

**GUIDELINES FOR DEVELOPING AND EVALUATING
AN OIL SPILL RESPONSE
EXERCISE**

A Handbook for National Preparedness for Response
Exercises

April 1996

*This handbook is developed for internal use by the
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INTRODUCTION

This handbook was developed to assist the U.S. Department of Transportation, Office of Pipeline Safety in conducting their exercise program. It contains two sections and a series of appendices. The purpose of each section is listed below:

SECTION 1 - DEVELOPING AN EXERCISE PROGRAM

- To provide protocols for developing an exercise.

SECTION 2 - EVALUATION METHODOLOGY

- To provide protocols for evaluating an exercise.

APPENDICES

- To provide standard objectives for exercise design and evaluation.
- To provide standard reporting formats.
- To establish a nationwide "lessons learned" system.

Section 1 contains the same guidance and criteria used to develop government-led Preparedness for Response Exercise Program (PREP) Area Exercises. Organizations that wish to develop exercise programs more comprehensive than the PREP guidelines will also find it of value.

It is recognized that there is no single way to develop effective exercises. The guidance in this handbook will provide a standard process, not only to the required oil spill exercises, but to all exercises. This standardization will pave the way to share lessons learned on a national basis and improve response preparedness.

LEGISLATIVE AND REGULATORY BACKGROUND

The cornerstones of the OPA 90 legislation were prevention, preparedness and response. The response plans required by industry, as well as government, are designed to prepare for an incident and, in the event of an oil spill, ensure the response is conducted to minimize damage to public health and the environment. To ensure these response plans and Area Contingency Plans (ACPs) will be executed effectively during an actual oil spill, OPA 90 and response plan regulations require that they be exercised. To that end, the PREP was developed.

PREP was developed to provide a mechanism for compliance with exercise requirements, while being economically feasible for the government and oil industry to adopt and sustain. The PREP is a unified federal effort and satisfies the exercise requirements of the Coast Guard, the Environmental Protection Agency (EPA), the Research and Special Programs Administration (RSPA) Office of Pipeline Safety (OPS), and the Minerals Management Service (MMS).

In August 1994, the PREP Guidelines were published. These guidelines are a culmination of over one and one-half years of workshops with federal, state and local government agencies and private companies, as well as other interested parties. The Guidelines outline the frequency and types of exercises a plan holder should conduct to meet the exercise requirements of the appropriate response plan regulations.

The types of exercises are divided into two categories: internal (facility or vessel specific) and external (Area specific). The internal exercises include:

- Qualified Individual notification exercises;
- Emergency procedures exercises for vessels and unmanned barges;
- Emergency procedures exercises for facilities (optional);
- Spill management team tabletop exercises; and
- Equipment deployment exercises.

All internal exercises are self-evaluated and self-certified.

The external exercises include:

- Area exercises; and
- Government-initiated unannounced exercises.

This manual does not duplicate the information in the PREP Guidelines. It is intended to supplement the information about Area Exercises and provide recommendations and examples of ways to design, develop, conduct and evaluate exercise activities.

The manual discusses three types of exercises: tabletop, functional, and full-scale exercises. The focus of the manual is on assisting organizations with functional or full-scale exercises; however, much of the information has application to smaller scale exercises.

Exercising provides a means for organizations to validate capability without actually going through real-life incidents. Exercises should be designed to mirror a real-life incident as realistically as possible. This type of activity enables the organization to validate a multitude of functions and teams, as well as to evaluate the interaction and coordination among all the various players. Exercises come in all shapes and sizes, depending on the goals and objectives of the particular organization. Not all exercises have to be large-scale productions. Conducting a small-scale internal exercise may be

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sufficient to meet the particular company objectives. However, for another company or organization, a full-scale Area exercise may be required instead. This manual is meant to provide basic guidance, but not a rigid methodology, for conducting all types and sizes of exercises.

SECTION 1 - DEVELOPING AN EXERCISE PROGRAM

A. GENERAL INFORMATION

A comprehensive exercise program is one of the best means for assessing response plans and procedures, determining the readiness of responders, clarifying roles and responsibilities, promoting awareness of potential incidents, and preparing for real spill events.

RELATIONSHIP BETWEEN PREPAREDNESS AND EXERCISES

Response preparedness is a continuous process with three integral functions: planning, training and exercising. Each function is dependent on the other two and should not be viewed in isolation. The process generally begins with planning, moves to training, then to exercising, and back to planning. There is always considerable interaction among these functions. Figure 1.1 illustrates this process and shows where exercises fit into the picture.

Figure 1.1 Preparedness activities should not concentrate solely on development of a response plan, but should focus on all functions that will lead to an organization being well prepared and equipped to meet the needs that arise during an incident. Once a plan has been developed, response equipment tested, and personnel trained in its implementation, the response organization is ready to validate its plan and determine its adequacy to meet anticipated needs. Planning should then be adjusted and revised based on the findings of the exercise. Understanding this process is an integral step in developing an exercise program to fit an organization's needs.

An important factor in developing an exercise program is having a clear understanding of the response functions (e.g., equipment and personnel deployment, communications, documentation, etc.) expected from an organization in the event of a discharge. These functions should be captured in a response plan. An effective exercise program is based on goals and objectives and on an understanding of current capabilities versus the desired level of capability. Improvement in current response capability will always be dependent on a well-developed exercise and training plan to support

response plans. The relationship between these response functions and the development of an exercise program for their validation cannot be over stressed.

Figure 1.2 Every function or activity in the response plan, whether organizational, operational, or supportive, should have a counterpart objective in an exercise to allow the response organization to demonstrate its ability to perform that function. In reality, OPA 90 contains a single task for federal, state and local government and industry. Figure 1.2 illustrates this as a single function related to a single objective.

BENEFITTING FROM EXERCISES

Exercises serve several important functions for response organizations, such as:

- Increase readiness in the event of an actual emergency;
- Provide a means to assess the effectiveness of response plans and response capabilities;
- Demonstrate the knowledge and skill of the plan implementers;
- Serve as a training tool for response personnel;
- Provide an opportunity to practice skills and improve individual performance in a non-threatening environment;
- Require participants to network with each other and pre-plan decisions on resources;
- Provide a means to educate and involve the public, media, and key community organizations in response planning;
- Validate existing policies and procedures;
- Identify planning conflicts;
- Identify resource needs; and
- Clarify roles and responsibilities.

The success of an effective and efficient response operation is based on teamwork. Response team interaction should occur periodically (i.e., once a quarter), and exercising is one form of team-building. The format of these interactions does not have to be simulation activities. However, some type of activity once a quarter encourages team-building and ensures the individuals serving on teams are comfortable with their roles and responsibilities, as well as comfortable with one another. Team-building activities could come from periodic meetings or from working together to develop potential response options for different types of spill scenarios. Simply developing "paper plans" is not enough to maintain an adequate response capability and is no substitute for simulation activities.

Exercises provide a sense of urgency, and the exercise scenario requires response organizations to develop alternatives and make decisions under the pressure of time without the possibility of serious consequences. Making decisions under duress is completely different from making decisions under normal working conditions. Many people who may be excellent managers conducting normal, day-to-day activities may not be capable of functioning appropriately during an emergency situation. The ability to quickly identify an emergency or crisis situation and the subsequent ability to alter management or working styles is not an intuitive skill, but one that should be practiced. Exercises can have an impact on improving performance during an actual response.

RELATIONSHIP TO MULTI-HAZARD RESPONSES

It is critical that oil spill exercise programs acknowledge the variety of initiating factors for oil spills. Very often an oil spill will be a secondary result of a primary natural or man-made disaster. Oil spills can occur in conjunction with a fire, flood, earthquake, transportation accident, hazardous material release, etc.

Exercise planners should keep in mind the effect that a multi-hazard response--such as with a hurricane or flood scenario--will have on the design of the exercise. Plan writers should have the same concerns when developing their own response plans. They should be aware of all response possibilities and options and their ultimate effect on the organization overall. In many cases the actual oil spill response will be overshadowed by the response to a more significant disaster or

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emergency situation, such as one dealing with human health and safety concerns. This does not necessarily mean that the oil spill will have to wait until the resolution of the primary emergency. It does mean that each response organization will have to ensure that its oil spill response plan is consistent with other broader, more comprehensive disaster plans.

Role clarification in these incidents will be of paramount concern, and some exercises should be designed to validate this planning, integration and coordination.

B. TYPES OF EXERCISES

There are three types of exercises described below. Each of the various drills and exercises described by the PREP can be classified into one of these categories.

TABLETOP EXERCISE

A tabletop exercise is a facilitated discussion or activity conducted in a conference room setting involving discussion of a scenario by a response organization. The primary characteristic of a tabletop exercise is that it involves a verbal "walk through" of a response to an incident. Tabletop exercises are also:

- used for establishing policies, providing input to planning, developing procedures, clarifying roles and confirming knowledge;
- conducted in a non-threatening learning environment; and
- conducted by trained personnel to facilitate discussion and evaluate performance.

The tabletop exercise should be designed to elicit constructive discussion by the participants as they examine and resolve problems based on the response plan. Tabletop exercises typically do not involve any demonstration of operational response. The organization conducting the tabletop exercise may have a facilitator and an assistant facilitator who plays the role of evaluator.

The purpose of a tabletop exercise is to have participants practice problem solving skills, resolve questions of coordination, and assign responsibilities in a non-threatening environment, under minimum stress. A tabletop exercise can be used in preparation for a functional or full-scale exercise.

Section 1.D. discusses the exercise design process. The limited nature of the tabletop exercise will call for an abbreviated design process, but care should be taken to follow the process in general.

Evaluation opportunities and activities associated with tabletop exercises are usually limited since typically only one individual will have primary responsibility for the evaluation. Evaluation by the participants themselves, as well as by the facilitator and assistant facilitator, is recommended. Areas needing improvement that are identified during the tabletop should be corrected within a reasonable time period. Figure 1.3. summarizes the characteristics of a tabletop exercise in the context of the full spectrum of exercise types.

FUNCTIONAL EXERCISE

A functional exercise is more extensive than a tabletop exercise in that activities are conducted beyond a conference room atmosphere. This type of exercise is often referred to as a "drill," and focuses on a single response function.

Functional exercises (drills) enable an organization to validate key functions/objectives and demonstrate individual and team knowledge, skills and capabilities. Functional exercises (drills) are characterized by:

- Scenario-driven response activities;
- Simulation of non-participating parties;
- Limited mobilization of personnel and resources;
- Limited scope;
- Trained personnel to serve as controllers, evaluators and simulators; and
- Hands-on experiential learning.

The purpose of a functional exercise (drill) is to exercise a specific function or a limited range of functions of a response plan. For example, the exercise may be designed to demonstrate the response functions related to protection of environmentally sensitive areas. The exercise may validate the command staff elements responsible for planning, including the staff personnel and equipment necessary to demonstrate the objective. In simpler terms, the exercise would require the presence of the incident/unified command staff personnel, the planning staff, the operations staff and sufficient resources to carry out the operation. The exercise should be conducted in the actual location(s) designated in the response plan and the level of resources mobilized should be adequate to demonstrate not only the field aspect, but the command or management aspects of the objective.

The ideal use of functional exercises (drills) would be to validate the whole response plan by exercising each functional element of the plan over a period of time. This offers a cost effective means of exercising the complete response plan.

Evaluation opportunities and activities will be more extensive than for the tabletop exercise. Use of the complete evaluation methodology, as described in Section 2, should be considered if resources are available. Figure 1.3. summarizes the characteristics of a functional exercise in the context of the full spectrum of exercise types.

FULL-SCALE EXERCISE

A full-scale exercise is used to evaluate a response organization's total, integrated, operational capabilities, involves all levels of the organization and could involve all aspects of a response operation (e.g., notification, assessment, initial response, recovery, disposal, etc.). Many area exercises conducted under PREP would be considered full-scale exercises.

Full-scale exercises are designed to mirror real-life incidents as closely as possible. This type of activity enables the organization to validate a multitude of functions and teams, as well as to evaluate the interaction and coordination among the participants. Exercises involve:

- scenario-driven response activities;
- variation in the number or type of participants;
- simulation of non-participating parties;
- a range of personnel and resource mobilization;
- participation of multiple teams/management levels in integrated response;
- extensive testing of interaction and coordination within a system;
- extensive realism; and
- trained personnel to serve as controllers and evaluators.

The purpose of a full-scale exercise is to exercise the range of response functions in a response plan to the maximum extent practical. A full-scale exercise will incorporate a high degree of realism, extensive involvement of personnel and resources, and an increased level of stress on player participants. This type of exercise would include mobilization of personnel and resources to different sites, and the actual movement of these resources and personnel required to demonstrate a coordinated response capability. As with functional exercises, this type of activity should include operations and coordination among policy level personnel, but with a much broader participation. The extent of involvement and mobilization will be determined by the design, scope and objectives of the exercise.

Evaluation activities could be extensive, and maximum effort should be exerted to develop an evaluation process that will obtain the necessary data to properly assess the organization's response capability. The evaluation should reflect existing capabilities and provide direction for continuing activities to improve the organization's capabilities.

Figure 1.3. summarizes the characteristics of a full-scale exercise in the context of the full spectrum of exercise types.

Figure 1.3

C. EXERCISE PARTICIPANTS

Establishing an exercise program will require a commitment of personnel and resources. The extent of this commitment and its impact on the organization will be determined by several factors, including:

- size of the operation;
- potential hazards (to the environment/public safety/worker safety);
- liabilities that the organization faces in the event an incident occurs; and
- cost of the exercise commitment.

Regardless of the extent and scope of the exercise program, resources must be committed to the program. The purpose of this section is to define the roles and responsibilities of the personnel involved in that commitment.

The complexity of the exercise development process depends on the objectives, type and scope of the exercises planned.

Figure 1.4

In a small tabletop exercise, much of the development process will be abbreviated and combined into a single effort. In a full-scale exercise, the development process could take a considerable amount of time and the key development personnel would possibly need assistance. Figure 1.4 illustrates key positions and groups involved in the exercise design and development process. These people will eventually become members of the overall exercise conduct organization. Whether one person fills a single role or multiple roles is determined by the size and complexity of the exercise.

When making the decision on commitment of personnel, keep in mind that the exercise program is implemented through a process, and each step of that process is integrated with the others. The key personnel in the exercise process each have defined responsibilities. The larger the exercise, the bigger the responsibility.

A successful exercise requires a resource commitment from the participating organizations that should result in an extensive learning experience for both the players and the conduct organization.

The following key positions and their responsibilities are considered essential to a quality exercise program:

EXERCISE DIRECTOR

This person is in charge of the overall exercise activity. For industry-led exercises, this person should be a

representative of the industry leading the exercise (the lead plan holder). The Exercise Director for an Area exercise could be USCG, USEPA, or industry, depending on the lead designated for the exercise. Responsibilities of the Exercise Director are to:

- Ensure established policies and procedures for exercises are followed;
- Ensure that the exercise development process is followed; and
- Solicit members for the design and conduct team, including controllers and evaluators.

The above responsibilities can be expanded and shared depending upon program size or the size and complexity of the exercise. A large program may require a program manager and several exercise coordinators, each handling the development of a single exercise.

EXERCISE COORDINATOR

The Exercise Coordinator is designated by the Exercise Director and should be a member of the Design Team. This person is in charge of the mechanics of the exercise. Responsibilities of the Exercise Coordinator are to:

- Facilitate the exercise design meetings;
- Manage the administrative portion of the program, including the exercise files and reports;
- Ensure exercise design and conduct are progressing satisfactorily;
- Ensure clerical support is available for the design team;
- Ensure the scenario and messages (scripting) are complete;
- Ensure the Exercise Plan is properly developed and distributed;
- Support conduct of the controller and player training/briefing sessions;
- Ensure the security of the scenario and other details of the exercise; and
- Ensure the Exercise Report is written.

DESIGN TEAM

The Exercise Design Team consists of representatives of the response organizations that are participating in the exercise. Figure 1.4 shows four possible sources for these people (i.e., federal, state, and local governmental personnel, and industry personnel). Depending on the size of the exercise, more than one representative may be needed from each organization. The primary responsibility of this team is to design a realistic exercise that validates the response plans and procedures that would normally be implemented for an incident in the specified location. For smaller scale exercises, in which only one organization is playing (with no other outside agency playing), the design team may consist only of personnel within the organization.

Their responsibilities include, but are not limited to:

- Ensure the scenario is realistic for the location;
- Ensure the response functions in the plans are adequately exercised; and
- Ensure the exercise conduct allows for sufficient evaluation.

Both the Exercise Coordinator and the Evaluation Director (described later) should be members of the Design Team. In addition, the remaining Design Team members should form the core members of the evaluation team and the controllers. None of the Design Team members should be players in the exercise since their knowledge of the scenario and issues would give them an advantage in performing their role during the exercise and would not provide an accurate assessment of their response capability. Section 1.D. contains additional information on the Design Team.

EVALUATION DIRECTOR

The Evaluation Director is designated by the Exercise Director and should be a member of the Design Team. This person is in charge of the application of the agreed-upon exercise evaluation methodology. Responsibilities of the Evaluation Director are to:

- Ensure the Evaluation Plan is properly developed and distributed;
- Select the proper number of qualified/appropriate evaluators;
- Conduct the evaluator training session; and
- Ensure the Exercise Evaluation Report is written.

CONTROLLERS

Controllers monitor the flow of the exercise and make adjustments where appropriate. Their role is to ensure that the objectives are sufficiently exercised to permit evaluation, that the level of activity keeps players occupied and challenged, and that the pace of the exercise proceeds according to the scenario. Controllers may also ensure that all safety conditions are maintained. If more than one controller is used in the exercise, a Lead Controller should be assigned to manage all controller activities. Responsibilities of the Controller are to:

- Input messages to drive the scenario, as appropriate;
- Monitor play to ensure the exercise is proceeding according to the scenario and rules of play, and notifying the Lead Controller of potential problems;
- Monitor the pace of the exercise and player workloads and notifying the Lead Controller of potential problems; and
- Ensure objectives are addressed by tracking the scenario.

EVALUATORS

Evaluators are responsible for observing player actions and evaluating execution of the response plan and the effectiveness of the plan. Evaluators are assigned to observe the exercise and gather data. Their primary role is to observe actions taken by the players, record their observations, and analyze the effectiveness of response actions. An evaluator's efforts provide the major portion of the documentation necessary to critique the exercise and produce an exercise report. Sometimes an evaluator will serve in a dual role, both as evaluator and controller. Evaluators should not interfere with the players in the performance of the latter's duties. Responsibilities of the Evaluator are to:

- Observe the receipt of scenario information by players and evaluate the players' ability to respond;
- Complete evaluation forms and record observations of player performance;
- Resolve any scenario, demonstration, or evaluation problems in coordination with the assigned controller; and
- Analyze response information and performance for inclusion in the evaluation report.

PLAYERS

Players are any individuals or members of the response organization who play a defined role during the exercise activity and who are committed to executing a specific response plan. Players are expected to make decisions and respond to scenario events in as realistic a manner as possible. All players should be familiar with their particular response plan, including the organizational structure and functions and procedures they will be expected to execute.

OBSERVERS

Observers are invited guests who have no official role in the conduct of the exercise activity but have received permission to observe the play from specific locations. Observers should be instructed to remain out of the exercise play and should provide no input to the players. Most exercise activities will have people who wish to observe the exercise, so the exercise plan should contain provisions for handling observers. While these people will provide limited input to the exercise, they can provide value to their own exercise program by applying the lessons learned within their own organization.

SIMULATORS

Some exercises use simulators to keep the exercise progressing realistically, or to ensure the play remains within the scope of the exercise. Simulation is used to represent organizations or individuals not playing in the exercise but who would have a role in an actual incident. The use of simulators should be restricted to non-responders. If certain organizations or individuals decide they cannot be available for the exercise, a decision should be made as to whether or not they should be simulated. Some groups which could be simulated include the media and the general public.

D. DESIGN, DEVELOPMENT AND CONDUCT OF AN EXERCISE

The purpose of this section is to provide an overview of the exercise design, development, and exercise conduct process.

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It identifies three phases of the process (pre-exercise, exercise execution, and post exercise) and discusses the steps that should take place in each phase. While each step is separate and distinct, many steps can and should occur simultaneously. The process shown in this section can be used no matter how large or small the exercise. The nature of the exercise will dictate the extent to which each step should be developed.

PRE-EXERCISE STEPS

Figure 1.5

Step One: Make Schedule and Location Decisions

The PREP Schedule is published in the Federal Register twice a year. A proposed triennial schedule is published in the spring and the final schedule is published in the fall after comments are received and the annual PREP workshop is held. The schedule lists the Area where the exercise will be held, but the EPA Region or the Coast Guard Marine Safety Office and District decide the location of the actual event. The schedule lists dates for the government-led exercises because these exercises involve the National Strike Force Coordination Center. There is some flexibility in the published dates for the exercises, but they cannot vary greatly because of the tight schedule to be maintained. For industry-led exercises, the schedule lists the suggested quarters for the upcoming year, but does not list any dates for the following two years. To provide sufficient flexibility, the regulatory agency(s) and the industry player(s) may decide to change the listed quarter the exercise will be held. The quarters are listed only to provide a platform for discussion and for budget purposes. It is important to coordinate the scheduling of internal company or other required exercises to supplement and complement an Area Exercise in which the organization may be involved.

Step Two: Determine Exercise Type and Scale

Selection of the exercise type should be based on the experience, needs, objectives and resources of the response organizations. A good strategy may be to start with a less ambitious exercise (tabletop or functional) and to build up to a full-scale exercise. This approach builds on the success of preceding exercises, enhances the response organization, boosts confidence, and develops management expertise.

Step Three: Develop an Exercise Timeline/Workplan

There is a need for a timeline/workplan to schedule all of the associated steps. The Exercise Coordinator, in coordination with the Design Team, should develop the timeline/workplan, and at a minimum, it should contain dates and time frames for each of the major steps. The timeline/workplan also allows design and development personnel to anticipate their

workload.

Step Four: Review Response Plan

The Exercise Coordinator should obtain copies of every response plan to be used in the exercise. For an internal facility exercise, this may only involve the local facility plan. Larger-scale Area Exercises would include the Facility Response Plan, Area Contingency Plan, and state and local contingency plans. A detailed review of these plans by the Exercise Coordinator is essential and should be conducted prior to establishing the full design team. This review should:

- Identify the roles and responsibilities of each response organization;
- Identify possible locations for an incident;
- Identify possible products for the discharge, or potential discharge;
- Examine the worst case and probable scenarios; and
- Identify all response functions in the plans.

Once assembled, the exercise Design Team should become thoroughly familiar with the response plans to be exercised. In the interest of area familiarization, it may be necessary to actually visit several of the possible exercise locations, to include the proposed incident location and any probable Field Command and/or Emergency Operations Center locations.

Step Five: Determine Objectives for Design and Evaluation

Regardless of whether an exercise is required or voluntary, the objectives give the exercise focus. The Exercise Coordinator, along with Design Team members, should assess the needs of the response organization and prepare a preliminary set of exercise objectives to fit those needs. This assessment should consider response functions that have not been validated in previous exercises or may need to be improved based on performance in past exercises. Either way, the relationship between response functions and exercise objectives, explained in Section 1.A, should be maintained. A standard set of objectives has been established under the PREP guidelines. Appendix A contains information on these core objectives. PREP guidelines contain information on the application of these objectives to specific exercises.

The objectives will further define the scope of an exercise. For example, the design team will need to decide whether the exercise will be announced or unannounced. This announcement pertains to both the time and date, as well as the scenario of the exercise. If the objectives of the exercise are to resolve planning issues in a tabletop format, an announced scenario would serve the purpose. If the objectives of the exercise involve validating response plans, an unannounced scenario should be considered. If the scenario is to be unannounced, the Exercise Coordinator should make provisions for the security of the scenario during the development process.

Step Six: Establish Design/Development Team(s)

Conducting an exercise in a particular area should benefit the entire response community in that area. The Exercise Coordinator should establish a design and development team for every exercise. For a large-scale exercise, representatives from industry, federal, state, and local agencies who will be participating in the exercise should be invited.

Each group should ensure it is adequately represented and that the exercise provides a fair demonstration of response plans. For a smaller-scale internal exercise, the design and development team may only consist of internal company personnel. Proper structuring of the design team is essential to the success of the exercise. It is not necessary that each group be equally represented. The team should include a mix of response representatives proportionate to their group's actual response functions in an incident. While broad representation on the team is necessary, the size of the team should be held to a manageable size. Team members typically assist with design, development and conduct. The Exercise Coordinator should ensure the total makeup of the team offers:

- Adequate knowledge of respective response plans;
- Sufficient local knowledge of the area;
- Technical expertise in the response functions to be demonstrated; and
- Scientific expertise necessary to develop design trajectories and modeling.

Each response organization should be prepared to provide personnel with the necessary expertise. However, these personnel should be chosen carefully to ensure that critical response personnel are not selected to assist in design and development, and therefore would not be able to participate in the exercise as players. The Exercise Coordinator should consider personally soliciting participation of desired personnel. Section 2 offers several alternative sources for personnel to serve as evaluators, and consideration could be given to recruiting the team from these sources. The Exercise Coordinator should bear in mind the above qualifications before considering these alternative sources.

A critical aspect is the scientific expertise needed for the scenario development. The Exercise Coordinator should include this expertise in order to properly develop technical aspects of the situation, as well as to provide contingencies depending on response actions.

Once the Exercise Coordinator has established a design/development team, he/she should schedule an initial production meeting.

Step Seven: Hold Working Meetings

It will be necessary to periodically bring the design/development team together physically. The type and scale of the exercise will dictate the number and length of these sessions. For simple exercises such as a tabletop, the meeting session could last one day. For the initial design of an Area Exercise, multiple meetings on different days or one meeting up to a week in length may be needed.

An initial tasking for these meetings should be the designation of an Exercise Coordinator and an Evaluation Director. Great care should be taken in the selection of personnel for these positions. While the exercise will be developed jointly by the complete team, these people will have the responsibility of compiling the results of the development process and incorporating them into the Exercise Plan and the Evaluation Plan. Details on the contents of these documents are in this section and in Section 2.A respectively.

Another important aspect of conducting these working meetings is to establish an agenda that ensures the exercise development process continues smoothly and on schedule. The following items are offered as potential agenda items for the various working meetings of the Design/Development Team:

- Response plan review;
- Objectives and issues;
- Scope and extent of play;
- Possible scenario options (eventually discuss narrative summary and steps timeline);
- Level of simulation activity;
- Evaluation plan;
- Exercise conduct organization;
- Training and briefing required prior to the exercise;
- Scripting for the exercise (message development);
- Logistics;
- Production needs; and
- Next steps.

Working Meeting Task - Develop the Scenario

An exercise scenario is a sequential, narrative account of a hypothetical incident. The scenario provides the catalyst for the exercise and is intended to introduce situations that will activate certain response functions and demonstration of the

exercise objectives. Scenarios developed by the Design/Development Team should be examined for their suitability to be exercised. These scenarios may provide the best starting point for development as they provide a statement of the response organization's expectations for a significant incident within its area. At a minimum, the scenario should contain:

- The date and time of the incident;
- The weather conditions at the time of the incident;
- The tidal and current conditions at the time of the incident;
- The primary cause of the incident (e.g., fire, explosion, tank rupture, etc.);
- The types and quantities of each product spilled;
- The source or sources of the spill (e.g., facilities, vessels, pipelines, etc.); and
- Any other pertinent consequences resulting from the incident.

Scenario development should be based on the objectives, and consider vulnerabilities, hazards or weaknesses to the organization, and what probability there is of each occurrence. The depth and quantity of this information could vary depending on the situation the designers wish to create, and the objectives that were developed previously. These considerations will also have an impact on the type of exercise to be conducted: a tabletop, functional or full-scale exercise. And, of course, the style and extent of the scenario developed will depend on the type of exercise conducted. For example, the level of detail in the scenario would not be as great for a tabletop exercise as it would be for a full-scale exercise.

To receive the maximum benefit from the exercise, the scenario should be realistic for the area exercised. The product spilled should be one that is produced, transported or stored in that area. The source or sources of the spill/s should be located or operating in that area. The weather and tidal/current conditions should be accurate for the area; they need not be the actual conditions that exist the day of the exercise, but they should be possible for the area and time. More than likely the conditions will need to be tailored to control the exercise.

Working Meeting Task - *Develop Technical Information to Supplement the Scenario*

In developing a scenario, it is important to define the physical aspects of the event as accurately as possible. For spill scenarios, as in a real response, a method to depict the anticipated path of the product must be used. During a real incident, every response organization faces this same problem of predicting, based on available information, the path of the product once it enters the environment. This prediction is referred to as *forecasting* or *trajectory modeling*.

For scenario development, the design team needs the same information. The trajectory should create a simulated incident that will require the desired response demonstration. Fortunately, the design team has the ability to "adjust" the parameters to suit the needs of the simulation. They can increase or decrease the quantity of spilled product, or they can adjust weather conditions to suit their purpose. Trajectories should be developed in a manner that is consistent with the technologies that are available to the responders and the following items should be considered:

- Weather conditions at the time of the incident;
- Tidal and current condition at the time of the incident;
- Types and quantities of each product spilled; and
- Geography.

One method to develop spill trajectories is to use computerized modeling programs supplemented with local knowledge of the area. The Scientific Support Coordinator from NOAA is the Coast Guard On-Scene Coordinator's official source for these trajectories. EPA can provide this scientific support function through the Environmental Response Team (ERT).

In addition, several other modeling tools are available from commercial sources for trajectories. Much of the industry

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also maintains their own in-house trajectory modeling capability. If computerized modeling capabilities are not available, trajectory information can developed from:

- Historical research of previous spills in the area;
- Interviewing local experts (i.e., commercial fisherman, vessel pilots, towboat operators); and
- Pre-event analysis of the area.

The above sources of information should also be used to validate the accuracy of computer-generated models. The Exercise Coordinator should ensure the development team has the scientific capabilities to develop trajectories and at the same time ensure that they will be consistent with the trajectories developed by the response organizations participating in the exercise. The parameters that are used by the development team should be consistent with those presented to the players to ensure similar trajectories.

The exercise spill trajectory will need to be repeatedly modeled on a defined frequency, such as every hour. It should then be made available graphically through overlays on maps or charts to the players through exercise controllers. The more sophisticated modeling tools will produce computer-generated maps. These graphic displays will significantly aid in the further development of the exercise. Another factor that should be considered is the effect response actions could have on the path of the spilled product. An efficient response that contains or deflects a significant quantity of the spilled product could seriously alter the pre-determined exercise trajectories. The development team should consider these factors and will need to develop several alternative trajectories or develop contingencies within the scenario to allow maximum flexibility with the exercise play. It is important to use the same parameters to develop exercise trajectories that are provided to the responders, either up front in the scenario or as controlling events.

Exercise trajectories provide players with a visual illustration of the spill path and areas of impact. The trajectories can be used by the exercise design team to:

- Anticipate the actions of the responders;
- Provide a reference point for examining the response plans and identifying response functions relevant to the simulated incident;
- Provide a frame of reference for controlling and evaluating the exercise;
- Determine the locations for positioning controllers and evaluators;
- Identify oil impact points, including environmentally sensitive areas for protection;
- Identify windows of opportunity for protection strategies;
- Define the tactical playing area for the exercise; and
- Define the strategic playing area for the exercise.

The above lists are not all inclusive, but should be used as a basis for scenario development. As previously discussed, it may be necessary to develop several alternative or contingency trajectories to respond to players' actions. Although developing spill trajectories are only one aspect of scenario development, it does provide the groundwork to ensure the scenario is realistic and technically accurate.

Working Meeting Task - Develop Exercise Scenario Events

It is imperative that in an actual incident the response organization control events.

In an exercise, the simulation should control the actions of the response organization. Some exercises have been produced using a concept called "freeplay." When used in moderation, this can add value and realism. However, if the players are provided a scenario and allowed to respond to the incident with little control or scripting from the control cell, there would be no guarantee that the objectives would be adequately exercised. The exercise may move in an undesirable direction and exercise objectives will not be met. For example, the use of actual weather or tides and currents may move the oil outside of the playing field. Exceptionally favorable conditions on the day of the exercise may remove the necessity for

any response, thereby not allowing demonstration of the exercise objectives.

Since a tremendous effort is required to conduct an exercise and bring the appropriate players together, the exercise should be controlled to ensure the response organization has the opportunity to demonstrate all the exercise objectives. For example, if wildlife recovery and rehabilitation is an exercise objective, there may have to be a simulated event that causes the failure of a protective booming operation in order to allow the responders to demonstrate that objective. Controlling weather conditions may have to be interjected to ensure the path of the spilled product impacts certain areas to trigger demonstration of exercise objectives. It is impossible to list examples of all the simulated events that may be necessary. It is sufficient to say that the exercise should be controlled to the extent necessary to ensure all exercise objectives can be demonstrated.

Scenario events should be coordinated and timed with the forecasted path of the product in the environment. The design team should develop a master list of control, or scenario, events. Using trajectory modelling, they can anticipate the actions of the response organization and establish the scenario events to keep the exercise on track.

There are two types of contingency events. A positive event will be one that moves the exercise along without direct interference in the response actions of the players. For example, a change in weather conditions that will alter the trajectory of the spill would be a positive control event. A negative event will be one that requires direct interference in the response actions of the players. The previous example of wildlife recovery and rehabilitation is an excellent example of a negative event.

The design team should use positive events as much as possible to drive and control the exercise. A negative event should be used only as an alternative and only when necessary. In anticipating the actions of the response organization, the design team may have to develop several interchangeable events to allow needed flexibility. While players should be allowed to respond realistically, the integrity of the scenario and exercise objectives should be maintained.

The Exercise Coordinator should make sure that the exercise includes:

- A master control space;
- Suitable communications for exercise controllers and evaluators, and simulators, if used;
- A method for tracking the scenario and corresponding response; and
- A method for interjecting control, or simulated, events.

A master events list which includes the time and method of injection of each event should be developed. Additionally, a detailed description of each event containing instructions for the individual simulator should be developed. This detailed description, or scripting, should contain information on additional/contingency controls for the simulators, reporting requirements for the simulators, instruction on when to stop play, etc.

Developing a scenario, spill trajectories and designing the scenario events are necessary tasks for development of the overall exercise. The process for developing these events "is not set in concrete," but rather, it is something that should be adapted for each organization's exercise program.

Working Meeting Task - Determine Resource Needs

As the scenario is developed, the design team should determine what resources are needed to execute the exercise. This includes both personnel and equipment needs.

Personnel requirements will be determined by analyzing the exercise design, the scenario and the type of exercise. For a tabletop exercise, one facilitator and one evaluator are usually needed. A larger, more functional, exercise, such as an Area Exercise, would need considerably more controllers and evaluators. Simulators may also be needed at each field location to inject scenario events.

Once the number of locations of anticipated operations is determined, the designers can determine the number of controllers and evaluators necessary to control and evaluate the objectives to be demonstrated at each location. The number of locations and scenario events will determine the number of controllers and evaluators, and simulators if needed. Carefully consider the number of personnel to staff the control cell and the number of controllers, evaluators and simulators required in the field to determine the total number of conduct organization personnel required.

Careful consideration also should be given to the number of evaluators necessary to gather sufficient data for evaluation. In many instances, a single person could fill both the roles of controller and evaluator. However, care should be taken when combining both functions so that an individual is not over-tasked and valuable evaluation data is not lost. For example, if the exercise begins to stall, the controller may have to focus on additional inject and not evaluation.

If the exercise will demonstrate objectives that require field deployment of equipment, safety will be another consideration. An exercise safety officer or safety observers/controllers may need to be designated.

No single organization should supply all the personnel resources for the exercise, unless only one organization is involved. As with the design team and the evaluation team, the necessary conduct organization personnel (personnel involved in conducting the exercise) should be a mix of representatives of all organizations participating in the exercise. After determining the number of people required for the exercise, the Exercise Coordinator should obtain commitments from the participating organizations on the number of people they can each supply to fill these critical roles. Final commitment and the names of the personnel should be provided early in the development phase of the exercise.

Equipment required to execute and evaluate the exercise should be one of the topics discussed during the working meetings. The type and scope of the exercise, along with the number of people involved, will be the major factors in determining the equipment requirements. It is important to keep clear the needs of the conduct organization and those of the player response organizations. The following list is offered as a starting point for consideration:

- A communications system for exercise control, for the exercise conduct organization (controllers and evaluators, and simulators if needed);
- Suitable administrative equipment (e.g., pens, notepads, flip charts, etc.);
- Vehicles and safety equipment (e.g., hard hats) for the exercise conduct organization;
- Recording equipment for debriefing, if required;
- Laptop computers for recordkeeping and rapid data compilation, if necessary; and
- Copy and fax machines.

The above list is not all inclusive, and cost-effective alternatives should always be considered.

Working Meeting Task - Produce an Exercise Plan

A product of the exercise working meetings should be an Exercise Plan and an Evaluation Plan. Section 2 provides details on the content of the Evaluation Plan. These plans need not be developed separately, and can be combined into a single document at the discretion of the Exercise Coordinator. The Exercise Director will be responsible for developing the Exercise Plan and ensuring it contains:

- A list of the response functions to be demonstrated (objectives);
- A list of the response plans to be exercised;
- A list of the participating organizations;
- A complete description of the exercise containing the scenario, type of exercise and scope of the exercise;
- A master timeline for the exercise;
- A list of exercise ground rules including safety controls;
- Spill trajectories and technical information to supplement the scenario;
- The master list of scenario events, or a message summary;
- The individual description of each event or message;
- A description of the exercise design team;
- A description of the exercise conduct organization, including all controllers, evaluators and simulators;
- A description of the roles and responsibilities of the controllers, evaluators and simulators;
- A plan for the handling of observers;
- A description of the conduct organization communications system and instructions for use;
- A listing of the time and location of the controller and evaluator training sessions;

- A listing of controller, evaluator and simulator assignments, including the reporting times and locations;
- A description of conduct organization support, e.g., transportation, meal or lodging arrangements;
- A time and location for the player, controller and evaluator debriefings;
- A listing of the review team and process for developing the final Exercise Report; and
- A commitment on the delivery date of the final Exercise Report.

The above list is not all inclusive. Depending on the type and scope of the exercise, the list could be considerably shorter or longer. The draft of this Exercise Plan should be completed far enough in advance of the exercise so that representatives of all participating organizations will have time to review and clearly understand their roles and responsibilities. They will also have to know what personnel and equipment resources they will be providing.

Step Eight: Hold Final Development Meeting

The purpose of the final meeting is to finalize the structure and details of the exercise. The Exercise Coordinator should review both the Exercise Plan and the Evaluation Plan during this meeting. Each participating response organization should be able to finalize its commitment for providing adequate numbers of controllers, evaluators, simulators, etc. Any final decisions will have to be made on the contents of the Exercise Plan and the Evaluation Plan.

The length of this meeting can vary. The Exercise Coordinator should prepare a firm agenda for the meeting to include:

- A careful review of the Exercise Plan and the Evaluation Plan;
- A review of all aspects of the technical and personnel support;
- An examination of, and necessary adjustments to, the timeline for the remaining portion of the process;
- Finalization of the date for assembly of the exercise staff; and
- Finalization of the schedule of steps for the exercise execution phase.

After the meeting, final versions of both the Exercise Plan and Evaluation Plan should be drafted for distribution to the design team members. Each member should make a commitment to review these plans by a specific date and return any comments for inclusion in the final plan.

The success of the exercise depends on the planning conducted during this Pre-Exercise Phase. This meeting will be the last chance to review the planning items and ensure the exercise will be executed in as smooth a manner as possible.

EXERCISE EXECUTION STEPS

Figure 1.6

Step One: Assemble the Exercise Conduct Organization

The exercise conduct organization will need to assemble at the location prior to exercise day. How much earlier than the day of the exercise will depend on what needs to be accomplished. The schedule of activities will be created during the development meetings and will be based upon needed set-up, briefings, training and preparation. A phased assembly may be most practical, with critical set-up personnel arriving first, followed by the controllers and evaluators.

Step Two: Plan Technical Set-Up

Sufficient time should be allowed to set-up and test the exercise equipment. It is typically best to have communications systems in place and functioning at least one day prior to the exercise. Other equipment and documentation, such as pens, notebooks, additions to controller, evaluator and simulator packages, etc., should be prepared for distribution. If transportation, lodging or meal arrangements are necessary, they should be confirmed.

Step Three: Conduct Controller and Evaluator Training

Although these are actually two steps, they are grouped together because of their similarities. Depending on the type and scope of the exercise, this training might be conducted simultaneously. Simulators, if used, should also attend this training. Members of each group should be provided with the information and materials they will need to carry out their respective roles during the execution of the exercise. This can be accomplished in advance as well as through the distribution of specific packets of information during the training. Information should include:

- The scope of the exercise, including objectives to be demonstrated and the extent of play agreements;
- The structure of the exercise, including individual controller, evaluator and simulator, assignments;
- The exercise scenario and simulator inputs;
- The exercise ground rules;
- Relevant portions of the evaluation methodology and data collection forms;
- Copies of plans and procedures for participating organizations that are pertinent to the assigned objectives;
- Portions of previous evaluation reports including unresolved issues and previous lessons learned;
- The exercise schedule, including a schedule of post-exercise activities; and
- Logistical information, location of meetings, lodging arrangements, etc.

Most of the above items will be contained in either the Exercise Plan or the Evaluation Plan. Several of the items will have to be obtained from the participating organizations or from previous exercise records. The training should include a briefing that covers these items in sufficient detail for the controllers, evaluators, and simulators. This training should also focus on both the specific evaluation methodologies to be used, and a review of the response plans to be demonstrated. Plans should be covered in sufficient depth so that the controllers, evaluators and simulators can anticipate actions that are likely to occur and be thoroughly familiar with their roles. This also would be a convenient time to distribute identification badges, or other means of identification such as color-coded vests or armbands, to all controllers, evaluators, simulators and observers. This type of training is typically completed prior to the exercise and may take one or more days depending on the complexity of the exercise.

Step Four: Hold Player Briefings

Player briefings prior to the exercise are used to explain the ground rules of conduct. The briefings usually cover:

- The overall objectives and scope of the exercise;
- The parameters and limits of play;
- Overview of the organization's crisis/emergency management program;
- The function of the control cell;

- What to do if a real event occurs;
- Where to get further exercise information; and
- How the debriefing process is going to occur.

If personnel are familiar with participating in exercises, this step may not be necessary. Player briefings should be held if the personnel have never or infrequently participated in an exercise activity or if there are unique aspects to the exercise.

Step Five: Make Final Production Arrangements

This is the last chance to fine tune the scenario, stage and set the site and equipment, and finalize logistical and coordination aspects of the exercise.

It is important to note that the amount of last-minute activities will likely increase proportionately with the scope and type of exercise. Consequently, appropriate time and resources should be allowed to complete the critical last-minute activities.

Step Six: Execute the Exercise

The conduct phase presents the culminating activity for players. It provides the actual opportunity for player training and for validating crisis and emergency capabilities. The advance planning of the design phase sets the stage for the smooth execution of the exercise. The Exercise Coordinator should assume responsibility for execution of the exercise and ensure that the exercise stays on track and that the objectives of the exercise are met. He/she oversees the following activities:

- Presents the players with the exercise-initiating scenario;
- Announces or injects the first control (simulated) event;
- Ensures the controllers, evaluators and simulators are at their assigned positions;
- Manages the flow and pace of the exercise by introducing the remaining control (simulated) steps in the appropriate sequence; and
- Keeps the exercise on schedule and terminates play at the specified time.

In general, it is best to let the exercise play develop naturally within the scope of the design. The simulators, if needed, track the progress of the scenario using status boards and a posted timeline of events and should control most of the scenario events not being played. However, some response actions are so critical to the completion of the exercise objectives that the Exercise Director, controllers or simulators may have to stimulate play by injecting additional scenario messages to ensure the objectives are met. The exercise controllers should observe play and give feedback to the simulators, who can then modify, redirect or adjust the pace of the scenario. If this occurs, it should be noted and discussed during the evaluation and as part of the exercise design debriefing.

POST-EXERCISE STEPS

Figure 1.7

Step One: Technical Breakdown

Immediately following the exercise, all exercise equipment should be dismantled and repacked for the next exercise. Equipment that malfunctioned during the exercise should be noted and repaired or replaced immediately, since a real incident could occur anytime that would require all equipment to be in proper working order. All exercise materials should be gathered together and given to the Exercise Director or Evaluation Director. Confidential company or scenario information may have been used during the exercise, so it is important to collect all that information and dispose of it properly. All response and conduct locations should be returned to their original state.

Step Two: Conduct the Player Debrief

The player debrief gives each participant a chance to input comments on the performance of the response organizations. This debrief will provide additional information to the Player/Participant Evaluation Methodology if used. It also provides time for the players to complete their written critique comments.

This debrief should be conducted as soon as practical after the exercise by one of the exercise controllers. For a large exercise, taking place in multiple locations, several debriefs may be necessary. Consideration should be given to audio recording the debriefs, if the players have no objections. All player comments should be forwarded to the Exercise Director or Evaluation Director for inclusion in the Exercise Evaluation Report.

Step Three: Conduct the Controller/Evaluator Debrief

As soon as practical after the conclusion of the exercise, all evaluators and controllers, and simulators if they participated, should be debriefed. This debrief should be moderated by the Evaluation Director. The different evaluation methodologies (see Section 2) and the scope of the exercise could very well dictate several debrief sessions. In any event, the debriefing topics should:

- Determine whether all the exercise objectives were met;
- Allow comments from all evaluators;
- Provide observations of positive actions taken and areas that need improvement;
- Produce the basis for the evaluation report (See Appendix B);
- Include any issues that were not addressed during the exercise, such as if a "disposal" issue was not addressed because the length of the exercise did not allow the players enough time to consider;
- Gather all the evaluator information at the end of the exercise; and
- Comment on the exercise process.

Step Four: Generate the Exercise Evaluation Report

Every exercise should be critiqued by the Joint Evaluation Team. The team is comprised of members from the government, if appropriate, and industry players' organizations. (Note: internal facility exercises may not always include government players.) This report evaluates the response plan and the success of the spill response vis-à-vis the response plan execution, as well as the design and conduct of the exercise. Evaluating the design and execution is important to maintaining an effective exercise program. The Joint Evaluation Team summarizes observations from the exercise and

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recommends actions. The Joint Evaluation Team never places blame on any one member or organization that participated in the exercise. Just as the player learns from the exercise, so does the design staff. The report should address:

- Effectiveness and realism of the scenario;
- Effectiveness and realism of scenario events;
- Player lessons learned; and
- Considerations for improvement.

Details on producing an evaluation report are contained in Section 2 and Appendix B.

Step Five: Generate Lessons Learned

The main purpose of an exercise is to validate response capabilities and identify any necessary changes or improvements. Every exercise, when critiqued, provides some opportunity to learn from performance. Every response organization should be willing to share these "Lessons Learned" in the hope that others will benefit from past experiences.

Appendix C provides details specifically on the PREP Lessons Learned System (PLLS) and how to participate.

SECTION 2 - EVALUATION METHODOLOGY

A. THE FOUNDATIONS OF EXERCISE EVALUATION

This section presents an overview of the concept of exercise evaluation. It addresses the reasons for evaluating exercises, the nature and purpose of exercise evaluation, the structure of an exercise evaluation team, and information on evaluation reports. The evaluation phase includes: development of the evaluation process that begins during the design phase; the actual evaluation (data collection and initial assessment) during exercise conduct; the debriefing activities immediately following conduct; and the data analysis, completion and presentation of a final evaluation report. In summary, this phase consists of development of the process, observation, data collection, analysis of the collected data, documentation and presentation of the findings.

This section and the evaluation report formats contained in Appendix B have been designed to enhance the value of the exercise to participating organizations. It should:

- Facilitate the selection of a set of standards for objective assessment;
- Enhance and focus an exercise evaluation team assessment on these standards;
- Convey its findings to the participating organizations in the context of these standards;
- Improve the translation of the findings into concrete improvements of plans and overall preparedness.

BASIS FOR EXERCISE EVALUATION

The reason to evaluate an exercise is to assess the response plan and execution of the plan. An evaluation should:

- Validate the adequacy and implementation of response plan(s);
- Measure the adequacy of training efforts;
- Indicate the general level of preparedness for a response; or
- Satisfy a statutory requirement that a response organization conduct evaluated exercises. (OPA 90, and its accompanying regulations, is an example of this form of requirement.)

Any exercise without effective evaluation or feedback offers limited value except to provide personnel with an opportunity to perform in their roles. Evaluation offers the means to:

- Focus on the Facility and Vessel Response Plans, Area Contingency Plan and other response plans and preparedness activities;
- Collect data, analyze and document how players understand and perform their designated response roles;
- Assess the consolidated capabilities of teams and organizations; and
- Ensure the continual improvement of emergency and crisis response capabilities by documenting strengths and areas for improvement.

EXERCISE OBJECTIVES AND EVALUATION CRITERIA

Every response plan should describe certain response functions and identify the "perceived abilities" of the response organizations covered by that plan. The basis of any evaluation system should be to examine these perceived abilities and objectively determine the response organization's "demonstrated abilities." As indicated in Section 1.D, it is critical that the response organization(s) whose exercise performance will be evaluated identify a specific set of objectives. These objectives will be the basis on which to design an evaluation system. Figure 2.1 illustrates this concept. Sample

objectives for oil spill response exercises can be found in the PREP Guidelines and are included in Appendix A.

Figure 2.1

The objectives contained in Appendix A should be used to evaluate an oil spill response exercise. The development of performance standards and evaluation criteria is the means of assessing the exercise objectives.

A distinction should be made between performance standards and evaluation criteria. A performance standard is a level of performance that can be assessed qualitatively or quantitatively. The Tiered Response Equipment requirements contained in the appropriate OPA 90 regulations could constitute one set of performance standards, for drill/exercise purposes. For regulatory purposes, these have been deliberately defined as "planning standards" only. (The use of these standards in exercise evaluation does not and will not be construed in any way as an enforcement action relative to these regulations.) Evaluation criteria are points of review used to measure how successfully the standard and/or objective has been met.

The sixteen (16) PREP core objectives contained and described in Appendix A should not be considered all inclusive; other objectives may be added where necessary. However, response plan holders using PREP to meet exercise requirements should challenge all 16 objectives during a three-year period. There may be situations where objectives "unique" to a

particular industry, organization, community or geographic area need to be developed for a particular exercise to augment these 16 core objectives. The key to objective-based evaluation using this methodology and the forms in Appendix A is to recognize and use only those objectives applicable and necessary to the exercise.

THE STRUCTURE OF AN EVALUATION TEAM

Generally all exercises are evaluated using a team concept. The team usually consists of personnel from each organization participating in the exercise. This provides for a representative evaluation where a consensus of performance is achieved, rather than each participating organization compiling and distributing a report of their observations independently.

Team Size and Composition

The size of the evaluation team is dependent on several factors. These include:

- The type of exercise (e.g., tabletop, functional, or full-scale);
- The purpose and objectives of the exercise;
- The size and complexity (e.g., the number of objectives to be demonstrated, the number of organizations participating, and the number of locations where the scenario is being played);
- The specific evaluation methodologies to be used; and
- The availability of resources needed to conduct the evaluation.

Notice that the above factors are part of the exercise design. As a general rule, the evaluation team should be large enough to provide for the evaluation of all objectives, organizations, and locations. In a small exercise, with few organizations and a limited number of objectives and locations, a simple organizational structure with an Evaluation Director and a small number of evaluators will usually suffice. In some very small drills and in tabletop exercises, only one evaluator may be necessary.

In a full-scale exercise, where a large number of objectives are demonstrated by multiple organizations at several locations, a more formal and complex structure is usually required. There are a variety of structures that can be used effectively for evaluation. Figure 2.2 depicts a generic structure suitable to exercises with multiple organizations and locations.

Figure 2.2

THE EVALUATION PLAN

It will be necessary to develop an Evaluation Plan specific to the exercise being conducted. Development of this Evaluation Plan will normally take place as a Pre-Exercise Step as discussed in Section 1.

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It is important to understand that the development of this Evaluation Plan is not a separate event, but rather a function of the exercise design. The exercise cannot be designed without considering the evaluation, nor can the exercise be evaluated without considering the design.

As noted in Section 1, the two primary members of the exercise design staff should be the Exercise Director and the Evaluation Director. As exercise development proceeds, each will be responsible for their particular aspect of the design and ensuring consistency and compatibility during execution.

The Evaluation Director will be responsible for developing the Evaluation Plan and ensuring it contains the following:

- Brief description of the exercise containing the scenario;
- Type and scope of the exercise;
- Description of the exercise evaluation team;
- Definition of the roles and responsibilities of the team members;
- Evaluator's guidelines;
- List of the response functions to be demonstrated (objectives);
- List of the specific evaluation methodologies to be used;
- List of the data collection forms to be used;
- List of the time and location of the evaluator training session;
- List of the times and locations for evaluator assignments;
- Description of the necessary evaluator support and any logistics arrangements;
- List of exercise ground rules;
- Time and location for the player debrief;
- Time and location for the evaluator debrief;
- Review team for the final report;
- Description of the reporting process to be followed; and
- Commitment on the delivery date of the final report.

This is not intended to be an all-inclusive list. This list of contents provides the Evaluation Director with a "starting point" for compiling the data necessary for an effective evaluation. The size and scope of a specific exercise would affect the contents of the Evaluation Plan.

EVALUATION REPORTS

One major purpose of any exercise is to assess the organization's response capabilities. This evaluation process generally consists of two distinct parts: the data gathering and compilation phase, and the interpretation of this data into a usable report. The lessons learned from the report should then be used to revise and improve the appropriate response plans. Figure 2.3 illustrates the overall evaluation process.

Figure 2.3

The interpretation of the performance observation is actually the evaluation and should be as objective as possible. Two things are essential in the final product of the evaluation. These are lessons learned (both positive and areas that need improvement) and issues requiring resolution. Without these "end products", and the follow-on actions that should be taken in the form of plan revisions, the value of the exercise is diminished.

In the evaluation of an exercise, the responsibility is divided among multiple evaluators who are each responsible for a specific segment of the evaluation. For smaller-scale and tabletop exercises, this responsibility may

fall to one person. The final evaluation report should tie together input from all evaluators and should address the extent to which communication and interaction between various segments was successful. The evaluation team should integrate the collective input, reconcile any discrepancies and draw appropriate conclusions. By following standard reporting formats, the information gathered during the exercise will not only be useful to the participating organizations, but can be distributed nationwide to everyone's benefit. The length of the report will vary, depending on the complexity and size of the exercise and level of detail required.

Appendix B contains information on developing reports using a basic format.

B. SPECIFIC EVALUATION METHODOLOGIES

Each of the following evaluation methodologies provides a different perspective on the performance of the organizations participating in the exercise. In most instances they are used in conjunction, but they can also be used independently depending on the type and scope of the exercise and the desired level of evaluation to be achieved. The details of each specific evaluation methodology are listed below. Appendix B provides more detail on evaluation reporting requirements and formats.

PEER EVALUATION

In this type of evaluation, individuals with experience in the function to be evaluated are recruited to provide an unbiased independent assessment of exercise play. This methodology is particularly suited for evaluation of the command elements of the response and the related staff, but can be used for most any aspect of the response.

The evaluation personnel would usually come from the exercise design staff and would be a mix of representatives of all

participating organizations. Should insufficient personnel be available from the design staff, personnel could be drawn from the following sources:

- Player Organizations -- Each organization participating in the exercise could designate personnel to represent them on the evaluation team. These would be senior level personnel with appropriate qualifications to provide a subjective evaluation of performance. While these evaluators would come from within the player organization, they would not be players in the exercise.
- Peer Groups -- The exercise design staff could designate "peers" from personnel outside the represented organizations or from another region within their company or agency. Possibilities include: other responders, other on-scene coordinators (OSCs), personnel from a different region, etc. The qualifications required above would remain the same.

Under the overall supervision of the Evaluation Director, these evaluators would be responsible for observing the performance of the field operations, Unified Command, and its support structure and staff. The size of the team and number and location of the evaluators will be dependent on the size and scope of the exercise. These evaluators could also be a part of the review team for the evaluation report.

This methodology will provide a subjective evaluation of the performance of the response organizations participating in the exercise. While data collection forms will be available for the evaluators, experience has shown that most of these evaluators will tend to record their observations, and after the exercise has concluded, they will transfer the comments to the data collection form. This approach is acceptable, but the Evaluation Director should ensure during the evaluator debrief that subjective comments are supported with data. All comments and observations should be related to one of the exercise objectives or issues.

All acceptable data will have to be collated into a single report based on the exercise objectives. If this method was used independently, this will be the final Exercise Evaluation Report. If combined methods were used, this information will have to be integrated in the final Exercise Evaluation Report.

PLAYER/PARTICIPANT EVALUATION

This method relies on the actual players as the principal collectors or source of exercise evaluation data. The players can provide their first-hand experience on the effectiveness of efforts to implement plans and procedures.

Under the supervision of the Evaluation Director, a player evaluation form would be developed to collect data and information. Players would have to be informed during the initial player briefing of the evaluation team's expectations to receive their written and verbal input.

Ideally, a form will be received from every player, but there should not be a limitation on the number of observations and recommendations a single player could input to the evaluation. Input also should be received from the players during the debriefing session immediately following the conclusion of the exercise.

All acceptable observations and recommendations should be collated into a single report based on the exercise objectives. If this method was used independently, this will be the final Exercise Evaluation Report. If combined methods were used, this information will have to be integrated in the final Exercise Evaluation Report.

Most exercise evaluations rely on a combination of the two methods identified above to provide the broadest possible perspective and input to the evaluation process.

C. ACTIVITIES AND TASKS OF THE EVALUATION TEAM

Regardless of the size and composition of the evaluation team assembled for a particular exercise, two key roles exist within this team. First is the Evaluation Director and second is the evaluator or data collector. Team/Group Leaders play an important role in controlling a number of evaluators when more than one evaluation location is necessary during an exercise. The following sections provide general details of their activities and steps. For consistency, these activities and steps have been grouped by the same categories identified in Section 1 for developing an exercise, Pre-Exercise Steps, Exercise Execution Steps and Post-Exercise Steps.

THE EVALUATION DIRECTOR

The responsibility of the Evaluation Director is to complete three major activities and their associated tasks. These activities are to plan and manage preparation of the Evaluation Plan, supervise the evaluation of the exercise and manage the development of the Evaluation Report. The tasks associated with these activities are depicted in Figure 2.4.

Figure 2.4

Pre-Exercise Activity: Plan and Manage Preparations of the Evaluation Plan

Step One: Participate in the Design of the Exercise

Step Two: Determine Method and Format of Evaluation

Step Three: Determine Process for Capturing and Analyzing Exercise Results

Step Four: Determine Process for Presentation of Exercise Results and Lessons Learned

Step Five: Determine the Evaluation Team Structure, Size, and Composition

Step Six: Recruit the Evaluation Team Members

Step Seven: Determine the Schedule of Activities.

Step Eight: Arrange for Logistical Support of the Evaluation Team

Essentially all of the steps listed above are completed by the exercise design staff. They are listed here as a task for the Evaluation Director to stress the Evaluation Director's role in managing the overall evaluation, since this person is specifically tasked with compiling these design results into the Evaluation Plan.

Step Nine: Prepare the Evaluation Plan

The Evaluation Plan provides the specific structure and framework for the evaluation. The Plan was discussed previously and a comprehensive list of its contents presented. This step is probably the single most important contribution of the Evaluation Director during the development of the exercise. The value of the exercise could be seriously diminished if the evaluation plan does not provide the necessary coordination for a systematic observation of the exercise.

Exercise Execution Activity: Supervise the Evaluation of the Exercise

Step One: Conduct the Pre-Exercise Briefing/Training of the Evaluation Team

In this task, the Evaluation Director provides the evaluators with the information and materials they will need to prepare for the evaluation effort. This is accomplished through the distribution of evaluator packets containing information on such items as:

- The scope of the exercise to be evaluated, including objectives to be demonstrated and the extent of play agreements;
- The structure of the evaluation team, including individual evaluator assignments;
- The exercise scenario (narrative summary and timeline) and message summary;
- The exercise ground rules;
- Relevant portions of the evaluation methodology and data collection forms;
- Copies of plans and procedures for participating organizations pertinent to the assigned objectives;
- Portions of previous evaluation reports including unresolved issues and areas that needed improvement;
- The exercise schedule, including a schedule of post-exercise activities; and
- Logistical information, location of meetings, lodging arrangements, etc.

Step Two: Manage the Evaluation of the Exercise

The critical first step in preparing the exercise report is the collection of data on the adequacy of the Facility and Vessel Response Plans, ACP and other response plans, and the performance of the participating organizations during exercise play. In this task, the Evaluation Director monitors and supervises the data collection activities of the exercise evaluation team during the exercise. In many exercises, the Evaluation Director will also be responsible for collecting data on a particular aspect of the response. For smaller-scale exercises where only one organization is participating, the evaluation report would not be "joint." It would simply reflect the response efforts of one organization.

A major part of this task is to coordinate with the exercise controllers and simulators on the progress of the exercise, and to advise the exercise evaluation team of developments affecting their roles and responsibilities as data collectors. In addition, the Evaluation Director may be called on to reassign evaluators to different objectives or locations if circumstances dictate.

Post-Exercise Activity: Manage the Development of the Evaluation Report

Step One: Facilitate the Player Debrief

This task can be conducted by either the Evaluation Director or one of the lead controllers.

Step Two: Moderate the Evaluation Debrief

Step Three: Oversee the Compilation of Data

The Evaluation Director (or staff) will oversee the compilation of data necessary to prepare the Evaluation Report.

Step Four: Manage the Preparation of the Evaluation Report

In this task, the Evaluation Director manages the preparation of the Evaluation Report. Depending on the level of evaluation effort, the Director will review the results of each phase of the evaluation report-writing process, as described in Appendix B. A draft will be compiled for review by the appropriate members of the evaluation team.

Step Five: Produce Lessons Learned

In this task, the Evaluation Director will ensure the preparation of Lessons Learned from the exercise. The response plan exercised will be revised, as appropriate, based on the Lessons Learned and should be placed in a data base to assist other plan holders.

THE DATA COLLECTOR OR EVALUATOR

The terms "data collector" and "evaluator" are essentially interchangeable in the context of any exercise. For continuity, "evaluator" will be used in the succeeding paragraphs. The following sections will discuss in greater detail the evaluator's activities and tasks as they relate to the three phases of the exercise.

During the exercise, the overall job of an evaluator is to serve as a reporter. Associated with each phase of an exercise, an evaluator's specific job as a reporter is to: conduct research, observe and document actions, evaluate, and reports results. Refer to Figure 2.5 for specific steps.

Figure 2.5

Pre-Exercise Activity: Research and Prepare for the Exercise

Step One: Receive and Review Evaluator Materials

Step Two: Review the Scope of the Exercise

Step Three: Review all Pertinent Plans and Procedures

Since plans and procedures are the basis for response efforts, an evaluator should review and understand these plans and procedures in order to anticipate the response efforts that are likely to occur. Evaluators should be knowledgeable of the following:

- The response plan's organization and concept of operations;
- The participating organization's primary response authority for the basic functions;
- The important acronyms used in the plans;
- The status of the response plans of the participating organizations;
- The relationship of this exercise to the overall exercise program of the participating organizations; and

- Any specific lessons learned or issues from previous exercises that might require particular observation during this exercise.

Step Four: Attend the Pre-Exercise Briefing

Depending on the scope of the exercise and the specific evaluators's role, certain evaluation items should be covered during the pre-exercise briefing and training session. Each evaluator is responsible for knowing:

- The exercise objectives that will be demonstrated;
- The objectives the evaluator is responsible for observing;
- Specific roles and responsibilities;
- Any special requirements inherent to the exercise play; and
- The exercise scenario and exercise rules.

Although the Evaluation Plan for the exercise will be distributed to each evaluator and should contain everything necessary for the evaluator, each evaluator is responsible for finding out:

- Recent and significant changes to the response plans being exercised;
- Location-specific protocols regarding safety or conduct; and
- Local geography.

As stated, all of the above topics should be covered in the Evaluation Plan and thoroughly discussed during the pre-exercise briefing and training session. Ideally, this material should be mailed to the members of the evaluation team ahead of time so they may become familiar with the information prior to the briefing.

Exercise Execution Activity: Perform the Data Collection Operation

Step One: Observe Actions during the Exercise

The exercise will be conducted under the guidance of the exercise controllers. The evaluator should observe players' activities, make appropriate notes, record steps, gather facts, times and details relevant to the exercise, and collect copies of the records produced by the exercise participants (e.g., sign-in sheets, logs, copies of messages, press releases and documentation records.)

During the exercise, evaluators observe and record the actions of the players. Generally speaking, during the exercise phase evaluators are "invisible" and do not interfere with exercise play, except for safety reasons.

Step Two: Follow Evaluator Guidelines

How evaluators present themselves at an exercise affects how successful they will be in obtaining necessary information. The evaluator should follow suggested guidelines for:

- The evaluator's role and attitude;
- Dress and appearance at an exercise;
- Dealing with the media;
- Information-gathering techniques; and
- Actual emergencies.

A set of standard evaluator guidelines is contained in Section 2.D. They are not all inclusive but they will be useful to the Evaluation Director when developing the Evaluation Plan.

Post Exercise Activity: Reporting the Results of the Exercise

Step One: Compile the Individual Data

Each evaluator should compile pertinent exercise data to ensure an effective evaluation. The evaluator should review the specific data collection forms used for completeness. All information should be compiled for presentation at the evaluation debrief.

Step Two: Participate in the Player Debrief

Every evaluator should participate in the player debrief, usually conducted immediately after the conclusion of the exercise. The player debrief gives evaluators a chance to input their comments on player performance into the evaluation.

By observing and facilitating this debrief, the evaluator has the opportunity to see the performance through the "eyes" of the participant. This could provide a substantial supplement to the data gathered by the evaluator.

Step Three: Provide Input at the Evaluation Debrief

The evaluator should participate in this debrief, which is usually moderated by the Evaluation Director. Evaluators may exchange information or seek supplemental data from other evaluators who may be able to provide missing pieces of information. This debrief is one source of information used in developing the final Exercise Evaluation Report. This information can take the form of written comments on the data collection forms, or observations that may be reported orally at the debrief. Complete and well-developed written or verbal comments:

- Contain a concise description of how the objective was demonstrated;
- Are developed objectively, stating only facts and observations;
- Highlight positive aspects as well as those areas that need improvement;
- Avoid opinions (e.g., "I think they did a good job"); and
- Describe unresolved issues.

To be of value, all information generated at the evaluator debrief should be correlated to the exercise objectives. It is critical to the development of lessons learned and the final Exercise Evaluation Report that this be accomplished.

Step Four: Review the Draft Exercise Evaluation Report

The Evaluation Director is responsible for compiling the data necessary to prepare the Evaluation Report. A draft report will be developed for review by designated members of the evaluation team. This could include all members, but more likely in a large exercise, designated senior evaluators from the exercise design phase will review the draft reports. It is essential that the review be completed promptly. Timeliness of the final report is critical.

D. STANDARD EVALUATOR GUIDELINES

Very few evaluation teams will have the luxury of experienced evaluators. The following guidelines, presented in a question and answer format, were developed from the questions most frequently asked by new evaluators. They have been compiled here for the Evaluation Director's convenience. They do not address every question but can be used to provide some basic guidelines for the Evaluation Plan.

THE EVALUATOR'S ROLE

What is the evaluator's role at an exercise? And how can the evaluator's function be best described?

- The evaluator is much like an unobserved reporter; the evaluator is a good observer and listener and is able to document facts without interfering with ongoing activities.
- The evaluator is often perceived by players as a guest, or more likely, as the watchdog. Be courteous and professional.
- Plan ahead; arrive at the specified location on time with all necessary tools (e.g., forms, pens, etc.); ensure enough time to process through any security or check-in location.
- Appropriate interaction with the players helps to establish rapport and can lead to accurate observations. **DO NOT INTERFERE WITH THE PLAY.**

DRESS AND APPEARANCE

What is acceptable clothing to wear at an exercise?

- Evaluators will be on their feet for many hours -- so wear comfortable footwear that conforms to the safety requirements for that location. This is especially appropriate for roving evaluators.
- Evaluators should dress in a professional manner suitable to the activity they will be observing.
- Observation of field activities would require coveralls, protective clothing or suitable work clothing.

MEDIA INTERACTIONS

If a reporter from the local newspaper or television station attempts to interview an evaluator, what should he/she do?

- All media inquiries should be directed to the media center or the Exercise Coordinator.
- Never provide evaluation status information or express any personal opinions to the media during the course of the exercise. This includes all phases.
- If asked, the evaluator may provide the appropriate post-exercise meeting information.

INFORMATION-GATHERING VIA QUESTIONING

How does an evaluator find out information that is not obvious, like who a particular individual is talking to on the telephone?

- Wait until there is a lull in the action and then ask.
- Do not interrupt the players in the response activities.
- If an evaluator does not observe specific aspects of an organizations's performance, ask questions of the exercise players after the exercise.
- Be sure that questions do not prompt a response that might otherwise have been overlooked by the player.
- Work with a controller or other evaluators to obtain information.

ACTUAL EMERGENCIES

Suppose a real emergency takes place during the exercise. What acceptable protocol should an evaluator follow?

- Real emergencies take precedence over exercise activities. Document when the "break in the action" occurred.
- If the real emergency prevented completion of required activities, document it as such.
- Contact the Exercise Coordinator or team leader if unexpected problems occurs, such as safety concerns or if the evaluator has a personal emergency.

APPENDIX A - EXERCISE OBJECTIVES

The foremost requirement of the Oil Pollution Act of 1990 was to task the oil industry and the federal government to plan for and develop the capability to respond to a worst-case oil discharge to the maximum extent practicable. This broad tasking was further defined and placed in the appropriate parts of the Code of Federal Regulations. The planning requirements contained in the Code of Federal Regulations segmented this broad tasking into manageable "response functions".

These "response functions" provided the plan writers with the structure for their plan and the exercise program with the objectives necessary to analyze these plans. Section 1.A detailed the relationship between the response functions, the exercise objectives, and the correlating of lessons learned. Appendices B and C provide the details for standard reporting formats and distribution of lessons learned.

During each triennial cycle, all components of a plan holder's response plan should be exercised at least once. The purpose of this requirement is to ensure that all plan components function adequately for response to an oil spill. The 16 core components listed below are the types of functions that should be exercised. However, these components may not be contained in each response plan. As such, the plan holder should identify those that are applicable from this list, adding or deleting as appropriate. The objectives listed below were taken from the National Preparedness for Response Exercise Program (PREP) Guidelines dated August 1994.

EXERCISE OBJECTIVES

1. Notifications: Test the notifications procedures identified in the Area Contingency Plan and the associated Responsible Party Response Plan.
2. Staff Mobilization: Demonstrate the ability to assemble the spill response organization identified in the Area Contingency Plan and associated Responsible Party Response Plan.
3. Unified Command: Demonstrate the ability of the spill response organization to work within a unified command.
 - 3.1 Federal Representation: Demonstrate the ability to consolidate the concerns and interests of the other members of the unified command into a unified strategic plan with tactical operations.
 - 3.2 State Representation: Demonstrate the ability to function within the unified command structure.
 - 3.3 Local Representation: Demonstrate the ability to function within the unified command structure.
 - 3.4 Responsible Party Representation: Demonstrate the ability to function within the unified command structure.
4. Response Management System: Demonstrate the ability of the response organization to operate within the framework of the response management system identified in their respective plans.

- 4.1 Operations: Demonstrate the ability to coordinate or direct operations related to the implementation of action plans contained in the respective response/contingency plans developed by the unified command.

- 4.2 Planning: Demonstrate the ability to consolidate the various concerns of the members of the Unified Command into joint planning recommendations and specific long-range strategic plans. Demonstrate the ability to develop short-range tactical plans for the operations division.

- 4.3 Logistics: Demonstrate the ability to provide the necessary support of both the short-term and long-term action plans.

- 4.4 Finance: Demonstrate the ability to document the daily expenditures of the organization and provide cost estimates for continuing operations.

- 4.5 Public Affairs: Demonstrate the ability to form a joint information center and provide the necessary interface between the unified command and the media.

- 4.6 Safety Affairs: Demonstrate the ability to monitor all field operations and ensure compliance with safety standards.

- 4.7 Legal Affairs: Demonstrate the ability to provide the unified command with suitable legal advice and assistance.
5. Discharge Control: Demonstrate the ability of the spill response organization to control and stop the discharge at the source.
6. Assessment: Demonstrate the ability of the spill response organization to provide an initial assessment of the discharge and provide continuing assessments of the effectiveness of the tactical operations.
7. Containment: Demonstrate the ability of the spill response organization to contain the discharge at the source or in various locations for recovery operations.
8. Recovery: Demonstrate the ability of the spill response organization to recover the discharged product.
- 8.1 On-Water Recovery: Demonstrate the ability to assemble and deploy the on-water recovery resources identified in the response plans.
- 8.2 Shore-Based Recovery: Demonstrate the ability to assemble and deploy the shoreside clean resources identified in the response plans.
9. Protection: Demonstrate the ability of the spill response organization to protect the environmentally and economically sensitive areas identified in the Area Contingency Plan and the respective industry response plan.
- 9.1 Protective Booming: Demonstrate the ability to assemble and deploy sufficient resources to implement the protection strategies contained in the Area Contingency Plan and the respective industry response plan.
- 9.2 Dispersant Use: Demonstrate the ability to quickly evaluate the applicability of dispersant use for this incident and implement the protection strategies contained in the Area Contingency Plan and the respective industry response plan.
- 9.3 In-Situ Burning: Demonstrate the ability to quickly evaluate the applicability of in-situ burning for this incident and implement a pre-approved plan from the Area Contingency Plan or develop a plan for use.
- 9.4 Water Intake Protection: Demonstrate the ability to quickly identify water intakes and implement the proper protection procedures from the Area Contingency Plan or develop a plan for use.
- 9.5 Wildlife Recovery and Rehabilitation: Demonstrate the ability to quickly identify these resources at risk and implement the proper protection procedures from the Area Contingency Plan or develop a plan for use.
- 9.6 Population Protection: Demonstrate the ability to quickly identify health hazards associated with the discharged product and the population at risk from these hazards, and to implement the proper protection procedures from the Area Contingency Plan or develop a plan for use.

- 9.7 Alternate Technologies: Demonstrate the ability to quickly evaluate the applicability of alternate technologies for use in an incident, and implement a plan from the Area Contingency Plan or develop a plan for use.
10. Disposal: Demonstrate the ability of the spill response organization to dispose of the recovered material and contaminated debris.
11. Communications: Demonstrate the ability to establish an effective communications system for the spill response organization.
- 11.1 Internal Communications: Demonstrate the ability to establish an intra-organization communications system. This encompasses communications both within the administrative elements and the field units.
- 11.2 External Communications: Demonstrate the ability to establish communications both within the administrative elements and the field units.
12. Transportation: Demonstrate the ability to provide effective multi-mode transportation both for execution of the discharge and support functions.
- 12.1 Land Transportation: Demonstrate the ability to provide effective land transportation for all elements of the response.
- 12.2 Waterborne Transportation: Demonstrate the ability to provide effective waterborne transportation for all elements of the response.
- 12.3 Airborne Transportation: Demonstrate the ability to provide the necessary support of all personnel associated with the response.
13. Personnel Support: Demonstrate the ability to provide the necessary support of all personnel associated with the response.
- 13.1 Management: Demonstrate the ability to provide administrative management of all personnel involved in the response. This requirement includes the ability to move personnel into or out of the response organization with established procedures.
- 13.2 Lodging (Berthing): Demonstrate the ability to provide overnight accommodations on a continuing basis for a sustained response.
- 13.3 Meals (Messing): Demonstrate the ability to provide suitable feeding arrangements for personnel involved with the management of the response.
- 13.4 Operational and Administrative Spaces: Demonstrate the ability to provide suitable operational and administrative spaces for personnel involved with the management of the response.
- 13.5 Emergency Procedures: Demonstrate the ability to provide emergency

services for personnel involved in the response.

14. Equipment Maintenance and Support: Demonstrate the ability to maintain and support all equipment associated with the response.
 - 14.1 Response Equipment: Demonstrate the ability to provide effective maintenance and support for all response equipment.
 - 14.2 Support Equipment: Demonstrate the ability to provide effective maintenance and support for all equipment that supports the response. This requirement includes communications equipment, transportation equipment, administrative equipment, etc.
15. Procurement: Demonstrate the ability to establish an effective procurement system.
 - 15.1 Personnel: Demonstrate the ability to procure sufficient personnel to mount and sustain an organized response. This requirement includes insuring that all personnel have qualifications and training required for their position within the response organization.
 - 15.2 Response Equipment: Demonstrate the ability to procure sufficient response equipment to mount and sustain an organized response.
 - 15.3 Support Equipment: Demonstrate the ability to procure sufficient support equipment to support and sustain an organized response.
16. Documentation: Demonstrate the ability of the spill response organization to document all operational and support aspects of the response and provide detailed records of decisions and actions taken.

APPENDIX B - EVALUATION REPORTING AND FORMATS

EVALUATION REPORTING

Exercise evaluations should be documented and reported for two reasons. First, the post-exercise report serves as the official record of the exercise and documents lessons learned. Second, it is the means by which areas of improvement in contingency preparedness policies, procedures, plans, equipment, and personnel are identified. Although Area Exercises focus on the lead plan holder's response plan, several response plans come into play. Each should be evaluated individually as well as for how each interfaces with the Area Contingency Plan. For smaller-scale internal exercises there may be only one plan being exercised and evaluated for the particular company. However, this should not diminish the importance of the evaluation process. The role of the Evaluation Team is to decide the parameters of the evaluation and the format for the presentation of evaluation results.

As indicated previously, exercise objectives are used to establish the performance standards and evaluation criteria. The evaluation criteria for each objective should be linked to the plans and procedures being assessed or to established regulatory requirements. The evaluation data collected during the response should be geared toward determining whether the evaluation criteria are met. Since one of the goals of PREP exercises is to improve response plans, improvement items should be documented in the exercise report. Information on both positive actions and areas that need improvement should be distributed so that other organizations and agencies may benefit from the lessons learned that resulted from the exercise. Improvements that are identified in the evaluation should be implemented through changes in the appropriate response plan(s).

The value of the exercise to the response organizations that participated is supported by the quality of the final exercise evaluation report. Each exercise that is conducted provides training for members of the participating response organizations, but unless an accurate assessment of their performance can be compiled, they will continue to train and perfect their mistakes. The same holds true for the National Response System. OPA 90 requires that the National Response System, which is actually a conglomerate of all response organizations, plan for an integrated response, exercise these response plans, and report on the preparedness of the National Response System.

One deficiency that is routinely evidenced in most exercise processes is in the area of analyzing responses, and making these assessments available to the entire National Response System. The guidance in this appendix addresses the need for reporting and presents a process for developing a standard reporting format. Appendix C presents the framework for a "Lessons Learned Distribution System" that could benefit all members of the National Response System.

Regardless of whether a single specific evaluation methodology has been used or a combination of various methodologies, there is a specific process to be followed in developing a final exercise evaluation report. The process for drafting an evaluation report should begin during the design and development phases of the exercise process. Before a report can be drafted, a number of issues and concerns need to be addressed, such as:

- The audience for the evaluation report;
- How the report will be presented to the organization;
- The type of report (micro vs. macro); and
- Qualification and experience of the exercise evaluators.

DEVELOPMENT PROCESS

B-1

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U.S. Department of Transportation/Office of Pipeline Safety*

PHASE 1 -- Initial Compilation of Data

Each evaluator will have to compile his/her data for review. Step one of this process will be to complete any data collection forms. Step two will be to separate the data in groups based on the exercise objectives. The evaluator should be ready to present all comments, either verbally or in a written format, at the evaluators' debrief. The completed data collection form should be collected at the end of this debrief.

PHASE 2 -- Integration of Data

During the evaluators' debrief, the Evaluation Director will oversee the integration of data into a preliminary set of comments. The Evaluation Director will moderate the debrief and provide clerical staff to gather the initial data. The debrief should;

- Use the exercise objectives as the agenda;
- Allow each evaluator to present their comments verbally, both on the objectives evaluated and on the exercise conduct;
- Be recorded for transcription to aid in the development of the final exercise evaluation report;
- Gather all completed data collection packages;
- Develop lessons learned, both positive and areas that need improvement; and
- Develop issues to be resolved by response organizations.

The final product of the evaluators' debrief should provide sufficient data on every objective demonstrated by the exercise.

PHASE 3 -- Writing the Draft Report

The Evaluation Director bears the responsibility for managing the preparation of the exercise evaluation report. For Area Exercises, it is important that the recommended format be followed to ensure consistency with a national reporting and lessons learned system. A suggested format is given below. For internal exercises, companies may utilize any reporting system that suits their internal requirements. However, some type of internal distribution system should be in place so as to be able to distribute the lessons learned throughout the company. One problem routinely found with reports is that they contain long narrative summaries with much of the value buried in the text. The recommended format summarizes comments on the particular objectives, including both observations and recommendations.

PHASE 4 -- Acceptance of the Final Exercise Evaluation Report

During the design phase of the exercise, a team should have been established to review the final exercise evaluation report. The Evaluation Director is responsible for ensuring that this review process is conducted and completed in a timely manner. A major element of the Evaluation Plan is establishing a firm date for the delivery of the evaluation report. This will require the review team for the exercise evaluation report to consider this report a priority even though they may have returned to their jobs elsewhere. The timeliness of the evaluation report cannot be over stressed. It is recommended that the Evaluation Director establish a system during the design phase for expediting this review.

PHASE 5 - Distribution of Exercise Findings and Lessons Learned

No report is complete until the findings and lessons learned are shared with all the participating organizations, and with any other organization or agency that may have an interest. The intent of sharing these lessons learned is so that other

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organizations and agencies may benefit from the experiences learned during the exercise, and target areas identified for improvement.

RECOMMENDED FORMAT

The following format is suggested as a standard for the Exercise Evaluation Report:

SECTION 1 - Introduction/Basic Information

This section should contain:

- General information, such as exercise participants, location, date and times, exercise scope, exercise type, etc.;
- The overall objectives;
- The basic scenario;
- The evaluation methodologies used; and
- A listing of any acronyms that were used.

SECTION 2 - Evaluation Comments

This section is the "heart" of the report. It is based on the objectives established during the design phase and should contain observations, lessons learned, and recommendations. This section should be formatted as follows:

- Title - Objective
- Observation - a brief factual statement of the observed success or problem. This statement can be (1) positive, about something that was done exceptionally well, or about procedures used that should be advertised or shared; or (2) areas that need improvement, something that happened that was not supposed to occur or something that did not but should have occurred. Each lesson learned should be linked to a single observation.
- Lesson Learned - This paragraph can contain (1) a statement of the positive action, if any, taken to generate success, or (2) a statement of the action that should have been taken to avoid or alleviate the problem.
- Recommended Action - This should contain a statement of how to repeat the success or permanently correct the problem, and who is responsible for making the correction. The recommendation could result in a requirement for new or modified plans or procedures, procuring new equipment, etc. This should not be a restatement of lessons learned.

SECTION 3 - Acceptance

It is important to list each member of the report review team. It would be very difficult, due to time constraints, to obtain a signature from each reviewer; however, it would be sufficient to note the date of their concurrence with the report. The final exercise evaluation report does not require approval from any particular agency or organization, but it does require the Evaluation Director to "accept" the report. This should be noted in this section by his/her signature.

SECTION 4 - Attachments

This section could include any attachments to the report that may assist in its review and use, such as timeline information, detailed objectives and issues, conduct organization chart, etc.

APPENDIX C - LESSONS LEARNED SYSTEM

PREP LESSONS LEARNED SYSTEM (PLLS)

The PREP Lessons Learned System (PLLS) is a computerized data management system used to enhance contingency preparedness. It provides each plan holder the ability to capture and locally store lessons learned. It also gives all members of the PREP community access to a national lessons learned database of knowledge and experience gained through exercises and real world operations. Additionally, PLLS provides each participating organization with the option to establish its own continuous improvement program for tracking areas that need improvement.

A Preparedness for Response Exercise Program is only as good as its ability to identify what works and what needs improvement. Capturing and sharing lessons learned enables each participating organization to identify and address weaknesses in the Area Contingency Plan (ACP) and their own response plans, learn from the experiences of other plan holders, and achieve the greatest return on their PREP investment by ultimately reducing risk and potential costs. PLLS software offers the capability to create and maintain a database of all lessons learned resulting from drills and exercises. For the area-type exercises, the Evaluation Team will be responsible for submitting the lessons learned from the exercise to the Area Committee for their review and submission into the PLLS. Currently, the National PLLS database should contain only lessons learned that pertain to Area exercises. PLLS is for use by all federal, state, and local government and industry PREP participants.

DATA FLOW

On completion of an exercise or real world operation each participating organization should evaluate how well their response plan and the ACP worked. A separate lesson learned should be written for each significant strength or area of improvement identified in each plan. Organizations using PLLS software will have their new lessons learned automatically added to their organization's local PLLS database.

All lessons learned that reside in the National PLLS database will be made available for download to the PREP community through a call-in computer bulletin board. The number is:
(703) 313-5910 or internet: <http://www.navcen.uscg.mil/prep/prep.htm>

ACCESSING THE NATIONAL PREP DATABASE

A. Logging On:

Using a computer with a modem and communications software, you can access the Navigation Information Service (NIS) Bulletin Board System (BBS) at: (703) 313-5910 or internet: <http://www.navcen.uscg.mil/prep/prep.htm>

B. Establishing an Account on the NIS BBS:

- The first time your computer connects to the system, you will go through a sign-up procedure which consists of: answering a few questions; entering your preferred user name; and selecting a password.
- If you have any problems with the technical aspects of connecting to the NIS BBS, contact the NIS Watchstander at: (703) 313-5900.
- On subsequent connections, you will be able to gain access to the NIS BBS by simply entering your account user name and password.
- Once you have accessed the NIS BBS, the screen will display the NIS Notice Board.

C. Accessing the National PREP/PLLS Database:

1. Select either option "n" (nonstop) or "c" (continue) by pressing its corresponding letter to enter the MAIN MENU.
2. Press <1> to proceed from the MAIN MENU to the *"Information from other Coast Guard Commands"* MENU.
3. Press <1> to access the *"Preparedness for Response Program (PREP)"* MENU.

The PREP MENU has four libraries:

- a. PREP GUIDELINES. The PREP GUIDELINES Library has brief information on the GUIDELINES.
- b. PREP LESSONS LEARNED. The PREP LESSONS LEARNED Library contains lessons learned files, the PLLS User's Manual, and the three freeware files needed to install the PLLS software (explode.exe, pllssetup.exe, and pllszip.exe). PLLS is a powerful program that enables users of DOS computers to sort and search lessons learned databases for specific information.
- c. PREP GENERAL FILES. Files on PREP background, the PREP Schedule, ordering PREP publications, and Federal Register excerpts pertaining to PREP are held within the PREP GENERAL FILES Library.
- d. HOW TO CONTACT THE PREP STAFF. This library contains staff contact information.

4. From the PREP MENU, determine the library you wish to access and press the corresponding number to enter it.
 5. Once you have entered your selected library, chose a file by moving the highlight bar with the arrow keys, or by pressing the corresponding letter.
 6. To view the administrative data for the highlighted files, press <ENTER>.
 7. From the administrative data screen, files with the extension ".TXT" can be viewed on-line by pressing "CTRL> + <V>. Files that do not have the ".TXT" extension must be downloaded first (pressing <CTRL> + <D> and follow the on-screen instructions) and then viewed through your computer's applications.
- D. Logging Off:
1. Press <X> (sometimes <X> + <ENTER>) until you receive the prompt: "Are you sure?"
 2. Press <Y> and then <ENTER>; your log off is complete.

APPENDIX D - ABBREVIATIONS AND ACRONYMS

ACP	AREA CONTINGENCY PLAN
DOT	DEPARTMENT OF TRANSPORTATION
EC	EXERCISE COORDINATOR
ED	EVALUATION DIRECTOR
EER	EXERCISE EVALUATION REPORT
EPA	ENVIRONMENTAL PROTECTION AGENCY
FEMA	FEDERAL EMERGENCY MANAGEMENT AGENCY
IC	INCIDENT COMMANDER
ICS	INCIDENT COMMAND SYSTEM
JER	JOINT EVALUATION REPORT
MMS	MINERALS MANAGEMENT SERVICE
NOAA	NATIONAL OCEANOGRAPHIC AND ATMOSPHERIC ADMINISTRATION
NRS	NATIONAL RESPONSE SYSTEM
OPA 90	OIL POLLUTION ACT OF 1990
OSC	ON SCENE COORDINATOR
PREP	PREPAREDNESS FOR RESPONSE EXERCISE PROGRAM
RSPA	RESEARCH AND SPECIAL PROGRAMS ADMINISTRATION
UC	UNIFIED COMMAND
USCG	U.S. COAST GUARD

APPENDIX E - DATA COLLECTION FORMS

The overall evaluation methodology essentially consists of observing the demonstration of major response functions, thus accomplishing the exercise objectives. This appendix contains a framework for collecting data (conducting the evaluation) and provides some sample data collection forms and the instructions for their use. They were developed specifically to assist the evaluator in observing and recording data related to these response functions. The sample forms may be used for either functional exercises (drills) or full-scale exercises and the type and format of the forms will be the decided by the Evaluation Team. The amount and type of data collected by the evaluators will be dependent on the objectives of the exercise and the type of report that will be completed. A detailed "micro-type" report will need more detailed information collected, and an evaluation form and process should be developed to support this data collection effort. Sample forms two, three and four would be used for collecting this type of data. A "macro-type" report will require a different evaluation form and process for data collection, similar to sample one forms. Sample forms five and six represent general critique forms to be completed by players and simulators.

COMPONENTS OF EVALUATION

OBSERVATION AND DOCUMENTATION

During exercise conduct, evaluators must be able to quickly document player and group responses and activities. Evaluation forms should be created that clearly reflect the exercise objectives and provide performance standards and evaluation criteria that will assist evaluators in their observations. Documentation on evaluation forms should be in sufficient detail and format to facilitate reliable analysis of performance. Evaluators should have a working knowledge of the response plans and procedures, as well as the response structure. Observations should include both areas that need improvement, and responses which deserve credit and might serve as models for the rest of the organization.

DATA COLLECTION

Several types of data should be collected during and after the exercise activity. In addition to the notes included in the completed evaluation forms, data from player activity logs and observations from simulators should be assembled. Debriefings for players and similar sessions with evaluators, simulators and controllers will also provide important data. Debriefings of players will often provide the most critical and important evaluation observations.

DATA ANALYSIS

This analysis links the objectives of the exercise to the actual decisions and response actions of participants during the exercise. The analysis should include sufficient detail to support the observations of performance made by both the evaluators and players. Planning for analysis should include activities to evaluate how effectively the design and development allowed accomplishment of exercise objectives.

DOCUMENTATION OF EVALUATION

Goals for documentation are to develop a format and presentation that meets the feedback needs of management and players, while appropriately representing the consensus of the evaluation team. It is generally desirable to provide some sort of written document to facilitate continuous improvement. For extensive exercises, there may be a need to segment the evaluation report, providing several versions that focus on different aspects of exercise performance. In addition,

provisions should always be made to document both positive lessons learned and areas that need improvement.

PLAN FOR EVALUATION

In designing and developing an exercise, one should consider the "How" of evaluation. This should include the development of appropriate forms, instructions and training that provide evaluators with a common understanding of the How.

The development of usable and appropriate evaluation forms is one of the most important items in the evaluation process. The forms should be based on previously developed exercise objectives. Questions which guide the evaluation of performance related to each objective should be included. Specific forms should be developed for the evaluation of participant understanding of emergency response/management and each group/team's roles and responsibilities. Forms should provide for an assessment of both strengths and areas that need improvement.

Instructions to evaluators may be provided in written form, either as a separate document in the evaluation plan or included on the evaluation forms. Evaluation will often require that instructions on how to evaluate specific activities at certain locations be provided to individual evaluators, in addition to any general instructions. While an experienced evaluation team may require only limited instructions, more extensive instructions or training sessions may be advantageous where the team is less experienced. This training session is appropriate because it provides to the evaluators a full understanding of how they are expected to accomplish evaluation.

This appendix provides some sample instructions that may assist evaluators in completing their evaluation forms. A representative sample of different types of evaluation forms is also provided to serve as an example of the type of system that may best suit the organization's exercise evaluation needs. All the evaluation forms should be developed based on the particular objective that is being analyzed; however, the design of the forms may vary. For a less experienced team, a number of questions may be included to assist the evaluator in determining whether or not the objective was accomplished. These questions can vary considerably in scope and content. They may require only a "yes" or "no" answer, or they may require a detailed explanation. Either way, there should always be a mechanism present in the data collection process that allows the evaluator to document his/her observations, findings and recommendations for improvement. Also included is a sample observation log that can be used by evaluators to document observations, findings and recommendations throughout exercise play.

Included in this appendix are sample player and simulator critique forms that should be completed at the conclusion of the exercise. These forms are essential for gathering critical information on the effectiveness of the exercise. Sufficient forms should be provided in all exercise spaces and locations for those players and simulators not present during the debriefing. All players and simulators should fill out the form and return it prior to departing the exercise.

Planning for the evaluation of exercises should recognize that "How" it is accomplished may vary dramatically depending on the objectives of the exercise and the type of exercise activity being conducted. While the specifics of "How" do and should vary, the quality of evaluation is measured in its utility as a means of identifying lessons learned and guiding continuous improvement of emergency management capabilities.

SAMPLE ONE: EMERGENCY MANAGEMENT TEAM (EMT) EVALUATION

Name:

Assigned Location:

The objectives for this exercise are listed below. After each objective, evaluators should note their observations and document their assessment of the extent and manner in which each objective was addressed.

OBJECTIVES/PERFORMANCE STANDARDS

- * DEMONSTRATE TIMELY NOTIFICATION AND ASSEMBLY OF THE EMERGENCY MANAGEMENT TEAM.
(Be sure to note times for receipt of notification and activation of the team.)

- * DEMONSTRATE QUALITY AND TIMELINESS OF INFORMATION FLOW BETWEEN THE EMT AND INCIDENT COMMAND.

- * VALIDATE THE APPROPRIATE MAKE OF THE EMERGENCY MANAGEMENT TEAM.

- * DEMONSTRATE IDENTIFICATION AND INITIAL WORK ON RESOLUTION OF ISSUES.

- * DEMONSTRATE THE ABILITY TO EFFECTIVELY COMMUNICATE AND COORDINATE AMONG THE REPRESENTATIVE AGENCIES WITHIN THE EOC.

- * DEMONSTRATE CLARITY OF ROLES AND RESPONSIBILITIES OF THE EMERGENCY MANAGEMENT TEAM MEMBERS.

* VALIDATE THE EFFECTIVENESS OF EXISTING PLANS AND PROCEDURES.

EVALUATION OF DEPARTMENTS

State conclusions on the adequacy of the following aspects of the emergency management program as demonstrated in the exercise. Where areas for improvement have been identified, offer solutions which will address the issue.

Staffing

Facilities and Equipment

Other Resources

Plans and Procedures

Training

SAMPLE TWO: EXERCISE EVALUATION FORM

Objective: To validate the current status of the Emergency Management (EM) Program by demonstrating use and integration of appropriate plans and procedures.

Criteria: To satisfy this objective, participants within the EM structure should demonstrate sufficient knowledge of the EM program through the use of checklists and development of response options in a manner that exhibits a thorough familiarization of plans and procedures. Evaluators should also note the set-up and functional capability of work areas where teams operate.

EVALUATION QUESTIONS:

Was there a general comprehension of individual and overall structures and plans?

Were plans and procedures used? Did they facilitate coordination and information flow throughout all responding groups (i.e. integrated response)? Describe.

Were rooms/work areas functionally organized?

Is the demonstrated capability adequate? Is it adequately reflected in planning documents?

Provide Detailed Observations:

Recommendations:

EXERCISE EVALUATION FORM

Objective: To demonstrate the ability of the spill response organization to provide an initial assessment of the discharge and provide continuing assessments of the effectiveness of the tactical operations.

Criteria: Individuals and teams should demonstrate a capability to assess the incident in an organized and timely fashion. Key response resources should be identified to ensure proactive or over-response in accordance with company philosophy.

EVALUATION QUESTIONS:

Was the situation assessed according to plan and in an organized manner?

Did the assessment of the incident lead to the development of appropriate initial response resource application?

Did the organization continue to provide assessments throughout the response?

Did the assessments include information on the effectiveness of the response operations? (provide details)

Provide Detailed Observations:**Recommendations:**

EXERCISE EVALUATION FORM

Objective: To demonstrate notification procedures identified in the Area Contingency Plan and the associated Responsible Party Response Plan.

Criteria: To satisfy this objective, personnel should demonstrate use of a notification system whereby personnel are notified promptly and move to assigned response locations in a timely manner. Mobilization requirements have been defined in respective planning documents; however, mobilization is generally designed to occur between 30 minutes and two hours.

EVALUATION QUESTIONS:

At what time was the decision made to mobilize personnel?

At what time was notification started and completed?

How effective was the roster(s) or automated system for notification?

Were all appropriate personnel notified? If not, who was not notified and for what reason? Did this affect the team's ability to perform its response functions?

Provide Detailed Observations:**Recommendations:**

EXERCISE EVALUATION FORM

GENERAL EM PROGRAM

The overall purpose of the exercise is to demonstrate and validate the company's emergency management capability, and to reinforce and enhance these capabilities throughout all levels of the organization. To assist in measuring how well the emergency management structure performed as a total unit, evaluators are requested to provide general evaluation comments on this form.

Overall Observations Concerning Response:

Recommendations for Improvements to the Response Structure, Planning Documents, Training or Other Areas:

SAMPLE THREE: EXERCISE EVALUATION FORM

Objective: To demonstrate the ability to establish an effective communications system for the spill response organization.

EVALUATION QUESTIONS:

1. What is the primary means of communications between _____ and _____ for emergency communications?

Was it demonstrated? By whom?

2. What is the secondary means of communications in an emergency?

Was it demonstrated? By whom?

3. Do other forms of communications exist? Identify them.

Were other forms of communications demonstrated?

4. Did communications systems appear adequate to meet emergency needs?

5. Do plans and procedures define primary/secondary communications systems and policy for their use?

6. Are personnel trained and proficient in the use of communications equipment?
-

Observations/Recommendations:

(use additional sheets, if necessary)

SAMPLE FOUR: GENERAL QUESTIONS

(Note: These questions may be constructed so as to be used as data collection forms.)

Notifications

- Were 24-hour notification contact members available in the Area Contingency Plan and the Vessel/Facility Response Plan?
- Were there any notifications that could not be completed, or notifications made that were not listed in the plan(s)?

Staff Mobilization

- Did the Area Contingency Plan identify specific individuals to serve in the Unified Command?
- Did the Area Contingency Plan identify a pre-designated site for assembly of the Unified Command? Was this site used?
- Did the Responsible Party(s) Response Plan(s) contain the structure of an Incident Command Staff?
- Was the Unified Command formed in a timely manner?

Unified Command

- Did the Unified Commanders prepare written strategic objectives and response priorities signed by each member?
- Did the Unified Commanders review and approve a daily Incident Action plan?
- Did the Unified Commanders conduct at least one joint press briefing each day?
- Did the press briefing address media, community and public relations concerns?
- Were concerns of local government addressed within the Unified Command?
- Was the Unified Command's organization organized as written in the Area Contingency Plan?
- Was the Unified Command able to provide necessary support to all personnel associated with the response?

SAMPLE INSTRUCTIONS

EVALUATION FORMS

The following evaluation forms are intended to assist in recording observations and assessments of performance during the exercise. The forms should be used in conjunction with the Observation Logs to document a chronology of activities. As the exercise progresses, note activities, conversations and decisions in some detail on the log. **(Note: Yes and No answers are not sufficient.)**

Please read through all forms carefully in advance of exercise play. This will assist in determining what to document, and will also ensure that observations are sufficiently detailed to facilitate development of a post-exercise report. The report will be based on observations and assessments, comments by participants in the exercise, and a review of plans and other materials developed during the exercise.

The evaluation forms are organized in the following manner:

- an objective is identified and;
- space is provided for general observations and recommendations.

Remember that evaluation forms should also include the evaluator's perception of how the entire group did overall as one integrated team. Also, always note if player actions were different from what were described in the planning documents. For all forms, use additional sheets of paper to describe complete observations and recommendations of player performance.

Evaluation forms should be completed and submitted before departing. All forms and materials collected from players will be collected when evaluation forms are submitted.

SAMPLE FIVE: PLAYER EXERCISE EVALUATION FORM

Please take a few minutes to complete this form. Please use additional sheets of paper for more room. Return it to a Controller/Evaluator during the debriefing session after the exercise.

Based on the exercise, what additional capabilities/equipment/resources are needed?

What changes or additions to the current plans, procedures, or training should be made based on your participation in the exercise?

What additional job aids, checklists, etc. would you like to have made available?

What recommendation do you have to improve future exercises and how should lessons learned be shared throughout the corporation/agency?

NAME AND PHONE NUMBER: _____

NOTE: This information will be kept confidential, but we may need to contact you for further information.

SAMPLE SIX: SIMULATOR EXERCISE EVALUATION FORM

Please take a few minutes to complete this form; feel free to use additional sheets of paper for more room. Return it to the Simulation Cell Lead during the debriefing session after the exercise.

What is your assessment of player performance during the drill? Were players proactive in response? Were they familiar with their roles and responsibilities? Did they manage response operations effectively?

What is your assessment of the design and conduct of the exercise? What recommendations do you have to improve future exercises?

If the exercise (incident) continued for an extended period, what is your assessment of how response would have continued to develop? Consider long-range strategies, shift changes and other issues that should be addressed for an extended operation.

NAME AND PHONE NUMBER: _____

NOTE: This information will be kept confidential, but we may need to contact you for further information.