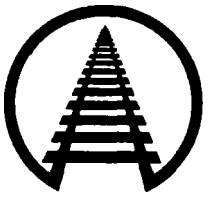

HAZARDOUS MATERIALS

EMERGENCY RESPONSE PLAN

GUIDANCE DOCUMENT FOR

RAILROADS

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Prepared by: ASSOCIATION OF AMERICAN RAILROADS
Safety and Hazardous Materials
Bureau of Explosives
50 F Street, N.W.
Washington, D.C. 20001

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EXECUTIVE SUMMARY

One of the predictors of success in the handling of any railroad emergency is how well the railroad planned for that emergency. It has been demonstrated that good planning usually produces good results. Poor planning almost always produces disappointing results.

The purpose of this emergency response guidance document is to provide assistance to the nation's railroads in developing and reviewing response plans for hazardous materials incidents. This document applies to all hazardous materials regulated by the Department of Transportation and is intended to:

1. Identify the principal elements which must be considered in preparing for and responding to rail incidents involving hazardous materials; and

2. Provide guidance in dealing with those principal elements in a framework that will allow each individual railroad to tailor its hazardous materials contingency plan to its own particular territory and operations.

It is recognized that many of the planning elements discussed in this guidance document are already in place in most railroad operations nationwide.

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HAZARDOUS MATERIALS EMERGENCY RESPONSE PLAN
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I. INTRODUCTION

A. Purpose of This Document

The purpose of this document is to provide guidance for railroads in the development and review of emergency response plans and preparedness activities for railroad accidents and incidents involving hazardous materials. It is intended to:

1. Identify the principal elements which must be considered in preparing for and responding to railroad accidents and incidents involving hazardous materials; and

2. Provide guidance in dealing with those principal elements in a framework that will allow each individual railroad to tailor its hazardous materials contingency plan to its own particular territory and operations.

The emergency plan is the structured documentation of a railroad's preparedness for emergencies. The purpose of the plan is to help the railroad effectively and safely respond to and recover from any incident involving hazardous materials. The hazardous materials emergency response plan should be an integral part of the overall emergency response plan of the railroad.

This guidance is voluntary. It is presented to the railroad industry for consideration by individual railroads in the development of their hazardous materials emergency response plans.

Because of the broad industry-wide coverage of this document, individual railroads should adapt this guidance to their specific corporate policy and unique needs. Preparedness activities and plans should be closely integrated with established railroad emergency management functions and responsibilities.

Unless otherwise specified in this document, the term "hazardous materials" includes hazardous materials, substances, and wastes.

B. General Policy

Good relationships with the communities, businesses, and people served by the railroad, and with regulatory and other public agencies, are necessary for the success of any rail transportation enterprise. Railroad activities are highly visible, and the public's attention to those activities is inevitable, particularly during and following any emergency. Therefore, it is essential that the railroads be prepared to act quickly and positively in the event of a hazardous materials emergency.

Despite the best prevention and safety programs, railroad incidents will occur. Some

will involve hazardous materials, and will require quick action and coherent policies and procedures for dealing with the specific situations.

The primary duties of railroad personnel at the scene of a hazardous materials incident are to:

1. Protect life and health;
2. Protect property and the environment;
3. Cooperate with and assist governmental authorities;
4. Maintain or restore normal rail operations; and
5. Provide necessary information to the media.

When an incident occurs, each railroad employee, from the chief operating officer down to the individual crewmember, needs to know precisely what is expected of them. The emergency procedures should identify and prioritize those activities which must be accomplished in order to carry out those duties.

C. Objective

The objective of this document is to assist the railroads in their emergency response planning by helping them answer the basic questions:

1. What must be accomplished?
2. When is it to be accomplished?
3. Who will accomplish it?
4. How is it to be accomplished?

D. Definitions

For purposes of this document, the following definition shall apply:

"A hazardous materials rail transportation emergency exists when an incident or accident (e.g., derailment, collision, fire, explosion, natural disaster, civil disturbance, loss of containment) has occurred which:

(1) involves a real, potential, or suspected release of that material from its intended containment;
(2) poses a real or potential threat to life, property, or the environment; and
(3) may require some action to mitigate the potential consequences."

E. Past Problems

The following are some of the problems involved in past railroad emergency response

operations:

1. Lack of coordination among governmental agencies;

2. Inability of the emergency response crews to quickly obtain the description of the cargo from the shipping papers on the train;

3. Lack of sufficient involvement by railroads in the emergency response planning and preparedness programs of state and local governments;

4. Inadequate communication between railroad officials and public officials at the incident scene; and,

5. Inappropriate response by the public (including the media) due to lack of timely and accurate information flowing from railroad representatives to emergency response agencies.

F. Accident/Incident Scenarios

No single incident scenario should be isolated as the one for which to plan because each incident will have different consequences, both in nature and degree. The range of possible scenarios is very large, starting with the worst possible accidents which have an extremely low likelihood of occurrence, through minor incidents which are more common, down to a zero point of requiring no planning at all. Practical preparedness efforts should concentrate on a middle ground that considers the most common situations and the most probable consequences.

The consequences associated with any particular incident depend on various factors, including:

1. Type and severity of accident forces such as impact, fire, and/or puncture;

2. The presence or possibility of a fire, explosion, or escape of a toxic gas;

3. The presence of certain hazardous materials, or combinations of those materials, which could interfere with recovery operations;

4. Quantity and physical/chemical form of hazardous material involved;

5. Incident location (rural, suburban, urban);

6. Type of packaging used to contain the hazardous material;

7. Amount of material released from package;

8. Weather conditions at the incident site;

9. The effectiveness of the railroad's response to the emergency; and

10. The effectiveness of the railroad's emergency response plan and its interrelationship with the emergency response plans of public agencies and other affected external organizations.

The quality of response to any serious railroad incident is affected by the quality of preparedness for that incident. The railroad should address the issues listed below in its hazardous materials emergency response plan.

1. What is the chain of command for directing response, recovery, and service restoration within the railroad?

2. What are the roles of railroad officials?

3. What local, State, and Federal agencies are likely to respond to a railroad incident?

4. Who are the railroad's hazardous materials specialists? Where are they located, and what type of response should they be prepared to make under various conditions anticipated during planning?

5. What plan or procedures are needed for dealing with the public and the media on the scene?

6. What resources are available and where are they located?

In actual response to emergencies, many tasks must be performed by many different organizations in a short period of time. A primary purpose of planning is to ensure that each of those organizations carry out pre-identified functions in a coordinated manner, commensurate with the demands of the emergency situation.

Emergency functions cannot be left entirely to a contingency approach to mitigation of hazardous materials releases. For example, emergency response teams cannot respond if they have not been previously established, and they cannot function effectively if they have not been trained and equipped before the incident. However, during the course of an emergency, many decisions will need to be made in response to conditions unique to the particular situation. For example, answers to the following questions will often identify the constraints placed on the emergency response team: (1) are they rested; (2) do they have an adequate supply of air; (3) what additional equipment will they need; (4) where can needed resources be obtained; and, (5) how long will it take to obtain the needed resources?

G. Railroad Responsibilities

In the case of an incident involving hazardous materials, it is the responsibility of the rail carrier to do the following:

1. Protect life, health, and the environment;

2. Notify appropriate railroad officials in a timely manner and in a proper and pre-determined order;

3. Notify appropriate Federal, State, and local authorities, and the shipper;

4. Initiate a prompt and proper response, including identifying the hazardous materials involved, and identifying possible hazardous materials leakage; and

5. Provide appropriate resources for the resolution of the incident. Perform cleanup functions on its own, with the shipper or consignee, or by contracting with others who have the necessary expertise; and

6. Establish and maintain working contact with the responsible governmental authorities until they declare the incident closed.

H. Planning Cycle Concepts

In an effective planning cycle, plans and emergency procedures are developed and published, tested as necessary, implemented in actual emergencies, and revised through lessons learned.

The term "preparedness" implies that all persons know their responsibilities, corporate guidelines, applicable governmental regulations, and location of resources to enable the railroad to appropriately manage its response to an emergency. "Preparedness" refers to the total set of functions, resources, and capabilities needed by a railroad to perform appropriately in emergencies. Adequate preparedness exists only if it has been thoroughly thought out, documented, and tested.

I. Introduction to the Plan

Both the plan and incident response activities may be thought of in three phases:

Preparedness: what you do before the incident

Response: what you do during the incident

Recovery: what you do after the incident

II. PREPAREDNESS

A. Assignment of Responsibility and Organizational Control

1. Planning Objective

To assure that:

a. Primary responsibilities for emergency response to hazardous materials incidents have been clearly and properly assigned within the railroad;

b. The emergency responsibilities of each of the various supporting external organizations and agencies have been specifically identified; and

c. Each individual and organization within the railroad to which such responsibilities have been assigned is able to respond on a timely basis.

2. Discussion

Someone has to prepare the plan. If the railroad has not designated that person, this is the first step.

This person will need to identify the appropriate individuals and organizations within the railroad, and to determine their responsibilities. Those responsibilities need to be written down, approved, and distributed so that all affected persons within the railroad know what their tasks are and what is expected of them.

3. Guidance

a. Overall, the plan must specify:

What must be accomplished? The assignment of each individual's responsibilities should be clear and specific.

When is it to be accomplished? The plan should indicate a general sequence of actions, in priority of importance.

Who will accomplish it? Individual task assignments and authority should be clear and specific.

How is it to be accomplished? Courses of action should be spelled out to the extent practicable. Each incident is unique, so it is not possible to develop a single set of specific directions that will cover all situations. Field judgment still has to be relied upon for quick decisions at the scene, and leeway must be

provided for that judgment.

b. Authority and responsibility should be assigned to each major department within the railroad. The responsibilities and actions required of each of the departments should be written into the plan in the form of specific and detailed departmental procedures. Each department should designate, by title, who will be in charge of that department's hazardous materials emergency response functions. Examples of such departments would be operations, engineering, communications, general claims, public relations, mechanical, police, and the hazardous materials section.

c. The plan should provide for the establishment of a command post at the scene of the incident.

d. The plan should provide for the establishment of a "Railroad Central Control" office somewhere within the company, probably within the operations department, through which all emergency communications and operations are coordinated, and from which corporate management can communicate directly with the on-scene command post.

e. The plan should illustrate the organizational interrelationships in a block diagram.

B. Hazardous Materials Emergency Response Organization

1. Planning Objective

The objectives are to assure that:

a. Each railroad has established an organization for responding to hazardous materials incidents;

b. The emergency response organization is staffed with people in sufficient numbers and level of expertise to provide adequate response capabilities at all times;

c. Timely augmentation of response capabilities is available; and

d. The interfaces between various on-scene response crews are defined.

2. Discussion

Without a functioning organization, the emergency response capability will not adequately serve the railroad when it is needed.

3. Guidance

a. Each railroad should establish a hazardous materials response organization with

formal designations of responsibility.

b. Each railroad should designate one individual who is responsible for management of the hazardous materials emergency response organization, and should identify the line of succession for the hazardous materials emergency supervisor/coordinators' positions.

c. Each railroad should provide its emergency response organization with the staff, equipment, training, and other resources necessary to ensure that the basic responsibilities of the railroad will be met.

d. Hazardous materials emergency response personnel should have the authority and responsibility to initiate emergency response actions.

C. Interjurisdictional Coordination

1. Planning Objective

The railroad must actively coordinate its emergency response activities with the local jurisdictions which may be called upon to provide assistance, or act as coordinator of the emergency at the scene of a hazardous materials incident. (Note: In the event of a very serious emergency, the National Response Team may take over coordination of the response.)

2. Discussion

The railroad normally does not have direct responsibility for public safety at the scene of an incident. This authority usually rests with the local fire or police department. Only a public official can exercise civil authority for control. If no civil authority is evident, then the railroad may, by default, have to assume some authority for access control.

3. Guidance

a. Railroad emergency response personnel should be familiar with local emergency response plans and capabilities and requirements.

b. Local authorities should be familiar with the railroad's plan.

c. The railroad's plan should identify the various authorities who might be called for an incident within defined territories.

D. Emergency Communications System

1. Planning Objective

Effective communications must be established promptly when an emergency occurs and be maintained throughout its duration. Principal railroad officials must coordinate with each other, various departments of the railroad, governmental emergency response personnel, and the media.

2. Discussion

In any rail incident, effective and rapid communications within the railroad, and between the railroad and the other responders, is vital to a smooth and safe operation.

3. Guidance

Each railroad should establish an emergency communications plan, to include at least the following:

a. A reliable primary communications system, along with any necessary backup systems, both within the railroad organization, and between the railroad and appropriate authorities and with contractors, where applicable;

b. Communications links with other railroads, where tracks are shared;

c. Communication links with shippers and other chemical experts (CHEMTREC);

d. Periodic verification and updating of emergency contacts and communications links; and

e. Call lists for internal, Federal, State and local government notification and other sources of assistance. Sample telephone notification lists are given in Appendix D.

E. Incident Classification System

1. Planning Objective

The objective is to provide a defined, standard hazardous materials incident classification system and action level format for the railroad to use in developing and operating its emergency response plan.

2. Discussion

Different kinds of incidents and different levels of real or potential hazards should dictate the level and type of response by both the railroad and public emergency response

agencies. With hazardous materials, too often it is automatically assumed that the worst possible circumstances exist when, in fact, most of the time those circumstances do not exist. The result is overreaction.

The best incident classification scheme is a simple one. The incident classification scheme should be based on three levels of hazard to people, property, and the transport environment:

a. **Minor** -- no significant hazardous materials exposure to nearby personnel is possible, or some release of a low risk hazardous material has occurred.

Hazardous material exposures to emergency response personnel would not occur or be insignificant; and significant offsite exposures are not possible. Recovery action does not require special protective measures. Some simple steps may need to be taken to control spread of contamination. (Examples: involvement of hazardous materials in and around the incident scene, but with no leakage or threat of leakage of those materials; leakage from packages of mildly hazardous materials; a dripping bottom valve on a tank car.)

b. **Moderate** -- a large release of low risk hazardous material has occurred, or a small release of highly dangerous material is likely or actual.

Toxic vapor exposures to emergency response personnel could be significant but probably not deadly. Offsite exposures or contamination are possible but not likely to be serious. Some immediate and positive steps need to be taken to control spread of contamination. Evacuation of nearby areas may be necessary. (Examples: minor leakage from a car containing chlorine, anhydrous ammonia, or a trailerload of drums of flammable liquids in a fire; or failure of a tank car of sulfuric acid.)

c. **Severe** -- large amounts of highly dangerous materials have been released.

On-scene exposures to toxic fumes must be strictly controlled; and evacuation of nearby areas is necessary. (Example: puncture of a carload of anhydrous ammonia, or involvement of LPG cars in a large fire.)

3. Guidance

An incident classification and emergency action level scheme should be established by each railroad.

a. The rationale for the classification of emergency action levels is to assure appropriate response to all incidents. The emergency action level scheme flows from the incident classification. The three action levels are: notification, on-scene emergency and area emergency.

(1) The action level "Notification" would be triggered by the involvement of a train carrying hazardous materials in an accident, or the discovery of a low volume leak or spill of hazardous materials.

(2) If it appears that rupture of or significant leakage from the hazardous materials packages has occurred, or is likely, an "On-Scene Emergency" should be declared until a more thorough evaluation can be made, based on monitoring and inspection by qualified persons.

(3) If it has been determined that a major release of highly dangerous material is imminent, likely, or has actually occurred, and that off-site consequences are likely to be serious, an "Area Emergency" should be declared.

b. The criteria by which the different action levels would be imposed should be clearly stated in the plan. The activation of the higher action levels will include or be concurrent with the lower levels.

c. The classification system and action level scheme should be reviewed by persons competent and experienced in handling hazardous materials emergencies.

d. The classification system and action level scheme should be flexible enough to provide for consideration of all types of hazardous materials which may be involved in the incident, and to ensure appropriate response to those hazards.

F. Emergency Response Support and Resources

1. Planning Objective

The objective is to assure that specialized emergency assistance resources have been identified and prearrangements made for obtaining them when they are needed.

2. Discussion

Plans must be made in advance by the railroad to obtain the additional resources needed to meet its responsibilities, and to provide on-scene support for its own emergency personnel. Once the incident has happened, it is too late to start thinking about who to call.

3. Guidance

a. The plan should describe existing emergency equipment resources, their location and availability, and the method of gaining access to the resources in an emergency. Types of equipment required can be highly variable depending on the type of accident. Planners are encouraged to research this area so that equipment suited to specific characteristics can be found quickly. Examples of such equipment are:

(1) Detection and monitoring instruments;
(2) Personnel protective equipment;
(3) Mobile emergency operations and communications equipment;
(4) Packaging materials and equipment for waste and debris; and
(5) Backhoes, bulldozers and endloaders.

b. The plan should list names, locations, and telephone numbers of various organizations within the territory which might be able to provide assistance, including their capabilities, and expected availability and mobility. Letters of agreement might be needed to clarify legal responsibilities, resources to be provided, and terms for payment for services rendered. Examples of such organizations are:

(1) Hospitals, universities, research facilities;
(2) Shippers and nearby chemical plants;
(3) Commercial hazardous material monitoring and cleanup firms;
(4) Aircraft charter operators; and
(5) Earthmoving contractors.

c. The plan should list names, addresses, and telephone numbers of national level organizations which may provide assistance, including the type of assistance. These include:

(1) Chemical Transportation Emergency Center (CHEMTREC);
(2) Chemical Manufacturer's Association (CMA); and
(3) Bureau of Explosives (BOE), Association of American Railroads (AAR).

Others are identified in Appendix D.

d. The names, addresses, and telephone numbers of the Federal response team or teams serving the railroad's territory should also be listed (National Response Center 800 424-8802). This list should include identification of the capabilities throughout the system. In most situations, the leader of the response team will be from one of the following agencies:

(1) U.S. Coast Guard (USCG);
(2) U.S. Environmental Protection Agency (EPA); or
(3) U.S. Federal Emergency Management Agency (FEMA)

G. Training, Exercises, and Drills

1. Planning Objective

Appropriate training must be provided for railroad emergency response personnel.

2. Discussion

Emergency procedures will have to be implemented quickly at unpredictable and infrequent intervals. The personnel involved in responding to that emergency must know what to do, and must understand the significance of their actions.

Training must be tailored to the railroad's specific needs and responsibilities. Training need not be elaborate, extensive, or expensive to be useful and effective.

General information should be made available to a wide spectrum of railroad personnel. More specific and detailed information would be presented to much smaller groups with special interests or responsibilities.

Training exercises have historically proven their worth in testing and validating emergency procedures. Such exercises not only test the procedures themselves, but provide valuable insight into the manner in which a railroad employee will respond in an actual emergency. On the other hand, there may be enough actual incidents in railroad operations that simulations may not be necessary at all. Real incidents are a better proving ground than contrived situations.

The training program should include public relations training for railroad personnel (other than public relations staff) if they will have close interaction with the public. This is especially important for the transportation department, railroad police, and emergency response team members. All of these people are likely to be in contact with local first responders and media representatives at the scene of the incident or at railroad headquarters.

By providing employees with the necessary knowledge and skills to handle their emergency responsibilities, a good training program can reduce the adverse impact of a hazardous materials incident.

3. Guidance

a. Programs should be established for the initial training and periodic retraining of all personnel who have responsibilities in the emergency response program. The training should be tailored to the specific needs of the individuals concerned, and should cover at least the following areas:

(1) Technical information regarding hazardous materials;

(2) Procedures for personnel safety;

(3) General responsibilities of carriers, shippers, and governmental agencies in railroad emergencies, particularly in terms of who is in charge of what; and

(4) Internal (company) and external notification and communication procedures and departmental/individual responsibilities.

b. Appropriate training should be provided for railroad personnel in at least the following categories:

(1) Operating Officers: General Manager, Division and Terminal Superintendents, Supervisors of Operations, Trainmasters and assistants, Road Foremen, Safety Supervisors and assistants, Dispatchers, Yardmasters;

(2) Directors or coordinators of emergency response organizations and their staffs;

(3) Environmental control team personnel;

(4) Engineering Department: District and Division Engineers, Roadmasters;

(5) Mechanical Department: Master Mechanics, Foremen (District, Car, Derrick, General); and other maintenance, repair, and cleanup personnel;

(6) Security and Special Service Agents;

(7) Train, engine, and yard crews; and

(8) Yard Office staffs.

c. Joint training with State and local emergency response agencies should be encouraged, particularly where formal agreements exist for emergency response mutual support. Provisions should be made for using applicable training programs of shippers as well as Federal, State, and local government agencies.

d. Periodic exercises and drills should be considered to evaluate major portions of emergency response capabilities, and to maintain skills and supplement the initial training program. The exercises/drills should identify deficiencies and corrective measures that need to be taken. Procedures actually followed and actions taken during real incidents involving hazardous materials should be evaluated with a view toward correction of errors.

e. Records should be kept on training and exercises/drills to document who has received what training.

H. Distribution, Review, and Update of Plan

1. Planning Objective

It is important to assure that: (a) the hazardous materials emergency response plan, and any revisions thereto, is distributed to all personnel and offices that may become involved in such an incident; (b) the plan is understood; and (c) it is reviewed periodically, and updated and corrected as necessary.

2. Discussion

Each person or office having some responsibility for action in case of a hazardous materials railroad incident needs to have immediately at hand an up-to-date copy of the emergency response plan. Information in the plan needs to be reliable, accurate and easy to understand.

Responsibility should be delegated to one individual to make sure that the plan is updated as frequently as necessary, and that all plan holders are informed of the changes.

Each group on the distribution list should be aware of who has access and reference to the plan to promote coordinated emergency readiness and response.

The Hazardous Materials Emergency Planning Guide recently published by the National Emergency Response Team (see Bibliography in Appendix B) contains useful information on a system for plan review and update. See Appendix C of this guidance document for a sample plan distribution list.

3. Guidance

a. The hazardous materials emergency response plan should be distributed to each organization and/or individual within the railroad who will play some role in a hazardous materials incident. An official distribution list should be published as a part of the plan.

b. Provision should be made for periodic review and updating of the plan. The person responsible for this should be identified in the plan. Frequency of updating should be determined, documented, and maintained, based on specific needs. Telephone numbers should be updated at least quarterly. Provisions should be made to update plans more often if major changes are necessary.

c. When revisions are made to the plan, all persons with copies of the plan should be notified in writing of the changes.

d. The date of publication (month and year) should be prominently shown on the cover page of the original plan and on any subsequent revisions. Each revision to the plan should be given an identifying number, e.g., "Change No. 7". Revised pages should be dated

and marked to show when and where changes are made. The changes should be noted on a "Record of Amendments" page.

e. Each plan should contain a detailed listing of supporting plans and procedures, and their source.

f. Each plan should contain a table of contents.

III. RESPONSE

A. General Approach

In setting up the plan and when responding to a hazardous materials incident, one must first identify the steps that must be taken, and the priority in which those steps must be carried out. In general, the following steps will have to be taken in the event of any incident involving hazardous materials. If hazardous materials are involved, but no release has occurred, some of these steps may be eliminated. The response steps are listed in general order of priority:

1. Detection of the incident;
2. Identification of the problem or hazard;
3. Saving lives, preventing injuries;
4. Notifications (priority 1);
5. Evaluation of problem or hazard;
6. Establishing control and mitigating consequences;
7. Protecting property and environment;
8. Notifications (priority 2);
9. Immobilization and containment.

As discussed in the previous section on the incident classification system, it is important that the response be appropriate to the problem. Distinguishing the trivial incident from the serious accident requires good planning and organization.

B. Detection and Identification of Problem

1. Planning Objective

Timely and accurate detection of the presence, identification, nature, and location of hazardous materials in a railroad incident is essential.

2. Discussion

To initiate the actions provided for in the hazardous materials emergency response

plan, it is first necessary to determine that hazardous materials are involved in the incident. If so, it must be determined what those materials are and the general nature of their involvement. This information is vital to the initial evaluation and notification steps.

3. Guidance

a. Provision should be made for a quick data recall system to provide information on whether and which hazardous materials are contained in any car. The following information needs to be quickly produced whenever there is a railroad incident:

(1) Whether the involved car(s) carries hazardous materials and if yes, the types of railroad equipment involved;

(2) The proper shipping name(s), hazard class(es), and identification number of the product(s) in the involved car(s); and

(3) The properties and quantities of the product(s) involved.

b. If possible, this information should be stored in the railroad's computer. If so, the plan should include instructions for accessing the data.

c. Train crews and supervisory personnel should be periodically instructed and evaluated on the procedures for using train documents to identify cars transporting hazardous materials and the information to be provided to assist emergency response personnel.

C. Saving Lives, Preventing Injuries

1. Planning Objective

The objective is to assure that the saving of lives and the prevention of injuries in and around the incident site takes priority over other incident management activities.

2. Discussion

One of the most important actions to be taken in the case of an incident is to save lives and prevent injuries. Railroad officials will be expected to cooperate with local authorities in carrying out these functions.

3. Guidance

a. The plan should emphasize the need to institute life-saving and injury-preventing actions with due regard to the potential for fire, explosion, exposure to toxic materials and fumes, and/or the spread of contamination. The physical safety of the people involved takes priority over the establishment of containment barriers.

b. The plan should provide for notification of local emergency response agencies concerning the identification of and handling procedures for those hazardous materials that are involved. There are many documents available regarding the handling of hazardous materials. For a listing, see Appendix B.

D. Notifications

1. Planning Objective

Effective and efficient procedures must be established for notification of the appropriate emergency response organizations.

2. Discussion

When a hazardous materials railroad incident occurs, timely and accurate information must flow quickly upward through the railroad and to appropriate external organizations.

3. Guidance

a. The plan should establish a system for notification and information exchange between emergency response organizations and individuals, and procedures for alerting, notifying, and mobilizing emergency response personnel.

b. The plan should establish procedures to include the following information, preferably given in a standard format(s):

(1) Who is responsible for what calls;

(2) The initiating conditions and time frames for notification;

(3) A scheme for establishing priorities of notifications, keyed to different graded action response levels;

(4) The methods of communication to be used; and

(5) Call lists of persons and organizations to be notified.

c. The plan should provide a capability for 24-hour per day coverage for both communications and personnel.

d. Single-number systems should be used to the extent possible to simplify the notification process.

e. The plan should incorporate a system for internal distribution of information within the railroad.

f. The plan should provide for coordination with State and local authorities so they know who to contact in the event of an incident.

g. The following list of incident characteristics is suggested as a guide for obtaining available and appropriate information from the scene of the incident:

(1) Identification of carrier caller (name and company or organizational affiliation), and call back number;

(2) Location of incident;

(3) Date and time of incident;

(4) Identification of the hazardous materials involved, including number and type of cars, car numbers, and shipper or consignee;

(5) Estimate of quantity of hazardous materials, and degree of involvement in the incident;

(6) Estimate of nature of possible or actual release of hazardous materials;

(7) Emergency response procedures and actions underway;

(8) Environmental and weather conditions;

(9) Description of terrain features, occupancy of the nearby area, and available access;

(10) Estimated number of fatalities, injured, and evacuees;

(11) Identification of organizations on-scene or en route; and

(12) Updated information, provided on a continuing basis, concerning the progress and control of the incident.

h. The plan should provide for required regulatory notifications.

i. It may be useful to establish notification levels for each of the three graded action levels (Notification, On-Scene Emergency, and Area Emergency).

E. Accident Evaluation/Assessment

1. Planning Objective

The plan should provide for adequate methods and equipment to determine if, and

to what extent, hazardous materials have been released, and to monitor and assess the actual or potential consequences of any release.

2. Discussion

It is vital for the railroad to do its own evaluation of the situation. The key to this assessment is communication of information to and from the other organizations and personnel involved. There are several vital pieces of information which only the railroad can provide, such as waybill information, and availability of railroad-owned equipment and personnel.

3. Guidance

a. The railroad should establish a system to gather the information needed, including access to computer-stored information, to assess the situation:

(1) Whether cars containing hazardous materials are derailed, damaged, or exposed to fire;

(2) Whether the cars containing hazardous materials are observable and accessible for damage assessment;

(3) Whether cars are leaking, and the leakage rate;

(4) What is being done to restrict spread of leaking liquids and contaminated materials;

(5) What consequences are likely due to the involvement of hazardous materials;

(6) Possible impacts on third parties (schools, hospitals, population centers, shopping malls, etc.);

(7) Recommendations for handling the situation; and

(8) Weather conditions and forecasts.

b. Supervisory personnel arriving at the scene of an emergency should determine what information has been provided by train crews to emergency response personnel, verify the accuracy of the information provided, and advise the local civil authority of any errors or omissions in the initial information given by the train crew.

c. Communications should be quickly established between the senior on-scene railroad official and the local authority command center, and between that official and Railroad Central Control.

d. Situation assessments should be made by the railroad emergency coordinator, and updated as frequently as practical and necessary. Situation reports should be made by that coordinator to appropriate railroad officials quickly so that decisions can be made based on this up-to-date information.

e. Provisions should be made for record keeping and documentation of all data obtained or developed from the incident assessment.

f. In the case of incidents with large third party liability impacts, a railroad claims agent should be on scene soon to arrange for processing of claims.

F. Establish Control and Initiate Protective Actions

1. Planning Objective

Necessary and appropriate protective actions must be developed and implemented as early as possible to protect both railroad and public interests and safety.

2. Discussion

Methods and procedures need to be established to ensure that the actions taken at the scene of the incident protect railroad property and personnel, and the public, and that actions are avoided which would jeopardize railroad interests, such as unnecessary delays in restoration of railroad operations, unnecessary evacuations, interference with reasonable mitigation actions, and unnecessary adverse environmental effects.

Railroad personnel generally will have little or no civil authority at the scene of an incident, and may have to protect company interests in cooperation with local authorities. The two first actions of this cooperative effort should be to: (1) secure the scene to ensure that unauthorized individuals will not interfere with response efforts, later investigations or be unnecessarily exposed to the hazards that are present; and, (2) establish a command post at the scene to coordinate response activities.

The civil authority in charge of the response will usually be a local official, probably a senior fire or police officer.

3. Guidance

a. A command post should be set up at the incident scene as soon as practicable in conjunction with the local authority command center. The senior railroad official, as well as the command center itself, should be identified and clearly designated.

b. Provision should be made with the local civil authority to coordinate all evacuation, mobilization, restoration, cleanup, decontamination, and personnel access movement control procedures with the railroad prior to implementation. This should

include establishment of incident-specific priorities for the steps to be taken.

c. Procedures should be established, in coordination with local authorities, to control entrance to and egress from incident scenes and affected areas. Railroad personnel must have access to the incident site.

d. Provision should be made to account for the movement and activities of all personnel at the incident scene.

e. Provision should be made to limit the presence of railroad and contractor personnel to the minimum necessary to effect recovery.

G. Mitigation

1. Planning Objective

The plan must provide for quick, effective action during the first stages of the incident to mitigate the consequences of the incident.

2. Discussion

Fire-fighting efforts need to be concentrated on those cars most likely to produce immediate threats to life, property and the environment. Railroad officials will need to advise emergency responders on this. Containment or immobilization of run-off liquids may be necessary to prevent contamination of water supplies. Local equipment may have to be moved in quickly to build containment for spills. Railroad officials and local officials must cooperate with each other in order for these actions to be taken quickly and effectively to protect life, property and liability.

3. Guidance

In cooperation with local officials, the railroad should:

a. Clear movable cars away from the scene of the incident;

b. Build dikes or dams to control run-off of spilled hazardous liquids;

c. Identify and isolate involved cars which pose a danger of failure as a result of fire or emergency measures taken by the responders; and

d. Take other actions as necessary and appropriate to restrict the spread and intensity of the incident consequences.

H. Public Information and Relations

1. Planning Objective

Methods and systems must be available to provide accurate and timely information to the general public during and after an incident.

2. Discussion

The activities of the railroad industry are highly visible, particularly when accidents happen. The public's attention to those events is inevitable. When hazardous materials are involved, the degree of public attention and concern is usually much greater than for other types of incidents.

The public perception of an incident is likely to be influenced by how well the railroad handles its public relations and information program. All important facts should be released to the media and to the public as soon as practicable, and frequent periodic updates should be issued. No facts should be held back, for the railroad's credibility hinges on accuracy, honesty and its handling of the incident. Timing of statements is very important. If it appears that human error may have contributed to the incident, the public information officer must be careful not to pre-judge an employee's actions before formal investigation.

It is important that the information coming out of the railroad be consistent. This can best be handled by centralizing all official railroad information releases at its central control headquarters (for small incidents) or at the scene (for serious accidents). There should be a railroad spokesperson at the scene for all serious accidents. Individual employees should not talk to the press, but instead should refer the media to the railroad's public information officer or the most senior railroad official available.

All requests to interview railroad employees should be handled either by the on-scene senior railroad official or the Railroad Central Control public information officer. The on-scene railroad official should, when practicable, direct the media to the command center for information, and should feed his/her information to the local civil authority.

3. Guidance

a. The emergency plan should contain clear procedures for handling the release of incident information to the public through one central information source. Individual railroad employees, except for the on-scene senior railroad official, should be discouraged from providing information to the media.

b. The plan should establish procedures for public information releases to consist of clear communications, written in simple layman's language.

c. Plans for disseminating emergency information on hazardous materials railroad incidents should be merged into a single comprehensive public information plan so that one source and one system is utilized by the railroad for all types of emergency information activities. If a joint press information center is set up at the scene, the railroad releases can be made through that center.

d. The identity of the official railroad spokesperson, and alternates, should be made known to the media. In major accidents, a corporate communications representative should be dispatched quickly to the scene.

e. Methods and procedures should be established to coordinate public information activities with the public agencies to avoid erroneous, inconsistent, or conflicting information. This is best accomplished by centralizing all information activities by all organizations at the command center.

f. Plans and training should stress the dissemination of concise messages that are easily understood by persons who are unfamiliar with the technical aspects of an incident.

g. Information in releases must be accurate. Statements should be factual and concise, without assigning blame or fault, and should emphasize the efforts being made to contain and control the emergency. The information should have a direct bearing on, and be limited to, the actual circumstances of the incident and to the control and corrective measures being taken. Speculation should be avoided, especially regarding:

(1) Causes which have not been confirmed;
(2) Fault;
(3) Extent of dollar damages;
(4) Possible long-term hazardous materials consequences;
(5) Off-site environmental effects or extent of damages to other than railroad property; and,
(6) Extent of personal injuries or possible fatalities.

h. Extreme care should be taken in responding to provocative, searching questions that go beyond the known facts. The phrase "No Comment" should not be used because of its connotation that there may be circumstances which might be embarrassing to the railroad. Phrases such as "We don't know yet" or "We're looking into that now and will let you know" are better.

i. If there is any doubt as to the cause of the emergency, the public information representative should state only that "the matter is under investigation."

j. As with all incidents, the names of injured or dead employees should be given to the media only after the next-of-kin have been notified.

(1) Information should be confined to the names, positions, addresses, and

general nature of injuries or cause of death.

(2) If hospitalized, the media should be told the name and location of the hospital. No information should be given out regarding possible effects of hazardous materials on injured employees.

k. Senior railroad officials should understand the need to cooperate with accredited media representatives and photographers. They should be treated courteously. Within the limits of safety and operational requirements, they should be permitted to visit the area of the emergency, but only if they have first been cleared through the on-scene civil command center. An operating or safety official should accompany the media if the situation warrants the extra caution. Freelance writers, non-accredited photographers, and trespassers should be excluded from the area as tactfully as possible. The civil authorities should be controlling the access of the media. If they are not, the senior railroad official should insist that the local civil authorities impose that control.

l. Provision should be made for the visual recording of the incident location and scene. Film photography and video recording are both useful in this regard. Efforts should be made to obtain visual records from other persons as well.

I. Airspace Control

1. Planning Objective

Responders must be prepared to clear the airspace over and around the accident scene of aircraft not directly involved in accident response, when necessary.

2. Discussion

When a serious rail accident occurs, it may be necessary or desirable for railroad officials or civil authorities to observe the scene from the air. This requires that aircraft be able to move over the scene area without having to worry about other aircraft in the area. Helicopters may be required to bring in supplies and/or personnel, or to evacuate injured persons. Media representatives will want pictures from the air. Without control of aircraft movement in the area, aircraft accidents could add to the casualty list.

The Federal Aviation Administration (FAA) has the authority to impose temporary flight restrictions over an area in which special hazards exist. Low-altitude overflights would be restricted to appropriate rescue or official observation aircraft. The FAA has expressed its willingness to impose such restrictions in the case of hazardous materials transportation incidents.

3. Guidance

a. The plan should provide for prompt notification to the nearest (FAA) facility

for emergency designation of restricted airspace around a serious incident scene. The FAA should be requested to maintain en route or approach control center radar surveillance if possible.

b. The plan should provide for identification and authorization of aircraft to be approved for overflight of the scene.

J. Site Security

1. Planning Objective

To protect railroad property and reduce railroad liability, access to the scene of the incident should be restricted to those having official business there.

2. Discussion

At the scene of a hazardous materials incident, site security may be critical due to the increased numbers of people and heightened public attention that will occur. This will require close cooperation between railroad police and state/local police.

Site security is a dynamic situation, and will require constant reevaluations and adjustment of boundaries and controls.

3. Guidance

a. Railroad police should be summoned and posted to protect railroad interests.

b. Steps should be taken to assure close cooperation of railroad police with state and local police. Coordination should be worked out with the civil on-scene commander and the senior railroad official.

c. Criteria should be established for determining the role of railroad police in providing site security, and for adjusting the security conditions over the course of the emergency.

d. Site security forces should be alerted to the possibility of a heavy influx of the media and other observers, and should work closely with the railroad public information staff to allow only authorized media representatives onto railroad property.

K. Documentation of Accident Operations

l. Planning Objective

The chronological events of the incident must be documented accurately and thoroughly.

2. Discussion

Written reports and pictures are necessary to document a hazardous materials incident and to support possible cost reimbursement and legal action.

3. Guidance

a. Responsibility should be clearly assigned for the maintenance of chronological logs of actions taken during the incident. Each major participant should keep his/her own log as completely as practical under the circumstances. It may be useful to assign the task of recorder to one individual, preferably at the command center.

b. Responsibility should be clearly assigned for the compilation of the various chronological logs into a consolidated chronological report for review by other railroad participants in the incident and eventual correction into a final internal report.

c. Responsibility should be clearly assigned for the preparation of backup reports to various agencies after the operation has been terminated, with a followup system to ensure that the reports are filed in a timely and competent manner.

d. Responsibility should be clearly assigned for taking and collecting pictures. Railroad officials can take their own pictures (film photography, video recording, etc.), or pictures can be obtained from other picture takers at the scene. Newspaper photographers take far more photos than are published in the newspapers. Television camera crews usually take large quantities of video footage. Copies may usually be obtained at nominal cost.

IV. RECOVERY

A. Restore Operations

1. Planning Objective

General plans for the restoration of railroad operations as soon as practicable after the incident will be needed.

2. Discussion

The railroad may have to be persistent in its efforts to persuade local authorities to allow railroad employees and contractors to begin timely restoration operations. Civil officials may be reluctant to approve access quickly into an area for restoration operations. The civil on-scene commander will be hearing "slow down" on one hand, and "hurry up" on the other. The railroad must insist on its rights to have access to the incident scene, and to obtain timely decisions on reentry and personnel movement control.

Timely restoration of railroad operations will also be affected by the state or local agencies that will supervise the public health and environmental aspects of the cleanup. Unreasonable contamination limits could be set ad hoc based on undue public pressure. The railroad needs to be aware of these potential problems and make provisions for countering them. Pre-planning will help in this.

Inherent in the reentry, restoration, and cleanup activities (see next section of this guidance document) is the need to control the spread of contamination. Railroad officials and contractors must cooperate with local emergency responders to work within the framework of a hazardous materials contamination control program.

3. Guidance

a. The railroad should develop general plans and procedures for entry into the incident site and recovery from the initial incident effects in order to restore railroad operations. This would include identifying methods for obtaining information rapidly on the local environmental and weather conditions.

b. The plan should provide for coordination of all wreckage-clearing operations with local public safety officials.

c. The plan should provide for a pre-determined list of materials, equipment, and cleanup contractors available to assist in restoration operations.

B. Cleanup of Debris and Residues

1. Planning Objective

The plan must provide for cleanup operations to be conducted safely, economically, and expeditiously, but not prematurely. Adequate time should be provided for accident cause determination.

2. Discussion

The desire and tendency to move in very quickly and start cleaning up needs to be tempered with the need for good information on the nature of the hazards involved and the need for agreement with civil authorities as to cleanup methods and limits.

3. Guidance

a. The railroad should have under contract its own hazardous materials health and environmental experts to advise it on health and exposure control matters, so that it will not be totally dependent upon outside "experts" and groups.

b. The plan should provide a method to determine cleanup criteria and

decontamination levels. The railroad should use those levels, both for its own use and for unrestricted release to the public, and should resist pressure to decontaminate below these levels.

c. The plan should provide for a system of making on-scene determinations of just what cleanup is necessary, and who is responsible for the various aspects of cleanup.

d. The plan should provide for a method of determining when the emergency is over.

C. Disposal of Wastes

1. Planning Objective

Preparations must be made to ensure that all contaminated debris and wastes are removed from the incident site, and properly disposed of in an authorized location.

2. Discussion

Regulations for waste disposal are complex. Railroads may need outside expertise to sort out the problems and solutions. The same outside contractors who can provide technical advice and assistance on restoration and cleanup can usually provide or manage the waste packaging and disposal operation.

3. Guidance

a. The plan should identify the contractors to be used for various types of incidents and provide their addresses and phone numbers.

b. The plan should identify which disposal sites are available and practical for transfer of contaminated debris and waste from the scene to an authorized disposal site.

APPENDIX A

GLOSSARY OF ACRONYMS

AAR	Association of American Railroads
BOE	Bureau of Explosives , AAR
CHEMTREC	Chemical Transportation Emergency Center
CMA	Chemical Manufacturers Association
DOD	U. S. Department of Defense
DOE	U. S. Department of Energy
DOT	U. S. Department of Transportation
EPA	U. S. Environmental Protection Agency
FAA	Federal Aviation Administration, DOT
FEMA	U. S. Federal Emergency Management Agency
FRA	Federal Railroad Administration, DOT
NRC	U. S. Nuclear Regulatory Commission or National Response Center, DOT
NTSB	U. S. National Transportation Safety Board

APPENDIX B

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American Society for Testing and Materials, 1916 Race Street, Philadelphia, Pennsylvania 19103. Phone: 215-299-5400.

Systems Technology Laboratory, 2020 14th Street North, Arlington, Virginia. Phone: 703-527-0054.

Bradford Communications Corp., 75500 Greenway Center Drive, Greenbelt, Maryland 20770. Phone: 301-345-0100.

National Fire Protection Association, Batterymarch Park, Quincy, Massachusetts 02269. Phone: 617-770-3000.

APPENDIX C

SAMPLE PLAN DISTRIBUTION LIST

The following is an example of the type of distribution that a railroad might want to make of its hazardous materials emergency response plan:

INTERNAL

- Administration Department
- AMTRAK Liaison Office
- Communications and Signals Division
- Corporate Communications Department
- Corporate and Regional Transportation Departments
- Emergency Equipment Division
- Engineering Department
  - District Engineer
  - Division Engineer
  - General Roadmaster
- Environmental Control Team Director
- Executive Department
  - General Manager
- Freight Claim Division
- General Claims Division
- Hazardous Materials Control Director
- Inspection Department
- Insurance Department
- Law Department
- Maintenance (of Way) Department
- Mechanical Department
  - Mechanical Superintendent
  - Wreckmaster
  - District Foremen
  - Chief Car Foreman
  - Chief Derrick Foreman
  - Chief General Foreman
  - Car Department Chief
- Operations Department
  - System Operations Control Center (Railroad Central Control)
  - Regional Operations Control Centers
  - General Superintendent
  - Division Superintendents
  - Terminal Superintendents
  - Territorial Trainmaster/Roadmaster
  - Terminal Trainmasters
  - Road Foreman of Engines
  - Safety Division
  - Headquarters Staff

Chief Train Dispatcher
Duty Dispatcher
Chief Yardmaster
Yard Office Managers
Personal Injury Claims Division
Property Protection Division
Public Relations Department
Sales and Marketing Department
Security, Police, and Special Services Divisions

EXTERNAL

LOCAL

Police Departments
Fire Departments
Council or Associations of Government

STATE

Police Departments
Health Departments
Environmental Agencies
Emergency Response Agencies
Civil Defense
National Guard

FEDERAL

Environmental Protection Agency (field offices)
U.S. Coast Guard
Federal Emergency Management Agency
Federal Railroad Administration (headquarters and field offices)
Department of Energy (field offices)

OTHERS

Bureau of Explosives, Association of American Railroads
Other railroads whose lines are shared

APPENDIX D

SAMPLE TELEPHONE NOTIFICATION LIST

INTERNAL

Priority 1

Chief Dispatcher (or Yardmaster)
Terminal/System Duty Officer
System Operations Control Center
Division/General Superintendent/Manager
Cognizant Regional Operations Control Center
Territorial Trainmaster/Roadmaster
Safety/Environmental Director/Manager
Hazardous Materials Control Director/Manager
Hazardous Materials Emergency Response Team
Assistant Superintendent, Operations
Communications Director
General Manager
Transportation Department
Mechanical Department (Wreckmaster)
Engineering Department
System Police, Plant Security
Maintenance (of Way) Department
Public Relations Department

Priority 2

Administration Department
Inspection Department
Law/Legal Department
Claims Department (both Freight and General)
Washington Affairs Office
Sales and Marketing Department
Insurance Department

EXTERNAL

STATES (Make separate lists for each State)

Priority 1

Local (On-Scene) Fire Department
Civil Defense/Preparedness/Emergency/Disaster Agency
State Police
Radiological Health Department (for nuclear only)

Priority 2

State Fire Marshall
Department of Health
Water Quality/Pollution Control
Air Pollution Control
Department of Natural Resources
Department of Transportation
Public Service Commission

Note: many States have established a "one-call" system.

FEDERAL

Priority 1

Federal Railroad Administration, USDOT*
U. S. Coast Guard National Emergency Response Center*
Department of Energy Field Office (for nuclear only)*
Environmental Protection Agency Field Office

* - tied into a one-call system (see 49 CFR, Section 171.15 for reporting requirements).

Priority 2

National Transportation Safety Board
Office of Hazardous Materials Transportation, USDOT
Military Traffic Management Command (for military only)
Federal Aviation Administration (if airspace control needed)

OTHER

Priority 1

CHEMTREC
Hazardous Materials Systems, AAR
Other Railroads (if shared lines involved)
Shipper/Receiver

Priority 2

Local Hospitals
Heavy Equipment Operators

4480-Hazardous Materials Emergency Response Plan Guidance Document for Railroads
14-HazMat