuity of student groupings throughout training is recommended.

### Methodology Recommendations

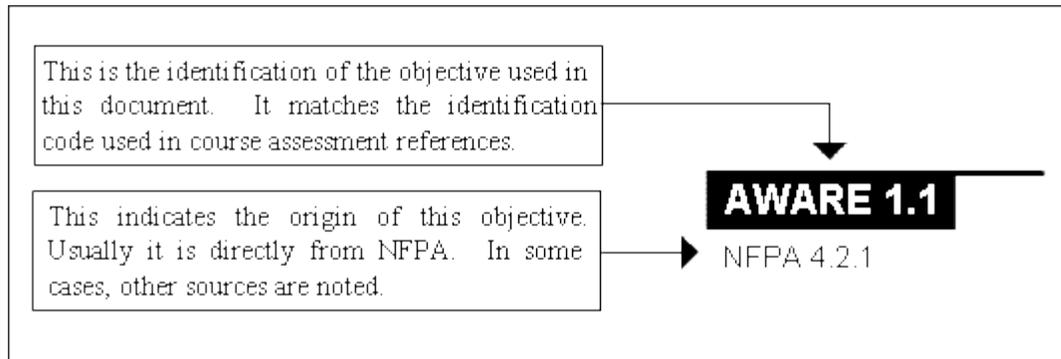
It is recognized that the planning needs of facilities, and the resulting training needs of planning team members, can vary greatly, depending on such factors as business size, demographics, product mix, hazards, local resources, and planning preferences. However, training described here is intended to address the generic training requirements of all hazardous materials facility planners. Training managers, course developers, and instructors may need to tailor these materials to meet the unique needs and interests of different audiences, incorporating elements covered in other Planning Specialties, as appropriate. Other training considerations include the following:

- Training should focus on the actual development of facility plans, with the work product and participation in the group planning process used to demonstrate student mastery of the objectives.
- Audiences should be heterogeneous, reflecting the diverse groups and professional disciplines represented in the planning process. It is highly recommended that team members who will work together in subsequent planning efforts be trained together.
- Course methodology should emphasize group interactions, team building, and resolution of interpersonal conflicts, as well as the development of the plan product itself.
- Course materials can be multi-tracked by type of plan (OSHA, EPA, etc.) to facilitate tailoring the instruction to the needs of different audiences.
- If possible, instruction should address practical strategies for consolidating planning requirements (i.e. merging several requirements into one plan development effort) to foster greater planning efficiency.
- Instruction should emphasize the need for on-going planning commitments by the team and the organizations they represent.
- Instruction should emphasize the need for ongoing evaluation at each step in the planning process.
- Instructors should emphasize that steps in the planning process, although taught sequentially, may actually be performed simultaneously.

Planning Training Considerations
Planning Orientation
Planning Essentials
Commodity Flow Study
Hazard Analysis and Threat Assessment
Capability Assessment
Planning for Protective Actions
Plan Implementation & Maintenance
Facility Planning
Planning for Public Education
Appendix: Additional Planning Resources

## Recommended Training Objectives

### Objective Identification Legend



### Facility Planning 1.

#### **FACIL - 1.1.**

Given an assignment as a facility planning team member, describe an appropriate planning strategy and team member responsibilities in the process.

#### **FACIL - 1.1.1.**

Describe the benefits of a team approach to planning, and identify skills necessary to participate in the team planning process.

#### **FACIL - 1.1.2.**

Identify individual roles and responsibilities in the facility planning process, to include work expectations, administrative support systems, and time lines.

#### **FACIL - 1.1.3.**

Identify the need to coordinate planning with outside groups (e.g., local government, surrounding jurisdictions, state offices, federal/regional offices such as EPA and FEMA, RRTs, and CAER.)

#### **FACIL - 1.1.4.**

Demonstrate understanding of the planning process mission statement, goals, and objectives.

#### **FACIL - 1.1.5.**

Describe the expected results of the planning process, to include required planning elements and plan format.

#### **FACIL - 1.1.6.**

Identify resources needed to conduct the planning process, including personnel, budgets, and technical capabilities, and solicit these resources within the company.

<b>FACIL - 1.2.</b>	Given an assignment as a facility planning team member, demonstrate the ability to conduct a review of federal, state, and local authorities applicable to the planning process.
<b>FACIL - 1.2.1.</b>	Describe the purpose and benefits of completing a review of existing plans and authorities.
<b>FACIL - 1.2.2.</b>	Identify methods and procedures for reviewing plans and authorities (collecting and organizing information, identifying and clarifying issues, identifying incompatibilities and shortfalls, etc.), including associated costs and staffing requirements.
<b>FACIL - 1.2.3.</b>	<p>Identify planning regulatory requirements that apply to the facility, to include consideration of:</p> <ul style="list-style-type: none"> <li>• SARA Title III</li> <li>• EPA’s Oil Pollution Prevention Regulation (SPCC and Facility Response Plan Requirements)—40 CFR part 112.7(d) and 112.20 to 112.21</li> <li>• MMS’s Facility Response Plan Regulation—30 CFR part 254</li> <li>• RSPA’s Pipeline Response Plan Regulation—49 CFR part 194</li> <li>• USCG’s Facility Response Plan Regulation—33 CFR part 154, subpart F</li> <li>• EPA’s Risk Management Programs Regulation—40 CFR part 68</li> <li>• OSHA’s Emergency Action Plan Regulation—29 CFR 1910.38(a)</li> <li>• OSHA’s Process Safety Standard—29 CFR 1910.119</li> <li>• OSHA’s HAZWOPER Regulation—29 CFR 1910.120</li> <li>• EPA’s Resource Conservation and Recovery Act Contingency Planning Requirements—40 CFR part 264, subpart D, 40 CFR part 265, subpart D, and 40 CFR part 279.52 State and local policies, codes, ordinances, etc.</li> </ul>
<b>FACIL - 1.2.4.</b>	Describe the advantages and disadvantages of all-hazard planning and hazard-specific planning.
<b>FACIL - 1.3.</b>	Given an assignment as a facility planning team member, demonstrate the ability to conduct background research appropriate to the planning requirement.

Planning Training Considerations

Planning Orientation

Planning Essentials

Commodity Flow Study

Hazard Analysis and Threat Assessment

Capability Assessment

Planning for Protective Actions

Plan Implementation & Maintenance

Facility Planning

Planning for Public Education

Appendix: Additional Planning Resources

**FACIL - 1.3.1.**

Identify critical internal and external products, services, and operations that impact the facility plan, including:

- Internal products and services and the facilities and equipment needed to produce them
- External products and services provided by suppliers, especially sole source vendors
- Services such as electrical power, water, sewer, gas, telecommunications, and transportation
- Operations, equipment, and personnel vital to the continued functioning of the facility

**FACIL - 1.3.2.**

Identify, gather, and review copies of existing hazardous materials and terrorist incident response plans (community emergency plans, mitigation/prevention plans, response agency SOPs, facility plans, etc.).

**FACIL - 1.3.3.**

Review critiques of actual incidents, exercises, and drills conducted by the facility or by the community with participation by the facility.

**FACIL - 1.3.4.**

Review important changes and trends impacting the facility.

**FACIL - 1.3.5.**

Conduct surveys, interviews, etc. to gather expert opinion on planning needs, as required.

**FACIL - 1.3.6.**

Identify and summarize related planning issues, priorities, concerns, and challenges.

**FACIL - 1.4.**

Given the planning process to be used by the facility, identify the purpose, benefits, methods, expected results, and participant roles in hazards analysis and capability assessment.

**FACIL - 1.4.1.**

Describe the purpose and benefits of conducting a hazards and threat analysis.

**FACIL - 1.4.2.**

Describe the purpose and benefits of conducting a capability assessment.

**FACIL - 1.4.3.**

Describe the methods to be used and the expected results of the facility's hazards and threat analysis and capability assessment processes.

<b>FACIL - 1.4.4.</b>	Identify organizational and team member responsibilities in the facility's hazards and threat analysis and capability assessment processes, including the roles of various technical specialists.
<b>FACIL - 1.5.</b>	Given the facility's production processes, potential hazards, and potential terrorist target areas, demonstrate the ability to identify, collect, and interpret hazards and threat analysis and capability assessment data needed for planning.
<b>FACIL - 1.5.1.</b>	Collect or assist in collecting data, as identified in Technical Guidance for Hazards Analysis.
<b>FACIL - 1.5.2.</b>	Identify types of emergencies that have occurred in the community, at the facility, and in similar facilities.
<b>FACIL - 1.5.3.</b>	Identify geographic factors that could contribute to potential emergencies.
<b>FACIL - 1.5.4.</b>	Identify types of emergencies that could occur from technological process or system failures.
<b>FACIL - 1.5.5.</b>	Identify types of emergencies that could occur as a result of human error.
<b>FACIL - 1.5.6.</b>	Identify types of emergencies that could result from the design or construction of the facility and production processes.
<b>FACIL - 1.5.7.</b>	Identify types of emergencies that could result from terrorist acts or other deliberate criminal sabotage
<b>FACIL - 1.5.8.</b>	For each potential emergency, identify possible complications and relationships to other emergency events, and estimate the probability of occurrence.
<b>FACIL - 1.5.9.</b>	Identify and evaluate internal and external resources and capabilities that could be applied in an emergency.
<b>FACIL - 1.5.10.</b>	Conduct an insurance review to identify and evaluate facility insurance coverage and benefits in various types of emergency situations.

Planning Training Considerations
Planning Orientation
Planning Essentials
Commodity Flow Study
Hazard Analysis and Threat Assessment
Capability Assessment
Planning for Protective Actions
Plan Implementation & Maintenance
Facility Planning
Planning for Public Education
Appendix: Additional Planning Resources

**FACIL - 1.5.11.** Review and interpret the data.

**FACIL - 1.5.12.** Identify, map, and prioritize hazards, terrorist targets, risk areas, and vulnerable zones, and identify capability shortfalls and excesses (gap analysis).

**FACIL - 1.6.** Given the results of the facility's hazards and threat analysis and capability assessment, demonstrate the ability to identify issues and solutions to be addressed in the plan, and assignments for developing the plan.

**FACIL - 1.6.1.** Identify issues and solutions to be addressed in the facility plan by examining existing plans, hazards and threat analysis results, capability assessment results, and other pertinent information.

**FACIL - 1.6.2.** Identify facility plan development tasks and assignments.

**FACIL - 1.7.** Given identified issues and solutions to be addressed in the facility plan, participate as assigned in developing or updating the hazardous materials and terrorist incident emergency operations plan, to address preparedness, response and short-term recovery.

**FACIL - 1.7.1.** Identify the planning elements necessary to comply with regulatory requirements, standards, and guidelines.

**FACIL - 1.7.2.** Develop or update the emergency operations plan to meet the required planning elements.

**FACIL - 1.8.** Given identified issues and solutions to be addressed in the facility plan, participate as assigned in developing or updating a comprehensive prevention/mitigation section in the plan

**FACIL - 1.8.1.** Identify prevention/mitigation strategies and techniques to address the identified issues and solutions.

**FACIL - 1.8.2.** Develop or update the plan to meet all identified prevention/mitigation planning needs.

**FACIL - 1.9.** Given a draft facility hazardous materials and terrorist incident response plan, participate as assigned in the plan review and appraisal process.

<b>FACIL - 1.9.1.</b>	Describe the purpose and benefits of reviewing the facility plan.
<b>FACIL - 1.9.2.</b>	Conduct an internal review of the draft facility plan to assess adequacy and completeness.
<b>FACIL - 1.9.3.</b>	Facilitate an external review of the draft facility plan, which may include peer review, management review, and local, state and federal review.
<b>FACIL - 1.9.4.</b>	Make necessary revisions, and promote formal plan promulgation.
<b>FACIL - 1.10.</b>	Given an approved hazardous materials and terrorist threat facility plan, describe appropriate strategies and identify methods for implementing the plan.
<b>FACIL - 1.10.1.</b>	Describe the purpose and benefits of implementing the plan.
<b>FACIL - 1.10.2.</b>	Describe the strategy and methods to be used for implementing the plan, to include: <ul style="list-style-type: none"> <li>• Disseminating copies of the plan</li> <li>• Briefing and orienting users of the plan</li> <li>• Integrating the plan with other plans and work processes within the facility</li> </ul>
<b>FACIL - 1.10.3.</b>	Identify options and develop strategies for coordinating the plan with multi-jurisdictional planning efforts.
<b>FACIL - 1.10.4.</b>	Identify options and develop strategies for ensuring that personnel are adequately trained to carry out their assigned responsibilities under the plan.
<b>FACIL - 1.10.5.</b>	Identify roles and responsibilities for implementing the plan, to include available resources, administrative systems, and time lines.
<b>FACIL - 1.11.</b>	Given an approved hazardous materials facility plan, describe appropriate strategies and identify methods for evaluating and maintaining the plan.

Planning Training Considerations

Planning Orientation

Planning Essentials

Commodity Flow Study

Hazard Analysis and Threat Assessment

Capability Assessment

Planning for Protective Actions

Plan Implementation & Maintenance

Facility Planning

Planning for Public Education

Appendix: Additional Planning Resources

---

**FACIL - 1.11.1.** Describe the purpose and benefits of evaluating and maintaining the plan.

---

**FACIL - 1.11.2.** Identify options and develop strategies for monitoring changes and trends affecting the facility and/or jurisdiction.

---

**FACIL - 1.11.3.** Identify options and develop strategies for critiquing actual incidents and accidents that occur, and for identifying and implementing remedial actions.

---

**FACIL - 1.11.4.** Identify options and develop strategies for developing, conducting, and evaluating exercises and drills.

---

**FACIL - 1.11.5.** Identify options and develop strategies for conducting an annual audit of the facility plan and/or periodically updating and revising the facility plan, as necessary.

---

**FACIL - 1.11.6.** Identify roles and responsibilities for evaluating and maintaining the facility plan, to include available resources, administrative systems, and time lines.

---

**FACIL - 1.11.7.** Work with planning team members, facility managers, and other facility and community representatives to test planning concepts and measures (e.g., through tabletop exercises and drills), as necessary.